

## 5.0 ENVIRONMENTAL IMPACT ANALYSIS

This section of the Program EIR discusses each of the potentially significant effects of implementing the BMP Update and identifies mitigation measures to reduce impacts found to be significant in the Program EIR analysis. This Program EIR analyzes the environmental issue areas identified in accordance with CEQA statutes and State CEQA Guidelines, Section 15000 et. seq.

The environmental issue areas analyzed in this section of the Program EIR are: Biological Resources; Historical Resources; Transportation/Circulation; Visual Quality and Neighborhood Character; Paleontological Resources; and Geologic Conditions.

The following information is presented for each environmental issue listed above:

- **Existing Conditions** describes the environmental setting in the vicinity of the project before the commencement of the program to provide a baseline for comparing “before the program” and “after the program” environmental conditions in accordance with Section 15125 of the State CEQA Guidelines. The existing environmental conditions described as of the June 25, 2012 NOP date constitute the baseline condition against which environmental impacts are analyzed in this Program EIR.
- **Significance Thresholds** defines and lists specific criteria used to determine whether an impact is or is not considered to be significant. The primary source for the criteria appropriate to the specifics of the program is the City’s Significance Determination Thresholds (City 2011), augmented by the State CEQA Guidelines and City, state, federal or other standards applicable to an impact category. As stated in State CEQA Guidelines, Section 15064[b], “...an ironclad definition of significant is not possible because the significance of an activity may vary with the setting.” In general, “a substantial, or potentially substantial, adverse change in any of the physical conditions within an area affected by the project, including land, air, water, flora, fauna, ambient noise, and objects of historic and aesthetic significance” constitutes a significant impact (State CEQA Guidelines, Section 15382).
- **Impacts Analysis** presents evidence, based on scientific and factual data to the maximum extent possible, for the cause and effect relationship between the proposed project and the potential changes in the environment. Each impact is analyzed in relation to an issue question that is based on the significance criteria previously identified. The magnitude, duration, extent, frequency, range, or other parameters of a potential impact are ascertained, to the extent possible at the programmatic level, to determine whether impacts may be significant. All of the potential effects are considered, including direct effects, reasonably foreseeable indirect effects, and considerable contribution to cumulative effects (refer to Section 6.0, *Cumulative Effects*, for cumulative analysis). For each issue question, a conclusion is drawn regarding the potential significance of the impacts.
- **Mitigation Monitoring and Reporting** identifies the means by which potentially significant impacts could be reduced or avoided in cases where the Program EIR analysis has determined such impacts to be potentially significant. Standard existing regulations,

requirements, programs, and procedures that are applied to all similar projects are taken into account in identifying additional program-specific mitigation that may be needed to reduce significant impacts. Mitigation, in addition to measures that the lead agency will implement, can also include measures that are within the responsibility and jurisdiction of another public agency (State CEQA Guidelines, Section 15091 [a] [2]). When impacts, even with the inclusion of mitigation measures, cannot be mitigated to a level considered less than significant, they are identified as “significant unavoidable impacts.” To approve a project with significant unavoidable impacts, the lead agency must adopt a Statement of Overriding Considerations. In adopting such a statement, the lead agency finds that it has reviewed the EIR, and has determined that, on balance, the benefits of the project outweigh the unavoidable adverse environmental effects; thus, the adverse environmental effects may be considered “acceptable” (State CEQA Guidelines, Section 15093 [a]). In any case where a specific project could not comply with or implement the mitigation measures in this Program EIR, then subsequent environmental review to satisfy CEQA will be required.

The environmental analysis in this Program EIR addresses potential impacts associated with implementation of the BMP Update at the planning horizon year (2030); this planning horizon represents an approximate 20-year period in which bicycle network planning decisions are expected to have foreseeable implications. Beyond that point, gauging the effects of planning under dynamic conditions is considered speculative.

The proposed BMP Update involves both a Citywide network of recommended infrastructure improvements and a series of programs aimed at increasing bicycle transit in San Diego. A portion of the proposed BMP Update relates to policy guidance, some of which would have no physical impacts; examples include education programs and public outreach. Only those elements of the BMP Update that would be reasonably expected to result in physical impacts to the environment are analyzed in this Program EIR.

Because details of individual bicycle-related projects (including defined areas of disturbance) are not known at this time, the level of analysis in this section is programmatic, evaluating the types of impacts to be anticipated for three general categories of future projects: On-street Bikeways With Widening; On-street Bikeways Without Widening; and Off-street Bikeways. The proposed infrastructure improvements include over 595 miles of proposed bike travel corridors in the form of lanes, paths, routes, and other bikeway. Approximately 15.8 percent of proposed bikeways would be Class I Bike Paths with their own right-of-way, separated from vehicle travel, while the remainder would be developed in existing street rights-of-way, with or without some widening of that right-of-way.

Facilities other than bikeways, such as signal detectors, bicycle racks/parking, other end-of-trip facilities, and multi-modal connections would largely be located within the footprint of proposed bikeway projects, and are addressed as part of the analysis of bikeways below. Potential impacts of larger end-of-trip and other facilities would be addressed as part of the environmental review of the specific projects they are associated with; for instance, if bicycle end-of-trip amenities are to be provided as part of a new park-and-ride facility, the bicycle-related amenities would be evaluated as part of the entire park-and-ride facility project.

## 5.1 BIOLOGICAL RESOURCES

### 5.1.1 Existing Conditions

#### Regional Overview

The influences of climate, topography, and soils combine to determine the character of the biological environment of a region. Each of these factors varies greatly throughout San Diego, resulting in a diversity of vegetation communities. Wetland/riparian vegetation communities include southern riparian forest, southern sycamore riparian woodland, southern willow scrub, mule fat scrub, riparian scrub, freshwater marsh, cismontane alkali marsh, southern coastal salt marsh, coastal brackish marsh, disturbed wetland, and natural flood channel/open water/streambed. Upland vegetation communities include Diegan coastal sage scrub, southern mixed chaparral, non-native grassland, eucalyptus woodland, non-native vegetation/ornamental, disturbed habitat/ruderal, and developed land. At least 50 different plant communities are known to occur (Oberbauer 1991) in the San Diego region.

Many habitats and species located within City boundaries are considered to be sensitive by state and federal agencies, the City, and conservation organizations. The San Diego region has been identified as a major “hot spot” for biodiversity and sensitive species; many unique and endangered species are found only in this region.

Vegetation communities and sensitive plant and animal species documented in this section were identified based on the regional vegetation map, prepared by the City, which is incorporated into the MSCP database San Diego GIS 1995 (SANGIS 1995). General flora and fauna species were determined based on the identified vegetation communities and the species that typically occur in these habitats (Figure 5.1-1, *Vegetation Communities in the Program Area*).

For the purposes of this document, sensitive species are those that are listed, are proposed for listing, or are candidates for listing as threatened or endangered by the USFWS or by the CDFW as endangered, threatened, or rare or those species within the California Native Plant Society's *Inventory of Rare and Endangered Vascular Plants of California* (Skinner and Pavlik 1994), or those species otherwise identified as sensitive in local conservation planning documents. Sensitive habitat types are those identified by the California Natural Diversity Database in its *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) or considered endangered, threatened, or rare by state and federal resource agencies, the City, or specialists.

#### Regional and Regulatory Context

##### Federal and State Regulations

The federal Endangered Species Act of 1973 (FESA) (16 U.S.C.) 15-31-1544, as amended) provides for the conservation of ecosystems upon which threatened and endangered species depend through federal action and encouraging State action.

The Migratory Bird Treaty Act of 1918 (MBTA) (16 U.S.C. 703-712, as amended) established a federal prohibition, unless permitted by regulations, to pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess any migratory bird, or any part, nest, or egg of any such bird.

The federal CWA (33 USC 1344) is the primary law regulating wetlands and waters. The CWA regulates the discharge of dredged or fill material into waters of the US, including wetlands. Section 404 of the CWA establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the ACOE with oversight by the U.S. Environmental Protection Agency (EPA).

At the state level, wetlands and waters are regulated primarily by the CDFW and the RWQCB. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement (LSAA) will be required.

Fish and Game Code Section 3503 mandates that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the code or any regulation made pursuant to it. Fish and Game Code Section 3503.5 specifically addresses birds in the orders *Falconiformes* or *Strigiformes* (birds-of-prey).

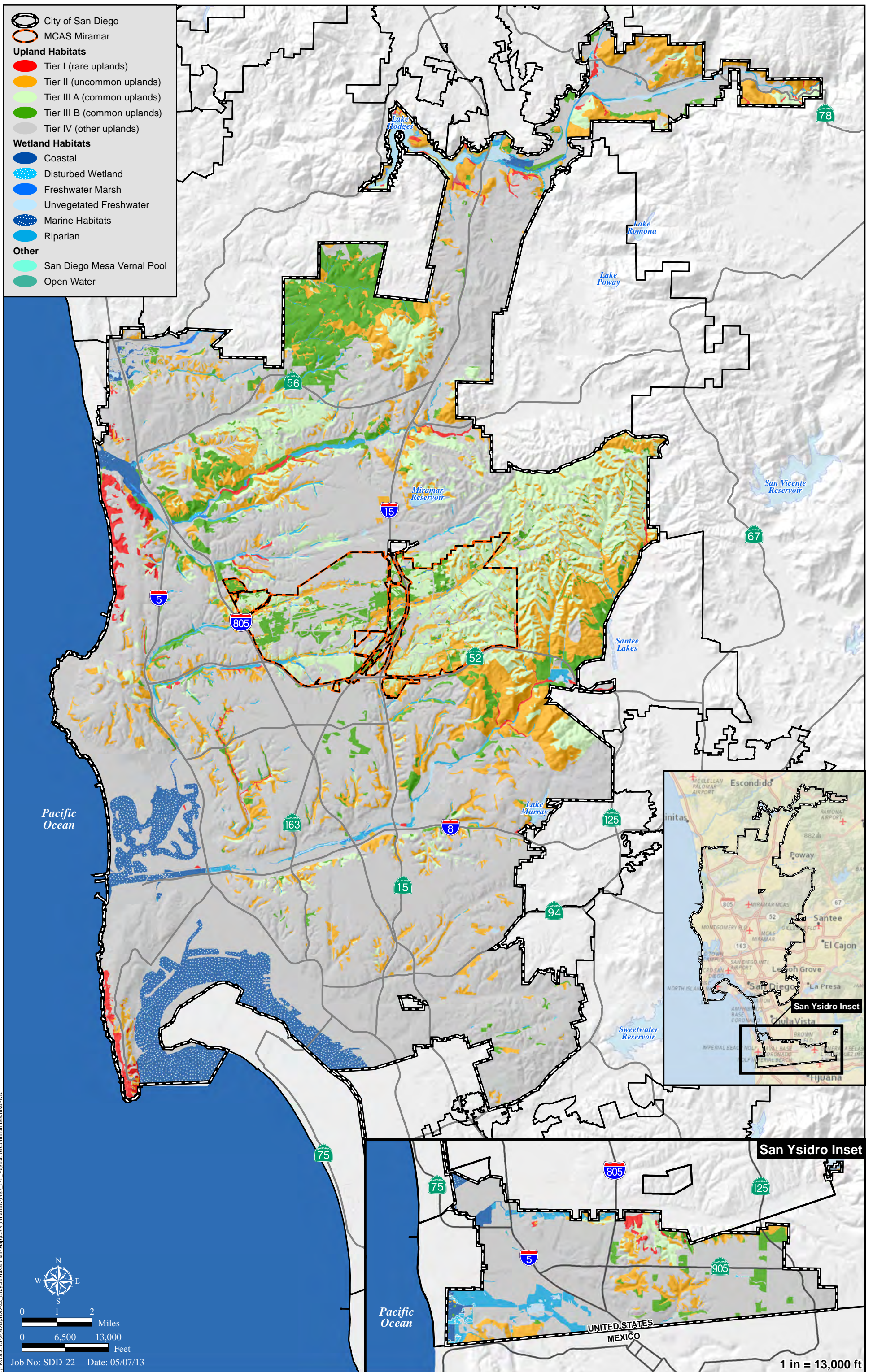
RWQCBs were established under the California Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications in compliance with Section 401 of the CWA.

#### Multiple Species Conservation Program

The City's MSCP Subarea Plan was prepared to meet the Habitat Conservation Plan requirements of the FESA and the California Natural Communities Conservation Planning (NCCP) Act of 1992. The Subarea Plan is consistent with the NCCP and describes how the evaluation of proposed development projects relative to the City's portion of the MSCP Preserve, the (MHPA), will be implemented. Approximately 56,831 acres of habitat are designated as the City's portion of the MHPA, of which approximately 90 percent is to be preserved and the remaining 10 percent may be developed. Figure 5.1-2, *Preserved Lands*, presents the preserved lands (MHPA) in the City.

Under the FESA, an incidental take permit is required when non-federal activities would result in the "take" of the threatened or endangered species. A Habitat Conservation Plan (HCP) must accompany an application for federal Incidental Take Permit (ITP). Take authorization for federally listed wildlife species covered in the HCP shall generally be effective upon approval of the HCP. The adoption of the MSCP Subarea Plan in 1997 allowed the City to issue take permits at the local level.

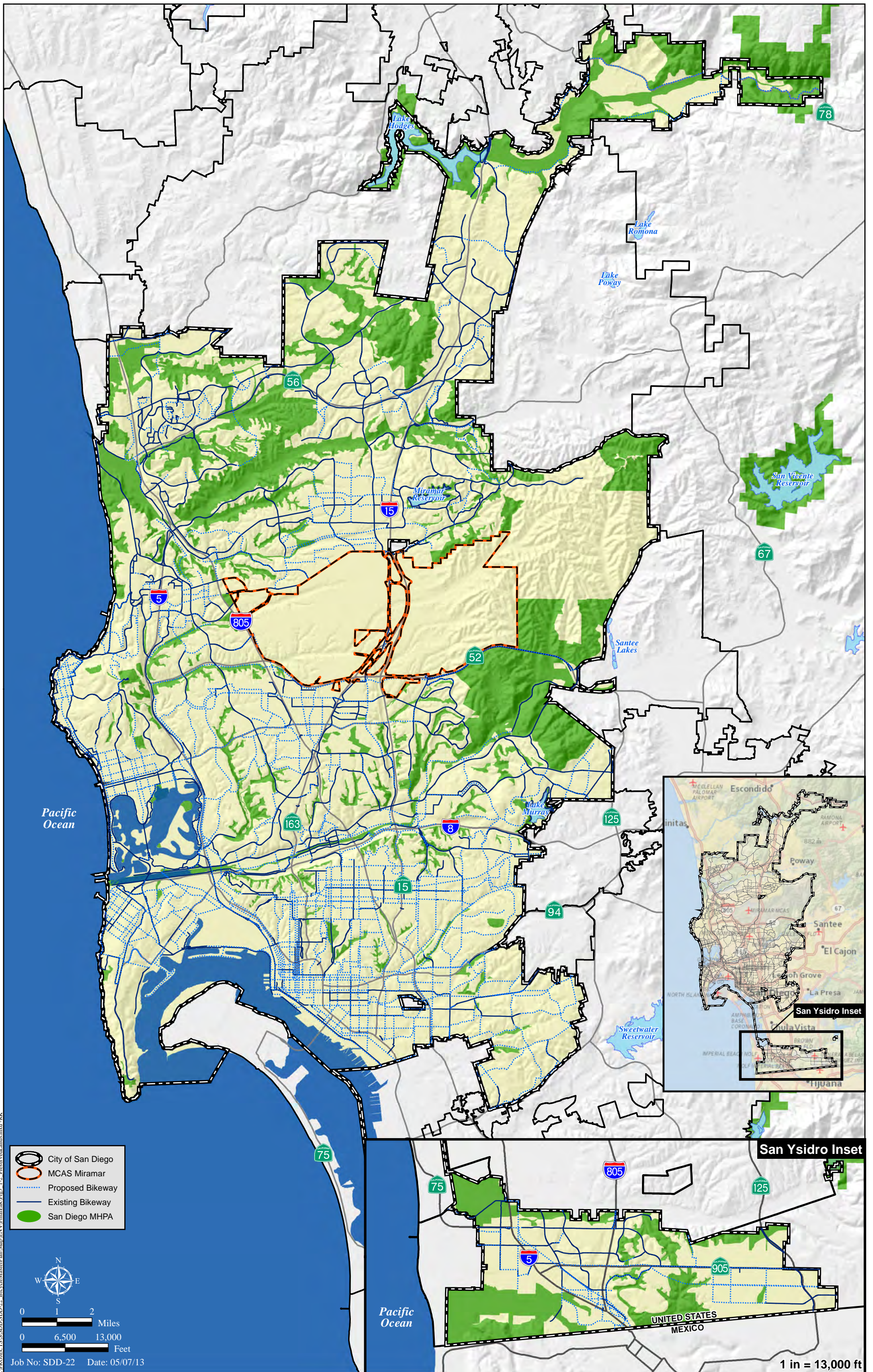




**Vegetation Communities in the Program Area**  
 Figure 5.1-1 (Revised)

Source: City of San Diego





**Preserved Lands**  
Figure 5.1-2 (Revised)

Source: City of San Diego and SANDAG



As of April 20, 2010, the City has relinquished coverage and does not rely on the City's Federal ITP to authorize an incidental take of the two vernal pool animal species and five vernal pool plant species. Upon completion of an HCP for vernal pools that is currently in progress (expected in 2013), the City would enter into an Implementing Agreement in order to obtain species coverage and a federal ITP for the seven vernal pool species

The MHPA is intended to link all core biological areas into a regional wildlife preserve. Many of the natural creeks and canyons encompassed by the program area fall within the MHPA. In addition to the regulations governing activities in the MHPA itself, the City has implemented MHPA Land Use Adjacency Guidelines (Section 1.4.3 of the City's MSCP Subarea Plan; March 1997) which address potential indirect effects to the MHPA related to drainage, toxics, lighting, noise, barriers, invasive species, brush management, and grading/land development in lands adjacent to the MHPA

MSCP policies and guidelines that are relevant to the proposed implementation of bikeways and related facilities are evaluated in Section 5.1.2 under Issues 5 and 6.

### City ESL Regulations

As mentioned in Section 2.0, *Environmental Setting*, the purpose of the ESL Regulations (San Diego Land Development Code, Section 143.010130) is to "protect, preserve and, where damaged, restore the City's ESL and the viability of the species supported by those lands." The ESL Regulations serve to implement the MSCP by placing priority on the preservation of biological resources within the MHPA.

Unless specifically exempted, ESL Regulations apply to all proposed development when any of the following environmentally sensitive lands are present in the program area: sensitive biological resources; steep hillsides (defined in part as all lands that have a slope with a natural gradient of 25 percent or greater and a minimum elevation differential of 50 feet); coastal beaches; sensitive coastal bluffs; and 100-year floodplains.

All proposed developments subject to ESL Regulations that encroach into environmentally sensitive lands must obtain either a NDP or a SDP. If development is proposed in the Coastal Overlay Zone, a CDP is also required. Limited exceptions to ESL Regulations apply in certain circumstances.

The ESL Regulations govern development for each type of sensitive land (sensitive biological resources, steep hillsides, coastal beaches, etc.). Outside the Coastal Overlay Zone, City linear projects, such as the proposed BMP Update bikeways, are exempt from the development area regulations for steep hillsides and sensitive biological resources. Within the Coastal Overlay Zone, the ESL Regulations generally establish a 25 percent allowable development area in steep hillside areas, although development of up to 40 percent is permitted under certain circumstances for certain types of development.

The ESL Regulations require impacts to wetlands be avoided unless the activities meet specific exemption criteria established in the ordinance. Impacts to City-defined wetlands require

approval of deviation findings. For projects occurring within wetlands in the Coastal Overlay Zone, uses are limited to those uses identified in Section 143.0130(d) the ESL Regulations. These uses are limited to aquaculture, nature study projects or similar resource dependent uses, wetland restoration projects, and incidental public service projects. Impacts to wetlands should only occur if they are unavoidable, have been minimized to the greatest degree possible, and have adequate mitigation. Wetlands must be mitigated in accordance with Table 2a or 2b of the City's Land Development Manual Biology Guidelines. Additionally, the ESL Regulations for projects occurring within the Coastal Overlay Zone require a 100-foot buffer to be maintained around all wetlands, as appropriate, to protect the functions and values of the wetland. A lesser or greater buffer may be warranted based on consultation with the resources agencies (i.e., ACOE and CDFW). The exemption for public maintenance access impacts to steep slopes and biological resources applies in the Coastal Overlay Zone.

Plans submitted in accordance with the ESL Regulations shall, to the maximum extent feasible, comply with the various ESL Regulations. If a proposed development does not comply with all applicable development regulations of the ESL, the decision-maker may approve, conditionally approve, or deny the proposed SDP, subject to the City making findings in accordance with Section 126.0504 of the Land Development Code for deviations from the ESL regulations.

In May 2012, the City amended their ESL Regulations to further clarify the wetland deviation process. In accordance with Section 143.0150(c) of the Land Development Code, within the Coastal Overlay Zone, deviations may be granted only if the decision maker makes the findings in Section 126.0708. In accordance with Section 143.0105(d) of the Land Development Code, for deviations for development outside of the Coastal Overlay Zone to be approved, the development must qualify as one of three options: Essential Public Projects Option, Economic Viability Option, or Biologically Superior Option. Pursuant to Section 143.0150(d)(1)(B), bikeways for which no feasible alternative that avoids impacts to wetlands exists could qualify as an Essential Public Projects Option type (ii): Linear infrastructure, including but not limited to major roads and land use plan circulation element roads and facilities including bike lanes, water and sewer pipelines including appurtenances, and stormwater conveyance systems including appurtenances; or type (iii): Maintenance of existing public infrastructure.

Deviations from ESL wetland requirements are considered under the Essential Public Project Option when a proposed project meets the following four criteria, as described in the City's Land Development Code Biology Guidelines:

1. The project must be an Essential Public Project that will service the community at large and not just a single development project or property. The project must meet the definition of an Essential Public Project pursuant to Section 143.0150(d)(1)(B) of the ESL Regulations and must be essential in both location and need. If the City has options on the location of an Essential Public Project, the City should not knowingly acquire property for an Essential Public Project which would impact wetlands.
2. The proposed project and all biological alternatives, both practicable and impracticable shall be fully described and analyzed in an appropriate CEQA document. Alternatives to the proposed project shall be comprehensively included in the CEQA document and/or the

biological technical report for the CEQA document. Alternatives must include the following: (1) a no project alternative; (2) a wetlands avoidance alternative, including an analysis of alternative sites irrespective of ownership; and (3) an appropriate range of substantive wetland impact minimization alternatives.

3. The potential impacts to wetland resources shall be minimized to the maximum extent practicable and the project shall be the least environmentally damaging practicable biological alternative considering all the technical constraints of the project. Recognizing the wetland resources involved, minimization to the maximum extent practicable may include, but is not limited to, adequate buffers and/or designs that maintain full hydrologic function and wildlife movement. The project applicant will solicit input from the USFWS and CDFW prior to the first public hearing.
4. All impacts shall be mitigated according to the requirements of Table 2a in the Land Development Code Biology Guidelines and the project shall not have a significant adverse impact to the MSCP.

It is anticipated that most bikeways implemented under the BMP Update would qualify for the Essential Public Projects Option deviation, if needed, as bikeways are listed as one of the linear transportation facilities in Section 143.0150(d)(1)(B) of the ESL Regulations and would essentially become “land use plan circulation element” facilities upon approval of the BMP Update. Future bikeways implemented under the BMP Update, therefore would meet criterion 1 above. It is anticipated that future bikeways implemented under the BMP Update also would meet criteria 2, 3, and 4 because this Program EIR identifies and analyzes a Reduced Biology Impact Alternative to avoid impacts to wetlands and identifies measures to mitigate impacts. Detailed evaluation of a bikeway project that would impact wetlands and any required deviations to the ESL Regulations would be conducted on a project by project basis, as discussed in Section 5.1.2, *Impacts*.

In the event that a bikeway project implemented under the BMP Update does not qualify under the Essential Public Project Option, it is anticipated that it would qualify under the Biologically Superior Option. The Biologically Superior Option is defined in 143.0150(d)(3)(A) and (B) of the ESL Regulations. This deviation may be requested to achieve a superior biological result which would provide long term biological benefit and a net increase in quality and viability (functions and value) relative to existing conditions or the project originally proposed by the applicant, and long term biological benefit. This type of deviation may apply to a particular bikeway that initially was impactive to wetlands but upon redesign or incorporation of other features/mitigation achieved a superior biological result.

Deviations from ESL wetland requirements are considered under the Biologically Superior Option when a proposed project meets the following four criteria, as described in the City’s Land Development Code Biology Guidelines:

1. The proposed project, a no project alternative, a wetland avoidance alternative, and a biologically superior alternative shall be fully described and analyzed in an appropriate CEQA document. The CEQA document must fully analyze and describe the rationale for why the Biologically Superior Option would result in the conservation of a biologically superior resource compared to strict compliance with the provisions of the ESL.

2. The wetland resources being impacted by the project shall be limited to wetlands of low biological quality.
3. The project and proposed mitigation shall conform to the requirements of this option as described in the Land Development Code Biology Guidelines.
4. The wildlife agencies have concurred with the biologically superior design and analysis.

Detailed evaluation of a bikeway project that would impact wetlands and any required deviations to the ESL Regulations would be conducted on a project-by-project basis, as discussed in Section 5.1.2, *Impacts*.

#### City Council Policy 900-19: Public Tree Protection

City Council Policy 900-19 (2005) is designed to protect, wherever practical, designated tree resources located in the public rights-of-way, on city-owned open space, in parks or other publicly owned lands, and on private land restricted by dedicated open space easements. This policy requires that CEQA review of projects consider the protected status of these trees as a factor in determining potential significant impacts to visual quality and community character resources. It defines four categories of special status trees: Landmark Trees, Heritage Trees, Parkway Resource Trees, and Preservation Groves. This policy also applies to “street trees” planted in the right-of-way in conjunction with adjacent development and/or roadway improvements. Street trees are considered City property and damage should be avoided where possible. The policy states: “Roadway widening requirements will avoid damage to trees where possible. When avoidance is not possible, tree protection during construction, tree transplanting or tree replacements will be required.”

#### **Biological Habitats and Communities**

As described in the City General Plan, a host of upland and wetland vegetation communities, defined according to the current Holland Code (HC) classification system (Holland 1986) and San Diego County terrestrial vegetation community descriptions (Oberbauer 1996), occur within the City. Figure 5.1-1 shows the general habitats present within the City boundaries.

For ease of discussion, some of the habitats have been grouped under broader habitat categories that are specifically addressed within the City Land Development Manual (LDM) – Biology Guidelines (as amended July, 2002). These categories are organized by habitat tiers, as specified in the City’s Biology Guidelines, rather than natural habitat groupings (Table 5.1-1, *Habitat Types Within the City*).

<b>Table 5.1-1 HABITAT TYPES WITHIN THE CITY</b>	
<b>Habitat Type</b>	<b>Habitat</b>
<b>UPLAND HABITATS</b>	
<b>Tier I: (rare uplands)</b>	Southern Foredunes, Torrey Pines Forest, Coastal Bluff Scrub, Maritime Succulent Scrub, Maritime Chaparral, Scrub Oak Chaparral, Native Grassland, Oak Woodland
<b>Tier II: (uncommon uplands)</b>	Coastal Sage Scrub (CSS), CSS/Chaparral
<b>Tier III A: (common uplands)</b>	Chaparral, Mixed Chaparral, Chamise Chaparral
<b>Tier III B: (common uplands)</b>	Valley and Foothill Grasslands, Non-native Grasslands
<b>Tier IV: (other uplands)</b>	Urban/Developed, Disturbed, Agriculture, Eucalyptus Woodland
<b>WETLAND HABITATS</b>	
<b>Coastal</b>	Salt Marsh, Salt Panne/Mudflat
<b>Riparian</b>	Oak Riparian Forest, Riparian Forest, Riparian Woodland, Riparian Scrub/Riparian Scrub in the Coastal Overlay Zone, Riparian and Bottomland Habitat
<b>Freshwater Marsh</b>	Freshwater Seep, Freshwater Marsh/Freshwater Marsh in the Coastal Overlay Zone
<b>Disturbed Wetland</b>	Disturbed Wetland
<b>Unvegetated Freshwater</b>	Non-vegetated Channel, Floodway, Lakeshore Fringe, Unvegetated Habitat Freshwater
<b>Marine Habitats</b>	Unvegetated Habitat Estuarine, Unvegetated Habitat Beach, Unvegetated Habitat Marine Intertidal, Unvegetated Habitat Marine Subtidal, Unvegetated Habitat Shallow Bay, Unvegetated Habitat Intermediate Bay
<b>Vernal Pools</b>	Various species (see description of vernal pools below)

Source: City 2008b

## Upland Habitats

### *Tier I Habitats – Rare Uplands*

Tier I habitats include the upland habitats that are considered to be rare within the City. These habitats have suffered substantial historic losses on top of naturally narrow distribution patterns, such as in the case of southern foredunes and Torrey pine woodlands. Tier I habitats were once common, as was the case for native grasslands, but other historic land conversion has resulted in precipitous declines that threaten the continued persistence of the habitats in the region.

### Southern Foredunes

Southern foredunes are a relatively uncommon constituent of today's City beaches, but two hundred years ago were widely dispersed at the upper edge of the region's oceanic high tides where they occupied hummocky areas of sand and the interstitial swales. The most common

components of this vestigial vegetation are two species of abronia (*Abronia maritima*, *A. umbellata*), beach evening primrose (*Camissonia cheiranthifolia*), and beach ambrosia (*Ambrosia bipinnatisecta*).

#### Torrey Pines Forest

With the exception of a subspecies population located on Santa Rosa Island, this remnant coniferous forest habitat is now restricted to several stands of Torrey pines at Torrey Pines State Park and around the city of Del Mar. It appears to rely on moisture supplied by frequent fogs and is strongly correlated with marine sandstone substrate.

#### Coastal Bluff Scrub

Few native plants can survive on the erosive slopes of San Diego's coastal bluffs. Typically, this scrub is comprised of plants that are adapted to a regime of fogs, and a generally wetter environment that is found a short distance inland, including some succulent-leaved plants such as *Coreopsis* spp. and coast pincushion flower (*Chaenactis glabriuscula* var. *orcuttiana*). Other plants are adapted to salt tolerant conditions and include species of saltbush (*Atriplex* spp.) and pineapple weed (*Chamomilla suaveolens*). This vegetation community is declining as the bluffs erode, where very disturbed weedy mesa vegetation is replacing the existing coastal bluff scrub.

#### Maritime Succulent Scrub

This scrub is largely associated with the flora of northern Baja California. It occurs in the U.S. primarily in the extreme southwestern portions of San Diego County near the Mexican border. Dominant shrubs here typically include jojoba (*Simmondsia chinensis*) and flat-top buckwheat (*Eriogonum fasciculatum*). This phase of sage scrub also includes several desert elements such as four-wing saltbush (*Atriplex canescens*), waterjacket (*Lycium andersonii*), and sometimes very unusual species for western San Diego County such as smooth-stemmed fagonia (*Fagonia laevis*) and desert filaree (*Erodium texanum*).

#### Maritime Chaparral

This phase of coastal chaparral, southern maritime chaparral located on north-facing slopes is a vestigial remnant of the wetter and cooler Pleistocene. It generally is restricted to sandstone substrates and usually includes at least one of the following shrub species: Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*), Nuttall's scrub oak (*Quercus dumosa*), and/or coast white lilac (*Ceanothus verrucosus*).

#### Scrub Oak Chaparral

Scrub oak chaparral is a dense, evergreen chaparral reaching up to 20 feet tall. The vegetation is dominated by Nuttall's scrub oak, with inclusions of interior mountain-mahogany (*Cercocarpus betuloides* var. *betuloides*) and a substantial accumulation of leaf litter. This chaparral type typically occurs in more mesic (moist) locations, and often at a slightly higher elevation, than other chaparral types, thus enabling the vegetation to recover more quickly from fire.



## Native Grassland

Valley needlegrass grassland typically supports extensive stands of purple needlegrass (*Nasella pulchra*) as the indicator species for its presence. A limited association of herbaceous perennials and annuals are often found growing among the clumps of needlegrass—including several rare species.

## Oak Woodland

Oak woodlands within the City are dominated by coast live oak woodlands. These habitats are evergreen woodlands primarily dominated by coast live oak (*Quercus agrifolia*), with a relatively open and low-growing understory that supports perennial grasslands, annuals, and herbaceous perennials, as well as a mix of shrubs and sometimes-dense thickets of western poison oak. Additional characteristic flora species include California blackberry, San Diego sedge (*Carex spissa*), California coffeeberry (*Rhamnus californica*), California rose (*Rosa californica*), nodding needlegrass (*Nassella cernua*) and large clarkia (*Clarkia purpurea*).

Dense coast live oak woodland is a thick phase of oak woodland characterized by a contiguous canopy of coast live oak with few additional tree or shrub components. The understory may be less diverse than that associated with a less mature phase of oak woodland.

## Tier II Habitats – Uncommon Uplands

### Coastal Sage Scrub

Most vegetation in the City is not native; the most widespread native vegetation type remaining within the City’s boundaries is Diegan coastal sage scrub. This phase of sage scrub is a low-lying, relatively open scrub with desert affinities, and is comprised of soft-woody, drought deciduous species that provide the majority of the vegetative cover. Characteristic flora species include California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), California encelia (*Encelia californica*), goldenbush (*Isocoma menziesii*), laurel sumac (*Malosma laurina*), foothill needlegrass (*Nassella lepida*), lemonadeberry (*Rhus integrifolia*), black sage (*Salvia mellifera*), San Diego monkeyflower (*Mimulus aurantiacus*), and California brickellbush (*Brickellia californica*) (City 2008b).

A disturbed form of coastal sage scrub is broom baccharis scrub. This habitat supports many of the same species as Diegan sage scrub, but is typically found as a disturbance-following community that is generally best developed along alluvial floodplains and within areas of sandy soils. The habitat is dominated by broom baccharis (*Baccharis sarothroides*).

### Coastal Sage Scrub/Chaparral

This “hybrid” of two more common vegetation types usually indicates either an area of sage scrub growing on disturbed substrates, converting into a mature chaparral vegetation; or a mature ecotone in which ecological conditions for each of these two vegetation types does not allow one habitat type to out-compete the other.

### *Tier IIIA Habitats – Common Uplands*

#### Chaparral

Chaparral, generally including mixed chaparral and chamise chaparral as described below, typically occupies dry, rocky, and often steep north-facing slopes, and is dominated by relatively tall (between 1.5 to 3 meters), broad-leaved, deep-rooted woody shrubs. Chaparral vegetation located on south-facing slopes is typically more open and can form a mosaic with sage scrub vegetation. Identification of shrub dominants usually allows for a more specific phase of chaparral to be identified.

Mixed Chaparral – Southern mixed chaparral is a mid-sized to tall chaparral, with limited shrub diversity in drier areas, but a floristically varied understory with numerous species of subshrubs, herbaceous perennials, bulbs and annuals in shaded and wetter areas. Characteristic flora species include mission manzanita (*Xylococcus bicolor*), Ramona ceanothus (*Ceanothus tomentosus*), San Diego mountain-mahogany (*Cercocarpus minutiflorus*), holly-leaf redberry (*Rhamnus ilicifolia*), sugar bush (*Rhus ovata*) and fuchsia-flowered gooseberry (*Ribes speciosum*).

Chamise Chaparral – Chamise chaparral is locally common on poorly developed soils throughout the City, and is a lower growing chaparral community dominated by chamise (*Adenostoma fasciculatum*), with comparatively limited shrub diversity and arid understory conditions.

### *Tier IIIB Habitats – Common Uplands*

#### Valley and Foothill Grasslands

This general vegetation category indicates there is insufficient information to more accurately identify the grassland components present. Included here may be areas of scattered native perennial grasses interspersed with larger stands of introduced non-native grasses. This habitat is classified as a Tier IIIB habitat for this analysis since it is highly probable that the majority of this habitat will ultimately be determined to be non-native grasslands rather than native grasslands when reviewed at the project-specific level.

#### Non-native Grasslands

Non-native grasslands are widely dispersed throughout the San Diego region. This “introduced” grassland consists of a dense to open cover of predominantly Eurasian grasses that have become widespread on disturbed or heavily grazed lands. Local grasslands are dominated by non-native grasses such as bromes (*Bromus madritensis* ssp. *rubens*, *B. hordeaceus* and *B. diandrus*) and slender wild oat (*Avena barbata*), as well as non-native forbs, such as mustard (*Hirshfeldia incana* and *Brassica nigra*), and filarees (*Erodium brachycarpum*, *E. cicutarium*, and *E. moschatum*). The quality of these grasslands is expected to coincide with the quality of the surrounding vegetation communities and land uses.

## Tier IV Habitats – Other Uplands

### Urban/Developed

Much of the peripheral study area is comprised of residential and commercial development dominated by non-native/exotic vegetation, eucalyptus woodland, and disturbed habitats. Urban and semi-urban areas contain numerous and varied horticultural plantings located within residential yards, active-use parklands, and golf courses. In the older, urbanized portions of the City, tall exotic plantings, such as eucalyptus trees (*Eucalyptus* sp.) with allelopathic toxins that tend to inhibit understory growth, form well-developed, and dense woodlands. Occasionally, other planted woodlands such as introduced pines, ash, and elm are present. Disturbed areas are typically located adjacent to urbanization and contain a mix of primarily weedy species, including non-native forbs, annuals, and grasses, usually found pioneering on recently disturbed soils. Characteristic weedy species include prickly sow thistle (*Sonchus asper*), common sow thistle (*Sonchus oleraceus*), bristly ox-tongue (*Picris echioides*), Russian thistle (*Salsola tragus*), giant reed, hottentot-fig (*Carpobrotus edulis*), wild lettuce (*Lactuca serriola*), tree tobacco (*Nicotiana glauca*), castor-bean (*Ricinus communis*), pampas grass (*Cortaderia selloana*), smooth cat's-ear (*Hypochoeris glabra*), red-stem filaree (*Erodium cicutarium*), short-beak filaree (*Erodium brachycarpum*) and white-stem filaree (*Erodium moschatum*). These urban lands do not typically contain native vegetation or provide essential habitat connectivity and, therefore, tend to have reduced biological value.

### Disturbed Habitat

Disturbed habitat is another broad category of disturbed lands that usually supports no vegetation, or retains only pioneering weedy species, but does not include a disproportionately strong component of non-native grasses. Such disturbed habitats may establish on recently graded or severely brushed lands.

### Agriculture

Agricultural practices throughout the City are quite varied. They include orchards and vineyards, intensive agriculture such as dairies, and extensive field crop and livestock grazing agriculture. While once a distinctive characteristic of the region in the late 1800s and early 1900s, today only small portions of the City are still comprised of groves/orchards, consisting primarily of woody crops such as citrus fruits and avocados. The majority of these crops are located to the north and east of the City infrastructure—within the foothills and along the San Pasqual Valley. Herbaceous understory growth may be planted or provide natural cover, and is typically open in density to facilitate with crop harvesting. Although groves and orchards also tend to have reduced biological value, they do provide cover for wildlife movement, as well as perch and nest sites for raptorial (relating to or characteristic of birds of prey) and passerine (perching birds and songbirds such as the jays, blackbirds, finches, warblers, and sparrow) species.

Few such areas under the general agricultural heading remain within the City. Where present, such as in portions of the San Pasqual Valley, habitat within the active footprint areas is usually extremely degraded and devoid of any significant biological resources.

Truck crops are still occasionally planted in the extreme northern and southern portions of the City. Typically all areas historically used for agriculture (controlled by the owner/renter) that can be deeply disked and planted for harvest are employed for that purpose. Fallow areas of agricultural fields overwhelmingly consist of non-native weedy species. Occasionally, rare bulbs may survive in lightly disked fields that have not been regularly planted.

### Eucalyptus Woodland

Eucalyptus woodland is a prominent component of the City's canyon lands, but is a relatively late introduction into the region. Quite a few eucalyptus species were intentionally introduced from arid portions of Australia to provide a readily grown tree. The understory within eucalyptus woodland is often devoid of all but the most ubiquitous non-native weeds.

### Wetland Habitats

The definition of wetlands in the City's ESL Regulation is intended to differentiate uplands (terrestrial areas) from wetlands, and furthermore to differentiate naturally occurring wetland areas from those created by human activities. Except for areas created for the purposes of wetland habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, it is not the intent of the City to regulate artificially created wetlands in historically non-wetland areas unless they have been delineated as wetlands by the ACOE and/or the CDFW. For the purposes of the ESL, artificially created lakes such as Lake Hodges, artificially channeled floodways such as the Carmel Valley Restoration and Enhancement Project (CVREP) and previously dredged tidal areas such as Mission Bay should be considered wetlands under the ESL regulations. The following provides guidance for defining wetlands regulated by the City under the Land Development Code.

Naturally occurring wetland vegetation communities are typically characteristic of wetland areas. Examples of wetland vegetation communities include saltmarsh, brackish marsh, freshwater marsh, riparian forest, oak riparian forest, riparian woodland, riparian scrub and vernal pools. Common to all wetland vegetation communities is the predominance of hydrophytic plant species (plants adapted for life in anaerobic soils). Many references are available to help identify and classify wetland vegetation communities; including Holland (1986), and the ACOE Wetland Delineation Manual (1987).

Problem areas can occur when delineating wetlands due to previous human activities or naturally occurring events. Areas lacking naturally occurring wetland vegetation communities are still considered wetlands if hydric soil or wetland hydrology is present and past human activities have occurred to remove the historic vegetation (e.g., agricultural grading in floodways, dirt roads bisecting vernal pools, channelized streambeds), or catastrophic or recurring natural events preclude the establishment of wetland vegetation (e.g., areas of scour within streambeds, coastal mudflats and salt pannes that are unvegetated due to tidal duration). The ACOE Wetland Delineation Manual (1987) provides technical information on hydric soils and wetland hydrology.

Seasonal drainage patterns that are sufficient enough to etch the landscape (i.e., ephemeral/intermittent drainages) may not be sufficient enough to support wetland dependent vegetation.

These types of drainages would not satisfy the City's wetland definition unless wetland-dependent vegetation is either present in the drainage or lacking due to past human activities. Seasonal drainage patterns may constitute "waters of the United States" which are regulated by the ACOE and/or the CDFW.

Areas lacking wetland vegetation communities, hydric soils and wetland hydrology due to non-permitted filling of previously existing wetlands are considered a wetland under the ESL and regulated accordingly. The removal of the fill and restoration of the wetland may be required as a condition of individual project approval.

Areas that contain wetland vegetation, soils or hydrology created by human activities in historically non-wetland areas do not qualify as wetlands under this definition unless they have been delineated as wetlands by the ACOE and/or the CDFW. Artificially created wetlands consist of the following: wetland vegetation growing in brow ditches and similar drainage structures outside of natural drainage courses, wastewater treatment ponds, stock watering, desiltation and retention basins, water ponding on landfill surfaces, road ruts created by vehicles and artificially irrigated areas which would revert to uplands if the irrigation ceased. Areas of historic wetlands can be assessed using historic aerial photographs, existing environmental reports (EIRs, biology surveys, etc.), and other collateral material such as soil surveys.

Some coastal wetlands, vernal pools and riparian areas have been previously mapped. The maps, labeled C-713 and C-740 are available to aid in the identification of wetlands. Additionally, the 1":2000' scale MSCP vegetation maps may also be used as a general reference, as well as the USFWS National Wetlands Inventory maps. These maps, located at the Development Services Department, should not replace site-specific field mapping.

Key examples of wetland habitats listed in Table 5.1-1, including saltmarsh, brackish marsh, freshwater marsh, riparian forest, oak riparian forest, riparian woodland, riparian scrub and vernal pools are described below.

#### *Southern Coastal Saltmarsh*

Coastal saltmarsh is dominated by plants adapted to the higher soil salinity levels and frequent inundation. These areas are periodically flooded by salt water. Typical plant species include California seablite (*Suaeda californica*), common glasswort and pickleweed (*Salicornia* spp.), and saltgrass. Species present on site included glasswort, alkali-heath (*Frankenia salina*), fleshy jaumea (*Jaumea carnosa*), western marsh-rosemary (*Limonium californicum*), California loosestrife (*Lythrum californicum*) and saltgrass.

#### *Coastal Brackish Marsh*

Coastal brackish marsh is dominated by perennial, emergent, herbaceous monocots that are adapted to varying soil salinities due to input from saltwater and freshwater. It is very similar to cismontane alkali marsh, with many of the same species. This habitat typically intergrades with coastal salt marshes toward the ocean and occasionally with freshwater marshes at the mouths of rivers. Species observed in this habitat on site include cattails, southwestern spiny rush, saltgrass, and glasswort.

### *Mud Flat*

Mud flat habitat is unvegetated and occurs in the low to mid intertidal areas around tidal lagoons. Although mudflat is unvegetated, it is important habitat for many invertebrates and is foraging habitat for many shorebirds.

### *Freshwater Marsh*

Freshwater marsh is dominated by perennial emergent monocots that can reach a height between 12 and 15 feet. This vegetation type occurs along the coast and in coastal valleys near river mouths and around the margins of lakes and springs. Species present in this habitat in the study area include cattails, California bulrush (*Scirpus californicus*), umbrella sedge (*Cyperus involucratus*), tall flatsedge (*C. eragrostis*), watercress (*Rorippa nasturtium-aquaticum*), spike-rush (*Eleocharis* spp.), and rabbitsfoot grass (*Polypogon monspeliensis*).

### *Southern Riparian Forest*

Southern riparian forests are composed of winter deciduous trees that require an abundant supply of water at or near the soil surface for most of the year. Species such as willows (*Salix* spp.) and western cottonwood (*Populus fremontii*) form a dense, medium-height canopy. Typical species present in this habitat in the study area include red willow (*Salix laevigata*), western sycamore (*Platanus racemosa*), black willow (*S. gooddingii*), arroyo willow (*S. lasiolepis*), stinging nettle (*Urtica dioica*), pampas grass (*Cortaderia selloana*), and giant reed (*Arundo donax*).

### *Southern Coast Live Oak Riparian Forest*

Southern coast live oak riparian forest is an open, to locally dense, evergreen, sclerophyllous, riparian woodland that is dominated by coast live oak (*Quercus agrifolia*). This community appears to be richer in herbs and poorer in understory shrubs than other riparian communities. Southern coast live oak riparian forest occurs on fine-grained alluvial soils on the floodplains along large streams in the canyons and valleys of coastal southern California (Holland 1986). Associated species include toyon (*Heteromeles arbutifolia*), Mexican elderberry (*Sambucus mexicana*), spreading snowberry (*Symphoricarpos mollis*), California rose (*Rosa californica*), California blackberry (*Rubus ursinus*), and poison oak (*Toxicodendron diversilobum*).

### *Southern Sycamore Riparian Woodland*

Southern sycamore riparian woodland is a tall, open, broad-leaved, winter-deciduous streamside woodland dominated by western sycamore (*Platanus racemosa*). These stands of woodlands seldom form closed canopy forests, and even may appear as trees scattered in a shrubby thicket of sclerophyllous and deciduous species. Species present on site include western sycamore, poison oak (*Toxicodendron diversilobum*), western cottonwood, castor bean (*Ricinus communis*), and ripgut grass (*Bromus diandrus*).

### *Riparian Scrub*

Riparian scrub is a generic term for several shrub-dominated communities that occur along storm water facilities and/or riparian corridors. Typical species in this habitat within the study area include mule fat, Hooker's evening primrose (*Oenothera elata* ssp. *hookeri*), and San Diego golden-bush (*Isocoma menziesii* var. *menziesii*).

### *Disturbed Wetland*

This community is typically dominated by exotic wetland species that have likely become established following previous disturbance(s), although it may also contain native species. The composition of disturbed wetland is highly variable based on the hydrology, soils, and type and frequency of disturbance. Species present in this habitat within the study area include rabbitfoot grass, curly dock (*Rumex crispus*), giant reed, bristly ox-tongue, cockle-bur (*Xanthium strumarium*), umbrella sedge, common celery (*Apium graveolens*), Bermuda grass (*Cynodon dactylon*), and poison hemlock (*Conium maculatum*).

### *Streambed/Open Water*

Streambed/open water habitat includes unvegetated drainages with a natural bottom. Areas mapped as open water either support perennial surface flows, or were inundated at the time of mapping.

### *Beach Habitat*

The beach community refers to the expanse of sandy substrate between mean tide and the foredune or, in the absence of a foredune, to the furthest inland reach of storm waves. The beach is characterized by a maritime climate, high exposure to salt spray and sand blast, and a shifting sandy substrate with low water-holding capacity and low organic matter content. Beach steepness, height, and width are affected by wave height, tidal range, sand grain size and supply. California's beaches tend to be relatively low and narrow. The lower half of the beach is relatively bare of plants, while the upper half is thinly vegetated with herbaceous perennials (Barbour and Johnson 1977). Beach vegetation exhibits a zonation of species from the tide line back to the foredune. In general, the number of species and total plant cover increases inland along this gradient. Species zonation is correlated with tolerance of salt spray, wave inundation, and soil salinity (Barbour and DeJong 1977). Common plant species within this vegetation community typically consist of sea rocket, beach evening primrose, beach-bur (*Ambrosia chamiossonis*), and beach morning-glory (*Calystegia soldanella*; Beauchamp 1986).

### *Vernal Pools*

Vernal pools are a highly specialized plant habitat that support a unique flora. Vernal pools are associated with two important physical conditions: a subsurface hardpan or claypan that inhibits the downward percolation of water and a topography characterized by a series of low hummocks called mima mounds and low depressions (the vernal pools) which prevents above ground water runoff. As the result of these two physical conditions, water collects in these depressions during

the rainy season. As the rainy season ends and the dry season begins, the water that has collected in these vernal pools is gradually evaporated. As water evaporates from these pools a gradient of low soil water availability to high soil water availability is created from the periphery of the pool margins to the center of the pool. The chemical composition of the remaining pool water becomes more concentrated as the pool water is evaporated creating a gradient of low ion concentration at the pool periphery to high ion concentration at the pool center. A temporal succession of plant species will occur at the receding pool margins, depending upon the physical and chemical microenvironmental characteristics of the pool. Vernal pools in a wet year will have a high proportion of native species that are endemic to this habitat. During these years the exotic, ruderal species, characteristic of the non-native grasslands that occur on the surrounding mima mounds, will not invade these pools unable to tolerate the physiological conditions of this ephemeral pool. In years of scarce rainfall that is insufficient to saturate the soil and create a surface pool, the native endemic flora will not germinate and the pool will be invaded by the exotic species. Typical vernal pool species include San Diego button celery (*Eryngium aristulatum* var. *parishii*), Prostrate navarretia (*Navarretia fossails*), California Orcutt grass (*Orucctia californica*), San Diego mesa mint (*Pogogyne abramsii*), Otay Mesa mint (*Pogogyne nudiuscula*), San Diego fairy shrimp (*Branchinecta sandiegoensis*), and Riverside fairy shrimp (*Streptocephalus woottonii*).

## **Botanical and Zoological Resources**

### Botanical Resources-Flora

San Diego County has the highest floristic diversity of any county in the continental United States and the City of San Diego hosts the highest floristic diversity of any city in the county. The diversity of the City is attributable both to its size and the diverse array of habitats that it includes. Among the most floristically diverse regions of the City are coastal canyons that support remnants of previously more common scrub communities. In a general sense, the diversity of the City's flora decreases away from the coast and to the north; such that the highest floristic diversity in the City is observed in the southwestern regions while the lowest floristic diversity is found in the northeastern portions of the City. Over the past century, the native flora of the City has been increasingly impacted. This has occurred as a result of rapidly changing land uses that have led to the loss of much of the region's native habitat, particularly on the immediate coast and over the flat coastal plains. In addition there has been a continued degradation of the remaining natural areas by intensifying recreational pressures, alteration of fire conditions, and perhaps most importantly, the expansion of invasive exotic plant species. As a result of these historic impacts, the flora with the highest affinity for coastal environments has been tremendously diminished within the City and only remnant representatives of the original floral diversity remain along the coastal fringe and within urban canyons. Conversely, the data are too coarse to include smaller drainages that may be found via field surveys.

### Zoological Resources-Fauna

The City is located within a coastal plain largely developed with urban and agricultural uses, but still retains a network of undeveloped canyonlands. Such development now limits the extent and connectivity of the wildlife habitat; however, the identified native vegetation communities, and to



some extent the non-native categories, support a number of locally common, as well as sensitive species. The following text discusses many of the faunal (animal) groups occurring within the City limits. Faunal species are discussed in a regional context; therefore, existing site-specific conditions may differ from this more generic coverage. Sensitive species are not specifically discussed in the initial summaries, since they are addressed in more detail later in this section.

### *Invertebrates*

Limited cohesive information is available to provide a thorough description of the many invertebrate fauna found within the region; however, the range of butterfly species and vernal pool branchiopods has been fairly well documented within the City. Butterfly species occur in a wide range of habitats; including sage scrub and chaparral, open areas devoid of substantial shrub cover such as non-native grasslands and agricultural/disturbed land, as well as more densely vegetated areas such as riparian habitat and oak woodlands. These habitats provide various host-specific plants suitable for larval development, adult nectar resources; as well as topographical features, such as hilltops or open ground that aid in courtship and mating. In contrast, vernal pool branchiopods are strongly restricted to vernal pool habitat, and consequently, many of these species are considered to be sensitive.

### *Fishes*

Insufficient information exists to provide a complete description of the freshwater fish associations found within the City. While fish species within the various reservoirs are fairly well known, fish occurring along the City's streams are not well documented. The only native freshwater fish species potentially present within the study area is an almost extinct race of steelhead trout (*Oncorhynchus mykiss*) that once spawned in some of the larger stream systems of Southern California. Within the City, this species once occurred in such drainages as the San Diego River and Rose Creek; however, it was extirpated (exterminated) in the middle of the last century. The freshwater fish community occurring in the area's reservoirs and streams are presently believed to consist exclusively of exotic species that have been introduced at various times over the past two centuries to provide game fish and a forage base. Fish species found in the City include largemouth bass, a number of centrarchid sunfish, bluegill, black crappie, threadfin shad, several catfish, rainbow trout, carp and goldfish, several minnows, and the ubiquitous mosquitofish (*Gambusia affinis*). While most of the established fish populations are found in association with the major reservoirs and deeper ponds along perennial streams and rivers in the City, mosquitofish have been introduced in nearly every freshwater body as a biotic control of mosquitos.

### *Amphibians*

Amphibians typically occur in riparian habitats with peripheral upland vegetation. Riparian ecosystems often provide temporary ponding water used as breeding habitat by various amphibious species, as well as abundant vegetation for cover and foraging. Amphibians will also create burrows in adjacent upland habitats, such as sage scrub and non-native grasslands, where they will aestivate (or spend time in a dormant state, similar to hibernation). Amphibian species known or with a potential to occur in the San Diego region include the garden slender salamander

(*Batrachoseps major*), arboreal salamander (*Aneides lugubris*), western toad (*Bufo boreas*), California chorus frog (*Pseudacris cadaverina*), Pacific chorus frog (*Pseudacris regilla*), and the bullfrog (*Rana catesbeiana*), a non-native species. Two sensitive species, the western spadefoot toad (*Scaphiopus hammondi*) and arroyo toad (*Bufo californicus*) also occur within the City at a few locations.

### Reptiles

Relatively uncommon in coastal canyons and other ESL is the western whiptail lizard (*Cnemidophorus tigris*); a species more typically seen in the inland arid foothill region. In contrast, the sensitive orangethroat whiptail (*Cnemidophorus hyperythrus*), which has a sporadic but widespread range in coastal San Diego County, is locally common within areas of native vegetation, including peripheral wetlands habitat. Western fence lizards (*Sceloporus occidentalis*) and side-blotched lizards (*Uta stansburiana*) are common to abundant in open areas throughout the City's canyons. Southern alligator lizards (*Elgaria multicarinata*) are regularly found in ecotonal habitat on the periphery of residential areas. Expected to occur occasionally in open, sandy habitat in areas of sage scrub is the coast horned lizard (*Phrynosoma coronatum blainvillei*). This lizard needs an abundant supply of ants as a food source, and is heavily predated upon by feral cats and pet collecting children.

Western pond turtle (*Clemmys marmorata*) are known to occur in many stock ponds and riverine pools within the City's canyon, but are now extirpated from most of their natural habitats. The pond slider (*Chrysemys scripta*) is an introduced species that is also found regionally. This large aquatic turtle is native to the eastern United States and various areas of Mexico.

The western rattlesnake (*Crotalus viridis helleri*) is commonly found within the canyons of the City and is most often encountered along the riparian fringe of urban canyons. During the summer months, this species often moves up to irrigated yards along canyon crests where it is often killed. While regionally common, this snake is being depleted in more urbanized areas. The larger ponds and marsh areas along the major rivers are particularly suitable to the requirements of the two-striped aquatic garter snake (*Thamnophis hammondi*). This species has been historically observed in many of these wetlands regionally.

Common reptiles such as the gopher snake (*Pituophis melanoleucus*), the coachwhip (*Masticophis flagellum*), the California striped racer (*Masticophis lateralis*), and common kingsnake (*Lampropeltis getulus*) occur within many of the region's canyons. Herpetologist Lawrence Klauber's field notes (unpublished/undated) from the first half of the 20<sup>th</sup> century include a variety of canyon sightings for now locally uncommon or infrequently observed species such as the glossy snake (*Arizona elegans*), the ringneck snake (*Diadophis punctatus*), the night snake (*Hypsiglena torquata*), and the long-nosed snake (*Rhinocheilus lecontei*). These species are likely depleted from the levels noted by Klauber.

Numerous species of lizards and snakes use rock crevices for cover within sage scrub and open chaparral habitat, and feed on small insects and insect larvae among the leaf litter. Other species are found in grasslands and agricultural/disturbed land, or in riparian areas and hunt small rodents. Quality reptilian habitat, primarily consisting of sage scrub, rocky outcrops, chaparral and oak

woodland, is still located at many canyon sites; however, the small patch size available for various species makes local population extirpations increasingly more difficult to deter.

### *Birds*

Over four hundred species of birds have been reported within the environs of the City, supporting some of the highest avian diversity in the United States. Both yellow-breasted chats (*Icteria virens*) and yellow warbler (*Dendroica petechia*) also nest locally in this habitat. Also noteworthy due to its sensitive status is the California gnatcatcher (*Polioptila californica*). There are many historical sightings of this gnatcatcher in open space, privately owned lands and on other sensitive lands.

A number of common birds, which nest in riparian woodland or adjacent sage scrub uplands in San Diego County, are known to nest in the City's canyons and other ESL. These include the Anna's hummingbird (*Calypte anna*), black-chinned hummingbird (*Archilochus alexandri*), mourning dove (*Zenaida macroura*), great horned owl (*Bubo virginianus*), burrowing owl (*Athene cunicularia*), black phoebe (*Sayornis saya*), cliff swallow (*Hirundo pyrrhonota*), common raven (*Corvus corax*), bushtit (*Psaltriparus minimus*), house finch (*Carpodacus mexicana*), black-headed grosbeak (*Pheucticus melanocephalus*), spotted towhee (*Pipilo maculatus*), California towhee (*Pipilo crissalis*), red-winged blackbird (*Agelaius phoeniceus*), tricolored blackbird (*Agelaius tricolor*), phainopepla (*Phainopepla nitens*), ash-throated flycatcher (*Myiarchus cinerascens*), orange-crowned warbler (*Vermivora celata*), common yellowthroat (*Geothlypis trichas*), song sparrow (*Melospiza melodia*), hooded oriole (*Icterus cucullatus*), northern oriole (*Icterus galbula*), lesser goldfinch (*Carduelis psaltria*), and American goldfinch (*Carduelis tristis*). Many other birds, primarily migrants and winter visitors, use the riparian trees as they pass through the coastal lowlands to and from their breeding grounds to the north and south. Migrant songbirds from the Emberizidae family found in spring include Nashville warbler (*Vermivora ruficapilla*), black-throated gray warbler (*Dendroica nigrescens*), hermit warbler (*Dendroica occidentalis*), Townsend's warbler (*Dendroica townsendi*), MacGillivray's warbler (*Oporornis tolmiei*), and Wilson's warbler (*Wilsonia pusilla*).

Some species of waterfowl more typically found in large bays and ponds occur seasonally and sporadically in coastal canyon wetlands and on the City's reservoirs. These include lesser scaup (*Aythya affinis*), bufflehead (*Bucephala albeola*), northern pintail (*Anas acuta*), ruddy duck (*Oxyura jamaicensis*), eared grebe (*Podiceps nigricollis*), Clark's grebe (*Aechmophorus clarki*), western grebe (*Aechmophorus occidentalis*), northern shoveler (*Anas clypeata*), canvasback (*Aythya valisineria*), and redhead (*Aythya americana*). Other species detected that are often associated with freshwater marshes and ponds include pied-billed grebe (*Podilymbus podiceps*), green-winged teal (*Anas crecca*), cinnamon teal (*Anas cyanoptera*), sora rail (*Porzana carolina*), common moorhen (*Gallinula chloropus*), and American coot (*Fulica americana*).

Some avian species such as the greater roadrunner (*Geococcyx californianus*) are now rarely observed in the City open space. These large ground-dwelling cuckoos are becoming less and less common in coastal Southern California as their open scrubland habitat is developed.

Numerous birds of prey still regularly use open space for hunting. These include white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), red-tailed hawk (*Buteo jamaicensis*),

sharp-shinned hawks (*Accipiter striatus*), merlin (*Falco columbarius*), golden eagle (*Aquila chrysaetos*), peregrine falcon (*Falco peregrinus*), Cooper's hawk (*Accipiter cooperii*), American kestrel (*Falco sparverius*), and red-shouldered hawk (*Buteo lineatus*).

Native and non-native vegetation communities provide habitat for numerous species of resident and migratory birds. A number of common avian species breed within sage scrub and chaparral habitats, and forage among the leaf litter in the vegetative understory. Rocky outcrops, particularly on undisturbed slopes or peaks can provide significant perching or roosting sites for raptors; and grasslands and agricultural lands located adjacent to woodland areas provide significant foraging habitat for resident, wintering and migrant raptors. Avian diversity and abundance is substantial within riparian and oak woodland habitats. These habitats are comprised of several horizontal niches including canopy, shrub, herb, and ground, which provide a network of valuable roosting, foraging and breeding areas for birds. Quality avian habitat within the City is concentrated where the vegetation is less disturbed and provides habitat connectivity; however, the various creeks and tributaries within the City also provide some measure of habitat connectivity, and potential avian breeding and foraging areas.

### *Mammals*

Without trapping, the presence of mammal species must be discerned through habitat suitability, species range and biological records. Many mammals are nocturnal and secretive, and indirect signs for a number of species, particularly rodents, can be similar. Small mammal species typically occur in sage scrub, chaparral, grasslands and agricultural/disturbed areas, and several of these species will intermittently use riparian and woodland habitats for foraging and cover. Various species of bats will also forage in grasslands and woodland habitats. Larger mammals often require greater blocks of connected habitat for hunting and travel within their range. Quality habitat for small mammal species is generally located throughout the study area, but as with reptiles, small remaining patch size can undercut the ability of some species populations to survive in open space.

Despite the extensive urban development within the City core, a number of regionally common mammals still reside within City open space and other now often isolated pockets of remaining native vegetation. Included are coyote, desert cottontail, California ground squirrel, Virginia opossum, and striped skunk.

### Threatened, Endangered, Endemic and Sensitive or MSCP Covered Species

#### *Sensitive Flora*

Table 5.1-2, *Potential Presence and Status of Local Special Status Plant Species*, summarizes the sensitive plant species that could be affected by the proposed project. Sensitive plants include those listed in the database maintained by the USFWS, CDFW, the California Native Plant Society (CNPS), and the City.

**Table 5.1-2  
POTENTIAL PRESENCE AND STATUS OF LOCAL SPECIAL STATUS PLANT SPECIES**

Scientific Name	Common Name	Habitat	Federal Status	California Status	CNPS List	MSCP Covered
<i>Convolvulus simulans</i>	small-flowered morning glory	Chprl (openings)	None	None	4	Not covered
<i>Cordylanthus orcuttianus</i>	Orcutt's bird's-beak	CoScr	None	None	2	Covered
<i>Corethrogyne filaginifolia</i> var. <i>incana</i>	Point Loma sand aster	Chprl	None	None	1B	Not Covered
<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>	Del Mar sand aster	CoScr, Chprl, VFGrs	None	None	1B	Covered
<i>Deinandra conjugens</i>	Otay tarplant	VFGrs	FT	SE	1B	Covered NE
<i>Dichondra occidentalis</i>	western dichondra	Chprl, CoScr	None	None	4	Not covered
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	Blochman's dudleya	CoScr	FSC	SE	1B	Covered NE
<i>Dudleya variegata</i>	variegated dudleya	CoScr	None	None	1B	Covered NE
<i>Dudleya viscida</i>	sticky dudleya	Chprl, CoScr (steep north facing slopes)	None	None	4	Covered
<i>Euphorbia misera</i>	cliff spurge	CoScr	None	None	2	Not covered
<i>Ferocactus viridescens</i>	San Diego barrel cactus	Chprl, CoScr	FSC	None	2	Covered
<i>Fritillaria biflora</i> var. <i>biflora</i>	chocolate lily	Chprl, CoScr, VFGrs/clay	None	None	Unlisted	Not covered
<i>Githopsis diffusa</i> ssp. <i>filicaulis</i>	mission canyon blue-cup	Chprl (openings)	None	None	3	Not covered

**Table 5.1-2 (cont.)  
POTENTIAL PRESENCE AND STATUS OF LOCAL SPECIAL STATUS PLANT SPECIES**

Scientific Name	Common Name	Habitat	Federal Status	California Status	CNPS List	MSCP Covered
<i>Harpagonella palmeri</i>	Palmer's grappling hook	Chprl, CoScr, VFGrs/clay	None	None	4	Not covered
<i>Hazardia orcuttii</i>	Orcutt's hazardia	Chprl	None	Candidate	1B	Not covered
<i>Holocarpha virgata</i>	graceful tarplant	VFGrs	None	None	4	Not covered
<i>Horkelia truncata</i>	Ramona horkelia	Chprl, CmWld/ clay	None	None	1B	Not covered
<i>Isocoma menzeisii</i> var. <i>decumbens</i>	decumbent goldenbush	CoScr	None	None	1b	Not covered
<i>Lepechinia cardiophylla</i>	Gander's pitcher sage	Chprl	None	None	1B	Covered
<i>Machaeranthera juncea</i>	rush-like bristleweed	Chprl, CoScr	None	None	4	Not covered
<i>Microseris douglasii</i>	small-flowered microseris	VFGrs (clay)	None	None	4	Not Covered
<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	felt-leaved monardella	Chprl	None	None	1B	Covered
<i>Muilla clevelandii</i>	San Diego goldenstar	Chprl, CoScr (openings)	None	None	1B	Covered
<i>Acanthomintha ilicifolia</i>	San Diego thorn-mint	Chprl, CoScr, VFGrs, /clay	FT	SE	1B	Covered NE
<i>Adolphia californica</i>	California adolphia	Chprl, CoScr	None	None	2	Not Covered
<i>Agave shawii</i>	Shaw's agave	CoScr	None	None	2	Covered NE
<i>Ambrosia pumila</i>	San Diego ambrosia	CoScr, RpWld	FE	None	1B	Covered NE
<i>Aphanisma blitoides</i>	aphanisma	CoScr	None	None	1B	Covered NE

**Table 5.1-2 (cont.)  
POTENTIAL PRESENCE AND STATUS OF LOCAL SPECIAL STATUS PLANT SPECIES**

Scientific Name	Common Name	Habitat	Federal Status	California Status	CNPS List	MSCP Covered
<i>Arctostaphylos glandulosa</i> <i>ssp. crassifolia</i>	Del Mar manzinita	Chprl	FE	None	1B	Covered
<i>Arctostaphylos otayensis</i>	Otay manzinita	Chprl	FE	None	1B	Covered
<i>Astragalus deanei</i>	Dean's milk-vetch	CoScr, Chrpl	None	None	1B	Covered
<i>Astragalus tener</i> var. <i>titi</i>	coastal dunes milk-vetch	Dunes	FE	SE	1B	Covered NE
<i>Baccharis vanessae</i>	Encinitas baccharis	Chprl (sandstone)	FT	SE	1B	Covered NE
<i>Bergerocactus emoryi</i>	goldenspined cereus	CoScr, Chprl	None	None	2	Not Covered
<i>Brodiaea orcutti</i>	Orcutt's brodiaea	CCFrS, Chprl, CmWld, edws, FGrs, clay	None	None	1B	Covered
<i>Calamagrostis</i> <i>koelerioides</i>	dense reed grass	Chprl	None	None	None	Covered
<i>Calochortus dunnii</i>	Dunn's mariposa lily	Chprl	None	SR	1B	Covered
<i>Caulanthus stenocarpus</i>	slender pod jewelflower	Chprl, CoScr	None	SR	None	Covered
<i>Ceanothus cyaneus</i>	lakeside ceanothus	Chprl	None	None	1B	Covered
<i>Ceanothus verrucosus</i>	wart-stemmed ceanothus	Chprl	FSC	None	2	Covered
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	VFGrs	None	None	1B	Not covered
<i>Chamaebatia australis</i>	southern mountain misery	Chprl	None	None	4	Not covered
<i>Chorizanthe orcuttiana</i>	Orcutt's spineflower	CoScr	FE	SE	1B	Covered

**Table 5.1-2 (cont.)  
POTENTIAL PRESENCE AND STATUS OF LOCAL SPECIAL STATUS PLANT SPECIES**

Scientific Name	Common Name	Habitat	Federal Status	California Status	CNPS List	MSCP Covered
<i>Comarostaphylis diversifolia</i> <i>ssp. diversifolia</i>	summer-holly	Chprl	None	None	1B	Not Covered
<i>Nolina interrata</i>	Dehesa bear-grass	Chprl	None	SE	1B	Covered
<i>Opuntia californica</i> var. <i>californica</i>	snake cholla	CoScr	None	None	1B	Covered NE
<i>Phacelia stellaris</i>	Brand's phacelia	CoScr, Dunes	None	None	1B	Not Covered
<i>Pinus torreyana</i>	Torrey pine	Coniferous Forest	None	None	1B	Covered
<i>Polygala cornuta</i> ssp. <i>fishiae</i>	Fish's milkwort	Chprl, CmWld, RpWld	None	None	4	Not covered
<i>Quercus dumosa</i>	Nuttall's scrub oak	Chprl	None	None	1B	Not covered
<i>Quercus engelmanni</i>	Engelmann oak	Chprl, CmWld, RpWld, VFGrs	None	None	4	Not covered
<i>Rosa minutiflora</i>	small-leaved rose	CoScr, Chprl	None	SE	2	Covered
<i>Satureja chandleri</i>	San Miguel savory	Chprl	None	None	1B	Covered
<i>Senecio ganderi</i>	Gander's butterweed	Chprl	None	SR	1B	Covered
<i>Solanum tenuilobatum</i>	narrow-leaved nightshade	Chprl	None	None	None	Covered
<i>Viguiera laciniata</i>	San Diego County viguiera	CoScr	None	None	4	Not covered

Source: City 2008b

FE = Federally Endangered, FT = Federally Threatened, FSC = Federal Species of Special Concern, SE = State Endangered, SR=State Rare, NE = Narrow Endemic Species; habitat codes are synonymous to those used in the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (Skinner and Pavlik 1994), including CCFrs = closed-cone conifer forest, Chprl = chaparral, CoScr = coastal scrub, CmWld = cismontane woodland, MshSw = marshes and swamps, Medws = meadows and seeps, RpWld = riparian woodland, VFGrs = valley and foothill grassland.



*Sensitive Fauna*

Table 5.1-3, *Potential Presence and Status of Local Special Status Animal Species*, summarizes the sensitive fauna species that could be affected by the proposed work. Sensitive animals include those listed in databases maintained by USFWS and CDFW.

<b>Table 5.1-3 POTENTIAL PRESENCE AND STATUS OF LOCAL SPECIAL STATUS ANIMAL SPECIES</b>					
<b>Scientific Name</b>	<b>Common Name</b>	<b>Habitat</b>	<b>Federal Status</b>	<b>California Status</b>	<b>MSCP Covered</b>
<i>Euphydryas editha quino</i>	Quino checkerspot butterfly	Open grassland and openings within shrub habitats that support Dwarf Plantain ( <i>Plantago erecta</i> )	FE	SA	None
<i>Lycaena hermes</i>	Hermes copper	Openings in chaparral, associated with the larval host plant Spiny Redberry ( <i>Rhamnus crocea</i> ), adults feed on nectar from Flat-top Buckwheat	FSC	SA	None
<i>Danaus plexippus</i>	monarch butterfly	Migratory concentrations found on trees	None	None	None
<i>Bufo californicus</i>	southwestern arroyo toad	Shallow pools, open sand, and gravel flood terraces of intermittent to perennial streams; may also occupy adjacent upland communities within 1.2 km	FE	CSC, Protected	Covered
<i>Scaphiopus hammondi</i>	western spadefoot toad	Prefers sandy or gravelly soil in grasslands, sage scrub, open chaparral, and pine-oak woodlands; grasslands with shallow temporary pools are optimal	FSC	CSC, Protected	None
<i>Phrynosoma coronatum blainvillii</i>	San Diego horned lizard	Chaparral, sage scrub, oak woodlands, and grasslands; sometimes occurs along seldom used dirt paths where native ant species are prevalent	FSC	CSC, Protected	Covered

**Table 5.1-3 (cont.)  
POTENTIAL PRESENCE AND STATUS OF LOCAL  
SPECIAL STATUS ANIMAL SPECIES**

<b>Scientific Name</b>	<b>Common Name</b>	<b>Habitat</b>	<b>Federal Status</b>	<b>California Status</b>	<b>MSCP Covered</b>
<i>Eumeces skiltonianus interparietalis</i>	Coronado skink	Variety of habitats including grasslands, sage scrub, and various woodlands including oak, pine, juniper, and riparian	FSC	CSC	None
<i>Cnemidophorus hyperythrus</i>	orangethroat whiptail	Sage scrub (and chaparral), prefers sandy areas with patches of brush and rocks; may be associated with buckwheat and Black Sage	FSC	CSC, Protected	Covered
<i>Anniela pulchra pulchra</i>	silvery legless lizard	Shows a preference for leaf litter and sandy substrates	FSC	CSC	Not covered
<i>Cnemidophorus tigris multiscutatus</i>	coastal western whiptail	Coastal sage scrub, chaparral, and grasslands	FSC	SA	None
<i>Salvadora hexalepis virgultea</i>	coast patch-nosed snake	Chaparral and sage scrub; may require mammal burrows or woodrat nests for overwintering	FSC	CSC, Protected	None
<i>Diadophis punctatus similis</i>	San Diego ringneck snake	Chaparral, forest, and grasslands	None	SA	None
<i>Lichanura trivirgata roseofusca</i>	coastal rosy boa	Rocky outcrop areas within chaparral and sage scrub	FSC	SA	None

**Table 5.1-3 (cont.)  
POTENTIAL PRESENCE AND STATUS OF LOCAL  
SPECIAL STATUS ANIMAL SPECIES**

<b>Scientific Name</b>	<b>Common Name</b>	<b>Habitat</b>	<b>Federal Status</b>	<b>California Status</b>	<b>MSCP Covered</b>
<i>Crotalus ruber ruber</i>	northern red diamond rattlesnake	Occupies rocky outcrops and areas of heavy brush or rugged terrain in chaparral, sage scrub, or desert scrub on both coastal and desert slopes, usually below 4000 feet	FSC	CSC	None
<i>Cathartes aura</i>	turkey vulture	Open habitats with protected large trees and snags	FSC	CSC	None
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	Found in Coastal sage scrub	FSC	CSC	None
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	Chaparral, particularly abundant in areas of rock outcrops	FSC	CSC	None
<i>Myotis yumanensis</i>	Yuma myotis	Uses multiple habitats (primarily woodlands and forests) but forages over water	FSC	CSC	None
<i>Myotis evotis</i>	long-eared myotis	Uses multiple habitats for roosting (mainly crevices), forages in oak/coniferous forests, and may require water. As with many bat species in the region, little information is available on microhabitat use	FSC	None	None
<i>Myotis thysanodes</i>	fringed myotis	Uses multiple habitats for roosting (mainly crevices), feeds in coniferous forests	FSC	None	None
<i>Myotis volans</i>	long-legged myotis	Uses multiple habitats for roosting (mainly crevices), feeds in coniferous forests	FSC	None	None

**Table 5.1-3 (cont.)  
POTENTIAL PRESENCE AND STATUS OF LOCAL  
SPECIAL STATUS ANIMAL SPECIES**

<b>Scientific Name</b>	<b>Common Name</b>	<b>Habitat</b>	<b>Federal Status</b>	<b>California Status</b>	<b>MSCP Covered</b>
<i>Myotis ciliolabrum</i>	small-footed myotis	Uses a variety of habitats, prefers open stands in forests/woodlands, brushy habitats, and riparian areas	FSC	None	None
<i>Euderma maculatum</i>	spotted bat	Roosts in high rocky cliffs, forages in riparian and edge habitats	FSC	CSC	None
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	Cave rooster, feeds in forest/woodland habitats or along habitat edges within 15 km of roost site	FSC	CSC	None
<i>Antrozous pallidus</i>	pallid bat	Uses open forest and grassland habitats for feeding and multiple habitats for roosting	None	CSC	None
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat	Cliff rooster, feeds in multiple habitats	None	CSC	None
<i>Nyctinomops macrotis</i>	big free-tailed bat	Cliff rooster, prefers rugged, rocky canyons, feeds in multiple habitats including over water	None	CSC	None
<i>Eumops perotis</i>	western mastiff bat (see California mastiff bat in text)	Extensive open areas with abundant roost locations in rock outcrops, (found where oaks and chaparral occur)	FSC	CSC	None
<i>Elanus leucurus</i>	white-tailed kite	Grasslands, agricultural fields, and open habitats with areas of dense deciduous trees for nesting	None	SA, Fully Protected	None

**Table 5.1-3 (cont.)  
POTENTIAL PRESENCE AND STATUS OF LOCAL  
SPECIAL STATUS ANIMAL SPECIES**

<b>Scientific Name</b>	<b>Common Name</b>	<b>Habitat</b>	<b>Federal Status</b>	<b>California Status</b>	<b>MSCP Covered</b>
<i>Aquila chrysaetos</i>	golden eagle	Nests in cliffs (or trees), found in generally mountainous or hilly terrain	None	CSC, Fully Protected	Covered
<i>Falco peregrinus anatum</i>	American peregrine falcon	Forages near coast	FE	CE	Covered
<i>Accipiter striatus</i>	sharp-shinned hawk	Mixed woodlands near open areas, prefers but not restricted to riparian habitats	None	CSC	None
<i>Circus cyaneus</i>	northern harrier	Forages over marsh and open terrain	None	CSC	Covered
<i>Buteo regalis</i>	ferruginous hawk	Dry, open terrain	FSC	CSC	Covered
<i>Lanius ludovicianus</i>	loggerhead shrike	Found within grassland or open habitats with bare ground and sparse shrub and/or tree cover for nesting and perching	FSC	CSC	None
<i>Eremophila alpestris actia</i>	California horned lark	Grasslands, disturbed areas and open habitats with sparse, low vegetation	None	CSC	None
<i>Speotyto cunicularia hypugaea</i>	burrowing owl	Hunts open terrain generally with burrow at a slight elevational rise	None	CSC	Covered
<i>Polioptila californica californica</i>	California gnatcatcher	Various successional stages of sage scrub	FT	CSC	Covered
<i>Sialia mexicana</i>	western bluebird	Open woodlands, farmlands, and orchards	None	None	Covered
<i>Campylorhynchus brunneicapillus cousei</i>	coastal cactus wren	Areas of sage scrub with robust stands of prickly pear and cholla	None	CSC	Covered

**Table 5.1-3 (cont.)  
POTENTIAL PRESENCE AND STATUS OF LOCAL  
SPECIAL STATUS ANIMAL SPECIES**

<b>Scientific Name</b>	<b>Common Name</b>	<b>Habitat</b>	<b>Federal Status</b>	<b>California Status</b>	<b>MSCP Covered</b>
<i>Aimophila ruficeps canescens</i>	Southern California rufouscrowned sparrow	Rocky hillsides supporting sparse, low scrub or chaparral, sometimes mixed with grasses	FSC	CSC	Covered
<i>Amphispiza belli belli</i>	Bell's sage sparrow	Chaparral and dense sage scrub	FSC	CSC	None
<i>Ammodramus savannarum</i>	grasshopper sparrow	Grasslands and pastures	None	SA	None
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	Relatively open chaparral and sage scrub and grasslands	FSC	CSC	None
<i>Perognathus longimembris pacificus</i>	Dulzura California pocket mouse	Found in areas of fine sandy ground, (Coastal sage scrub)	FSC	CSC	None
<i>Elanus leucurus</i>	white-tailed kite	Grasslands, agricultural fields, and open habitats with areas of dense deciduous trees for nesting	None	SA, Fully Protected	None
<i>Aquila chrysaetos</i>	golden eagle	Nests in cliffs (or trees), found in generally mountainous or hilly terrain	None	CSC, Fully Protected	Covered
<i>Aimophila ruficeps canescens</i>	Southern California rufouscrowned sparrow	Rocky hillsides supporting sparse, low scrub or chaparral, sometimes mixed with grasses	FSC	CSC	Covered

<b>Table 5.1-3 (cont.) POTENTIAL PRESENCE AND STATUS OF LOCAL SPECIAL STATUS ANIMAL SPECIES</b>					
<b>Scientific Name</b>	<b>Common Name</b>	<b>Habitat</b>	<b>Federal Status</b>	<b>California Status</b>	<b>MSCP Covered</b>
<i>Amphispiza belli belli</i>	Bell's sage sparrow	Chaparral and dense sage scrub	FSC	CSC	None
<i>Ammodramus savannarum</i>	grasshopper sparrow	Grasslands and pastures	None	SA	None
<i>Felis concolor</i>	mountain lion	Found in areas of extensive dense native vegetation	None	Calif. Regulated	Covered
<i>Odocoileus hemionus fuliginata</i>	southern mule deer	Found in areas of extensive dense native vegetation	None	Calif. Regulated	Covered
<i>Taxidea taxus</i>	American badger	Found in open grasslands on periphery of native vegetation	None	None	Covered
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	Relatively open chaparral and sage scrub and grasslands	FSC	CSC	None
<i>Perognathus longimembris pacificus</i>	Dulzura California pocket mouse	Found in areas of fine sandy ground, (Coastal sage scrub)	FSC	CSC	None

Source: City 2008b

FE = Federally Endangered, FT = Federally Threatened, FSC = Federal Species of Special Concern, SE = State Endangered,

SR = State Rare, ; habitat codes are synonymous to those used in the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (Skinner and Pavlik 1994), including CCFrs = closed-cone conifer forest, Chprl = chaparral, CoScr = coastal scrub, CmWld = cismontane woodland, MshSw = marshes and swamps, Medws = meadows and seeps, RpWld = riparian woodland, and VFGrs = valley and foothill grassland.

The specific conditions provided in Table 5.1-4, *Area Specific Management Directives for MSCP Covered Species: Plants*, and 5.1-5, *Area Specific Management Directives for MSCP Covered Species: Animals*, must be followed in order to assure the City's continued take coverage under the MSCP implementing agreement and take permit. The conditions were included in the MSCP Plan (Table 3-5) and the City of San Diego MSCP Subarea Plan (Appendix A). Four MSCP covered plant species are not included in Table 5.1-4. Otay manzanita was not included in Appendix A, Del Mar Manzanita has no area specific management directives, and Dean's milk vetch and Orcutt's spineflower are listed in Appendix A as having unknown conservation levels and therefore not covered by the plan.

**Table 5.1-4  
AREA SPECIFIC MANAGEMENT DIRECTIVES FOR MSCP COVERED SPECIES: PLANTS**

<i>Scientific Name</i>	<b>Common Name</b>	<b>Condition(s) of Coverage</b>
<i>Acanthomintha ilicifolia</i>	San Diego Thorn-Mint	Area specific management directives (ASMD) and the Specific Area Plan SPA for the Otay Lakes Resort area must include specific measures to protect against detrimental edge effects from the surrounding development.
<i>Agave shawii</i>	Shaw's agave	ASMD must include specific measures to protect against detrimental edge effects.
<i>Ambrosia pumila</i>	San Diego ambrosia	If more than 10 percent of the populations at the Mission Trails Regional Park is impacted, this species will no longer be a covered species. ASMD must include monitoring of transplanted populations, and specific measures to protect against detrimental edge effects.
<i>Aphanisma blitoides</i>	Aphanisma	None
<i>Astragalus tener var. titi</i>	Coastal dunes milk vetch	ASMD must provide for reintroduction opportunities, identify potential reintroduction sites, and include measures to prevent non-native species introductions. Any newly found population shall be evaluated for inclusion in the preserve strategy through acquisition, like exchange, etc.
<i>Baccharis vanessae</i>	Encinitas baccharis	Based on Best Management Practices, area specific management directives must include specific management measures to address the autecology and natural history of the species and to reduce the risk of catastrophic fire; and appropriate male/female plant ratios. Management measures to accomplish this may include prescribed fire.
<i>Brodiaea filifolia</i>	Thread-leaved brodiaea	None
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	The San Vicente population is identified as a critical population in the County's Subarea Plan and must be 100 percent conserved. ASMD must include specific measures to protect against detrimental edge effects.
<i>Calamagrostis densa</i>	Dense reed grass	Trail maintenance/placement to avoid human impacts must be addressed in ASMD. Enhancement opportunities using prescribed fire should be evaluated in the management plans. ASMD must include specific management measures to address the autecology and natural history of the species and to reduce the risk of catastrophic fire .



**Table 5.1-4 (cont.)  
AREA SPECIFIC MANAGEMENT DIRECTIVES FOR MSCP COVERED SPECIES: PLANTS**

<i>Scientific Name</i>	<b>Common Name</b>	<b>Condition(s) of Coverage</b>
<i>Calochortus dunnii</i>	Dunn's mariposa lily	None
<i>Caulanthus stenocarpus</i>	Slender-pod jewelflower	Area specific management directives (ASMD) must include specific management measures to address the autecology and natural history of the species and to reduce the risk of catastrophic fire. Management measures to accomplish this may include prescribed fire.
<i>Ceanothus cyaneus</i>	Lakeside ceanothus	ASMD must include specific management measures to address the autecology and natural history of the species and to reduce the risk of catastrophic fire. Management measures to accomplish this may include prescribed fire.
<i>Ceanothus verrucosus</i>	Wart-stemmed ceanothus	Revegetation efforts within appropriate habitats must include restoration of this species. ASMD for the protected populations must include specific measures to increase populations. ASMD must include specific management measures to address the autecology and natural history of the species and to reduce the risk of catastrophic fire. Management measures to accomplish this may include prescribed fire. Any newly found populations should be evaluated for inclusion in the preserve strategy through acquisition, like exchange, etc.
<i>Cordylanthus maritimus</i> <i>ssp. Maritimus</i>	Salt marsh bird's beak	ASMD must (1) include measures to reduce threats and stabilize populations (e.g., relocation of footpaths, establishment of buffer areas, etc.), (2) address opportunities for reintroduction, and (3) include measures to enhance existing populations (e.g., protect and improve upland habitat for pollinators). There is a federal recovery plan for this species and management activities should to the extent possible help achieve the specified goals. Any newly found populations shall be evaluated for inclusion in the preserve strategy through acquisition, like exchange, etc.
<i>Cordylanthus orcuttianus</i>	Orcutt's bird's beak	At the time permit amendments are proposed, strategies to provide protection for this species within the amendment area must be included. (Take authorization amendments are subject to public review through CEQA and NEPA processes and require approval by CDFW and USFWS).

**Table 5.1-4 (cont.)  
AREA SPECIFIC MANAGEMENT DIRECTIVES FOR MSCP COVERED SPECIES: PLANTS**

<i>Scientific Name</i>	<b>Common Name</b>	<b>Condition(s) of Coverage</b>
<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>	Del Mar Mesa sand aster	ASMD for the protected populations must include specific measures to protect against detrimental edge effects to this species. ASMD must include specific management measures to address the autecology and natural history of the species and to reduce the risk of catastrophic fire. Management measures to accomplish this may include prescribed fire.
<i>Cupressus forbesii</i>	Tecate cypress	ASMD for the protected populations will include specific measures to maintain or increase populations. ASMD must include specific management measures to address the autecology and natural history of the species and to reduce the risk of catastrophic fire. Management measures to accomplish this may include prescribed fire.
<i>Dudleya blochmaniae</i> ssp. <i>Brevifolia</i>	Short-leaved dudleya	ASMD must include (1) specific measures to protect against detrimental edge effects to this species, (2) species-specific monitoring and (3) maintenance of surrounding habitat for pollinators.
<i>Dudleya variegata</i>	Variegated dudleya	ASMD must include species-specific monitoring and specific measures to protect against detrimental edge effects to this species, including effects caused by recreational activities. Some populations now occur within a major amendment area (Otay Mountain) and at the time permit amendments are proposed, strategies to provide protection for this species within the amendment area must be included. (Proposed take authorization amendments will have public review through CEQA and NEPA processes and require approval by CDFW and USFWS).
<i>Dudleya viscida</i>	Sticky dudleya	ASMD must address specific measures to protect against detrimental edge effects.
<i>Ericameria palmeri</i> ssp. <i>Palmeri</i>	Palmer's ericameria	None

**Table 5.1-4 (cont.)  
AREA SPECIFIC MANAGEMENT DIRECTIVES FOR MSCP COVERED SPECIES: PLANTS**

<i>Scientific Name</i>	<b>Common Name</b>	<b>Condition(s) of Coverage</b>
<i>Eryngium aristulatum</i> <i>var. parishii</i> <sup>1</sup>	San Diego button celery	ASMD must include specific measures to protect against detrimental edge effects.
<i>Erysimum ammophilum</i>	Coast wallflower	None
<i>Ferocactus viridescens</i>	San Diego barrel cactus	ASMD must include measures to protect this species from edge effects, unauthorized collection, and include appropriate fire management/control practices to protect against a too frequent fire cycle.
<i>Hemizonia conjugens</i>	Otay tarplant	MSCP coverage of this species requires avoidance of populations in the Otay River Valley through sensitive design and development of the active recreations area as described in the Otay Ranch Resource Management Plan (RMP) and General Development Plan (GDP). One of the seven major populations occurs within an amendment area (Proctor Valley). At the time permit amendments are proposed, strategies to provide protection for this species within the amendment area must be included (proposed take authorization amendments will be subject to public review through CEQA and NEPA processes and take authorization amendments require approval by CDFW and USFWS). ASMD must include specific measures for monitoring of populations and adaptive management of preserves (taking into consideration the extreme population fluctuations from year to year), and specific measures to protect against detrimental edge effects to this species.
<i>Lepechinia cardiophylla</i>	Hear-leaved pitcher sage	ASMD must include: (1) specific measures to protect against detrimental edge effects; (2) specific measures to promote increase of populations; and (3) specific management measures to address the autecology and natural history of the species and to reduce the risk of catastrophic fire (management measures to accomplish this may include prescribed fire).

<sup>1</sup> Vernal pool species. As of the date of surrender, April 20, 2010, the City has relinquished coverage and does not rely on the City's Federal ITP to authorize an incidental take of the two vernal pool animal species and five vernal pool plant species. Upon completion of a HCP for vernal pools, the City would enter into an Implementing Agreement in order to obtain species coverage and a Federal ITP for the seven vernal pool species. ASMD for the vernal pool species would be described in the forthcoming HCP.

**Table 5.1-4 (cont.)  
AREA SPECIFIC MANAGEMENT DIRECTIVES FOR MSCP COVERED SPECIES: PLANTS**

<i>Scientific Name</i>	<b>Common Name</b>	<b>Condition(s) of Coverage</b>
<i>Lepechinia ganderi</i>	Gander's pitcher sage	ASMD must include: (1) specific measures to protect against detrimental edge effects and uncontrolled access; (2) measures to promote the increase of populations; and (3) specific management measures to address the autecology and natural history of the species and to reduce the risk of catastrophic fire (management measure to accomplish this may include prescribed fire). One of the five major populations occurs within a major amendment area (Otay Mountain). At the time permit amendments are proposed, strategies to provide protection for this species within the amendment area must be included (proposed take authorization amendments are subject to public review through CEQA and NEPA processes and require approval by CDFW and USFWS).
<i>Lotus nuttallianus</i>	Nuttal's lotus	ASMD must include measures to protect against detrimental edge effects.
<i>Monardella hypoleuca</i> <i>ssp. lanata</i>	Felt-leaved monardella	ASMD must include measures to protect against detrimental edge effects and uncontrolled access.
<i>Monardella linoides</i> <i>ssp.</i> <i>viminea</i>	Willowy monardella	ASMD must include specific measures to protect against detrimental edge effects.
<i>Muilla clevelandii</i>	San Diego goldenstar	ASMD must include monitoring of the transplanted population(s), and specific measures to protect against detrimental edge effects to this species.
<i>Navarretia fossails</i> <sup>1</sup>	Prostrate navarretia	ASMD must include specific measures to protect against detrimental edge effects to this species, and must incorporate measures to conserve and maintain surrounding habitat for (1) pollinators and (2) as part of the hydrological system for the vernal pools.
<i>Nolina interrata</i>	Dehesa bear-grass	ASMD must include specific measures to protect against detrimental edge effects and management measures to maintain surrounding habitats for pollinators.

<sup>1</sup> Vernal pool species. As of the date of surrender, April 20, 2010, the City has relinquished coverage and does not rely on the City's Federal ITP to authorize an incidental take of the two vernal pool animal species and five vernal pool plant species. Upon completion of a HCP for vernal pools, the City would enter into an Implementing Agreement in order to obtain species coverage and a Federal ITP for the seven vernal pool species. ASMD for the vernal pool species would be described in the forthcoming HCP.

**Table 5.1-4 (cont.)  
AREA SPECIFIC MANAGEMENT DIRECTIVES FOR MSCP COVERED SPECIES: PLANTS**

<i>Scientific Name</i>	<b>Common Name</b>	<b>Condition(s) of Coverage</b>
<i>Opuntia parryi</i> var. <i>serpentina</i>	Snake cholla	ASMD must include specific measures to protect against detrimental edge effects to this species, and promote translocation opportunity where appropriate. The Otay Ranch project GDP and RMP require protection of 80 percent of existing occurrences, and transplantation of any impacted occurrences to restored areas of comparable size.
<i>Oruictia californica</i> <sup>1</sup>	California Orcutt grass	ASMD must include specific measures to protect against detrimental edge effects to this species and measures to maintain surrounding habitats for pollinators.
<i>Pinus torreyana</i>	Torrey pine	None
<i>Pogogyne abramsii</i> <sup>1</sup>	San Diego mesa mint	Preserve management plan must include measures to: (1) protect against detrimental effects; (2) maintain surrounding habitat for pollinators; and (3) maintain pool watershed areas.
<i>Pogogyne nudiuscula</i> <sup>1</sup>	Otay Mesa mint	Preserve management plan must include measures to: protect against detrimental edge effects; maintain surrounding habitat for pollinators; and maintain pool watershed areas.
		<p>The following conditions for small-leaved rose conservation are required in the CDFW 2081 as part of the California Terraces project:</p> <ol style="list-style-type: none"> <li>1. The rose population shall be salvaged, propagated, and transplanted to a new location that will support a healthy, reproducing population in perpetuity. This goal shall be achieved through a five year program that includes site improvement, propagation, transplantation, and monitoring. (a) The rose population shall be transplanted to a suitable open space preserve location on the Otay Mesa or to an alternative location subject to Department approval. Criteria in site selection shall include similar habitat, slope, aspect, soils, and hydrology as present on the existing rose site. (b) Propagation and transplanting of the rose population shall be implemented by a qualified native plant nursery/habitat restoration contractor (hereinafter Restoration Contractor), acceptable to the department, and under supervision of a qualified botanist. The rose propagation shall take place over a two year period. Rose plants to be extirpated shall be salvaged through: (i) seed</li> </ol>

<sup>1</sup> Vernal pool species. As of the date of surrender, April 20, 2010, the City has relinquished coverage and does not rely on the City's Federal ITP to authorize an incidental take of the two vernal pool animal species and five vernal pool plant species. Upon completion of a HCP for vernal pools, the City would enter into an Implementing Agreement in order to obtain species coverage and a Federal ITP for the seven vernal pool species. ASMD for the vernal pool species would be described in the forthcoming HCP.

**Table 5.1-4 (cont.)  
AREA SPECIFIC MANAGEMENT DIRECTIVES FOR MSCP COVERED SPECIES: PLANTS**

<i>Scientific Name</i>	<b>Common Name</b>	<b>Condition(s) of Coverage</b>
<i>Rosa minutifolia</i>	Small-leaved rose	<p>collection; (ii) preparation of cuttings from rose canes; and (iii) salvage of underground parts and transplantation. (d) Transplantation of the rose clone shall commence during the period of October-December 1997. The remaining rose clone shall be cut into a minimum of 200 clumps. Each clump possessing roots and de-caned stems shall be planted on the HM lands as prescribed by a qualified botanist.</p> <p>2. No removal of the rose population for a two (2) year period commencing from the date of planting propagated rose plants at the approved locations.</p> <p>3. The progress of the rose mitigation effort shall be assessed through measurements and observations for a period of at least five (5) years following implementation of rose transplantation commencing in December 1997 and ending in July 2002. Factors to be monitored shall include growth, survival and/or establishment rate of the species, presence of introduced weeds, erosion, effects of herbivores, and any other factors important to the success of the mitigation effort. Community structure and species diversity at the mitigation site shall also be assessed. (a) Transplant success criteria over a five (5) year period shall include: (i) measurable annual growth on a minimum of 50 percent of the rose plants; and (ii) flowering of 50 percent of the rose plants during a minimum of one flowering season. In the event that success criteria are not met, the project applicant shall implement remedial measures subject to department approval.</p>
<i>Santureja chandleri</i>	San Miguel savory	ASMD must include specific management measures to address the autecology and natural history of the species and to reduce the risk of catastrophic fire. Management measures to accomplish this may include prescribed fire. This species will be conserved at the 80+ percent level.
<i>Senecio ganderi</i>	Gander's butterweed	ASMD must include: (1) specific measures to protect against detrimental edge effects to this species; and (2) measures to address the autecology and natural history of the species.
<i>Solanum tenuilobatum</i>	Narrow-leaved nightshade	None
<i>Tetracoccus dioicus</i>	Parry's tetracoccus	ASMD must include specific measures to protect against detrimental edge effects to this species.

**Table 5.1-5  
AREA SPECIFIC MANAGEMENT DIRECTIVES FOR MSCP COVERED SPECIES: ANIMALS**

Scientific Name	Common Name	Condition(s) of Coverage
<b>INVERTEBRATES</b>		
<i>Mitoura throni</i>	Thorne's hairstreak butterfly	ASMD must manage for the host species (Tecate cypress). Management measures to accomplish this may include prescribed fire.
<i>Panoquina errans</i>	Salt marsh skipper	ASMD must include measures to: control exotic weeds and invertebrate predators (where appropriate), and control access to saltmarsh habitat.
<i>Branchinecta sandiegoensis</i> <sup>1</sup>	San Diego fairy shrimp	ASMD must include specific measures to protect against detrimental edge effects to this species.
<i>Streptocephalus woottonii</i> <sup>1</sup>	Riverside fairy shrimp	ASMD must include specific measures to protect against detrimental edge effects to this species.
<b>REPTILES AND AMPHIBIANS</b>		
<i>Bufo microscaphus californicus</i>	Arroyo southwestern toad	ASMD must address the maintenance of Arroyo toad through control of non-native predators, protection and maintenance of sufficient suitable low gradient sandy stream habitat (including appropriate water quality) to meet breeding requirements, and preservation of sheltering and foraging habitat within 1km of occupied breeding habitat within preserved lands. ASMD must include measures to control human impacts to the species within the preserve (e.g., public education, patrol, etc. ).
<i>Rana aurora draytoni</i>	California red-legged frog	ASMD must provide for management of any new discovered populations within the preserve.
<i>Clemmys marmorata pallida</i>	Southwestern pond turtle	Maintain and manage a 1500 foot area around known locations within the preserve lands for the species. Within this impact avoidance area, human impacts will be minimized, non-native species detrimental to pond turtles controlled/removed and habitat restoration/enhancement measures implemented.

<sup>1</sup> Vernal pool species. As of the date of surrender, April 20, 2010, the City has relinquished coverage and does not rely on the City's Federal ITP to authorize an incidental take of the two vernal pool animal species and five vernal pool plant species. Upon completion of a Habitat Conservation Plan (HCP) for vernal pools, the City would enter into an Implementing Agreement in order to obtain species coverage and a Federal ITP for the seven vernal pool species. Area Specific Management Directives for the vernal pool species would be described in the forthcoming HCP.

**Table 5.1-5 (cont.)**  
**AREA SPECIFIC MANAGEMENT DIRECTIVES FOR MSCP COVERED SPECIES: ANIMALS**

Scientific Name	Common Name	Condition(s) of Coverage
<b>REPTILES AND AMPHIBIANS (cont.)</b>		
<i>Cnemidophorus hyperythrus beldingi</i>	Orange-throated whiptail	ASMD must address edge effects.
<i>Phrynosoma coronatum blainvillei</i>	San Diego horned lizard	ASMD must include specific measures to maintain native ant species, discourage Argentine ant, and protect against detrimental edge effects to this species.
<b>BIRDS</b>		
<i>Pelecanus occidentalis californicus</i>	California brown pelican	None
<i>Egretta rufescens</i>	Reddish egret	None
<i>Plegadis chihi</i>	white-faced ibis	ASMD must include specific measures to protect against detrimental edge effects to this species.
<i>Branta canadensis</i>	Canada goose	None
<i>Haliaeetus leucocephalus</i>	Bald eagle	None
<i>Circus cyaneus</i>	Northern harrier	ASMD must: manage agricultural and disturbed lands (which become part of the preserve) within four miles of nesting habitat to provide foraging habitat; include an impact avoidance area (900 foot or maximum possible within the preserve) around active nests; and include measures of maintaining winter foraging habitat in preserve areas in Proctor Valley, around Sweetwater Reservoir, San Miguel Ranch, Otay Ranch east of Wueste Road, Lake Hodges, and San Pasqual Valley. The preserve management coordination group shall coordinate efforts to manage for wintering northern harriers' foraging habitat within the MSCP preserves.
<i>Accipiter cooperii</i>	Cooper's hawk	In the design of future projects within the Metro-Lakeside-Jamul segment, design of preserve areas shall conserve patches of oak woodland and oak riparian forest of adequate size for nesting and foraging habitat. ASMD must include 300-foot impact avoidance areas around the active nests, and minimization of disturbance in oak woodlands and oak riparian forests.
<i>Buteo swainsoni</i>	Swainson's hawk	None
<i>Buteo regalis</i>	Ferruginous hawk	None



**Table 5.1-5 (cont.)**  
**AREA SPECIFIC MANAGEMENT DIRECTIVES FOR MSCP COVERED SPECIES: ANIMALS**

Scientific Name	Common Name	Condition(s) of Coverage
<b>BIRDS (cont.)</b>		
<i>Aquila chrysaetos</i>	Golden eagle	ASMD for areas with nest sites must include measures to avoid human disturbance while the nest is active, including establishing a 4,000 foot disturbance avoidance area within preserved lands. ASMD must also include monitoring of nest sites to determine use/success.
<i>Falco peregrinus anatum</i>	American peregrine falcom	None
<i>Rallus longirostris levipes</i>	Light-footed clapper rail	ASMD must include active management of wetlands to ensure a healthy tidal saltmarsh environment, and specific measures to protect against detrimental edge effects to this species.
<i>Charadrius alexandrinus nivosus</i>	Western snowy plover	ASMD must include protection of nesting sites from human disturbance during the reproductive season, and specific measures to protect against detrimental edge effects to this species. Incidental take (during the breeding season) associated with maintenance/removal of levees/dikes is not authorized except as specifically approved on a case-by-case basis by the wildlife agencies.
<i>Charadrius montanus</i>	Mountain plover	Management Plans for the Tijuana River Valley should specifically address the habitat requirement for this species.
<i>Numenius americanus</i>	Long-billed curlew	None
<i>Sterna elegans</i>	Elegant tern	ASMD must include protection of nesting sites from human disturbance during reproductive season, and specific measures to protect against detrimental edge effects to this species. Incidental take (during the breeding season) associated with maintenance/removal of levees/dikes is not authorized except as specifically approved on a case-by-case basis by the wildlife agencies.

**Table 5.1-5 (cont.)**  
**AREA SPECIFIC MANAGEMENT DIRECTIVES FOR MSCP COVERED SPECIES: ANIMALS**

Scientific Name	Common Name	Condition(s) of Coverage
<b>BIRDS (cont.)</b>		
<i>Sterna antillarum browni</i>	California least tern	ASMD must include protection of nesting sites from human disturbance during reproductive season, predator control, and specific measures to protect against detrimental edge effects to this species. Incidental take (during the breeding season) associated with maintenance/removal of dikes/levees, beach maintenance/enhancement is not authorized except as specifically approved on a case-by-case basis by the wildlife agencies.
<i>Speotyto cunicularia hypugaea</i>	Burrowing owl	During the environmental analysis of proposed projects, burrowing owl surveys (using appropriate protocols) must be conducted in suitable habitat to determine if this species is present and the location of active burrows. If burrowing owls are detected, the following mitigation measures must be implemented: within the MHPA, impacts must be avoided; outside of the MHPA, impacts to the species must be avoided to the maximum extent practicable; any impacted individuals must be relocated out of the impact area using passive or active methodologies approved by the wildlife agencies; mitigation for impacts to occupied habitat (at the Subarea Plan specified ratio) must be through the conservation of occupied burrowing owl habitat or conservation of lands appropriate for restoration, management and enhancement of burrowing owl nesting and foraging requirements. Management plans/directives must include: enhancement of known, historical and potential burrowing owl habitat; and management for ground squirrels (the primary excavator of burrowing owl burrows). Enhancement measures may include creation of artificial burrows and vegetation management to enhance foraging habitat. Management plans must also include: monitoring of burrowing owl nest sites to determine use and nesting success; predator control; establishing a 300-foot-wide impact avoidance area (within the preserve) around occupied burrows. Eight known burrowing owl locations occur within major amendment areas of the South County Segment of the County Subarea Plan and the conservation of occupied burrowing owl habitat must be one of the primary factors preserve design during the permit amendment process.

**Table 5.1-5 (cont.)**  
**AREA SPECIFIC MANAGEMENT DIRECTIVES FOR MSCP COVERED SPECIES: ANIMALS**

Scientific Name	Common Name	Condition(s) of Coverage
<b>BIRDS (cont.)</b>		
<i>Empidonax traillii extimus</i>	Southwestern willow flycatcher	Jurisdictions must require surveys (using appropriate protocols) during the CEQA review process in suitable habitat proposed to be impacted and incorporate mitigation measures consistent with the 404(b)1 guidelines into the project. Participating jurisdictions' guidelines and ordinances, and state and federal wetlands regulations will provide additional habitat protection resulting in no net loss of wetlands. For new developments adjacent to preserve areas that create conditions attractive to brown-headed cowbirds, jurisdictions must require monitoring and control of cowbirds. ASMD must include measures to provide appropriate successional habitat, upland buffers for all known populations, cowbird control, and specific measures to protect against detrimental edge effects to this species. Any clearing of occupied habitat must occur between September 1 and May 1 (i.e., outside of the nesting period).
<i>Camphylorhynchus brunneicapillus couesi</i>	Coastal cactus wren	The restoration of maritime succulent scrub habitat as specified in the Otay Ranch RMP must occur at the specified 1:1 ratio. ASMD must include restoration of maritime succulent scrub habitat, including propagation of cactus patches, active/adaptive management of cactus wren habitat, monitoring populations within preserves and specific measures to reduce or eliminate detrimental edge effects. No clearing of occupied habitat may occur from the period February 15 through August 15.
<i>Polioptila californica</i>	California gnatcatcher	ASMD must include measures to reduce edge effects and minimize disturbance during the nesting period, fire protection measures to reduce the potential for habitat degradation due to unplanned fire, and management measures to maintain or improve habitat quality including vegetation structure. No clearing of occupied habitat within the cities' MHPAs and within the County's Biological Resource Core Areas may occur between March 1 and August 15.
<i>Sialia mexicana</i>	Western bluebird	None

**Table 5.1-5 (cont.)  
AREA SPECIFIC MANAGEMENT DIRECTIVES FOR MSCP COVERED SPECIES: ANIMALS**

Scientific Name	Common Name	Condition(s) of Coverage
<b>BIRDS (cont.)</b>		
<i>Vireo bellii pusillus</i>	Least Bell's vireo	Jurisdictions will require survey (using appropriate protocols) during the CEQA review process in suitable habitat proposed to be impacted and incorporate mitigation measures consistent with the 404(b)1 guidelines into the project. Participating jurisdictions guidelines and ordinances, and state and federal wetland regulations will provide additional habitat protection resulting in no net loss of wetlands. Jurisdictions must require new developments adjacent to preserve areas that create conditions attractive to brown-headed cowbirds to monitor and control cowbirds. Area specific management directives must include measures to provide appropriate ASMD successional habitat, upland buffers for all known populations, cowbird control, and specific measures to protect against detrimental edge effects to this species. Any clearing of occupied habitat must occur between September 15 and March 15 (i.e. outside of the nesting period).
<i>Aimophila ruficeps canescens</i>	California rufous-crowned sparrow	ASMD include maintenance of dynamic processes, such as fire, to perpetuate some open phases of coastal sage scrub with herbaceous components.
<i>Passerculus sandwichensis beldingi</i>	Belding's savannah sparrow	ASMD must include specific measures to protect against detrimental edge effects to this species.
<i>Passerculus sandwichensis rostratus</i>	Large-billed savannah sparrow	ASMD must include specific measures to protect against detrimental edge effects to this species.
<i>Ammodramus savannarum</i>	Grasshopper sparrow	Project approvals must require avoidance of active nesting areas during the breeding season. ASMD must include measures to avoid impacts to breeding colonies, and specific measures to protect against detrimental edge effects to this species.
<b>MAMMALS</b>		
<i>Taxidea taxus</i>	American badger	ASMD must include measures to avoid direct human impacts to this species if it is present or likely to be present.
<i>Felis concolor</i>	Mountain lion	None
<i>Odocoileus hemionus fuliginata</i>	Southern mule deer	None

## Wildlife Corridors

Wildlife corridors are linear landscape features that allow animal movement between two patches of more substantial habitat. A corridor is not expected to provide sufficient space and resources to meet all of the life history needs of its target species.

Depending upon the species considered, corridors function in a variety of ways and may function differently over the course of a year. For the purposes of general discussion, wildlife corridors can be broken down into three categories: regional corridors, local corridors, and short corridors. Regional corridors accommodate the needs of a broad suite of animals. Such corridors are especially important to dispersing individuals (i.e., juveniles) that use these corridors to find unoccupied ranges and mates. This effectively links otherwise distinct populations of animals and serves to maintain genetic diversity. In regional planning, attention often focuses on large, wide-ranging “umbrella” species. Under this concept, if a preserve plan can accommodate the needs of wide-ranging species, it will allow sufficient connectivity to meet the lesser needs of other species.

A typical width of greater than 1,000 feet is recommended for regional corridors serving large mammals. Constricted sections of the corridor should have maximum lengths of less than 500 feet and minimum widths of 400 feet. Where possible, canyon corridors should extend from rim to rim. For planning purposes, widths of a 2:1 proportion (length to width) are generally considered to be necessary for wildlife corridors on an average basis to provide essential buffering of wildlife activities. Narrower or wider corridors may also function depending upon the particular physiography, adjacent land uses, and corridor lengths. Where corridors are narrow and already tenuous, special management measures are required, including implementing measures to control runoff, noise, lighting, exotic predators and invasive plants. Such measures have been adopted as the MHPA Land Use Adjacency Guidelines (City 2008b).

Local corridors are much shorter than regional corridors and permit movement between discrete vegetation patches, thereby forming “habitat linkages.” These corridors allow two or more small connected patches of habitat to function as a larger block of habitat. The larger interconnected block enables viability and promotes population stability through regular genetic interchange, even though each individual habitat patch may be too small for the long-term survival of a wildlife population. To serve effectively as wildlife corridors, habitat linkages must permit unobstructed movement of the species. This becomes an important consideration with respect to connectivity between preserve areas, particularly where additional urban development is to occur on a limited basis. Depending upon the particular parameters of the linkage, connectivity may also be made by utility corridors and recreational trail facilities. Local corridors are generally considered to require widths of 400 to 600 feet to function for wildlife movement, depending upon the corridor lengths, species using the corridor, cover, topography, as well as adjacent land uses.

Short corridors function like their larger counterparts, but typically serve the daily needs of individuals. These corridors allow animals to move through unsuitable habitat to access bedding sites, watering sites, and foraging areas. Because of their frequent and regular use, such areas of concentrated wildlife movement are often referred to as “travel routes.” Figure 5.1-3, *Wildlife Corridors*, shows the biological core and linkage areas that serve as wildlife corridors in the City

### 5.1.2 Impacts

Bikeway alignments as shown in the BMP Update are conceptual in nature. As projects are designed, impacts to biological resources would be evaluated on a project-by-project basis.

**Issue 1:** *Would the project result in a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in the MSCP or other local or regional plans, policies or regulations, or by CDFG or USFWS?*

#### **Significance Thresholds**

According to the City's Significance Determination Thresholds (2011), impacts to biological resources under Issue 1 would be significant if the project would:

- Cause a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in the MSCP or other local or regional plans, policies or regulations, or by the CDFG or USFWS.

#### **Impact Analysis**

The following analysis characterizes impacts to biological resources as direct or indirect. An impact is considered direct when the primary effect is removal of existing habitat and/or species. Direct impacts would generally result from clearing of vegetation. Indirect impacts occur when secondary effects of adjacent activities, such as noise, reduced water quality, dust, or non-native plant invasion may adversely affect adjacent biological resources. The magnitude of an indirect impact may be the same as a direct impact; however, the effect usually takes a longer time to become apparent because indirect impacts are related to changes in animal behavior or transition of habitats from one type to another, which typically takes longer to manifest.

#### On-street Bikeways Without Widening

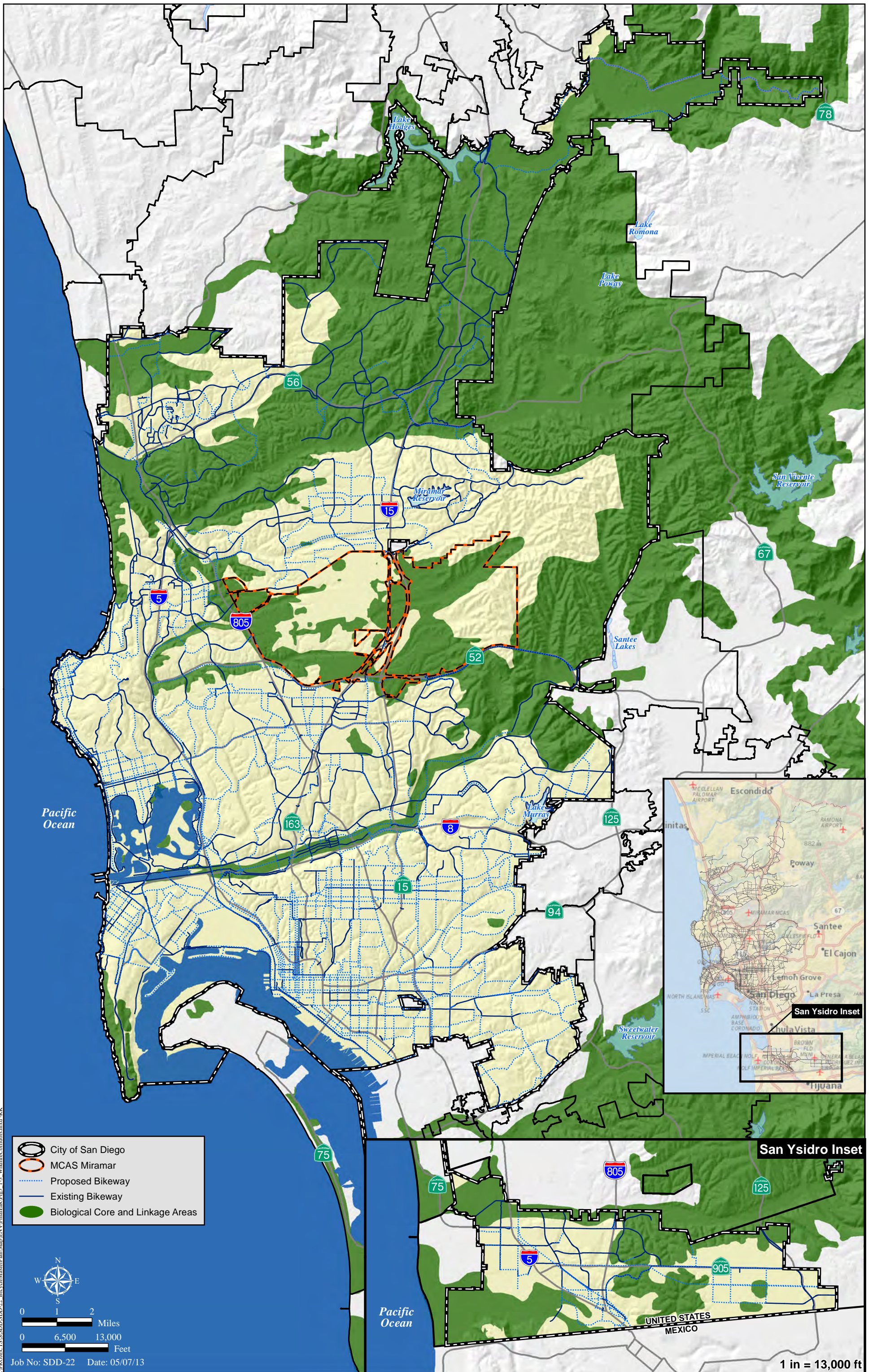
##### *Direct Impacts*

Proposed On-street Bikeways Without Widening would occur in existing developed areas and not located within sensitive biological resource areas containing species identified as a candidate, sensitive, or special status species. On-street Bikeways Without Widening would be developed inside the footprint of existing roadways that have already been cleared of biological resources. They would, therefore, have no direct impacts on candidate, sensitive, or special status species.

##### *Indirect Impacts*

There is the potential for implementation of On-street Bikeways Without Widening to result in potentially significant impacts to adjacent candidate, sensitive or special status species if a bikeway is located adjacent to the MHPA or other habitats where such species are present (refer to Figure 5.1-2). Indirect impacts could include increased public access (authorized or





**Wildlife Corridors**  
Figure 5.1-3 (Revised)

Source: City of San Diego and SANDAG



unauthorized), lighting, noise, or contaminated runoff which would be significant if a sensitive species would be displaced from their nests or territories and fail to breed. On-street Bikeways Without Widening are intended for use of non-motorized bicycles and are associated with existing roadways, so substantial new sources of light, glare, noise, contaminated runoff, litter, or public access to candidate, sensitive or special status species would not be expected.

### On-street Bikeways With Widening and Off-Street Bikeways

#### *Direct Impacts*

Proposed On-street Bikeways With Widening would require some widening beyond the existing roadway footprint. In addition, as previously noted, approximately 15.8 percent of proposed bikeways would be Class I Bike Paths with their own right-of-way, separated from vehicle travel. On-street Bikeways With Widening and Off-street Bikeways are envisioned throughout the City, including areas that may be near wetlands, riparian habitats, sensitive upland habitats, or other sensitive natural areas that may support candidate, sensitive, or special status species. Structures such as retaining walls, bridges or culverts associated with bikeways could also interfere with wildlife corridors or nesting areas used by such species. Direct impacts to candidate, sensitive, or special status species would therefore be potentially significant.

Development of On-street Bikeways With Widening and Off-street Bikeways may require the removal of existing trees and/or plants, which are located either adjacent to existing roadways or within undeveloped natural areas through which a bikeway would traverse. The removal of special status plant/tree species having local or regional protections and/or trees that are listed by CDFW or USFWS may result in a potentially significant impact. The removal of substantial numbers or concentrations of trees considered to provide high-value habitat for special status species birds (including those protected under the MBTA), bats, or raptors may also result in potentially significant impacts to candidate, sensitive, or special status species. In addition, “street trees” planted in the right-of-way in conjunction with adjacent development and/or roadway improvements are considered City property and damage should be avoided where possible. When avoidance is not possible, impacts to street trees are considered potentially significant.

#### *Indirect Impacts*

Possible indirect impacts to candidate, sensitive, or special status species include habitat insularization, water quality degradation, lighting, noise, roadkill, exotic plant species, fugitive dust, and human intrusion. Habitat insularization is fragmentation of large habitat areas into smaller “islands,” presenting barriers to wildlife movement and breeding, and splitting plant and animal populations. No habitat insularization impacts are expected to occur as a result of proposed bicycle facilities because most of the network is proposed for urban areas, and in open space areas, bikeways would not be wide enough to isolate any habitat areas. Indirect impacts associated with roadkill also would not occur, as construction machinery would be slow-moving, and during operation, the bicycles using the bikeways would not be heavy enough or travel at speeds likely to result in significant numbers of deaths of animals crossing the bikeways. The



potential for indirect impacts related to the introduction of exotic plant species is discussed under Issue 8 in this section.

In the short term, construction of On-street Bikeways With Widening and Off-street Bikeways in proximity to sensitive vegetation and species may result in indirect impacts that are normally temporary in nature. Indirect impacts related to construction noise, lighting, and fugitive dust would be significant if a sensitive species would be displaced from their nests or territories and fail to breed. Nighttime construction is not expected to be needed, however, and any lighting that may be installed during construction would be temporary. All equipment associated with construction, including lighting, would be removed when the particular project is completed. Construction impacts from light or glare would be less than significant.

The use of petroleum products (e.g., fuels, oils, and lubricants) by construction equipment also has the potential to contaminate surface water runoff and significantly impact biological resources in adjacent and downstream areas. The potential exists for construction activities of On-street Bikeways With Widening and Off-street Bikeways implemented under the BMP Update to result in a significant indirect impact on sensitive wildlife.

In both the short and long term, the development of On-street Bikeways With Widening and Off-street Bikeways in proximity to creeks, waterways, and other sensitive vegetation may result in increased public access (authorized or unauthorized) near these sensitive areas, creating the potential for potentially significant indirect impacts to candidate, sensitive, or special status species due to human intrusion. Increased public access, particularly unauthorized access, can disturb or damage special status plants, as well as habitats suitable for certain protected species. Litter and debris associated with human activity in protected areas can also result in potentially significant adverse effects to candidate, sensitive or special status species.

Long-term indirect operational impacts related to lighting could also occur. On-street Bikeways With Widening are associated with existing roadways, so new sources of substantial light or glare would not be expected. Stationary lighting for Off-street Bikeways would be limited to that required for safety. New lighting adjacent to or within natural or residential areas may be relatively substantial compared to the existing condition, however; accordingly, operation impacts from light or glare would be potentially significant.

Long-term indirect operational impacts related to noise would not be anticipated. Bikeways are intended for use of non-motorized bicycles and, as such, would not generate high noise levels that could impact adjacent noise-sensitive species. The noise from day-to-day activities for the bikeways would typically be limited to people talking as they are riding or walking by and would not be expected to exceed any standards or to be considered a nuisance to adjacent noise-sensitive species.

### **Significance of Impact**

In general, On-street Bikeways Without Widening would have no direct ~~or indirect~~ impacts on candidate, sensitive, or special status species, but could have indirect impacts. On-street

Bikeways With Widening and Off-street Bikeways would have the potential for significant direct and indirect impacts to such species.

For Issue 1, at this Citywide planning phase, potential direct and indirect program-level impacts to candidate, sensitive, or special status species would be potentially significant. Measures to mitigate such impacts are discussed below.

### **Mitigation, Monitoring, and Reporting**

The following mitigation measures would reduce potential direct and indirect program impacts to candidate, sensitive, or special status species to below a level of significance. These measures may be updated periodically in response to changes in federal and State laws, and new/improved scientific methods.

**Bio-1:** A biological resources report shall be prepared for bikeways proposed in naturally vegetated areas or within or adjacent to the MHPA. The biological resources report shall identify sensitive biological resources within and adjacent to the proposed bikeway alignment and make recommendations for avoidance and minimization of impacts to those resources identified. If the project-level biological resources report determines that sensitive biological resources are within or adjacent to the proposed bikeway alignment, one or more of the following mitigation measures shall be implemented, as applicable. As each future bikeway project implemented under the BMP Update is reviewed under CEQA, additional specificity may be required with respect to mitigation measures identified below. If a biological resources report is required at the time of a specific bikeway project submittal, the report shall be prepared utilizing current biological mitigation and monitoring in accordance with City requirements. The biological resources report will include a specific detailed analysis of consistency with MSCP policies and guidelines, including MSCP Subarea Plan policies for the particular project location.

**Bio-2:** Proposed bikeways shall be designed to conform to requirements of the management directives of the City's Subarea Plan and to minimize impacts to biological resources. Projects within or adjacent to sensitive biological resource areas shall incorporate the following design features:

- Existing trails shall be used whenever feasible.
- Reduction in path width shall be considered in sensitive biological resource areas.
- Bikeways shall be designed to avoid damage to trees, including street trees, where possible. When avoidance is not feasible, trees shall be protected during construction, transplanted or replaced.
- Use of decomposed granite, unpaved trail, or equivalent pervious trail surface shall be considered.

**Bio-3:** Proposed bikeways adjacent to the MHPA shall conform to all applicable MHPA Land Use Adjacency Guidelines (Section 1.4.3) of the MSCP Subarea Plan. In particular, lighting, drainage, landscaping, grading, access, and noise must not result in a

substantial, adverse effect on the MHPA. Prior to issuance of grading permits, the following shall occur:

- Lighting shall be directed away from the MHPA, and shielded if necessary.
- Drainage shall be directed away from the MHPA, or if not possible, must not drain directly into the MHPA. Instead, runoff should flow into sedimentation basins, grassy swales, or mechanical trapping devices prior to draining into the MHPA. Drainage shall be shown on the site plan and reviewed satisfactory to the City Engineer.
- Landscape plans for bikeways shall be reviewed and approved by the Development Services Department Environmental Review Manager (ERM) to ensure that no invasive non-native plant species shall be planted in or adjacent to the MHPA.
- Manufactured slopes shall be included within the development footprint of proposed bikeways and outside the MHPA.
- Construction activities associated with proposed bikeways located within or adjacent to the MHPA shall occur outside of the avian breeding season, if feasible. If avoidance of the breeding season is not feasible, additional measures identified in the project-specific biological resources report shall be implemented, such as temporary noise barriers.
- New development adjacent to the MHPA may be required to provide barriers (e.g., non-invasive vegetation, rocks/boulders, fences, walls, and/or signage) along the MHPA boundaries to direct public access to appropriate locations and reduce domestic animal predation.

In addition, litter and trash will be removed on a regular basis. Signage will be installed to prevent littering and encourage reporting of littering in trail and road access areas. Trash cans and bins will be provided at trail access points. Signage will be installed notifying users that penalties will be imposed for littering and dumping.

**Bio-4:** Biological mitigation for direct impacts to upland habitat shall be in accordance with the City's Biology Guidelines, as identified in Table 5.1-6, *Upland Mitigation Ratios*, below. Prior to the commencement of construction related activity (including earthwork and fencing), mitigation for direct impacts to Tier I, Tier II, Tier IIIA, and Tier IIIB upland habitat shall be assured to the satisfaction of the ERM through preservation of upland habitats in conformance with the City's Biology Guidelines, MSCP, and ESL Regulations. Mitigation for upland habitats may include on-site preservation, on-site enhancement/restoration; payment into the Habitat Acquisition Fund; acquisition/dedication of habitat inside or outside the MHPA; or other mitigation as approved by the ERM, MSCP staff, and the Park and Recreation (if applicable), as described below. Any restoration plans are subject to review by the City's EAS, Parks and Recreation, and MSCP staff prior to issuance of any grading permits. These entities also must sign off on final acceptance of the mitigation project as successful.

**Table 5.1-6  
UPLAND MITIGATION RATIOS**

Table 5.1-6 UPLAND MITIGATION RATIOS					
Tier	Habitat Type	Mitigation Ratios			
<b>TIER I (rare uplands)</b>	Southern Foredunes Torrey Pines Forest Coastal Bluff Scrub Maritime Succulent Scrub Maritime Chaparral Scrub Oak Chaparral Native Grassland Oak Woodlands	Location of Preservation			
		Location of Impact		Inside	Outside
			Inside*	2:1	3:1
			Outside	1:1	2:1
<b>TIER II (uncommon uplands)</b>	Coastal Sage Scrub (CSS) CSS/Chaparral	Location of Preservation			
		Location of Impact		Inside	Outside
			Inside*	1:1	2:1
			Outside	1:1	1.5:1
<b>TIER IIIA: (common uplands)</b>	Coastal Sage Scrub (CSS) CSS/Chaparral	Location of Preservation			
		Location of Impact		Inside	Outside
			Inside*	1:1	1.5:1
			Outside	0.5:1	1:1
<b>TIER IIIB: (common uplands)</b>	Non-Native Grasslands	Location of Preservation			
		Location of Impact		Inside	Outside
			Inside*	1:1	1.5:1
			Outside	0.5:1	1:1
<b>TIER IV: (other uplands)</b>	Disturbed Land Agriculture Eucalyptus Woodland Ornamental Plantings	Location of Preservation			
		Location of Impact		Inside	Outside
			Inside*	0:1	0:1
			Outside	0:1	0:1

Notes:

- 1 For all Tier I impacts, the mitigation could (1) occur within the MHPA portion of Tier I (in Tier) or (2) occur outside of the MHPA within the affected habitat type (in-kind)
  - 2 For impacts to Tier II, III A and III B habitats, the mitigation could (1) occur within the MHPA portion of Tiers I – III (out-of-kind) or (2) occur outside of the MHPA within the affected habitat type (in-kind).
- \* No mitigation would be required for impacts within the base development area (25%) occurring inside the MHPA. Mitigation for any impacts from development in excess of the 25% base development area for community plan public facilities or for projects processed through the deviation process would be required at the indicated ratios.

**Bio -5:** Impacts to wetlands shall be avoided. Unavoidable impacts to wetlands shall be minimized to the maximum extent practicable and fully mitigated per the Biology Guidelines. For projects with the potential to affect wetlands, the project-specific biological resources report shall include an analysis of wetlands (including City, state and federal jurisdiction analysis) within and adjacent to the footprint of the proposed bikeway and measures to avoid or minimize impacts to wetlands. If impacts to wetlands cannot be avoided, a conceptual mitigation program (which includes identification of the mitigation site) must be prepared by the City and approved by the resource agency or agencies with jurisdiction over the affected wetlands, and implemented by the City and would ensure a no net loss of wetlands.

### ***Resource Agency Permitting***

In addition, prior to the commencement of any construction related activities on-site for Off-Street Bikeway projects impacting wetland habitat (including earthwork and fencing), the applicant shall provide evidence<sup>3</sup> of the following to the ERM prior to any construction activity:

- Compliance with ACOE Section 404 nationwide permit
- Compliance with the Regional Water Quality Control Board Section 401 Water Quality Certification; and
- Compliance with the CDFW Section 1601/1603 Streambed Alteration Agreement.

**Bio-6:** Proposed bikeways shall provide for continued wildlife movement through wildlife corridors as identified in the MSCP Subarea Plan or as identified through project-level analysis. Mitigation may include, but is not limited to, provision of appropriately-sized bridges, culverts, or other openings to allow wildlife movement.

The following mitigation measures shall be implemented for proposed bikeways that could potentially impact the following specific candidate, sensitive, or special status species through grading or clearing activities in areas where there is potential for these sensitive species to occur:

- Coastal California gnatcatcher (Federally Threatened);
- Least Bell's vireo (State Endangered/Federally Endangered); and
- Southwestern willow flycatcher (Federally Endangered).

**Bio-7:** Prior to the issuance of any authorization to proceed, the City's ERM (or appointed designee) shall verify that the MHPA boundaries and the following project requirements regarding the coastal California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher are shown on the grading and building permit plans:

**No clearing, grubbing, grading or other construction activities shall occur between March 1 and August 15, the breeding season of the coastal California gnatcatcher; between March 15 and September 15, the breeding season of the least Bell's vireo; and between May 1 and September 1, the breeding season of the southwestern willow flycatcher, until the following requirements have been met to the satisfaction of the Assistant Deputy Director (ADD) of Land Development Review Division (LDR).**

- A qualified biologist (possessing a valid Endangered Species Act Section 10(a)(1)(A) Recovery Permit) shall survey habitat areas (only within the MHPA for gnatcatchers) that would be subject to the construction noise levels exceeding 60 decibels [dB(A)] hourly average for the presence of the coastal California gnatcatcher, least Bell's vireo, and the southwestern willow flycatcher. Surveys for this species shall be conducted pursuant to

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<sup>3</sup> Evidence shall include either copies of permits issued, letter of resolutions issued by the responsible agency documenting compliance, or other evidence documenting compliance and deemed acceptable by the Assistance Deputy Director (ADD) of City Land Development Review (LDR) Department.

the protocol survey guidelines established by the USFWS within the breeding season prior to the commencement of construction. **If the coastal California gnatcatchers, least Bell's vireo, and/or the southwestern willow flycatcher are present, then the following conditions must be met:**

- a. Between March 1 and August 15 for occupied gnatcatcher habitat, between March 15 and August 15 for occupied least Bell's vireo habitat, and between May 1 and September 1 for occupied southwestern willow flycatcher habitat, no clearing, grubbing, or grading of occupied habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; **AND**
  - b. Between March 1 and August 15 for occupied gnatcatcher habitat, between March 15 and August 15 for occupied least Bell's vireo habitat, and between May 1 and September 1 for occupied southwestern willow flycatcher habitat, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) hourly average at the edge of the occupied habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a qualified acoustician (possessing a current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the ERM at least two weeks prior to the commencement of construction activities; **OR**
  - c. At least two weeks prior to the commencement of clearing, grubbing, grading and/or any construction activities, under the direction of a qualified acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) hourly average at the edge of habitat occupied by the aforementioned avian species. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician or biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the appropriate breeding season.  
*\* Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the ERM, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.*
- If the aforementioned avian species are not detected during the protocol survey, the qualified biologist shall submit substantial evidence to the ERM and applicable resource

agencies which demonstrate whether or not mitigation measures such as noise walls are necessary during the applicable breeding seasons of March 1 and August 15, March 15 and September 15, and May 1 and September 1, as follows:

- If this evidence indicates the potential is high for the aforementioned avian species to be present based on historical records or site conditions, then Condition 4-b or 4-c shall be adhered to as specified above.
- If this evidence concludes that no impacts to the species are anticipated, no new mitigation measures are necessary.
- If the City begins construction prior to the completion of the protocol avian surveys, then the Development Services Department shall assume that the appropriate avian species are present and all necessary protection and mitigation measures shall be required as described in Conditions 4 a, b, and c, above.

The following mitigation measure shall be implemented for proposed bikeways that could potentially impact sensitive avian species through grading and clearing activities in areas where there is potential to impact sensitive avian species:

**Bio-8:** If project grading is proposed during the raptor breeding season (Feb. 1-Sept. 15), the project biologist shall conduct a pre-grading survey for active raptor nests within 300 feet of the development area and submit a letter report to MMC prior to the preconstruction meeting. If active raptor nests are detected, the report shall include mitigation in conformance with the City's Biology Guidelines (i.e. appropriate buffers, monitoring schedules, etc.) to the satisfaction of the City's ERM. Mitigation requirements determined by the project biologist and the ERM shall be incorporated into the project's Biological Construction Monitoring Exhibit (BCME) and monitoring results incorporated in to the final biological construction monitoring report. If no nesting raptors are detected during the pre-grading survey, no mitigation is required.

The following mitigation measure shall be implemented to address potential impacts to avian species related to the MBTA and Fish and Game Code 3503:

**Bio-9:** If project grading/brush management is proposed in or adjacent to native habitat during the typical bird breeding season (i.e., February 1-September 15), or an active nest is noted, the project biologist shall conduct a pregrading survey for active nests in the development area and within 300 feet of the nest.

The following mitigation measure shall be implemented to address potential impacts to biological resources during construction of Off-Street Bikeway projects:

**Bio-10:** A qualified Biological Monitor shall be on site at a minimum when initial grading of Off-Street Bikeways is occurring adjacent to wetland habitats and/or potential occupied avian or sensitive species habitat, to ensure that no take of sensitive species or active bird nests occurs, grading limits are observed, and that orange fencing and silt fencing are installed to protect sensitive areas outside earthwork limits.

With implementation of Mitigation Measures **Bio-1** through **Bio-10**, potential direct and indirect impacts to candidate, sensitive, or special status species would be reduced to less than significant.

**Issue 2:** *Would the project result in a substantial adverse impact on any Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats as identified in the Biology Guidelines of the Land Development manual or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS?*

**Issue 3:** *Would the project result in a substantial adverse impact on wetlands (including, but not limited to, marsh, vernal pool, riparian, etc.) through direct removal, filling, hydrological interruption, or other means?*

### Significance Thresholds

According to the City's Significance Determination Thresholds (2011), impacts to biological resources under Issues 2 and/or 3 would be significant if the project would:

- Impact more than 0.1 acre of any Tier I, Tier II, Tier IIIA, or Tier IIIB upland habitat.
- Cause a substantial adverse impact on more than 0.01 acre of wetlands

### Impact Analysis

#### On-street Bikeways Without Widening

##### *Direct Impacts*

Proposed On-street Bikeways Without Widening would occur in existing developed areas and not located within sensitive biological resource areas. On-street Bikeways Without Widening would be developed inside the footprint of existing roadways that have already been cleared of biological resources. They would, therefore, have no direct impacts on sensitive habitats, including bogs, marshes, riparian habitat or other wetlands.

##### *Indirect Impacts*

There is the potential for implementation of On-street Bikeways Without Widening to result in potentially significant impacts to adjacent sensitive habitats, including bogs, marshes, riparian habitat or other wetlands, if a bikeway is located adjacent to the MHPA or other sensitive habitats (refer to Figure 5.1-2). Indirect impacts could include increased public access (authorized or unauthorized), lighting, noise, or contaminated runoff which would be significant if a sensitive species would be displaced from their nests or territories and fail to breed. On-street Bikeways Without Widening are intended for use of non-motorized bicycles and are associated with existing roadways, however, so substantial new sources of light, glare, noise, contaminated runoff, litter, or public access to sensitive habitats, including bogs, marshes, riparian habitat, vernal pools or other wetlands, would not be expected.



## On-street Bikeways With Widening and Off-Street Bikeways

### *Direct Impacts*

On-street Bikeways With Widening and Off-street Bikeways are proposed throughout the City, including areas that may be within or adjacent to Tier I, Tier II, Tier IIIA, or Tier IIIB Habitats (as summarized in Table 5.1-1), or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS, such as wetlands, including vernal pools. Figures 5.1-4a, 5.1-4b and 5.1-4c, *Potential Vegetation Impacts of the Bicycle Master Plan Update Facilities*, show areas where proposed bikeways would traverse or run adjacent to sensitive habitats such as wetlands, coastal sage scrub, and grasslands. Direct impacts to sensitive habitats would therefore be potentially significant.

### *Indirect Impacts*

Possible indirect sensitive habitat impacts include habitat insularization, water quality degradation, exotic plant species, fugitive dust, and human intrusion. No habitat insularization impacts are expected to occur as a result of proposed bicycle facilities, because most of the network is proposed for urban areas, and in open space areas, bikeways would not be wide enough to isolate any habitat areas. The potential for indirect impacts related to the introduction of exotic plant species is discussed under Issue 8 below.

The development of On-street Bikeways With Widening and Off-street Bikeways in proximity to sensitive habitats may also result in increased public access (authorized or unauthorized) near these sensitive areas, creating the potential for adverse impacts. Increased public access, particularly unauthorized access, can disturb or damage habitats suitable for certain protected species. Litter and debris associated with human activity in protected areas can also result in potentially significant adverse effects to sensitive habitats, including wetlands.

### **Significance of Impact**

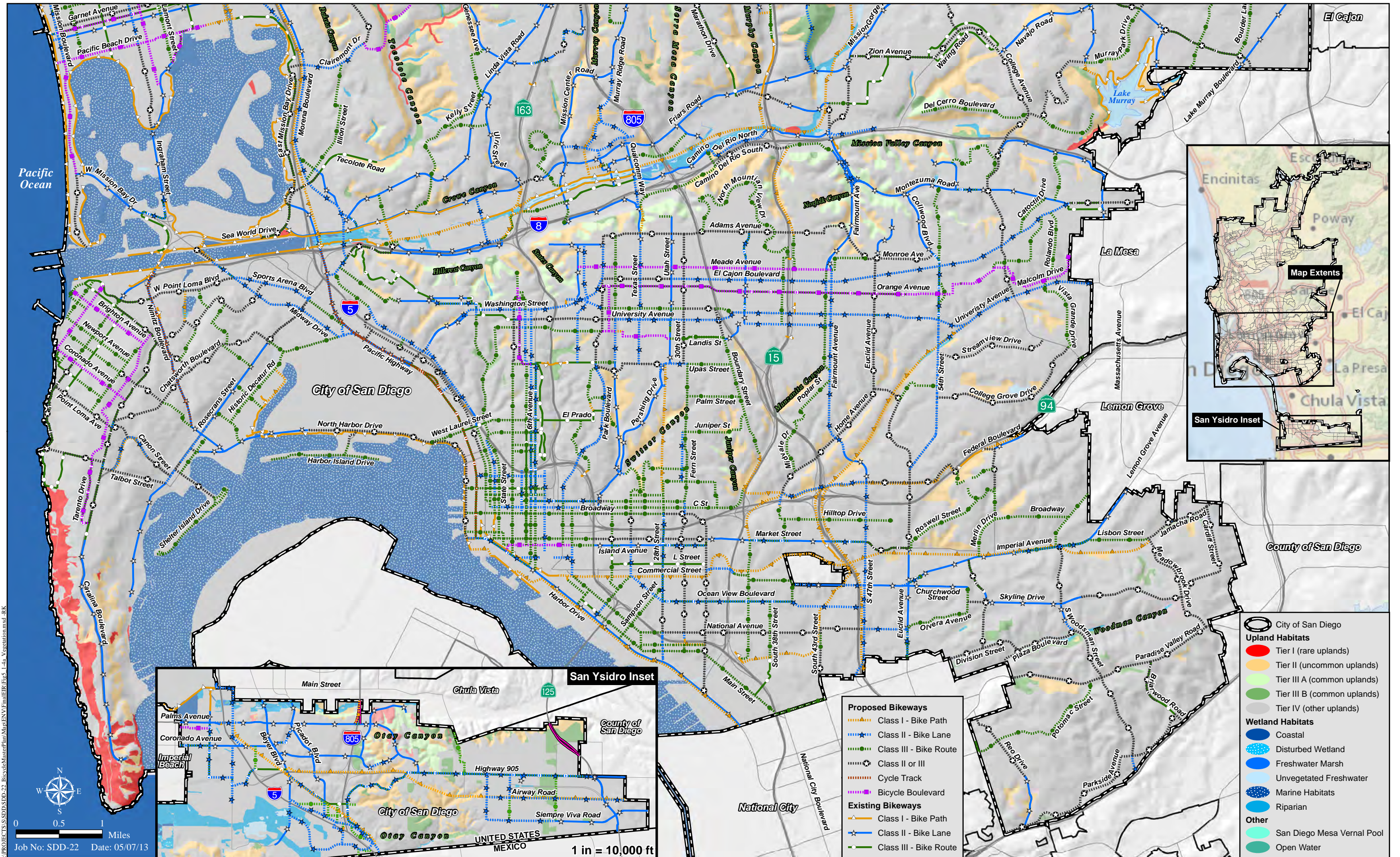
In general, On-street Bikeways Without Widening would have no direct or indirect impacts on sensitive habitats but could have indirect impacts. On-street Bikeways With Widening and Off-street Bikeways would have the potential for significant direct and indirect impacts to sensitive habitats, such as wetlands, including vernal pools.

For Issue 2 and Issue 3, at this Citywide planning phase, potential direct and indirect program-level impacts to sensitive habitats, including wetlands, would be potentially significant. Measures to mitigate such impacts are discussed below.

### **Mitigation, Monitoring, and Reporting**

With implementation of Mitigation Measures *Bio-1* through *Bio-10* identified under Issue 1, potential impacts to sensitive habitats, including wetlands, would be reduced to less than significant.



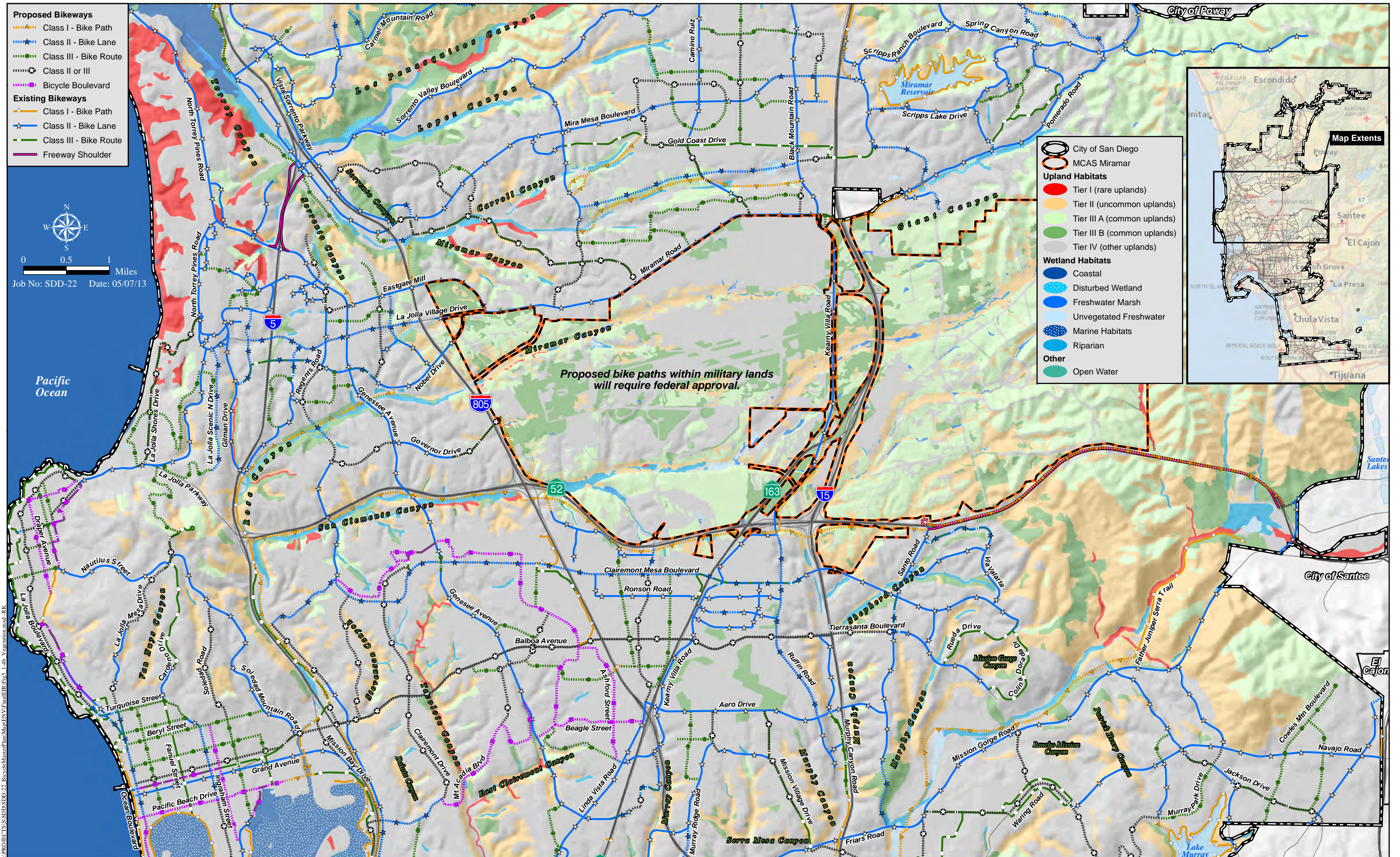


**Potential Vegetation Impacts of the Proposed Bicycle Master Plan Update Facilities (South)**  
 Figure 5.1-4a

Source: City of San Diego and SANDAG

PROJECTS\SDD-22-22-BicycleMasterPlan\Map\ENV\Final\FIR\Figs\_1-4a\_Verification.mxd -RK  
 Job No: SDD-22 Date: 05/07/13

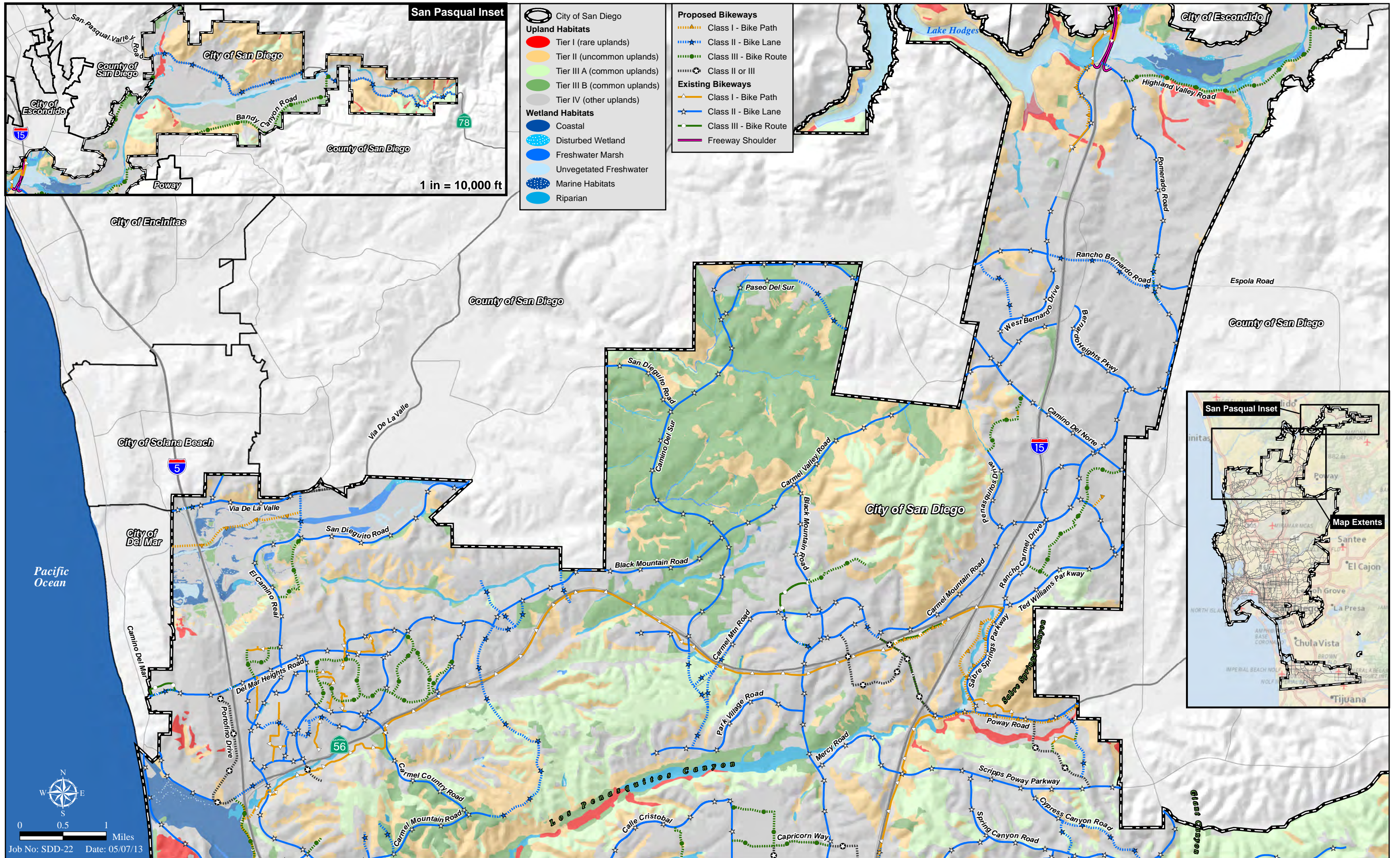




**Potential Vegetation Impacts of the Proposed Bicycle Master Plan Update Facilities (Central)**  
 Figure 5.1-4b (Revised)

Source: City of San Diego and SANDAG





**Potential Vegetation Impacts of the Proposed Bicycle Master Plan Update Facilities (North)**

Figure 5.1-4c

Source: City of San Diego and SANDAG



**Issue 4:** *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, or impede the use of native wildlife nursery sites?*

### **Significance Thresholds**

The City does not have any significance thresholds regarding this issue; however, according to the Program EIR Scoping Letter (June 2012), impacts to biological resources under Issue 4 would be significant if the program would:

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

### **Impact Analysis**

#### On-street Bikeways Without Widening

##### *Direct Impacts*

The location of wildlife corridors in relation to the bicycle network proposed in the BMP Update is presented in Figure 5.1-3. Proposed On-street Bikeways Without Widening would occur in existing developed areas that do not include existing wildlife corridors or wildlife nursery sites. On-street Bikeways Without Widening would be developed inside the footprint of existing roadways that have already been cleared of biological resources. Therefore, they would have no direct impacts on wildlife movements, corridors or the use of native wildlife nursery sites.

##### *Indirect Impacts*

Indirect impacts to wildlife corridors could be potentially significant if a bikeway is within the roadway (no widening) but adjacent to a wildlife corridor or nursery site. Indirect impacts could include increased public access (authorized or unauthorized), lighting, noise, which would be significant if a sensitive species would be displaced from their nests or territories and fail to breed. The potential exists for construction activities to have a significant indirect impact on sensitive wildlife. Nighttime construction is not expected to be needed, however, and any lighting that may be installed during construction would be temporary. All equipment associated with construction, including lighting, would be removed when the particular project is completed. Construction impacts from light or glare would be less than significant.

Long-term indirect operational impacts related to lighting could also occur. On-street Bikeways Without Widening are associated with existing roadways, so new sources of substantial light or glare would not be expected. Operational impacts from light or glare would be less than significant for On-street Bikeways With Widening.

Long-term indirect operational impacts related to noise would not be anticipated. Bikeways are intended for use of non-motorized bicycles and, as such, would not generate high noise levels in excess of the existing condition that could impact adjacent noise-sensitive species.

### On-street Bikeways With Widening

#### *Direct Impacts*

On-street Bikeways With Widening would be developed immediately adjacent to the footprint of existing roadways that do not currently function as wildlife corridors or wildlife nursery sites. While some existing roadways themselves may currently interrupt wildlife movements, minimally widening these roadways would not be expected result in additional impacts to wildlife movements, corridors or the use of native wildlife nursery sites.

#### *Indirect Impacts*

In the short term, construction of On-street Bikeways With Widening in proximity to wildlife corridors and nursery sites may result in indirect impacts related to construction noise and lighting, which would be significant if a sensitive species would be displaced from their nests or territories and fail to breed. The potential exists for construction activities to have a significant indirect impact on sensitive wildlife. Nighttime construction is not expected to be needed, however, and any lighting that may be installed during construction would be temporary. All equipment associated with construction, including lighting, would be removed when the particular project is completed. Construction impacts from light or glare would be less than significant.

Long-term indirect operational impacts related to lighting could also occur. On-street Bikeways With Widening are associated with existing roadways, so new sources of substantial light or glare would not be expected. Operational impacts from light or glare would be less than significant for On-street Bikeways With Widening.

Long-term indirect operational impacts related to noise would not be anticipated. Bikeways are intended for use of non-motorized bicycles and, as such, would not generate high noise levels in excess of the existing condition that could impact adjacent noise-sensitive species.

In both the short and long term, the development of On-street Bikeways With Widening and Off-street Bikeways in proximity to wildlife corridors or nursery sites may result in increased public access (authorized or unauthorized) near these sensitive areas, creating the potential for adverse indirect impacts. Increased public access, particularly unauthorized access, can disturb or damage wildlife corridors or nursery sites. Litter and debris associated with human activity in protected areas can also result in potentially significant adverse effects to wildlife corridors or nursery sites.

## Off-Street Bikeways

### *Direct Impacts*

Off-street Bikeways may be proposed through areas identified as wildlife movement corridors in regional planning documents. Figure 5.1-3 shows that some bikeways proposed under the BMP Update traversing or adjacent to biological core or linkage areas identified as part of the regional planning effort for the MSCP that function as wildlife corridors. In general, Off-street Bikeways are not anticipated to impede wildlife movement, as they would be paved or unpaved paths with minimal to no surface structures. Nevertheless, structures such as retaining walls, bridges or culverts may be associated with Off-street Bikeways, which could interfere with wildlife corridors or nesting areas used by such species.

### *Indirect Impacts*

In the short term, construction of Off-Street Bikeways in proximity to wildlife corridors and nursery sites may result in indirect impacts related to construction noise and lighting, which would be significant if a sensitive species would be displaced from their nests or territories and fail to breed. The potential exists for construction activities to have a significant indirect impact on sensitive wildlife. Nighttime construction is not expected to be needed, however, and any lighting that may be installed during construction would be temporary. All equipment associated with construction, including lighting, would be removed when the particular project is completed. Construction impacts from light or glare would be less than significant.

Long-term indirect operational impacts related to lighting could also occur. Stationary lighting for Off-street Bikeways would be limited to that required for safety. New lighting adjacent to or within natural or residential areas may be relatively substantial compared to the existing condition, however. Operation impacts from light or glare would be potentially significant.

Long-term indirect operational impacts related to noise would not be anticipated. Bikeways are intended for use of non-motorized bicycles and, as such, would not generate high noise levels in excess of the existing condition that could impact adjacent noise-sensitive species. The noise from day-to-day activities for the bikeways would typically be limited to people talking as they are riding or walking by and would not be expected to exceed any standards or to be considered a nuisance to adjacent noise-sensitive species.

### **Significance of Impact**

In general, On-street Bikeways Without Widening would have no direct impacts on wildlife movements, corridors or the use of native wildlife nursery sites, although indirect impacts have the potential to be significant. On-street Bikeways With Widening and Off-street Bikeways would have the potential for significant direct and indirect impacts to wildlife movements, corridors or the use of native wildlife nursery sites.

For Issue 4, at this Citywide planning phase, potential direct and indirect program-level impacts to wildlife movements, corridors, or the use of native wildlife nursery sites would be potentially significant. Measures to mitigate such impacts are discussed below.

### **Mitigation, Monitoring, and Reporting**

With implementation of Mitigation Measure **Bio-6**, requiring consideration of wildlife corridors and nursery sites during design of bikeways implemented under the BMP Update, impacts would be reduced to less than significant.

**Issue 5:** *Would the project result in a conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan, either within the MSCP plan area or in the surrounding region?*

**Issue 6:** *Would the project result in a conflict with any local policies or ordinances protecting biological resources?*

### **Significance Thresholds**

According to the City's Significance Determination Thresholds (2011), impacts to biological resources under Issues 5 and 6 would be significant if the program would:

- Cause a conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan, either within the MSCP plan area or in the surrounding region.

### **Impact Analysis**

As previously noted, a significant portion of the proposed BMP Update relates to policy guidance, developed to implement policy objectives of the General Plan. The Conservation Element of the General Plan contains policies to guide the conservation of resources that are consistent with existing environmental regulations, goals, and policies that address habitat, wildlife, natural open space, and natural drainages. These policies would be consistent with the overarching MSCP goal to maintain and enhance biological diversity in the region and conserve viable populations of endangered, threatened, and key sensitive species and their habitats, while enabling economic growth in the region. Through compliance with the Conservation Element of the General Plan, the BMP Update would also be consistent with the MHPA Land Use Adjacency Guidelines for drainage, toxics, lighting, noise, barriers, invasive species, and brush management, as identified in the MSCP Subarea Plan. An initial evaluation of consistency with applicable MSCP policies and guidelines is presented in Table 5.1-7, *MSCP Consistency Evaluation*. At this planning level phase, no conflicts have been identified with such plans, policies and ordinances. Specific detailed analysis of individual projects as they occur in particular MSCP subareas would be conducted as part of subsequent evaluations conducted on a project-by-project basis, as noted below.



Figure 5.1-2 presents the proposed BMP Update bikeway network relative to lands preserved under the MHPA. Approximately 34 miles of bikeways are proposed within the MHPA.

#### On-street Bikeways Without Widening

Proposed On-street Bikeways Without Widening would occur in existing developed areas not within preserved lands under local, regional, or state habitat conservation plans, policies and ordinances protecting biological resources. On-street Bikeways Without Widening would be developed inside the footprint of existing roadways that have already been cleared of biological resources. They would, therefore, have no impact on local, regional, or state HCP.

#### On-street Bikeways With Widening and Off-Street Bikeways

On-street Bikeways With Widening and Off-street Bikeways may be proposed within or adjacent to established preserve areas as identified within local and regional planning documents (e.g., NCCP, MSCP) and shown in Figure 5.1-2. It should be noted that trails, including Class I Bike Paths, are considered to be a compatible land use within preserve areas. Bikeway alignments as shown in the BMP Update, however, are conceptual in nature. As projects are designed, impacts to lands preserved under the MSCP and other local, regional, or state habitat conservation plans, policies and ordinances protecting biological resources would be evaluated on a project-by-project basis.

The City's MSCP designates areas suitable for development and areas proposed for conservation (the MHPA). In the event that future bicycle facilities are proposed within the MHPA, the MSCP contains a provision that requires additional lands be added to the MHPA that have an equal or better biological value than those lands removed for development. Any modification to the adopted Subarea Plan would be subject to oversight by the USFWS and CDFW, and would require environmental review and public comment pursuant to the CEQA. In addition, bikeways would be designed to comply with the MHPA Land Use Adjacency Guidelines. Because existing provisions in the MSCP require that any modifications to the plan result in equal or better biological values, the proposed BMP Update is not anticipated to result in any significant impacts related to consistency with environmental or habitat conservation plans.

**Table 5.1-7  
MSCP CONSISTENCY EVALUATION**

MSCP Policy/Guideline	Evaluation	Consistent?
<b>1.4.1 Compatible Land Uses</b>		
<p>The following land uses are considered conditionally compatible with the biological objectives of the MSCP and thus will be allowed within the City's MHPA:</p> <ul style="list-style-type: none"> <li>▪ Passive recreation</li> <li>▪ Utility lines and roads in compliance with policies in 1.4.2 below</li> <li>▪ Limited water facilities and other essential public facilities</li> <li>▪ Limited low density residential uses</li> <li>▪ Brush Management (Zone 2)</li> <li>▪ Limited agriculture</li> </ul>	<p>Bikeways constitute passive recreation facilities and are therefore conditionally compatible with the MSCP and can be allowed within the City's MHPA.</p>	<p>Yes</p>
<b>1.4.2 General Planning Policies and Guidelines</b>		
<p><u>Roads and Utilities - Construction and Maintenance Policies 1.</u> All proposed utility lines (e.g., sewer, water, etc.) should be designed to avoid or minimize intrusion into the MHPA. These facilities should be routed through developed or developing areas rather than the MHPA, where possible. If no other routing is feasible, then the lines should follow previously existing roads, easements, rights-of-way and disturbed areas, minimizing habitat fragmentation.</p>	<p>The location and design of bikeway facilities would be reviewed by the appropriate agencies and City MSCP staff. Furthermore, mitigation for any additional impacts would be required.</p>	<p>Yes</p>
<p><u>Roads and Utilities - Construction and Maintenance Policies 2.</u> All new development for utilities and facilities within or crossing the MHPA shall be planned, designed, located and constructed to minimize environmental impacts. All such activities must avoid disturbing the habitat of MSCP covered species, and wetlands. If avoidance is infeasible, mitigation will be required.</p>	<p>The location and design of bikeway facilities would be reviewed by the appropriate agencies and City MSCP staff.</p>	<p>Yes</p>

**Table 5.1-7 (cont.)  
MSCP CONSISTENCY EVALUATION**

MSCP Policy/Guideline	Evaluation	Consistent?
<b>1.4.2 General Planning Policies and Guidelines (cont.)</b>		
<p><u>Roads and Utilities - Construction and Maintenance Policies 3.</u> Temporary construction areas and roads, staging areas, or permanent access roads must not disturb existing habitats unless determined to be unavoidable. All such activities must occur on existing agricultural lands or other disturbed areas rather than in habitat. If temporary habitat disturbance is unavoidable, then restoration of, and/or mitigation for the disturbed areas after project completion will be required.</p>	<p>The location and design of bikeway facilities and any access, staging, and stock pile areas needed for construction would be reviewed by the appropriate agencies and City MSCP staff.</p>	<p>Yes</p>
<p><u>Roads and Utilities - Construction and Maintenance Policies 4.</u> Construction and maintenance activities in wildlife corridors must avoid significant disruption of corridor usage. Environmental documents and Mitigation Monitoring and Reporting Programs covering such development must clearly specify how this will be achieved, and construction plans must contain all the pertinent information and be readily available to crews in the field. Training of construction crews and field workers must be conducted to ensure that all conditions are met. A responsible party must be specified.</p>	<p>Maintenance activities would be of limited durations and would occur during daylight hours when wildlife movement is limited.</p>	<p>Yes</p>
<p><u>Roads and Utilities - Construction and Maintenance Policies 5.</u> Roads in the MHPA will be limited to those identified in Community Plan Circulation Elements, collector streets essential for area circulation, and necessary maintenance/emergency access roads.</p>	<p>Although not a road, bikeways would be analyzed in a subsequent environmental document if needed to obtain approval of appropriate agencies and City MSCP staff.</p>	<p>Yes</p>
<p><u>Roads and Utilities - Construction and Maintenance Policies 6.</u> Development of roads in canyon bottoms should be avoided whenever feasible. If an alternative location outside the MHPA is not feasible, then the road must be designed to cross the shortest length possible of the MHPA in order to minimize impacts and fragmentation of sensitive species and habitat. If roads cross the MHPA, they should provide for fully functional wildlife movement capability. Bridges are the preferred method of providing for movement, although culverts in selected locations may be</p>	<p>Although not a road, bikeways would be analyzed in a subsequent environmental document if needed to obtain approval of appropriate agencies and City MSCP staff.</p>	<p>Yes</p>

**Table 5.1-7 (cont.)  
MSCP CONSISTENCY EVALUATION**

MSCP Policy/Guideline	Evaluation	Consistent?
<b>1.4.2 General Planning Policies and Guidelines (cont.)</b>		
acceptable. Fencing, grading, and plant cover should be provided where needed to protect and shield animals, and guide them away from roads to appropriate crossings.		
<u>Roads and Utilities - Construction and Maintenance Policies 7.</u> Where possible, roads within the MHPA should be narrowed from existing design standards to minimize habitat fragmentation and disruption of wildlife movement and breeding areas. Roads must be located in lower quality habitat or disturbed areas to the extent possible.	Although not a road, bikeways would be analyzed in a subsequent environmental document if needed to obtain approval of appropriate agencies and City MSCP staff.	Yes
<u>Roads and Utilities - Construction and Maintenance Policies 8</u> For the most part, existing roads and utility lines are considered a compatible use within the MHPA and therefore will be maintained. Exceptions may occur where underutilized or duplicative road systems are determined not to be necessary.	Bikeways would be analyzed in a subsequent environmental document if needed to obtain approval of appropriate agencies and City MSCP staff.	Yes
<u>Fencing, Lighting, and Signage 1.</u> Fencing or other barriers will be used where it is determined to be the best method to achieve conservation goals and adjacent to land uses incompatible with the MHPA.	Fencing for bikeways would be designed and implemented in accordance with adjacency guidelines and subject to approval by the City.	Yes
<u>Fencing, Lighting, and Signage 2.</u> Lighting shall be designed to avoid intrusion into the MHPA and effects on wildlife. Lighting in areas of wildlife crossings should be of low sodium or similar lighting. Signage will be limited to access and litter control and educational purposes.	Lighting for bikeways would be limited and designed in accordance with adjacency guidelines. Signage for bikeways would be designed and implemented in accordance with adjacency guidelines and subject to approval by the City.	Yes
<b>1.4.3 MHPA Adjacency Guidelines</b>		
1. All new and proposed parking lots and developed areas in and adjacent to the preserve must not drain directly into the MHPA.	Drainage for bikeways would be designed and implemented in accordance with adjacency guidelines and subject to approval by the City.	Yes

**Table 5.1-7 (cont.)  
MSCP CONSISTENCY EVALUATION**

MSCP Policy/Guideline	Evaluation	Consistent?
<b>1.4.3 MHPA Adjacency Guidelines (cont.)</b>		
2. Land uses, such as recreation and agriculture, that use chemicals or generate by-products such as manure, that are potentially toxic or impactful to wildlife, sensitive species, habitat, or water quality need to incorporate measures to reduce impacts caused by the application and/or drainage of such materials into the MHPA.	Chemical use is anticipated to be minimal for bikeways. Drainage systems and storm water BMPs would be designed and implemented in accordance with adjacency guidelines and subject to approval by the City.	Yes
3. Lighting of all developed adjacent areas should be directed away from the MHPA. Where necessary, development should provide adequate shielding with non-invasive plant materials (preferably native), berms, and/or other methods to protect MHPA and sensitive species from night lighting.	Lighting for bikeways would be limited and designed in accordance with adjacency guidelines.	Yes
4. Uses in or adjacent to the MHPA should be designed to minimize noise impacts. Excessively noisy uses or activities adjacent to breeding areas must incorporate noise reduction measures and be curtailed during the breeding season of sensitive species.	Wherever possible, construction activities would avoid breeding seasons for sensitive bird species. Where avoidance during the breeding season is not possible, noise reductions measures would be incorporated into the construction activities (refer to mitigation measures <i>Bio-1</i> through <i>Bio-10</i> ). Operational noise of bikeways would be minimal.	Yes
5. New development adjacent to the MHPA may be required to provide barriers (e.g., non-invasive vegetation, rocks/boulders, fences, walls, and/or signage) along the MHPA boundaries to direct public access to appropriate locations and reduce domestic animal predation.	Fencing and signage for bikeways would be designed and implemented in accordance with adjacency guidelines and subject to approval by the City.	Yes
6. No invasive non-native plant species shall be introduced into areas adjacent to the MHPA.	City design standards would be followed to prohibit the use of invasive plants in revegetation efforts.	Yes
7. Brush management zones will not be greater in size that is currently required by the City's regulations. The amount of woody vegetation clearing shall not exceed 50 percent of the vegetation existing when the initial clearing is done. Vegetation clearing shall be done consistent with City standards and shall avoid/minimize impacts to covered species to the maximum extent possible.	Bikeways, their associated facilities, and adjacent land would be maintained in accordance with City policies and ordinances. Adjacent landscaping would be designed to minimize the need for maintenance and subsequent brush management.	Yes

**Table 5.1-7 (cont.)  
MSCP CONSISTENCY EVALUATION**

MSCP Policy/Guideline	Evaluation	Consistent?
<b>1.5.2 General Management Directives</b>		
<u>Mitigation.</u> Mitigation, when required as part of project approvals, shall be performed in accordance with the City of San Diego ESL Regulations and Biology Guidelines.	Mitigation measures would be carried out in compliance with the ESL Regulations and Biology Guidelines.	Yes
<u>Restoration.</u> Restoration or revegetation undertaken within the MHPA shall be performed in a manner acceptable to the City. Wetland restoration/revegetation proposals are subject to permit authorization by federal and state agencies.	Restoration or revegetation would be subject to approval by the City as well as state and federal agencies.	Yes
<u>Public Access, Trails, and Recreation 1.</u> Provide sufficient signage to clearly identify public access to the MHPA.	Fencing and signage for bikeways would be designed and implemented in accordance with adjacency guidelines and subject to approval by the City.	Yes
<u>Public Access, Trails, and Recreation 2.</u> Locate trails, view overlooks, and staging areas in the least sensitive areas of the MHPA.	Bikeways would be sited, designed and implemented in accordance with adjacency guidelines and subject to approval by the City.	Yes
<u>Public Access, Trails, and Recreation 3.</u> In general, avoid paving trails unless management and monitoring evidence shows otherwise.	Bikeways may be paved where needed, but would be designed and implemented in accordance with adjacency guidelines and subject to approval by the City.	Yes
<u>Public Access, Trails, and Recreation 4.</u> Minimize trail widths to reduce impacts to critical resources.	Bikeways would be designed and implemented in accordance with adjacency guidelines and subject to approval by the City.	Yes
<u>Public Access, Trails, and Recreation 7.</u> Limit recreational uses to passive uses such as birdwatching, photography and trail use. Locate developed picnic areas near MHPA edges or specific areas within the MHPA, in order to minimize littering, feeding of wildlife, and attracting or increasing populations of exotic or nuisance wildlife (opossums, raccoons, skunks).	Bikeways and associated facilities would be sited, designed and implemented in accordance with adjacency guidelines and subject to approval by the City.	Yes
<u>Litter/Trash and Materials Storage 1.</u> Remove litter and trash on a regular basis. Post signage to prevent and report littering in trail and road access areas. Provide and maintain trash cans and bins at trail access points.	Bikeways and associated facilities would be sited, designed and maintained in accordance with adjacency guidelines and subject to approval by the City.	Yes

**Table 5.1-7 (cont.)  
MSCP CONSISTENCY EVALUATION**

MSCP Policy/Guideline	Evaluation	Consistent?
<b>1.5.2 General Management Directives</b>		
<u>Litter/Trash and Materials Storage 2.</u> Impose penalties for littering and dumping.	Signage and penalties will be consistent with City policies and ordinances.	Yes
<u>Litter/Trash and Materials Storage 3.</u> Prohibit permanent storage of materials (e.g., hazardous and toxic chemicals, equipment, etc.) within the MHPA and ensure appropriate storage per applicable regulations in any areas that may impact the MHPA, due to potential leakage.	Hazardous and toxic chemicals, equipment, etc. will not be stored on bikeways or associated facilities.	Yes
<u>Litter/Trash and Materials Storage 4.</u> Keep wildlife corridor undercrossings free of debris, trash, homeless encampments, and all other obstructions to wildlife movement.	Bikeways and associated facilities would be maintained in accordance with City policies and ordinances.	Yes
<u>Exotics Control 1.</u> Do not introduce invasive non-native species into the MHPA.	Restoration or revegetation would be subject to approval by the City as well as state and federal agencies.	Yes
<u>Exotics Control 2.</u> Avoid removal activities during the reproductive seasons of sensitive species and avoid/minimize impacts to sensitive species or native habitats.	Construction in sensitive areas would be timed to avoid impacts to sensitive species.	Yes
<u>Exotics Control 3.</u> Perform standard maintenance, such as clearing and dredging of existing flood channels, during the non-breeding or nesting season of sensitive bird or wildlife species utilizing the riparian habitat. For the least Bell's vireo, the non-breeding season generally includes mid-September through mid-March.	Maintenance activities would be of limited durations and would follow City protocols that would preclude disturbances during the designated breeding seasons for potentially occurring sensitive birds (e.g., coastal California gnatcatcher and least Bell's vireo).	Yes

## Significance of Impact

In general, On-street Bikeways Without Widening would have no impact on local, regional, or state habitat conservation plans, policies and ordinances protecting biological resources. On-street Bikeways With Widening and Off-street Bikeways also would not result in significant impacts related to consistency with habitat conservation plans, policies and ordinances protecting biological resources.

For Issues 5 and 6, at this Citywide planning phase, potential program-level impacts related to consistency with local, regional, or state habitat conservation plans, policies and ordinances protecting biological resources would be less than significant.

## Mitigation, Monitoring, and Reporting

Because impacts related to conflict with an adopted habitat conservation plan would be less than significant, no mitigation would be required.

***Issue 7: Would the project introduce a land use within an area adjacent to the MHPA that would result in adverse edge effects?***

## Significance Thresholds

According to the City's Significance Determination Thresholds (2011), impacts to biological resources under Issue 7 would be significant if the program would:

- Result in a physical change in the MHPA which is not immediately related to the project, but which is caused indirectly by the project. Examples include:
  - The introduction of urban meso-predators (medium-sized predators such as raccoons, skunks, snakes, cats, and foxes) into a biological system;
  - The introduction of urban runoff into a biological system;
  - The introduction of invasive exotic plant species into a biological system;
  - Noise and lighting impacts at the construction/demolition and/or operational phases of the project;
  - Alteration of a dynamic portion of a system, such as stream flow characteristics or fire cycles; and
  - Loss of a wetland buffer that includes no environmentally sensitive lands.

## Impact Analysis

### On-street Bikeways (With and Without Widening) and Off-Street Bikeways

The issue of edge effects of bikeways adjacent to the MHPA is addressed in the indirect impacts discussions of under Issues 1, 2, 3, 4, and 8. Although trails, including Class I Bike Paths, are considered to be a compatible land use within preserve areas, possible indirect impacts (edge effects) to the MHPA by adjacent bikeways could include water quality degradation, exotic plant



species, fugitive dust, lighting, noise, and human intrusion. Refer to the identified sections of this Program EIR for an analysis of potential indirect impacts (edge effects) of bikeways adjacent to the MHPA.

### **Significance of Impact**

As discussed under Issues 1, 2, 3, 4, and 8, On-street Bikeways With or Without Widening and Off-street Bikeways would have the potential for significant indirect impacts to the MHPA. Measures to mitigate such impacts are discussed below.

### **Mitigation, Monitoring, and Reporting**

For bikeways proposed adjacent to open space areas proposed for conservation under the MHPA, implementation of Mitigation Measure **Bio-3** would reduce potential adjacency impacts to the MHPA to less than significant.

#### ***Issue 8: Would the project introduce invasive species of plants into a natural open space area?***

According to the City's Significance Determination Thresholds (2011), impacts to biological resources under Issue 8 would be significant if the program would:

- Introduce invasive exotic plant species into a biological system.

#### On-street Bikeways Without Widening

Proposed On-street Bikeways Without Widening would occur in existing developed areas, and would only involve improvements such as signage and striping that would not be expected to introduce invasive species. Such bikeways would have no impacts related to invasive species.

#### On-street Bikeways With Widening and Off-street Bikeways

Non-native plants could colonize areas disturbed during construction of On-street With Widening or Off-street Bikeways in proximity to natural open space areas, and potentially spread into these adjacent open space areas. Such invasions could displace native plant species, reducing diversity, increasing flammability and fire frequency, change ground and surface water levels, and adversely affect the native wildlife that are dependent on native vegetation. Invasion by non-native plants in areas where they previously did not exist would be considered a significant impact.

### **Significance of Impact**

On-street Bikeways Without Widening would have no impact related to invasive species, but On-street Bikeways With Widening and Off-street Bikeways would have the potential for significant direct and indirect impacts related to invasive species.

For Issue 8, at this Citywide planning phase, potential direct and indirect program-level impacts to invasive species remain significant. Measures to mitigate such impacts are discussed below.

**Mitigation, Monitoring, and Reporting**

With implementation of Mitigation Measure **Bio-3**, project impacts related to invasive species would be reduced to less than significant.

## 5.2 HISTORICAL RESOURCES

### 5.2.1 Existing Conditions

Historical resources in the San Diego region include archaeological sites and artifacts, buildings, groups of buildings, structures, districts, street furniture, signs, landscapes, distinguishing architectural characteristics, traditional cultural properties, and other features reflecting past human existence. These include both the prehistoric and historic periods, and span a timeframe of at least the last 10,000 years.

As described in the General Plan Program EIR (City 2008b), the earliest archaeological remains in San Diego County are believed to represent a nomadic hunting culture. Subsequently, the archaeological record dating from about 6000 BC to AD 0 shows that a gathering culture was present, which subsisted largely on shellfish and plant foods from the abundant near shore resources of the area. In the Late Prehistoric Period (AD 0 to 1769), the area was host to a hunting and gathering culture that was ancestral to the Kumeyaay people of today; they were adapted to a wide range of ecological zones from the coast to the Peninsular Range.

The ethnohistoric period began locally about 1769 with the establishment of the Spanish mission system, which brought about profound changes in the lives of the Yuman-speaking Kumeyaay people, particularly those living in the coastal areas. The ethnohistoric Kumeyaay were generally a hunting and gathering society characterized by nomadism from a central base (City 2008b).

The historic period in San Diego can be divided into the Spanish Period (1769-1821), Mexican Period (1821-1846) and American Period (1846-Present). Architectural examples of every major period and style are visible in San Diego, including Spanish Colonial, Pre-Railroad New England, National Vernacular, Victorian Italianate, Stick, Queen Anne, Colonial Revival, Neoclassical, Shingle, Folk Victorian, Mission, Craftsman, Prairie, French Eclectic, Italian Renaissance, Spanish Eclectic, Egyptian Revival, Tudor Revival, Modernistic and International (City 2008b).

The Spanish colonization of Alta California did not begin until 1769 with the founding of Mission San Diego de Alcalá (initial primitive mission and presidio structure) by Father Junípero Serra, near the Kumeyaay village of Cosoy. In August, 1774 the Spanish missionaries moved the Mission San Diego de Alcalá to its present location six miles up the San Diego River valley (modern Mission Valley). Substantial numbers of the coastal Kumeyaay people were forcibly brought into the mission or died from introduced diseases (City 2008b).

As early as 1791, presidio commandants in California were given the authority to grant small house lots and garden plots to soldiers and their families and in the early 1800s, soldiers and their families began to move down the hill near the San Diego River (City 2008b).

In 1822, Mexico won its independence from Spain, and San Diego became part of the Mexican Republic. The Mexican Government opened California to foreign trade; began issuing private land grants in the early 1820s, creating the rancho system of large agricultural estates;

secularized the Spanish missions in 1833; and oversaw the rise of the civilian pueblo. In 1835, Mexico granted San Diego official pueblo (town) status. At this time, centers of activity in Mexican San Diego (population approximately 500 residents) focused on the town and the ship landing area at La Playa instead of the Presidio and mission (City 2008b).

Native American attacks on outlying ranchos increased in the late 1830s. These attacks, along with political and economic factors resulted in a population decline to around 150 permanent residents by 1840, from a peak of 600, and removal of San Diego's official Pueblo status by 1838, relegating it to a subprefecture of the Los Angeles Pueblo (City 2008b).

The American Period began in July 1846 when United States military forces occupied San Diego, at which time San Diego's population had increased to roughly 350 non-Native American residents, with a continuing decline in the Native American population due to displacement and acculturation. Californio resistance to the American occupation was defeated in late 1846 and early 1847, and the Americans assumed formal control with the Treaty of Guadalupe-Hidalgo in 1848, introducing Anglo culture and society, American political institutions and American entrepreneurial commerce. With the Americanization of San Diego, the city began to develop rapidly. On February 18, 1850, the California State Legislature formally organized San Diego County (City 2008b).

During the Civil War, San Diego was a remote frontier town, and the town's population declined from 650 in 1850 to 539 in 1860. The urbanization of San Diego began with the arrival of land speculator and developer Alonzo Horton in 1867, and his development of a New San Diego (modern downtown). Trade expansion brought an increase in the availability of building materials, so that adobe structures were gradually replaced by wood buildings. The areas of Golden Hill, Uptown, Banker's Hill, Sherman Heights and Little Italy were developed during the Victorian Era of the late 1800s and early 1900s, and temporary vacation housing was developed in what are now the beach communities and La Jolla area. During the early 1900s, development (one small lot at a time) also spread to the Greater North Park, Mission Hills, and Barrio Logan areas, providing affordable housing away from the downtown area, and development expanded as transportation improved (City 2008b).

Also during this period, San Ysidro began to be developed by followers of the Littlelanders movement, as part of a farming-residential cooperative community. Nearby Otay Mesa-Nestor began to be developed by farmers of Germanic and Swiss background. Some of the prime citrus groves in California were in the Otay Mesa-Nestor area; in addition, there were grape growers of Italian heritage who settled in the Otay River Valley and tributary canyons and produced wine for commercial purposes (City 2008b).

San Diego State University was established in the 1920s, with consequent development of the College and Navajo area communities. Mission Valley transformed from farming and ranching to commercial and residential uses in the mid-20th century, and in the 1940s, the federal government improved public facilities and extended water and sewer pipelines north of the San Diego River to the Linda Vista area, to develop it as military housing. Development then spread north of Mission Valley to the Clairemont Mesa and Kearny Mesa areas. Tierrasanta (developed in the 1970s) and many of the communities that have developed since, such as Rancho

Peñasquitos and Rancho Bernardo, represent the typical development pattern in San Diego in the last 25 to 30 years: commercial uses are located along the main thoroughfares, residential uses are located in between, and industrial uses are located in planned industrial parks (City 2008b).

## **Regulatory Framework**

### Federal Regulations

The National Historic Preservation Act (NHPA), enacted in 1966, established the National Register of Historic Places, authorized funding for state programs with participation by local governments, created the Advisory Council on Historic Preservation, and established a review process for protecting cultural resources. NHPA provides the legal framework for most state and local preservation laws. The National Register of Historic Places is the nation's official list of cultural resources worthy of preservation. It is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archaeological resources.

### State Regulations

The California Register of Historical Resources (California Register) was established in 1992, through amendments to the Public Resources Code, as an authoritative guide to be used by state and local agencies, private groups, and citizens to identify the State's historical resources and to indicate what properties are to be protected from substantial adverse change. The California Register includes resources that are formally determined eligible for, or listed in, the National Register, State Historical Landmarks numbered 770 or higher, Points of Historical Interest recommended for listing by the State Historical Resources Commission (SHRC), resources nominated for listing and determined eligible in accordance with criteria and procedures adopted by the SHRC, and resources and districts designated as city or county landmarks when the designation criteria are consistent with California Register criteria.

With establishment of the California Register and the SHRC, the State Legislature amended CEQA in 1992 to define historical resources as a resource listed in, or determined eligible for listing in, the California Register, a resource included in a local register of historical resources or identified as significant in a historical resource survey that meets certain requirements, and any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be significant. Generally, a resource is considered to be historically significant if it meets the criteria for listing on the California Register. However, a lead agency under CEQA is not precluded from determining a resource is significant that is not listed in or determined eligible for listing in the California Register, not included in a local register, or identified in a historical resources survey as a historical resource, as defined in the Public Resources Code.

CEQA was further amended to clarify that a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. While demolition and destruction are fairly obvious significant impacts, it is more difficult to assess when change, alteration, or relocation crosses the threshold of substantial adverse change. The State CEQA Guidelines provide that a project that demolishes or alters those physical characteristics of a historical resource that convey its historical significance,

(i.e., its character-defining features), can be considered to materially impair the resource's significance. However, a project that conforms to the *Secretary of the Interior's Standards for the Treatment of Historic Properties* can generally be considered to be a project that will not cause a significant impact.

Several state laws address the importance of Native American involvement in the development review process and provide requirements for treatment of human remains and grave goods and protection of cultural places. Among these laws is the California Native American Graves Protection and Repatriation Act of 2001, consistent with the federal Native American Graves Protection and Repatriation Act, which was enacted to ensure that all California Indian human remains and cultural items be treated with dignity and respect. In addition, sections of the California Health and Safety Code address the discovery of human remains outside a dedicated cemetery and provide the requirements for consultation with appropriate Native American individuals for disposition of the remains. The requirements for local agencies to consult with identified California Native American Tribes, as part of the general plan adoption or amendment process and prior to the dedication of open space, are provided in Government Code Sections 65352.3, 65352.4, 65562.5, and others collectively referred to Senate Bill (SB) 18, which was enacted in September 2004.

#### Local Regulations, Plans and Policies

The Historic Preservation Element of the City's General Plan (City 2008a) includes the following policies related to historical resources (with policy numbers shown in parentheses):

1. Strengthen historic preservation planning. (HP-A.1)
2. Fully integrate the consideration of historical and cultural resources in the larger land use planning process. (HP-A.2)
3. Foster government-to-government relationships with the Kumeyaay/Diegueño tribes of San Diego. (HP-A.3)
4. Actively pursue a program to identify, document and evaluate the historical and cultural resources in the City of San Diego. (HP-A.4)
5. Designate and preserve significant historical and cultural resources for current and future generations. (HP-A.5)
6. Promote the maintenance, restoration and rehabilitation of historical resources through a variety of financial and development incentives. Continue to use existing programs and develop new approaches as needed. Encourage continued private ownership and utilization of historic structures through a variety of incentives. (HP-B.2)
7. Develop a historic preservation sponsorship program. (HP-B.3)
8. Foster greater public participation and education in historical and cultural resources. (HP-B.1)
9. Increase opportunities for cultural heritage tourism. (HP-B.4)

Chapters 11, 12, and 14 of the City of San Diego Municipal Code establish the Historical Resources Board (HRB) authority, appointment and terms, meeting conduct, and powers and duties; the designation process including the nomination process, noticing and report requirements, appeals, recordation, amendments or rescission, and nomination of historical

resources to state and national registers; and development regulations for historical resources. The purpose of these regulations is to protect, preserve, and, where damaged, restore the historical resources of the City. The historical resources regulations require that designated historical resources and traditional cultural properties be preserved unless deviation findings can be made by the decision maker as part of a discretionary permit. Minor alterations consistent with the U.S. Secretary of the Interior's Standards are exempt from the requirement to obtain a separate permit but must comply with the regulations and associated historical resources guidelines. Limited development may encroach into important archaeological sites if adequate mitigation measures are provided as a condition of approval.

Historical Resources Guidelines, located in the Land Development Manual, provide property owners, the development community, consultants and the general public explicit guidance for the management of historical resources located within the City's jurisdiction. These guidelines are designed to implement the historical resources regulations and guide the development review process from the need for a survey and how impacts are assessed to available mitigation strategies and report requirements and include appropriate methodologies for treating historical resources located in the City.

The City maintains a Register of Historic Resources of historical landmarks designated by the HRB, including National Register, National Historic Landmark, California Historic Landmark, Historical American Building Survey resources. Any improvement, building, structure, sign, interior element and fixture, feature, site, place, district, area, or object may be designated a historical resource by the City's HRB if it meets one or more of the following designation criteria:

- a. exemplifies or reflects special elements of the City's, a community's, or a neighborhood's, historical, archaeological, cultural, social, economic, political, aesthetic, engineering, landscaping or architectural development;
- b. is identified with persons or events significant in local, state or national history;
- c. embodies distinctive characteristics of a style, type, period, or method of construction or is a valuable example of the use of indigenous materials or craftsmanship;
- d. is representative of the notable work of a master builder, designer, architect, engineer, landscape architect, interior designer, artist, or craftsman;
- e. is listed or has been determined eligible by the National Park Service for listing on the National Register of Historic Places or is listed or has been determined eligible by the State Historical Preservation Office for listing on the State Register of Historical Resources; or
- f. is a finite group of resources related to one another in a clearly distinguishable way or is a geographically definable area or neighborhood containing improvements which have a special character, historical interest, or aesthetic value or which represent one or more architectural periods or styles in the history and development of the City.

Balboa Park's El Prado was the first site designated as a historical resource by the City in 1967. The City's Register of Historic Resources currently includes approximately 1,060 buildings, structures, objects, districts, cultural landscapes, and archaeological sites that have been designated by the City's HRB.

### Historical Resource Significance Criteria

Generally, a resource is considered by a Lead Agency to be historically significant if the resource meets the criteria for listing on the California Register (Public Resources Code 5024.1, 14 CCR Section 4852), including the following:

- a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- b. Is associated with the lives of persons important in our past;
- c. Embodies the distinctive characteristics of a type, period, region, or method of maintenance, or represents the work of an important creative individual, or possesses high artistic values; or,
- d. Has yielded or may be likely to yield information important in prehistory or history.

The California Register includes resources listed in or formally determined eligible for listing in the National Register of Historic Places, as well as some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory as potentially significant may be eligible for listing in the California Register and are presumed to be significant resources for purposes of CEQA, unless a preponderance of evidence indicates otherwise (Public Resource Code 5024.1, 14 CCR 4850).

The most recent amendments to the State CEQA Guidelines direct that lead agencies should first evaluate an archaeological site to determine if it meets the criteria for listing in the California Register. If an archaeological site is an historical resource (i.e., listed or eligible for listing in the California Register) potential adverse impacts to it must be considered (Public Resource Code 21084.1 and 21083.2(1)). If an archaeological site is not an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment.

The City's Significance Determination Thresholds (2011) have established the following criteria to be used in the determination of significance under CEQA:

- An archaeological site must consist of at least three associated artifacts/ecofacts (within a 40-square meter area) or a single feature and must be at least 45 years of age. Archaeological sites containing only a surface component are generally considered not significant unless demonstrated otherwise. Such site types may include isolated finds, bedrock milling stations, sparse lithic scatters, and shellfish processing stations. All other archaeological sites are considered potentially significant. The determination of significance is based on a number of factors specific to a particular site including site size, type, and integrity; presence or absence of a subsurface deposit, soil stratigraphy, features, diagnostics, and dateable material; artifact and ecofact density; assemblage complexity; cultural affiliation; association with an important person or event; and ethnic importance.



- The determination of significance for historic buildings, structures, objects, and landscapes is based on age, location, context, association with an important person or event, uniqueness, and integrity.
- A site will be considered to possess ethnic significance if it is associated with a burial or cemetery; religious social or traditional activities of a discrete ethnic population; an important person or event as defined by a discrete ethnic population; or the mythology of a discrete ethnic population.

Projects that have a federal nexus (e.g., permits or funding from a federal agency) require compliance with federal regulations. The NHPA and the regulations that implement Section 106 of the Act (36 CFR 800) require federal agencies to consider the effects of their actions on properties listed, or eligible for listing in the National Register of Historic Places. Eligible resources are considered historic properties. The criteria for listing a property on the California Register were modeled after on those for the National Register of Historic Places, so the significance criteria are quite similar under both sets of regulations.

Section 60.6 of 36 CFR Part 60 presents the criteria for evaluation of cultural resources for nomination to the National Register of Historic Places as follows:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, materials, workmanship, and association, and

- a. that are associated with events that have made a significant contribution to the broad patterns of our history; or
- b. that are associated with the lives of persons significant in our past; or
- c. that embody the distinctive characteristics of a type, period or method or maintenance, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d. that have yielded, or may be likely to yield, information important in prehistory or history.

Direct impacts to resources associated with the built environment may include substantial alteration, relocation, or demolition of historic buildings, structures, objects, landscapes, and sites, including above-ground historic resources such as sidewalk date stamps. The demolition or substantial alteration of a resource listed on, or formally determined eligible for, the National Register of Historic Places or the California Register, including contributors to National Register or California Register Historic Districts; or listed on the San Diego Historical Resources Register, including contributors to San Diego Register Historic Districts; or that meet the CEQA criteria for historical resources would represent a significant direct impact to historical resources. Additionally, grading, excavation and other ground disturbing activities associated with development projects that affect significant archaeological sites or traditional cultural properties would represent a significant direct impact to historical resources.

Archaeological resources may be difficult to detect prior to construction activities, as they are generally located below the ground surface. Most archaeological sites have some surface expression and many have been found within inches of the ground surface. Therefore, the potential to affect important archaeological sites exists if a development activity requires even minimal grading and/or excavation. The likelihood of encountering archaeological resources is greatest on sites that have been minimally excavated in the past (e.g., undeveloped parcels, vacant lots and lots containing surface parking; undeveloped areas around historic buildings; under buildings with post, pier, slab, or shallow wall foundations without basements; etc.). Previously excavated areas are generally considered to have a low potential for archaeological resources, since the soil containing the archaeological resources has been removed. However, under certain circumstances, further evaluation would be required when previously excavated and/or graded project sites are located within areas of known archaeological sensitivity (e.g., recorded sites, designated sites, etc.), or are identified as traditional cultural properties. In addition, building demolition and surface clearance could result in direct impacts to archaeological resources.

As described in the City's Significance Determination Thresholds (2011), possible indirect impacts in the built environment include the introduction of visual, audible or atmospheric effects that are out of character with the historic property or alter its setting, when the setting contributes to the property's significance. Examples include, but are not limited to, the construction of a large scale building, structure, object, or public works project that has the potential to cast shadow patterns on the historic property, intrude into its viewshed, generate substantial noise, or substantially increase air pollution or wind patterns. Increases in air pollution can result in adverse effects to historically designated buildings (chimney soot, dust, debris, etc.). Increased wind patterns can result in adverse effects to an archaeological site if, through removal of vegetation or structure, the wind exposes the site or feature that was previously protected from the wind. Conversely, an adverse effect could occur from blocking a natural wind pattern at a sacred site where the wind is integral to the ritual or experience.

For archaeological resources and traditional cultural properties, indirect impacts are often the result of increased public accessibility to resources not otherwise subject to impacts, which may result in an increased potential for vandalism and site destruction. Placing sites into open space does not always mean that there will not be the potential for indirect impacts to the resource. Therefore, resources placed into open space need to be evaluated for indirect impacts.

### **General Location of Historical Resources in the San Diego Region**

Decades of systematic historical resource survey, evaluation, and data recovery for CEQA-mandated projects has resulted in a body of data relating to historical settlement and land use. Presented below are some generalizations regarding the location and nature of historical resources within the study area, based on previous historical resources studies in the region (Christenson 1990; Gross 1993; Affinis 2011).

### Land Use and Settlement Patterns

Large habitation sites are usually located in valleys near seasonal streams, with slopes no greater than 15 percent, generally in grassland areas (Christenson 1990). Small habitation sites and large resource processing sites were similarly situated, in flat areas of valleys, drainages, or ridges near seasonal streams within chaparral grasslands or southern oak woodlands. Small processing sites were mostly found in flat, grassy valley settings near seasonal streams and were often associated with granitic outcrops. Lithic scatters<sup>1</sup> were found in a variety of locations, but most were on flat ridges, terraces, or mesas near water (Gross 1993).

Hillside and slope locations were the most common landform on which sites occurred, followed by valley bottom locations and hilltop/ridge locations. Quaternary alluvium (common in valley bottoms) was the most common geologic setting, with the formations of the Poway and La Jolla groups (source of lithic raw material) coming in second (Gross 1993).

Elevation, distance to water, and differential between site elevation and elevation of the nearest water source are all important considerations in site location. Valley bottom locations were favored, and steep slopes were avoided. Based on these data, one would expect to encounter archaeological sites in valley bottom and valley margin locations. Sites would be much less likely in steep-sided canyons. Lithic quarrying or processing sites may be found on steeper slopes, but these sites would generally not be as significant as habitations or camp sites (Gross 1993).

### Buried Site Potential

Human activities take place on the ground surface. Artifacts and features appear in a subsurface context through bioturbation (the reworking of soils and sediments by animals or plants) or deposition of sediments. The depositional mechanisms of site burial include alluvium (flowing water); colluvium (gravity); eolian (wind-blown) sediments; and anthropogenic (human-caused) mechanisms, such as purposeful burial of materials, or cut and fill activities. Therefore, buried sites are often found near floodplains, mouths of streams, coastal valleys, bottoms of slopes, and within areas graded or leveled by man. Buried historical resources often become surface resources through earth-disturbing activities, including erosional gullies, road cuts, plowing, rodent activity, and grading and trenching (Affinis 2011).

Major archaeological sites within the study area that are known to have deeply buried deposits include the ethnohistoric villages of Ystagua, Rinconada, Millejo, Cosoy, and Nipaguay. In addition to these sites, buried historic material may be expected in such areas as Sorrento Valley/Soledad Canyon, Rose Creek, Mission Valley, Chollas Valley, and the Tijuana River Valley, because of the depositional processes described above (Affinis 2011).

A map showing the locations of recorded historical resources sites within the City is not included in this Program EIR because locations of such resources are not publicly disclosed in accordance with State law.

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<sup>1</sup> Lithic scatter consists of surface debris of stone chips and flakes leftover from tool making.

### 5.2.2 Impacts

**Issue 1:** *Would the project result in an alteration, including the adverse physical or aesthetic effects and/or the destruction of a prehistoric or historic building (including an architecturally significant building), structure, or object or site?*

**Issue 2:** *Would the project result in an impact to existing religious or sacred uses within the potential impact area?*

### **Significance Thresholds**

According to the City's Significance Determination Thresholds (2011), impacts to historical resources under Issues 1 or 2 would be significant if the project would affect any of the following:

- A resource listed in, eligible, or potentially eligible for the National Register of Historic Places.
- A resource listed in, or determined to be eligible by, the State Historical Resources Commission, for listing in the California Register of Historical Resources (Public Resources Code, § 5024.1).
- A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code, or identified as significant in an historical resource survey meeting the requirements of § 5024.1(g) of the Public Resources Code.
- Any object, building, structure, site, area, place, record, or manuscript which a Lead Agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the Lead Agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the Lead Agency to be "historically significant" if the resource meets the criteria for listing on the California Register (Public Resources Code, § 5024.1), including the following criteria:
  - a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
  - b. Is associated with the lives of persons important in our past;
  - c. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
  - d. Has yielded, or may be likely to yield, information important in prehistory or history.
- An archaeological site consisting of at least three associated artifacts/ecofacts (within a 40 square meter area) or a single feature.
- A "traditional cultural property", defined to include any locale that;  
...has been, and often continues to be of religious, mythological, cultural, economic and/or social importance to an identified ethnic group. This includes sacred areas where religious ceremonies have

been or currently are practiced or which are central to a group's origins as a people. Also included are areas where plants or other materials have been or currently are gathered for food, medicine or other economic purposes...Traditional cultural properties may also include neighborhoods which have been modified over time by ethnic or folk group use in such a way that the physical and cultural manifestations of the ethnic or folk culture are still distinguishable today. Cultural expressions shared within familial, ethnic, occupational, or religious groups include but are not limited to; technical skill, language, music, oral history, ritual, pageantry, and handicraft traditions which are learned orally, by limitation or in performance, and are generally maintained without benefit of formal instruction or institutional direction. Physical features may include: distinctive landscape and settlement patterns, architectural topologies, materials and methods of construction, and ornamental detail.

A site would be considered to possess ethnic significance if it is associated with a burial or cemetery; religious, social or traditional activities of a discrete ethnic population; an important person or event as defined by a discrete ethnic population; or the belief system of a discrete ethnic population.

The determination of significance of impacts on historical and unique archaeological resources is based on the criteria found in Section 15064.5 of the State CEQA Guidelines. Section 15064.5 clarifies the definition of a substantial adverse change in the significance of a historical resource as "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired."

### **Impact Analysis**

Operation (i.e., use) of the bicycle facilities proposed in the BMP Update would have no impact on prehistoric or historic buildings, structures, objects, or sites, since the act of riding a bicycle would have no potential to disturb historic resources. The following analysis focuses on potential direct and indirect impacts of construction of these facilities. Facilities other than bikeways, such as signal detectors, bicycle racks/parking, other end-of-trip facilities, and multi-modal connections would largely be located within the footprint of proposed bikeway projects, and are addressed under the On-street Bikeways With Widening and Off-Street Bikeways categories below. Potential impacts of larger end-of-trip and other facilities would be addressed as part of the environmental review of the specific projects they are associated with.

#### On-street Bikeways Without Widening

##### *Direct Impacts*

On-street Bikeways Without Widening would be developed inside the footprint of existing developed roadways. Therefore, there is no potential to directly impact above-ground historical

resources. On-street Bikeways Without Widening are also unlikely to directly impact subsurface resources, since the underlying substrate has been previously disturbed in conjunction with roadway development. Such bikeways could, however, involve the installation of traffic lights (new or relocated), utility work, or major signage requiring excavation, which would have the potential to adversely affect archaeological resources and result in a significant direct impact.

#### *Indirect Impacts*

On-street Bikeways Without Widening would be located within existing developed roadways and would not involve the construction of large scale structures with the potential to cast shadow patterns on historic properties, intrude into viewsheds, generate substantial noise increases, substantially increase air pollution or wind patterns or otherwise indirectly impact historical resources. They also would not substantially increase public accessibility to historical resources not otherwise subject to impacts, so they would not expose such resources to an increased potential for vandalism and site destruction. Implementation of On-street Bikeways Without Widening would, therefore, have no significant indirect impact on prehistoric or historic buildings, structures, objects or sites, or existing religious or sacred uses.

#### On-street Bikeways With Widening and Off-Street Bikeways

On-street Bikeways With Widening and Off-Street Bikeways and other facilities implemented under the BMP Update are analyzed together, because these types of facilities are likely to involve grading, excavation, or demolition, which could directly or indirectly impact historical resources.

#### *Direct Impacts*

Many of the proposed bikeways and other facilities implemented under the BMP Update would be located in the vicinity of known archaeological and historic resources; in particular, on-street bikeways are proposed in historic districts containing numerous historic buildings and objects such as sidewalk date stamps. Although construction of bikeways and other facilities implemented under the BMP Update would not likely involve extensive excavation or grading, all earthmoving activities have the potential to adversely affect archaeological resources and result in a significant impact. While it is unlikely that an historical structure would be altered or demolished to accommodate new bikeways or other facilities implemented under the BMP Update, the setting of an historical resource may be directly affected, for instance, by removal of landscaping, thereby resulting in a potential significant impact. Historical resources can include open spaces, trees (i.e., heritage trees), or landscaping—in and of themselves—or as part of an historical structure's setting.

#### *Indirect Impacts*

The proposed project would not involve the construction of a large scale structures with the potential to cast shadow patterns on the historic properties, intrude into viewsheds, generate substantial noise, substantially increase air pollution or wind patterns or otherwise indirectly impact historical resources. Implementation of proposed bikeways and other facilities

implemented under the BMP Update may, however, introduce new facilities in proximity to the resource and thereby result in a potential significant indirect impact to the setting of an historical resource. Bikeway projects and other facilities implemented under the BMP Update may also result in increased public accessibility to historical resources; increased public access, particularly unauthorized access, to open space areas that could contain previously inaccessible archaeological resources could result in an increased potential for vandalism and site destruction.

### **Significance of Impact**

Bikeway alignments as shown in the BMP Update are conceptual in nature. As projects are designed, impacts to prehistoric or historic buildings, structures, objects or sites would be evaluated on a project-by-project basis.

All categories of bikeways, as well as other facilities implemented under the BMP Update would have the potential for direct impacts on prehistoric or historic buildings, structures, objects or sites or existing religious or sacred uses. On-street Bikeways With Widening and Off-street Bikeways and related facilities would have the potential for significant indirect impacts to such resources, but On-street Bikeways Without Widening would not.

### **Mitigation, Monitoring, and Reporting**

The following mitigation measure would avoid or reduce potentially significant direct or indirect impacts to unknown buried historical resources to below a level of significance.

**Hist-1:** Prior to issuance of any permit that could directly affect an archaeological resource or resources associated with prehistoric Native American activities, the City shall require the following steps be taken to determine: (1) the presence of archaeological resources and (2) the appropriate mitigation for any significant resources that may be impacted by a development activity.

### **Initial Determination**

The environmental analyst shall determine the likelihood for the project site to contain historical resources by reviewing site photographs and existing historic information (e.g., Archaeological Sensitivity Maps, the Archaeological Map Book, and the California Historical Resources Inventory System) and conducting a site visit. If there is any evidence that the site contains archaeological resources, then an evaluation consistent with the City of San Diego's Historical Resources Guidelines shall be required. All individuals conducting any phase of the archaeological evaluation program must meet professional qualifications in accordance with the City's Historical Resources Guidelines.

### **Step 1**

Based on the results of the Initial Determination, if there is evidence that the site contains archeological resources, preparation of an evaluation report is required. The

evaluation report could generally include background research, field survey, archeological testing, and analysis. Before actual field reconnaissance would occur, background research is required that includes a record search at the South Coastal Information Center (SCIC) at San Diego State University and the San Diego Museum of Man. A review of the Sacred Lands File maintained by the NAHC must also be conducted at this time. Information about existing archaeological collections shall also be obtained from the San Diego Archaeological Center and any tribal repositories or museums.

Once the background research is complete a field reconnaissance must be conducted by individuals whose qualifications meet City standards. Consultants are encouraged to employ innovative survey techniques when conducting enhanced reconnaissance including, but not limited to, remote sensing, ground penetrating radar, and other soil resistivity techniques as determined on a case-by-case basis. Native American participation is required for field surveys when there is likelihood that the project site contains prehistoric archaeological resources or traditional cultural properties. If through background research and field surveys historical resources are identified, then an evaluation of significance must be performed by a qualified archaeologist.

## **Step 2**

Once a resource has been identified, a significance determination must be made. It should be noted that tribal representatives and/or Native American monitors will be involved in making recommendations regarding the significance of prehistoric archaeological sites during this phase of the process. The testing program may require reevaluation of the proposed project in consultation with the Native American representative, which could result in a combination of project redesign to avoid and/or preserve significant resources, as well as mitigation in the form of data recovery and monitoring (as recommended by the qualified archaeologist and Native American representative). An archaeological testing program will be required that includes evaluating the horizontal and vertical dimensions of a site, the chronological placement, site function, artifact/ecofact density and variability, presence/absence of subsurface features, and research potential. A thorough discussion of testing methodologies including surface and subsurface investigations can be found in the City of San Diego's Historical Resources Guidelines.

The results from the testing program will be evaluated against the Significance Thresholds found in the Historical Resources Guidelines and in accordance with the provisions outlined in Section 15064.5 of the State CEQA Guidelines. If significant historical resources are identified within a project's Area of Potential Effect (APE), the site may be eligible for local designation. At this time, the final testing report must be submitted to Historical Resources Board staff for eligibility determination and possible designation. An agreement on the appropriate form of mitigation is required prior to distribution of a draft environmental document. If no significant resources are found, and site conditions are such that there is no potential for further discoveries, then no further action is required. Resources found to be non-significant



as a result of a survey and/or assessment will require no further work beyond documentation of the resources on the appropriate DPR site forms and inclusion of results in the survey and/or assessment report. If no significant resources are found but results of the initial evaluation and testing phase indicate there is still a potential for resources to be present in portions of the property that could not be tested, then mitigation monitoring is required.

### **Step 3**

Preferred mitigation for archeological resources is to avoid the resource through project redesign. If the resource cannot be entirely avoided, all prudent and feasible measures to minimize harm shall be taken. For archaeological resources where preservation is not an option, a Research Design and Data Recovery Program (RDDR) is required or is required to follow alternate treatment recommendations by the Most Likely Descendant (MLD), which includes a Collections Management Plan for review and approval. The data recovery program shall be based on a written research design and is subject to the provisions as outlined in CEQA Section 21083.2. If the archaeological site is an historical resource, then the limits on mitigation provided under Section 21083.2 shall not apply, and treatment in accordance with Guidelines Section 15162.4 and 21084.1 is required. The data recovery program must be reviewed and approved by the City's Environmental Analyst prior to draft CEQA document distribution. Archaeological monitoring shall be required during building demolition and/or construction grading when significant resources are known or suspected to be present on a site, but cannot be recovered prior to grading due to obstructions such as, but not limited to, existing development or dense vegetation.

A Native American observer must be retained for all subsurface investigations, including geotechnical testing and other ground disturbing activities whenever a Native American Traditional Cultural Property (TCP) or any archaeological site located on City property, or within the APE of a City project, would be impacted. In the event that human remains are encountered during data recovery and/or a monitoring program, the provisions of PRC Section 5097 must be followed. These provisions would be outlined in the Mitigation Monitoring and Reporting Program included in the environmental document. The Native American monitor shall be consulted during the preparation of the written report, at which time they may express concerns about the treatment of sensitive resources. If the Native American community requests participation of an observer for subsurface investigations on private property, the request shall be honored.

### **Step 4**

Archaeological Resource Management reports shall be prepared in conformance with the California Office of Historic Preservation (OHP) "Archaeological Resource Management Reports (ARMR): Recommended Contents and Format" (see Appendix C of the Historical Resources Guidelines), which will be used by Environmental Analysis Section staff in the review of archaeological resource reports. Consultants must ensure

that archaeological resource reports are prepared consistent with this checklist. This requirement will standardize the content and format of all archaeological technical reports submitted to the City. A confidential appendix must be submitted (under separate cover), along with historical resource reports for archaeological sites and TCPs, containing the confidential resource maps and records search information gathered during the background study. In addition, a Collections Management Plan shall be prepared for projects that result in a substantial collection of artifacts, which must address the management and research goals of the project, the types of materials to be collected and curated based on a sampling strategy that is acceptable to the City of San Diego. Appendix D (Historical Resources Report Form) shall be used when no archaeological resources were identified within the project boundaries.

### **Step 5**

For Archaeological Resources: All cultural materials, including original maps, field notes, non-burial related artifacts, catalog information and final reports recovered during public and/or private development projects must be permanently curated with an appropriate institution, one which has the proper facilities and staffing for insuring research access to the collections consistent with state and federal standards. In the event that a prehistoric and/or historical deposit is encountered during construction monitoring, a Collections Management Plan would be required in accordance with the project MMRP. The disposition of human remains and burial-related artifacts that cannot be avoided or are inadvertently discovered is governed by state (i.e., AB 2641 and California Native American Graves Protection and Repatriation Act [NAGPRA]) and federal (i.e., federal NAGPRA) law, and must be treated in a dignified and culturally appropriate manner with respect for the deceased individual(s) and their descendants. Any human bones and associated grave goods of Native American origin shall be turned over to the appropriate Native American group for repatriation.

Arrangements for long-term curation must be established between the applicant/property owner and the consultant prior to the initiation of the field reconnaissance, and must be included in the archaeological survey, testing, and/or data recovery report submitted to the City for review and approval. Curation must be accomplished in accordance with the California State Historic Resources Commission's Guidelines for the Curation of Archaeological Collections (dated May 7, 1993) and, if federal funding is involved, Part 36, Section 79 of the Code of Federal Regulations. Additional information regarding curation is provided in Section II of the Historical Resources Guidelines.

**Issue 3: *Would the project disturb any human remains, including those interred outside of formal cemeteries?***

**Significance Thresholds**

According to the City's Significance Determination Thresholds (2011), impacts to historical resources under Issue 2 would be significant if the program would:

- Result in the disturbance of any human remains within the City, including those interred outside formal cemeteries.

On-street Bikeways Without Widening

*Direct Impacts*

On-street Bikeways Without Widening would be developed inside the footprint of existing developed roadways, and therefore are unlikely to directly impact subsurface resources such as human remains, since the underlying substrate has been previously disturbed in conjunction with roadway development. Such bikeways could, however, involve the installation of traffic lights (new or relocated), utility work, or major signage requiring excavation, which would have the potential to adversely affect buried human remains and result in a significant direct impact.

*Indirect Impacts*

On-street Bikeways Without Widening would be located within existing developed roadways, so they would not substantially increase public accessibility to subsurface artifacts such as human remains. Therefore, they would not expose such resources to an increased potential for vandalism and site destruction. Implementation of On-street Bikeways Without Widening would, therefore, have no indirect impact with respect to disturbance of any human remains.

On-street Bikeways With Widening and Off-street Bikeways

*Direct Impacts*

~~On-street Bikeways Without Widening would be developed inside the footprint of existing developed roadways, and therefore are unlikely to directly impact subsurface resources such as human remains, since the underlying substrate has been previously disturbed in conjunction with roadway development. Such bikeways could, however, involve the installation of traffic lights (new or relocated), utility work, or major signage requiring excavation, which would have the potential to adversely affect buried human remains and result in a significant direct impact.~~

Human remains have been previously identified in association with prehistoric and historic sites within the City. Therefore, the potential for encountering human remains in the area of proposed bikeway improvements and other facilities implemented under the BMP Update exists. The proposed on-street improvements would involve the extension or integration of bike facilities with existing roadways, and even the construction of Class I Bike Paths would

not likely involve extensive excavation or grading. Nevertheless, all earthmoving activities have the potential to adversely affect archaeological resources, including human remains, and result in a significant impact.

### *Indirect Impacts*

Bikeway projects and other facilities implemented under the BMP Update may result in increased public accessibility to historical resources. Increased public access, particularly unauthorized access, to open space areas that could contain previously inaccessible subsurface artifacts such as human remains could result in an increased potential for vandalism and site destruction. Therefore, Implementation of On-street Bikeways Without Widening, Off-street Bikeways or related facilities would have the potential for indirect impacts with respect to disturbance of human remains.

### **Significance of Impact**

Bikeway alignments as shown in the BMP Update are conceptual in nature. As projects are designed, impacts to prehistoric or historic buildings, structures, objects or sites would be evaluated on a project-by-project basis.

All categories of bikeways, as well as other facilities implemented under the BMP Update would have the potential for direct impacts on human remains. On-street Bikeways With Widening and Off-street Bikeways and related facilities would have the potential for significant indirect impacts to human remains, but On-street Bikeways Without Widening would not.

### **Mitigation, Monitoring and Reporting**

Mitigation Measure Hist-1, presented above under Issues 1 and 2, would avoid or reduce potentially significant impacts to unknown buried human remains to below a level of significance. This mitigation measure would only be required for proposed bikeways or facilities under the BMP Update that would require ground disturbance.

## 5.3 TRANSPORTATION/CIRCULATION

This section describes the City's existing transportation network and transportation regulatory framework, presents a program-level transportation impact analysis of implementing the proposed BMP Update, and identifies mitigation measures associated with BMP Update implementation. In addition, this section discusses on-street parking and transit operations, which are not considered environmental impacts pursuant to CEQA, as these issues are not contained within CEQA's Appendix G, Environmental Checklist Form (although parking had appeared previously in this Checklist), but are relevant topics associated with the proposed bicycle network. Furthermore, Section 15064.7 of the State CEQA Guidelines recommends that local agencies establish their own significance thresholds, and parking is listed in the City's significance thresholds as a potential area of impact, although it should be noted that the City's parking thresholds pertain to parking shortfalls for proposed development projects and not for the removal of on-street parking as may be required to implement some of the bikeways proposed in the BMP Update. Therefore, these two transportation issues are discussed in this section for informational purposes.

### 5.3.1 Existing Conditions

#### **Transportation System**

The City's transportation system provides for the movement of people and goods through a network of highways and roads, public transit, freight railroads, airports, seaports, and intermodal facilities. Local streets, paths, and trails serve to provide local access and connections to the City-wide and regional transportation network. The City transportation system provides travel for residents, employees, visitors, and goods movement and creates a system that supports City and regional economic needs. To accommodate the various travel needs, the City's transportation network includes infrastructure to support the various modes of transportation. The City's existing transportation system infrastructure is described below.

#### Roadways

The current *City of San Diego Street Design Manual* (2002) classifies roadways within the City into the categories listed below.

#### *Primary Arterial*

A primary arterial is a roadway that provides vehicles and transit a connection to other primary arterials and to the freeway system. Six-lane primary arterials have a LOS E maximum capacity of 60,000 Average Daily Traffic (ADT), while accommodating few pedestrians and only a moderate number of bicyclists and public transit vehicles. Primary arterials per the current Street Design Manual have a raised center median, bicycle lanes, street trees, street lighting, non-contiguous sidewalks, and no access from abutting property. These roadways may include underground utilities.

### *Major Street*

A major street is a roadway that provides vehicles and transit a connection to other major streets, primary arterials, and freeways. They also provide access to abutting commercial and industrial property. Major streets have a LOS E maximum capacity of 50,000 ADT (6 lanes) or 40,000 ADT (4 lanes), accommodate a low-to-high number of pedestrians and bicyclists, and moderate-to-high amount of transit. Per the current Street Design Manual, major streets have a raised center median, street trees, street lighting, non-contiguous sidewalks, and bike lanes, although many major streets do not currently have bicycle lanes since they were designed prior to bicycle lanes being a requirement for major streets. They also may include landscaping, pedestrian-scale lighting, underground utilities, and on-street parking.

### *Collector Street*

A collector street provides movement between local/collector streets and streets of higher classification. Collector streets also provide access to abutting property. They have a LOS E maximum capacity of 8,000 to 30,000 ADT (depending on number of lanes and location), accommodate few too many-pedestrians, medium to large number of bicyclists, and little to moderate numbers of public transit. Collector streets per the current Street Design Manual have on-street parking, street trees, street lighting, and non-contiguous sidewalks. They may also include landscaping, pedestrian-scale lighting, and underground utilities.

### *Local Street*

A local street is a street that provides direct access to abutting property. Local streets are designed to accommodate low vehicular traffic volumes, few too many pedestrians, and little to moderate number of bicyclists. Local streets have on-street parking, street trees, street lighting, and sidewalks. They may also include landscaping, pedestrian-scale lighting, and underground utilities.

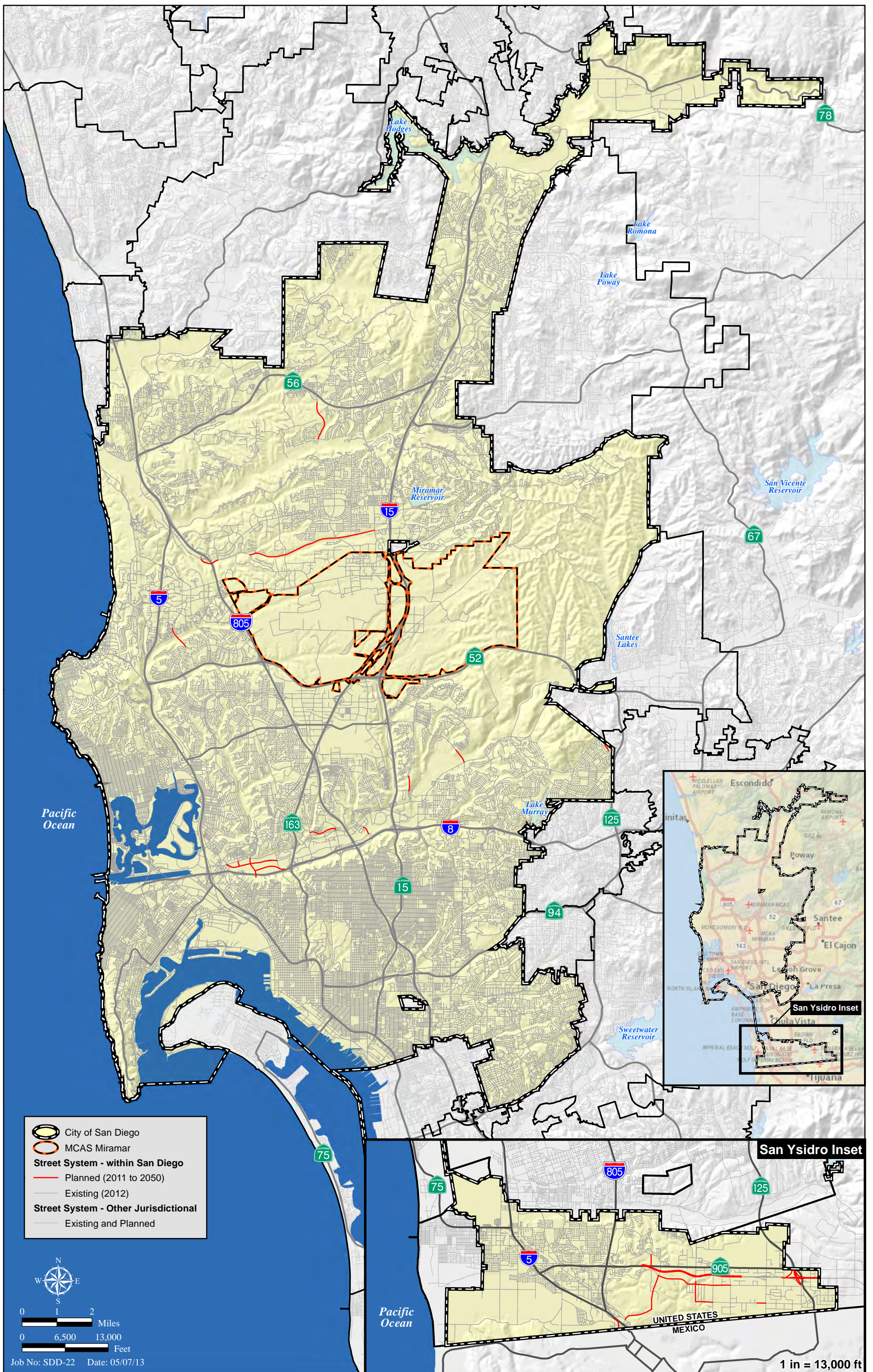
A total of approximately 4,362 miles of roadways are located within the City. Figure 5.3-1, *Existing and Planned Roadway System*, shows the existing roadway system in the City of San Diego.

### Bikeways

As discussed in Section 2.0, *Environmental Setting*, existing bikeways can be classified into three types in accordance with the Caltrans Highway Design Manual (refer to Table 3-1, *Proposed Bikeways*): Class I (Bike Path), Class II (Bike Lane), Class III (Bike Route), as well as roadways with no bikeway designation.. Bicycles are also allowed on freeway shoulders in some areas.

Figures 2-3a, 2-3b, and 2-3c in Section 2.0, *Environmental Setting*, show the network of existing bikeways within the City. Many Class I Bike Paths (which provide for bicycle travel on a paved right-of way completely separated from any street or highway) are located in Mission Valley, Mission Bay Park, and along the beachfronts in Pacific Beach and Mission Beach. Other Class I Bike Paths of significant length can be found in Carmel Valley, Rancho Peñasquitos, Mira Mesa, Rose Canyon, near the San Diego Airport, and in the Mission Trails Park. In the City, many





**Existing and Planned Roadway System**  
Figure 5.3-1



Class I Bike Paths provide critical links between communities that would otherwise be totally separated for bicyclists. Two examples of these critical links are the Rose Canyon and Murphy Canyon paths, which provide for convenient bicycle travel in areas with no other alternative route adjacent to busy freeways.

Most of the Class II Bike Lanes (which provide a striped ~~and stenciled~~ lane for one-way travel on a street or highway) are located in areas of the City developed within the last 30 years and include Rancho Bernardo, Rancho Peñasquitos, Sabre Springs, Mira Mesa, University City, Carmel Valley, and Tierrasanta. Some important Class II Bike Lanes of significant length include Genesee Avenue, Linda Vista Road, Kearny Villa Road, Black Mountain Road, Aero Drive, Harbor Drive, Friars Road, Mission Gorge Road, Nimitz Boulevard Beyer Boulevard, Carmel Mountain Road, Torrey Pines Road, and Otay Mesa Road.

Class III Bike Routes (which provide for shared use with pedestrian or motor vehicle traffic and are identified only by signage) are located both along major arterials and along quiet neighborhood streets. Arterial Class III Bike Routes are located along such streets as Miramar Road, Rancho Peñasquitos Boulevard, Pacific Highway, 4<sup>th</sup> Avenue, 5<sup>th</sup> Avenue, 6<sup>th</sup> Avenue, Camino Ruiz, Saturn Boulevard, and Del Sol Boulevard. Neighborhood Class III Bike Routes are located along streets such as Orange Avenue in City Heights, Gold Coast Drive in Mira Mesa, Fort Stockton Drive in Mission Hills, Hornblend Avenue in Pacific Beach, L Street near Golden Hill, and Iris Avenue in Otay Mesa-Nestor.

Currently, the City has 510.7 miles of bikeways, as well as bicycle parking facilities in multiple locations.

### Transit

Transit services are provided both for trips within the City and region and for trips between San Diego and adjacent areas. The current transit network includes local and express bus, Bus Rapid Transit (BRT), light rail (trolley), ferry, and Coaster commuter rail services.

Within the San Diego region, transit services are provided by the Metropolitan Transit System (MTS) in the southern metropolitan area (including the City of San Diego) and the North County Transit District (NCTD) in the northern part of the county (with Coaster and bus services that tie into the City). Ferry service (privately operated) also is available between San Diego and Coronado. In addition, there are demand-responsive transit services, such as RideFACT, a “dial-a-ride” service for ages 60 and older that provide transit service in sparsely traveled areas and for travelers with special needs that cannot be well served by fixed-route service.

Figure 5.3-2, *Regional Transit Service*, shows existing San Diego regional transit service network with connections in the City, consistent with the SANDAG 2050 RTP. The RTP identifies light rail, local and express bus, and BRT projects that would improve operations of existing services.

The San Diego Trolley serves the downtown area, Old Town, Mission Valley, Fashion Valley, Petco Park, Qualcomm Stadium, San Diego State University, San Ysidro and its port of entry into Mexico, Santee, and other destinations.



Bicycles are allowed on MTS vehicles free of charge on all bus routes. Bicycles are accommodated on a rack on the front of each bus, which holds up to two bikes. On the trolley, one bike is allowed on board during rush hours and two bikes are allowed on board at other times. All of NCTD's transit vehicles can accommodate bicycles. Every NCTD bus has a bike rack capable of handling two bikes.

### Passenger Rail

The Coaster and Amtrak trains provide passenger rail service to the City of San Diego along the coastal rail corridor. The Coaster provides commuter rail service between Oceanside and Downtown San Diego with stations in the City at Sorrento Valley, Old Town, and the Santa Fe Depot; there are bike areas on each Coaster train car. Amtrak provides intercity passenger rail service from Downtown San Diego to Los Angeles, and north to San Luis Obispo (LOSSAN), which is the second most heavily traveled intercity passenger rail corridor in the nation.

### Goods Movement Transportation Modes

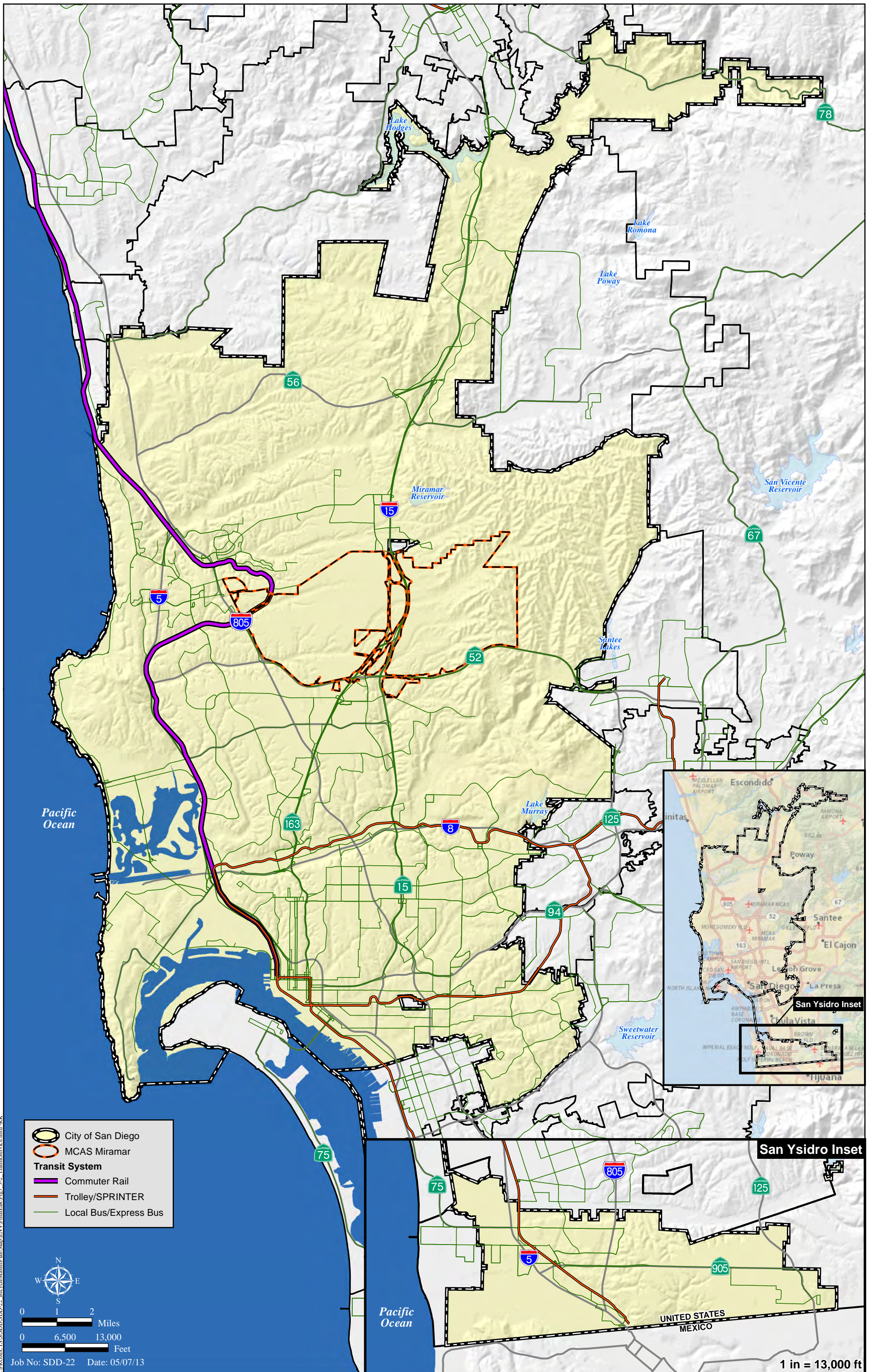
Goods movement in the San Diego region is provided via truck travel on the region's roadway systems, as well as by air, seaport, and rail. San Diego International Airport (Lindbergh Field) serves as the primary airport for the movement of the goods transported by air. The region's seaport at Tenth Avenue in San Diego and National City is located on San Diego Bay and is operated by the San Diego Unified Port District. Freight rail service within the San Diego region is provided via the Burlington Northern and Santa Fe Railway (BNSF) and San Diego and Imperial Valley (SDIV) railroads with Carrizo Gorge Railway operating between Tijuana and Tecate, Baja California. The SD&AE South Line, owned by MTS and operated by the SDIV Railroad, extends approximately 15 miles between downtown San Diego and the U.S.–Mexico border at San Ysidro. This railroad line connects to the Carrizo Gorge Railway in Mexico. Another short rail segment operated by the SDIV Railroad runs from downtown San Diego to Santee. The BNSF Railway operates a line that runs from downtown San Diego to Oceanside, and another segment between downtown San Diego and the National City Marine Terminal. The 60-mile San Diego segment of the Los Angeles-to-San Diego (LOSSAN) corridor, extending from the Orange County line to the Santa Fe Depot in downtown San Diego, also carries freight.

## **Transportation Analysis Metrics**

### Level of Service

Level of service (LOS) is the term used to denote the different operating conditions that occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis that takes into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. LOS provides an index to the operational qualities of a roadway segment or an intersection. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. LOS designation is reported differently for signalized and unsignalized intersections, as well as for roadway segments. Table 5.3-1, *Roadway Level of Service Definitions*, summarizes the types of traffic flow associated with each LOS.





**Regional Transit Service**  
Figure 5.3-2 (Revised)



**Table 5.3-1  
ROADWAY LEVEL OF SERVICE DEFINITIONS**

LOS	Traffic Flow Description
A	Primarily free-flow operations. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at signalized intersections is minimal.
B	Reasonably unimpeded operations. The ability to maneuver within the traffic stream is only slightly restricted, and control delays at signalized intersections are not significant.
C	Stable operations; however, ability to maneuver and change lanes in midblock locations may be more restricted than at LOS B, and longer queues, adverse signal coordination, or both may contribute to lower average travel speeds.
D	Borders on a range in which small increases in flow may cause substantial increases in delay. LOS D may be due to adverse signal progression, inappropriate signal timing, high volumes, or a combination of these factors.
E	Characterized by significant delays. Such operations are caused by a combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections, and inappropriate signal timing.
F	Characterized by urban street flow at extremely low speeds. Intersection congestion is likely at critical signalized locations, with high delays, high volumes and extensive queuing.

Source: 2000 Highway Capacity Manual

### Volume to Capacity Ratio

The *City of San Diego Significance Determination Thresholds* defines project impact thresholds corresponding to the type of facility. These thresholds are generally based upon an acceptable increase in the Volume/Capacity (V/C) ratio for roadway and freeway segments, and upon increases in vehicle delays for intersections and ramps.

### Delay

Delay is a measure of driver and/or passenger discomfort, frustration, fuel consumption and lost travel time. This technique uses a maximum saturation volume of an intersection. This saturation volume is adjusted to account for lane width, on-street parking, pedestrians, traffic composition (i.e., percentage trucks) and shared lane movements (i.e. through and right-turn movements originating from the same lane). Intersection delay is expressed in terms of LOS similar to roadways. LOS A reflects an intersection where average control delay per vehicle is less than 10 seconds, the progression is extremely favorable, and most vehicles do not stop at all. LOS F reflects an intersection where average control delay per vehicle exceeds 80 seconds, the progression is poor, and cycle lengths are long.

## Vehicle Miles Traveled

Vehicle Miles Traveled (VMT) is a measure that identifies the number of miles motorists travel on the roadway network. Measuring the percent of daily vehicle miles traveled at a LOS E or F identifies the total number of miles motorists will travel under congested conditions throughout the day.

## **Regional Transportation Model**

The SANDAG Series 12 Regional Transportation Model is the tool that public agencies within the San Diego region currently use to forecast future traffic volumes and estimate the effects of changes in land use and corresponding travel patterns on roadway facilities. The traffic model produces separate assignments of travel throughout the day and during peak hours. The model is also used to compare existing transportation conditions to future conditions.

The Regional Transportation Model is based on the long-range population, housing, and employment projections of the 2050 Regional Growth Forecast. The model optimizes the performance of the roadway and public transit system through smart land use planning, increased transit options, increased system and demand management, and additional infrastructure to accommodate the future growth.

## **Transportation Planning Regulatory Framework**

### State and Federal Requirements

The Transportation Equity Act for the 21st Century (TEA-21), signed into law in 1998, provided the regulatory framework at the federal level for transportation planning in urban areas. The State of California has additional regulations for the preparation of long-range transportation plans. Subsequent federal legislation includes SAFETEA-LU, which expired in 2009. The current program was signed into law in July 2012. P.L. 112-141, the Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21) provides funds for surface transportation programs and is the first multi-year transportation authorization enacted since 2005. Notably, MAP-21 authorizes \$82 billion in Federal funding for FYs 2013 and 2014 for road, bridge, bicycling, and walking improvements.

### *Complete Streets Policies*

Complete streets are designed to provide convenient routes and a variety of transportation options while enabling safe access for motorists, transit users, pedestrians and bicyclists of all ages and abilities. State, regional and local governments and organizations have enacted complete streets laws or adopted related policies, including California's Complete Streets Act of 2008 (AB1358) and Caltrans' Deputy Directive DD-64-R1 (Complete Streets – Integrating the Transportation System).

## Regional Plans

### *2050 Regional Transportation Plan (RTP)*

SANDAG is the region's transportation and planning agency. The City participates in the development and adoption of SANDAG documents and programs through the votes of our elected officials serving on the SANDAG Board of Directors, staff participation on SANDAG advisory committees, and direct citizen participation in the process. In October 2011, the SANDAG Board of Directors approved the 2050 RTP (SANDAG 2011), which is the adopted long-range transportation planning document for the San Diego region. It is used as the basis for funding decisions made through the Regional Transportation Improvement Program (RTIP; SANDAG 2010a), which is discussed below. The plan covers public policies, strategies and investments to maintain, manage, and improve the regional transportation system through 2050. The RTP and its associated (SCS focus on land use, sustainability, social equity, financial strategies, public health, system development, system management, demand management, public involvement, and reduction of greenhouse gas emissions to 1990 levels by 2020. The plan outlines projects for transit, rail and bus services, express or managed lanes, highways, local streets, bicycling, and walking. The result is expected to be an integrated, multimodal transportation system by mid-century.

Policy goals of the 2050 RTP relate to mobility, reliability, system preservation and safety, social equity, healthy environment, and a prosperous economy. Policy objectives of particular relevance to the BMP Update are: (1) under the Mobility Goal – (a) tailoring transportation improvements to better connect people with jobs and other activities; (b) providing convenient travel options including transit, intercity and high speed trains, driving, ridesharing, walking and biking; (c) increasing the use of transit, ridesharing, walking and biking in major corridors and communities; (2) under the Reliability Goal – (a) managing the efficiency of the transportation system to improve traffic flow; (3) under the System Preservation and Safety Goal – (a) keeping the region's transportation system in a good state of repair; and (b) reducing bottlenecks and increasing safety by improving operations; (4) under the Social Equity Goal – (a) creating equitable transportation opportunities for all populations regardless of age, ability, race, ethnicity, or income; (b) ensuring access to jobs, services, and recreation for populations with fewer transportation choices; and (5) under the Healthy Environment Goal – (a) developing transportation improvements that respect and enhance the environment; (b) reducing greenhouse gas emission from vehicles and continue to improve air quality in the region; and (c) making transportation investments that result in healthy and sustainable communities.

## Local Plans

### *City of San Diego General Plan*

The BMP Update is consistent with and implements the Bicycle Section of the General Plan Mobility Element (City 2008a), which calls for development and implementation of a bicycle master plan, as described in Section 1.0, *Introduction*.

### Community Plans

The City has over 50 planning areas, most governed by 44 corresponding community plans. Adopted community plans specify the planned system of classified streets within the local community, as well as planned bicycle and transit facilities.

### 5.3.2 Impacts

#### **Approach to the Analysis of Impacts**

Pursuant to State CEQA Guidelines Section 15168, this Program EIR provides a framework for the environmental review and clearance of the BMP Update. Although parking and transit operations are not environmental issues in and of themselves, as these issues are not contained within CEQA's Appendix G, Environmental Checklist Form (although parking had appeared previously in this Checklist), they are included in this analysis for informational purposes because they are relevant topics associated with the proposed bicycle network.

As described in earlier sections of this Program EIR, the analysis of the proposed bikeway network is organized by "On-street Bikeways Without Widening" "On-street Bikeways With Widening," and "Off-street Bikeways." On-street bikeways (With or Without widening) include Bike Lanes (Class II), Bike Routes (Class III), and Bicycle Boulevards, and Cycle Tracks. Off-street Bikeways are Bike Paths (Class I); the classes of bikeways are defined in Table 3-1. The proposals for individual bikeways to be implemented under the BMP Update are conceptual in nature at this time. As projects are designed, traffic and circulation impacts would be evaluated on a project-by-project basis. It is anticipated that many bikeways implemented under the BMP Update categorized as On-street Bikeways Without Widening would be covered by this Program EIR and would not require additional CEQA review, since they would only require signage or pavement markings and would not necessitate other roadway modifications.

Facilities other than bikeways, such as signal detectors, bicycle racks/parking, other end-of-trip facilities, and multi-modal connections would be located within the footprint of proposed bikeway projects, and thus are addressed in the analysis of each of the bikeway categories (On-street Bikeways Without Widening, On-street Bikeways With Widening, and Off-street Bikeways). Potential impacts of larger end-of-trip and other facilities would be addressed as part of the environmental review of the specific projects they are associated with.

***Issue 1: Would the project result in an increase in projected traffic which is substantial in relation to the existing traffic load and capacity of the street system?***

***Issue 2: Would the project result in the addition of a substantial amount of traffic to a congested freeway segment, interchange, or ramp?***

***Issue 3: Would the project result in diminished LOS, primarily related to the elimination of travel and/or turn lanes?***

## Significance Thresholds

According to the City’s Significance Determination Thresholds (City 2011), impacts to transportation/circulation, under Issues 1, 2, or 3 would be significant if the project would result in the following conditions:

- Any intersection, roadway segment, or freeway segment affected by the project would operate at LOS E or F under either direct or cumulative conditions, and the project exceeds the thresholds shown in Table 5.3-2, *Traffic Significance Thresholds*; or
- Any intersection, roadway segment, or freeway segment that would operate at acceptable LOS without the project in place but would operate at unacceptable LOS with the project in place; or
- A substantial amount of traffic would be added to a congested freeway segment, interchange, or ramp exceeding the values shown in Table 5.3-2.

<b>Table 5.3-2 TRAFFIC SIGNIFICANCE THRESHOLDS</b>						
<b>Level of Service With Project*</b>	<b>Allowable Change Due to Project Impact**</b>					
	<b>Freeways</b>		<b>Roadway Segments</b>		<b>Intersections Delay (sec.)</b>	<b>Ramp Metering Delay (min.)</b>
	<b>V/C</b>	<b>Speed (mph)</b>	<b>V/C</b>	<b>Speed (mph)</b>		
E (or ramp meter delays above 15 min.)	0.010	1.0	0.02	1.0	2.0	2.0
F (or ramp meter delays above 15 min.)	0.005	0.5	0.01	0.5	1.0	1.0

Source: City 2011

Note 1: The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 minutes.

Note 2: The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 minute.

\* All LOS measurements are based upon Highway Capacity Manual procedures for peak-hour conditions. However, V/C ratios for roadway segments are estimated on an ADT/24-hour traffic volume basis (using Table 2 of the City’s Traffic Impact Study Manual) (1998). The acceptable LOS for freeways, roadways, and intersections is generally “D” (“C” for undeveloped locations). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.

\*\* If a proposed project’s traffic causes the values shown in the table to be exceeded, the impacts are determined to be significant. The project applicant shall then identify feasible improvements (within the Traffic Impact Study) that will restore/and maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see above \* note), or if the project adds a significant amount of peak-hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating the project’s direct significant and/or cumulatively considerable traffic impacts.

## **Impact Analysis**

### On-street Bikeways Without Widening

#### *Construction Impacts*

Implementation of On-street Bikeways Without Widening would be short term and generate a negligible increase in construction vehicle traffic associated with construction workers' personal vehicles and the transportation of equipment to and from the work sites. This temporary increase in traffic during construction would not substantially add to the existing traffic volumes on roadways. In some cases, staging and/or work areas for individual bicycle infrastructure projects would be within streets and/or rights-of-way. This could require temporary partial or full lane closures and the diversion of traffic around work areas. Consistent with standard City practices, if closures and/or diversions are required for individual bikeways implemented under the BMP Update, a construction traffic management plan (TMP) would be prepared, permitted after review by the City, and implemented by the construction contractor to minimize potential short-term traffic impacts.

Implementation of On-street Bikeways Without Widening would be expected to have less than significant impacts on existing intersections and street segments.

#### *Operational Impacts*

Because bikeways would not generate motorized traffic during the operational phase, they would not cause a substantial increase in traffic in relation to the existing traffic load and street capacity. Instead, they would likely have a beneficial impact on traffic generation, since the BMP Update aims to reduce motorized traffic demand by improving bike accessibility throughout the City and encouraging alternate means of transportation.

Furthermore, it is anticipated that many bikeways implemented under the BMP Update categorized as On-street Bikeways Without Widening would be covered by this Program EIR and would not require additional CEQA review since they would only require signage or pavement markings and would not necessitate other roadway modifications. Some of the proposed On-street Bikeways Without Widening, however, could require restriping of existing public streets and rights-of-way that would alter the existing lane configuration of the roadway by removing one or more travel and/or turn lanes, potentially impacting the capacity for vehicles on the roadway. Lane removal could cause an intersection or roadway segment to operate at an unacceptable LOS or could cause the delay or V/C in roadway facilities already operating at unacceptable LOS to exceed the thresholds shown in Table 5.3-2.

Since the net effect of a potentially reduced motorized traffic demand combined with changed lane configurations is unknown, there is a potential for significant impacts for On-street Bikeways Without Widening.



### On-street Bikeways With Widening and Off-street Bikeways

On-street Bikeways With Widening and Off-street Bikeways are grouped together for analysis, because both types would likely be designed such that they would not require restriping of existing public streets and rights-of-way that would alter the existing lane configuration of the roadway by removing one or more travel and/or turn lanes.

#### *Construction Impacts*

Construction of On-street Bikeways With Widening and Off-street Bikeways would be short term and generate a negligible increase in construction vehicle traffic associated with construction workers' personal vehicles and the transportation of equipment to and from the work sites. This temporary increase in traffic during construction would not be expected to substantially add to the existing traffic volumes on roadways. In some cases, staging and/or work areas for individual bicycle infrastructure projects would be within streets and/or rights-of-way. This could require temporary partial or full lane closures and the diversion of traffic around work areas. Consistent with standard City practices, if closures and/or diversions are required, a construction traffic control plan would be prepared, reviewed and permitted by the City, and implemented to minimize potential short-term traffic impacts. Construction staging areas for materials, equipment, and vehicles would be located so as to not impede safe pedestrian and vehicular traffic. Solid waste generated by project construction activity, and haul routes for movement of construction vehicles would be identified to minimize impacts on vehicular and pedestrian traffic, circulation and safety.

Although construction of On-street Bikeways With Widening and Off-street Bikeways would be expected to have less than significant impacts on existing intersections and street segments, this would need to be verified on a project by project basis. Therefore, there would be the potential for significant construction impacts.

#### *Operational Impacts*

Because bikeways would not generate motorized traffic during the operational phase, they would not cause a substantial increase in traffic in relation to the existing traffic load and street capacity. Instead, they would likely have a beneficial impact on traffic generation, since the BMP Update aims to reduce motorized traffic demand by improving bike accessibility throughout the City and encouraging alternate means of transportation.

Most On-street Bikeways With Widening and Off-street Bikeways would not require restriping of existing public streets and rights-of-way that would alter the existing lane configuration of the roadway by removing one or more travel and/or turn lanes. Off-street Bikeways would be separated from roadways used by cars and trucks, and when widening of on-street roadways is planned, it would, presumably be of sufficient width to prevent the need for lane removal. Most of these bikeways would not, therefore, result in significant impacts on the existing traffic load, street capacity, LOS, and amount of traffic on congested freeway segments, interchanges, and ramps.

Off-street Bikeways could also necessitate changes in lane configurations and/or traffic signal operations, where the bikeways intersect with roadways. Therefore, there would be the potential for significant impacts.

### **Significance of Impact**

On-street Bikeways Without Widening would have the potential for significant direct operational impacts to the existing street system. On-street Bikeways With Widening and Off-street Bikeways would be less likely to have operational impacts nevertheless, the potential for significant operational impacts exists. In addition, potential construction impacts of On-street Bikeways With Widening and Off-street Bikeways would need to be verified on a project by project basis and are considered to be potentially significant.

For Issues 1, 2 and 3, at this City-wide planning phase, potential direct program-level impacts on the existing street system would be potentially significant. ~~Measures to mitigate such impacts are discussed below.~~

### **Mitigation, Monitoring, and Reporting**

Projects implementing on-street bikeways would be required to implement Mitigation Measures *Trans-1 and Trans-2* to reduce the potentially significant impacts that may result to less than significant.

**Trans-1:** During design of any proposed bikeway or other facility implemented under the BMP Update that would result in (1) the removal of one or more travel lanes that could affect intersection operations; (2) the removal of one or more travel lanes that could affect volume-to-capacity ratios for roadway segments; (3) the removal of any raised center median that could affect volume-to-capacity ratios for any roadway segment; or (4) the removal of one or more turn lanes that could affect intersection operations, an analysis shall be prepared by the project proponent to assess potential traffic impacts. The traffic analysis shall include an assessment of existing LOS and shall evaluate the feasibility of accommodating the proposed bike lane or route within the existing roadway so that it does not cause a significant traffic impact to any roadway segment or intersection. In addition, the analysis shall assess how the proposed roadway changes would affect bicycling conditions. The analysis shall also include an assessment of potential impacts during construction for On-street Bikeways With Widening and Off-street Bikeways.

**Trans-2:** If the removal of a travel and/or turn lane would cause an intersection or roadway segment to operate at an unacceptable LOS, the project will be redesigned and/or mitigation measures identified in the project-specific traffic analysis ~~shall~~ will be implemented, with the goal to reduce traffic impacts on the affected intersection or roadway segment, ideally to less than significant levels, if such redesign or mitigation is consistent with project objectives, pedestrian circulation needs, or other community goals. Such design or mitigation measures might include road or interchange

widening, elimination of parking, evaluation of alternate bikeway routes, or other measures.

With implementation of Mitigation Measures *Trans-1* and *Trans-2* potential traffic impacts associated with Issues 1, 2, and 3 could be reduced to less than significant. This would need to be verified on a project by project basis, however, so the potential exists for significant, unavoidable traffic impacts to occur that ~~therefore would~~ requires a Statement of Overriding Considerations in this Program EIR for the BMP Update.

**Issue 4:** *Would the project result in substantial alterations to present circulation movements including effects on existing public access to beaches, parks, or other open space areas?*

### Significance Thresholds

According to the City's Significance Determination Thresholds (City 2011), impacts to transportation/circulation under Issue 4 would be significant if the program would:

- Result in a substantial restriction in access to publicly or privately owned land.

### Impact Analysis

#### On-Street Bikeways Without Widening

##### *Construction Impacts*

Although implementation of the bikeway improvements proposed throughout the City would occur in multiple phases, even if implemented in a single phase of work, the resulting construction-related impacts would be temporary. Many proposed improvements would require restriping existing lanes and reconfiguring lanes at certain intersections. Restriping of the existing lanes would be conducted during off-peak periods to minimize any potential impacts. This could require temporary partial or full lane closures and the diversion of traffic around work areas. If closures and/or diversions are required, a construction traffic control plan would be prepared and implemented to minimize potential short-term traffic impacts and provide access to the extent possible. If required, temporary alternate access points would be provided for public access to beaches, parks, or other open space areas. Emergency vehicle access to public and private properties would be maintained during construction of any recommended network improvements.

Implementation of On-street Bikeways Without Widening would have less than significant impacts on circulation movements including effects on existing public access to beaches, parks, or other open space areas.

##### *Operational Impacts*

Many of the On-street Bikeways Without Widening included in the proposed network would only require signage or pavement markings. Some of the proposed On-street Bikeways Without

Widening, however, could require restriping of existing public streets and rights-of-way that would alter the existing lane configuration of the roadway by removing one or more travel and/or turn lanes and/or sidewalks, potentially affecting circulation movements, including effects on existing public access to beaches, parks, or other open space areas.

### On-Street Bikeways With Widening and Off-Street Bikeways

#### *Construction Impacts*

Although implementation of the bikeway improvements proposed throughout the City would occur in multiple phases, even if implemented in a single phase of work, the resulting construction-related impacts would be temporary. Many proposed improvements would require restriping existing lanes and reconfiguring lanes at certain intersections. Restriping of the existing lanes would be conducted during off-peak periods to minimize any potential impacts. This could require temporary partial or full lane closures and the diversion of traffic around work areas. If closures and/or diversions are required, a construction traffic control plan would be prepared and implemented to minimize potential short-term traffic impacts and provide access to the extent possible. If required, temporary alternative access points would be provided for public access to beaches, parks, or other open space areas. Emergency vehicle access to public and private properties would be maintained during construction of any recommended network improvements.

The construction contractor would ensure that roadways and sidewalks are not completely blocked, so that adjacent residents, occupants, business owners or clients would not be adversely affected from getting to and from the respective property, including public areas like beaches, parks, and open space. Adjacent property owners, business owners, and public safety personnel would be notified in a timely basis regarding when construction would require major (temporary) detours and or lane closures. Construction staging areas for materials, equipment, and vehicles would be located so as to not impede safe pedestrian and vehicular traffic. Solid waste generated by project construction activity, and haul routes for movement of construction vehicles would be identified to minimize impacts on vehicular and pedestrian traffic, circulation and safety, particularly around public areas like beaches, parks, and open space.

Construction of On-street Bikeways With Widening and Off-street Bikeways would have less than significant impacts on circulation movements including effects on existing public access to beaches, parks, or other open space areas.

#### *Operational Impacts*

Most On-street Bikeways With Widening and Off-street Bikeways would not require restriping of existing public streets and rights-of-way that would alter the existing lane configuration of the roadway by removing one or more travel and/or turn lanes. Off-street Bikeways would be separated from roadways used by cars and trucks, and when widening of on-street roadways is planned, it would, presumably be of sufficient width to prevent the need for lane removal. Most of these bikeways would not, therefore, result in significant impacts on circulation movements or public access to beaches, parks, recreation, or open space areas.

Off-street Bikeways could necessitate changes in lane configurations, if the bikeways intersect with roadways. Although lane removal is less likely for On-street Bikeways With Widening and Off-street Bikeways (compared to On-street Bikeways Without Widening), there would be the potential for significant impacts to circulation movements, including effects on existing public access to beaches, parks, or other open space areas.

### **Significance of Impact**

Bikeway alignments as shown in the BMP Update are conceptual in nature. As projects are designed, impacts on circulation movements, including access to public areas such as beaches, parks, and open space, would be evaluated on a project-by-project basis.

On-street Bikeways Without Widening would have the potential for significant direct impacts to circulation movements, including access to public areas such as beaches, parks, and open space. On-street Bikeways With Widening and Off-street Bikeways would be less likely to have impacts on access; nevertheless, the potential for significant impacts exists.

For Issue 4, at this City-wide planning phase, potential direct program-level impacts on circulation movements, including access, would be potentially significant. Measures to mitigate such impacts are discussed below.

### **Mitigation, Monitoring, and Reporting**

With implementation of Mitigation Measures *Trans-1 and Trans-2* described above, potential impacts associated with Issue 4 could be reduced to less than significant. This would need to be verified on a project by project basis, however, so the potential exists for significant, unavoidable circulation and access impacts to occur that ~~therefore would~~ requires a Statement of Overriding Considerations in this Program EIR for the BMP Update.

***Issue 5: Would the project result in an increase in traffic hazards for motor vehicles, bicyclists or pedestrians due to a proposed, non-standard design feature (e.g., poor sight distance or driveway onto an access-restricted roadway)?***

### **Significance Thresholds**

According to the City's Significance Determination Thresholds (2011), transportation/circulation impacts under Issue 5 would be significant if the project would:

- Result in an increase in traffic hazards for motor vehicles, bicyclists or pedestrians due to a proposed, non-standard design feature (e.g., poor sight distance or driveway onto an access-restricted roadway);

## Impact Analysis

### On-street (With and Without Widening) and Off-street Bikeways

On-street (With and Without Widening) and Off-street Bikeways are grouped together for analysis purposes, because they would have similar impacts with respect to traffic hazards due to non-standard design features.

#### *Construction Impacts*

If closures and/or diversions are required, a construction traffic control plan would be prepared and implemented to minimize potential short-term traffic impacts. Emergency vehicle access to all major roads would be maintained during construction of any recommended network improvements. The construction contractor would ensure that roadways and sidewalks are not blocked, so that adjacent residents or occupants would not be adversely affected from getting to and from their respective property. Adjacent property owners and public safety personnel would be notified in a timely basis regarding when construction would require major (temporary) detours and or lane closures. Construction staging areas for materials, equipment, and vehicles would be located so as to not impede safe pedestrian and vehicular traffic. Solid waste generated by project construction activity, and haul routes for movement of construction vehicles would be identified to minimize impacts on vehicular and pedestrian traffic, circulation and safety.

Construction of On-street Bikeways With or Without Widening and Off-street Bikeways would have less than significant impacts regarding traffic hazards. Refer to Section 8.6, *Human Health and Public Safety*, for more information on hazard-related impacts during project construction.

#### *Operational Impacts*

Proposed bikeways implemented under the BMP Update, whether On-street or Off-street Bikeways, would be designed in accordance with applicable standards. This would include conforming to all requirements of the California Public Utilities Commission for all bikeway facilities located adjacent to, near, or over the railroad/light rail right-of-way. It is anticipated that no non-standard design features would be constructed. This would help reduce traffic hazard potential.

Off-Street Bikeways would be separate from the roadway and therefore, would not result in traffic hazard impacts. Where Off-street Bikeways would intersect with roadways or access points, they would be designed according to applicable standards to prevent traffic hazard impacts.

On-street Bikeways (With or Without widening) could require widening and/or restriping of existing public streets and rights-of-way; adding a Class III Bike Route would only require signage. A component of the BMP Update is policy guidance and design features to increase awareness of cyclists on the road and increase safety. The BMP Update includes design measures, such as signage, dedicated lanes, and other features, that would clearly separate bike flows from motorized vehicle traffic flows. The addition of this signage and striping to existing roadways would improve way-finding for bicyclists, alert drivers to the presence of bicyclists, and help roadway users more effectively share the public right-of-way. These additions would not create traffic hazards because

they would follow established design standards, guidelines, and best practices. Instead, such signing and striping would improve traffic safety by providing additional guidance to bicyclists and automobile drivers. Therefore, bikeway signage and striping would likely have a beneficial effect on traffic operations, and would not be expected to result in traffic hazard impacts.

The proposed bikeway network would be designed to avoid modification or removal of pedestrian facilities such as sidewalks, crosswalks, or refuge islands. The installation of new bicycle racks in the public right-of-way would follow established placement standards to ensure that those racks do not infringe on pedestrian circulation. Off-street Bikeways are often used by pedestrians as paved trails, providing a benefit to pedestrians. On-street Class II Bike Lanes can also benefit pedestrians by providing an added buffer between the sidewalk and the motor vehicle travel lanes. In addition, on-street bikeways that propose a travel lane removal would decrease the number of motor vehicle lanes a pedestrian would need to traverse when crossing the street, resulting in fewer conflict points and reducing the risk of collisions. Therefore, the proposed bikeway network would have a beneficial impact on pedestrian circulation and would not increase traffic hazards to pedestrians.

### **Significance of Impact**

For Issue 5, at this Citywide planning phase, the proposed project would not substantially increase hazards due to a proposed, non-standard design feature. Therefore, no significant traffic hazard impacts would be expected.

### **Mitigation, Monitoring, and Reporting**

Because impacts under Issue 5 would be less than significant, no mitigation would be required.

***Issue 6: Would the project conflict with adopted policies, plans or programs supporting alternative transportation models (e.g., bus turnouts, bicycle racks)?***

### **Impact Analysis**

#### On-street (with and Without Widening) and Off-street Bikeways

On-street (With and Without Widening) and Off-street Bikeways are grouped together for analysis purposes, because they would have similar impacts with respect to adopted policies, plans or programs supporting alternative transportation models.

In general, the proposed project would not conflict with applicable local, state, or federal land use plans, policies, or regulations, but would, instead, support the adopted policies, plans, or programs involving alternative transportation through improvements to infrastructure, education, and coordination. City regulations and policies specifically identify bicycle facilities as an integral part of the transportation and recreational goals. The BMP Update provides a summary of relevant planning and policy documents of the State of California, SANDAG, and the City. These include:

- SANDAG’s San Diego Regional Bicycle Plan;
- The City’s General Plan, especially the Mobility Element;
- 44-San Diego Community Plans, covering over 50 planning areas; and
- Local plans such as the Encanto Neighborhoods Pedestrian and Bicycle Network Plan.

SANDAG’s San Diego Regional Bicycle Plan, adopted in 2010, was developed as a complementary document to the 2030 RTP, the regional transportation planning document that preceded the current 2050 RTP. The 2050 RTP (and the previous 2030 RTP) outline projects for transit, rail and bus services, express or managed lanes, highways, local streets, bicycling, and walking. The result is expected to be an integrated, multimodal transportation system by mid-century. The Regional Bicycle Plan proposes a unified bicycle network for the San Diego region by 2050, providing bikeway connections to activity centers, transit facilities, and regional trail systems in addition to bicycle education, marketing/awareness campaigns, encouragement, enforcement, and monitoring and evaluation programs. A large percentage of the proposed regional bikeway network is within the jurisdiction of the City of San Diego. The BMP Update’s proposed bicycle network and related features take into consideration the recommendations set forth in the San Diego Regional Bicycle Plan, as well as existing facilities and future bicycle facilities desired by each community.

The Mobility Element of the General Plan expresses the overarching goal to advance a balanced, efficient, multi-modal transportation network that minimizes adverse environmental and neighborhood impacts. The BMP Update has been developed to enhance, or at a minimum not interfere with applicable land use plans, policies, and regulations of the City and the communities within which individual bikeways or other facilities would be sited. In particular, the BMP Update augments Mobility Element policies with additional policies to further enhance the state of bicycling in San Diego. The BMP Update policies would not result in incompatibilities or conflicts with adopted policies, plans or programs supporting alternative transportation models.

Section 4.0 of the BMP Update addresses the relationships to other plans and policies, ~~including a detailed analysis of the consistency of the program with facilities proposed in the various community plans. Potential inconsistencies are listed along with a recommended action and which document should supersede. Similarly, potential inconsistencies exist with the Encanto-Neighborhoods Pedestrian and Bicycle Network Plan and other local plans. Nevertheless, the facilities and programs proposed in the BMP Update are based on a Citywide planning effort that factored in inter- and intra-community demands, opportunities and constraints, physical barriers and a public input process. Many of the inconsistencies are because the BMP Update includes new proposed facilities that were not included in the older plans.~~ In addition, the BMP Update proposals could be refined as part of a community plan update process or other focused community planning process. The community and local plans all promote bikeways as an alternative transportation mode. Bikeway types and/or alignments at the regional, community and local plan level are highly conceptual, so refinements are to be expected. ~~These~~ Any inconsistencies ~~therefore~~ are not considered significant, and would not represent adverse conflicts with existing land use plans. Furthermore, proposing new facilities that would be desired by the community would be considered a beneficial impact of the proposed BMP Update.



## **Significance of Impact**

No significant adverse impacts to adopted policies, plans, or programs supporting alternative transportation models would be anticipated.

## **Mitigation, Monitoring, and Reporting**

Because impacts under Issue 6 would be less than significant, no mitigation is required.

## **Other Transportation Issues**

This section discusses on-street parking and transit operations, which are not considered environmental impacts pursuant to CEQA, as these issues are not contained within CEQA's Appendix G, Environmental Checklist Form (although parking had appeared previously in this Checklist), but are relevant topics associated with the proposed bicycle network. Furthermore, Section 15064.7 of the State CEQA Guidelines recommends that local agencies establish their own significance thresholds, and parking is listed in the City's significance thresholds as a potential area of impact, although it should be noted that the City's parking thresholds pertain to parking shortfalls for proposed development projects and not for the removal of on-street parking as may be required to implement some of the bikeways proposed in the BMP Update. Therefore, these two transportation issues are discussed in this section for informational purposes only.

### On-street Parking

#### *Construction*

Construction of projects implemented under the proposed BMP Update would have a minimal effect on on-street parking, as a limited number of construction workers would be required for each project. When able to do so, workers would park off the street; however, in some cases they may need to park on the street.

#### *Operational Impacts*

The proposed bikeway network would not generate additional motor vehicle trips or result in new land uses, and therefore would not increase the demand for motor vehicle parking.

For some on-street bikeway projects, however, elimination of some on-street parking (including curb space currently dedicated to yellow commercial vehicle freight loading zones or active passenger loading/unloading zones) could be required to accommodate proposed bikeways. Parking removal associated with bikeway project implementation may potentially result in secondary effects (noise, air quality, traffic congestion, etc.) related to cars circling and looking for a parking space in areas of limited parking supply; this is typically a temporary condition, however, often offset by a reduction in motor vehicle trips due to others who are aware of constrained parking conditions in a given area and by increased use of bicycles instead of motor vehicles. Furthermore, the absence of a ready supply of parking spaces, combined with available alternatives to private motorized vehicle travel (such as bicycles, transit service, taxis, or walking),

may induce drivers to shift to other modes of travel, or change their overall travel habits. Long-term operation of bikeway projects implemented under the proposed BMP Update would be expected to have a beneficial effect on parking in many cases, since the program is designed to encourage drivers to leave their vehicles at home and ride bicycles instead, resulting in a reduction in parking demand.

With respect to non-motorized vehicle parking, the BMP Update emphasizes the need for bicycle parking facilities through the application of current municipal code requirements on individual development projects.

Actions that may be considered to reduce the effects of the loss of on-street parking may include provision of replacement parking, for example, by creating diagonal parking on side streets where the street width would allow.

### Transit Operations

An important goal of the City's General Plan is to "increase the number of bicycle-to-transit trips by coordinating with transit agencies to provide safe routes to transit stops and stations, to provide secure bicycle parking facilities, and to accommodate bicycles on transit vehicles" (Mobility Element, Policy ME-F.5). The BMP Update considered transit hubs and mode transitioning locations, and factored this into the development of the proposed bicycle network.

Bicycle trips are and would likely continue to be a relatively small fraction of trips to major transit stations in the City. Improvements in bicycle access to these stations are likely to increase transit ridership, but not to a level that would create transit capacity issues.

Some of the proposed bikeways would require the removal of one or more travel and/or turn lanes on streets with bus service. These projects would result in a potentially significant traffic impact if they caused an intersection or roadway segment to operate at an unacceptable LOS. Because buses and shuttles operate in mixed-flow travel lanes, they would be subject to the same potential delays experienced by other motor vehicles on these roadways. These issues are addressed above by the analysis of impacts and mitigation measures related to travel and turn lane removal.

## **5.4 VISUAL QUALITY/NEIGHBORHOOD CHARACTER**

### **5.4.1 Existing Conditions**

#### **Regional Visual Setting and Characteristics**

San Diego is a city in a region with unique and varied landscapes, including ocean, bays, beaches, estuaries, river valleys, canyons, mesas, hills, mountains, and desert. Much of the City occurs in the coastal plain portion of southwestern San Diego County. This coastal plain slopes gently upwards to the eastern foothills and has been eroded into separate mesas, which have developed into unique communities that are physically bounded by distinct natural barriers, namely the major east-west canyons. These have incised the coastal plain and created major drainages which generally flow westward towards the coast.

The City's location bordering the Pacific Ocean also contributes to the natural setting of the area, and many of the City's most appreciated natural resources are located within the Coastal Zone. These include the City's beaches, bays, shoreline, coastal canyons and the many rivers, streams and other watercourses that drain inland areas, eventually reaching the coastal environment and waters.

Approximately 30 percent of all existing land use in San Diego consists of parks, open space, and recreation areas reserved for environmental protection and/or public recreation. Preserving parks and open space areas protects San Diego's unique natural landscape and scenic beauty. Natural scenic vistas can be seen from the 36,000 acres of recreational and open space parks in the City, such as Mission Trails Regional Park, Marian Bear Memorial Park, Rose Canyon Open Space Park, Tecolote Canyon Natural Park & Nature Center, San Diego River Park, Los Peñasquitos Canyon Preserve, Black Mountain Open Space Park, and San Pasqual/Clevenger Canyon Open Space Park (City 2008b).

#### **Community and Neighborhood Character**

Residential uses account for 24 percent of the City's total acreage, which highlights the importance of community and neighborhood character in defining the overall visual setting within the City and surrounding region, although other land uses, including commercial, industrial, and open space, also affect community character. San Diego's communities, and the landscapes and transportation networks that frame and link them, are the City's basic building blocks that began to be established more than 200 years ago. The real urbanization of the City as it is today began in 1869 when Alonzo Horton moved the center of commerce and government from Old Town (Old San Diego) to New Town (Downtown). Development spread from Downtown based on a variety of factors, including the availability of potable water and transportation corridors. Factors such as views and access to public facilities affected land values, which in turn affected the character of neighborhoods that developed. San Diego's communities can be characterized in seven basic typologies that provide a general description of the pattern of development within the City: Downtown San Diego, Pre World War II Communities (Uptown, Old Town, North Park, Golden Hill, Southeastern, Barrio Logan, and the Mid-City neighborhoods), Coastal Communities (Midway, Peninsula, Ocean Beach, Mission Beach, Pacific Beach and La Jolla), Post World War II Suburban Communities (Torrey Pines, Mira Mesa, Clairemont Mesa, Linda Vista, Serra

Mesa, Navajo, College Area, Encanto, Skyline-Paradise Hills and Otay Mesa-Nestor), Master Planned Suburban Communities (Otay Mesa, Tierrasanta and the majority of the neighborhoods in the northern part of the City of San Diego, from Carmel Valley to Rancho Bernardo and Rancho Encantada), Newer Urban Communities (University City, Kearny Mesa and Mission Valley), and Military, Environmental and Other Limited Development (Marine Corps Air Station Miramar, East Elliot, the Tijuana River Valley, San Pasqual Valley and regional and City parks like Mission Bay Park and Balboa Park) (City 2008b).

The timing and duration of development helped determine the dominant architecture in a particular area. Among the recognized architectural styles in the City, from early to later periods, are Spanish Colonial, Pre-Railroad New England, National Vernacular, Victorian Italianate, Stick, Queen Anne, Colonial Revival, Neoclassical, Shingle, Folk Victorian, Mission, Craftsman, Monterey Revival, Italian Renaissance, Spanish Eclectic, Egyptian Revival, Tudor Revival, Modernistic, and International. Examples of every major period and style remain, although few areas retain neighborhood-level architectural integrity due to several major building booms when older structures were demolished prior to preservation movements and stricter regulations regarding historic structures.

Neighborhood character is reflected in the dominant architectural styles and is defined by certain physical qualities that repeat throughout neighborhoods, such as landscape and massing of buildings, colors, and materials. The character of a neighborhood or community is also defined by factors including topography and natural features, street layout and streetscape, and landmarks and civic land uses. In the past, the pattern of development in the City has occurred on large vacant tracks of land. Currently, vacant land considered to be developable accounts for less than four percent of the City's total acreage. Vacant land within the City is limited, and redevelopment and infill development is occurring in many parts of the City. As noted in the City General Plan, the City will continue to experience infill development and redevelopment in urbanized communities. Meeting the City's growth needs through infill and redevelopment complements the City's strategy for protecting canyons and open spaces (City 2008b).

### **Existing Public Views**

Neighborhood and community borders are often defined by San Diego's interstate and highway system from which many public views are available to a large number of viewers. Communities are connected and can be viewed through a system of transportation networks including major arterial freeways, highways, surface streets, and public transportation routes. Close proximity to Mexico and the presence of the federal ports of entry connect the City to the international arena as well, and public views of these areas are available from such facilities. The City also encompasses portions of a number of state designated scenic highways, including SR-75, SR-78, SR-163, and SR-125 (City 2008b). Portions of I-5, I-8, SR-52, SR-75, SR-76, SR-78, SR-79, SR-94, SR-163, and SR-209 are eligible for scenic designation.

In addition to scenic vistas and highways, public views are also identified in community plans. Although most community plans make some reference to public views, the detail varies from plan to plan with many plans making little or no reference to public views. In the community plans that do identify public views, the views are typically those which overlook or face a body of water,

most often the Pacific Ocean, however, community plans also identify views overlooking canyons, the Centre City skyline, and open space (City 2008b).

### **Applicable Regulations and Programs**

The Coastal Zone encompasses approximately 40,000 acres of public and private land and waters in the City. Attention to visual resources is required by the California Coastal Act for development and land use changes within the Coastal Zone boundary as administered by the Coastal Commission and jurisdictions with delegated authority.

In 1972, voters approved Proposition D which restricts the building height in areas generally west of I-5 to 30 feet. Prior to the adoption of Proposition D, multiple dwelling unit developments in San Diego were built to accommodate a range of densities at varying heights. Since the adoption of Proposition D, the bulk and scale of buildings has become more uniform as property owners seek to maximize development potential within the 30-foot height limit.

The City's Utilities Undergrounding Program is also improving views in neighborhoods. The City has been undergrounding lines since 1970, and the program is currently relocating approximately 30 to 35 miles of overhead utility lines underground throughout the City each year. It is estimated that nearly all major and collector streets will be completed within the next 20 years and streets in residential areas within approximately 50 years. The Utilities Undergrounding Program will help beautify neighborhoods and clear up views by hiding utility lines (City 2008b).

The California Community Redevelopment Law authorizes the City of San Diego to use special legal and financial mechanisms to eliminate blight and improve economic and physical conditions in designated areas of the City. San Diego's Redevelopment Agency was created in 1958 and until recently managed redevelopment areas within the City's jurisdiction. Redevelopment activities in the Redevelopment Agency's 17 project areas were carried out by the City's Redevelopment Division and two public, nonprofit City corporations: Centre City Development Corporation and Southeastern Economic Development Corporation. Due to recent State legislative changes, however, Redevelopment is no longer a tool that the City can use.

City Council Policy 900-19, Public Tree Protection (2005) is designed to protect, wherever practical, designated tree resources located in the public rights-of-way, on City-owned open space, in parks or other publicly owned lands, and on private land restricted by dedicated open space easements. This policy requires that CEQA review of projects consider the protected status of these trees as a factor in determining potential significant impacts to visual quality and community character resources. It defines four categories of special status trees: Landmark Trees, Heritage Trees, Parkway Resource Trees, and Preservation Groves. This policy also applies to "street trees" planted in the right-of-way in conjunction with adjacent development and/or roadway improvements. Street trees are considered City property and damage should be avoided where possible. The policy states: "Roadway widening requirements will avoid damage to trees where possible. When avoidance is not possible, tree protection during construction, tree transplanting or tree replacements will be required."

## Relevant Visual/Community and Neighborhood Character Guidelines

### City of San Diego General Plan

The Urban Design Element of the City of San Diego General Plan contains the goals, recommendations, and urban design objectives that relate to visual issues and community and neighborhood character. The stated purpose of the Urban Design Element is to guide physical development toward a desired scale and character that is consistent with the social, economic, and aesthetic values of the City (City 2008a). The Urban Design Element defines community and neighborhood character as the visual and sensory relationship between people and the built and natural environment. The built environment includes buildings and streets, and the natural environment includes features such as shorelines, canyons, mesas, and parks as they shape and are incorporated into the urban framework.

The Urban Design Element identifies several goals and policies to help guide compact, efficient, and environmentally sensitive patterns of development. As the availability of vacant land becomes more limited, designing infill development which complements the City's existing communities becomes increasingly important. The Urban Design Element identifies the following goals and policies applicable to the bikeways and other facilities proposed to be implemented under the BMP Update as related to Visual Effects and Neighborhood Character:

#### A. General Urban Design Goals

- A pattern and scale of development that provides visual diversity, choice of lifestyle, opportunities for social interaction, and that respects desirable community character and context.

#### Policies

##### *Natural Features*

- UD-A.1. Preserve and protect natural landforms and features.
- UD-A.2. Use open space and landscape to define and link communities.
- UD-A.3. Design development adjacent to natural features in a sensitive manner to highlight and complement the natural environment in areas designated for development.
- UD-A.4 Use sustainable building methods in accordance with the sustainable development policies in the Conservation Element.

##### *Architecture*

- UD-A.7. Respect the context of historic streets, landmarks, and areas that give a community a sense of place or history.

##### *Landscape*

- UD-A.8 Landscape materials and design should enhance structures, create and define public and private spaces, and provide shade, aesthetic appeal, and environmental benefits.

*Transit Integration*

UD-A.9 Incorporate existing and proposed transit stops or stations into project design

*Streets*

UD-A.10 Design or retrofit streets to improve walkability, bicycling, and transit integration; to strengthen connectivity; and to enhance community identity.

*Lighting*

UD-A.13 Provide lighting from a variety of sources at appropriate intensities and qualities for safety.

*Signs*

UD-A.14 Design project signage to effectively utilize sign area and complement the character of the structure and setting.

B. Distinctive Neighborhoods and Residential Design

Goals

- Pedestrian connections linking residential areas, commercial areas, parks and open spaces.

Policies

*Neighborhood Streets*

- UD-B.5 Design or retrofit streets to improve walkability, strengthen connectivity, and enhance community identity.
- UD-B.6 Utilize alleys to provide improved and alternative pedestrian access to sites.
- UD-B.7 Work with community groups and property owners to ensure adequate street maintenance, public landscape maintenance, law enforcement, code enforcement, and litter and graffiti control to maintain safe and attractive neighborhoods.

C. Mixed-Use Villages and Commercial Areas

Goals

- Mixed-use villages that achieve an integration of uses and serve as focal points for public gathering as a result of their outstanding public spaces.
- Vibrant, mixed-use main streets that serve as neighborhood destinations, community resources, and conduits to the regional transit system.

Policies

*Village Street Layout and Design*

UD-C.6 Design project circulation systems for walkability.

## Community Plans

The City has over 50 distinct community planning areas and 42 recognized community planning groups that provide input on planning and development. Each community planning area is covered under a land use plan that specifically addresses land use distribution and land use designations in more detail than is possible at the General Plan level; some planning areas have combined plans—such that there are 44 community plans. Community plans also provide community and site-specific guidance on community facilities, urban design and other aspects of community planning as needed. Community plans are policy documents and do not contain regulatory requirements, however. Policies and recommendations must be in harmony with other community plans, the City General Plan, and Citywide policies (City 2008b). The BMP Update summarizes the goals for each community plan as related to bicycle facilities.

### **5.4.2 Impacts**

*Issue 1: Would the project result in a substantial obstruction of any vista or scenic view from a public viewing area as identified in the community plan?*

#### **Significance Thresholds**

According to the City's Significance Determination Thresholds (2011), impacts to visual resources under Issue 1 would be significant if the following conditions apply:

- The project would substantially block a view through a designated public view corridor as shown in an adopted community plan, the General Plan, or the Local Coastal Program. Minor view blockages would not be considered to meet this condition. In order to determine whether this condition has been met, consider the level of effort required by the viewer to retain the view.
- The project would cause substantial view blockage from a public viewing area of a public resource (such as the ocean) that is considered significant by the applicable community plan. Unless the project is moderate to large in scale, the condition “e” below regarding bulk and scale would typically have to be met for view blockage to be considered substantial.
- The project exceeds the allowed height or bulk regulations, and this excess results in a substantial view blockage from a public viewing area.
- The project would have a cumulative effect by opening up a new area for development, which will ultimately cause extensive view blockage.

#### **Impact Analysis**

Because the bikeways are sited throughout the City, any of the types of bikeways could be located within or adjacent to scenic views, designated public view corridors, and public viewing areas of a



public resource. A particular bikeway may also create a new public viewing area of a public resource, depending on its location.

#### On-street Bikeways Without Widening

During construction, view impairment could occur due to the presence of construction equipment and facilities along the alignment or in staging areas and due to placement of temporary signage. The direct impacts of any potential view blockage would be temporary. All equipment associated with construction would be removed when the particular project is completed. Construction impacts on views would be less than significant.

After completion, all types of bikeways and other associated facilities are expected to have a small footprint and a low profile. On-street Bikeways Without Widening would create the least intrusive change to existing views. This type of bikeway would be developed by changing roadway striping and/or installing signage. None of these changes would be expected to block views from any point, create a facility with excessive height or bulk, or open up a new area for development. Operational impacts of this type of bikeway would be less than significant.

#### On-street Bikeways With Widening and Off-Street Bikeways

Impacts during construction of these types of bikeways would be similar to impacts from On-street Bikeways Without Widening, although the possible need for larger and more equipment could result in potentially more intensive or wider ranging view blockage. Nevertheless, the direct impacts would be temporary, and all equipment would be removed when the particular project is completed. Construction impacts on views would be less than significant.

The bikeways themselves are expected to have a small footprint and a low profile. A bikeway that involves on-street widening or off-street construction could, however, require the installation of retaining walls, bridges, or embankments. Depending on the height, bulk, placement, and design of such elements, a substantial view blockage could occur. Bikeways and possible accompanying structures would not be expected to involve construction of any new structures at a scale that could obstruct any views or alter a current viewshed (i.e., downtown skyline, Balboa Park, bays, oceans, lagoons, and mountains). Design of bikeways or other facilities where scenic vistas could be affected would focus on avoiding view changes and/or incorporating mitigation measures that would prevent blocking of the view. The success of such efforts would be specific to each particular bikeway or facility, however, and is unknown at this level of planning. Direct impacts on views for each project where such impacts would occur would be potentially significant.

An Off-street Bikeway could open up access to a new area. Such limited infrastructure is not anticipated to result in new development, however. The indirect, cumulative effect of opening up a new area for development, which could ultimately cause extensive view blockage, is not expected to occur for any bikeway or other facilities implemented under the BMP Update.

### **Significance of Impact**

Construction impacts on views for all bikeways and other facilities implemented under the BMP Update would be less than significant.

Operational impacts on views for On-street Bikeways Without Widening would be less than significant.

Operational impacts on views for On-street Bikeways With Widening and Off-street Bikeways would be potentially significant. Measures to mitigate such impacts are discussed below.

Indirect, cumulative impacts on views for any type of bikeway or other facilities implemented under the BMP Update would not occur.

### **Mitigation, Monitoring, and Reporting**

Projects implementing any features that could generate visual impacts, including by blocking views through a designated view corridor, blocking views of a public resource, or exceeding allowable height or bulk regulations, would be required to implement Mitigation Measures *Vis-1* and *Vis-2*.

***Vis-1:*** A visual study shall be prepared during design of a proposed bikeway or other facility implemented under the BMP Update, to adequately assess the potential visual impacts. The visual study shall include assessment of the existing visual environment, including existing views, aesthetics, neighborhood character, and landforms, and evaluate the feasibility of designing the particular feature that could generate visual impacts so that it does not cause impacts, including issues associated with blocking scenic views.

***Vis-2:*** Recommendations of the visual study shall be incorporated into the design of the feature that could cause visual impacts. If the alignment cannot be changed, or the feature cannot be redesigned or screened visually by incorporating elements such as landscaping or berming to avoid the impact, or the bikeway cannot be designed to eliminate the need for that particular feature, the City's process for subsequent evaluation of discretionary projects shall be followed. The process includes environmental review and documentation pursuant to CEQA, as well as an analysis of the individual project for consistency with the goals, policies, and recommendations of the General Plan and the applicable Community Plan. The process may require development of additional site-specific measures to avoid or reduce significant impacts.

With implementation of Mitigation Measures *Vis-1* and *Vis-2* potential visual impacts associated with Issue 1 would be reduced to less than significant.

**Issue 2: *Would the project result in the creation of a negative aesthetic site or project?***

**Significance Thresholds**

According to the City's Significance Determination Thresholds (2011), impacts to visual resources under Issue 2 would be significant if the following conditions apply:

- The project would create a disorganized appearance and would substantially conflict with City codes (e.g., a sign plan which proposes extensive signage beyond the City's sign ordinance allowance).
- The project significantly conflicts with the height, bulk, or coverage regulations of the zone and does not provide architectural interest (e.g., a tilt-up concrete building with no offsets or varying window treatment).
- The project includes crib, retaining or noise walls greater than six feet in height and 50 feet in length with minimal landscape screening or berming where the walls would be visible to the public.
- The project is large and would result in an exceeding monotonous visual environment (e.g., a large subdivision in which all the units are virtually identical).
- The project includes a shoreline protection device in a scenic, high public use area, unless the adjacent bluff areas are similarly protected.

**Impact Analysis**

On-street Bikeways Without Widening

During construction, the presence of construction equipment and facilities along the alignment or in staging areas could create a disorganized appearance. The direct impacts of any potential negative aesthetics would be temporary. All equipment associated with construction would be removed when the particular project is completed. Construction sites would have to be managed in accordance with City requirements and therefore would not substantially conflict with City codes. Other thresholds are related to the completed appearance of a particular project. Construction impacts on aesthetics would be less than significant.

After completion, all types of bikeways and other associated facilities are expected to have a small footprint and a low profile. On-street Bikeways Without Widening would create the least intrusive change to the aesthetics of the existing scene. This type of bikeway would be developed by changing roadway striping and/or installing signage that would be small and would conform to the City's sign ordinance. None of these bikeways would be expected to create a disorganized appearance, have excessive height or bulk, or be large enough to create a monotonous visual environment. Walls and shoreline protection devices would not be needed, because this type of bikeway would be developed within existing roadways. Operational direct impacts on aesthetics of this type of bikeway would be less than significant.

### On-street Bikeways With Widening and Off-Street Bikeways

Impacts during construction of these types of bikeways would be similar to impacts from On-street Bikeways Without Widening, although the possible need for larger and more equipment could result in potentially more intensive or wider ranging aesthetic impacts. Nevertheless, the direct impacts would be temporary, and all equipment would be removed when the particular project is completed. Construction impacts on aesthetics would be less than significant.

The bikeways themselves are expected to have a small footprint and a low profile. Noise walls would not be needed for bikeways because operational noise impacts would be less than significant for these passive recreational facilities. A bikeway that involves on-street widening or off-street construction could, however, require the installation of retaining walls, bridges, embankments, or shoreline protection. Depending on the height, bulk, placement, and design of such elements, negative aesthetics could occur. Bikeways and other facilities implemented under the BMP Update would be designed to have an attractive and organized appearance in order to encourage use and conform to City requirements. Walls that may be required in a particular area could be greater than 6 feet in height and 50 feet in length. Adequate landscape screening or berming is expected to be incorporated where the walls would be visible to the public because the bikeways themselves would be narrow enough to allow room for screening landscaping. At this level of planning, however, it is unknown if landscaping or berming could be installed and maintained in all cases. No bikeway or facility is expected to be large enough to create a monotonous visual environment. If a shoreline protection device would be needed in a scenic, high-public use area, the project would include assurance that the adjacent bluff areas are similarly protected. Due to the unknowns regarding screening of possible walls, operational direct impacts on aesthetics of these types of bikeways and other facilities implemented under the BMP Update would be potentially significant.

### **Significance of Impact**

Construction impacts on aesthetics for all bikeways and other facilities implemented under the BMP Update would be less than significant.

Operational impacts on aesthetics for On-street Bikeways Without Widening would be less than significant.

On-street Bikeways With Widening and Off-street Bikeways would be potentially significant. Measures to mitigate such impacts are discussed below.

### **Mitigation, Monitoring, and Reporting**

Projects implementing any features that could generate visual impacts, including by causing adverse effects on aesthetics, including by having a wall greater than 6 feet in height and 50 feet in length that would not be screened adequately, would be required to implement Mitigation Measures *Vis-1* and *Vis-2*, discussed above.

With implementation of Mitigation Measures *Vis-1* and *Vis-2* potential impacts associated with Issue 2 would be reduced to less than significant.

**Issue 3:** *Would the project result in project bulk, scale, materials or style which would be incompatible with surrounding development?*

**Issue 4:** *Would the project result in a substantial alteration to the existing or planned character of the area, such as could occur with the construction of a subdivision in a previously undeveloped area?*

**Issue 5:** *Would the project result in the loss of any distinctive or landmark tree(s), or stand of mature trees as identified in the community plan?*

### **Significance Thresholds**

According to the City's Significance Determination Thresholds (2011), impacts to visual resources under Issues 3, 4, and 5 would be significant if the following conditions apply:

- The project exceeds the allowable height or bulk regulations and the height and bulk of the existing patterns of development in the vicinity of the project by a substantial margin.
- The project would have an architectural style or use building materials in stark contrast to adjacent development where the adjacent development follows a single or common architectural theme (e.g., Gaslamp Quarter, Old Town).
- The project would result in the physical loss, isolation or degradation of a community identification symbol or landmark (e.g., a stand of trees, coastal bluff, historic landmark) which is identified in the General Plan, applicable community plan or local coastal program.
- The project is located in a highly visible area (e.g., on a canyon edge, hilltop or adjacent to an interstate highway) and would strongly contrast with the surrounding development or natural topography through excessive height, bulk, signage, or architectural projections.
- The project would have a cumulative effect by opening up a new area for development or changing the overall character of the area (e.g., rural to urban, single-family to multi-family).

### **Impact Analysis**

#### On-street Bikeways Without Widening

The construction scene of an individual project being constructed would not exceed height or bulk regulations, have an architectural style, or open up a new area for development or change the overall character of an area, which are thresholds related to permanent structures. Construction of this type of bikeway would not result in the loss of community symbols or landmarks, as discussed below under operational impacts. During construction, the equipment and facilities along the

alignment or in staging areas could be on a canyon edge, hilltop, or adjacent to an interstate highway and therefore be highly visible or strongly contrast with the surrounding development or natural topography. Such direct impacts on neighborhood character would be temporary. All equipment associated with construction would be removed when the particular project is completed. Construction impacts on neighborhood character would be less than significant.

After completion, all types of bikeways and other associated facilities are expected to have a small footprint and a low profile. On-street Bikeways Without Widening would create the least intrusive change to the character of the existing scene. This type of bikeway would be developed by changing roadway striping and/or installing signage that would be small and would not starkly contrast with adjacent development. No community identification symbols or landmarks, including trees, would be removed because this type of bikeway would be developed within existing roadways. Operational direct impacts on neighborhood character of this type of bikeway would be less than significant.

#### On-street Bikeways With Widening and Off-Street Bikeways

Impacts during construction of these types of bikeways would be similar to impacts from On-street Bikeways Without Widening, although the possible need for larger and more equipment could result in potentially more intensive or wider ranging neighborhood character impacts. Nevertheless, the direct impacts would be temporary, and all equipment would be removed when the particular project is completed. Construction impacts on neighborhood character would be less than significant.

The bikeways themselves are expected to have a small footprint and a low profile. A bikeway that involves on-street widening or off-street construction could, however, require the installation of retaining walls, bridges, embankments, or other stabilizing structures. Depending on the height, bulk, placement, and design of such elements, impacts to neighborhood character could occur. Bikeways and other facilities implemented under the BMP Update would be designed to be within the allowable height or bulk regulations and the height and bulk of the existing patterns of development in the vicinity of the project in order to achieve acceptance as a community amenity and encourage use. It is unknown at this point of planning, however, if a particular project requiring accompanying structures could be accomplished within allowable regulations. In addition, it is not known if the architectural style or building materials of structures that could be needed in particular locations would be in stark contrast to adjacent development where the adjacent development follows a single or common architectural theme. Even in densely developed urban neighborhoods there are steep roadways and canyons where walls could be required to accomplish the proposed bikeway, and the placement of concrete or other structural materials in a natural or historical area could result in a stark contrast.

Similarly, although such structures would not be expected to have excessive height, bulk, or architectural projections, and signage is expected to be small, it is unknown at this point of planning if a particular project located in a highly visible area (e.g., on a canyon edge, hilltop or adjacent to an interstate highway) would strongly contrast with the surrounding development or natural topography. Finally, it is not expected that any bikeway would be located such that it would result in the physical loss, isolation, or degradation of a community identification symbol or



landmark, but it is not known if all planned bikeways and other facilities in the BMP Update can be accomplished without the loss of trees (including street trees) or some other landmark within a particular corridor. Operational direct impacts on neighborhood character of these types of bikeways implemented under the BMP Update would be potentially significant.

An Off-street Bikeway could open up access to a new area. Such limited infrastructure is not anticipated to result in new development or influence the character of surrounding development. The indirect, cumulative effect of opening up a new area for development, which could ultimately change the overall character of the area, is not expected to occur for any bikeway or other facilities implemented under the BMP Update.

### **Significance of Impact**

Construction impacts on neighborhood character for all bikeways and other facilities implemented under the BMP Update would be less than significant.

Operational impacts on neighborhood character for On-street Bikeways Without Widening would be less than significant.

Operational impacts on neighborhood character for Bikeways With Widening and Off-street Bikeways would be potentially significant. Measures to mitigate such impacts are discussed below.

Indirect, cumulative impacts on neighborhood character from opening access for any type of bikeway or other facilities implemented under the BMP Update would not occur.

### **Mitigation, Monitoring, and Reporting**

Projects implementing any features that could generate visual impacts, including by causing adverse effects on neighborhood character, would be required to implement Mitigation Measures *Vis-1* and *Vis-2*, discussed above, and *Vis-3* discussed below.

**Vis-3:** If trees or other landmarks could be eliminated by a proposed bikeway or accompanying structure, the first focus of mitigation will be on changing the alignment or redesigning the bikeway to avoid the removal of such resources. If avoidance is not possible, compensation will be provided. Removal of trees for the purpose of bikeway or accompanying structure shall be minimized to the greatest extent practicable. When avoidance is not possible, tree protection during construction, tree transplanting or tree replacements shall be required. Any mature trees that must be removed shall be replaced at a minimum 1:1 ratio with like or acceptable substitute, as determined by the City. Trees shall be planted in a suitable location within the corridor where the trees can be maintained. No trees or shrubs exceeding 3 feet in height at maturity shall be installed within 10 feet of any water and sewer facilities.

With implementation of Mitigation Measures *Vis-1*, *Vis-2*, and *Vis-3*, potential impacts associated with Issues 3, 4, and 5 would be reduced to less than significant.

**Issue 6: *Would the project result in a substantial change in the existing landform?***

**Significance Thresholds**

According to the City's Significance Determination Thresholds (2011), impacts to visual resources under Issue 6 would be significant if the following conditions apply:

- The project would alter more than 2,000 cubic yards of earth per graded acre by either excavation or fill. Grading of a smaller amount may still be considered significant in highly scenic or environmentally sensitive areas. Excavation for garages and basements are typically not held to this threshold. In addition, one or more of the following conditions must apply to meet this significance threshold.
  - The project would disturb steep hillsides in excess of the encroachment allowances of the ESL regulations (Land Development Code Chapter 14, Article 3, Division 1). In evaluating this issue, environmental staff should consult with permit staff.
  - The project would create manufactured slopes higher than ten feet or steeper than 2:1 (50 percent).
  - The project would result in a change in elevation of steep hillsides as defined by the San Diego Municipal Code Section 113.0103 from existing grade to proposed grade of more than five feet by either excavation or fill, unless the area over which excavation or fill would exceed five feet is only at isolated points on the site. (A continuous elevation change of five feet may be noticeable in relation to surrounding areas. In addition, such a change may require retaining walls and other features to stabilize slopes, potentially resulting in a manufactured appearance.)
  - The project design includes mass terracing of natural slopes with cut or fill slopes in order to construct flat-pad structures.
  
- However, the above conditions may not be considered significant if one or more of the following apply:
  - The grading plans clearly demonstrate, with both spot elevations and contours, that the proposed landforms will very closely imitate the existing on-site landform and/or the undisturbed, pre-existing surrounding neighborhood landforms. This may be achieved through naturalized variable slopes.
  - The grading plans clearly demonstrate, with both spot elevations and contours, that the proposed slopes follow the natural existing landform and at no point vary substantially from the natural landform elevations.
  - The proposed excavation or fill is necessary to permit installation of alternative design features such as step-down or detached buildings, non-typical roadway or parking lot designs, and alternative retaining wall designs which reduce the project's overall grading requirements.

## **Impact Analysis**

The alteration of landform would occur during construction and be reflected in the final completed condition; therefore, construction and operational impacts of this issue are discussed together.

### On-street Bikeways Without Widening

On-street Bikeways Without Widening would be developed by changing roadway striping and/or installing signage. These bikeways would not be expected to require excavation or grading. This type of bikeway would have a completed landform that would match the existing on-site landform of the roadway within which it is installed. Construction and operational direct impacts on landform of this type of bikeway would be less than significant.

### On-street Bikeways With Widening and Off-Street Bikeways

The bikeways themselves are expected to have a small footprint and a low profile. A bikeway that involves on-street widening or off-street construction could, however, require the installation of retaining walls, bridges, embankments, or other stabilizing structures. Depending on the placement and design of such elements, direct impacts to landform could occur. Bikeways are relatively narrow in width and have more flexible design standards than roadways that carry vehicular traffic. It is expected that grading plans for these two types of bikeways and accompanying structures, if needed, would be able to demonstrate that proposed landforms would closely imitate the existing on-site landform, proposed slopes would follow the natural existing landform, and excavation or fill would only be proposed in order to accomplish design features that reduce the individual project's overall grading requirements. It is unknown at this point of planning, however, if grading exceeding the City's thresholds would be needed to accomplish a particular bikeway or other facility implemented under the BMP Update. Construction and operational direct impacts on landforms of these types of bikeways implemented under the BMP Update would be potentially significant.

## **Significance of Impact**

Construction and operational impacts on landform for On-street Bikeways Without Widening would be less than significant.

Construction and operational impacts on landform for On-street Bikeways With Widening and Off-street Bikeways would be potentially significant. Measures to mitigate such impacts are discussed below.

## **Mitigation, Monitoring, and Reporting**

Projects implementing any features that could generate visual impacts, including by adversely affecting landforms by specifying grading that exceeds the City's thresholds, would be required to implement Mitigation Measures *Vis-1* and *Vis-2*, discussed above.

With implementation of Mitigation Measures *Vis-1* and *Vis-2* potential impacts associated with Issue 6 would be reduced to less than significant.

***Issue 7: Would the project result in substantial light or glare which would adversely affect daytime or nighttime view in the area?***

### **Significance Thresholds**

According to the City's Significance Determination Thresholds (2011), impacts to visual resources under Issue 7 would be significant if the following conditions apply:

- The project would be moderate to large in scale, more than 50 percent of any single elevation of a building's exterior is built with a material with a light reflectivity greater than 30 percent (see Land Development Code Section 142.07330(a)), and the project is adjacent to a major public roadway or public area.
- The project would shed substantial light onto adjacent, light-sensitive property or land use, or would emit a substantial amount of ambient light into the nighttime sky. Uses considered sensitive to nighttime light include, but are not limited to, residential, some commercial and industrial uses, and natural areas.

### **Impact Analysis**

#### On-street Bikeways Without Widening

During construction, light could be shed onto adjacent light-sensitive property or land use. Nighttime construction is not expected to be needed, however, and any lighting that may be installed during construction would be temporary. All equipment associated with construction, including lighting, would be removed when the particular project is completed. Construction impacts from light or glare would be less than significant.

No lighting in addition to that already existing along roadways would be necessary for this type of bikeway. Operational impacts from light or glare would be less than significant.

#### On-street Bikeways With Widening and Off-Street Bikeways

Impacts during construction of these types of bikeways would be similar to impacts from On-street Bikeways Without Widening, although the possible need for larger and more equipment could result in potentially more intensive or wider ranging impacts from light or glare. Nevertheless, nighttime construction is not anticipated, any direct impacts would be temporary, and all equipment would be removed when the particular project is completed. Construction impacts from light or glare would be less than significant.

On-street Bikeways With Widening are associated with existing roadways, so new sources of substantial light or glare would not be expected. New features that would be moderate to large in scale and create a source of reflectivity would not be anticipated from the BMP Update. Night

lighting would be installed where appropriate for Off-street Bikeways, as needed for safety. Outdoor lighting would be fully shielded in conformance with City specifications pursuant to Section 142.0740 of the San Diego Municipal Code. New lighting adjacent to or within natural or residential areas may be relatively substantial compared to the existing condition, however. Operation impacts from light or glare would be potentially significant.

### **Significance of Impact**

Operational impacts from light or glare for On-street Bikeways Without Widening and On-street Bikeways With Widening would be less than significant.

Operational impacts from light or glare for Off-street Bikeways would be potentially significant. Measures to mitigate such impacts are discussed below.

### **Mitigation, Monitoring, and Reporting**

Projects implementing any features that could generate visual impacts, including by adversely affecting light and glare by shedding substantial light, would be required to implement Mitigation Measures *Vis-4* discussed below.

***Vis-4:*** Lighting of Off-street Bikeways adjacent to open space or residential areas shall be limited to that required for safety. Lighting shall be shielded and directed away from open space areas and residences and onto the bikeway itself.

With implementation of Mitigation Measure *Vis-4*, potential light and glare impacts associated with Issue 7 would be reduced to less than significant.

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## 5.5 PALEONTOLOGICAL RESOURCES

### 5.5.1 Existing Conditions

Paleontology is the science dealing with pre-historic plant and non-human animal life. Paleontological resources (or fossils) typically encompass the remains or traces of hard and resistant materials such as bones, teeth, or shells, although plant materials and occasionally less resistant remains (e.g., tissue or feathers) also may be preserved. Paleontological resources are nonrenewable and, as such, they cannot be replaced. The destruction, disturbance, or alteration of a paleontological resource causes an irreversible loss of information about prehistoric life on Earth.

The potential for fossil remains at a location can be predicted through established correlations between the fossils and geologic formations. For this reason, knowledge of the geology of a particular area and the paleontological resource sensitivity of particular formations makes it possible to predict where fossils may occur.

The area encompassing the City's proposed bicycle master plan network includes numerous surficial deposits and geologic formations, as identified in Table 5.5-1, *Paleontological Resource Potential of Geologic Formations*, and summarized below. The City's Significance Determination Thresholds (2011) were used to determine the potential for fossil remains within given geologic formations and the respective sensitivity of those fossil remains. Paleontological resource sensitivity is generally defined as follows:

- High Sensitivity – These formations contain a large number of known fossil localities, and generally either produce vertebrate fossil remains or are considered to have the potential to produce such remains.
- Moderate Sensitivity – These formations have a moderate number of known fossil localities and typically yield either invertebrate fossil remains in high abundance or vertebrate fossil remains in low abundance.
- Low or Unknown Sensitivity – These formations contain only a small number of known fossil localities and typically produce invertebrate fossil remains in low abundance. Unknown sensitivity is assigned to formations from which there are presently no known paleontological resources, but which have the potential for producing such remains based on their sedimentary origin.
- Very Low Sensitivity – Very low sensitivity is assigned to geologic formations that, based on their relative youthful age or high-energy depositional history, are judged unlikely to produce any fossil remains.

<b>Table 5.5-1 PALEONTOLOGICAL RESOURCE POTENTIAL OF GEOLOGIC FORMATIONS</b>		
<b>Geologic Unit</b>	<b>Potential Fossil Localities</b>	<b>Sensitivity Rating</b>
Alluvium	All communities where this unit occurs	Low
Ardath Shale	All communities where this unit occurs	High
Bay Point/Marine Terrace	All communities where this unit occurs	High
Cabrillo Formation	All communities where this unit occurs	Moderate
Delmar Formation	All communities where this unit occurs	High
Friars Formation	All communities where this unit occurs	High
Granitic/Plutonic	All communities where this unit occurs	Zero
Lindavista Formation	A. Mira Mesa/Tierrasanta B. All other areas	A. High B. Moderate
Lusardi Formation	A. Black Mountain Ranch/Lusardi Canyon Poway/ Rancho Santa Fe B. All other areas	A. High B. Moderate
Mission Valley Formation	All communities where this unit occurs	High
Mt. Soledad Formation	All communities where this unit occurs	Moderate
Otay Formation	All communities where this unit occurs	High
Point Loma Formation	All communities where this unit occurs	High
Pomerado Conglomerate	A. Scripps Ranch/Tierrasanta B. All other areas	A. High B. Moderate
River/Stream Terrace Deposits	A. South Eastern Chollas Valley/Fairbanks Ranch Skyline/Paradise Hills/Otay Mesa Nestor/ San Ysidro B. All other areas	A. Moderate B. Low
San Diego Formation	All communities where this unit occurs	High
Santiago Peak Volcanics A. Metasedimentary B. Metavolcanic	A. Black Mountain Ranch/La Jolla Valley/ Fairbanks Ranch/Mira Mesa/Peñasquitos B. All other areas	A. Moderate B. Zero
Scripps Formation	All communities where this unit occurs	High
Stadium Conglomerate	All communities where this unit occurs	High
Sweetwater Formation	All communities where this unit occurs	High
Torrey Sandstone	A. Black Mountain Ranch/Carmel Valley B. All other areas	A. High B. Low
Unnamed Formation	Rose Canyon area between Mission Bay and SR 52	High

Source: City 2011 and City 2008a

### **Alluvium**

Alluvial materials are associated primarily with larger active stream channels, and generally encompass variable amounts of silt, sand, and gravel. These deposits are approximately 10,000 years or less in age (Holocene), and typically do not contain important fossils in the Coastal Plain region. Notable exceptions do occur, however, including mammoth remains found in floodplain deposits of the Tijuana River Valley. Within the project area, late Quaternary alluvial deposits occur within larger drainages and associated floodplains such as Otay, Mission, Sorrento, and San Dieguito valleys, as well as Rose Canyon. Because of their relatively young age and mode of deposition (i.e., high energy environments), these formations are assigned a low paleontological resource sensitivity.

### **Ardath Shale**

The Ardath Shale is part of the La Jolla Group, and occurs generally from Soledad Valley to La Jolla, and from Pacific Beach to Clairemont. This formation is approximately 47 to 48 million years old (middle Eocene), and has yielded diverse and well-preserved assemblages of marine microfossils, invertebrates, and vertebrates. Due to the nature and quality of the described fossil assemblages, a high paleontological resource sensitivity is assigned to the Ardath Shale.

### **Bay Point/Marine Terrace**

The Bay Point Formation is a nearshore marine sedimentary deposit that is approximately 220,000 years old (late Pleistocene), and is exposed along the northern shore of Mission Bay (i.e., Crown Point) and portions of the San Diego waterfront. This unit has produced a large and diverse number of well-preserved fossil marine invertebrates, along with rare vertebrate fossils including sharks, rays, and bony fishes. Accordingly, this unit is assigned a high paleontological resource sensitivity.

Unnamed marine terrace deposits are between approximately 80,000 to 180,000 years old (Late Pleistocene). These deposits have a moderate to high paleontological resource sensitivity due to the large variety of marine vertebrate and invertebrate fossils that have been recovered from them.

It should be noted that current regional geologic mapping does not recognize the Bay Point formation as a lithostratigraphic unit, but identifies this Quaternary age geologic unit as a surficial deposit characterized as old or very old paralic deposits covering the emergent marine terraces. The unit is still assigned a high paleontological resource sensitivity.

### **Cabrillo Formation**

The Cabrillo Formation is composed primarily of marine sandstones and conglomerates, and occurs along the eastern and southwestern sides of the Point Loma peninsula in coastal cliffs and road cuts, as well as on Mount Soledad. This formation is approximately 70 million years old (late Cretaceous), and has produced marine invertebrates and vertebrates. Based on the nature of recovered materials, the Cabrillo Formation is assigned a moderate paleontological sensitivity.

### **Delmar Formation**

The Delmar Formation is part of the La Jolla Group, and occurs from Sorrento Valley to Baticuitos Lagoon, with the best exposures located in coastal cliffs between Torrey Pines State Reserve and Encinitas. This formation is approximately 49 to 50 million years old (early to middle Eocene), with fossils from this formation including estuarine vertebrates and invertebrates, aquatic reptiles, and terrestrial mammals. Due to the nature and diversity of associated fossils, the Delmar Formation is assigned a high paleontological resource sensitivity.

### **Friars Formation**

The Friars Formation is the uppermost unit of the La Jolla Group, a series of interbedded marine, lagoonal, and non-marine sedimentary rocks. This formation occurs from Mission Valley north to Rancho Santa Fe, and from Tecolote Canyon east to Santee/Lakeside. The Friars Formation is approximately 46 million years old (middle Eocene), with fossil occurrences including a rich assemblage of vertebrates (especially terrestrial mammals), marine microfossils and invertebrates, and terrestrial plants. Accordingly, this formation is assigned a high paleontological resource sensitivity.

### **Granitic/Plutonic**

Much of the San Diego region is underlain by granitic bedrock associated with the Southern California Batholith. These materials are generally early Cretaceous in age and were emplaced as molten material that subsequently crystallized to form regional granitic/plutonic bodies (with these rocks exposed by subsequent uplift/erosion in many areas). Due to their described molten nature of formation, granitic/plutonic materials exhibit no potential for the occurrence of sensitive paleontological resources.

### **Lindavista Formation**

This distinctive, rust-colored formation includes marine and/or non-marine terraces deposited on level wave-cut platforms during a period of dropping sea levels. The Lindavista Formation is approximately 0.5 to 1.5 million years in age (early Pleistocene), and occurs extensively as mesa surfaces in the Otay Mesa, San Diego Mesa, Linda Vista Mesa, Kearny Mesa, and Mira Mesa areas. Fossils are rare in this formation and have only been recorded in a few areas, including Mira Mesa and Tierrasanta. Accordingly, the Lindavista Formation is assigned a high paleontological resource sensitivity in Mira Mesa and Tierrasanta, and a moderate sensitivity in all other areas.

It should be noted that current regional geologic mapping does not recognize the Lindavista formation as a lithostratigraphic unit, but identifies this Quaternary age geologic unit as a surficial deposit characterized as old or very old paralic deposits covering the emergent marine terraces. The unit is still assigned a high and moderate paleontological resource sensitivity as identified above.

### **Lusardi Formation**

The Lusardi Formation consists of marine sandstones and conglomerates, with local occurrences including Lusardi and La Zanja canyons near Rancho Santa Fe, and the Poway area. This formation is approximately 80 million years old (late Cretaceous) and has produced a large number of vertebrate and invertebrate fossils. Based on these conditions, the Lusardi Formation is assigned a high paleontological resource sensitivity in the Black Mountain Ranch/Lusardi Canyon, Rancho Santa Fe, and Poway areas, and a moderate sensitivity in other locations.

### **Mission Valley Formation**

This unit is the middle member of the Poway Group and consists of marine and non-marine sedimentary rocks that occur discontinuously from Otay Valley to Miramar Reservoir and from Old Town to Spring Valley and Santee. The Mission Valley Formation is approximately 42 million years old (middle Eocene), with the marine strata having produced abundant and generally well-preserved microfossils, invertebrates, and vertebrates. The non-marine portions of this formation have yielded well-preserved samples of petrified wood as well as fairly large and diverse assemblages of fossil land mammals. The occurrence of both terrestrial and marine fossil assemblages in this formation is extremely important paleontologically, as it allows for the direct correlation of terrestrial and marine faunal time scales. Accordingly, the Mission Valley Formation is assigned a high paleontological resource sensitivity.

### **Mt. Soledad Formation**

The Mount Soledad Formation is the lowest (oldest) member of the La Jolla Group, and occurs in the vicinity of Rose Canyon, Tourmaline Beach, the north end of Point Loma, and Mount Soledad. This formation is approximately 48 to 50 million years old (early to middle Eocene), and has yielded fossils of various kinds of marine organisms (including marine microfossils and invertebrates), as well as pollen. Based on the somewhat limited nature and distribution of fossil occurrences, this formation is assigned a moderate paleontological resource sensitivity.

### **Otay Formation**

The Otay Formation is a fluvial (river deposited) sedimentary unit that is exposed in portions of Otay Mesa, as well as areas west of the Sweetwater Reservoir. This formation is approximately 29 million years old (late Oligocene), with a well-preserved and diverse assemblage of important terrestrial vertebrate fossils recovered from the upper (sandstone-mudstone) unit. Based on these discoveries, the Otay Formation is considered to be the richest source of late Oligocene terrestrial vertebrates in California, and is assigned a high paleontological resource sensitivity.

### **Point Loma Formation**

The Point Loma Formation includes a series of alternating marine shales, mudstones, and sandstones, and occurs along the western side of Point Loma and the northern flank of Mount Soledad. This formation is approximately 75 million years old (late Cretaceous) and has produced numerous well-preserved and diverse marine invertebrates and vertebrates, as well as

occasional terrestrial plants and dinosaurs. The paleontological resources of the Point Loma Formation represent some of the best-preserved examples of late Cretaceous marine fossils known from California and one of the few sources of dinosaur fossils in the state. Accordingly, this formation is assigned a high paleontological sensitivity.

### **Pomerado Conglomerate**

The Pomerado Conglomerate is the uppermost formation of the Poway Group, a sequence of primarily non-marine conglomerate and sandstone units. This formation occurs generally from La Mesa north to at least Miramar Reservoir, and east to Santee. The lower and middle portions of the Pomerado Conglomerate are between approximately 40 and 42 million years old (middle Eocene), with the lower member producing terrestrial mammal fossils (including insectivores, primates, and rodents) in the Scripps Ranch area. The middle member has yielded near-shore marine mollusks (e.g., clams and snails) and unidentifiable mammal bone fragments. Based on the noted occurrences, the Pomerado Conglomerate is assigned a high paleontological resource sensitivity in the Scripps Ranch and Tierrasanta areas, and a moderate sensitivity in other locations.

### **River/Stream Terrace Deposits**

River terrace deposits consist of coarse-grained gravelly sandstones, pebble/cobble conglomerates, and claystones, and are present along the edge of many larger coastal valleys. These materials generally occur at levels above the active stream channels and represent sediments deposited by ancient river courses. River terrace deposits are typically between approximately 10,000 and 500,000 years old (late Pleistocene), and while fossil occurrences are uncommon, important resources have been recovered from these deposits. Specifically, a number of vertebrate remains have been collected from river terrace deposits, including ground sloth, mammoth, wolf, camel, and mastodon fossils from the South Bay Freeway; and well-preserved ground sloth remains from the San Dieguito River Valley. Because fossil occurrences in river terrace deposits are uncommon but high value materials have been recovered, this unit is assigned a moderate paleontological resource sensitivity in the southeastern Chollas Valley, Fairbanks Ranch, Skyline, Paradise Hills, Otay Mesa, Nestor, and San Ysidro areas, and a low sensitivity for other locations.

### **San Diego Formation**

The San Diego Formation is a marine sedimentary deposit and is extensively exposed from Otay Mesa/Otay Ranch to Mission Valley (with isolated occurrences between Rose Canyon and Pacific Beach). This formation is between approximately 1.5 and 3 million years old (late Pliocene), and has produced extremely diverse assemblages of marine organisms, as well as rare terrestrial mammal and plant fossils. The San Diego Formation represents one of the most important sources of information on Pliocene marine organisms and environments in the world, and is assigned a high paleontological resource sensitivity.



### **Santiago Peak Volcanics**

The Santiago Peak Volcanics include moderately metamorphosed volcanic rocks, including localized deposits of volcanoclastic materials (i.e., sedimentary units derived from weathered volcanic rocks). This formation occurs more commonly in locations east of the Program area, but is exposed or present at shallow depths in portions of Otay Valley, Peñasquitos Canyon, the San Diego River Valley, La Zanja Canyon, and the San Dieguito River Valley. The Santiago Peak Volcanics are approximately 120 to 130 million years old (early Cretaceous), with important marine microfossils and invertebrate fossils known from the volcanoclastic metasedimentary units. Accordingly, metasedimentary rocks from this formation are assigned a moderate paleontological resource sensitivity in the Black Mountain Ranch, La Jolla Valley, Fairbanks Ranch, Mira Mesa, and Peñasquitos areas. No potential for sensitive paleontological resources is present in all other units and locations of this formation, due to the molten nature of formation for volcanic rocks.

### **Scripps Formation**

The Scripps Formation is part of the La Jolla Group, and occurs from Presidio Park north to Del Mar, and from Clairemont east to La Jolla Valley. This formation is approximately 47 million years old (middle Eocene), and has yielded predominantly marine vertebrate and invertebrate fossils, although reptiles, mammals, and plant remains also have been recovered. Based on the described fossil occurrences, the Scripps Formation is assigned a high paleontological resource sensitivity.

### **Stadium Conglomerate**

The Stadium Conglomerate is the lower member of the Poway Group, and includes two conglomeratic units that are distinct with respect to both composition and the time of formation. The two described units can occur either together or separately, with observed locations in the Mission Valley, Murphy Canyon, Tierrasanta, Rancho Peñasquitos, and Rancho Bernardo areas. Both members of this formation are middle Eocene, with ages ranging from approximately 42 to 43 million years old for the upper member, and 43 to 44 million years for the lower (Cypress Canyon) member. Fossil occurrences in the Stadium Conglomerate include marine microfossils and invertebrates, as well as sparse but well-preserved vertebrates from the upper member, and abundant and diverse assemblages of land mammals from the Cypress Canyon Member. Based on these fossil occurrences, the Stadium Conglomerate is assigned a high paleontological resource sensitivity.

### **Sweetwater Formation**

The Sweetwater Formation is a non-marine sedimentary deposit that occurs in the central and eastern portions of Otay Valley, as well as areas to the north and east (including Lower Otay Lake and Sweetwater Valley). This formation is approximately 37 to 42 million years in age (middle Eocene), and has produced important dental remains of terrestrial mammals. Accordingly, the Sweetwater Formation is assigned a high paleontological resource sensitivity.

## **Torrey Sandstone**

The Torrey Sandstone is a member of the La Jolla Group, and occurs from Sorrento Valley to Batiquitos Lagoon, and inland from the coast to La Jolla Valley. This formation is approximately 48 to 49 million years old (early to middle Eocene) and has produced important fossil plants and marine invertebrates. Based on the nature, location, and quality of recovered materials, the Torrey Sandstone is assigned a high paleontological resource sensitivity in the Black Mountain Ranch/Carmel Valley vicinity, and a low potential in all other areas.

## **Unnamed Formation**

An unnamed formation consisting of terrestrial sedimentary rocks occurs in the Rose Canyon area between Mission Bay and SR-52. This formation is approximately 51 to 55 million years old (early Eocene), with associated fossil discoveries including dental remains of terrestrial mammals. Based on the nature of associated fossil materials, this formation is assigned a high paleontological resource sensitivity.

### **5.5.2 Impacts**

*Issue 1: Would the project require over 1,000 cubic yards of excavation in a high resource potential geologic deposit/formation/rock unit?*

*Issue 2: Would the project require over 2,000 cubic yards of excavation in a moderate resource potential geologic deposit/formation/rock unit?*

### **Significance Thresholds**

According to the City's Significance Determination Thresholds (2011), impacts to paleontological resources under Issues 1 and 2 would be significant if the project would:

- Grade/excavate more than 1,000 cubic yards of material and extend to depths of 10 feet or more in geologic formations with a high paleontological sensitivity rating;
- Grade/excavate more than 2,000 cubic yards of material and extend to depths of 10 feet or more in geologic formations with a moderate paleontological sensitivity rating;
- Grade/excavate to a depth less than 10 feet within an area that has previously been graded and where unweathered formations with moderate or high sensitivity are present at the surface; and/or
- Grade/excavate within a fossil recovery site or near a fossil recovery site within the same geologic formation as the project site.

### **Impact Analysis**

Facilities other than bikeways, such as signal detectors, bicycle racks/parking, other end-of-trip facilities, and multi-modal connections would largely be located within the footprint of proposed bikeway projects, and are addressed as part of the analysis of bikeways below. Potential impacts

of larger end-of-trip and other facilities would be addressed as part of the environmental review of the specific projects they are associated with; for instance, if bicycle end-of-trip amenities are to be provided as part of a new park-and-ride facility, the bicycle-related amenities would be evaluated as part of the entire park-and-ride facility project.

Bikeway alignments as shown in the BMP Update are conceptual in nature. As projects are designed, impacts to paleontological resources would be evaluated on a project-by-project basis.

#### On-street Bikeways Without Widening

On-street Bikeways Without Widening and other facilities implemented under the BMP Update not requiring grading would have no impact on paleontological resources.

#### On-street Bikeways With Widening and Off-Street Bikeways

As shown in Table 5.5-1, portions of the project area are underlain by geologic formations with no, low, or marginal paleontological resource potential and sensitivity and are unlikely to contain important fossils. Also present within the region, however, are geologic formations of high and moderate sensitivity (e.g., Bay Point Formation, Friars Formation, Lindavista Formation, Mission Valley Formation, Otay Formation, Pomerado Conglomerate, river/stream deposits, San Diego Formation, Scripps Formation, and Torrey Sandstone), which do have the potential to contain unique paleontological resources. In general, construction of On-street (With or Without Widening) or Off-street Bikeways would involve only marginal subsurface grading in developed and undeveloped areas and is not anticipated to impact paleontological resources. While it is unlikely that construction of On-street or Off-street Bikeways would involve extensive excavation or grading, it is possible that bikeway construction could require over 1,000 cubic yards of excavation in a high resource potential geologic deposit/formation/rock unit or over 2,000 cubic yards of excavation in a medium resource potential geologic deposit/formation/rock unit, with the potential to adversely affect these resources and result in a significant impact to paleontological resources.

#### **Significance of Impact**

Bikeways requiring grading (i.e. primarily On-street Bikeways With Widening and Off-street Bikeways) would have the potential for significant direct and indirect impacts to paleontological resources in areas with a high paleontological resource sensitivity rating.

For Issues 1 and 2, at this Citywide planning phase, potential program-level impacts to paleontological resources in areas with a high or medium paleontological resource sensitivity rating significant. Alternative alignment of individual network segments that deviate from the proposed network alignment may be identified during project-specific design, and these alternatives could be implemented to reduce impacts to paleontological resources. Should projects in high or medium sensitivity areas require substantial grading, implementation of Mitigation Measure *Paleo-1* described below would reduce impacts to less than significant.

## Mitigation, Monitoring, and Reporting

**Paleo-1:** Prior to approval of Reach Recommendations or development projects implementing the Design Guidelines within the RCA, the City shall determine, based on review of the project application, that future projects are sited and designed to minimize impacts on paleontological resources in accordance with the City Paleontological Resources 2011 Significance Thresholds and 2002 Paleontological Resources Guidelines. Monitoring for paleontological resources required during construction activities would be implemented at the project level and would provide mitigation for the loss of important fossil remains with future discretionary projects that are subject to environmental review.

Future design of projects as noted below in accordance with the City's Paleontological Resources 2011 Significance Thresholds and City 2002 Paleontology Guidelines shall be based on the recommendations of a project-level analysis of potential impacts on paleontological resources completed in accordance with the steps presented below.

### I. Prior to Project Approval

- A. The environmental analyst shall complete a project level analysis of potential impacts on paleontological resources. The analysis shall include a review of the applicable USGS Quad maps to identify the underlying geologic formations, and shall determine if construction of a project would:
- Require over 1,000 cubic yards of excavation and/or a 10-foot, or greater, depth in a high resource potential geologic deposit/formation/rock unit.
  - Require over 2,000 cubic yards of excavation and/or a 10-foot, or greater, depth in a moderate resource potential geologic deposit/formation/rock unit.
  - Require construction within a known fossil location or fossil recovery site.
- Resource potential within a formation is based on the Paleontological Monitoring Determination Matrix.
- B. If construction of a project would occur within a formation with a moderate to high resource potential, monitoring during construction would be required.
- Monitoring is always required when grading on a fossil recovery site or a known fossil location.

- Monitoring may also be needed at shallower depths if fossil resources are present or likely to be present after review of source materials or consultation with an expert in fossil resources (e.g., the San Diego Natural History Museum).
- Monitoring may be required for shallow grading (<10 feet) when a site has previously been graded and/or unweathered geologic deposits/formations/rock units are present at the surface.
- Monitoring is not required when grading documented artificial fill.

When it has been determined that a future project has the potential to impact a geologic formation with a high or moderate fossil sensitivity rating a Paleontological MMRP shall be implemented during construction grading activities.

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## 5.6 GEOLOGIC CONDITIONS

### 5.6.1 Existing Conditions

#### **Regional Geologic Setting**

San Diego is located in the Peninsular Ranges Geomorphic Province of southwestern California. The province is characterized by southeast-northwest trending ranges and fault zones. The westward tilted ranges are primarily composed of granitic rocks of the southern California Batholith, which intrude older volcanic and volcanoclast rocks. A sequence of Cretaceous and Tertiary marine and non-marine sediments has been deposited along the coastal margin of the Peninsular Ranges in the San Diego region. A combination of regional uplift and fluctuating sea-level during the Quaternary has resulted in a flight of coastal terraces subsequently dissected by streams. The surficial deposits and geologic formations encompassed by the City's proposed bicycle master plan network are described in Section 5.5, *Paleontological Resources*.

#### **Seismic Hazards**

Southern California is a seismically active region with a history of destructive earthquakes caused by the release of accumulated strain due to relative motion between the Pacific and North American tectonic plates. The hazards associated with earthquakes can be grouped into fault-rupture, ground shaking (strong ground motion), and the secondary effects of ground shaking (such as tsunamis, liquefaction, settlement, landslides), as described in Table 5.6-1, *Definitions of Seismic Hazards*. The hazard of surface fault-rupture is generally thought to be associated with a relatively narrow zone along well-defined pre-existing active or potentially active faults.

Numerous active earthquake fault zones are present in the region and the active Rose Canyon fault zone crosses the City of San Diego. The Rose Canyon fault zone extends from off shore at Torrey Pines, and on shore from La Jolla Shores to the Old Town area, and consists of several splay faults including the Rose Canyon, Mount Soledad, Country Club, and Mission Bay faults. South of Old Town the Rose Canyon fault zone splays into the East Garben, San Diego, Silver Stand, Coronado, and Spanish Bight faults. Active faults within this zone pose a risk of surface fault rupture.

Earthquakes on local or regional faults can produce potentially damaging ground shaking in the city of San Diego. Damage to structures and improvements caused by a major earthquake depends on the distance to the epicenter, the magnitude of the event, the underlying soil, and the quality of construction. The severity of ground shaking can be expressed in terms of both intensity and duration. The magnitude of an earthquake is measured by the amount of energy released at the source of the quake.

<b>Table 5.6-1 DEFINITIONS OF SEISMIC HAZARDS</b>	
<b>Seismic Hazard</b>	<b>Definition</b>
Groundshaking	When a break or rapid relative displacement occurs along the two sides of a fault, the tearing and snapping of the earth's crust creates seismic waves which are felt as a shaking motion at the ground surfaces.
Ground Displacement	Ground displacement is characterized by slippage along the fault, or by surface soil rupture resulting from displacement in the underlying bedrock. Such displacement may be in any direction and can range from a fraction of an inch to tens of feet.
Seismically Induced Settlement/Subsidence	Settlement of the ground may come from fault movement, slope instability, and liquefaction and compaction of the soil at the site. Settlement is not necessarily destructive. It is usually differential settlement that damages structures. Differential or uneven settlement occurs when the subsoil at a site is of non-uniform depth, density, or character, and when the severity of shaking varies from one place to another.
Liquefaction	Liquefaction is a process by which water-saturated granular soils transform from a solid to a liquid state during strong groundshaking. Primary factors controlling development of liquefaction include intensity and duration of ground accelerations, characteristics of the subsurface soil, in situ stress conditions, and depth of groundwater.
Soil Lurching	Soil lurching is the movement of land at right angles to a cliff, stream bank, or embankment due to the rolling motion produced by the passage of surface waves. It can cause severe damage to buildings because of the formation of cracks in the ground surface.
Tsunamis and Seiches	A tsunami is a sea wave generated by a submarine earthquake, landslide, or volcanic action. A seiche is an earthquake-induced wave in a confined body of water, such as a lake, reservoir, or bay.

Source: City 2008b

### **Soils and Slope Stability**

A landslide is the down slope movement of soil and rock material under the influence of gravity. Earthquakes and their aftershocks can destabilize slopes. A significant earthquake could cause the occurrence of landslides along sea cliffs, on steep road cuts and natural slopes, and where unprotected cut slopes occur in landslide-prone areas.

A slope can be made potentially unstable by removal of lateral support; increasing the height of the slope; saturating the slope; or adding a surcharge load (City 2008b).

### **Erosion**

Erosion is defined as a combination of processes in which the materials of the earth's surface are loosened, dissolved, or worn away, and transported from one place to another by natural agents. Erosion potential in soils is influenced primarily by loose soil texture and steep slopes. Loose soils can be eroded by water or wind forces, whereas soils with high clay content are generally susceptible only to water erosion. The potential for erosion generally increases as a result of

human activity, primarily through the development of structures and impervious surfaces and the removal of vegetative cover. Because much of the City is characterized as having slopes greater than 25 percent in grade, there are many areas within the City subject to erosion (City 2008b).

### **Geologic Risk Areas**

The geologic hazard areas in the City are illustrated by the geographical inclusion of each area of the City into one of three risk areas: nominal to low, low to moderate, and moderate to high (Figures 5.6-1a through 5.6-1c, *Potential Geohazard Issues for the Proposed Bicycle Master Plan Update Facilities*). The nominal to low category includes areas of the City with such geologic characteristics that may include: generally stable areas; level mesas underlain by terrace deposits and bedrock; favorable geologic structures; gently sloping terrain; and areas containing minor or no erosion potential. The low to moderate relative risk areas include areas with such geologic characteristics as: possible or conjectured landslide areas; slide prone formations; unfavorable geologic structures; level or sloping terrain; hydraulic fills; and/or local high erosion. The moderate to high relative risk areas include such geologic conditions as: confirmed, known or highly suspected landslide areas; an active faults; high erosion potential; steep bluffs; and/or unfavorable geologic structures. The categories illustrate the types of geologic hazards that could be found in particular areas of the City and are not all inclusive of the level of risk that may be present within a certain area. Most of the City is in nominal to low and low to moderate risk areas, but much of downtown centered at I-5 and Highway 94 is classified as a moderate to high risk area (City 2008a).

### **Regulatory Framework**

#### Alquist-Priolo Earthquake Fault Zoning Act

The State of California Alquist-Priolo Earthquake Fault Zoning Act (1972) was established to mitigate the hazard of surface faulting to structures for human occupancy. The intent of this act is to require fault investigations on sites located within Earthquake Fault Zones to preclude new construction of certain inhabited structures across the trace of active faults.

#### Building Codes

The City has adopted the 2010 California Building Code (CBC) as San Diego Municipal Code (SDMC) Chapter 14, Article 5, Division 1 together with other modifications and amendments provided in SDMC Chapter 14. The CBC is based on the International Building Code (IBC) 2010 Edition, Chapters 1 through 35 and various appendices as published by the International Code Council. As of January 1, 2011 all new residential, commercial, and light industrial construction is governed by the IBC, which the City of San Diego has amended and provided additions to. SDMC Chapter 14 Article 2, Division 1 (Grading Regulations) sets forth rules and regulations to control excavation, grading and earthwork construction, including fills and embankments; establishes the administrative procedure for issuance of permits; and provides for approval of plans and inspection of grading construction. SDMC Chapter 14 Article 4, Division 2 (Tentative Map Regulations) sets engineering geologic and geotechnical requirements related to the subdivision process. The most recent 2010 CBC incorporates lessons from the most

severe earthquakes to hit California in the past 42 years, in particular San Fernando-Sylmar (1971), Loma Prieta (1989), and Northridge (1994).

### San Diego Seismic Safety Study

The San Diego Seismic Study is a series of maps that depict where geologic hazards likely exist within the City and are used as a guide to determine relative risk and when evaluation by a geologist, an engineer, or both are required. Areas within the City are designated with a geologic hazard category and number based on the type of geologic hazard a particular location is potentially subject to. Geologic hazard categories from the Seismic Safety Study are listed and defined in Table 5.6-2, *City of San Diego Geologic Hazard Categories*.

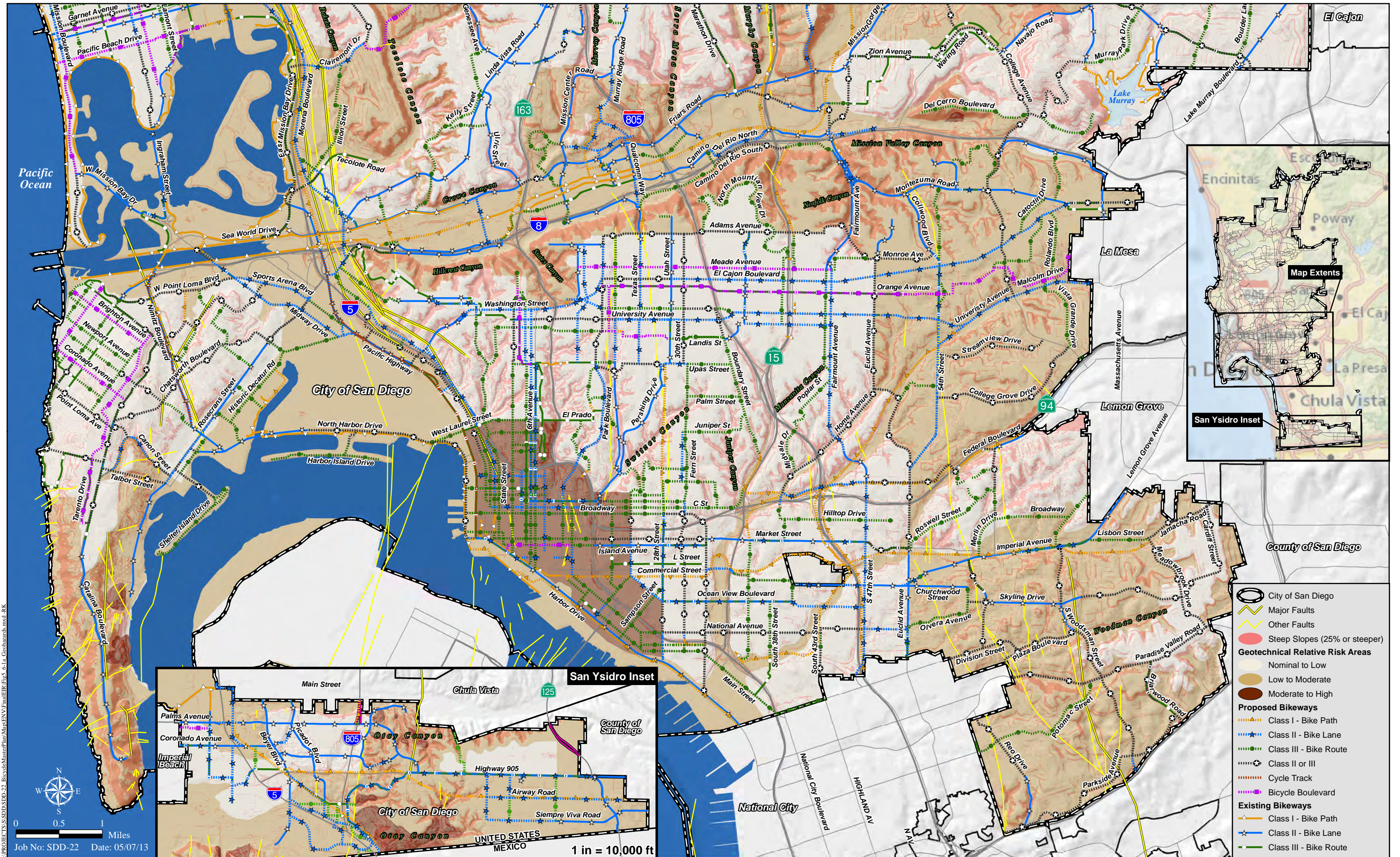
### San Diego ESL Regulations

As mentioned in Section 5.1, *Biological Resources*, unless specifically exempted, ESL Regulations apply to all proposed development when any of the following environmentally sensitive lands are present on the program area: sensitive biological resources; steep hillsides (defined in part as all lands that have a slope with a natural gradient of 25 percent or greater and a minimum elevation differential of 50 feet); coastal beaches; sensitive coastal bluffs; and 100-year floodplains.

Outside the Coastal Overlay Zone, City linear projects, such as the proposed BMP Update bikeways, are exempt from the development area regulations for steep hillsides and sensitive biological resources. Within the Coastal Overlay Zone, the ESL Regulations generally establish a 25 percent allowable development area in steep hillside areas, although development of up to 40 percent is permitted under certain circumstances for certain types of development.

<b>Table 5.6-2 CITY OF SAN DIEGO GEOLOGIC HAZARD CATEGORIES</b>	
<b>Category Number</b>	<b>Category Definition</b>
<b><i>Fault Zones</i></b>	
11	Active, Alquist-Priolo Earthquake Fault Zone
12	Potentially active: inactive, presumed inactive or activity unknown
13	Downtown special fault zone
<b><i>Landslides</i></b>	
21	Confirmed, known, or highly suspected landslide
22	Possible or conjectured landslide
<b><i>Slide-Prone Formations</i></b>	
23	Friars: neutral or favorable geologic structure
24	Friars: unfavorable geologic structure
25	Ardath: neutral or favorable geologic structure
26	Ardath: unfavorable geologic structure
27	Otay, Sweetwater and others





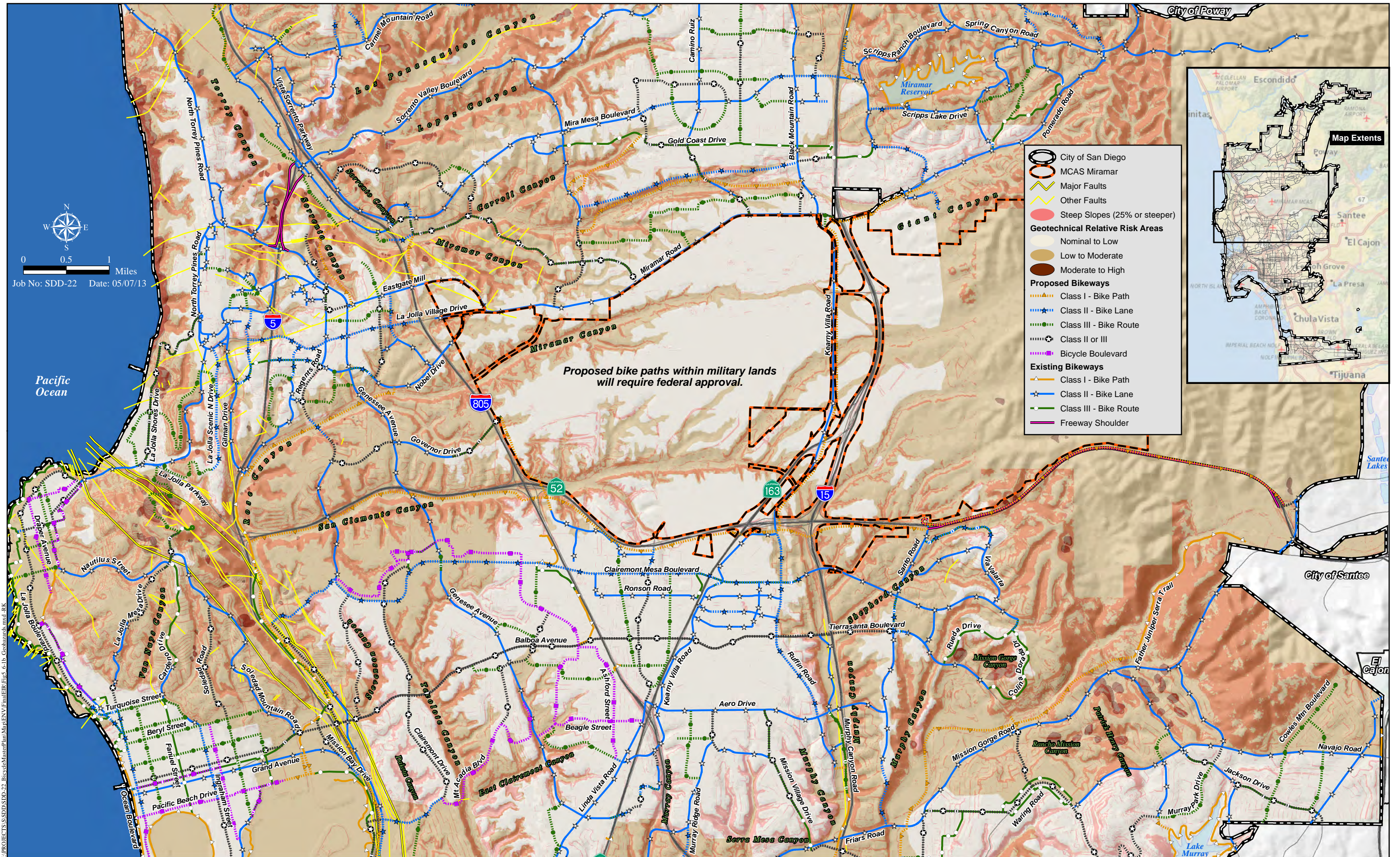
Potential Geohazard Issues for the Proposed Bicycle Master Plan Update (South)

Figure 5.6-1a

Source: City of San Diego and SANDAG

PROJECTS\SDD-22-22-BicycleMasterPlan\Map\ENV\Final\FIR\Figs\_6-1a\_Geohazards.mxd - RK  
 Job No: SDD-22 Date: 05/07/13



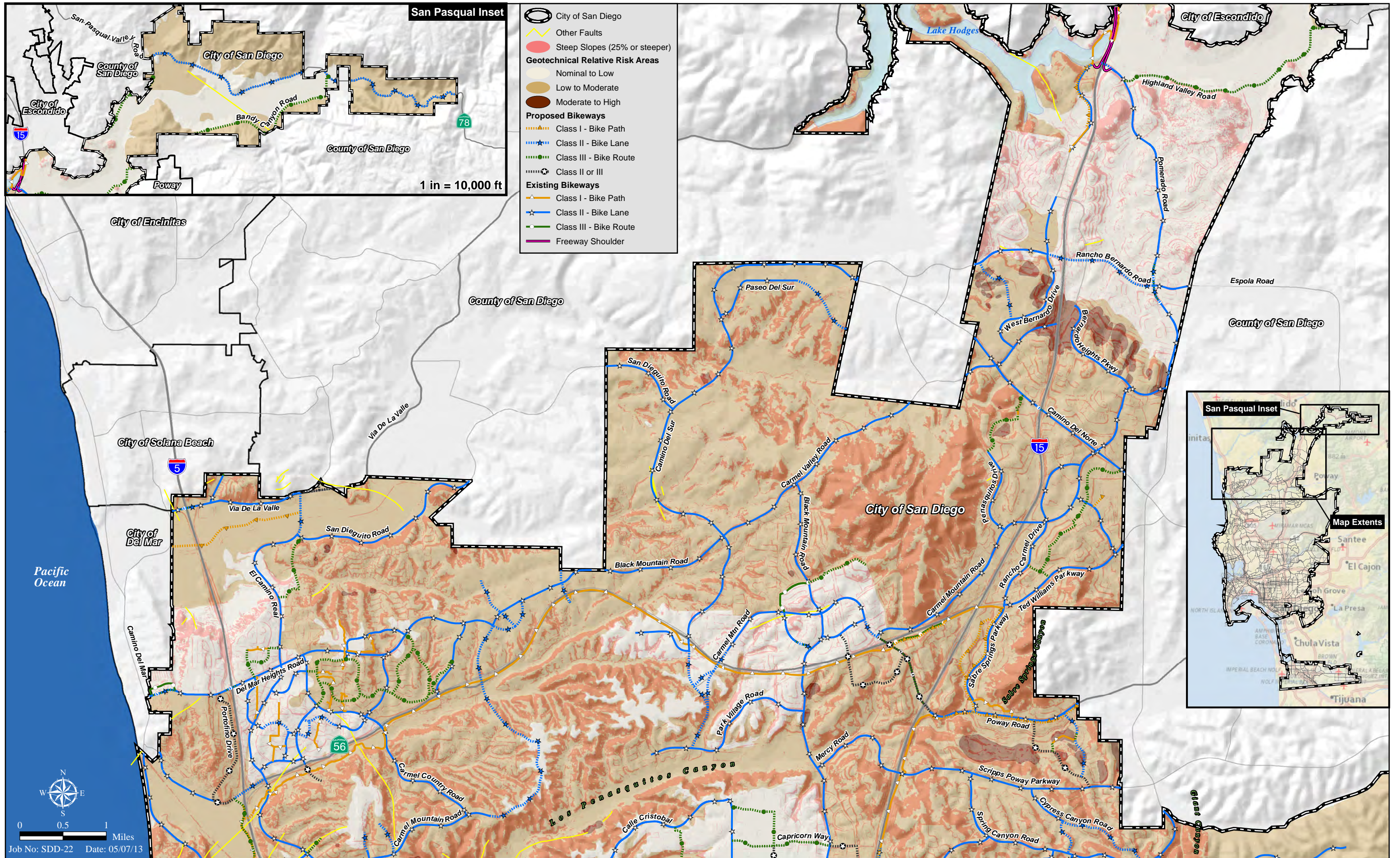


**Potential Geohazard Issues for the Proposed Bicycle Master Plan Update (Central)**

Figure 5.6-1b (Revised)

Source: City of San Diego and SANDAG





Potential Geohazard Issues for the Proposed Bicycle Master Plan Update (North)

Figure 5.6-1c

Source: City of San Diego and SANDAG



<b>Table 5.6-2 (cont.) CITY OF SAN DIEGO GEOLOGIC HAZARD CATEGORIES</b>	
<b>Category Number</b>	<b>Category Definition</b>
<b><i>Liquefaction</i></b>	
31	High potential – shallow groundwater, major drainages, hydraulic fills
32	Low potential – fluctuating groundwater, minor drainages
<b><i>Coastal Bluffs</i></b>	
41	Generally unstable: numerous landslides, high steep bluffs, severe erosion, unfavorable geologic structure
42	Generally unstable: unfavorable bedding planes, high erosion
43	Generally unstable: unfavorable jointing, local high erosion
44	Moderately stable: mostly stable formations, local high erosion
45	Moderately stable: some minor landslides, minor erosion
46	Moderately stable: some unfavorable geologic structure, minor or no erosion
47	Generally stable: favorable geologic structure, minor or no erosion, no landslides
48	Generally stable: broad beach areas, developed harbor
<b><i>Other Terrain</i></b>	
51	Level mesas – underlain by terrace deposits and bedrock: nominal risk
52	Other level areas, gently sloping to steep terrain, favorable geologic structure, low risk
53	Level or sloping terrain, unfavorable geologic structure, low to moderate risk
54	Steeply sloping terrain, unfavorable or fault controlled geologic structure, moderate risk
55	Modified terrain (graded sites): nominal risk

Source: City 2011

### City of San Diego General Plan

The Public Facilities, Services, and Safety Element of the City’s General Plan presents goals and policies regarding geology and soils. Relevant policies from this element include the following:

- PF-Q.1.** Protect public health and safety through the application of effective seismic, geologic, and structural considerations.
- a. Ensure that current and future community planning and other specific land use planning studies continue to include consideration of seismic and other geologic hazards. This information should be disclosed, when applicable, in the California Environmental Quality Act (CEQA) document accompanying a discretionary action.
  - b. Maintain updated citywide maps showing faults, geologic hazards, and land use capabilities, and related studies used to determine suitable land uses.

- c. Require the submission of geologic and seismic reports, as well as soils engineering reports, in relation to applications for land development permits whenever seismic or geologic problems are suspected.
  - d. Utilize the findings of a beach and bluff erosion survey to determine the appropriate rate and amount of coastline modification permissible in the City.
  - e. Coordinate with other jurisdictions to establish and maintain a geologic “data bank” for the San Diego area.
  - f. Regularly review local lifeline utility systems to ascertain their vulnerability to disruption caused by seismic or geologic hazards and implement measures to reduce any vulnerability.
  - g. Adhere to state laws pertaining to seismic and geologic hazards.
- PF-Q.2.** Maintain or improve integrity of structures to protect residents and preserve communities.
- a. Abate structures that present seismic or structural hazards with consideration of the desirability of preserving historical and unique structures and their architectural appendages, special geologic and soils hazards, and the socioeconomic consequences of the attendant relocation and housing programs.
  - b. Continue to consult with qualified geologists and seismologists to review geologic and seismic studies submitted to the City as project requirements.
  - c. Support legislation that would empower local governing bodies to require structural inspections for all existing pre-Riley Act (1933) buildings, and any necessary remedial work to be completed within a reasonable time.

### **5.6.2 Impacts**

***Issue 1: Would the project expose people or structures to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?***

***Issue 2: Would the project be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?***

***Issue 3: Would the project result in a substantial increase in wind or water erosion of soils, either on or off the site?***

## Significance Thresholds

According to the City's Significance Determination Thresholds (2011), significance thresholds for geologic conditions are determined on a case-by-case basis.

For purposes of this Program EIR for the BMP Update, impacts due to geologic conditions under Issues 1, 2, or 3 would be significant if the following conditions apply:

- Implementation of a project would result in the exposure of people or property to geologic hazards such as groundshaking, fault rupture, landslides, mudslides, ground failure, or similar hazards.
- The project would be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
- Implementation of a project would result in a substantial increase in wind or water erosion.

## Impact Analysis

Facilities other than bikeways, such as signal detectors, bicycle racks/parking, other end-of-trip facilities, and multi-modal connections would largely be located within the footprint of proposed bikeway projects, and are addressed as part of the analysis of bikeways below. Potential impacts of larger end-of-trip and other facilities would be addressed as part of the environmental review of the specific projects they are associated with; for instance, if bicycle end-of-trip amenities are to be provided as part of a new roadway or park-and-ride facility, the bicycle-related amenities would be evaluated as part of the entire roadway or park-and-ride facility project.

Bikeway alignments as shown in the BMP Update are conceptual in nature. As projects are designed, impacts due to geological conditions would be evaluated on a project-by-project basis.

### On-street Bikeways Without Widening

On-street Bikeways Without Widening and other facilities implemented under the BMP Update not requiring grading or other disturbance of an existing roadway likely would not 1) expose people or property to geologic hazards; 2) be located on unstable materials resulting in landslide, lateral spreading, subsidence, liquefaction or collapse; or 3) increase erosion, provided the affected roadway has already been designed and constructed to full satisfaction of City requirements and standard construction practices recommended in a geologic report, and/or is operating without signs of damage or risk from geologic conditions. If the existing roadway was not adequately constructed and/or shows signs of damage or risk from geologic conditions, then a proposed On-street Bikeway Without Widening project would be evaluated similarly to an On-street Bikeway With Widening or Off-street Bikeway project discussed below. Otherwise, implementation of On-street Bikeways Without Widening would have no significant direct or indirect impacts due to geologic hazards, unstable geologic materials, or erosion.

### On-street Bikeways With Widening and Off-Street Bikeways

As shown in Figures 5.6-1a through 5.6-1c, portions of the BMP Update facilities would cross areas identified as having potential geologic hazards.

Individual bikeways and other facilities implemented under the BMP Update could be located within a fault zone or areas of any of the geologic hazards categories listed in Table 5.6-2. Segments of the proposed facilities could be sited over or near a fault, within or near landslides and slide prone areas, on ground with the potential for liquefaction, along or adjacent to coastal bluffs subject to erosion or landslides, and on or near other terrain with unfavorable geology. Facilities may also be located on highly erodible soils or in areas subject to erosion due to factors including location near flowing water. Potential impacts are described below.

#### *Fault Rupture*

A proposed bikeway or associated structure such as a retaining wall constructed on a fault could be damaged or collapse if the fault ruptured and split apart the structure, displaced underlying ground; caused differential settlement along the alignment, or induced other ground failures. A roadway with bike lanes could be rendered impassable for vehicles and bicycles if the facility is offset vertically or horizontally by fault motion. As shown in Figures 5.6-1a through 5.6-1c, traces of faults are located throughout the City.

#### *Landslides and Slope Failures*

Areas susceptible to earthquake-induced landslides and other slope failures such as rockfalls typically occur in hillside areas. A proposed bikeway or associated structure constructed on top of a landslide or other unstable area could be damaged or rendered impassable when the ground fails and moves downslope, and a facility located below an unstable area could be damaged by sudden burial under debris. Workers in the area during construction or bicyclists on a completed bikeway could be severely injured during such failure.

#### *Liquefaction*

Areas particularly susceptible to liquefaction are underlain by uniform fine grain sediments (such as fine grained sands) and shallow groundwater. In these areas, strong earthquake shaking could cause liquefaction, resulting in ground fissures, sand boils, ground settlement and loss of bearing strength, buoyancy effects uplifting buried structures, ground oscillation, and lateral spread. A proposed bikeway or associated structure could be severely damaged by settlement or failure of the underlying ground caused by liquefaction. Areas adjacent to rivers, bays, and low lying coastal areas are among those in the City where potential liquefaction is of concern.

#### *Coastal Hazards*

Coastal bluff instability could result in injuries to workers during construction or bicyclists after project completion and damage bikeways or associated structures on or below the bluffs in ways that are similar to landslide hazard and rockfall areas discussed above. Another coastal concern is

potential tsunami inundation that could result in water surging in and out and debris colliding with fixed structures, damaging bikeways or associated structures located near the ocean. Similar damage could occur to facilities near the bay and harbor, as well as inland lakes, due to a seiche.

### *Erosion*

Severe erosion can cause extensive gully formation and destabilize otherwise stable ground that underlies a bikeway or associated structure. An unpaved bikeway could be cut by a gully and rendered impassable; a paved bikeway could be undermined by uncontrolled drainage and collapse. Sediment carried by uncontrolled runoff could deposit on bikeways located down gradient, necessitating clean-up and repair.

### *Summary of Potential Impacts*

Geologic hazards of varying levels of risk based on location are inherent in San Diego. All projects in the City must adhere to state laws for seismic and geologic hazards, abate structures that present dangers during seismic events, and consult with qualified geologists and seismologists. All projects are required to be reviewed by appropriate regulatory agencies prior to construction, must meet design standards that address seismically active areas, and comply with the CBC.

Any bikeway or other facility built under the BMP Update would be required to utilize proper engineering design and standard construction practices in order to ensure that people or structures would not be directly or indirectly exposed to substantial adverse effects from geologic hazards such as ground shaking, fault rupture, liquefaction, ground failure, landslides, and unstable geologic units or unstable or expansive and/or erodible soils either during construction or after project completion. Geotechnical investigations would be required where proposed facilities would require excavation, grading, or fill, and recommendations would be incorporated into the design. In addition, grading and construction activities would be required to comply with existing NPDES requirements, and compliance with the General Construction Activity Storm Water Permit would be required for projects with over one acre of ground disturbance. Compliance with the General Construction Activity Storm Water Permit would include the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Requirements of a General Construction Activity Storm Water Permit are designed to avoid or reduce potential short-term erosion and sedimentation impacts through the application of Best Available Technology and Best Management Practices.

Although all facilities built under the BMP Update are expected to comply with all applicable regulations, the success of such efforts would be specific to each particular bikeway or facility and is unknown at this level of planning. Impacts due to geologic conditions during construction or after project completion would be potentially significant.



## Significance of Impact

Construction and operational impacts due to geologic conditions for On-street Bikeways Without Widening would be less than significant, unless the existing roadway was not adequately constructed and/or shows signs of damage or risk from geologic conditions.

Construction and operational impacts due to geologic conditions for On-street Bikeways With Widening and Off-street Bikeways would be potentially significant. Measures to mitigate such impacts are discussed below.

## Mitigation, Monitoring, and Reporting

Projects implementing any features that could generate impacts due to geologic conditions, including by being located in an area subject to geologic hazards, unstable geologic materials, or erosion, would be required to implement Mitigation Measures *Geo-1* and *Geo-2*.

***Geo-1:*** A project-specific geologic report shall be prepared during design of a proposed bikeway or other facility implemented under the BMP Update, to adequately assess the potential impacts due to geologic conditions. The report shall include the studies designated in Table F-1 of the City's Significance Determination Thresholds (City 2011) and defined in the City's Guidelines for Geotechnical Reports (City 2011). The report shall specify possible mitigation measures for potential impacts due to geologic hazards, unstable geologic materials, and/or erosion. Measures may include the following:

- **Faulting:** Applying the most rigorous building codes governing seismic safety and structural design; allowing for setback; revising the alignment to avoid fault areas.
- **Landslides and Slope Failure:** Providing protective barriers such as drapes, nets, fences, barriers, and catchment; allowing for setbacks; grading to reduce slope angles; removing vulnerable deposits and replacing with compacted fill; providing stabilization; and providing signage on bikeways in areas of potential rock fall or unstable ground.
- **Liquefaction:** Conducting ground improvement (densification and hardening); providing appropriate structural (foundation) design; removing or treating liquefiable soils; modifying drainage to lower groundwater levels; providing for temporary or permanent dewatering; allowing for setbacks.
- **Coastal Hazards:** Similar measures as above for landslides and slope failure; developing evacuation procedures and routes and providing signage on bikeways in areas where tsunamis and seiches could result in damage.
- **Erosion:** Providing erosion control and drainage facilities as specified in City regulations.

**Geo-2:** Recommendations of the project-specific report shall be incorporated into the design of the feature(s) that could experience impacts due to geologic conditions.

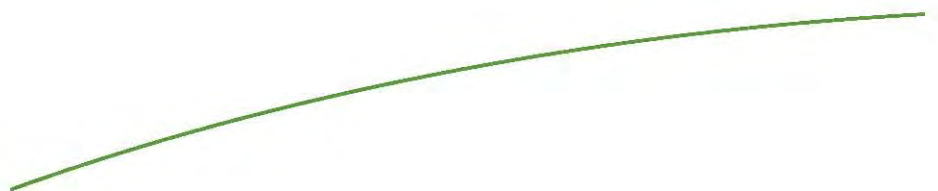
With implementation of Mitigation Measures **Geo-1** and **Geo-2** potential impacts due to geologic conditions associated with Issues 1, 2, and 3 would be reduced to less than significant.

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Section 6.0

# CUMULATIVE EFFECTS



## 6.0 CUMULATIVE EFFECTS

### 6.1 BASIS OF ANALYSIS

This section of the EIR provides an analysis of cumulative impacts of the BMP Update, as required by the State CEQA Guidelines Section 15130. Cumulative impacts are defined in State CEQA Guidelines Section 15355 as two or more individual effects that together create a considerable environmental impact or that compound or increase other impacts. A cumulative impact occurs from the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (State CEQA Guidelines Section 15355[b]). According to State CEQA Guidelines Section 15130, the discussion of cumulative effects “...need not provide as great a detail as is provided of the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness.” State CEQA Guidelines Section 15130 also notes that “An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.”

The evaluation of cumulative impacts is required by State CEQA Guidelines Section 15130 to be based on either: “(A) a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative effect. Any such planning document shall be referenced and made available to the public at a location specified by the Lead Agency.”

This cumulative impacts discussion is based on the adopted Final Program EIR for the City General Plan (City 2008b) that evaluated region-wide conditions pertaining to cumulative impacts. In accordance with State CEQA Guidelines Section 15130(b)(1)(B), the General Plan Final Program EIR’s analysis of the cumulative effects relied on the regional growth projections provided by SANDAG’s *2030 Regional Growth Forecast Update* (Regional Growth Forecast). The Regional Growth Forecast provides estimates and forecasts of employment, population, and housing for the period between 2004 and 2030. The Regional Growth Forecast and Final Program EIR for the General Plan are available for review at the City Planning and Community Investment Department.

According to the 2030 forecast, the population of the City is projected to increase by 361,110 persons or approximately 28 percent between 2004 and 2030 to approximately 1,656,257 persons (Table 6-1, *Projections for the City and San Diego County (2004 and 2030)*). The population of San Diego County (i.e., the unincorporated areas of the County and all of the incorporated cities) is projected to increase by 971,739 persons or approximately 32 percent between 2004 and 2030 to 3,984,753 persons. The number of housing units is projected to increase by approximately 24 percent within the City and 26 percent within the County during the 2004-2030 period.



In the time that has passed since the General Plan Update EIR was certified in 2008, the City of San Diego has approved 19 amendments to the various Community Plans which implement the City’s General Plan (see Table 6-2, *Community Plan Amendments Approved After Certification of the General Plan Update EIR*). Although these amendments occurred after the General Plan Update Program EIR was certified, they do not substantially affect the basis upon which the cumulative analysis was based. The primary reason for this conclusion is the fact that none of the amendments identified in Table 6-2 required an amendment to the General Plan. This is indicative of the fact that the land uses associated with the Community Plan amendments are consistent with the land use designations established by the General Plan Update. Thus, approval of these amendments would not change the basic land use assumptions upon which the housing and population forecasts for 2030 were based and upon which the cumulative analysis in the General Plan Update Program EIR relied.

This analysis of cumulative impacts focuses on issues determined to be potentially significant based on the analysis contained in Section 5.0, *Environmental Analysis*, of this Program EIR. These issues include Biological Resources, Historical Resources, Transportation/Circulation, Visual Quality/Neighborhood Character, Paleontological Resources, and Geologic Conditions. The potential footprint-related cumulative impacts associated with the proposed BMP Update (biological, historical, paleontological resources, and geologic conditions) are not sensitive to changes which are associated with the Community Plan amendments. Impacts of future Citywide development on such resources are a function of the physical area of disturbance rather than the nature of development. For example, the impacts to biological resources would be essentially the same whether the resource is impacted by a residential or commercial development. Similarly, changing the density of residential development would not change the disturbance footprint. Local traffic conditions and visual resources could be affected by changes in density or development type reflected in the Community Plan amendments. These changes would have been addressed in the specific environmental processing for those actions, however, with appropriate mitigation applied, and would not change the cumulative analysis conclusions of the General Plan Program EIR upon which this cumulative analysis is based.

Changes to policies recommended by the BMP Update would enhance, or at a minimum, not interfere with applicable land use plans, policies, and regulations of the City and the communities within which individual bikeways or other facilities would be sited, as discussed in Section 8.0, *Effects Found Not to be Significant*, of this Program EIR. The policy aspects of the BMP Update, therefore, would not be affected by potential policy shifts in past or future Community Plan amendments. The approach of applying projections contained in the adopted City General Plan to cumulative analysis for the BMP Update is valid.

<b>Table 6-1 PROJECTIONS FOR THE CITY AND SAN DIEGO COUNTY (2004 AND 2030)</b>				
<b>Jurisdiction</b>	<b>Total Population</b>		<b>Total Housing Units</b>	
	<b>2004</b>	<b>2030</b>	<b>2004</b>	<b>2030</b>
City of San Diego	1,295,147	1,656,257	420,266	610,249
San Diego County	3,013,014	3,984,753	1,095,077	1,383,803

Source: SANDAG 2030 Regional Growth Forecast Update, September 2006

**Table 6-2  
COMMUNITY PLAN AMENDMENTS APPROVED AFTER CERTIFICATION OF  
THE GENERAL PLAN UPDATE PEIR**

<b>Project Name</b>	<b>Community Plan Area</b>	<b>Description</b>	<b>Council Approval Date</b>
Scripps Mercy Hospital	Uptown	Redesignate 2.19 acres from Open Space to Institutional (Hospital), 0.40 from High Residential (44-74 du/ac*) to Open Space and 0.04 acres from Institutional (Hospital) to Open Space.	5/20/08
Linda Vista/ Clairemont Mesa Open Space	Linda Vista and Clairemont Mesa	Boundary adjustment to shift 6.64 acres from Clairemont Mesa to Linda Vista Community Plan, and redesignate property from School/Open Space to Open Space. Shift 0.93 acres in Linda Vista to Clairemont Mesa and redesignate from Open Space to School.	5/30/08
University Town Center	University City	Change development intensity from 1,061,000 sf of Regional Commercial to 1,811,409 sf of Regional Commercial and 250 multi-family dwelling units.	7/29/08
Torrey Hills Unit 19, Lots 1-4	Torrey Hills	Redesignate 13.26 acres from Industrial to Medium Density Residential (30-44 du/ac) and transfer 950 ADTs from TAZ 931 to TAZ 937.	9/16/08
Point Loma Townhomes	Peninsula	Redesignate 1.65 acres from Industrial (Fishing-Marine Related) to Commercial <sup>1</sup>	10/7/08
Quarry Falls	Mission Valley	Specific Plan for 230-acre mixed use development including 4,780 residential dus, 480,000 sf of commercial retail, 420,000 sf of commercial office, 17.5 acres of parks, open space, trails and an optional school site.	10/21/08
Archstone	Navajo	Removal of mobile home overlay on 10.2 acres and retention of Medium High density residential.	11/18/08
Palladium	Kearny Mesa	Redesignate 7.5 acres from Industrial Business Park to High Density Residential (44-74 du/ac).	11/18/08

Note: \* du/ac = dwelling unit per acre

**Table 6-2 (cont.)  
COMMUNITY PLAN AMENDMENTS APPROVED AFTER CERTIFICATION OF  
THE GENERAL PLAN UPDATE PEIR**

<b>Project Name</b>	<b>Community Plan Area</b>	<b>Description</b>	<b>Council Approval Date</b>
SEDC 5 <sup>th</sup> Amendment	Southeastern SD/Skyline PH	Redesignate Imperial Avenue corridor to allow mixed use development and increase the maximum allowable residential density from 30 to 74 du/ac, increase residential capacity by 1,766 dus, reduce industrial acreage by 8.3 acres, and reduce commercial acreage by 6 acres. Redesignate portions of Skyline-Paradise Hills CP to increase residential units by 90 units and reduce commercial acreage by 1.2 acres.	4/28/09
Black Mountain Ranch Subarea Plan Amendment	Black Mountain Ranch	Reconfigure street patterns, adjust land use in northern village, convert golf course to Open Space, and allow Senior Housing on Hotel site.	5/19/09
Alvarado Apartments	College Area	Redesignate 9.99 acres from Institutional (Hospital and Related Medical Offices) to High Residential Density (45-75 du/ac).	7/28/09
Erma Road	Scripps Miramar Ranch	Redesignate 3.92 acres from Commercial (Professional Office) to High Medium Density Residential (15-29).	11/10/09
Aztec Court Apartments	College Area	Redesignate 0.19 acres from Low Medium Density Residential (10-15 du/ac) to High Residential Density (45-75 du/ac).	1/26/10
Community Wellness Campus	Rancho Penasquitos	Redesignate 4.45 acres from Religious Facilities to General Institutional – Healthcare Services.	2/23/10
Hazard Center	Mission Valley	Increase residential dwelling units from 145 to 618 and decrease commercial space from 205,510 sf to 185,000 sf.	5/18/10
Mission Brewery Mixed Use	Midway/PHC	Redesignate 3.12 acres from Commercial-Transportation to Multiple Use (up to 29 du/ac).	7/12/10
Vista Lane Villas	San Ysidro	Redesignate 2.88 acres from Low Density Residential (5-10 du/ac) to Low-Medium Residential Density (10-15 du/ac).	11/30/10
Blackshaw Lane Villas	San Ysidro	Redesignate 0.94 acres from Low Residential Density (5-10 du/ac) to Low-Medium Residential Density (10-15 du/ac).	11/30/10
Gables Carmel Valley	Carmel Valley	Redesignate 3.17 acres from Open Space to Low Density Residential (15-29 du/ac).	3/29/11

Source: HELIX Environmental Planning 2011

## 6.2 CUMULATIVE EFFECTS OF ISSUES FOUND TO BE POTENTIALLY SIGNIFICANT

Cumulative impacts are analyzed in light of the significance criteria presented in Section 5.0, *Environmental Analysis*. Implementation of the mitigation measures identified in Section 5.0 would reduce the incremental contribution of the proposed BMP Update to cumulative impacts to the maximum extent that can be identified at this level of planning. Impacts to Biological Resources, Historical Resources, Transportation/Circulation, Visual Quality/Neighborhood Character, Paleontological Resources, and Geologic Conditions were identified as potentially significant in Section 5.0. Impacts of these issues could create considerable environmental impacts or compound or increase other impacts when considered together with other development causing related impacts as addressed in the City's General Plan Program EIR (City 2008b). These issues are discussed in more detail below.

### 6.2.1 Biological Resources

#### **General Plan Program EIR**

The MSCP, MHCP, and the Multiple Habitat Conservation and Open Space Program collectively contribute to the conservation of vegetation communities and species in the City. As the City develops based on projected future population growth and housing units, however, biological resources not adequately protected by an adopted species or habitat conservation program or other regulations may be adversely affected. In addition, for some projects, it is possible that adherence to regulations protecting biological resources may not adequately avoid or reduce incremental impacts.

The General Plan Program EIR concluded that because the degree of future impacts and applicability, feasibility, and success of future mitigation measures could not be adequately known at the General Plan Program EIR level of analysis, incremental impacts to biological resources could occur which would represent a significant, unavoidable cumulative impact on biological resources.

#### **BMP Update**

##### Impact Analysis Summary

As discussed in Section 5.1, *Biological Resources*, bikeway alignments are conceptual in nature, and as individual projects are designed, potential impacts to biological resources would be evaluated on a project-by-project basis. On-street Bikeways Without Widening would be developed inside the footprint of existing roadways that have already been cleared of biological resources. On-street Bikeways Without Widening were concluded to have no direct impacts on biological resources, including candidate, sensitive or special status species; sensitive habitats; wetlands; wildlife movements, corridors or wildlife nursery sites; lands preserved under the MSCP and other local, regional, or state habitat conservation plans, policies and ordinances protecting biological resources; indirect impacts (edge effects) on the MHPA; or invasive species. On-street Bikeways Without Widening or other facilities completely within the built

right-of-way would therefore not contribute to direct cumulative impacts on biological resources. On-street Bikeways Without Widening could have indirect impacts on sensitive biological resources, including edge effects on the MHPA, however, and could contribute to indirect cumulative impacts on biological resources. Mitigation measures are provided in Section 5.1. The measures are concluded to reduce potential impacts to less than significant.

On-street Bikeways With Widening and Off-street Bikeways are not anticipated to impede wildlife movement, as they would be paved or unpaved paths with minimal to no surface structures. In addition, trails, including Class I Bike Paths, are considered to be a compatible land use within preserve areas. On-street Bikeways With Widening and Off-street Bikeways, other related facilities outside the built right-of-way, and supporting structures such as retaining walls, bridges and embankments may be sited near or within wetlands, riparian habitats, sensitive upland habitats, or other sensitive natural areas. On-street Bikeways With Widening and Off-street Bikeways were concluded to have the potential for significant direct and indirect impacts to each of the biological resource issues listed above, and mitigation measures are provided in Section 5.1. The measures are concluded to reduce potential impacts to less than significant.

### Cumulative Impact Conclusions

When viewed together with the City-wide loss of biological resources anticipated by the General Plan Program EIR, the potential incremental contribution of bikeways and other facilities would be very small. Only approximately 16 percent of the proposed bikeways would be Class I Bike Paths with their own right-of-way, separated from vehicle travel. The footprint of most bikeways would be narrow, the alignment would be adjustable, and construction would be relatively short-term and flexible in schedule. Each individual project would be required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact on biological resources, including specific measures that may be developed during future environmental processing, as needed. Refinements to the conceptual proposals in the BMP Update and application of mitigation measures where impacts could occur are expected to reduce the contribution of the BMP Update to cumulative biological resources impacts to be less than cumulatively considerable and therefore less than significant.

### **6.2.2 Historical Resources**

#### **General Plan Program EIR**

Development that is expected to occur through the implementation of the General Plan could involve ground-disturbing activities and substantial alteration, relocation, or demolition of historic buildings, structures, objects, landscapes, and sites that would significantly impact historic and archaeological resources and/or prehistoric human remains. In general, however, implementation of General Plan policies and compliance with federal, state, and local regulations would preclude impacts to historic and archaeological resources and prehistoric human remains. Nonetheless, for some projects, it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts.

The General Plan Program EIR concluded that because the degree of future impacts and applicability, feasibility, and success of future mitigation measures could not be adequately known at the General Plan Program EIR level of analysis, incremental impacts related to historic and archaeological resources and prehistoric human remains could occur which would represent a significant, unavoidable cumulative impact on historical resources.

## **BMP Update**

### Impact Analysis Summary

As discussed in Section 5.2, *Historical Resources*, bikeway alignments are conceptual in nature, and as individual projects are designed, potential impacts to historical resources would be evaluated on a project-by-project basis. On-street Bikeways Without Widening would be developed inside the footprint of existing roadways by striping and/or signage, so would not be expected to have impacts on prehistoric or historic buildings, structures, objects or sites or existing religious or sacred uses. On-street Bikeways Without Widening would therefore not contribute to cumulative impacts on historical resources.

On-street Bikeways With Widening, Off-street Bikeways, other related facilities that are outside the built right-of-way or that could create disturbance within the built right-of-way, and supporting structures such as retaining walls, bridges, and embankments could cause impacts to resources associated with the built environment. Impacts could consist of substantial alteration, relocation, or demolition of historic buildings, structures, objects, landscapes, and sites, including above-ground historic resources such as sidewalk date stamps. If important archaeological sites occur on property that is proposed for development, construction activities, such as grading and excavation, could result in significant impacts. In addition, human remains have been previously identified in association with prehistoric and historic sites within the City, so the potential for encountering human remains in the area of proposed bikeway improvements exists. All earthmoving activities have the potential to adversely affect archaeological resources, including human remains, and result in a significant impact. Standard City mitigation measures are provided in Section 5.2. The mitigation measures are concluded to avoid or reduce potentially significant impacts to unknown buried historical and/or cultural resources to less than significant.

### Cumulative Impact Conclusions

When viewed together with the City-wide disturbance of historical resources anticipated by the General Plan Program EIR, the potential incremental contribution of bikeways and other facilities would be very small. As noted above, only approximately 16 percent of the proposed bikeways would be Class I Bike Paths (Off-street Bikeways). Bikeway footprints generally would be narrow and not require extensive excavation, and the alignments could be adjusted to avoid identified historical resources. Each individual project would be required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact on historical resources, including specific measures that may be developed during future environmental processing, as needed. Refinements to the conceptual proposals in the BMP Update and application of mitigation measures where impacts could occur are expected to reduce



the contribution of the BMP Update to cumulative historical resources impacts to be less than cumulatively considerable and therefore less than significant.

### **6.2.3 Transportation/Circulation**

#### **General Plan Program EIR**

Development that is expected to occur through the implementation of the General Plan could result in project-level impacts associated with an increased number of roadway miles at LOS E or F on the planned transportation network and thus lead to greater cumulative impacts when viewed in connection with future development elsewhere in San Diego County. The SANDAG Transportation Model forecasts that daily vehicle miles traveled at LOS E or F will decrease by the Year 2030. However, due to uncertainties associated with the long-range implementation of the 2030 RTP and potential changes that could occur during the major update of the RTP that was underway when the General Plan Program EIR was being prepared (and is now complete as the 2050 RTP), future regional development was concluded to possibly increase the number of roadway miles at LOS E or F on the planned transportation network. In general, implementation of the above policies and compliance with federal, state, and local regulations would preclude incremental impacts associated with an increase in roadway miles at LOS E or F on the planned transportation network. However, for some projects it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts, and such projects would require additional measures.

The General Plan Program EIR concluded that because the degree of future impacts and applicability, feasibility, and success of future mitigation measures could not be adequately known at the General Plan Program EIR level of analysis, incremental impacts associated with an increase in roadway miles at LOS E or F on the planned transportation network could occur which would represent a significant, unavoidable cumulative impact on traffic/circulation.

#### **BMP Update**

##### Impact Analysis Summary

As discussed in Section 5.3, *Transportation/Circulation*, the BMP Update aims to reduce motorized traffic demand by improving bike accessibility throughout the City and encouraging alternate means of transportation. Bikeways therefore would not cause a substantial increase in traffic in relation to the existing traffic load and street capacity. Bikeways and other facilities in the BMP Update would not contribute to cumulative impacts of these traffic/circulation issues.

On-street Bikeways Without Widening could require restriping that could remove one or more travel and/or turn lanes, potentially impacting the capacity for vehicles on the roadway. Lane removal could cause an intersection to perform at an unacceptable LOS or cause a roadway segment to have an unacceptable volume-to-capacity ratio. Most On-street Bikeways With Widening and Off-street Bikeways would not require street restriping that would alter the existing lane configuration, but the potential exists for existing development to constrain street widening such that it would not be sufficient to accommodate on-street bikeways, necessitating

the removal of one or more travel and/or turn lanes. In addition, Off-street Bikeways could necessitate changes in lane configurations, if the bikeways intersect with roadways. Since the net effect of potentially reducing motorized traffic balanced against changing lane configurations is unknown, there is a potential for the BMP Update to cause significant impacts with respect to traffic load and capacity of the roadway system (including freeway segments, interchanges, or ramps), and resulting LOS for all three types of bikeways. Similarly, all three types of bikeways are concluded to have the potential for significant impacts to circulation movements. Mitigation measures are provided in Section 5.3. The mitigation measures may not reduce potentially significant impacts to these traffic/circulation issues to less than significant; therefore, a Statement of Overriding Considerations would be required.

All three types of bikeways within the proposed bikeway network would have a beneficial impact on pedestrian circulation, either by decreasing the number of motor vehicle lanes a pedestrian would need to traverse when crossing the street (On-street Bikeways Without Widening), adding a buffer between the sidewalk and the motor vehicle travel lanes (On-street Bikeways With Widening), or providing an off-street trail that can be used by pedestrians (Off-street Bikeways). Other facilities would either be buried (e.g., bicycle signal detectors) or would be placed following established standards to ensure that they do not infringe on pedestrian circulation (e.g., bicycle racks). Bikeways and other facilities in the BMP Update would not constitute a hazard to pedestrians, and therefore would not contribute to cumulative impacts of this traffic/circulation issue.

~~The BMP Update has identified inconsistencies with certain community plans because the BMP Update includes new proposed facilities that were not included in the community plans. These inconsistencies would not represent adverse conflicts with adopted policies, plans, or programs supporting alternative transportation models. The recommendations could be refined as part of a community plan update process or other focused community planning process. Furthermore, proposing new facilities that would be desired by the community would be considered a beneficial planning impact of the proposed BMP Update. Bikeways and other facilities in the BMP Update would not cause significant planning conflicts, and therefore would not contribute to cumulative impacts of this traffic/circulation issue.~~

### Cumulative Impact Conclusions

Although potentially significant impacts with respect to traffic load and capacity of the roadway system are identified for the BMP Update, the bikeways and other facilities would have a counteracting and beneficial effect when viewed together with City-wide development that would generally add to vehicular traffic. Improving bike accessibility throughout the City and encouraging alternate means of transportation would reduce vehicular trips and enhance the travel experience for bicyclists and pedestrians. Regardless, the contribution of the BMP Update to cumulative traffic/circulation impacts is concluded to be cumulatively considerable and therefore potentially significant. A Statement of Overriding Considerations would be required for these potential cumulative impacts.

## **6.2.4 Visual Quality/Neighborhood Character**

### **General Plan Program EIR**

Future development within the City, including the infill and redevelopment that would likely occur under the General Plan, may result in significant project-level impacts associated with visual resources and neighborhood character. Since the Draft General Plan area constitutes a large portion of San Diego County, project-level impacts could occur that would be related to substantial blocking of public views from designated open space areas, scenic highways or to any significant visual landmarks or scenic vistas (e.g., mountains, bays, rivers, and ocean), substantial changes in topography or to ground surface relief features, and negative and substantial alteration of the existing character of the plan area.

The General Plan Program EIR concluded that because the degree of future impacts and applicability, feasibility, and success of future mitigation measures could not be adequately known at the General Plan Program EIR level of analysis, incremental impacts on public views, landmarks, topography, and neighborhood character could occur which would represent a significant, unavoidable cumulative impact on visual resources and neighborhood character.

### **BMP Update**

#### **Impact Analysis Summary**

As discussed in Section 5.4, *Visual Quality and Neighborhood Character*, On-street Bikeways Without Widening would be developed inside the footprint of existing roadways by striping and/or signage, so would not have significant impacts on views, aesthetics, neighborhood character, landform, and light or glare. On-street Bikeways Without Widening would therefore not contribute to cumulative impacts on visual resources.

In general, the bikeways themselves are expected to have a small footprint and a low profile. At this level of planning, however, On-street Bikeways With Widening, Off-street Bikeways, and supporting structures such as retaining walls, bridges, and embankments could block views, impact neighborhood character or landforms, have negative aesthetics that would require screening, or require new lighting adjacent to or within natural or residential areas that may be relatively substantial compared to the existing condition. These two types of bikeways are concluded to have the potential for significant impacts on views, aesthetics, neighborhood character, landform, and light or glare. Mitigation measures are provided in Section 5.4. The mitigation measures are concluded to reduce potentially significant impacts to these visual resources issues to less than significant.

#### **Cumulative Impact Conclusions**

When viewed together with the City-wide changes to visual resources anticipated by the General Plan Program EIR, the potential incremental contribution of bikeways and other facilities would be very small. As noted above, only approximately 16 percent of the proposed bikeways would be Class I Bike Paths (Off-street Bikeways), which is the type of bikeway potentially needing

supporting structures such as retaining walls, bridges, or embankments. Bikeway footprints generally would be narrow and have a low profile, and the alignments could be adjusted to avoid view blockage or removal of neighborhood visual resources, such as trees. Supporting structures are likely to be able to be screened or designed to be unobtrusive. Lighting can be designed to be directed away from sensitive areas. Each individual project would be required to implement mitigation measure(s) designed to alleviate the cumulative impact on visual resources, including specific measures that may be developed during future environmental processing, as needed. Refinements to the conceptual proposals in the BMP Update and application of mitigation measures where impacts could occur are expected to reduce the contribution of the BMP Update to cumulative visual resources impacts to be less than cumulatively considerable and therefore less than significant.

### **6.2.5 Paleontological Resources**

#### **General Plan Program EIR**

As the City continues to develop in response to projected population growth, mass grading, underground parking areas, roadway construction, and other activities associated with future development may result in the loss of unique paleontological resources or geologic formations with moderate to high fossil bearing potential. In general, implementation of General Plan policies and compliance with federal, state, and local regulations would preclude incremental paleontological resources impacts. For some projects, however, it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts.

The General Plan Program EIR concluded that because the degree of future impacts and applicability, feasibility, and success of future mitigation measures could not be adequately known at the General Plan Program EIR level of analysis, incremental impacts on unique paleontological resources or geologic formations with moderate to high fossil bearing potential could occur which would represent a significant, unavoidable cumulative impact on paleontological resources.

#### **BMP Update**

##### **Impact Analysis Summary**

As discussed in Section 5.5, *Paleontological Resources*, On-street Bikeways and other facilities implemented under the BMP Update not requiring grading (which would primarily include On-street Bikeways Without Widening) would have no impact on paleontological resources. These bikeways and facilities would therefore not contribute to cumulative impacts on paleontological resources.

Bikeways and related facilities requiring grading (primarily On-street Bikeways With Widening and Off-street Bikeways) would have the potential for significant direct and indirect impacts to paleontological resources in areas with a moderate or high paleontological resource sensitivity rating. Mitigation measures are provided in Section 5.5. The mitigation measures are concluded to reduce potentially significant impacts to paleontological resources issues to less than significant.

## Cumulative Impact Conclusions

When viewed together with the City-wide disturbance of paleontological resources anticipated by the General Plan Program EIR, the potential incremental contribution of bikeways and other facilities would be very small. As noted above, only approximately 16 percent of the proposed bikeways would be Class I Bike Paths (Off-street Bikeways), which is the type of bikeway potentially needing more extensive grading and supporting structures such as retaining walls, bridges, or embankments. Bikeway footprints generally would be narrow and have a low profile, and the actual volume of excavation deep enough to disturb sensitive paleontological resources is expected to be limited. A project that would exceed the City's paleontological resources thresholds for grading would be required to implement mitigation measure(s) designed to alleviate the cumulative impact on paleontological resources, including specific measures that may be developed during future environmental processing, as needed. City required standard mitigation of monitoring and recovery of resources encountered is typically considered adequate mitigation on an individual project basis to reduce impacts to less than significant. Refinements to the conceptual proposals in the BMP Update and application of mitigation measures where impacts could occur are expected to reduce the contribution of the BMP Update to cumulative paleontological resources impacts to be less than cumulatively considerable and therefore less than significant.

### **6.2.6 Geologic Conditions**

#### **General Plan Program EIR**

As the City continues to develop in response to projected population growth, mass grading, underground parking areas, roadway construction, and other activities associated with future development may result in exposure of project features to hazardous geologic conditions, including by being located in an area subject to geologic hazards, unstable geologic materials, or erosion. In general, implementation of General Plan policies and compliance with federal, state, and local regulations would preclude incremental geologic conditions impacts. For some projects, however, it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts.

The General Plan Program EIR concluded that because the degree of future impacts and applicability, feasibility, and success of future mitigation measures could not be adequately known at the General Plan Program EIR level of analysis, incremental impacts due to geologic conditions associated with seismic and geologic hazards, erosion, and unstable geology and soils would represent a significant, unavoidable cumulative impact.

#### **BMP Update**

##### Impact Analysis Summary

As discussed in Section 5.6, *Geologic Conditions*, On-street Bikeways and other facilities implemented under the BMP Update not requiring grading (which would primarily include On-

street Bikeways Without Widening) would have no impact due to geologic conditions unless the existing roadway was not adequately constructed and/or shows signs of damage or risk from geologic conditions. In general, On-street Bikeways and facilities would not contribute to cumulative impacts on geologic conditions.

Bikeways and related facilities requiring grading (primarily On-street Bikeways With Widening and Off-street Bikeways) would have the potential for significant direct impacts due to geologic conditions. Segments of the proposed facilities could be sited over or near a fault, within or near landslides and slide prone areas, on ground with the potential for liquefaction, along or adjacent to coastal bluffs subject to erosion or landslides, and on or near other terrain with unfavorable geology. Facilities may also be located on highly erodible soils or in areas subject to erosion due to factors including location near flowing water. Although any bikeway or other facility built under the BMP Update would be required to utilize proper engineering design and standard construction practices in order to ensure that people or structures would not be directly or indirectly exposed to substantial adverse effects from geologic hazards, the success of such efforts would be specific to each particular bikeway or facility and is unknown at this level of planning. Mitigation measures are provided in Section 5.6. The mitigation measures are concluded to reduce potentially significant impacts due to geologic conditions to less than significant.

#### Cumulative Impact Conclusions

When viewed together with the City-wide exposure of people and structures to hazardous geologic conditions anticipated by the General Plan Program EIR, the potential incremental contribution of bikeways and other facilities would be very small. As noted above, only approximately 16 percent of the proposed bikeways would be Class I Bike Paths (Off-street Bikeways), which is the type of bikeway potentially needing more extensive grading and supporting structures such as retaining walls, bridges, or embankments. Bikeway footprints generally would be narrow and have a low profile, and construction in locations that would result in geologic hazards is expected to be limited. Refinements to the conceptual proposals in the BMP Update and application of mitigation measures where impacts could occur are expected to reduce the contribution of the BMP Update to cumulative geologic conditions impacts to be less than cumulatively considerable and therefore less than significant.

### **6.3 CUMULATIVE EFFECTS OF ISSUES NOT FOUND TO BE SIGNIFICANT**

Based on an Initial Study, NOP scoping process, and analysis in Section 5.0, *Environmental Analysis*, it was determined that the proposed BMP Update would not have a significant direct, indirect, or cumulative environmental impact in the following areas: Agricultural and Forest Resources; Air Quality; Energy; Greenhouse Gas Emissions; Human Health and Public Safety; Hydrology and Water Quality; Land Use; Mineral Resources; Noise; Population and Housing; Public Services and Facilities; Public Utilities; and Recreation.

The reasons for the determination that the project would not cause significant impacts associated with these issues are discussed in Section 8.0, *Effects Found Not to be Significant*. For most issues, the reasons potential impacts of these issues would not be cumulatively considerable are



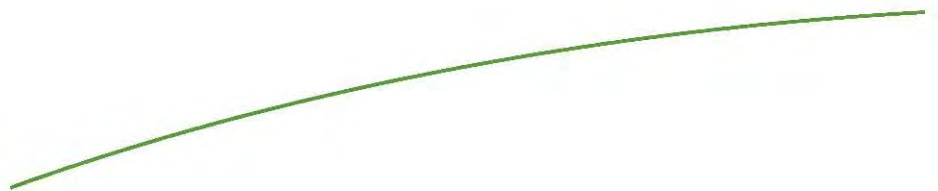
related to the limited footprint and passive nature of operation and use of bikeways and other facilities, the relatively short term and low-impact construction efforts needed to build most of the bikeways and facilities, and the expectation that design and construction would comply with applicable regulations and policies.

For the issues of Air Quality, Energy, and Greenhouse Gas Emissions, the reasons the potential impacts of these issues would not be cumulatively considerable are related to the short-term and low-impact construction efforts, as well as the conclusion that once constructed, the bikeways and other facilities built under the BMP Update would enhance and encourage bicycle travel. The BMP Update therefore would potentially reduce automobile trips throughout the City, and be expected to reduce vehicular emissions of pollutants and GHG emissions in the long term. Similarly, reductions in automobile usage as a result of improved bikeways are expected to reduce overall energy consumption related to transportation.



Section 7.0

MITIGATION, MONITORING,  
AND REPORTING PROGRAM



## 7.0 MITIGATION, MONITORING, AND REPORTING PROGRAM

As Lead Agency for the proposed project under CEQA, the City will administer the Mitigation, Monitoring, and Reporting Program (MMRP) for the following environmental issue areas as identified in the BMP Update EIR: Biological Resources, Historical Resources, Transportation/Circulation, Visual Quality/Neighborhood Character, ~~and~~ Paleontological Resources, and Geologic Conditions. The mitigation measures identified below include all applicable measures from the BMP Update EIR (Project No. 290781; SCH No. 2012061075). This MMRP shall be made a requirement of project approval.

Section 21081.6 to the State of California Public Resources Code requires a Lead or Responsible Agency that approves or carries out a project where an EIR has identified significant environmental effects to adopt a “reporting or monitoring program for adopted or required changes to mitigate or avoid significant environmental effects.” The City is the Lead Agency for the BMP Update EIR, and therefore must ensure the enforceability of the MMRP. An EIR has been prepared for this project that addresses potential environmental impacts and, where appropriate, recommends measures to mitigate these impacts. As such, an MMRP is required to ensure that adopted mitigation measures are implemented.

### 7.1 GENERAL REQUIREMENTS

The following general measures are included in this MMRP:

1. Prior to the commencement of work on any project under the BMP Update, a pre-construction meeting shall be conducted and include City’s Mitigation Monitoring and Coordination (MMC) staff, Resident Engineer, Applicant, and other parties of interest.
2. Prior to Notice to Proceed (NTP) for any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, the Assistant Deputy Director (ADD) of the City’s Land Development Review Division (LDR) shall verify that the following statement is shown on the grading and/or construction plans as a note under the heading **ENVIRONMENTAL MITIGATION REQUIREMENTS**: “*The Bicycle Master Plan Update project is subject to a Mitigation, Monitoring, and Reporting Program and shall conform to the mitigation conditions as contained in Environmental Impact Report No. 290781.*”

### 7.2 BIOLOGICAL RESOURCES

The following mitigation measures would reduce potential direct and indirect program impacts to biological resources to below a level of significance. These measures may be updated periodically in response to changes in federal and State laws, and new/improved scientific methods.

**Bio-1:** A biological resources report shall be prepared for bikeways proposed in naturally vegetated areas or within or adjacent to the MHPA. The biological resources report shall identify sensitive biological resources within and adjacent to the proposed bikeway alignment and make recommendations for avoidance and minimization of

impacts to those resources identified. If the project-level biological resources report determines that sensitive biological resources are within or adjacent to the proposed bikeway alignment, one or more of the following mitigation measures shall be implemented, as applicable. As each future bikeway project implemented under the BMP Update is reviewed under CEQA, additional specificity may be required with respect to mitigation measures identified below. If a biological resources report is required at the time of a specific bikeway project submittal, the report shall be prepared utilizing current biological mitigation and monitoring in accordance with City requirements. The biological resources report will include a specific detailed analysis of consistency with MSCP policies and guidelines, including MSCP Subarea Plan policies for the particular project location.

**Bio-2:** Proposed bikeways shall be designed to conform to requirements of the management directives of the City's Subarea Plan and to minimize impacts to biological resources. Projects within or adjacent to sensitive biological resource areas shall incorporate the following design features:

- Existing trails shall be used whenever feasible.
- Reduction in path width shall be considered in sensitive biological resource areas.
- Bikeways shall be designed to avoid damage to trees, including street trees, where possible. When avoidance is not feasible, trees shall be protected during construction, transplanted or replaced.
- Use of decomposed granite, unpaved trail, or equivalent pervious trail surface shall be considered.

**Bio-3:** Proposed bikeways adjacent to the MHPA shall conform to all applicable MHPA Land Use Adjacency Guidelines (Section 1.4.3) of the MSCP Subarea Plan. In particular, lighting, drainage, landscaping, grading, access, and noise must not result in a substantial, adverse effect on the MHPA. Prior to issuance of grading permits, the following shall occur:

- Lighting shall be directed away from the MHPA, and shielded if necessary.
- Drainage shall be directed away from the MHPA, or if not possible, must not drain directly into the MHPA. Instead, runoff should flow into sedimentation basins, grassy swales, or mechanical trapping devices prior to draining into the MHPA. Drainage shall be shown on the site plan and reviewed satisfactory to the City Engineer.
- Landscape plans for bikeways shall be reviewed and approved by the Development Services Department Environmental Review Manager (ERM) to ensure that no invasive non-native plant species shall be planted in or adjacent to the MHPA.
- Manufactured slopes shall be included within the development footprint of proposed bikeways and outside the MHPA.
- Construction activities associated with proposed bikeways located within or adjacent to the MHPA shall occur outside of the avian breeding season, if feasible. If avoidance of the breeding season is not feasible, additional measures

identified in the project-specific biological resources report shall be implemented, such as temporary noise barriers.

- New development adjacent to the MHPA may be required to provide barriers (e.g., non-invasive vegetation, rocks/boulders, fences, walls, and/or signage) along the MHPA boundaries to direct public access to appropriate locations and reduce domestic animal predation.

In addition, litter and trash will be removed on a regular basis. Signage will be installed to prevent littering and encourage reporting of littering in trail and road access areas. Trash cans and bins will be provided at trail access points. Signage will be installed notifying users that penalties will be imposed for littering and dumping.

**Bio-4:** Biological mitigation for direct impacts to upland habitat shall be in accordance with the City's Biology Guidelines, as identified in Table 5.1-6, *Upland Mitigation Ratios*, below. Prior to the commencement of construction related activity (including earthwork and fencing), mitigation for direct impacts to Tier I, Tier II, Tier IIIA, and Tier IIIB upland habitat shall be assured to the satisfaction of the ERM through preservation of upland habitats in conformance with the City's Biology Guidelines, MSCP, and ESL Regulations. Mitigation for upland habitats may include on-site preservation, on-site enhancement/restoration; payment into the Habitat Acquisition Fund; acquisition/dedication of habitat inside or outside the MHPA; or other mitigation as approved by the ERM, MSCP staff, and the Park and Recreation (if applicable), as described below. Any restoration plans are subject to review by the City's EAS, Parks and Recreation, and MSCP staff prior to issuance of any grading permits. These entities also must sign off on final acceptance of the mitigation project as successful.

<b>Table 5.1-6 UPLAND MITIGATION RATIOS</b>					
<b>Tier</b>	<b>Habitat Type</b>	<b>Mitigation Ratios</b>			
<b>TIER 1 (rare uplands)</b>	Southern Foredunes Torrey Pines Forest Coastal Bluff Scrub Maritime Succulent Scrub Maritime Chaparral Scrub Oak Chaparral Native Grassland Oak Woodlands	Location of Preservation			
		Location of Impact		Inside	Outside
			Inside*	2:1	3:1
			Outside	1:1	2:1
<b>TIER II (uncommon uplands)</b>	Coastal Sage Scrub (CSS) CSS/Chaparral	Location of Preservation			
		Location of Impact		Inside	Outside
			Inside*	1:1	2:1
			Outside	1:1	1.5:1
<b>TIER IIIA: (common uplands)</b>	Coastal Sage Scrub (CSS) CSS/Chaparral	Location of Preservation			
		Location of Impact		Inside	Outside
			Inside*	1:1	1.5:1
			Outside	0.5:1	1:1
<b>TIER IIIB: (common uplands)</b>	Non-Native Grasslands	Location of Preservation			
		Location of Impact		Inside	Outside
			Inside*	1:1	1.5:1
			Outside	0.5:1	1:1
<b>TIER IV: (other uplands)</b>	Disturbed Land Agriculture Eucalyptus Woodland Ornamental Plantings	Location of Preservation			
		Location of Impact		Inside	Outside
			Inside*	0:1	0:1
			Outside	0:1	0:1

Notes:

- 1 For all Tier I impacts, the mitigation could (1) occur within the MHPA portion of Tier I (in Tier) or (2) occur outside of the MHPA within the affected habitat type (in-kind)
  - 2 For impacts to Tier II, III A and III B habitats, the mitigation could (1) occur within the MHPA portion of Tiers I – III (out-of-kind) or (2) occur outside of the MHPA within the affected habitat type (in-kind).
- \* No mitigation would be required for impacts within the base development area (25%) occurring inside the MHPA. Mitigation for any impacts from development in excess of the 25% base development area for community plan public facilities or for projects processed through the deviation process would be required at the indicated ratios.



**Bio -5:** Impacts to wetlands shall be avoided. Unavoidable impacts to wetlands shall be minimized to the maximum extent practicable and fully mitigated per the Biology Guidelines. For projects with the potential to affect wetlands, the project-specific biological resources report shall include an analysis of wetlands (including City, state and federal jurisdiction analysis) within and adjacent to the footprint of the proposed bikeway and measures to avoid or minimize impacts to wetlands. If impacts to wetlands cannot be avoided, a conceptual mitigation program (which includes identification of the mitigation site) must be prepared by the City and approved by the resource agency or agencies with jurisdiction over the affected wetlands, and implemented by the City and would ensure a no net loss of wetlands.

### ***Resource Agency Permitting***

In addition, prior to the commencement of any construction related activities on-site for Off-Street Bikeway projects impacting wetland habitat (including earthwork and fencing), the applicant shall provide evidence<sup>1</sup> of the following to the Environmental Review Manager (ERM) prior to any construction activity:

- Compliance with ACOE Section 404 nationwide permit
- Compliance with the Regional Water Quality Control Board Section 401 Water Quality Certification; and
- Compliance with the CDFW Section 1601/1603 Streambed Alteration Agreement.

**Bio-6:** Proposed bikeways shall provide for continued wildlife movement through wildlife corridors as identified in the MSCP Subarea Plan or as identified through project-level analysis. Mitigation may include, but is not limited to, provision of appropriately-sized bridges, culverts, or other openings to allow wildlife movement.

The following mitigation measures shall be implemented for proposed bikeways that could potentially impact the following specific candidate, sensitive, or special status species through grading or clearing activities in areas where there is potential for these sensitive species to occur:

- Coastal California gnatcatcher (Federally Threatened);
- Least Bell's vireo (State Endangered/Federally Endangered); and
- Southwestern willow flycatcher (Federally Endangered).

**Bio-7:** Prior to the issuance of any authorization to proceed, the City's ERM (or appointed designee) shall verify that the MHPA boundaries and the following project requirements regarding the coastal California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher are shown on the grading and building permit plans:

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<sup>1</sup> Evidence shall include either copies of permits issued, letter of resolutions issued by the responsible agency documenting compliance, or other evidence documenting compliance and deemed acceptable by the Assistance Deputy Director (ADD) of City Land Development Review (LDR) Department.

**No clearing, grubbing, grading or other construction activities shall occur between March 1 and August 15, the breeding season of the coastal California gnatcatcher; between March 15 and September 15, the breeding season of the least Bell's vireo; and between May 1 and September 1, the breeding season of the southwestern willow flycatcher, until the following requirements have been met to the satisfaction of the Assistant Deputy Director (ADD) of Land Development Review Division LDR).**

- A qualified biologist (possessing a valid Endangered Species Act Section 10(a)(1)(A) Recovery Permit) shall survey habitat areas (only within the MHPA for gnatcatchers) that would be subject to the construction noise levels exceeding 60 decibels [dB(A)] hourly average for the presence of the coastal California gnatcatcher, least Bell's vireo, and the southwestern willow flycatcher. Surveys for this species shall be conducted pursuant to the protocol survey guidelines established by the USFWS within the breeding season prior to the commencement of construction. **If the coastal California gnatcatchers, least Bell's vireo, and/or the southwestern willow flycatcher are present, then the following conditions must be met:**
  - a. Between March 1 and August 15 for occupied gnatcatcher habitat, between March 15 and August 15 for occupied least Bell's vireo habitat, and between May 1 and September 1 for occupied southwestern willow flycatcher habitat, no clearing, grubbing, or grading of occupied habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; **AND**
  - b. Between March 1 and August 15 for occupied gnatcatcher habitat, between March 15 and August 15 for occupied least Bell's vireo habitat, and between May 1 and September 1 for occupied southwestern willow flycatcher habitat, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) hourly average at the edge of the occupied habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a qualified acoustician (possessing a current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the ERM at least two weeks prior to the commencement of construction activities; **OR**
  - c. At least two weeks prior to the commencement of clearing, grubbing, grading and/or any construction activities, under the direction of a qualified acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) hourly average at the edge of habitat occupied by the aforementioned avian species. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) hourly

average. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician or biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the appropriate breeding season.

*\* Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the ERM, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.*

- If the aforementioned avian species are not detected during the protocol survey, the qualified biologist shall submit substantial evidence to the ERM and applicable resource agencies which demonstrate whether or not mitigation measures such as noise walls are necessary during the applicable breeding seasons of March 1 and August 15, March 15 and September 15, and May 1 and September 1, as follows:
  - If this evidence indicates the potential is high for the aforementioned avian species to be present based on historical records or site conditions, then Condition 4-b or 4-c shall be adhered to as specified above.
  - If this evidence concludes that no impacts to the species are anticipated, no new mitigation measures are necessary.
  
- If the City begins construction prior to the completion of the protocol avian surveys, then the Development Services Department shall assume that the appropriate avian species are present and all necessary protection and mitigation measures shall be required as described in 4-Conditions a, b, and c, above.

The following mitigation measure shall be implemented for proposed bikeways that could potentially impact sensitive avian species through grading and clearing activities in areas where there is potential to impact sensitive avian species:

**Bio-8:** If project grading is proposed during the raptor breeding season (Feb. 1-Sept. 15), the project biologist shall conduct a pre-grading survey for active raptor nests within 300 feet of the development area and submit a letter report to MMC prior to the preconstruction meeting. If active raptor nests are detected, the report shall include mitigation in conformance with the City's Biology Guidelines (i.e. appropriate buffers, monitoring schedules, etc.) to the satisfaction of the City's ERM. Mitigation requirements determined by the project biologist and the ERM shall be incorporated into the project's Biological Construction Monitoring Exhibit (BCME) and monitoring

results incorporated in to the final biological construction monitoring report. If no nesting raptors are detected during the pre-grading survey, no mitigation is required.

The following mitigation measure shall be implemented to address potential impacts to avian species related to the Migratory Bird Treaty Act and Fish and Game Code 3503:

**Bio-9:** If project grading/brush management is proposed in or adjacent to native habitat during the typical bird breeding season (i.e., Feb. 1-Sept. 15), or an active nest is noted, the project biologist shall conduct a pregrading survey for active nests in the development area and within 300 feet of the nest.

The following mitigation measure shall be implemented to address potential impacts to biological resources during construction of Off-Street Bikeway projects:

**Bio-10:** A qualified Biological Monitor shall be on site at a minimum when initial grading of Off- Street Bikeways is occurring adjacent to wetland habitats and/or potential occupied avian or sensitive species habitat, to ensure that no take of sensitive species or active bird nests occurs, grading limits are observed, and that orange fencing and silt fencing are installed to protect sensitive areas outside earthwork limits.

### **7.3 HISTORICAL RESOURCES**

**Hist-1:** Prior to issuance of any permit that could directly affect an archaeological resource or resources associated with prehistoric Native American activities, the City shall require the following steps be taken to determine: (1) the presence of archaeological resources and (2) the appropriate mitigation for any significant resources that may be impacted by a development activity.

#### **Initial Determination**

The environmental analyst shall determine the likelihood for the project site to contain historical resources by reviewing site photographs and existing historic information (e.g., Archaeological Sensitivity Maps, the Archaeological Map Book, and the California Historical Resources Inventory System) and conducting a site visit. If there is any evidence that the site contains archaeological resources, then an evaluation consistent with the City of San Diego's Historical Resources Guidelines shall be required. All individuals conducting any phase of the archaeological evaluation program must meet professional qualifications in accordance with the City's Historical Resources Guidelines.

#### **Step 1**

Based on the results of the Initial Determination, if there is evidence that the site contains archeological resources, preparation of an evaluation report is required. The evaluation report could generally include background research, field survey, archeological testing, and analysis. Before actual field reconnaissance would occur, background research is required that includes a record search at the South Coastal Information Center (SCIC) at San Diego State University and

the San Diego Museum of Man. A review of the Sacred Lands File maintained by the NAHC must also be conducted at this time. Information about existing archaeological collections shall also be obtained from the San Diego Archaeological Center and any tribal repositories or museums.

Once the background research is complete a field reconnaissance must be conducted by individuals whose qualifications meet City standards. Consultants are encouraged to employ innovative survey techniques when conducting enhanced reconnaissance including, but not limited to, remote sensing, ground penetrating radar, and other soil resistivity techniques as determined on a case-by-case basis. Native American participation is required for field surveys when there is likelihood that the project site contains prehistoric archaeological resources or traditional cultural properties. If through background research and field surveys historical resources are identified, then an evaluation of significance must be performed by a qualified archaeologist.

## **Step 2**

Once a resource has been identified, a significance determination must be made. It should be noted that tribal representatives and/or Native American monitors will be involved in making recommendations regarding the significance of prehistoric archaeological sites during this phase of the process. The testing program may require reevaluation of the proposed project in consultation with the Native American representative, which could result in a combination of project redesign to avoid and/or preserve significant resources, as well as mitigation in the form of data recovery and monitoring (as recommended by the qualified archaeologist and Native American representative). An archaeological testing program will be required that includes evaluating the horizontal and vertical dimensions of a site, the chronological placement, site function, artifact/ecofact density and variability, presence/absence of subsurface features, and research potential. A thorough discussion of testing methodologies including surface and subsurface investigations can be found in the City of San Diego's Historical Resources Guidelines.

The results from the testing program will be evaluated against the Significance Thresholds found in the Historical Resources Guidelines and in accordance with the provisions outlined in Section 15064.5 of the State CEQA Guidelines. If significant historical resources are identified within a project's Area of Potential Effect (APE), the site may be eligible for local designation. At this time, the final testing report must be submitted to Historical Resources Board staff for eligibility determination and possible designation. An agreement on the appropriate form of mitigation is required prior to distribution of a draft environmental document. If no significant resources are found, and site conditions are such that there is no potential for further discoveries, then no further action is required. Resources found to be non-significant as a result of a survey and/or assessment will require no further work beyond documentation of the resources on the appropriate DPR site forms and inclusion of results in the survey and/or assessment report. If no significant resources are found but results of the initial evaluation and testing phase indicate there is still a potential for resources to be present in portions of the property that could not be tested, then mitigation monitoring is required.

### **Step 3**

Preferred mitigation for archeological resources is to avoid the resource through project redesign. If the resource cannot be entirely avoided, all prudent and feasible measures to minimize harm shall be taken. For archaeological resources where preservation is not an option, a Research Design and Data Recovery Program (RDDR) is required or is required to follow alternate treatment recommendations by the Most Likely Descendant (MLD), which includes a Collections Management Plan for review and approval. The data recovery program shall be based on a written research design and is subject to the provisions as outlined in CEQA Section 21083.2. If the archaeological site is an historical resource, then the limits on mitigation provided under Section 21083.2 shall not apply, and treatment in accordance with Guidelines Section 15162.4 and 21084.1 is required. The data recovery program must be reviewed and approved by the City's Environmental Analyst prior to draft CEQA document distribution. Archaeological monitoring shall be required during building demolition and/or construction grading when significant resources are known or suspected to be present on a site, but cannot be recovered prior to grading due to obstructions such as, but not limited to, existing development or dense vegetation.

A Native American observer must be retained for all subsurface investigations, including geotechnical testing and other ground disturbing activities whenever a Native American Traditional Cultural Property (TCP) or any archaeological site located on City property, or within the APE of a City project, would be impacted. In the event that human remains are encountered during data recovery and/or a monitoring program, the provisions of PRC Section 5097 must be followed. These provisions would be outlined in the Mitigation Monitoring and Reporting Program included in the environmental document. The Native American monitor shall be consulted during the preparation of the written report, at which time they may express concerns about the treatment of sensitive resources. If the Native American community requests participation of an observer for subsurface investigations on private property, the request shall be honored.

### **Step 4**

Archaeological Resource Management reports shall be prepared in conformance with the California Office of Historic Preservation (OHP) "Archaeological Resource Management Reports (ARMR): Recommended Contents and Format" (see Appendix C of the Historical Resources Guidelines), which will be used by Environmental Analysis Section staff in the review of archaeological resource reports. Consultants must ensure that archaeological resource reports are prepared consistent with this checklist. This requirement will standardize the content and format of all archaeological technical reports submitted to the City. A confidential appendix must be submitted (under separate cover), along with historical resource reports for archaeological sites and TCPs, containing the confidential resource maps and records search information gathered during the background study. In addition, a Collections Management Plan shall be prepared for projects that result in a substantial collection of artifacts, which must address the management and research goals of the project, the types of materials to be collected and curated based on a sampling strategy that is acceptable to the City of San Diego. Appendix D (Historical Resources Report Form) shall be used when no archaeological resources were identified within the project boundaries.



## Step 5

For Archaeological Resources: All cultural materials, including original maps, field notes, non-burial related artifacts, catalog information and final reports recovered during public and/or private development projects must be permanently curated with an appropriate institution, one which has the proper facilities and staffing for insuring research access to the collections consistent with state and federal standards. In the event that a prehistoric and/or historical deposit is encountered during construction monitoring, a Collections Management Plan would be required in accordance with the project MMRP. The disposition of human remains and burial-related artifacts that cannot be avoided or are inadvertently discovered is governed by state (i.e., AB 2641 and California Native American Graves Protection and Repatriation Act [NAGPRA]) and federal (i.e., federal NAGPRA) law, and must be treated in a dignified and culturally appropriate manner with respect for the deceased individual(s) and their descendants. Any human bones and associated grave goods of Native American origin shall be turned over to the appropriate Native American group for repatriation.

Arrangements for long-term curation must be established between the applicant/property owner and the consultant prior to the initiation of the field reconnaissance, and must be included in the archaeological survey, testing, and/or data recovery report submitted to the City for review and approval. Curation must be accomplished in accordance with the California State Historic Resources Commission's Guidelines for the Curation of Archaeological Collections (dated May 7, 1993) and, if federal funding is involved, Part 36, Section 79 of the Code of Federal Regulations. Additional information regarding curation is provided in Section II of the Historical Resources Guidelines.

## 7.4 TRANSPORTATION/CIRCULATION

**Trans-1:** During design of any proposed bikeway or other facility implemented under the BMP Update that would result in (1) the removal of one or more travel lanes that could affect intersection operations; (2) the removal of one or more travel lanes that could affect volume-to-capacity ratios for roadway segments; (3) the removal of any raised center median that could affect volume-to-capacity ratios for any roadway segment; or (4) the removal of one or more turn lanes that could affect intersection operations, an analysis shall be prepared by the project proponent to assess potential traffic impacts. The traffic analysis shall include an assessment of existing LOS and shall evaluate the feasibility of accommodating the proposed bike lane or route within the existing roadway so that it does not cause a significant traffic impact to any roadway segment or intersection. In addition, the analysis shall assess how the proposed roadway changes would affect bicycling conditions. The analysis shall also include an assessment of potential impacts during construction for On-street Bikeways With Widening and Off-street Bikeways.

**Trans-2:** If the removal of a travel and/or turn lane would cause an intersection or roadway segment to operate at an unacceptable LOS, the project will be redesigned and/or mitigation measures identified in the project-specific traffic analysis shall will be implemented, with the goal to reduce traffic impacts on the affected intersection or

roadway segment, ideally to less than significant levels, if such redesign or mitigation is consistent with project objectives, pedestrian circulation needs, or other community goals. Such design or mitigation measures might include road or interchange widening, elimination of parking, evaluation of alternate bikeway routes, or other measures.

## **7.5 VISUAL QUALITY/NEIGHBORHOOD CHARACTER**

- Vis-1:** A visual study shall be prepared during design of a proposed bikeway or other facility implemented under the BMP Update, to adequately assess the potential visual impacts. The visual study shall include assessment of the existing visual environment, including existing views, aesthetics, neighborhood character, and landforms, and evaluate the feasibility of designing the particular feature that could generate visual impacts so that it does not cause impacts, including issues associated with blocking scenic views.
- Vis-2:** Recommendations of the visual study shall be incorporated into the design of the feature that could cause visual impacts. If the alignment cannot be changed, or the feature cannot be redesigned or screened visually by incorporating elements such as landscaping or berming to avoid the impact, or the bikeway cannot be designed to eliminate the need for that particular feature, the City's process for subsequent evaluation of discretionary projects shall be followed. The process includes environmental review and documentation pursuant to CEQA, as well as an analysis of the individual project for consistency with the goals, policies, and recommendations of the General Plan and the applicable Community Plan. The process may require development of additional site-specific measures to avoid or reduce significant impacts.
- Vis-3:** If trees or other landmarks could be eliminated by a proposed bikeway or accompanying structure, the first focus of mitigation will be on changing the alignment or redesigning the bikeway to avoid the removal of such resources. If avoidance is not possible, compensation will be provided. Removal of trees for the purpose of bikeway or accompanying structure shall be minimized to the greatest extent practicable. When avoidance is not possible, tree protection during construction, tree transplanting or tree replacements shall be required. Any mature trees that must be removed shall be replaced at a minimum 1:1 ratio with like or acceptable substitute, as determined by the City. Trees shall be planted in a suitable location within the corridor where the trees can be maintained. No trees or shrubs exceeding 3 feet in height at maturity shall be installed within 10 feet of any water and sewer facilities.
- Vis-4:** Lighting of Off-street Bikeways adjacent to open space or residential areas shall be limited to that required for safety. Lighting shall be shielded and directed away from open space areas and residences and onto the bikeway itself.

## 7.6 PALEONTOLOGICAL RESOURCES

**Paleo-1:** Prior to approval of Reach Recommendations or development projects implementing the Design Guidelines within the RCA, the City shall determine, based on review of the project application, that future projects are sited and designed to minimize impacts on paleontological resources in accordance with the City Paleontological Resources 2011 Significance Thresholds and 2002 Paleontological Resources Guidelines. Monitoring for paleontological resources required during construction activities would be implemented at the project level and would provide mitigation for the loss of important fossil remains with future discretionary projects that are subject to environmental review.

Future design of projects as noted below in accordance with the City's Paleontological Resources 2011 Significance Thresholds and City 2002 Paleontology Guidelines shall be based on the recommendations of a project-level analysis of potential impacts on paleontological resources completed in accordance with the steps presented below.

### **I. Prior to Project Approval**

A. The environmental analyst shall complete a project level analysis of potential impacts on paleontological resources. The analysis shall include a review of the applicable USGS Quad maps to identify the underlying geologic formations, and shall determine if construction of a project would:

- Require over 1,000 cubic yards of excavation and/or a 10-foot, or greater, depth in a high resource potential geologic deposit/formation/rock unit.
- Require over 2,000 cubic yards of excavation and/or a 10-foot, or greater, depth in a moderate resource potential geologic deposit/formation/rock unit.
- Require construction within a known fossil location or fossil recovery site.

Resource potential within a formation is based on the Paleontological Monitoring Determination Matrix.

B. If construction of a project would occur within a formation with a moderate to high resource potential, monitoring during construction would be required.

- Monitoring is always required when grading on a fossil recovery site or a known fossil location.
- Monitoring may also be needed at shallower depths if fossil resources are present or likely to be present after review of source materials or consultation with an expert in fossil resources (e.g., the San Diego Natural History Museum).

- Monitoring may be required for shallow grading (<10 feet) when a site has previously been graded and/or unweathered geologic deposits/formations/rock units are present at the surface.
- Monitoring is not required when grading documented artificial fill.

When it has been determined that a future project has the potential to impact a geologic formation with a high or moderate fossil sensitivity rating a Paleontological MMRP shall be implemented during construction grading activities.

## **7.7 GEOLOGIC CONDITIONS**

**Geo-1:** A project-specific geologic report shall be prepared during design of a proposed bikeway or other facility implemented under the BMP Update, to adequately assess the potential impacts due to geologic conditions. The report shall include the studies designated in Table F-1 of the City's Significance Determination Thresholds (City 2011) and defined in the City's Guidelines for Geotechnical Reports (City 2011). The report shall specify possible mitigation measures for potential impacts due to geologic hazards, unstable geologic materials, and/or erosion. Measures may include the following:

- **Faulting:** Applying the most rigorous building codes governing seismic safety and structural design; allowing for setback; revising the alignment to avoid fault areas.
- **Landslides and Slope Failure:** Providing protective barriers such as drapes, nets, fences, barriers, and catchment; allowing for setbacks; grading to reduce slope angles; removing vulnerable deposits and replacing with compacted fill; providing stabilization; and providing signage on bikeways in areas of potential rock fall or unstable ground.
- **Liquefaction:** Conducting ground improvement (densification and hardening); providing appropriate structural (foundation) design; removing or treating liquefiable soils; modifying drainage to lower groundwater levels; providing for temporary or permanent dewatering; allowing for setbacks.
- **Coastal Hazards:** Similar measures as above for landslides and slope failure; developing evacuation procedures and routes and providing signage on bikeways in areas where tsunamis and seiches could result in damage.
- **Erosion:** Providing erosion control and drainage facilities as specified in City regulations.

**Geo-2:** Recommendations of the project-specific report shall be incorporated into the design of the feature(s) that could experience impacts due to geologic conditions.