Biological Resources Assessment for the Carmel Mountain and Del Mar Mesa Natural Resource Management Plan Project

San Diego, California

Prepared by:
City of San Diego
Park and Recreation Department, Open Space Division
202 C Street, MS 5D
San Diego, California 92101

Betsy Miller, Biologist/Senior Natural Resource Planner

January 2014

Page left blank intentionally

Table of Contents

Figures

Appendix

Page left blank intentionally

1 Project Information

The Carmel Mountain and Del Mar Mesa (Preserve) Natural Resource Management Plan (NRMP) has been developed to provide Area Specific Management Directives (ASMDs) that meet the requirements of the Multiple Species Conservation Program (MSCP). The NRMP details the location, ownership, and mitigation status of parcels within the preserve; contains detailed survey information on existing environmental conditions necessary for management; discusses existing land uses and management challenges; and provides resource management, maintenance and recreation guidelines for the Park. The NRMP also identifies and prioritizes enhancement (e.g. invasive weed removal), education, and research needs, and includes an implementation schedule with responsible parties. The project is located within core biological areas in the MSCP's Multi-Habitat Planning Area (MHPA).

Carmel Mountain

Carmel Mountain Preserve is a 302-acre park situated south of Highway 56 and east of Interstate 5 (I-5), between Carmel Creek and Carmel Country Roads (Figure 1). This area includes Carmel Mountain and facilitates an important wildlife corridor adjoining it to Peñasquitos Canyon and to the Los Peñasquitos Lagoon. Its unique location provides for an important inland-coastal habitat linkage. The majority of Carmel Mountain is owned by the City of San Diego (300 acres), with an additional 2 acres under private ownership.

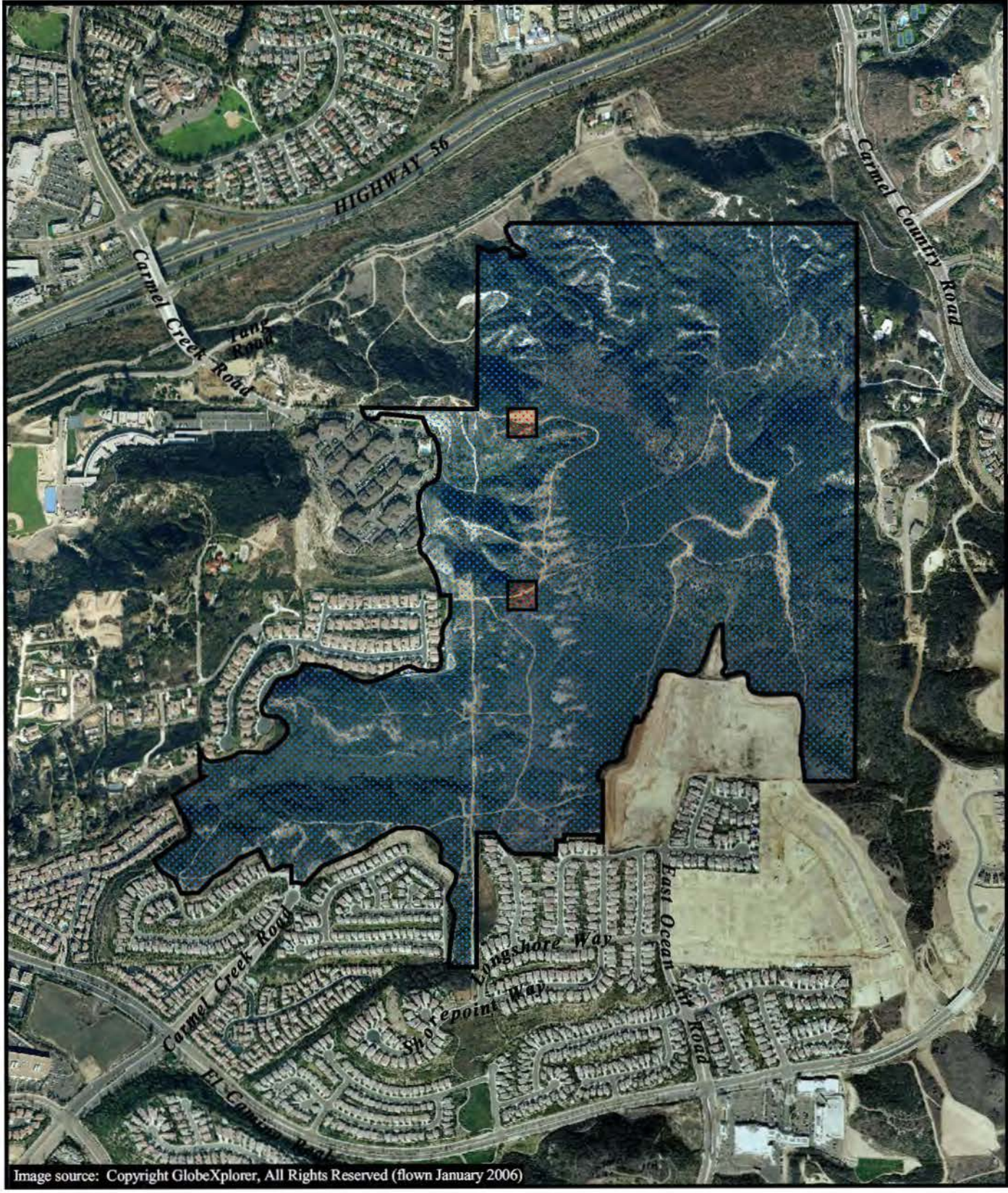
Southern Maritime Chaparral and Coastal Sage Scrub are found within the boundaries of the Carmel Mountain Preserve. Thirty vernal pool basins were mapped at Carmel Mountain, at least two of which contain San Diego fairy shrimp.

Del Mar Mesa

Del Mar Mesa is a 980-acre park situated south of Highway 56 and north of Los Penasquitos Canyon, east of Carmel Country Road and north of Park Village Road (Figure 2). The topography of the large Del Mar Mesa is diverse with level mesa tops, steep slopes, major drainages, and undulating mima mounds and intervening depressions (vernal pools). Elevations range from 420 feet above sea level on the mesa to 200 feet above sea level in the bottom of Deer Canyon, which runs along the northern edge of the Preserve.

There are multiple property owners on Del Mar Mesa: The City of San Diego owns 626.5 acres, the County of San Diego owns 27.5 acres, the California Department of Fish and Wildlife owns 81.6 acres, the U.S. Fish and Wildlife Service owns 75.4 acres, and an addition 169 acres are under private ownership. Five parcels on Del Mar Mesa Preserve, totaling 159.0 acres, have been preserved for mitigation by 1) the Metropolitan Wastewater Department, 2) public land managed by a nonprofit organization (formerly TET), 3) Mira Mesa Market Center, 4) Environmental Services, 5) the Deer Canyon Mitigation Bank, and 6) the SANDAG/CalTrans Environmental Mitigation Program.

Southern Willow Scrub, Southern Maritime Chaparral, Scrub Oak Chaparral, Coastal Sage Scrub, Southern Mixed Chaparral, Chamise Chaparral, Non-Native Grassland, Eucalyptus Woodland and Developed Land are found within the boundaries of the Del Mar Mesa Preserve (SANDAG 2012; City staff surveys 2012, 2014). Both preserves contain regionally important vernal pool habitats: 344 vernal pool basins, including 186 basins supporting endangered San Diego button celery (*Eryngium aristulatum* var. *parishii*), 63 basins supporting San Diego mesa mint (*Pogogyne abramsii*) and 53 positive surveys for San Diego fairy shrimp (*Branchinecta sandiegonensis*), were mapped on Del Mar Mesa (City 2004). The NRMP proposes to manage the Preserves to maintain and improve the functions and values of upland and wetlands habitats in accordance with the MSCP.



Carmel Mountain Preserve

Ownership
Private
City of San Diego

0 Feet 1000

FIGURE 1

Ownership on Carmel Mountain Preserve

M:\jobs\3493\gis\mgm_updates.apr\fig2-1 (own-cm) 08/25/06

Trail System
The NRMP contains a proposal to revise the existing trail system on 1) Carmel Mountain through permitting 4.13 miles of trails and 2) Del Mar Mesa through permitting of 6.84 miles of trails for a total of 7.9 miles while closing 13.29 miles of existing paths. The changes to the trail system have been proposed to meet the requirements of the MSCP. All proposed trails follow existing use patterns and avoid vernal pool basins. Trails are sited within vernal pool watersheds in limited instances only where the trail segment cannot be rerouted without direct impacts to an adjacent vernal pool basin or sensitive vegetation. However, the closure and restoration of 13.29 miles of existing trails results in an overall net benefit to the Preserves, and the proposed trail system has been approved by the U.S. Fish and Wildlife Service and by the California Department of Fish and Wildlife.

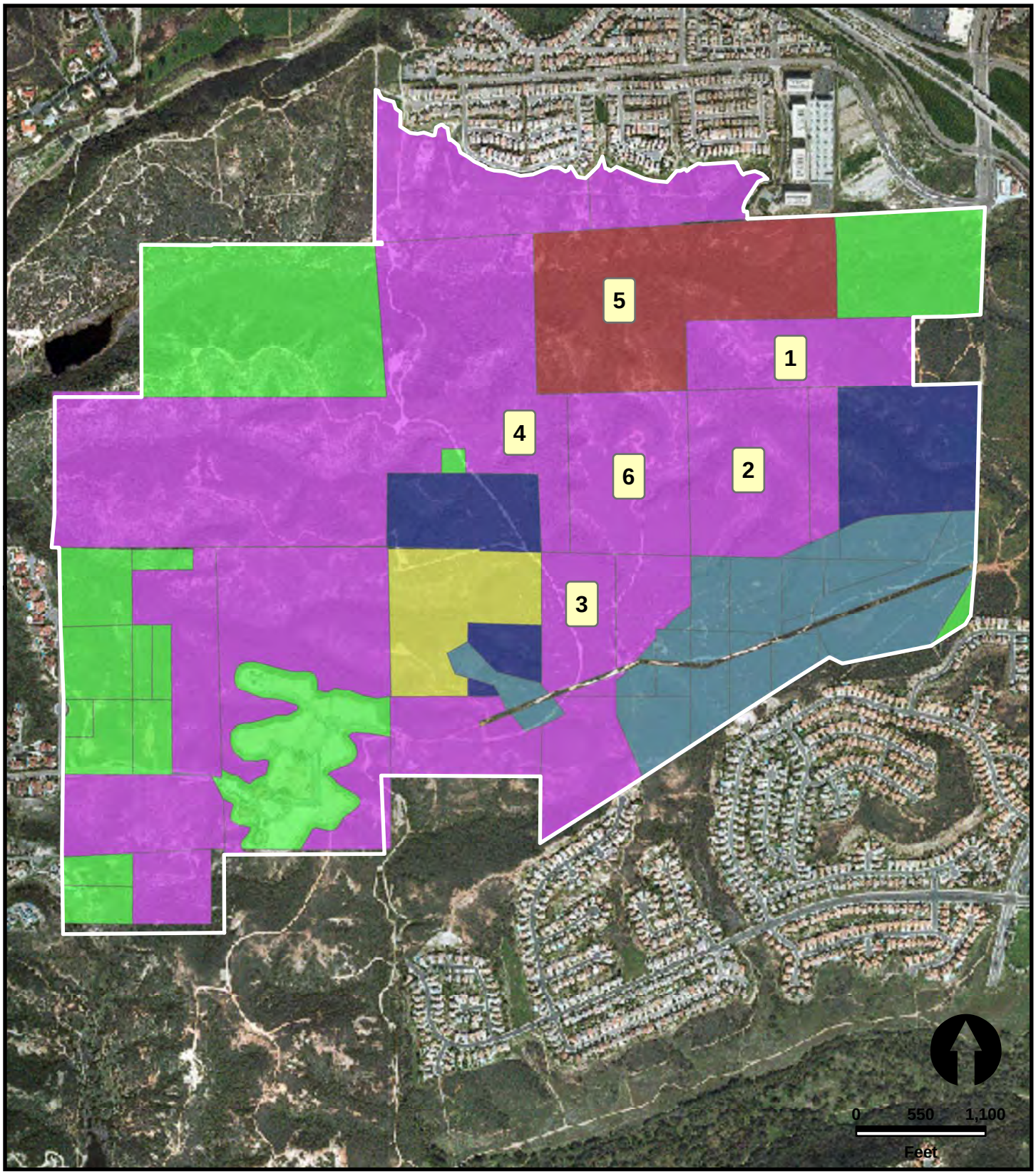
2 Methods

The project site has been surveyed extensively and information from the following reports is included in the NRMP and this Biological Assessment:

- Biological Technical Report for Neighborhood 8A (Recon 1994)
- Biological Resources Report for Subarea V North City Future Urbanizing Area (Dudek 1996)
- Regional Vegetation Survey (SANDAG 1997)
- Biological Surveys for Carmel Mountain and Del Mar Mesa NRMP (Recon 2001)
- Herpetofaunal Monitoring in MSCP Region of San Diego (USGS 2001)
- Vernal Pool Inventory (City 2004)
- Floral Survey (Landis 2013)

Numerous additional surveys were conducted by City and Wildlife Agency staff during development of the trail system:

Date	Attendees	Survey Focus
June 2009	City, Wildlife Agencies	Del Mar Mesa Trails
May 2009	City, Wildlife Agencies	Del Mar Mesa Trails
September 2009	City, Wildlife Agencies	Del Mar Mesa Trails
April 2010	City, Wildlife Agencies, Community Members	Del Mar Mesa Trails
December 2010	City, Wildlife Agencies	Del Mar Mesa Trails
July 2011	City, Wildlife Agencies, Community Members	Del Mar Mesa Trails
September 2011	Wildlife Agencies	Del Mar Mesa Trails
October 2011	City	Del Mar Mesa Trails
Fall 2011	City, Wildlife Agencies, Community Members	Carmel Mountain Trails
July 2013	City, Wildlife Agencies, Community Members	Carmel Mountain Trails
January 2014	City	Del Mar Mesa Trails



Legend

Property Ownership

- CDFG Preserve
- City of San Diego
- County of San Diego
- Other Conserved Land
- Private Property
- USFWS NWR

Parcels Used for Mitigation

1 - Metropolitan Waste Water Division
2 - The Environmental Trust
3 - Mira Mesa MarketCenter
4 - Environmental Services Department
5 - Deer Canyon Mitigation Bank
6 - TransNet Environmental Mitigation Program

FIGURE 2
Ownership and Parcels Used for Mitigation in the Del Mar Mesa Preserve

3 Biological Resources

3.1 Botany

Southern Maritime Chaparral, Southern Mixed Chaparral, and Chamise Chaparral are the dominant plant communities within the NRMP boundary (Figures 3 and 4). Vernal pools, Southern Willow Scrub, Scrub Oak Chaparral, Coastal Sage Scrub, Non-native Grassland and Eucalyptus Woodland habitats are also found within the Park.

Vernal Pools

Vernal pool basins cover 6 acres at the Preserves. Vernal pools are shallow, isolated, ephemeral wetlands surrounded by small mima mounds or hummocks. Vernal pools fill with water during winter rains and the water evaporates after the rains cease. Plants in vernal pools may be aquatic or may germinate following the drying of the pool. San Diego mesa hardpan vernal pools have a characteristic suite of plant and animal species. Sensitive plant species occurring in the vernal pools on Del Mar Mesa Preserve include San Diego button celery and San Diego mesa mint; sensitive plant species were not detected at Carmel Mountain. Sensitive animal species within vernal pool habitat on the Preserves include the two-striped garter snake (*Thamnophis hammondii*), western spadefoot, and San Diego fairy shrimp. Other sensitive species typically associated with vernal pools include California adder's-tongue (*Ophioglossum californicum*), Orcutt's brodiaea (*Brodiaea orcuttii*), and San Diego goldenstar.

Southern Willow Scrub

This habitat occupies 2 acres on the Del Mar Mesa Preserve, in the far northeast corner. Southern willow scrub is a dense riparian community dominated by broad-leafed, winter-deciduous trees such as willows (*Salix* spp.). The density of the willows typically prevents a dense understory of smaller plants from growing. The representative species typically grow in loose, sandy, or fine gravelly alluvium deposited near stream channels during flood flows.

Scrub Oak Chaparral (Tier 1)

Scrub oak chaparral (103 acres) is found at Del Mar Mesa. Scrub oak chaparral is characterized by dominant oak species with continuous cover, including significant old-growth areas in the northern portion of the Preserve.

Southern Maritime Chaparral (Tier 1)

Southern maritime chaparral (353 acres) is found at both Preserves. Southern maritime chaparral is comprised of a low-growing, fairly open chaparral that grows along the coast and is influenced directly by the coastal climate. The vegetation community typically forms a mosaic of dense, impenetrable stands of vegetation intermixed with open areas. Other sensitive species within this vegetation community included coast barrel cactus (*Ferocactus viridescens*), ashy spike-moss, and Del Mar Mesa sand aster.

Diegan Coastal Sage Scrub (Tier 2)

Diegan Coastal Sage Scrub (79 acres) is found at both Preserves. It is a community of low, soft-woody subshrubs that are most active in winter and early spring, with many species being drought-deciduous. Dominant species include coastal sagebrush (*Artemisia californica*), flat-topped buckwheat (*Eriogonum fasciculatum*) and black sage (*Salvia mellifera*). The coastal sage scrub on-site contains many sensitive plant species including California adolphia (*Adolphia californica*), San Diego viguiera (*Viguiera laciniata*), and San Diego barrel cactus (*Ferocactus viridescens*).

Carmel Mountain Preserve

Vegetation Communities (RECON, 1996)
- Diegan coastal sage scrub
- Southern maritime chaparral
- Mesic meadow, seeps and *Selaginella*
- Disturbed

Burn area (1990's)
Burn area (1986)

0 Feet 1000

FIGURE 3
Vegetation on Carmel Mountain Preserve

M:\jobs\3493\gis\mgm_updates05.apr\fig3-3 (veg-cm) 08/25/06

Southern Mixed Chaparral (Tier 3A)
Southern mixed chaparral (259 acres) is found at Del Mar Mesa. This habitat type is dominated by tall, drought-tolerant shrubs and is typically found on north-facing slopes. Species within this community include chamise (*Adenostoma fasciculatum*), toyon (*Heteromeles arbutifolia*), ceanothus (*Ceanothus* spp.), and mission manzanita (*Xylococcus bicolor*). This vegetation type is usually dense with little or no under story cover.

Chamise Chaparral (Tier 3A)
Del Mar Mesa Preserve is dominated by this community, with 440 acres on the site. This vegetation community is dominated by chamise, with mature stands characterized by densely interwoven vegetation and little herbaceous understory or litter. Chamise chaparral is often found on xeric slopes and ridges at low elevations. In some of these areas, scrub oak and other species make up to 25 percent of the scrub cover.

Non-native Grassland (Tier 3B)
Non-native grassland (6 acres) is found at Del Mar Mesa. It is dominated by Eurasian grasses and is generally found between patches of sage scrub. The dominant species include wild oats (*Avena barbata* and *A. fatua*), bromes (*Bromus madritensis* ssp. *rubens*, *B. hordaceous*, *B. diandrus*), foxtail fescue (*Vulpia myuros*), hare barley (*Hordeum murinum* ssp. *leporinum*), and English ryegrass (*Lolium perenne*).

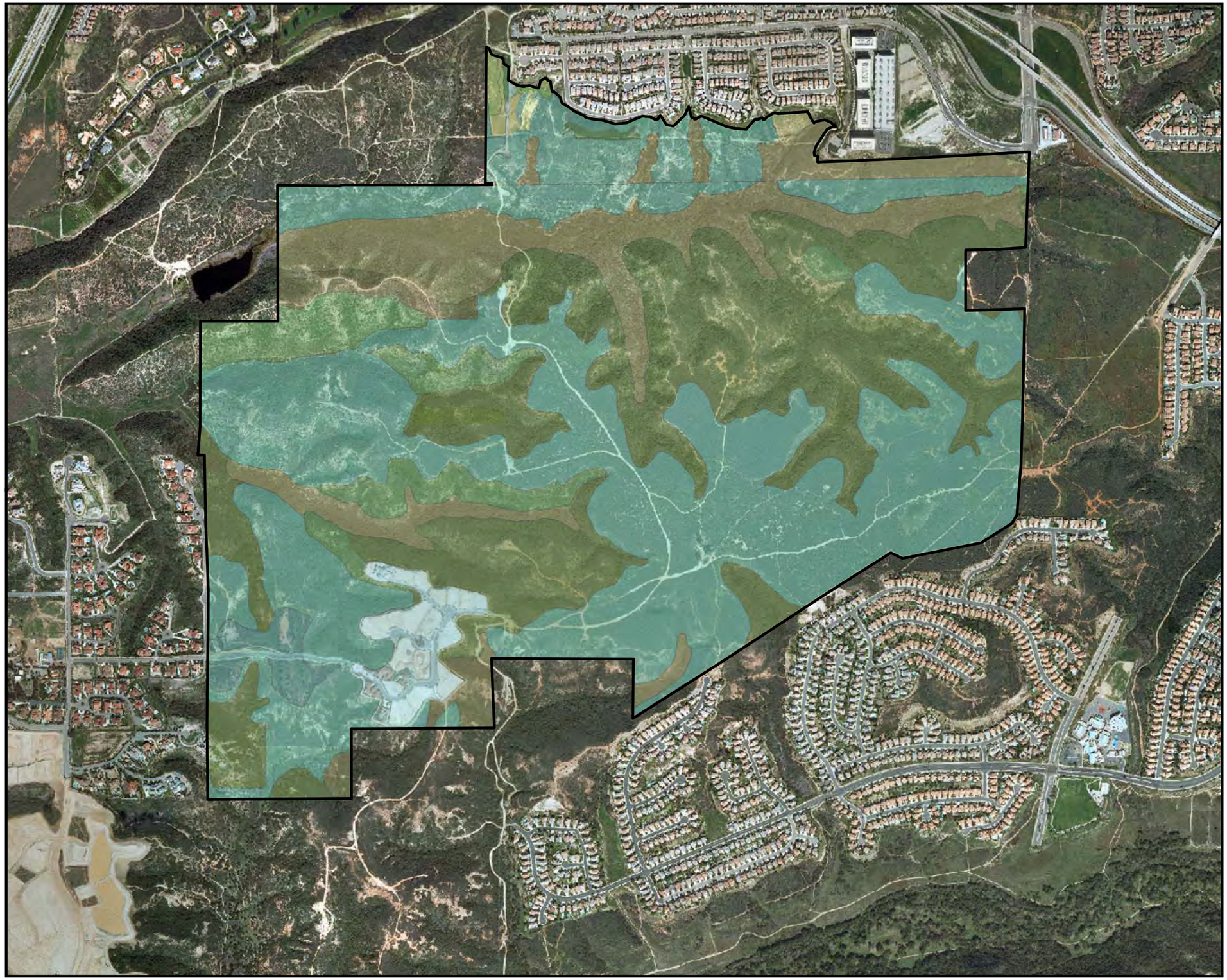
Eucalyptus Woodland (Tier 4)
There is a small patch of eucalyptus woodland at Del Mar Mesa (2 acres). This is a fairly widespread tree in southern California, typically forming monotypic stands of introduced, Australian eucalyptus trees (*Eucalyptus* spp.). The understory is usually depauperate or lacking from either shade or the toxic properties of the leaf litter. Eucalyptus woodlands are typically limited in value, serving only as nesting and perching sites for raptors.

Developed
Developed habitat (32 acres) includes 'The Preserve' development which is located in the western portion of Del Mar Mesa.

3.2 Zoology

Animal species noted during surveys for the NRMP and the project-specific biology surveys demonstrated that the Park supports a functioning chaparral ecosystem as expected within an MSCP Core Biological Area.

The Preserves support diverse wildlife species: Carmel Mountain surveys detected 11 mammal, 51 bird, 4 reptile, 1 amphibian, and 1 invertebrate species; while, Del Mar Mesa Preserve surveys detected 12 mammal, 62 bird, 7 reptile, 4 amphibian, and 14 invertebrate species. The diversity of animals observed and expected to occur in this area is typical of relatively undisturbed native habitat in coastal San Diego County and include California ground squirrel (*Spermophilus beecheyi*), southern pocket gopher (*Thomomys umbrinus*), woodrats (*Neotoma* spp.), brush rabbits (*Sylvilagus bachmani*), coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), southern mule deer (*Odocoileus hemionus fuliginata*), red-tailed hawks (*Buteo jamaicensis*), California quail (*Callipepla californica californica*), mourning



Del Mar Mesa Preserve

Vegetation Communities

- CSS/Chamise Chaparral
- Chamise Chaparral
- Chamise Chaparral - Disturbed
- Developed
- Diegan Coastal Sage Scrub
- DCSS - Disturbed
- Disturbed Chamise Chaparral
- Disturbed Habitat
- Eucalyptus Woodland
- Non-Native Grassland
- Scrub Oak Chaparral
- Southern Maritime Chaparral
- Southern Mixed Chaparral
- Southern Willow Scrub

FIGURE 4
Vegetation on Del Mar Mesa Preserve

0 0.2 0.4
Miles

doves (*Zenaida macroura marginella*), Anna's hummingbirds (*Calypte anna*), California towhees (*Pipilo crissalis*), western fence lizard (*Sceloporus occidentalis*), San Diego horned lizard (*Phrynosoma coronatum blainvillii*), red diamond rattlesnake (*Crotalus ruber*), and San Diego fairy shrimp (*Branchinecta sandiegonensis*).

Page left blank intentionally

4 Project Impact Analysis

4.1 Significance Criteria

The California Environmental Quality Act (CEQA) Guideline Section 21068 defines "significant effect on the environment" as a "substantial, or potentially substantial adverse change in the environment." The CEQA Guidelines (Appendix G) further state that there may be a significant effect on biological resources if the project will:

1) Substantially affect an endangered, rare, or threatened species of animal or plant or the habitat of the species;
2) Interfere substantially with the movement of any resident or migratory fish or wildlife species to the extent that it adversely affects the population dynamics of the species; or
3) Substantially diminish habitat for fish, wildlife, or plants.

The City of San Diego has adopted CEQA significance criteria in assessing impacts to biological resources within the City of San Diego (City of San Diego, 2007) and also assesses biological impacts based on conformance with City of San Diego biological regulations, including the Municipal Code's Environmentally Sensitive Lands regulations and Biology Guidelines as well as the City's MSCP Subarea Plan.

Pursuant to City and State regulations, impacts to sensitive biological resources must be assessed, and mitigation, where necessary, must be provided as described in the Biology Guidelines. Impacts to Tier 1, 2 or 3 communities may be achieved through preservation within tier or higher. Land with the appropriate habitat may be preserved in perpetuity, or payment into the City's habitat acquisition fund may be made to satisfy upland mitigation requirements.

4.2 Project Impacts

4.2.1 Direct Impacts

The NRMP does not propose adverse impacts to biologically sensitive resources.

The NRMP has been created to maintain and improve the quality of conserved lands within the project area by providing Area Specific Management Directives (ASMDs) to guide management and monitoring actions in conformance with the MSCP. The NRMP contains general sections detailing the location, ownership, and mitigation status of parcels within the preserve; detailed survey information on existing environmental conditions necessary for management; information on existing land uses and management challenges relevant to natural resource management; and resource management, maintenance and recreation guidelines for implementation by Park staff. The NRMP also identifies and prioritizes enhancement (e.g. invasive weed removal), education, and research needs and includes an implementation schedule with responsible parties.

The proposed trail system is the result of a comprehensive trail analysis completed in conjunction with the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, and community input

received at 16 public meetings from 2009 – 2011 and during the public comment period. First, a trail inventory was completed using handheld GPS devices to map all existing trails within the Park and record associated information such a trail use(s), width, condition, etc. Each existing trail segment was reviewed against the analysis criteria: habitat sensitivity (e.g. vegetation type, deer-bedding areas), locations of mitigation sites within the Park (e.g. Deer Canyon), erosion, maintenance, redundancy, trail experience and connectivity, and safety metrics such as steepness, sightlines and other factors. In addition, extensive public comments were reviewed and user groups were engaged to determine the most desired trail segments. The proposed trail system incorporates large blocks of un-fragmented habitat with the trail segments most desired by user groups in an arrangement that allows for both loops and through-preserve access.

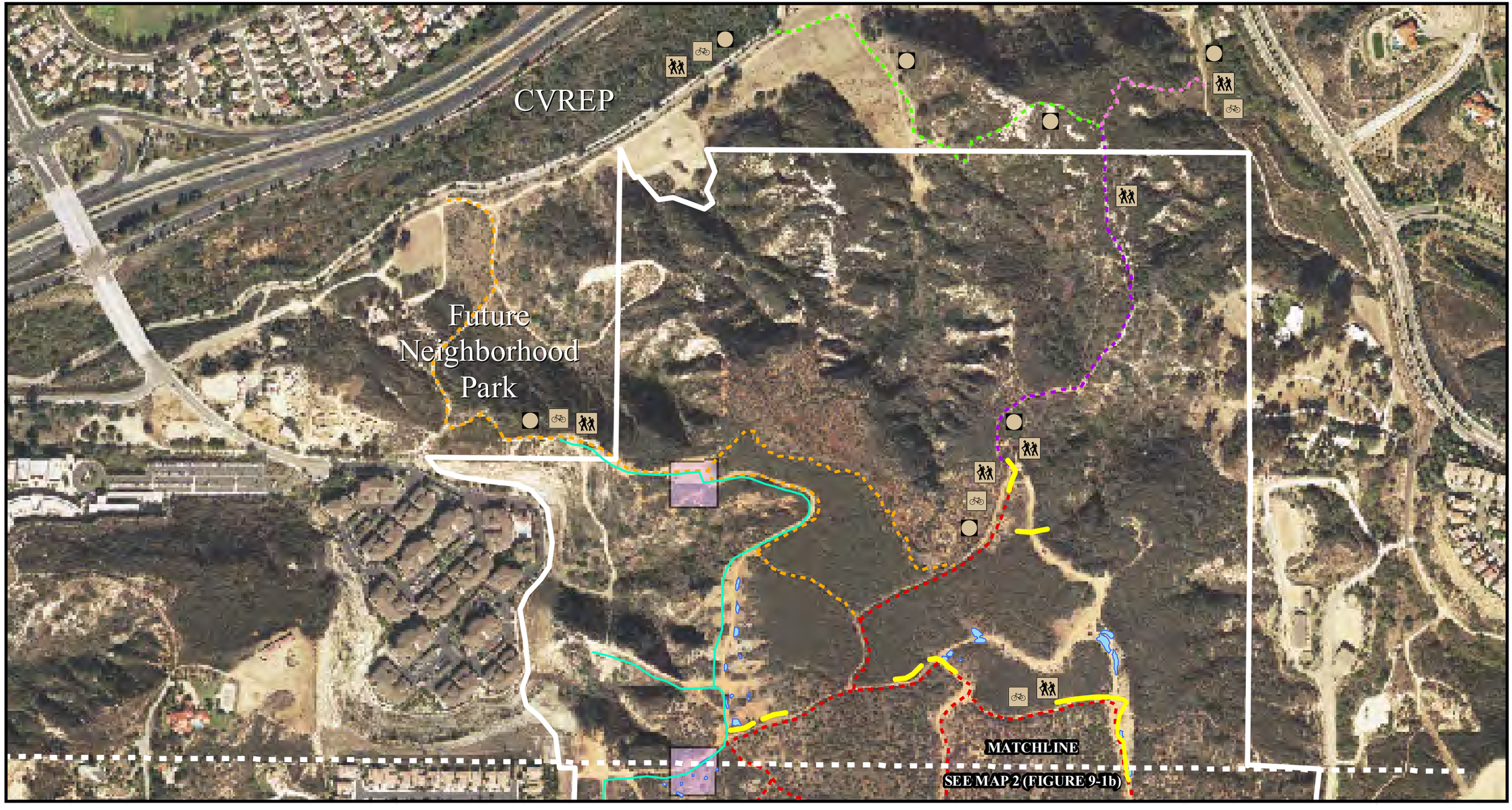
The NRMP contains a proposal to revise the existing trail system on 1) Carmel Mountain through permitting 4.13 miles of trails and 2) Del Mar Mesa through permitting of 6.84 miles of trails for a total of 7.9 miles while closing 13.29 miles of existing paths (Figures 5, 6 and 7). All proposed trails follow existing use patterns and avoid vernal pool basins. Trails are sited within vernal pool watersheds in limited instances only where a reroute of the trail segment was precluded by an adjacent vernal pool basin or sensitive vegetation. One existing trail segment also crosses a relatively small (≤ 4 feet wide) blue-line stream; however, this trail segment will not be altered or expanded, and puncheon bridges spanning the length of the drainage feature will be added within the existing trail footprint if needed to prevent erosion based on the results of annual trail monitoring. In addition, additional existing trail segments that include drainage crossings will be closed.

The proposed trail system will close and restore of 13.29 miles of existing trails, including areas of vernal pools and riparian habitat, resulting in an overall net benefit to the Preserves. In addition, the proposed trail system has been approved by the U.S. Fish and Wildlife Service and by the California Department of Fish and Wildlife.

The proposed trail system is located within the City of San Diego's MHPA. Pursuant to Section 1.4 of the City of San Diego MSCP Subarea Plan, passive recreation is considered 'conditionally compatible with the biological objectives of the MSCP' and therefore may be allowed within the MHPA. The proposed project would be in conformance with the City of San Diego MSCP Subarea Plan Adjacency Guidelines (Section 1.4.3), which are designed to minimize the effects of the proposed trail system within the MHPA. The proposed project does not include invasive plantings, lighting, drainage or toxic chemical sources, or brush management for fire prevention; and allowed trail uses will not be excessively noisy. Public access will be directed to the trailhead through use of signs and existing kiosks, and additional barriers would be installed as needed based on trail monitoring results.

In addition to compatible use considerations, the project will conform to the City's MSCP Subarea Plan Framework Management Plan General Management Directives (Section 1.5.2) requirements for access, trails, and recreation, as follows (requirement in italics, explanation of project conformance in regular font):

1. Provide sufficient signage to clearly identify public access to the MHPA. Barriers such as vegetation, rocks/boulders or fencing may be necessary to protect highly sensitive areas. Use appropriate type of barrier based on location, setting and use.



0 205 410
Feet

Proposed Multi-Use Trails
Proposed Hike and Bike Trails
Proposed Hiking and Equestrian Trails
Proposed Hiking Only Trails
Proposed Equestrian Only Trails
Proposed Future Multi-Use Trails
Proposed Trail Access
Proposed Hiking Signage
Proposed Biking Signage
Proposed Signage
Utility Access Road
Proposed Fencing
Vernal Pools (Source: City of San Diego revised in part by RECON 2001/2002)
Seeps (Source: City of San Diego, Helix Environmental Inc. revised in part by RECON 2002)
Private Property
Proposed Viewpoint

Note: Public trails will not be located on private land (pending land acquisition, MOU and/or trail easement)

FIGURE 5
Proposed Trail System
on Carmel Mountain Preserve
(Map 1)

Existing trailheads are marked with signage and informational/educational kiosks. Directional signage and barriers are provided throughout the trail system to guide users to their desired destination, and additional signage/barriers would be installed as needed based on trail monitoring results. The proposed trail system will remove trail segments adjacent to sensitive habitats and species (e.g. vernal pools, deer bedding areas) in favor of segments in less sensitive areas.

2. Locate trails, view overlooks, and staging areas in the least sensitive areas of the MHPA. Locate trails along the edges of urban land uses adjacent to the MHPA, or the seam between land uses (e.g., agriculture/habitat), and follow existing dirt roads as much as possible rather than entering habitat or wildlife movement areas. Avoid locating trails between two different habitat types (ecotones) for longer than necessary due to the typically heightened resource sensitivity in those locations.

No new parking lots or view overlooks are proposed. The proposed trail system utilizes existing trail segments and utility access roads. The proposed trail segments do not follow the ecotone except for the shortest distance necessary to cross habitat types.

3. In general, avoid paving trails unless management and monitoring evidence shows otherwise. Clearly demarcate and monitor trails for degradation and off-trail access and use. Provide trail repair/maintenance as needed. Undertake measures to counter the effects of trail erosion including the use of stone or wood crossjoints, edge plantings of native grasses, and mulching of the trail.

The proposed trails permitted through this project would not be paved. All trails are surveyed by Park staff on a rotating basis throughout the year, with a complete trail maintenance survey occurring at the end of each rainy season. Actions to repair trail damage from erosion, inappropriate use, or other factors will be taken promptly as needed.

4. Minimize trail widths to reduce impacts to critical resources. For the most part, do not locate trails wider than four feet in core areas or wildlife corridors. Provide trail fences or other barriers at strategic locations when protection of sensitive resources is required.

The proposed trail segments would remain less than four feet in width except for access roads. If off-trail use is noted during trail maintenance surveys, areas of concern will be signed and/or barriers will be installed as necessary.

5. Limit the extent and location of equestrian trails to the less sensitive areas of the MHPA. Locate staging areas for equestrian uses at a sufficient distance (e.g., 300-500 feet) from areas with riparian and coastal sage scrub habitats to ensure that the biological values are not impaired.

No equestrian staging areas are proposed. Trails are collocated with existing utility access roads and existing paths.

6. Limit recreational uses to passive uses such as birdwatching, photography and trail use… Where permitted, restrain pets on leashes.

Only passive recreational activities will be allowed on the proposed trail system. Pursuant to the Municipal Code and the MSCP Framework Management Plan, pets would be required to be on leash at all times.

7. Design and maintain trails where possible to drain into a gravel bottom or vegetated (e.g., grass-lined) swale or basin to detain runoff and remove pollutants.

0 200 400
Feet

Proposed Multi-Use Trails
Proposed Hike and Bike Trails
Proposed Hiking and Equestrian Trails
Proposed Hiking Only Trails
Proposed Equestrian Only Trails

Proposed Future Multi-Use Trails
Proposed Trail Access
Proposed Hiking Signage
Proposed Biking Signage
Proposed Signage

Utility Access Road
Proposed Fencing
Vernal Pools (Source: City of San Diego Vernal Pool Inventory 2004)
Seeps (Source: City of San Diego, Helix Environmental Inc. revised in part by RECON 2002)
Private Property

Proposed Viewpoint

Note: Public trails will not be located on private land (pending land acquisition, MOU and/or trail easement)

FIGURE 6
Proposed Trail System
on Carmel Mountain Preserve
(Map 2)

Existing trails selected for retention in the trail system are sited at appropriate grades to minimize erosion and sedimentation.

The MSCP Subarea Plan Section 1.5.8, Specific Management Policies and Directives for the Northern Area, contains management directives for Del Mar Mesa (NCFUA Subarea 5) and Carmel Mountain (Carmel Valley Neighborhood 8A):

NCFUA Subarea 5

1. Clearly demarcate all trails through the Del Mar Mesa area and provide split rail fencing or barriers and signage along sensitive portions to discourage off-trail use. Trails through this area should use the existing disturbed roads as much as possible. No new trails should be cut through existing habitat. Assess existing dirt and disturbed roads and trails for restoration over the long-term.

Del Mar Mesa is patrolled regularly by City ranger staff. Upon approval of the NRMP, signs would be posted on Del Mar Mesa directing users to the approved trail system, and maps would be provided at entrance kiosks. The proposed trail system utilizes existing access roads with some additional segments of existing dirt paths. None trails are proposed to be cut through existing habitat. As part of the development of the proposed trail system, 13.29 miles of existing paths were identified for closure and restoration.

2. Develop an equestrian use plan for the Del Mar Mesa area that avoids the vernal pool habitat and their associated watershed areas. If possible, the Del Mar Mesa are should be managed as a single unit rather than split into separate entities according to ownership (County, various City departments, easements).

The NRMP and proposed trail plan fulfill this MSCP requirement for development of an equestrian use plan. The proposed trail system does not include direct impacts to vernal pool basins. The NRMP also discusses the alternatives for joint management in Section 1.2.2.

3. Protect sensitive areas of Del Mar Mesa area from impacts from adjacent development. Use signage to inform people of the sensitivity of the vernal pools and the Del Mar Mesa are in general, and restrict off-road vehicle use in the area.

Upon approval of the NRMP, additional educational signage will be installed. Off-road vehicle use has been restricted through installation of gates and a guardrail by the City of San Diego's Park and Recreation Department. Landowners within Del Mar Mesa have not reported any off-road activity following the installation of the guardrail.

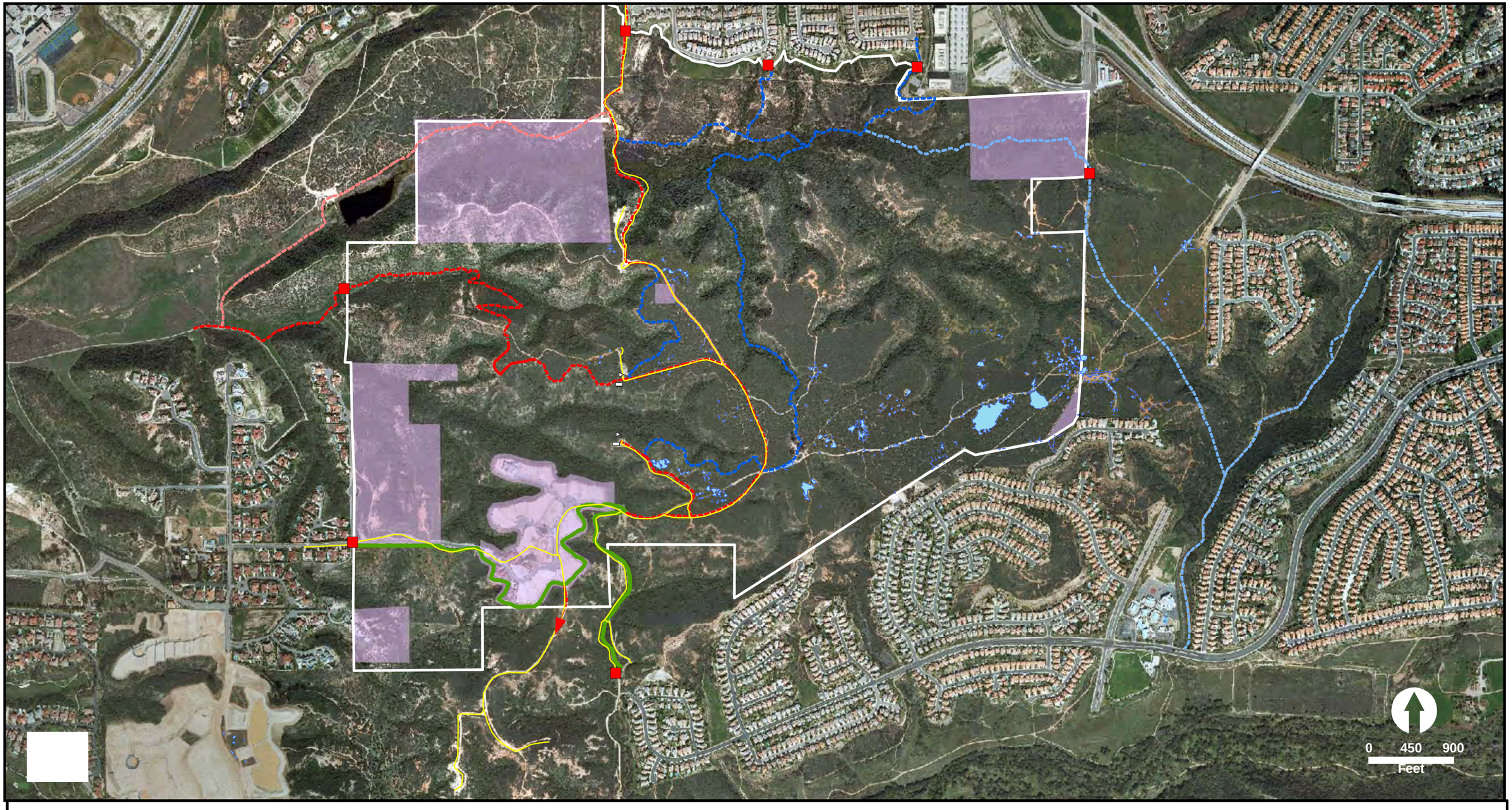
Carmel Valley Neighborhood 8A

1. Redirect human access from vernal pools and dudleya populations through signage and fencing as necessary to delineate and protect the sensitive species.

The proposed trail plan proposes closure of trails that are near vernal pools and dudleya populations. Fencing and educational signage are in place in critical areas to limit impacts to these habitats.

2. Develop an equestrian use plan including a trail system so as to avoid as much as possible wetlands and other highly sensitive areas.

The NRMP and proposed trail plan fulfill this MSCP requirement for development of an equestrian use plan. The proposed trail system does not include direct impacts to wetlands, vernal pools, or other sensitive vegetation.



Proposed trail access
SDG&E access roads
Private property
Proposed view point
Proposed multi-use trail
Proposed hike/bike trail
Proposed future multi-use trail
Proposed future hike/bike trail
Existing trail per Del Mar Mesa Specific Plan
Vernal pools (Source: City of San Diego Vernal Pool Inventory 2004)

Notes:
1 - Fencing and signage will be installed as necessary
2 - Public trails will not be located on private land (pending land acquisition, MOU and/or trail easement)
3 - Lands not shown as private, within the boundaries of Del Mar Mesa Preserve, are in public ownership or under easement to a public agency

FIGURE 7
Proposed Trail System
on Del Mar Mesa Preserve

3. Monitor this sensitive area for off-road and off-trail use, and take necessary measures to prevent such use, and repair damage (at minimum, closure of areas) as soon as feasible. Also assess for invasive plant species and remove as soon as possible.

Carmel Mountain is patrolled regularly by City ranger staff. Vehicle gates and fences have been installed where necessary to prevent off-road and off-trail use. Invasive species removal is recommended by the NRMP.

4. Use some of the existing dirt roads for trails, and avoid cutting new trails through habitat areas. Restore/revegetate dirt roads (not used as trails) and other disturbed areas to the appropriate habitat (maritime chaparral, vernal pool, grassland, coastal sage scrub, as determined by biologists.

The proposed trail system utilizes existing access roads with some additional segments of existing dirt paths. No new trails are proposed to be cut through existing habitat. As part of the development of the proposed trail system, 13.29 miles of existing paths were identified for closure and restoration.

The proposed trail system was evaluated based on the criteria included in these management directives (e.g. sensitive species, erosion, appropriate use type and frequency), and will be signed both at access points and at trail intersections. Complete trail surveys are conducted annually by Park staff and trail maintenance projects are implemented as necessary based on survey results. The proposed project, if approved, will complete implementation of the above management directives through significantly lowering the number of trail-miles within the Preserves from existing conditions and providing increased buffers for sensitive species.

4.2.2 Indirect Impacts

Indirect impacts due to noise and dust from recreational use of trails could occur as part of the project. However, closure of 13.29 miles of trails throughout both Preserves would result in a lower extent of indirect impacts than the current condition if this project is approved.

No ornamental landscaping/invasive plantings, lighting, manufactured slopes, or toxics/runoff are proposed with the project. The trail system has been designed to minimize drainage and resulting erosion, and will be regularly maintained which will limit potential effects to water quality. In addition, no new parking lots or staging areas are proposed. Signage and fencing are used to direct public access to and from the MHPA.

Thus, the project would conform to MSCP Land Use Adjacency Guidelines and would not introduce any significant indirect adjacency impacts to the Preserves.

4.2.3 Cumulative Impacts

Cumulative impacts are potential regional effects of a project, including the proposed project's effects when combined with other projects and the conditions of a region that may affect an ecosystem or one of its components beyond the project limits and on a regional scale.

Because the project does not propose impacts to sensitive biological resources and would conform to the Multiple Species Conservation Plan, cumulative impacts would be less than significant.

5 Mitigation and Monitoring

No mitigation is required because the project does not propose impacts to sensitive biological resources.

6 References

California Department of Fish and Game (CDFG). 2001. California Department of Fish and Game Natural Diversity Data Base – Electronic Format.

City of San Diego. 2007. *Significance Determination Guidelines under the California Environmental Quality Act.*

City of San Diego. 2004. *Biology Guidelines of the San Diego Municipal Code's Land Development Code*.

City of San Diego. 2004. *Vernal Pool Inventory*.

City of San Diego. 1997. *City of San Diego MSCP Subarea Plan.*

Dudek. 1996. *Biological Resources Report for Subarea V North City Future Urbanizing Area*.

Holland, R.F. 1986. *Preliminary descriptions of the terrestrial natural communities of California*. State of California, The Resources Agency.

Landis, Frank. 2013. *Preliminary Report on the Del Mar Mesa Flora Project.*

Lightner, J. 2nd ed. 2006. *San Diego County Native Plants*. San Diego County Flora, California.

Oberbauer, T. 1991. *Terrestrial vegetation communities in San Diego County based on Holland's descriptions*. December.

Ogden Environmental. 1998. *Multiple Species Conservation Program*: MSCP Plan.

RECON. 1994. *Biological Technical Report for Neighborhood 8A.*

RECON. 2001. *Biological Surveys for Carmel Mountain and Del Mar Mesa NRMP*.

SANDAG. 1997. Regional Vegetation Survey.

Sibley, D.A. 2000. *The Sibley Guide to Birds, National Audubon Society.* Chanticleer Press, Inc. New York.

Shuford, W.D and Gardall, T. Eds. 2008. *California Bird Species of Special Concern.* Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Unitt, P. 2004. *San Diego County Bird Atlas.* San Diego Natural History Museum, San Diego.

URS. 2001. *Biological Resources Report: MSCP California Gnatcatcher Monitoring Survey Report.* Prepared for City of San Diego Planning and Development.

USGS. 2001. *Herpetofaunal Monitoring in MSCP Region of San Diego*.

Appendix A – Floral and Faunal Species Lists

Page left blank intentionally