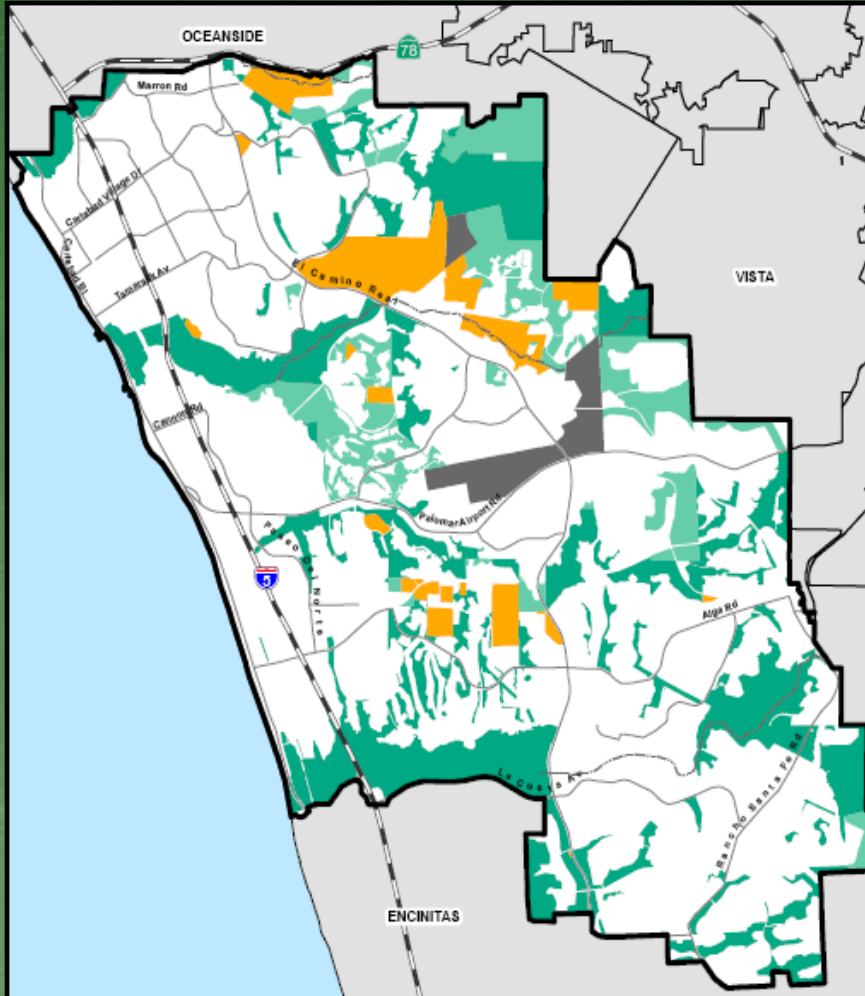


Annual Report

City of Carlsbad Habitat Management Plan

Including Years One through Three

Nov. 2004 – October 2007



Prepared for:
City of Carlsbad, Planning Dept.
1635 Faraday Ave.
Carlsbad, CA 92008



April 15, 2008
Revised September 30, 2008

Prepared by:
Technology Assoc. (TAIC)
9089 Clairemont Mesa Blvd
Suite 200
San Diego, CA 92123



City of Carlsbad Habitat Management Plan Third Annual Report

Years 1 through 3, Nov. 2004 – October 2007

April 15, 2008

Revised September 30, 2008

Prepared for:

City of Carlsbad Planning Department
1635 Faraday Avenue
Carlsbad, CA 92008
Contact: Don Neu, Planning Director



Prepared by:

Technology Associates (TAIC)
9089 Clairemont Mesa Blvd., Suite 200
San Diego, CA 92123
Contact: Rosanne Humphrey, Preserve Steward



Approved by:

I certify that, to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of this report, the information submitted is a true, and accurate representation of the information currently available.

City of Carlsbad Planning Director

Date

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Executive Summary

Assembling and managing the HMP Preserve System has provided the City with an opportunity to significantly contribute to the conservation of ecological diversity and ecosystem integrity within the regional context of Southern California. This is the first complete annual report for the City of Carlsbad Habitat Management Plan (HMP), a subarea plan under the Multiple Habitat Conservation Program (MHCP). The reporting period for this document includes the first three years of HMP implementation (November 2004 – October 2007). The purpose of this report is to demonstrate City compliance with the HMP Implementing Agreement, and HCP/NCCP Take Authorization/Permits. To this end, the following topics are covered: background of the HMP, current status of the individual preserves within the Preserve System, regulatory compliance, management and monitoring activities, acquisitions, a financial summary, and a discussion of opportunities and constraints.

Background

The HMP was developed to provide a comprehensive, citywide, program to identify how the City of Carlsbad (City), in cooperation with the U. S. Fish and Wildlife Service and the California Department of Fish and Game (collectively the Wildlife Agencies), can preserve the diversity of habitat and protect sensitive biological resources within the City, while allowing for additional development consistent with the City's General Plan and its Growth Management Plan. The HMP serves as a habitat conservation plan (HCP), as described in Section 10(a)(1)B of the Endangered Species Act (ESA), and as a Natural Community Conservation Plan (NCCP), as authorized by the Natural Community Conservation Planning Act (Fish and Game Code Section 2800 et. seq.). This report will help the Wildlife Agencies evaluate the City's *compliance* with the HMP by the City, and the *effectiveness* of the MHCP/HMP with respect to natural resources protection.

Current Status of the Preserve System

A total of 6,478 acres of natural habitat have been targeted for preservation within the City limits and an additional 307.6 acres of coastal sage scrub habitat within the MHCP California Gnatcatcher Core Area. To date, 5,956.7 acres have been preserved within the HMP planning area and all but 43 acres of land have been acquired to fulfill the Core Area requirements. Approximately 780 acres within the preserve are not yet "conserved" because one or more of the following is still pending: Property Analysis Record (PAR),

non-wasting endowment, preserve management plan, or preserve management agreement. All of the acres within the Core Area are currently being actively managed by the Center for Natural Lands Management (CNLM); however, the City must reimburse the cost of approximately 50 acres that were purchased upfront by a developer. In-lieu mitigation fees will be used to fulfill all reimbursement and acquisition requirements. As of November 30, 2007, a total of \$765,370 in fees has been collected, \$72,903 of interest has accrued, and no money has been spent. The City is currently in negotiations with the developer, Lennar Communities, on the timing of reimbursement.

The following table shows a summary of the HMP preserve's gains and losses through October 2007. Losses occurred through development. Baseline gains are preserves that were in existence prior to the HMP. Year 0 includes the period of time between initial HMP approval (Wildlife Agency approval only) and final approval (Coastal Commission approval). "Potential Gains" are project-specific preserve areas that have been approved, but one or more of the following HMP requirements have not been met:

- Preparation of a Property Analysis Record (PAR) to assess the initial start up costs and costs of management and monitoring of the preserve in perpetuity.
- Preparation of an area-specific Preserve Management Plan to ensure adequate management and monitoring of biological resources within the individual preserve (i.e., the open space parcel that will become part of the HMP Preserve System).
- Establishment of a non-wasting endowment to provide adequate funds for preserve management in perpetuity.
- Establishment of a Conservation Easement as defined by state law (including deed restriction, restrictive covenant, transfer of fee title or other protective mechanism) on the preserve.
- Procurement of a Preserve Manager for the preserve whose qualifications are consistent with Wildlife Agency guidelines.

Summary of Gains and Losses within the Subarea

Year	Acreage Losses	Potential Acreage Gains	Acres Gained (Conserved)
Baseline	N/A	4,592	4,592
0 (1999-2004)	812.5	360.1	131.3
1 (2004/2005)	664.5	773.3	238.5
2 (2005/2006)	47.0	25.8	9.4
3 (2006/2007)	126.0	205.5	205.5
Totals	1,650.0	5,956.7	5,176.7

Regulatory Compliance

The City is implementing the HMP in a manner that is consistent with the Implementing Agreement and the HCP/NCCP Take Authorization/Permits. The Municipal Codes and development permitting process have been revised to ensure that all new development complies with HMP regulations, including coastal zone requirements and zone-specific standards within Standards Areas. Conservation is occurring in rough step with development (If the baseline is removed, then conservation since 2004 just meets the rough step 10% standard: 1,364.7 acres (45%) gained plus 1650 acres (55%) lost = 3,014.7 acres total). The City is currently supporting the HMP through pre-existing resources and targeted HMP funding. In addition, the City continues to work closely with Wildlife Agencies, Preserve Managers, local organizations, and the general public to keep the lines of communication open and to improve its efforts towards HMP implementation.

Management and Monitoring

Currently, the majority of preserve lands in the City of Carlsbad are managed by CNLM and the California Department of Fish and Game (CDFG). Other management entities include Helix Community Conservancy (HCC), which is currently managing one property and under negotiations for several others; the University of California; and private Home Owners Associations. Properties that were previously managed by TET are gradually being released from bankruptcy court. Most or all of these properties will be managed by CDFG, CNLM, or HCC. The City is undergoing negotiations with CNLM for management of City-owned preserves; the PAR and preserve management plan are expected to be completed (including Wildlife Agency review) by mid 2008. In the meantime, management on City lands since inception of the HMP includes basic land management, erosion control, and invasive species removal.

The greatest threats to the preserves, identified by the Preserve Managers, are: (1) unmanaged and/or uncontrolled public use, (2) adjacent land use that may be detrimental to the preserve, (3) fragmentation of the ecosystem, and (4) wildfires. CNLM has submitted annual monitoring results to the City for all CNLM-managed preserves, and are available to the Wildlife Agencies upon request.

Acquisitions

The only property acquired within the HMP to date is the Buena Vista Creek Ecological Reserve (Sherman Property), which was purchased with grants (National Fish and Wildlife Foundation, Habitat Conservation Planning Land Acquisition Grant, Wildlife Conservation Board Habitat Conservation Fund Proposition 117), and private donations coordinated by Preserve Calavera and supported by the Buena Vista Audubon Society and the Sierra Club.. This property is being held in fee title by CDFG who has contracted with CNLM for management of the property.

Funding

The following funding sources have been used by the City to support HMP implementation. (see Section 4.0 for a more complete discussion).

- Program Administration and Oversight: The City has contracted with Technology Associates (TAIC) to serve as the City's Preserve Steward, who coordinates management throughout the Preserve System, and monitors HMP compliance and management effectiveness. The annual cost to the City for this administration and oversight service is \$125,000.
- Management of City-Owned Preserve Lands: Based on the PAR submitted by CNLM, start up costs and ongoing management for City-owned preserves for the first three years of management will be \$818,130. In June 2007, the City Council approved a budget of \$357,000 for start up costs, and \$154,000 for annual maintenance. The PAR and scope of work are under City review.
- Program Implementation: The City contracted with TAIC to develop guidelines to assist City planners, developers, biologists, and the public through the HMP process. The City also uses its existing infrastructure, staff, and departmental operating budgets to further support HMP goals, including public outreach, facility maintenance, and administrative requirements.
- Habitat In-Lieu Mitigation Fee: In-lieu habitat mitigation fees are collected from developers for project-related impacts to habitat groups D, E and F (unoccupied coastal sage scrub and chaparral, non-native grassland, disturbed lands,

Eucalyptus, and agricultural lands). These fees will be used to fulfill the City's Gnatcatcher Core Area obligations.

Opportunities and Constraints

There are many opportunities to improve the condition of preserve lands in Carlsbad. The City is currently working towards some of these goals already, while others will require long-term planning. These opportunities include the following.

1. Coordinate with Preserve Managers, Wildlife Agencies, local organizations and others to:
 - Standardize monitoring methods, data collection, and data management so that monitoring results can be analyzed regionally
 - Determine monitoring priorities
 - Develop programs to monitor wildlife movement
 - Implement adaptive management strategies
2. Standardize, collect, manage, and update spatial data on an annual basis, including project-specific vegetation mapping, preserve monitoring data, parcel boundaries, etc.
3. Develop public outreach programs

The most prevalent constraints identified for the HMP Preserve System are:

1. Limited resources
2. Administrative difficulties, including Conservation Easement processing
3. Human-related impacts
4. Monitoring difficulties, including appropriate methods for detecting population trends, and fragmented habitat managed by many entities at different levels of responsibility

Acronyms and Definitions

ASMD – Area Specific Management Directive

California Gnatcatcher Core Area – An area identified in the MHCP that is considered critical to the recovery of the California Gnatcatcher. Approximately 500 acres of core habitat must be conserved by the MHCP jurisdictions as a condition of coverage for gnatcatcher. Although the core area is located outside of the City of Carlsbad, the City is responsible for 307.6 acres.

City – City of Carlsbad

CNLM – Center for Natural Lands Management

Compliance Monitoring – Monitoring to determine if the HMP is being properly implemented pursuant to the Implementing Agreement (IA) and state and federal take authorizations/permits.

Conservation Easement – (as defined in California Civil Code Section 815.1) Any limitation in a deed, will, or other instrument in the form of an easement, restriction, covenant, or condition, which is or has been executed by or on behalf of the owner of the land subject to such easement and is binding upon successive owners of such land, and the purpose of which is to retain land predominantly in its natural, scenic, historical, agricultural, forested, or open-space condition.,

Edge Effects – Impacts to natural open space resulting from adjacent, contrasting environments, such as developed or disturbed land. When an edge is created, the natural ecosystem is affected for some distance in from the edge.

Effectiveness Monitoring – Monitoring habitat and species to determine if the HMP is protecting sensitive biological resources as predicted.

ESA – Endangered Species Act

Existing Hardline Areas – Natural habitat open space areas, such as Ecological Reserves and Dawson-Los Monos Reserve, that were preserved prior to final approval of the HMP.

FPA – Focused Planning Area

HCC – Helix Community Conservancy

HCP – Habitat Conservation Plan

HMP – Habitat Management Plan; serves as the MHCP Subarea Plan for the City

IA – Implementing Agreement

LFMZ – Local Facility Management Zone

MHCP – Multiple Habitat Conservation Program

NCCP – Natural Communities Conservation Program

Non-wasting endowment – an endowment with sufficient principal such that, through investment returns, it will provide for the set up costs and management/monitoring of a preserve in perpetuity.

OSMP – Open Space Management Plan, which serves as the Preserve Management and Monitoring Plan, which is referenced in Section 12.3 of the Implementing Agreement.

PMP – Area-specific Preserve Management Plan, the permanent management plan developed for a particular preserve within the Preserve System. The City has contracted Center for Natural Lands Management to develop a single PMP for all City-owned preserves.

Preserved – land conserved with conservation easement, restrictive covenant, deed restriction or transfer of fee title to the City or California Department of Fish and Game, that are being managed to HMP and MHCP standards.

Proposed Hardline Areas – Areas identified in the HMP as natural habitat open space that were proposed for permanent conservation and perpetual management during the design phase of development projects but not completed prior to final approval of the HMP.

Standards Areas – Areas that were included in the MHCP Focused Planning Area (i.e., considered high priority for inclusion into the Preserve System), but for which projects had not been proposed prior to HMP approval. Because potential protected habitat areas had not been delineated, a set of zone-specific conservation standards were established as a condition of future project approval.

TAIC – Technology Associates

Take – As defined in the federal Endangered Species Act, to harm, harass, pursue, hunt, shoot, wound, kill, trap, capture, or collect a listed species or attempt to do so.

Wildlife Agencies – California Department of Fish and Game, and U.S. Fish and Wildlife Service

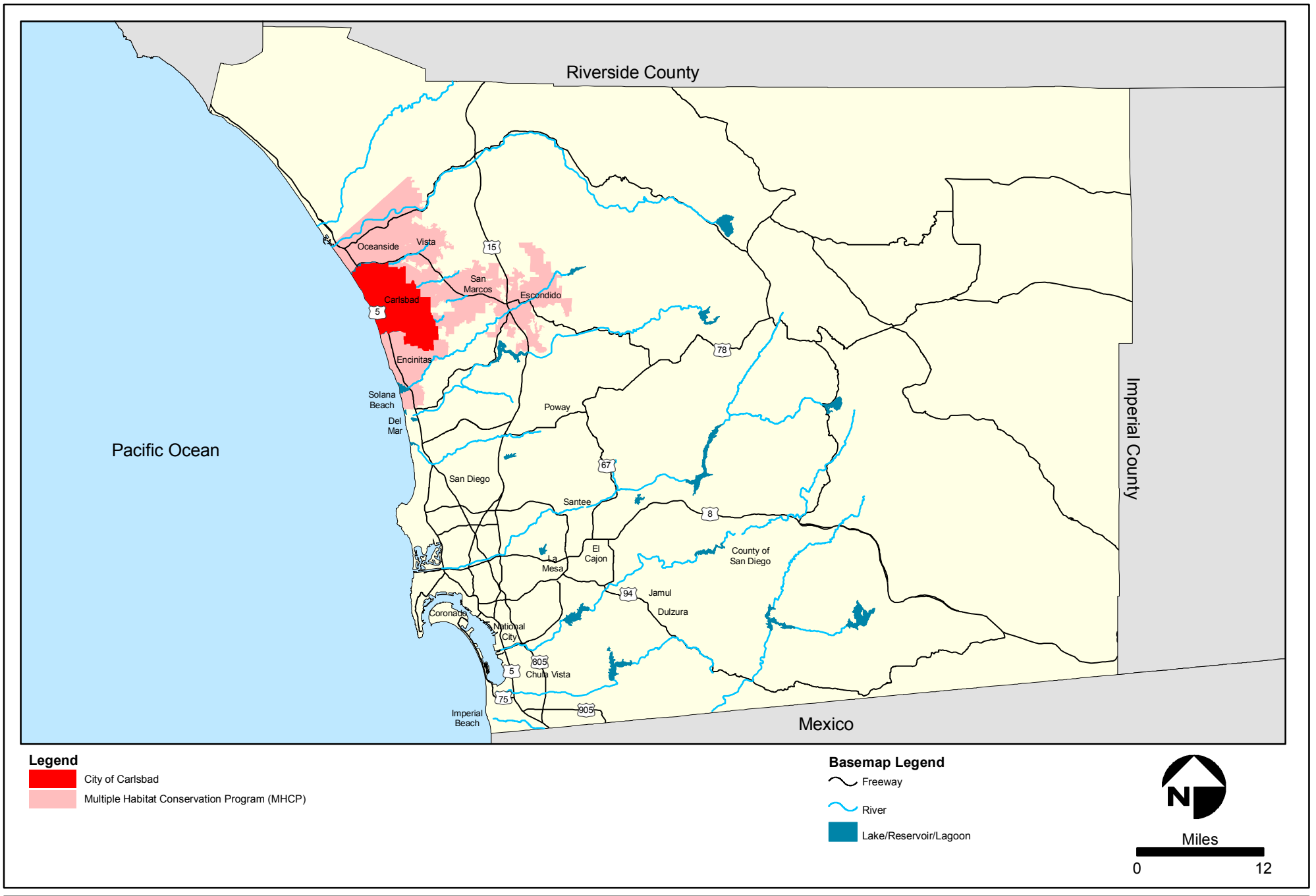
1.0 Introduction

The purpose of this document is to provide an update on the current status of the Habitat Management Plan (HMP) Preserve System, including gains and losses of natural habitat; summarize the management and monitoring activities within the Preserve System; provide a current financial status summary; address constraints to HMP implementation; and discuss opportunities and goals for the future. This information will be used in *compliance monitoring* to determine if the HMP is being properly implemented pursuant to relevant regulations and permit conditions, and in *effectiveness monitoring* to determine if the HMP is protecting sensitive biological resources as predicted. Annual tracking of the Preserve System's gains, losses, management, and monitoring is required by the Implementing Agreement (IA) and the HCP/NCCP take permits/authorizations. The City of Carlsbad (City) approved the IA for implementing the HMP on November 9, 2004.

1.1 Background

The HMP was developed to provide a comprehensive citywide program to identify how the City, in cooperation with the U. S. Fish and Wildlife Service and the California Department of Fish and Game (collectively the Wildlife Agencies), can preserve the diversity of habitat and protect sensitive biological resources within the City, while allowing for additional development consistent with the City's General Plan and its Growth Management Plan. The HMP serves as a habitat conservation plan (HCP), as described in Section 10(a)(1)B of the Endangered Species Act (ESA), and as a Natural Community Conservation Plan (NCCP), as authorized by the Natural Community Conservation Planning Act (Fish and Game Code Section 2800 et. seq.) (Nelson 1999; USFWS 2005; CDFG 2007). The HMP constitutes the City's subarea plan within the Multiple Habitat Conservation Program (MHCP) Subregional Plan for north coastal San Diego County (Figure 1). The advantages of the HCP/NCCP planning process are:

- The HMP protects rare and endangered species while accommodating economic development within the City.
- The HCP/NCCP planning process protects natural communities and sensitive species at an ecosystem or landscape level, rather than on a project-by-project basis. Project-by-project planning often results in the conservation of smaller parcels of disconnected habitat, while ecosystem planning can result in the preservation of larger, more contiguous blocks of habitat.



- A goal of the HCP/NCCP planning process is to protect habitat linkages and wildlife movement corridors that connect the preserved habitat blocks.
- The HMP ensures the management and monitoring of preserve lands in perpetuity.
- The HMP streamlines both the State and federal ESA compliance process for smaller landowners and developers by authorizing the City to issue species take permits.

1.2 HMP Compliance Monitoring and Effectiveness Monitoring

In order to evaluate the City's *compliance* with the HMP, and the *effectiveness* of the MHCP/HMP with respect to natural resources protection, it is necessary to understand the underlying goals of the plan which are summarized below (HMP p. A-2):

- Conserve the full range of vegetation community types, with a focus on sensitive habitat types.
- Conserve populations of narrow endemic species and other covered species.
- Conserve ample habitat, functional biological cores, wildlife movement corridors, and habitat linkages (including linkages that connect gnatcatcher populations and movement corridors for large mammals) to support covered species in perpetuity.
- Apply a “no net loss” policy to wetlands, riparian habitats, and oak woodlands.
- Implement appropriate land use measures to ensure the protection of preserve lands in perpetuity.
- Meet conservation goals stated above while accommodating orderly growth and development in the City.
- Coordinate and monitor protection and management of conserved lands within the Preserve System.
- Minimize costs of ESA-related mitigation and HMP implementation.

1.2.1 Compliance Monitoring

The Preserve Steward is working with the City to ensure that the HMP is being implemented in a manner that is consistent with the duties and obligations outlined in Sections 10 through 14 of the Implementing Agreement, the Conditions of the State NCCP Permit, and Terms and Conditions of the Federal ESA Section 10(a)(1)(B) Incidental Take Authorization/Permit. In addition, the City is working with individual Preserve Managers to ensure that their activities are consistent with the Biological Monitoring and Management Plan (MHCP, Vol. III) and the Open Space Management Plan (OSMP; a framework management plan developed for the City of Carlsbad) which

consist of focused guidelines pertaining to management and monitoring of sensitive species and habitats. Section 3.0 (Activities Conducted during Reporting Period) and Section 4.0 (Financial Summary) describe how these obligations have been or are currently being met by the City.

Building the Preserve System is a multi-step process which can take several years. Reviewing an itemized list of compliance, as described above, does not give a clear picture of the current state of the Preserve System. As such, Section 2 provides a snapshot of the individual preserves, mitigation banks, wildlife movement corridors and crossings, and Carlsbad's MHCP Gnatcatcher Core Area obligation.

1.2.2 Effectiveness Monitoring

Monitoring the effectiveness of the MHCP and HMP is more challenging than compliance monitoring because the biological goals are broad, and it may take several years before trends in species populations and habitat conditions are detectable. Species and habitat monitoring is conducted by the Preserve Managers. Every three years, this information is gathered by the City and the Preserve Steward, who work with the Preserve Managers and Wildlife Agencies to analyze the data in order to detect changes in covered species populations and habitat conditions. Section 5 of this report is the first three-year monitoring summary for the Carlsbad HMP.

1.3 Annual Reporting

The reporting period for this HMP Annual Report extends from the final adoption of the HMP (November 2004) through the end of the third year (October 2007). In the future, each annual report will cover only the previous year's activities. Because the City is in the initial stages of HMP implementation, it took some time to get the preserve tracking system (Habitrak) up and running. Consequently, habitat tracking data, a critical component of the annual report, were not available at the end of the first or second years. To show the Wildlife Agencies a good-faith effort, the City and Preserve Steward proposed a two-phased approach to the First Annual Report. Phase one consisted of a general status report and presentation to the City Council at a public meeting on March 27, 2007. Phase two consisted of merging the more detailed habitat tracking data from year one into the Second Annual Report, which was to be a more typical and complete report that covered years one and two. And, as recommended by the OSMP, the public component of this report will consist of a workshop planned in Spring 2008 to which the public, Wildlife Agencies, Preserve Managers, and Preserve Steward will be invited to discuss HMP implementation and preserve management.

The City and Preserve Steward recognize that this is an atypical approach to Natural Community Conservation Program (NCCP) annual reporting; however, in support of the City's efforts to comply with the requirements of the HMP, the Wildlife Agencies approved the two-phased approach described above. The First Annual HMP Report (phase 1) was completed in December, 2006 and included the first year status of HMP implementation pursuant to Section 11.0 of the IA, additional measures taken by the City (not required by the IA), current status of mitigation banks in the City, a review of projects, and a summary of management and monitoring activities within the Preserve System. It was prepared with the most current information that was available at the time. The report was provided to the Wildlife Agencies for review, sent to target interest groups (e.g. primary preserve management entities, lagoon foundations, Preserve Calavera, etc.), advertised in the North County Times, and posted on the City's website. The final report (January 2007) was presented to the City Council on March 27, 2007 at a public meeting, and the public was invited to give their comments, which are now part of the public record.

In the preparation and review of the Second Annual Report, extensive comments were received from USFWS and CDFG. It was determined that the City needed to provide additional information for the Wildlife Agencies to fully assess HMP compliance. After discussions about the purpose of the annual reporting and the schedule of reports and public meetings, all parties agreed to extend the current reporting period through year three, providing a summary of all HMP activities and preserve assembly to date.

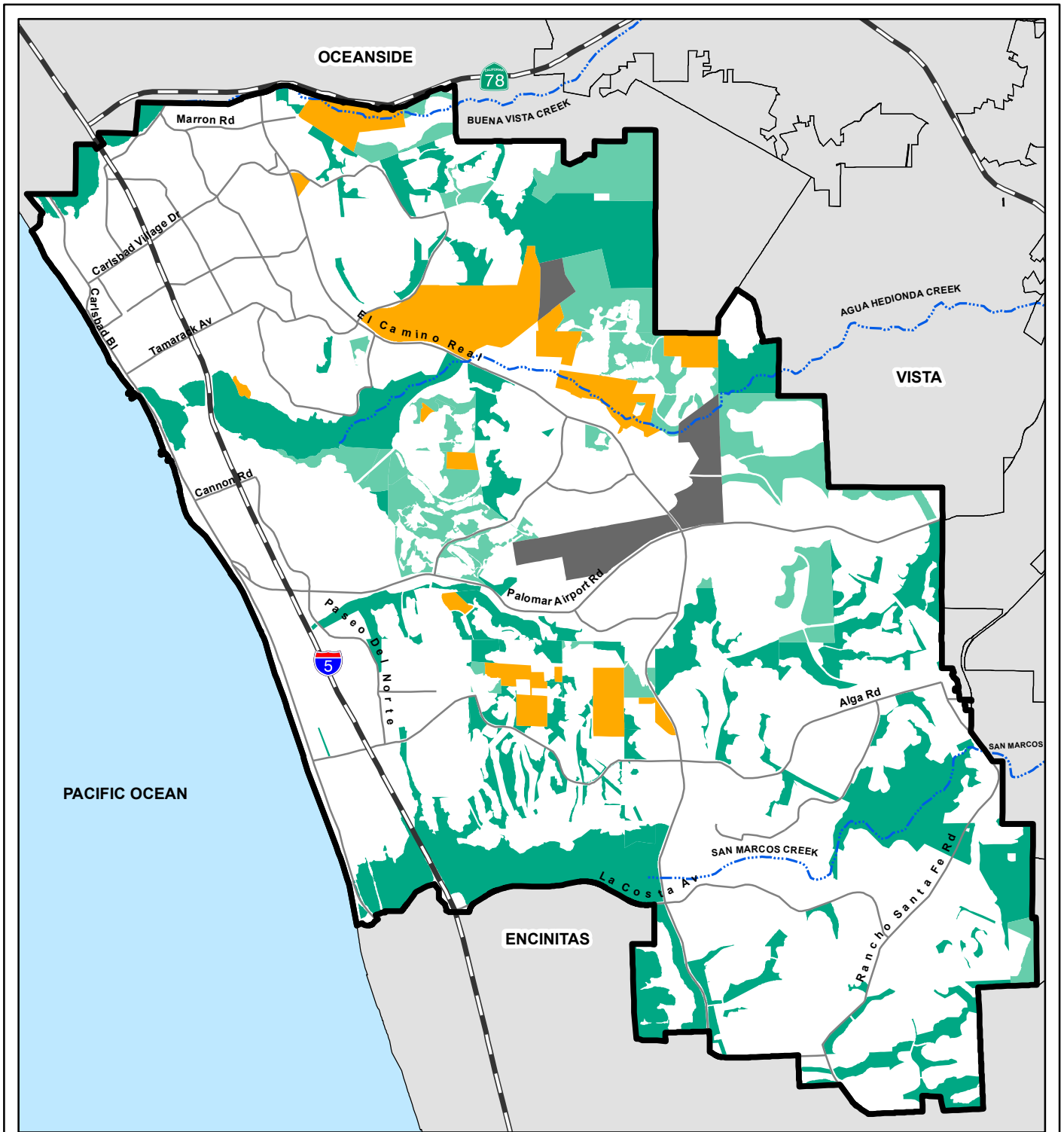
2.0 Current Status of HMP Preserve

2.1 Baseline Conditions

The initial condition of the HMP Preserve System serves as the baseline to which all subsequent preserve data will be compared (Figure 2). The baseline is defined as the condition of the Preserve System at the time of final HMP approval (November 2004). The Preserve System consists of the following elements: (a) lands already conserved and protected (Existing Hardline areas), (b) lands that were part of existing and future development projects that were proposed for conservation (Proposed Hardline areas), and (c) undeveloped properties considered important for preserve integrity and connectivity (Standards areas). These three elements were assembled using the following criteria:

- Large, contiguous blocks of high quality habitat;
- Effective habitat linkages and wildlife movement corridors; and
- Lands containing special resources, such as vernal pools or narrow endemic species that may not be contiguous with the rest of the preserve (Special Resource Areas).

The baseline acreages of each vegetation type, which were taken from HMP Table 8, are given in Table 1 and shown in Figure 3. Baseline acreages of Existing and Proposed Hardline areas are known because these preserve areas were pre-existing or pre-negotiated. Except for very minor adjustments due to more detailed project-level mapping, boundaries of the Existing Hardline areas should not change. Boundaries of the Proposed Hardline areas could change as projects become finalized; however, if this happens, an Equivalency Finding must be processed to ensure that, overall, no additional acreage will be removed from the preserve (HMP p. E-3). The preserve area boundaries for Standards areas, on the other hand, had not been negotiated at the time of final HMP approval. As such, in order to protect the sensitive resources in these areas (e.g. wildlife movement corridors, wetlands, rare vegetation types, gnatcatcher-occupied coastal sage scrub, etc.), preservation standards were developed as a condition of project approval. The Standards area acreages given in Table 1 are estimates. These estimates were made by (1) overlaying the MHCP vegetation communities GIS layer with the boundaries of the HMP Standards areas, (2) calculating total number of acres of each habitat type within the Standards areas in each Local Facility Management Zone (LFMZ; developed as part of the City's Growth Management Program), and (3) applying the zone-specific standards, using the assumption that all allowable take would occur.



HMP Preserve System

- EXISTING HARDLINE CONSERVATION AREAS
- PROPOSED HARDLINE CONSERVATION AREAS
- PROPOSED STANDARDS AREAS
- NOT A PART

Basemap Legend

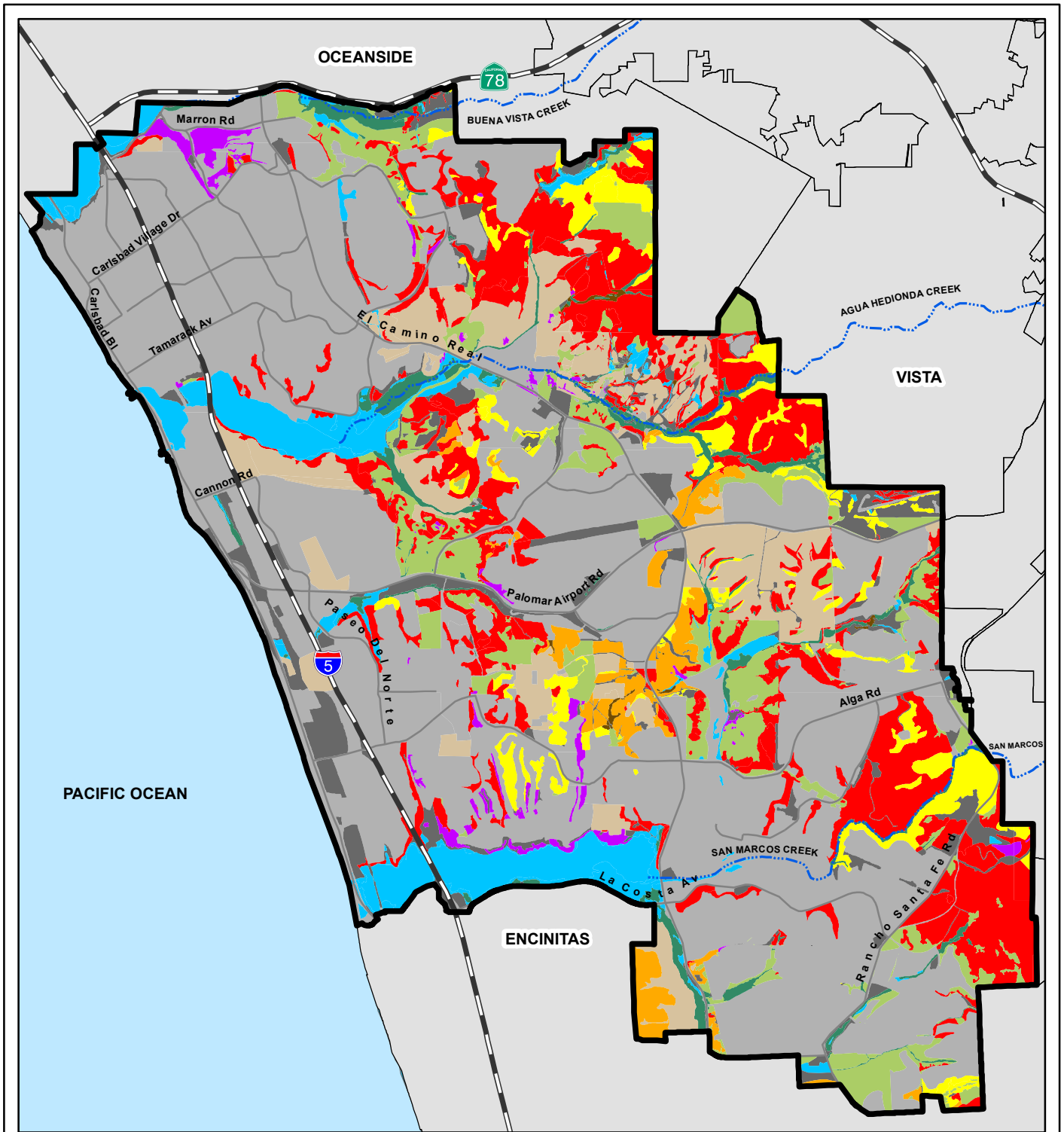
- City of Carlsbad
- Jurisdictional Boundaries
- Freeway
- Major Road
- River



Feet

0 6,250

* Baseline condition is the condition of the preserve system at the time of final HMP approval (November 2004)



Aggregated Vegetation

- | | |
|---|--|
| ■ Coastal Sage Scrub | ■ Wetlands |
| ■ Chaparral | ■ Eucalyptus Woodland |
| ■ Southern Maritime Chaparral | ■ Disturbed |
| ■ Grassland | ■ Agricultural |
| ■ Oak Woodland | ■ Developed |
| ■ Riparian Scrub/Woodland/Forest | |

Basemap Legend

- City of Carlsbad
- Jurisdictional Boundary
- Freeway
- Major Road
- ~ River



Feet

0 6,250

* Baseline condition is the condition of the preserve system at the time of final HMP approval (November 2004)

Table 1. Baseline Conditions of the HMP Preserve System

Vegetation Community	Existing Hardline (Acres)	Proposed Hardline (Acres)	Standards Areas Estimate (Acres)¹	Total Estimated Acres Conserved¹
Coastal Sage Scrub	1,281	585	273	2,139
Chaparral	492	168	16	676
Southern Maritime Chaparral	255	33	54	342
Oak Woodland	4	12	8	24
Riparian	269	115	110	494
Marsh	1,141	73	38	1,252
Grassland	401	252	54	707
Eucalyptus Woodland	96	3	0	99
Additional Conservation on Disturbed Lands	514	231	N/A	745
CAGN Core Area	308	N/A	N/A	308
Total Conservation	4,761²	1,472²	553²	6,786²

Source: HMP Table 8

¹ At build-out

² When reviewing this table it is important to keep in mind that (a) “baseline” defined in this section is different than “baseline” as defined for Habitak (Section 3.1.2), and (b) Habitak is based on more accurate data; therefore conservation acreages may differ slightly.

Limitations of Baseline Data

It is important to understand the limitations of the baseline data when tracking the progress of preserve assembly and its condition. At the time the HMP was finalized, the GIS capabilities and accuracy of spatial data, such as the boundaries of the different vegetation communities and parcel lines, were somewhat rudimentary. It was understood by the City and the Wildlife Agencies that the boundaries and acreages of natural habitat may change as more accurate data become available. The source of the HMP baseline vegetation data is the GIS layer that was used for the MHCP subregional plan. Much of this mapping was done at a regional scale, and it may differ from current preserve or project-level field mapping which has been ground-truthed. In addition, current parcel boundary data are much more accurate today than was available in 2004. Using the San Diego MSCP, a HCP/NCCP plan in southwestern San Diego County (City of San Diego

1997), as a model, it was determined that the baseline condition must be a fixed target when tracking gains and losses, and therefore, the following assumptions were used:

- The baseline condition will be taken from the final HMP as a snapshot in time.
- The Existing Hardline and Proposed Hardline area boundaries that were approved in the final HMP will be included in the baseline condition, as they were pre-existing or pre-negotiated for conservation.
- Gains and losses in the Standards areas will be calculated as projects in these areas are developed. To track the gains/losses in Habittrak, the date of habitat gain/loss within a property will be the date of grading permit approval because (a) the grading permit is easy to track and (b) HMP consistency is a condition of approval for the grading permit.
- Gain (preserved) and loss (developed) boundaries will be taken from the Final Map and other individual project-related documents, such as boundaries of the Conservation Easement and grading plans.
- Tracking habitat gains and losses will be conducted using Habittrak; this tracking will assist the Preserve Steward in monitoring for HMP compliance.
- Because the City is nearing build-out, the majority of gains and losses in the Preserve System will be the result of development projects that are located within the Standards areas. Additional gains could come from land acquired from willing sellers within the Focused Planning Area (FPA; lands of high biological value that are considered for conservation as part of the HMP).
- Preserve System information, such as parcel and preserve boundaries, detailed field mapping, and rectification with aerial maps, will be kept current by the City in a HMP Preserve System database, and updated at least annually.

2.2 Current Status

2.2.1 Covered Species

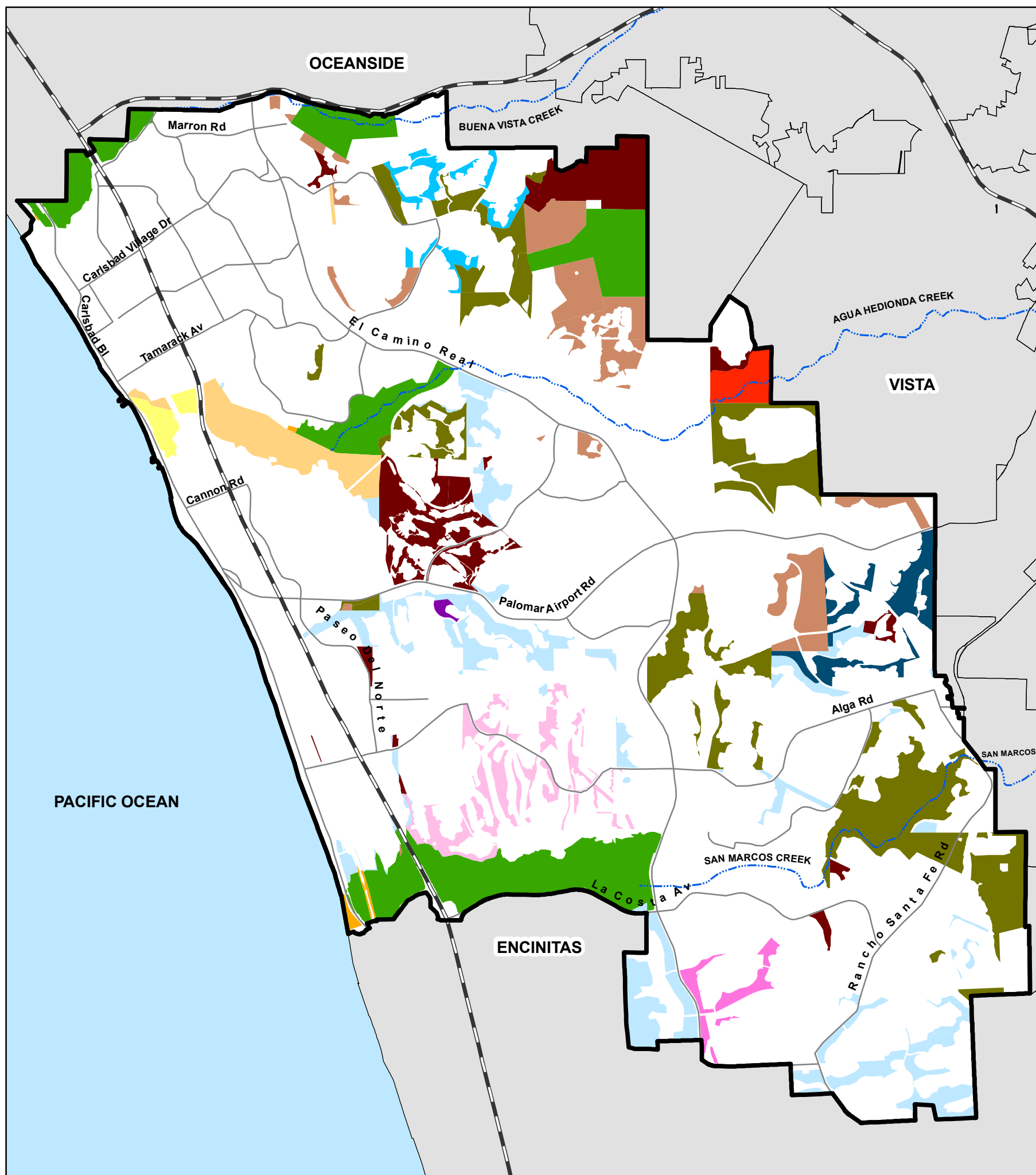
The HMP currently covers a total of 25 species, including 6 plants, and 19 wildlife species (Table 2). Brodiaea coverage was granted by the Agencies through a minor amendment December 2, 2005.

Table 2. Species Covered by the HMP

Common Name	Scientific Name
Plants	
Bochman's Dudleya	<i>Dudleya blochmaniae</i> spp. <i>blochmaniae</i>
Cliff Spurge	<i>Euphorbia misera</i>
Nuttall's Scrub Oak	<i>Quercus dumosa</i>
Orcutt's Hazardia	<i>Hazardia orcuttii</i>
Orcutt's Spineflower	<i>Chorizanthe orcuttiana</i>
Thread-leaved Brodiaea	<i>Brodiaea filifolia</i>
Invertebrates	
Harbison's Dun Skipper	<i>Euphyes vestries harbisoni</i>
Salt Marsh Skipper	<i>Panoquina errans</i>
Amphibians/Reptiles	
Orange-throated Whiptail	<i>Aspidoscelis hyperythrus</i>
Birds	
American Peregrine Falcon	<i>Falco peregrinus anatum</i>
Belding's Savannah Sparrow	<i>Passerculus sandwichensis beldingi</i>
California Brown Pelican	<i>Pelecanus occidentalis californicus</i>
California Least Tern	<i>Sterna antillarum browni</i>
California Gnatcatcher	<i>Polioptila californica californica</i>
Cooper's Hawk	<i>Accipiter cooperi</i>
Elegant tern	<i>Sterna elegans</i>
Large-billed Savannah Sparrow	<i>Passerculus sandwichensis rostratus</i>
Least Bell's Vireo	<i>Vireo bellii pusillus</i>
Light-footed Clapper Rail	<i>Rallus longirostris levipes</i>
Osprey	<i>Pandion haliaetus</i>
Rufous-crowned Sparrow	<i>Aimophila ruficeps canescens</i>
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>
Western Snowy Plover	<i>Charadrius alexandrinus nivosus</i>
White-faced Ibis	<i>Plegadis chihi</i>
Yellow-breasted Chat	<i>Icteria virens</i>

2.2.1 Individual Preserves

The current status of individual preserves within the HMP Preserve System is given in Tables 3-6, including the primary preserve management entity, underlying landowner, overall acreage, and status of Conservation Easement, endowment, preserve management plan, and annual reports, where applicable. Preserve locations are shown in Figure 4. The preserves have been grouped according to management status and type of ownership, which have been determined in the HMP.



Legend

City of Carlsbad

- City of Carlsbad Preserves
 - Batiquitos Drive
 - Carlsbad Drive
 - Carlsbad Village
 - Carrillo Ranch
 - La Costa Canyon Park
 - La Costa/Romero
 - Lagoon Lane
 - Lake Calavera
 - Los Monos
 - Macario Canyon
 - Municipal Golf Course
 - Poinsettia Park
 - Poinsettia Lane Vernal Pools
 - Research Center
 - Veteran's Memorial Park

Other Public/Sem-Public

- Cabrillo Power
- SDG&E
- Other Public Agencies
 - North San Diego County Transit
 - San Dieguito union High School
 - State of California

Wildlife Agencies

- California Department of Fish and Game
 - Agua Hedionda Ecological Reserve
 - Batiquitos Ecological reserve
 - Buena Vista Ecological Reserve
 - Carlsbad Highlands Ecological Reserve
 - Buena Vista Ecological Reserve (aka. Sherman Property)

University of California Reserve System

- University of California Reserve System
 - Dawson - Los Monos Canyon Reserve

Conservation Management Entity

- Center for Natural Lands Management
 - Calavera Hills Phase II
 - Carlsbad Oaks North
 - Kelly Ranch
 - North County Habitat Bank
 - Rancho La Costa
 - Robertson Ranch East Village

- Helix Community Conservancy
 - Emerald Point Estates

Other Entities (Pending or Unknown)

- Management Under Negotiation
 - Batiquitos Lagoon Parcel
 - Bressi Ranch
 - Brodiaea Preserve
 - Calavera Heights Mitigation Site
 - Cantarini/Holly Springs
 - Carlsbad Raceway
 - Encinitas Wetlands
 - Fox Miller Brodiaea Site
 - Summit

Private

- Arroyo La Costa Master HOA
- Aviara HOAs
- Calavera Hills Phase I HOAs
- Rancho Carrillo Master HOA
- Other HOAs and Private Open Space

Basemap Legend

- City of Carlsbad
- Jurisdictional Boundary
- Freeway
- Major Road
- River

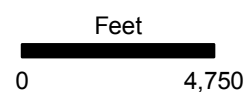


Table 3 includes all Ecological Reserves that are owned by CDFG. Ecological Reserves in existence prior to the HMP (Existing Hardline areas) require management to HMP standards pursuant to available funding. These reserves will be funded and managed according to the pre-existing management and funding structure (e.g. independent management entity and endowment are not required). Ecological Reserves acquired after the HMP may include a non-wasting endowment and management contract with a non-CDFG preserve manager.

Table 3. Current Status of Ecological Reserves within the HMP Preserve System

Preserve / Project Name	Acres	Land Owner	PM^{1, 2}	PMP¹	Annual Reports
Agua Hedionda Lagoon Ecol. Reserve	195	CDFG	CDFG	None	None
Batiquitos Lagoon Ecological Reserve	621	CDFG	CDFG	1999	None
Buena Vista Ecological Reserve	139	CDFG	CDFG	None	None
Buena Vista Creek Ecological Reserve (Sherman Property) ³	134	CDFG	(CNLM)	None	Due in 2008
Carlsbad Highlands Ecological Reserve	293	CDFG	CDFG	None	None

¹ Abbreviations: PM – Preserve Manager; PMP – Preserve Management Plan

² Preserve Manager names in parentheses indicate that the management contract is currently under negotiation

³ The Sherman Property was acquired by CDFG in March 2007. CDFG is negotiating a management agreement with CNLM; the Property Analysis Record (PAR) is pending. A non-wasting endowment for permanent management was established in April 2007.

The other pre-HMP preserves (Existing Hardline areas) include the areas in or near Agua Hedionda Lagoon that are owned by Cabrillo Power and SDG&E, UCSD-owned Dawson-Los Monos Reserve, TET bankruptcy properties, and HOA lands that were in existence prior to the planning for the HMP (Table 4). The HMP requires that these lands be managed according to pre-existing levels of management (e.g. Level 1 -Property Management, see Section 3.2.2), which will be increased to Level 3 – Species Monitoring and Management if regional funding becomes available. Pursuant to the HMP, pre-existing privately-owned preserve areas do not require PMPs or annual reports unless funded by a regional funding source. The level of management required for TET properties is limited to the extent of the prior management funding that is attached to the properties until a regional or other funding source becomes available. Note that the currently available Existing Hardline data exists as a single GIS layer for HOA properties. As such, acreages for individual HOA properties are not available at this time, but will be calculated during subsequent mapping updates.

Table 4. Other Pre-Existing Preserves

Preserve ¹	Acres	Land Owner ²	PM ³
Agua Hedionda –Cabrillo Power ³	73.2	Cabrillo Power	Cabrillo Power
Agua Hedionda –SDG&E	280.2	SDG&E	SDG&E
Arroyo La Costa	Unknown ⁴	HOA	HOA
Aviara Conservation Area	Unknown ⁴	HOA	HOA
Batiquitos Lagoon Parcel	1.5	Previously TET ⁵	(CDFG)
Brodiaea Preserve	1	Previously TET ⁵	(CDFG or City?)
Calavera Heights Mitigation Parcel (aka Calavera Nature Preserve)	110	Previously TET ⁵	(CDFG)
Calavera Hills Phase I	120	HOA	HOA
Dawson-Los Monos Reserve ⁶	106	UCSD	UCSD
Encinitas Wetlands ⁷	19	Previously TET ⁵	(CNLM)
Rancho Carrillo Conservation Area	204	Continental Residential Inc.	HOA
Shelley Preserve	52	Fair Oaks Valley LLC	HOA
Special Resource Area 3: Encinitas Creek	Unknown ⁴	Multiple HOAs	HOAs (Level 1)
Summit (aka Kelly-Bartman)	10.4	Carlsbad Apts. LLC ⁵	(CDFG or HCC?)

¹ Pursuant to the HMP, pre-existing privately-owned preserves do not require preserve management plans or annual reports unless funded by a regional funding source. TET properties *may* require PMPs and annual reports once ownership and management issues have been resolved.

² Abbreviations: HCC = Helix Community Conservancy; HOA = Home Owner’s Association; PM – Preserve Manager; TET = The Environmental Trust; UCSD = University of California at San Diego.

³ Preserve Managers in parentheses indicate that the management contract is currently under negotiation.

⁴ GIS data for pre-existing HOA properties (which are Existing Hardline areas) are contained in a single GIS layer; therefore, acreages for individual properties are currently unknown, but will be calculated during subsequent mapping updates.

⁵ TET bankruptcy property. Ownership and management under negotiation. In general, TET properties have no endowment (due to bankruptcy) or have an endowment that is too small to adequately manage the property.

⁶ Located partially in City of Vista.

⁷ Conservation easement to be managed by CNLM, who manages adjacent No. County Habitat Bank. no credits will be sold from this property.

Table 5 shows City-owned preserves, for which ongoing management will be continuously funded through the City’s annual budget appropriation process. City preserves require permanent Level 3 management (see Section 3.2.2), a preserve management plan, and annual reports. Center for Natural Lands Management has prepared a PAR and PMP (described below), which are under City review and are expected to be finalized (including Wildlife Agency approval) by mid 2008. This would fulfill the City’s obligation to manage the Lake Calavera Mitigation Parcel and other City owned lands as described in the HMP and Implementing Agreement.

Table 5. City-Owned Preserves and Mitigation Parcel

Preserve / Project Name	Acres
Batiquitos Drive	2.7
Carlsbad Village	12.6
Carrillo Ranch	16.6
La Costa Canyon Park	8.9
La Costa /Romero	12.9
Lagoon Lane	2.7
Lake Calavera Mitigation Parcel	266
Los Monos	20.5
Macario Canyon	33
Municipal Golf Course	198
Poinsettia Park	12.5
Research Center	2.8
Veterans Park	21
Total Acres	600.2

Table 6 shows all project-related preserves. Projects that mitigated impacts through an in-lieu mitigation fee rather than land preservation are not included in this table. It is useful to understand all of the steps involved in land conservation within the Preserve System (e.g. management to HMP standards), because it can take several years after a project is approved to finalize protection and management of a project-related preserve. Projects that were approved after the 1999 draft of the HMP, but prior to final approval of the revised HMP (November 2004), were conditioned to comply with the land preservation requirements; however, due to difficulties in processing Conservation Easements and/or securing a Preserve Manager, some of these “pre-HMP” projects were allowed to grade prior to completion of all preservation-related conditions, deferring the Conservation Easement recordation and other provisions to building permit issuance or Certificate of Occupancy. Currently (since November 2004), as a condition of final project approval, the following steps must be taken by the landowner or developer before a grading permit will be issued by the City:

- Preparation of a Property Analysis Record (PAR) to assess the initial start up costs and costs of management and monitoring of the preserve in perpetuity.
- Preparation of an area-specific Preserve Management Plan (PMP) to ensure adequate management and monitoring of biological resources within individual preserve (i.e., the open space parcel that will become part of the HMP Preserve System).

Table 6. Project-Related Preserves

Preserve / Project Name	Acres	Grading Permit	PAR ¹	Endwmt ¹	CE ¹	Land Owner	PM ^{1, 2}	PMP ¹	Annual Reports	Comments
Bressi Ranch	153.7	Jan-03	Pending	Pending	Pending	Bressi Gardenlane	(HCC)	Jul-05	None	PAR under negotiation; 1st PAR Aug-05; 2nd PAR Jul-06, 3rd PAR Mar -07
Calavera Hills Phase II (Calavera West or Calavera Heights)	133	2002	2006	May-06*	May-06	Calavera Hills HOA	CNLM	2002	2006	*CNLM merged funds with Robertson Ranch East to for cost savings since client uses CNLM for both projects.
Cantarini/Holly Springs	115	No	Pending	No	No	Benteq/Bentley-Monarch	(HCC)	None	None	Cost estimate Jul-05; under review
Carlsbad Oaks North Habitat Conserv. Area	327	11/12/04	2006	Jun-06	Nov-05	CNLM, County	CNLM	2006	2005-2006	
Carlsbad Raceway	48.9	Jan-03	Pending	Pending	Pending	H.G. Fenton	(HCC)	None	None	Under review: cost est: Dec-05; CE Sep-06; PM Nov-06.
Emerald Pointe Estates	10	3/21/06	Feb-06	12/12/06	Feb-06	Saddleview LLC	HCC	None	None	CE to be recorded; escrow not started.
Encinas Creek (Biltmore)	8	No	Pending	Pending	Pending	Ascent Biltmore Clsbad, LLC	(HCC)	Jan-06	None	1st PAR Mar/06; under review
Kelly Ranch HCA	63	2003	2002	Feb-02	Feb-02	multiple	CNLM	2002	2002-06	
Moonstone (aka. La Costa Village Center Townhomes; Levatino)	8	No	Pending	Pending	Pending	Barratt American	(HCC)	Pending	None	Under review: PAR Aug-06, Sep-06, Dec-06, Sept-07. CE Dec-06, Sept-07. PM Dec-06, Sept-07.
N. County Habitat Bank	18.7	N/A ¹	5/24/07	Pending	Pending	Westmark Dvp	CNLM	2006	None	Pre-existing; no grading permit required.
Palomar Pointe/Hieatt	See comments	2/03/05	Date unknown	No	No	Larry Jet; Lanikai Mgmt Group	Helix	2005	None	Offsite mitigation (8.7) at Whelan Ranch, 16.8 ac creation. Financial guarantee: Mgmt is contracted out and paid for by landowner (L. Jett).
Rancho La Costa (La Costa Villages)	1,026	3/31/04	2001	2002 and 2003	Pending	CNLM	CNLM	2006	2002-2006	Includes the CAGN Core Area parcels outside of the City limits.
Robertson Ranch East	67	1/16/07	Feb-07	2/6/07	2/6/07	Calavera Hills II LLC	CNLM	2006	None	*CNLM merged funds with Calavera Hills Phase II for cost savings since client uses CNLM for both projects.
Special Resource Area 1: Fox Miller Brodiaea site	18.1	12/28/05	Pending	Pending	Pending	HG. Fenton	(HCC)	Nov-05	None	Mitigation for Fox-Miller project impacts: preservation, relocation, and revegetation. Cost estimate under review (June-05; Oct-05; Nov-05; Dec/05).
Special Resource Area 2 ⁴ : Poinsettia Ln Vernal Pools (includes Water's End)	3.1	5/15/02	No	Yes	1994	NCTD ¹ and HOA	undetermined	None	None	Vernal pools in NCTD right-of-way. \$50,000 paid by NCTD, held by CDFG for management. Watershed buffer mitigation fee of \$100,000 paid by Water's End, held by City. No preserve manager has been established.

¹ Abbreviations: PAR – Property Analysis Record; Endwmt – endowment; CE – Conservation Easement; PM – Preserve Manager; PMP – Preserve Management Plan; NCTD = North County Transit District; N/A Not applicable

² Preserve Manager names in parentheses indicate that the management contract is currently under negotiation.

³ In general, TET properties have no endowment (due to bankruptcy) or have an endowment that is too small to adequately manage the property

- Establishment of a non-wasting endowment to provide adequate funds for preserve management in perpetuity.
- Establishment of a Conservation Easement on the preserve.
- Procurement of a Preserve Manager for the preserve whose qualifications are consistent with Wildlife Agency guidelines.

All of these items must be approved by the City to ensure consistency with the MHCP, HMP, and OSMP (i.e., the subarea framework management plan, which is described below); to ensure adequate funding; and to ensure that the Preserve Manager has the appropriate qualifications. For clarification, an explanation of each column heading in Table 6 is given below.

Acres. Total number of acres (according to the HMP GIS database) of a given preserve.

Grading Permit. Because all HMP requirements must be met as a condition of project approval, the grading permit date for a given project is used as the date of habitat gain (preserve) and loss (development). Grading permits are not applicable for pre-existing preserves or for preserve acquisitions that are not related to a development project.

Property Analysis Record (PAR). Cost analysis software developed to estimate the cost of managing a preserve based on user-defined parameters. It allows an objective cost/benefit analysis for each line item as a contribution to the success of the HMP, and adjusts for inflation.

Endowment. The date that a non-wasting endowment, held by a third party, was established for a given preserve. Pre-HMP project-related preserves generally did not require management endowments, unless specified in previously negotiated environmental documentation. With the exception of the Sherman Property, preserves owned and managed by CDFG are managed with funds from the Department's operating budget. City-owned preserves will be managed with funds from the General Budget, which were approved by the City Council as for the 07/08 fiscal year. Dawson-Los Monos Reserve will continue to be funded through the University of California Reserve System. Properties previously managed by TET and any associated endowment funds are being released through bankruptcy court. Only a portion of the original endowments remain available for management and monitoring.

Conservation Easement. (see also definition pursuant to California Civil Code Section 815.1 contained on page 6 of this report) A restriction placed on a piece of property to

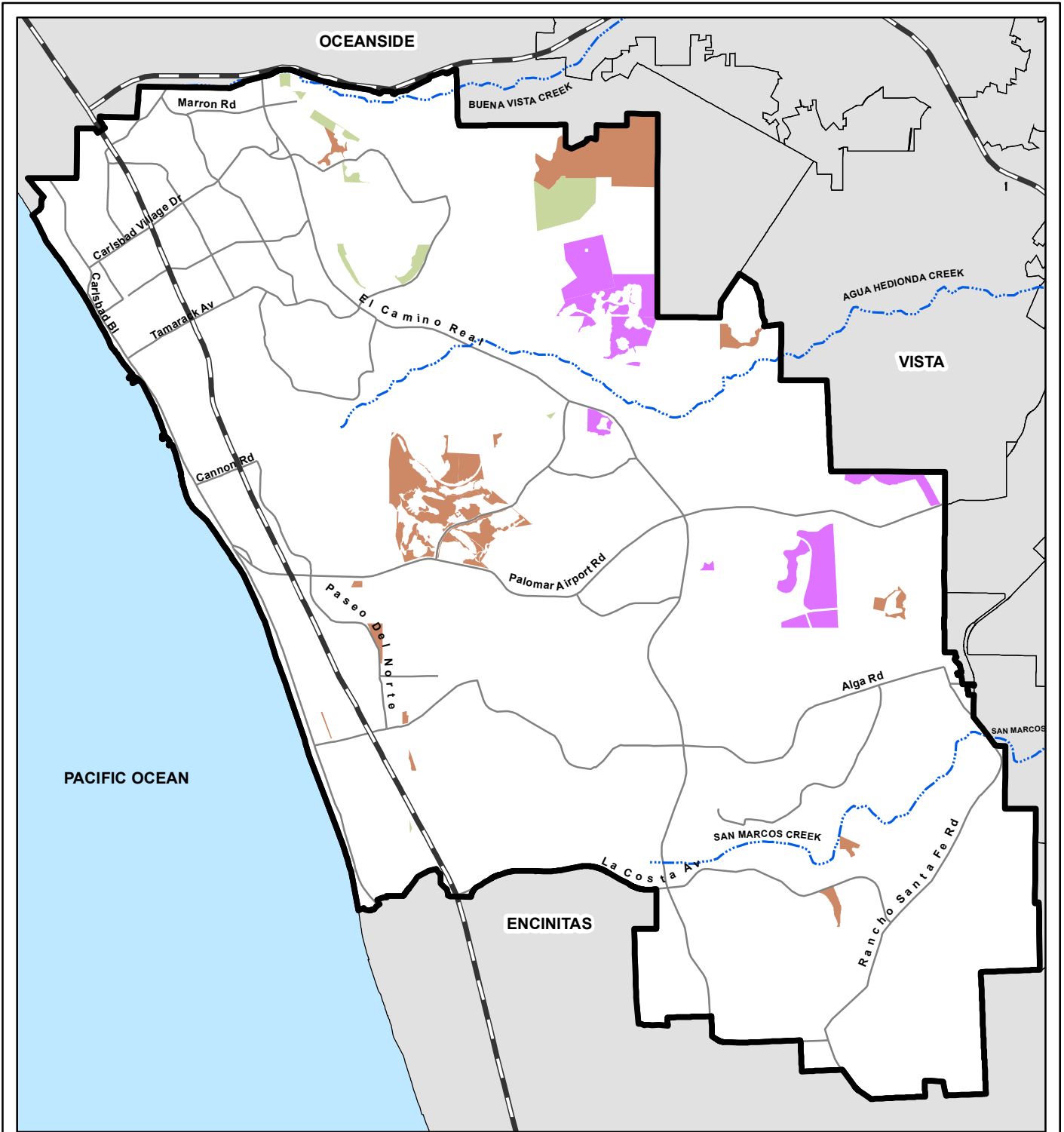
protect its natural open space values pursuant to the HMP. It is a legally binding agreement that limits certain types of uses, mandates HMP-level management and monitoring, and prevents future development. Pre-existing preserves generally do not have Conservation Easements placed over the property; however, all lands within the Preserve System are protected as Open Space within the City's General Plan and through Open Space zoning. Special provisions have been developed for Natural Habitat (a specific type of Open Space), which further restricts uses and prohibits development. Because of concerns with liability issues among Grantors, Grantees, and Third Parties, some Conservation Easement negotiations have taken more than two years, resulting in a bottleneck to finalizing the establishment of new preserves.

Landowner. The landowner owns the land through fee-title. The landowner has the ultimate responsibility to ensure that preserve management is secured prior to habitat impacts. Often, the management responsibility is contracted to a third party.

Preserve Manager (PM). The entity responsible for monitoring and managing a preserve. Figure 4 shows the current management entity and location of each preserve. The majority of preserve lands are owned/managed by the City, California Department of Fish and Game (CDFG), University of California at San Diego (UCSD), Aviara Master Home Owner's Association (HOA), Rancho Carrillo HOA, and Center for Lands Management (CNLM). The remaining preserve lands are the responsibility of other public entities or private HOAs; are within Standards Areas for which projects have not been developed; or are in the process of management negotiations.

In many instances the preserve management entity for a given preserve area is pending or unknown. The reasons for this are (1) a proposed development project has not been finalized, (2) a developer or landowner is currently negotiating with a management entity to contract management services, (3) Standards Areas for which no project has been proposed, or (4) a property previously managed by The Environmental Trust (TET) that has not been acquired by another management entity. Figure 5 shows all preserves for which a management agreement is pending. Tables, 3, 4, and 5 show the *pending* management entities in parentheses.

Preserve Management Plan (PMP). The area-specific monitoring and management plan for a given preserve. The PMP is consistent with the PAR, which estimates the cost of management activities described in the PMP, and is required prior issuance of a project grading permit. Pre-HMP preserves are generally not required to prepare a PMP, unless stipulated in previously negotiated agreements with the Wildlife Agencies, or the



Legend

- | | | |
|---|---|--|
| <ul style="list-style-type: none"> Center for Natural Lands Management-Pending - City Properties - Encinitas Wetlands | <ul style="list-style-type: none"> Helix Community Conservancy-Pending - Bressi Ranch - Cantarini/Holly Springs - Carlsbad Raceway - Fox-Miller Brodiaea Site | <ul style="list-style-type: none"> California Dept of Fish and Game-Pending - Batiquitos Lagoon Parcel - Brodiaea Preserve - Calavera Heights Mitigation Site - Summit |
|---|---|--|

Basemap Legend

- City of Carlsbad
- Jurisdictional Boundary
- Freeway
- Major Road
- River



Feet

0 6,250

landowner is a signatory to the Implementing Agreement (i.e., CDFG).

Annual Reports. The first area-specific annual report is due within 12 months of the start of preserve management (i.e., when all of the above criteria have been met and as determined by the Preserve Manager and the City). Subsequent annual reports will be due in early October to facilitate compilation of HMP-wide annual report by the City and Preserve Steward. Pre-HMP preserves are generally not required to prepare annual reports unless stipulated in previously negotiated agreements with the Wildlife Agencies, or the landowner is a signatory to the Implementing Agreement (i.e., CDFG).

2.2.2 The Environmental Trust (TET) Properties

Prior to March 2005, The Environmental Trust (TET) managed several preserves in the City; however, after filing for Chapter 11 bankruptcy on March 23, 2005, the company no longer held this responsibility. TET was initially organized as a California non-profit organization on Oct 15, 1990 for the purpose of managing protected lands. At its peak, TET managed approximately 4,600 acres of land within San Diego County (McClure, 2005). Much of the associated endowment money, which was used to fund preserve management, was invested in the stock market. It is believed that a combination of poor fiscal management and a downturn in the stock market in the late 1990's resulted in insufficient money to fund the obligations that TET agreed to provide (Lee, 2005). However, regardless of the problems with the investment strategy, the Wildlife Agencies feel that the initial funding set aside by TET for management purposes was insufficient to begin with, and therefore, adequate endowments were never provided for the HMP preserves (D. Mayer, CDFG, pers. comm.).

TET was contracted to manage seven preserves in Carlsbad: the Batiqitos Lagoon Parcel, Bressi Ranch, Brodiaea Preserve, Calavera Heights Mitigation Site, Calavera Hills Phase II (the management agreement was not finalized), Encinitas Wetlands and Summit (Table 7). All areas set aside for preservation remain protected by Open Space zoning and/or Conservation Easements. Each property has been or will be offered to the following entities, in this order: (1) original landowner, (2) City, (3) Wildlife Agencies, and (4) non-profit land management organizations. Only a portion of the original endowment will come with the land, which will impact the future levels of management and monitoring until additional funds become available through grants or a regional funding source.

Table 7. Current Status of TET Properties

Property	APN	Current Status
Batiquitos Lagoon Parcel	216-140-39	Located between State Lands Commission and CalTrans properties and will likely be managed by the CDFG as part of their management of Batiquitos Lagoon.
Bressi Ranch	213-121-04	HCC has submitted PARs (Aug-05, Jul-06, Mar-07) and a CE, which are currently under negotiation.
<i>Brodiaea filifolia</i> Preserve	212-050-46	CDFG expected to take ownership of the property. Property will likely be managed by CDFG or CNLM.
Calavera Heights Mitigation Site	168-050-01 168-040-31	CDFG will take ownership of the property.
Calavera Hills Phase II	167-101-19 168-303-08 168-310-07 168-310-08 168-311-02 168-311-03	This property will be owned by Calavera Hills LLC, c/o The Corky McMillan CO; Calavera Hills Master HOA; Calavera Hills II HOA, and Robertson Ranch HOA. It will be managed by CNLM. CE, management contract, and endowment are all in place (May 17, 2006).
Encinitas Wetlands	211-040-33	TET held Conservation Easement; parcel owned by Westmark Development. The parcel is adjacent to the North County Habitat Bank and it will likely be managed as part of this property by CNLM.
Summit (aka Kelly-Bartman)	167-030-79	CDFG currently considering taking ownership of the property, as it is adjacent to the Sherman Property, which is currently managed by CNLM.

2.2.3 Mitigation Banks and City Mitigation Parcel

A mitigation bank is a site on which upland and/or wetland habitat is preserved, restored, or created to serve as compensation for project-related impacts to sensitive natural communities or sensitive species. Mitigation credits, in the form of preserved land within the mitigation bank, may be purchased by the landowner of a project site at a ratio consistent with HMP Table 11. Mitigation banking encourages the consolidation of protected parcels into larger, contiguous blocks rather than preserving smaller, isolated fragments. Larger blocks of habitat are essential to the survival of sensitive species, such as the federally threatened coastal California gnatcatcher (*Polioptila californica californica*), by providing enough space for breeding, foraging, and the establishment of territories; by providing avenues for wildlife movement and genetic flow; and by reducing edge effects.

Two mitigation banks and one City mitigation parcel have been or are in the process of being established within the HMP area (Table 8). Credits from the Carlsbad Highlands Mitigation Bank are sold out, and the property is now being managed by CDFG as part of the Carlsbad Highlands Ecological Reserve. The North County Habitat Bank consists of 15.7 acres of wetland/riparian credits that have been available since May, 2007. The

City-owned Lake Calavera Municipal mitigation parcel will provide mitigation only for City projects. Credits will be deducted on an acre-for-acre basis for all upland habitat impacts except for gnatcatcher-occupied coastal sage scrub, southern maritime chaparral, maritime succulent scrub, and wetlands as needed for City project-related impacts. No credits will be sold to outside entities. Because this parcel was identified as a “mitigation bank” in the HMP and the First Annual Report, it is included in Table 5. However, after discussing the need for a standard mitigation banking agreement with the Wildlife Agencies, it was determined by all parties that a banking agreement was not necessary for the following reasons: (1) mitigation within the parcel will be used as needed only for City project-related impacts; (2) mitigation credits will be deducted on an acre-for-acre basis; (3) no credits will be sold to outside entities; and (4) mitigation, as described in (1) – (3) above is allowed under current regulations. Therefore, this parcel will no longer be referred to as a “mitigation bank”.

Table 8. Current Status of Mitigation Banks and Parcel

Mitigation Bank	Current Status	Description and Notes
Carlsbad Highlands Mitigation Bank	<u>Landowner:</u> CDFG <u>Preserve Manager:</u> CDFG <u>Debits/Credits:</u> credits sold out Now part of the larger Carlsbad Highlands Ecological Reserve.	Approx 180 acres of coastal sage scrub. Multi-species credits were sold to mitigate for upland impacts throughout the NCCP plan area of San Diego County, including coastal areas.
North County Habitat Bank	<u>Landowner:</u> Westmark Development <u>Preserve Manager:</u> CNLM as of 2007 <u>Debits/Credits:</u> Credits have been available for sale since May 2007. The Planning Commission approved the Conditional Use Permit to create the mitigation bank on September 7, 2005. Mitigation Bank Agreement has been signed; Conservation Easement and Endowment in place.	An 18.7-acre parcel that consists of approximately 15.7 acres of wetland and riparian habitat that can be sold as mitigation credits for impacts from development projects in the coastal North County area.
Lake Calavera Municipal Mitigation Parcel	<u>Landowner:</u> City of Carlsbad <u>Preserve Manager:</u> CNLM (pending) <u>Debits/Credits:</u> 82.6 mitigation credits have been pre-debited from the bank for City projects, and 183.5 acres remain. A Conservation Easement, Preserve Management Plan, and financial guarantees for management and monitoring will be required.	Approx. 266-acres set aside by the City to serve mitigation parcel for municipal projects. Credits will be deducted on an acre-for-acre basis ¹ as needed for City project-related impacts. No credits will be sold to outside entities. Because this parcel will only be used for City project mitigation, and the mitigation program was included in the HMP, the Agencies have given the City approval to debit mitigation credits prior to completing Agency requirements. A total of 3.04 acres has been debited for City projects since approval of the HMP (Table 9).

¹ Except for gnatcatcher-occupied coastal sage scrub, southern maritime chaparral, maritime succulent scrub, and wetlands which require a higher mitigation ratio.

Currently, the City is working with CNLM and the Wildlife Agencies to complete a preserve management plan, secure the financial guarantee for management and monitoring in perpetuity, and to record a Conservation Easement for this parcel. Because this parcel will only be used for City project mitigation and credits will not be sold to private entities, and because the mitigation program was described in the HMP and IA, the Wildlife Agencies have given the City approval to debit mitigation credits (Table 9) prior to fulfilling the Wildlife Agency requirements mentioned above provided that all parties work diligently on fulfilling all of the requirements. It is anticipated that these requirements will be met by Fiscal Year 2008/2009.

Table 9. Mitigation Acreage Provided at Lake Calavera Mitigation Parcel

Credits and Debits	Acres¹
<i>INITIAL CREDITS</i>	266.1
Pre-HMP Deductions (Prior to Nov 2004)	
1. 100-ft wide fire break on N boundary	17.6
2. Police shooting range	10.0
<i>Subtotal pre-HMP debits</i>	27.6
Year 1 Project-Related Deductions (Nov 2004 – Oct 2005)	
1. Municipal Golf Course	20.0 (+ 2 pr CAGN ²)
2. Hub park	10.0
3. South Agua Hedionda Sewer Interceptor	0.2
4. Approved Future Projects	
a) Water District Projects (see HMP Appendix B)	22.0
5. Lake Calavera Remedial Improvements	1.5
<i>Subtotal Year 1 debits</i>	53.7
Year 2 Project-Related Deductions (Nov 2005 – Oct 2006)	
None	
<i>Subtotal Year 2 debits</i>	0
Year 3 Project-Related Deductions (Nov 2006 – Oct 2007)	
1. Fire Station No. 6	0.8
2. Rancho Carrillo Citywide Trail	0.2
3. Hosp Grove Drainage Project	0.04
<i>Subtotal Year 3 debits</i>	1.04
<i>Total Debits</i>	82.3
TOTAL ACRES AVAILABLE AS OF OCTOBER, 2007	183.8

¹ Rounded to the nearest tenth of an acre.

² CAGN = California gnatcatcher

2.2.4 Wildlife Movement Corridors and Crossings

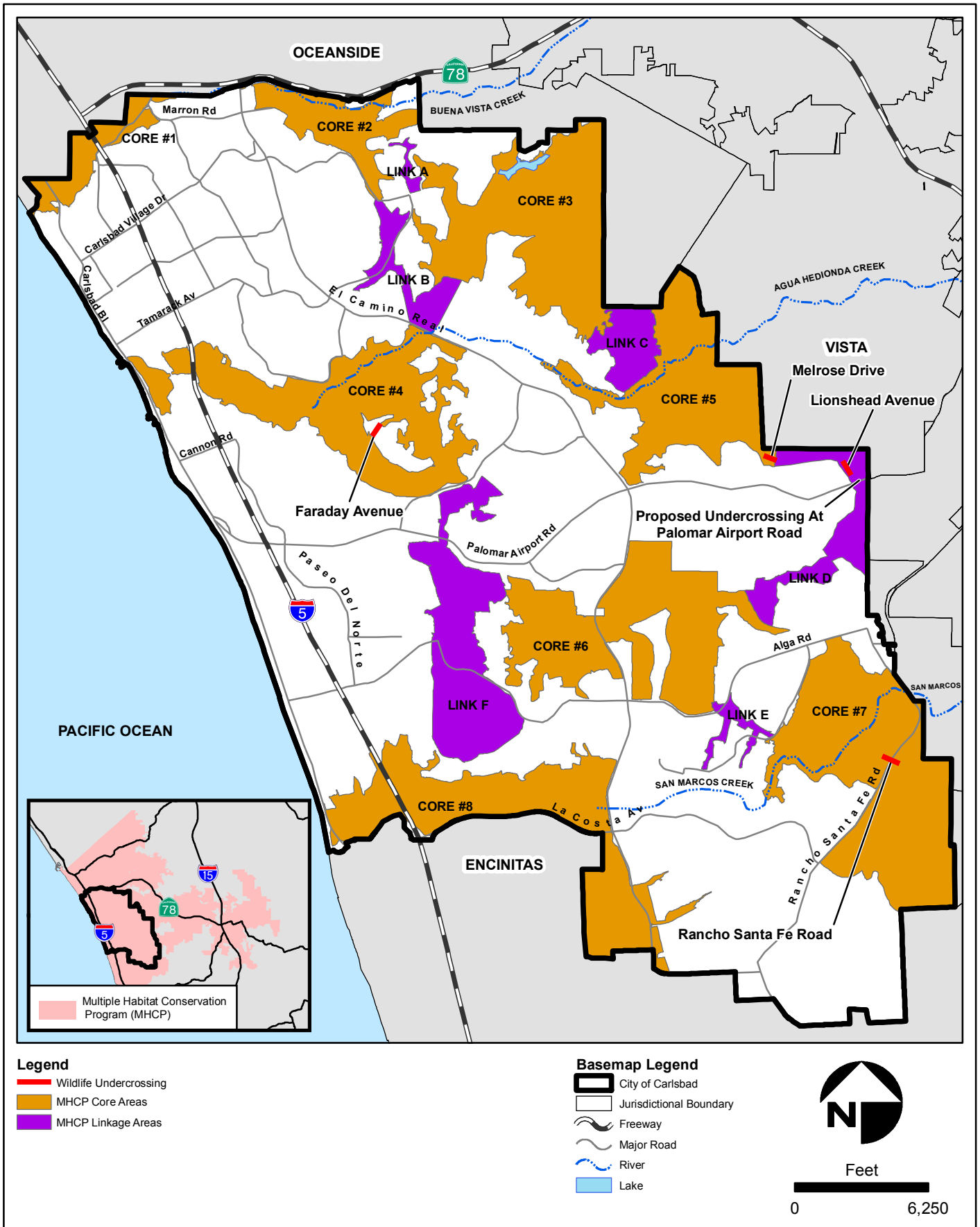
The MHCP Focused Planning Area (i.e., the areas of highest priority for conservation consisting of core habitat and habitat linkages) was developed to accommodate regional wildlife movement. The California Gnatcatcher Core Area, discussed in more detail below, Core Areas 1 – 8, and HMP Linkages A – F were included in this planning effort

(Figure 6). To support wildlife movement in these areas, wildlife-friendly undercrossings are occasionally required as a condition of approval for new development projects to ensure continued functionality of the HMP Linkages and to reduce road-kill mortality. Four such undercrossings have been built: under Rancho Santa Fe Road, Lionshead Avenue, Melrose Drive, and Faraday Avenue. The current status of the major wildlife movement corridors and existing crossings in the HMP preserve area is summarized in Table 10. An additional undercrossing is currently being considered by the City and Wildlife Agencies at Palomar Airport Road, just west of Business Park Drive (between Core Area #5 and Linkage D). The City collected approximately \$360,000 in mitigation fees from the Forum and Raceway projects. These funds will be used either to build the undercrossing if it is considered feasible and ecologically functional, or to acquire habitat within the Gnatcatcher Core Area.

Table 10. Current Status of Wildlife Movement Corridors and Existing Crossings

Corridor/Crossing¹	Description	Current Status
HMP Linkages A-F and associated projects A - Calavera Hts Village K, EH B - Roberston Ranch, SA C - Mandana; Holly Springs/Cantarini; Kato (no current action) D - Carlsbad Raceway; Bressi, EH E - EH; No current projects F - NC Calvary Chapel; Emerald Pt Estates; golf course, EH	Habitat linkages identified in the HMP that serve as wildlife movement corridors between core habitat areas (HMP Figure 4).	Linkage Status A- Entire linkage conserved B- Built out consistent with HMP (RR final map approved) C- Built out except for Kato and Mandana properties D- Built out E- Mostly built out F- Built out except for a few Standards Area properties.
Rancho Santa Fe Road undercrossing	Roadway undercrossing located within the Villages of La Costa Preserve Area.	In place – management performed by CNLM and City.
Lionshead Avenue undercrossing	Roadway undercrossing located within the Carlsbad Raceway industrial development.	In place – management performed by local Owner’s Association until PM secured.
Melrose Drive undercrossing	Roadway undercrossing located within the Carlsbad Raceway industrial development.	In place – management performed conjointly with Lionshead undercrossing.
Faraday Avenue undercrossing	Roadway undercrossing located at Veteran’s Memorial and Hub Park.	In place – management performed by City.

¹ EH = Existing Hardline; SA = Standards Area



2.2.5 Status of Carlsbad's Gnatcatcher Core Area Obligation

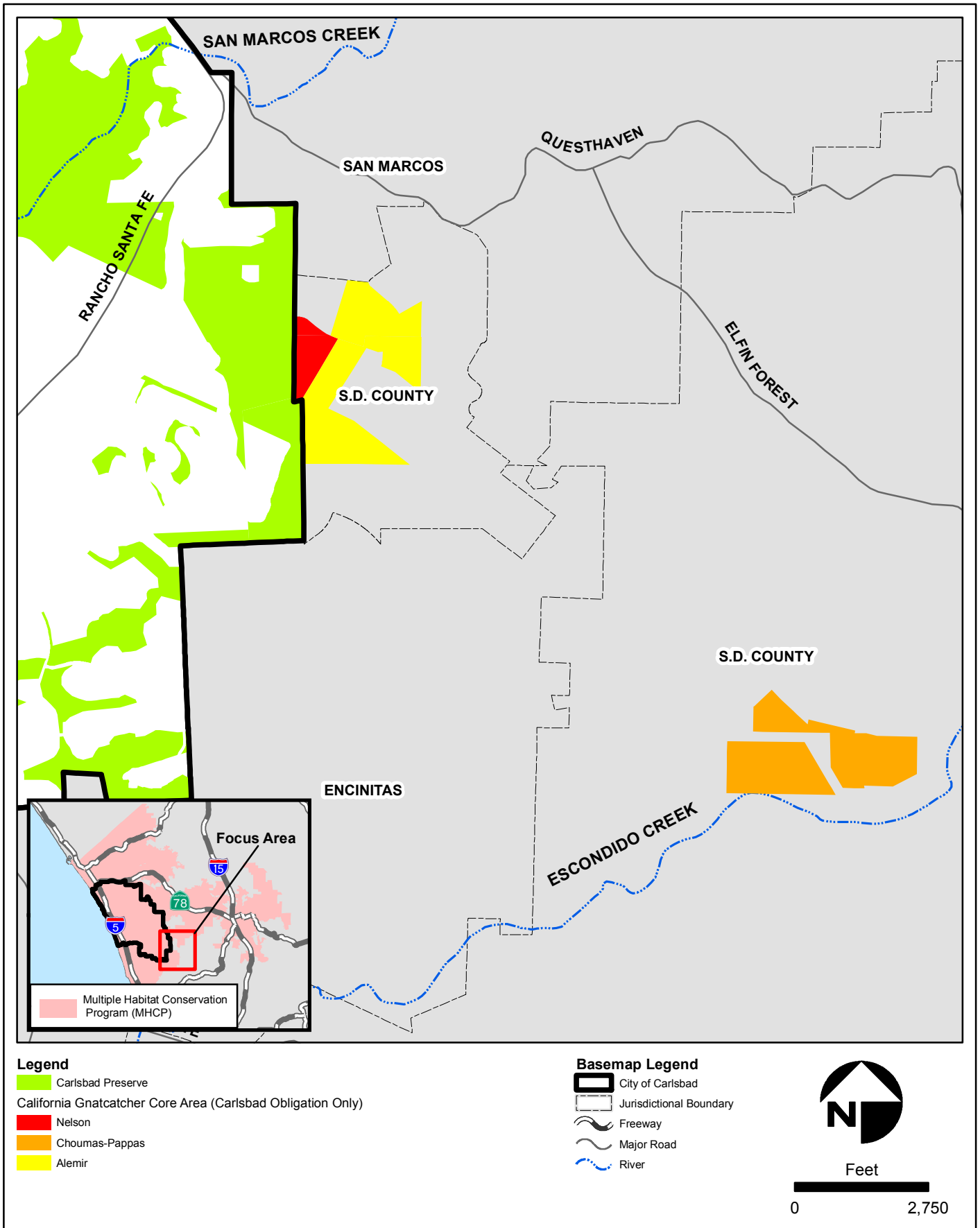
A biological analysis conducted for the MHCP determined that a large core breeding area was needed in the MHCP planning area in addition to a functional north-south movement corridor to ensure the long term viability of the federally threatened California gnatcatcher in northwestern San Diego County (MHCP 2003). A 400 to 500-acre Gnatcatcher Core Area was proposed for conservation in the unincorporated area adjacent to the MHCP, southeast of Carlsbad, which would be assembled by various MHCP jurisdictions. Located within a regionally important stepping-stone movement corridor, the California Gnatcatcher Core Area would facilitate movement of scrub-adapted birds from the southern part of San Diego County, through the MHCP planning area, and northward to Camp Pendleton and Orange and Riverside Counties. It would also function as a core gnatcatcher breeding area, which would provide a regular source of dispersing birds.

Because the amount of high quality coastal sage scrub habitat within the City was deemed inadequate to satisfy take permit conditions, the Wildlife Agencies agreed to let the City fulfill this obligation by conserving 307.6 acres of land within the Gnatcatcher Core Area. To date, 264.75 acres of this obligation have been met (with approval of the Wildlife Agencies) through up-front acquisitions, project-related mitigation, and credit for habitat restoration within the City, leaving 43 acres that must still be acquired and conserved by the City (Table 11). However, the City must also reimburse the cost of the up-front acquisitions (50.3 acres, see explanation below). Lands within the Gnatcatcher Core Area are currently being managed by CNLM as part of the Rancho La Costa Open Space Preserve (Figure 7).

Table 11. Status of Carlsbad HMP Gnatcatcher Core Area Obligation

Core Area Components	Acres	
	Components	Total
TOTAL CORE AREA CONSERVATION REQUIREMENT		307.6
1. Up-front Acquisition		
La Costa Villages –land in excess of mitigation requirements (cost to be reimbursed by the city)	50.13	
<i>Subtotal Up-front Acquisition</i>		<i>50.13</i>
2. Project-Related Mitigation¹		
<i>Parcel 1 – Villages of La Costa - Alemir</i>		
Villages of La Costa	39.39	
Bressi Ranch	<u>24.50</u>	
Subtotal Parcel 1	63.89	
<i>Parcel 2 – Villages of La Costa – Choumas Pappas</i>		
City of Carlsbad Municipal Golf Course	51.60	
Villages of La Costa – HCP Cost Share	5.50	
Palomar Forum	4.90	
Villages of La Costa – Other	<u>4.06</u>	
Subtotal Parcel 2	66.06	
<i>Parcel 3 – Rancho Carrillo Mitigation - Nelson</i>		
Rancho Carrillo	<u>20.31</u>	
Subtotal Parcel 3	20.31	
<i>Subtotal Project-Related Mitigation</i>		<i>150.26</i>
3. Onsite Conservation Restoration Credits		
Villages of La Costa (Canyons Network Settlement)	23.79	
Additional Carlsbad Golf Course Restoration	15.40	
Additional Citywide Miscellaneous Adjustments	<u>25.00</u>	
<i>Subtotal Onsite Credits</i>		<i>64.19</i>
Total Acres Conserved		264.58
REMAINING ACQUISITION REQUIREMENT		43.02

¹ The parcel name refers to the parcel within the Core Area that provided the land that was conserved. Project names underneath each parcel refer to projects within the City of Carlsbad that satisfied off-site habitat mitigation requirements by purchasing land (via a conservation easement) from Parcel 1-3 developers, providing a non-wasting management/monitoring endowment, and procuring a Preserve Manager.



Gnatcatcher Core Area Components (other MHCP jurisdictions not included)

1. Upfront acquisitions (50.3 acres) – Land in excess of the La Costa Villages Project mitigation requirements that were purchased by the developer (Lennar) in anticipation of the HMP Core Area requirements. The City has agreed to reimburse the cost of this land using in-lieu mitigation funds. A reimbursement agreement will be processed once negotiations are completed

In-Lieu Habitat Mitigation Fee Program. Under certain conditions, project impacts that occur outside of the HMP preserve area may be mitigated through a fee, rather than onsite land conservation. Approximately \$765,370 in fees have been collected as of November, 30, 2007 (Table 12). A detailed accounting of these fees is given in Section 4 (Financial Summary).

Table 12. Gnatcatcher Core Area Activity through October 2007

Reporting Year	Acres from Project Mitigation	In-lieu Mitigation Fees Collected ^{1, 2}	Fees Used by City	Future Use of Mitigation Fees
Pre-HMP (before Nov 2004)	150.26	\$461,894	None	Reimbursement, then acquisition.
Year 1 (Nov 2004 – Oct 2005)	0	\$15,333	None	“
Year 2 (Nov 2005 – Oct 2006)	0	\$38,661	None	“
Year 3 (Nov 2006 – Oct 2007)	0	\$249,482	None	“
TOTALS	150.26	\$765,370	None	“

¹ Mitigation fees may be collected in-lieu of onsite mitigation for project impacts under certain conditions (see HMP for details). These fees will be used to fulfill the City’s Gnatcatcher Core Area Obligations.

² A detailed accounting of mitigation fees is given in Section 4 (Financial Summary).

2. Project-related mitigation (150.3 acres). Prior to HMP approval, several projects within the City of Carlsbad mitigated project-related habitat impacts by acquiring Conservation Easements on land within the Gnatcatcher Core Area. Table 11 shows a breakdown of this project-related mitigation. Projects requiring off-site mitigation are listed under the parcel in which the land was conserved. Parcel names refer to the developments within the Core Area that provided the land for conservation. In other words, (a) the developers of Parcels 1-3 set aside land for conservation, (b) projects outside of the Core Area in need of off-site habitat mitigation were able to purchase mitigation credits from the developers within

- Parcels 1-3, and (c) as a condition of approval, the off-site projects established a non-wasting endowment and procured a Preserve Manager for the conserved land.
3. Credits for enhanced habitat within the City (64.2 acres). Enhancement credits included onsite preservation, preserve enhancement, and revegetation projects that were approved by the Wildlife Agencies prior to HMP finalization.
 4. Land to be acquired (43.0 acres). In-lieu mitigation fees will be used to purchase the remaining acres after all reimbursement obligations have been met (Table 11). As described in the Biological Opinion (BO) prepared by the U.S. Fish and Wildlife Service for the HMP, credit towards the MHCP core area obligation was given for increased preservation within the City beyond that identified in the approved HMP, and credit for additional preservation of coastal sage scrub within the City can be considered for the core area obligation in the future (USFWS 2004).

3.0 Activities Conducted During Reporting Period

This section describes the HMP-related activities conducted during the first three years of HMP implementation (November 2004 – October 2007). When relevant, activities conducted prior to November 2004 may be included as well. Three main topics will be covered: regulatory compliance (Section 3.1), management and monitoring activities (Section 3.2), and acquisitions (Section 3.3). Each of these components will be used to determine if the City is meeting the HMP goals described in Section 1.2 and complying with all relevant regulations.

3.1 Regulatory Compliance

To ensure regulatory compliance, the City has implemented, or is in the process of implementing, the HMP (1) by ensuring consistency with the terms and conditions of the IA, and State and federal permits; (2) through the project review process for new development projects; (3) by issuing HMP Permits when incidental take of a covered species is anticipated; and (4) by developing guidelines and policies to assist the City Planning Department staff, private developers, and consultants. The subsections below will describe each of these in detail.

3.1.1 City Compliance with Terms and Conditions of Take Authorization

To satisfy the terms and conditions of the State and federal take authorization, the City is required to fulfill the obligations outlined in Sections 10 – 14 of the IA, the Conditions of the State NCCP Permit, and Terms and Conditions of the Federal ESA Section 10(a)(1)(B) Incidental Take Authorization/Permit. Implementation tasks associated with these regulations are completed or ongoing, and are described in Tables 13-16. In cases where a particular condition is worded the same in more than one document, a reference is made to a previous table in which compliance is described to avoid redundancy.

**Table 13. Summary of City Compliance with HMP Requirements
Outlined in the Implementing Agreement (IA).**

IA Section	Obligation	City Compliance
10.10	Duty to Enforce: To enforce the terms of the Take Authorization, HMP, and IA and ensure HMP lands are conserved in perpetuity.	<ul style="list-style-type: none"> ▪ The City requires compliance with the HMP as a condition of approval for new development projects, which includes conservation in perpetuity, a non-wasting endowment, and a management agreement with a preserve manager. ▪ On March 14, 2006 the City passed the Habitat Preservation and Management Requirements Ordinance (Carlsbad Municipal Code § 21.210), which includes a section on enforcement (§21.210.19) for violations of the HMP. ▪ The City is currently developing an enforcement policy as well as a coordinated multi-departmental implementation program. (Section 3.3). ▪ The City is working with a group of stakeholders to develop a program of on-the-ground enforcement. ▪ Complaints made by citizens regarding possible violations of the HMP within preserves are investigated on a case by case basis.
11.1	Preserve System: To ensure the establishment and management in perpetuity of a 6,757-acre Preserve System.	<ul style="list-style-type: none"> ▪ The City has currently preserved 5,956.7 acres of habitat within the HMP planning area, which will be conserved and managed in perpetuity. See Section 3.1.2 for more details.
11.2	Project Mitigation Measures: To require additional mitigation measures to mitigate impacts to covered species in all future development projects.	<ul style="list-style-type: none"> ▪ As a condition of approval for new development projects, the City requires that all potential impacts to HMP covered species be avoided, minimized, or mitigated.
11.3	<p>Regulatory Implementation:</p> <ul style="list-style-type: none"> A. Urgency Ordinance – interim HMP enforcement B. Amend Open Space and Conservation Element of General Plan to incorporate HMP C. Amend Open Space Ordinance to incorporate Conserved Habitat Areas D. Amend Municipal Code to incorporate Standards Area compliance E. Amend General Plan to identify HMP as priority use for open space lands F. Wetlands Protection Program 	<ul style="list-style-type: none"> A. The Emergency Ordinance was approved by the City Council November 9, 2004. B. Revisions to the policy statements regarding the HMP were approved by the City Council in July, 2005. C. Revisions were made to Carlsbad Municipal Code § 21.53.230 and approved by the City Council in March, 2006. Conserved Habitat Areas were included as undevelopable open space lands preserved exclusively and in perpetuity for conservation purposes consistent with the HMP. Submitted to California Coastal Commission on April 3, 2006. Awaiting approval. D. A new chapter (§ 21.210) was added to the Zoning Ordinance to address habitat preservation and management requirements. Section 21.210.040 B. specifically addresses Standards Area compliance. Approved by the City Council in March 2006. Submitted to California Coastal Commission on April 3, 2006 – awaiting approval. E. The General Plan was revised to make conservation of habitat a priority use for the 15% of otherwise developable land which the Growth Management Plan already requires to be set aside for open space purposes (the City defines five categories of open space). Approved by the City Council July 2005. F. New subsections (§21.210.040 D.5, and §21.210.070 A.5) were added to the Municipal Code to address the protection of wetland habitat. The ordinance states that wetlands impacts will be avoided, minimized, or mitigated (in that order). Approved by the City Council in March 2006. Submitted to California Coastal Commission on April 3, 2006 – awaiting approval. Compliance is enforced on a project by project basis during environmental review. In addition, the City is developing Guidelines for Riparian and Wetlands buffers, which will further protect wetland habitat.

Table 13. Summary of City Compliance with HMP Requirements (*continued*)

IA Section	Obligation	City Compliance
11.4	Additional Implementation Measures: To implement measures included in MHCP.	<ul style="list-style-type: none"> ▪ The MHCP, HMP, and OSMP conservation measures are currently being implemented during the approval process for all development projects and preserve management activities. ▪ The City is preparing a compliance checklist for preserve managers that will include a list and schedule of required management and monitoring activities.
11.5	Regional Conservation: To effectuate the conservation of 307.6 acres of land within the MHCP Gnatcatcher Core Area, and convey the property to a qualified preserve manager.	<ul style="list-style-type: none"> ▪ The City has met 265 acres of its coastal sage scrub conservation obligation through up-front acquisition (50 acres), project mitigation (150 acres), and habitat enhancement credit (64 acres). ▪ The City must acquire an additional 43 acres, and reimburse Lennar (developer) for the 50 acres that were purchased up-front. ▪ A non-wasting endowment was established prior to final HMP approval to provide for management of the land in perpetuity. ▪ The Core Area properties are protected under a Conservation Easement, and are being monitored and managed by the Center for Natural Lands Management (CNLM). ▪ See Section 2.2.5 for more details.
11.6	Cooperative Regional Implementation: To participate in MHCP Elected Officials Committee.	<ul style="list-style-type: none"> ▪ To date, Carlsbad is the only MHCP jurisdiction with an approved subarea plan, so this is not applicable at this time. However, the City participates in meetings to discuss MHCP-wide issues with other MHCP jurisdictions and SANDAG as needed.
12.1 12.2 12.4 12.5	Monitoring and Reporting: To track habitat gains and losses within the HMP area (which should occur in rough step with one another); to maintain its database of biological resources; to submit an annual report by December 1 of each year; and to hold a public meeting to discuss HMP implementation; to provide the Wildlife Agencies with additional reports if necessary for compliance monitoring; and to certify all reports.	<ul style="list-style-type: none"> ▪ Habitat gains and losses are being tracked through Habitrak (See Section 3.1.2), which shows that conservation is occurring in rough step with development. ▪ Currently the City Planning Department is working with the Preserve Steward, preserve managers, and City GIS staff to determine the best approach to develop and manage monitoring data. ▪ Protocols and standards will be developed with regard to baseline surveys and monitoring (survey methods and data format), entry and attributing of GIS data, and data management. ▪ The first annual report was submitted to the Wildlife Agencies in January 2007. The City and Preserve Steward have discussed the annual reporting schedule with the Wildlife Agencies. Given that the initial three to five years of HCP/NCCP subarea plan implementation often include developing tools, guidelines, standards, and procedures that will facilitate reporting, the Agencies approved the current strategy of including all monitoring and compliance information for years 1-3 in this three-year summary report.

Table 13. Summary of City Compliance with HMP Requirements *continued*

IA Section	Obligation	City Compliance
12.3	Preserve Management and Monitoring Plan: To prepare a preserve management and monitoring plan that will detail recommendations in HMP Section F.	The Open Space Management Plan (OSMP) serves as the Preserve Management and Monitoring Plan described in IA Section 12.3, and the subarea framework management described in MHCP Vol. III, Section 1.2. The City hired consultant TAIC to prepare the OSMP. The name was changed from Preserve Management and Monitoring Plan to reduce confusion between this subarea-wide framework plan and the area-specific Preserve Management Plans that are prepared for individual preserves. The first complete draft was finalized in May 2004. The document was accepted by the Carlsbad City Council in December 2005. Currently the OSMP is being reviewed by the California Coastal Commission; however, the City is currently implementing OSMP policies.
13.0	Adaptive Management: To ensure that adaptive management does not result in less mitigation than proposed in the HMP or an increase in take.	<ul style="list-style-type: none"> ▪ The City complies with this policy by having ongoing discussions with preserve managers on management activities and by requiring adaptive management within all actively managed preserves. ▪ Carlsbad is developing a compliance checklist for the preserve managers; the checklist will include a section on adaptive management activities (pilot study design, methods, results, etc.).
14.0	<p>Funding:</p> <p>14.1 MCHP Core Area Participation</p> <p>14.2 Preserve Management and Monitoring Plan</p> <p>14.3 Management of City owned public lands</p> <p>14.4 Management of private lands in HMP area</p> <p>14.5 Management of Existing Hardline areas</p> <p>14.6 Program Administration</p> <p>14.7 Habitat In-Lieu-Mitigation Fees</p>	<p>14.1 The City has met 265 acres of its coastal sage scrub conservation obligation through up-front acquisition (50 acres), project mitigation (150 acres), and habitat enhancement credit (64 acres). The City must acquire an additional 43 acres, and reimburse Lennar (developer) for the 50 acres that were purchased up-front. Reimbursement and acquisition (in that order) will be paid for by in-lieu mitigation fees (See Section 2.2.5)</p> <p>14.2 The Preserve Management and Monitoring Plan (now called the Open Space Management Plan or OSMP) was completed in September 2004 using City funds.</p> <p>14.3 Based on the PAR submitted by CNLM, start up costs and ongoing management for City-owned preserves for the first three years of management will be \$818,130. In June 2007, the City Council approved a budget of \$357,000 for start up costs, and \$154,000 for annual maintenance. The PAR and scope of work are under City review..</p> <p>14.4 The City has required all private development projects to fully fund perpetual management of associated preserve land after the HMP was approved (2004).</p> <p>14.5 Hardline preserves in existence before the HMP was drafted are owned and managed by several other entities, including the CDFG and private HOAs.</p> <p>14.6 The City has contracted with Technology Associates (TAIC) to serve as the City’s Preserve Steward, who coordinates management throughout the Preserve System, and monitors HMP compliance and management effectiveness. The annual cost to the City for this administration and oversight service is \$125,000.</p> <p>14.7 The City has implemented an in-lieu-mitigation fee for new development that will pay for the City’s remaining Gnatcatcher Core Area obligations. See Section 4.2 for details.</p>

Table 14. Summary of City Compliance with Terms and Conditions of the NCCP Take Authorization/Permit

NCCP Permit Terms and Conditions (T&C)	Description of City Compliance
<p>Section 6.1 Conditions A through F are the same as those stated in A through F of the IA, Section 11.3 (See Table 13). They are summarized below.</p> <p>A. Urgency Ordinance –interim HMP enforcement.</p> <p>B. Amend OSC Element of General Plan to incorporate HMP.</p> <p>C. Amend Open Space Ordinance to incorporate Conserved Habitat Areas.</p> <p>D. Amend Municipal Code to incorporate Standards Area compliance.</p> <p>E. Amend General Plan to identify HMP as priority use for open space lands.</p> <p>F. Wetlands Protection Program.</p>	<p>See Table 13, IA Section 11.3.</p>
<p>G. This permit is subject to compliance with the MHCP Volumes I-III, HMP, including Addenda 1 and 2, and the IA.</p>	<p>All project approval within the City is subject to these requirements as a condition of approval.</p>
<p>H. Coverage for thread-leaved brodiaea and approval of the Fox-Miller Project. The conditions are as described in the USFWS 10(a) Permit Condition 7 (Table 15).</p>	<p>See Table 15, USFWS 10(a) Permit Condition 7 for a description of compliance.</p>
<p>I. All monitoring and reporting must comply with MHCP Vol I and III, and IA Section 12. Annual reports are due no later than December 1 of each year.</p> <p>MHCP Volume II includes the following policies and conditions:</p> <ul style="list-style-type: none"> • Standard Best Management Practices (Appendix B) • General Outline for Revegetation Plans (Appendix C) • Narrow Endemic Species and Critical Population Policies (Appendix D) • Conditions for Estuarine Species (Appendix E) • CEQA requirements for quantifying and mitigating impacts 	<p>See description for Condition G.</p> <p>MHCP Vol II policies and conditions are reviewed during regular HMP compliance review for all new projects within Carlsbad. In addition, these policies have been integrated and/or referenced in the Guidelines for Biological Studies (currently being finalized), which will assist City planners, developers, and biologists to understand and comply with all permit conditions.</p>

Table 15. Summary of City Compliance with the Terms and Conditions of the Federal ESA Section 10(a)(1)(B) Take Authorization/Permit.

FESA 10(a) Permit Terms and Conditions (T&C)	Description of City Compliance
<p>1. All sections of Title 50 Code of Federal Regulations (CFR) 13, 17.22, and 17.32 are conditions of this permit.</p>	<p>Appropriate language has been integrated into the HMP and IA; therefore, compliance with these documents ensures compliance with Title CFR sections.</p>
<p>2. The permittee is subject to compliance with the MHCP, HMP, and IA.</p>	<p>The City complies with all regulations as described in Tables 13 and 14.</p>
<p>3. The amount and form of take are authorized as described below. Referenced tables are from Attachment 2 of the T&C, and are the same as List 1-3 Species in HMP Section C. Coverage for species in HMP Tables 2 and 3 below require the City to submit in writing a request for coverage, including documentation showing compliance.</p>	<p>See next page.</p>

Table 15. Summary of City Compliance with Terms and Conditions of Federal ESA Section 10(a) Take Authorization/Permit *continued*

FESA 10(a) Permit Terms and Conditions (T&C)	Description of City Compliance
<p>3. <i>continued</i></p> <p><u>Table 1. (a) No take authorized for the following species:</u></p> <p><i>Chorizanthe orcuttiana</i> – Orcutt’s spineflower <i>Dudleya blockmaniae</i> ssp. <i>blockmaniae</i> – Blochman’s dudleya <i>Euphorbia misera</i> – Cliff spurge <i>Hazardia orcuttii</i> – Orcutt’s hazardia <i>Quercus dumosa</i> – Nuttall’s scrub oak <i>Pelecanus occidentalis californicus</i> – California brown pelican <i>Falco peregrinus</i> – American peregrine falcon <i>Rallus longirostris levipes</i> - Light-footed clapper rail <i>Sterna antillarum brownii</i> – California least Tern <i>Charadrius alexandrinus nivous</i> – Western snowy plover <i>Sterna elegans</i> – Elegant tern</p> <p><u>Table 1. (b) Take authorization is or will be (upon listing) granted for:</u></p> <p>Listed species: <i>Epidonax traillii extimus</i> – Southwestern willow flycatcher <i>Vireo bellii pusillus</i> – Bell’s vireo <i>Poliophtila californica californica</i> – Coastal California gnatcatcher</p> <p>Not yet listed: <i>Panoquina errans</i> – Salt marsh skipper <i>Euphyes vestries harbisoni</i> – Harbison’s dun skipper <i>Plegadis chihi</i> – white-faces ibis <i>Accipiter cooperi</i> – Cooper’s hawk <i>Pandion haliaetus</i> - Osprey <i>Icteria virens</i> – Yellow-breasted chat <i>Aimphila ruficeps canescens</i> – California rufous-crowned sparrow <i>Passerfulus sandwhichensis beldingii</i> – Belding’s savannah sparrow <i>P.s. rostratus</i> – Large-billed savannah sparrow <i>Cnemidophorus hyperythrus beldingii</i> – Orange-throated whiptail</p> <p><u>Table 2. Take authorization contingent upon other MHCP subarea plans being permitted for the following species:</u></p> <p><i>Acanthomintha ilicifolia</i> – San Diego thornmint <i>Ambrosia pumila</i> – San Diego Ambrosia <i>Ceanothus verrucosis</i> – Wart-stemmed ceanothus <i>Dudleya viscida</i> – Sticky dudleya <i>Ferocactus viridescens</i> – San Diego barrel cactus <i>Quercus engelmannii</i> – Engelmann oak</p> <p><u>Table 3. (a) Take authorization contingent upon adequate funding and legal access to manage and monitor the following species:</u></p> <p><i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i> – Del Mar Manzanita <i>Baccharis vanessae</i> – Encinitas baccharis <i>Brodiaea filifolia</i> – Thread-leaved brodiaea <i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> – Summer Holly <i>Corethrogyne filaginifolia</i> var. <i>linifolia</i> – Del Mar sand aster <i>Pinus torreyana</i> ssp. <i>torreyana</i> – Torrey pine</p>	<p><u>Table 1 (a).</u> No take of these species has been authorized by the City.</p> <p><u>Table 1 (b).</u> The city has authorized take only for the listed species as summarized below:</p> <p>Coastal California gnatcatcher: -Carlsbad Golf Course (HMP 04-01) -Palomar Point (HMP 05-02)</p> <p><u>Table 2.</u> No other MHCP subarea plans have been permitted, and therefore no take of these species has been granted by the City.</p> <p><u>Table 3.</u> Take authorization for thread-leaved brodiaea was granted by the Wildlife Agencies to the City on December 2, 2005 based upon the management required for Fox-Miller property..</p>

Table 15. Summary of City Compliance with Terms and Conditions of Federal ESA Section 10(a) Take Authorization/Permit *continued*

FESA 10(a) Permit Terms and Conditions (T&C)	Description of City Compliance
<p><u>Table 3. (b) Take is contingent upon (a), described above, and the City receiving legal control over</u> the vernal pools adjacent to the Poinsettia Train Station.</p> <p><i>Eryngium aristulatum</i> var. <i>parishii</i> – San Diego button-celery <i>Myosurus minimus</i> ssp. <i>apus</i> – Little mouse-tail <i>Navarretia fossalis</i> – Spreading navarretia <i>Orcuttia californica</i> – California Orcutt grass <i>Streptocephalus woottoni</i> - Riverside fairy shrimp <i>Branchinecta sandeigonenis</i> - San Diego fairy shrimp</p> <p><u>Table 3. (b) Take is contingent upon (a) and (b), described above, and upon other</u> MHCP subarea plans being permitted.</p> <p><i>Iva hayesiana</i> – San Diego marsh elder</p>	<p>The City has not taken legal control of the Poinsettia Lane Vernal Pools and has not requested take for vernal pool species.</p> <p>No other take authorizations have been requested.</p>
<p>4. The FESA Section 10(a) constitutes a Special Purpose Permit for the take of HMP covered species which are listed as threatened or endangered under the FESA, and which are also protected by the Migratory Bird Treaty Act of 1918, as amended. The Special Purpose Permit will be valid for three years after effective date and may be renewed as long as 10(a) permit conditions are being met.</p> <p><i>Sterna antillarum browni</i> - California least tern <i>Epidonax traillii extimus</i> - Southwestern willow flycatcher <i>Vireo bellii pusillus</i> - Least Bell's vireo <i>Passerculus sandwichensis beldingi</i> - Belding's savannah sparrow</p>	<p>The Special Purpose Permit has been in effect during the current reporting period. No take of these species has been granted.</p>
<p>5. The Permittee shall not allow clearing and grubbing in known or potentially occupied California gnatcatcher habitat between February 15 and August 31.</p>	<p>This requirement is included in Municipal Code 21.210.040 and HMP Table 9. Compliance is a condition of approval for every new development project.</p>
<p>6. Specific standards (described in the T&C) must be met if the City proceeds with any of the following plans:</p> <p>(a) Cannon Road Reach 4 (b) Extension of Melrose Drive through the Shelley Property (c) Marron Road through the Sherman Property</p>	<p>None of these projects have been proposed at this time.</p>
<p>7. To receive coverage for thread-leaved brodiaea, the City must demonstrate that</p> <p>(a) The Fox-Miller project meets the narrow endemic standards for this critical location and major population of this species (b) The proposed hardline shown in Addendum 2 (2003) of the HMP is not permitted (it does not meet the MHCP standards) (c) The Agencies must concur with the Fox-Miller project proposal, and the conserved area must be managed and monitored to MHCP standards in perpetuity (d) If all conditions are met, the Fox-Miller project can be permitted under the HMP through the HMP amendment process</p>	<p>(a) The boundary for the brodiaea population has been established. (b) The boundary was expanded. (c) The Agencies have approved the Fox-Miller project; The Brodiaea site is currently under management/monitoring by RECON. Long term management will be provided by HCC (still pending). (d) Brodiaea coverage was granted by the Agencies through a minor amendment December 2, 2005.</p>
<p>8. To minimize impacts to the California gnatcatcher, rufous-crowned sparrow, and orange-throated whiptail the City must:</p> <p>(a) Maintain and/or widen the habitat corridor between the City and Oceanside as much as feasible, and (b) If the driving range adjacent to the Kelly/Bartman property is proposed for a different use, the City will ensure that an on-site corridor is established on the driving range property.</p>	<p>(a) The corridor on the northeast boundary of Carlsbad is conserved. Along the northern boundary, the Sherman property was acquired in 2007, resulting in 100% conservation, and the Summit property will likely be acquired by CDFG. (b) No other uses for this property have been proposed at this time.</p>

Table 15. Summary of City Compliance with Terms and Conditions of Federal ESA Section 10(a) Take Authorization/Permit *continued*

FESA 10(a) Permit Terms and Conditions (T&C)	Description of City Compliance
9. As part of the project review process, a qualified biologist shall survey for all species with immediate and conditional coverage.	The City has included this as a condition of approval for all new projects.
10. The City will contact the USFWS Carlsbad Office immediately regarding any violations or potential violations of the FESA or Migratory Bird Treaty Act.	The City regularly communicates with the USFWS on regulatory issues, contacts the appropriate personnel immediately upon learning of any potential problems.
11. The City will notify the USFWS within one working day of finding any dead, injured, or sick threatened or endangered species.	No such individuals have been reported to or observed by the City.
12. All monitoring and reporting for this permit shall be in compliance with the MHCP (Vol I and III) and the IA (Section 12).	See IA Section 12 discussion in Table 13 above for compliance information.
13. A copy of this permit must be on file with the City, its authorized agents, and third parties under the jurisdiction and direct control of the City.	A copy of this permit is on file with the City and is available to any interested parties.

3.1.2 City Compliance with HMP Zone-Wide Standards

The City is also required to ensure that all projects within Standards Areas comply with the zone-specific standards outlined in HMP Section D. All projects that occur within a Standards Area are processed as a Consistency Finding. During this process, it must be demonstrated that the project complies with the standards before the project will be approved by the City and Wildlife Agencies, and therefore all development within standards areas are consistent with the HMP.

A total of 181.0 acres of coastal sage scrub occurs within standards areas throughout the HMP. To date, 17.9 acres have been lost (9.6%), and 51.1 acres have been conserved (27.4%). Zone-wide standards require at least 67% (124.8 acres) of the coastal sage scrub to be conserved. Therefore, the City must conserve at least 73.7 more acres of coastal sage scrub within the Standards Areas at build-out. Table 16 summarizes property-specific and linkage-related standards and current status. Refer to HMP Section D pp. D-73 through D-82 for additional zone-specific standards.

Table 16. Compliance with Zone-Wide Standards through Year 3

Zone	Zone-Specific Standard	Current Status
All zones	A minimum of 67% of coastal sage scrub and 75% of the gnatcatchers shall be conserved overall within the Standards areas.	Total coastal sage scrub habitat within standards areas: 186.3 acres ¹ . Coastal sage scrub loss = 17.9 acres (9.6%) Coastal sage scrub gains = 51.1 acres (27.4%). An additional 73.7 acres must be conserved to meet 67% conservation in the Standards Areas. Occupied gnatcatcher habitat is mitigated at 2:1, therefore there will be no net loss of gnatcatchers within standards areas. No direct mortality of gnatcatchers has been reported.
Zone 1	Preserve at least 50% of CSS and avoid areas occupied by gnatcatchers. Applies to several vacant lots on north shore of Agua Hedionda Lagoon and a larger, vacant in-fill lot SW of El Camino Real and Kelly Drive	Vacant lots on north shore of Agua Hedionda: no projects have been finalized for these parcels. In-fill parcel: Aura Circle property was changed to a Proposed Hardline preserve in the HMP mapping during Coastal Commission processing however HMP.text was not corrected.
Zone 2	1. Kelly/Bartman property: 50% of this property shall be conserved and must form a continuous corridor from the SE corner of the property to the northern edge. 2. Spyglass property: grasslands impacted on this property shall have offsite mitigation at 2:1 ratio	The Kelly-Bartman property, aka the Summit, is an Existing Hardline preserve that was approved with 50% conservation an open space corridor, from the SE to the northern site boundary., The Spyglass property has been developed and grassland impacts were mitigated at a 2:1 ratio through restoration at Carlsbad Highlands Mitigation Bank. This project was compliant with all other standards.
Zone 8	1. Kirgis property: a maximum of 25% can be developed. 2. Callaghan property: a maximum of 50% can be developed. No impacts to narrow endemic species on either property.	Kirgis property: the property was approved with 75% percent conservation., Callaghan property: no final map has been approved for this property.
Zone 14	Areas of upland habitat outside Linkage B may be taken in exchange for restoration and enhancement inside of the linkage as long as the result is conservation of at least 67% coastal sage scrub and associated gnatcatcher populations within southern portions of the zone.	Projects: Robertson Ranch East was approved by the City and wildlife agencies in 2007. Out of a total of 197.3 acres of coastal sage scrub in zone 14, 11.3 acres (5.7%) has been impacted. A total of 154.0 acres (78%) of the coastal sage scrub has already been conserved.
Zone 15	Maintain and enhance habitat linkages across Linkage C and adjoining Cores 3 and 5. Areas of upland habitat outside Linkage C may be taken in exchange for restoration and enhancement inside of the linkage as long as there is a no net loss of coastal sage scrub and associated gnatcatcher populations within southern portions of the zone.	Terraces at Sunny Creek occurs within Core Area 5; no net loss of coastal sage scrub has occurred. No other projects have final City/Agency approval.
Zone 20	Create continuous habitat through Linkage F between Core Areas 4 and 6. No net loss of coastal sage scrub or maritime succulent scrub within standards areas of the zone.	Projects: Emerald Pointe and North Coast Calvary Chapel. Both projects were processed through a Consistency Finding and approved by the City and Wildlife Agencies. No net loss of coastal sage scrub or maritime succulent scrub occurred.
Zone 21	Ensure habitat connectivity and wildlife movement east-west across the zone.	The Manzanita project was a Proposed Hardline preserve area in the HMP and approved as shown by the City and Wildlife Agencies. It provides east-west connectivity from El Camino Real to the project boundary.
Zone 25	At least 75% of the Sherman property must be conserved.	As of March 2007, 100% of the Sherman property has been conserved.

¹ Note that the number used for total acres of coastal sage habitat within standards areas was taken from the MHCP vegetation layer, which has not been ground-truthed. Vegetation mapping is verified on the ground on a project by project basis.

3.1.2 Habitat Gains and Losses

Pursuant to the HMP and IA, the City is required to provide an annual accounting of the amounts and locations of habitat lost and conserved over time due to public and private development projects and land acquisition. This information will be used to demonstrate to the Wildlife Agencies that (a) habitat loss is occurring in rough step with development, (b) the HMP Preserve System is being assembled as anticipated, and (c) the habitat conservation goals of the HMP are being achieved. Habitrak is a software tool that was designed to satisfy these tracking and reporting requirements by providing standard tracking protocols and reporting output. It uses standard baseline spatial databases (e.g. vegetation, preserve boundaries, and parcel boundaries) and development project footprints to prepare standardized tables and maps for annual reporting.

The number of acres of each habitat projected to be conserved in the Carlsbad Preserve System at build-out is given in Table 8 of the HMP (reproduced in Table 17 below), including 6,478 acres of habitat within the City and an additional 307.6 acres of habitat within the gnatcatcher core area outside of City limits (note that some of these requirements have been met through habitat enhancement within the HMP). According to this table, the total projected amount of conserved land is 6,786 acres. However, the Implementing Agreement states that the City is obligated to establish a preserve of 6,757 acres, a difference of 29 acres. At this time the origin of this discrepancy is unknown.

Habitrak is used by the City to calculate the number of acres added to the Preserve System every year (although it does not calculate gains within the core area which is outside of the City limits). Some of the habitat types used in the standard Habitrak table outputs are more specific than those used in HMP Table 8. To make it easier to compare the Habitrak tables with the HMP table for compliance monitoring, Table 17 lists acres of target conservation and compares habitat categories in HMP Table 8 to categories used in Habitrak. Note that the GIS data layers used for this analysis included the more detailed habitat categories. See Section 2.1 for a description of the baseline data condition and the assumptions used when setting up Habitrak for Carlsbad.

**Table 17. HMP Target Conservation of Habitats
(Comparison of Habitat Categories in HMP and Habittrak)**

HMP Table 8		Habittrak	
Habitat Type	Target Acres	Habitat type	Target Acres
Coastal sage scrub	2,139	Maritime succulent scrub	29
		Coastal sage scrub	2,003
		Coastal sage-chaparral scrub	107
		<i>Subtotal</i>	<i>2,139</i>
Chaparral	676	Chaparral	676
Southern maritime chaparral	342	Southern maritime chaparral	342
Oak woodland	24	Coast live oak	20
		Other oak woodland	4
		<i>Subtotal</i>	<i>24</i>
Riparian	494	Riparian forest	82
		Riparian woodland	17
		Riparian scrub	395
		<i>Subtotal</i>	<i>494</i>
Marsh	1,252	Southern coastal salt marsh	143
		Alkali marsh	9
		Freshwater marsh	165
		Freshwater	53
		Estuarine	789
		Disturbed wetland	93
<i>Subtotal</i>	<i>1,252</i>		
Grassland	707	Grassland	707
Eucalyptus woodland	99	Eucalyptus woodland	99
Disturbed lands	745	Agriculture	185
		Disturbed Land	244
		Developed	316
		<i>Subtotal</i>	<i>745</i>
Total Target Conservation within Carlsbad	6,478	Total Target Conservation within Carlsbad	6,478
Carlsbad's Gnatcatcher Core Area Contribution	308 ¹	Not tracked in Habittrak	N/A
Total HMP Target Conservation	6,786		

¹ Rounded to the nearest acre.

Table 18 shows cumulative totals of habitat gains and losses through the end of year three (a) within and outside of the HMP Preserve System, not including the Gnatcatcher Core Area, and (b) by habitat type, and (c) as a percentage of the target conservation. To date, a total of 5956.7 acres have been preserved, which is 92% of the target acreage. Because Existing Hardline Areas were already conserved prior to HMP approval, these areas were included in the baseline as conserved habitat. Table 19 (1999-October 2004) refers to "Year 0, Pre-HMP" because this is the time period between preliminary and final HMP approval. (The HMP was approved by the

Table 18. Summary of Habitat Losses and Gains

Year 0 - Year 3

Begin Period: 1/1/2000
 End Period: 10/31/2007
 Duration in days: 2861

Habitat Type	Target Cons.	Inside the Habitat Preserve Planning Area					Outside the Habitat Preserve				Total			
		Habitat Loss		Habitat Gain			Habitat Loss		Habitat Gain		Habitat Loss		Habitat Gain	
		Current Period	Cumulative	Current Period	Cumulative	Cons. to Date %	Current Period	Cumulative	Current Period	Cumulative	Current Period	Cumulative	Current Period	Cumulative
Maritime Succulent Scrub	29	1.6	1.6	5.1	25.5	88.0	0.0	0.0	0.0	0.0	1.6	1.6	5.1	25.5
Coastal Sage Scrub	2,003	11.4	11.4	466.3	1,731.1	86.4	223.5	223.5	0.0	0.0	234.9	234.9	466.3	1,731.1
Chaparral	676	0.6	0.6	71.6	597.6	88.4	70.3	70.3	0.0	0.0	70.9	70.9	71.6	597.7
Southern Maritime Chaparral	342	0.0	0.0	42.9	328.5	96.1	20.2	20.2	0.0	0.3	20.2	20.2	42.9	328.8
Coastal Sage-Chaparral Scrub	107	0.0	0.0	87.1	112.4	105.1	153.5	153.5	0.0	0.0	153.5	153.5	87.1	112.4
Grassland	707	21.2	21.2	218.4	637.0	90.1	233.5	233.5	0.2	0.2	254.7	254.7	218.6	637.2
Southern Coastal Salt Marsh	143	0.0	0.0	0.0	127.8	89.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	127.8
Alkali Marsh	9	0.0	0.0	4.5	4.5	49.9	3.0	3.0	0.0	0.0	3.0	3.0	4.5	4.5
Freshwater Marsh	165	0.0	0.0	13.8	148.1	89.8	1.4	1.4	0.0	0.3	1.4	1.4	13.8	148.3
Riparian Forest	82	0.9	0.9	40.8	63.3	77.2	1.3	1.3	0.4	0.4	2.2	2.2	41.2	63.7
Riparian Woodland	17	1.3	1.3	13.8	14.1	82.9	0.1	0.1	0.0	0.0	1.4	1.4	13.8	14.1
Riparian Scrub	395	0.1	0.1	110.1	370.5	93.8	10.0	10.0	0.5	0.5	10.0	10.0	110.6	371.0
Coast Live Oak	20	0.0	0.0	12.0	12.0	59.9	0.4	0.4	0.0	0.0	0.4	0.4	12.0	12.0
Other Oak Woodland	4	0.0	0.0	0.0	4.8	120.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Freshwater	53	0.0	0.0	0.5	51.7	97.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	51.7
Estuarine	789	0.0	0.0	0.0	776.4	98.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	776.4
Disturbed Wetland	93	0.0	0.0	18.3	88.6	95.3	11.7	11.7	0.0	0.0	11.7	11.7	18.3	88.6
Agriculture	185	117.0	117.0	155.0	207.1	112.0	497.6	497.6	0.1	0.1	614.6	614.6	155.1	207.2
Eucalyptus Woodland	99	1.3	1.3	9.2	97.3	98.3	9.6	9.6	0.0	0.0	11.0	11.0	9.2	97.3
Disturbed Land	244	0.0	0.0	57.3	245.8	100.7	124.2	124.2	0.0	0.0	124.2	124.2	57.3	245.9
Urban/Developed	316	13.0	13.0	30.0	310.5	0.0	121.3	121.3	0.0	0.1	134.3	134.3	30.0	310.7
Grand Total:	6,478	168.4	168.4	1,356.6	5,954.7		1,481.6	1,481.6	1.3	2.0	1,650.0	1,650.0	1,357.9	5,956.7

Wildlife Agencies in 1999, but not by the Coastal Commission; as such, projects were being processed as if the HMP was in place, but final approval was not granted until November 2004, after the HMP had been amended). Tables 20 - 22 cover years one, two, and three (November 1 – October 31; 2004-2005; 2005-2006; and 2006-2007, respectively) of HMP implementation. Table 18 is the original table produced by Habitrak. Tables 19 – 22 were created from Habitrak tables, but gain and loss information was combined into a single table for each year for simplicity. Original Habitrak tables are included in Appendix B. Figure 8 shows the baseline condition of the Preserve System, and Figure 9 shows gains and losses that have occurred during years 0 through 3.

Table 19. Summary of Project Losses and Gains, Year 0 (pre-HMP)

Project Name	Grading Permit Date	Date Conserved ¹	Acres ²		
			Losses	Potential Gains	Conserved
Aviara	4/26/04	4/26/04	140.69	43.94	43.94
Aviara Point	10/29/04	N/A	4.53	0	
Black Rail Ridge	5/18/04	N/A	3.16	0	
Bressi Ranch	1/24/03	pending	419.19	153.74	
Calavera Hts, Village K	1/2/02	11/04	16.16	33.34	33.34
Kelly Ranch	6/18/03	2/1/02	133.84	52.82	52.82
Manzanita	9/26/03	pending	12.67	30.73	
Redeemer	10/29/02	11/04	9.67	.77	.77
Spyglass	7/3/01	N/A	10.61	0 ³	
Steiner Property	1/5/00	N/A	1.84	0	
Tabata 2001	1/17/01	N/A	5.60	0	
Tabata 2002	9/1/04	N/A	4.48	.42	.42
Terraces at Sunny Creek	4/26/00	pending	50.05	44.36	
TOTALS			812.49	361.12	131.29

¹ Preserves that have not completed all conservation requirements are considered “pending” and not formally conserved. “N/A” = Not Applicable; used for projects that mitigated through fees or offsite mitigation.

² All projects that are currently tracked in Habitrak are associated with the HMP, and therefore gains and losses inside the HMP vs. outside the HMP have been collapsed for simplicity. This issue will be addressed when projects outside of the HMP are incorporated into Habitrak.

³ Offsite mitigation (habitat gain) for Spyglass project was counted as part of Carlsbad Highlands Mitigation Bank, an Existing Hardline which is now part of the Carlsbad Highlands Ecological Reserve.

Table 20. Summary of Project Loss and Gains, Year 1

Project Name	Grading Permit Date	Date Conserved ¹	Acres ²		
			Losses	Potential Gains	Conserved
Cantarini/Holly Springs	12/7/04	Pending	138.12	234.15	
Carlsbad Oaks North	11/12/04	6/06	195.43	221.26	221.26
North Coast Calvary Chapel	11/17/04	6/21/06	14.56	10.71	10.71
Municipal Golf Course	12/06/04	Pending	188.13	207.10	
Palomar Point/Hieatt	2/3/05	2/3/05	7.11	6.51	6.51
Raceway	12/1/04	Pending	92.61	44.71	
Shelley	8/17/05	Pending	28.55	48.86	
TOTALS			664.51	773.30	238.48

¹ Preserves that have not completed all conservation requirements are considered “pending” and not formally conserved.

² All projects that are currently tracked in Habitrak are associated with the HMP, and therefore gains and losses inside the HMP vs. outside the HMP have been collapsed for simplicity. This issue will be addressed when projects outside of the HMP are incorporated into Habitrak.

Table 21. Summary of Project Losses and Gains, Year 2

Project Name	Grading Permit Date	Date Conserved ¹	Acres ²		
			Losses	Potential Gains	Conserved
Emerald Point Estates	3/21/06	04/07	6.49	9.43	9.43
Fox-Miller	12/28/05	Pending	35.62	16.33	
Yamamoto	4/17/06	N/A	4.92	0	
TOTALS			47.03	25.76	9.43

¹ Preserves that have not completed all conservation requirements are considered “pending” and not formally conserved. “N/A” = Not Applicable; used for projects that mitigated through fees or offsite mitigation.

² All projects that are currently tracked in Habitrak are associated with the HMP, and therefore gains and losses inside the HMP vs. outside the HMP have been collapsed for simplicity. This issue will be addressed when projects outside of the HMP are incorporated into Habitrak.

Table 22. Summary of Project Losses and Gains, Year 3

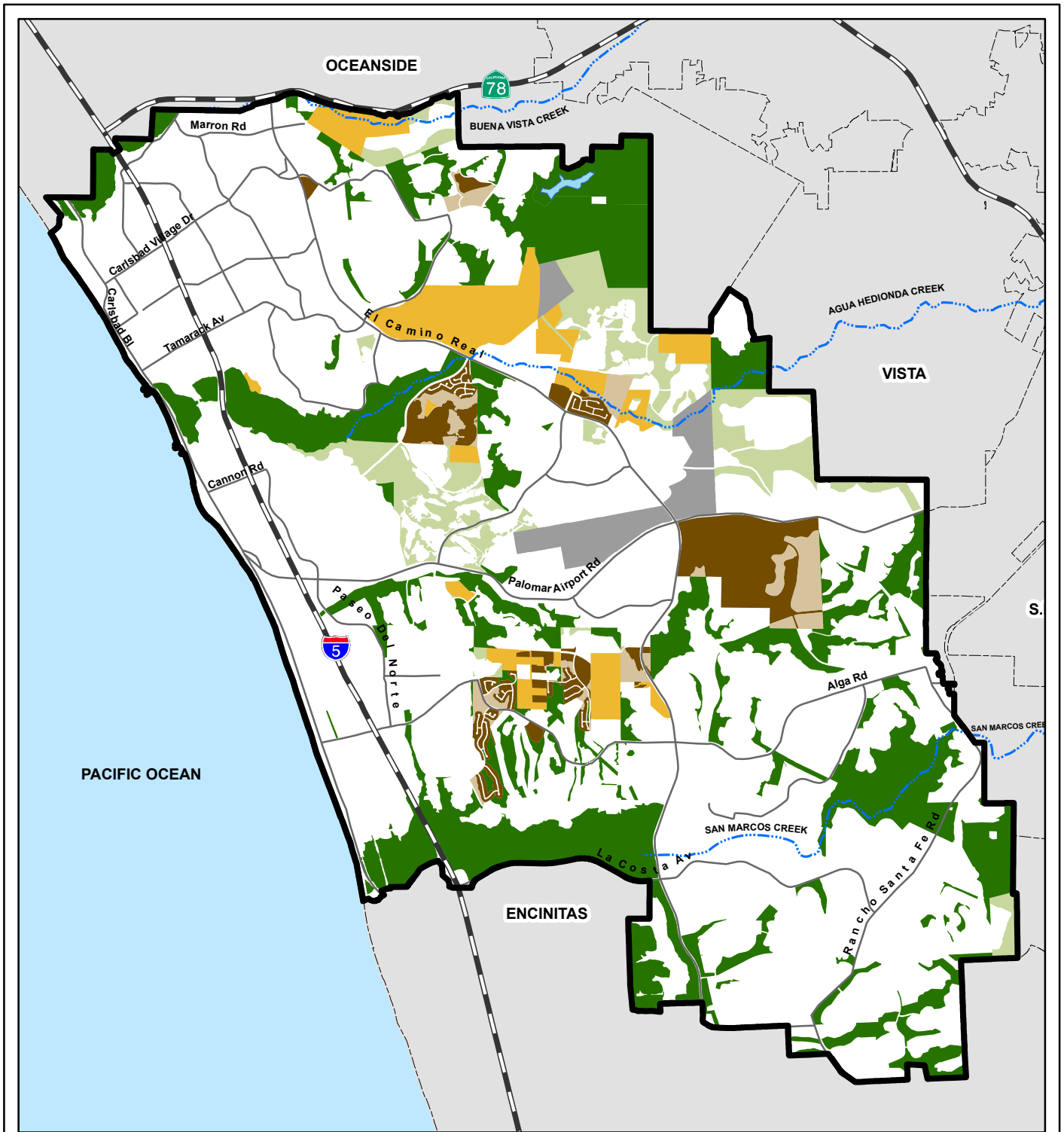
Project Name	Grading Permit Date	Date Conserved	Acres ¹		
			Losses	Potential Gains	Conserved
Robertson Ranch East	1/16/07	2/6/07	125.95	71.97	71.97
Sherman	N/A	3/31/07	0	133.51	133.51
TOTALS			125.95	205.48	205.48

¹ All projects that are currently tracked in Habitrak are associated with the HMP, and therefore gains and losses inside the HMP vs. outside the HMP have been collapsed for simplicity. This issue will be addressed when projects outside of the HMP are incorporated into Habitrak.

It is important to note the following when reviewing the tables:

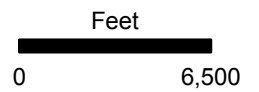
- Proposed Hardline areas were pre-negotiated (with Wildlife Agencies and the City) areas of mitigation for proposed projects. When setting preserve boundaries during the development of the HMP, only the future preserve areas were included in the HMP; proposed project-related losses were not included, and therefore these losses show up as losses outside of the preserve (shown in Table 18).
- Table 18 shows a cumulative total of 2.0 acres of habitat gain outside of the preserve. This is likely due to (a) misregistration of data, (b) an error in precision, or (c) slight misalignment artifacts during GIS processing. This will be rectified for the next report.
- As described in Section 2.1, the grading permit date was used for both gain and loss because it was easy to track and that allowed GIS staff to input the data while other information was being gathered.
- A piece of land is not considered “conserved” until all of the following elements are in place: PAR, endowment, Conservation Easement, and management agreement for a Preserve Manager.
- All properties that are lacking at least one required element are labeled “pending” in Tables 19 – 22 to show that they are not technically “conserved” yet, and the totals in the far right-hand column reflect this.
- To date, projects outside of the HMP (with the exception of projects that resulted in Proposed Hardline areas) have not been tracked. As such, gains and losses inside vs. outside of the preserve have been collapsed in Tables 19 – 22 for simplicity. This issue will be addressed when projects outside of the HMP are added to Habitrak.
- Projects that mitigated impacts with in-lieu habitat mitigation fees have not been incorporated into Habitrak yet, because the information was not available when Habitrak was being set up. However, Table 29 shows a breakdown of all fees paid and acres lost for these projects.

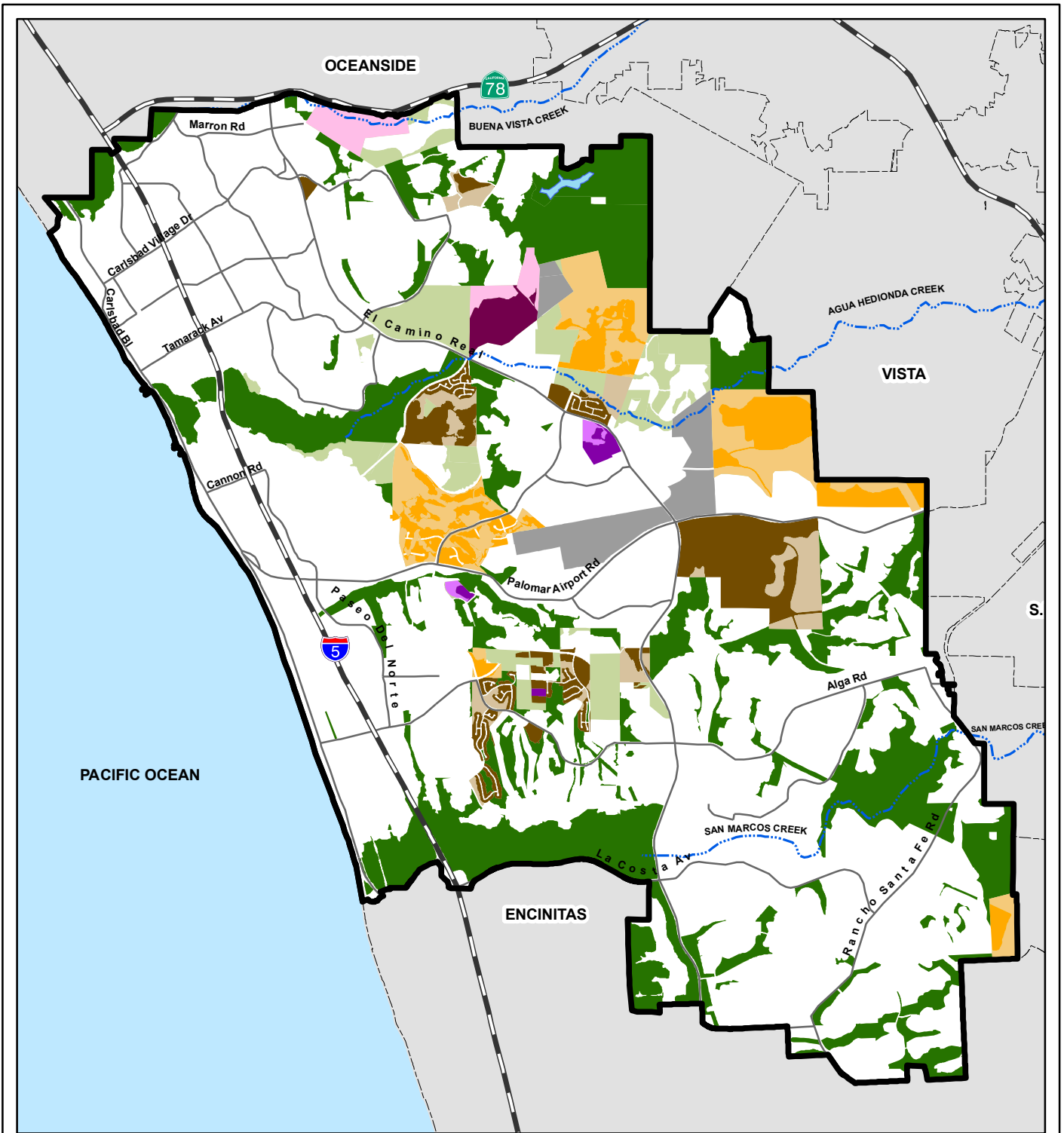
The majority of acreage in the Preserve System comes from pre-existing preserves that were included in the baseline condition. During the period between preliminary and final HMP approval, a total of 812.49 acres were lost and 131.29 acres were gained within the Preserve System. An additional 837.49 acres were lost and 453.39 acres were gained during years 1-3. Because of the HMP standards that have been incorporated into the Municipal Code, habitat losses have occurred in rough step with habitat gains, as mitigation for potential impacts to sensitive habitat and covered species is required as a condition of project approval.



- Legend**
- Preserved Prior to 1/1/2000 (Baseline)
 - Preserved in 2004
 - Take in 2004
 - Proposed Standards Area
 - HMP Preserve Area With No Projects in 2004
 - Not A Part

- Basemap Legend**
- City of Carlsbad
 - Jurisdictional Boundary
 - Freeway
 - Major Road
 - River
 - Lake





Legend

- | | |
|-------------------------------------|--|
| Existing Hardline Conservation Area | HMP Preserve Area With No Current Projects |
| Gain in Year 0 | Not A Part |
| Loss in Year 0 | |
| Gain in Year 1 | |
| Loss in Year 1 | |
| Gain in Year 2 | |
| Loss in Year 2 | |
| Gain in Year 3 | |
| Loss in Year 3 | |

Basemap Legend

- | |
|-------------------------|
| City of Carlsbad |
| Jurisdictional Boundary |
| Freeway |
| Major Road |
| River |
| Lake |



Feet

0 6,500

In addition to the HMP requirement of conserving 6,478 acres of habitat within the City and 307.6 acres within the Gnatcatcher Core Area, the MHCP discusses the need for 104 acres of restored coastal sage scrub habitat within the City (MHCP Vol I, Table 3-4), although “acres listed by city are not necessarily the responsibility of that city.” There is no mention of any restoration obligation in the HMP or the IA, and it appears that the City has met this target. The *USFWS Findings and Recommendations for the Issuance of Section 10(a)(1)(B) Incidental Take Permit*, Section E states “Shortly after receiving their permit for the HMP, the City is expected to meet and exceed the 104 acres of coastal sage scrub revegetation expected in Section 3.3.2 of MHCP Volume 1.” The breakdown of restored habitat is given in 23.

Table 23. Components of MHCP Habitat Restoration Obligation Fulfilled by Carlsbad

Project	Acres
Carlsbad Raceway	17.5
Palomar Forum	1.57
Carlsbad Oaks North	20.9
Carlsbad Oaks North (restoration on Carlsbad Highlands Mitigation Bank)	20
Calavera Hills (restoration on Robertson Ranch)	10
Robertson Ranch	21
Municipal Golf Course	15.4
Total Restored Habitat	106.37

3.1.3 HMP Permits and Amendments

From the inception of the HMP through October 2007, 31 HMP permits for private and public development projects have been reviewed by the City, 19 of which have been issued (Table 24). No major amendments have been processed. The following Equivalency Findings (minor amendments) have been processed since the inception of the HMP program:

- **12/09/2004 The Callaway Golf Testing Facility Expansion Project** footprint extended into city-owned property northwest of the facility. This resulted in a minor modification to the hardline for the Carlsbad Municipal Golf Course. The area of impact included 0.57 acres of Eucalyptus woodland, which was replaced

by 0.59 acres of land revegetated with coastal sage scrub species, coast live oak trees, and California sycamore trees.

- **7/20/2006 The Cantarini/Holly Springs Projects.** The acreage of the original hardline preserve for Cantarini was 51.31 acres, and was adjusted to 52.57 acres of “equal or better” habitat.
- **2/15/2007 Robertson Ranch.** (a) The “Tamarack Connection” component of the project would have impacted 1.66 acres of existing hardline. The hardline was adjusted to add 2.30 acres immediately east and west of the Tamarack Connection. (b) The brush management limits along the western side of HMP Link B were moved 60 feet to the west, increasing the hardline area in Link B by 1.93 acres. The brush management zone would remain outside of the preserve and disturbed portions of the 1.93 acres would be revegetated with coastal sage scrub. (c) traffic calming features would be implemented to protect wildlife mortality. The modifications will result in an addition of 4.23 acres to the HMP hardline preserve to mitigate for the loss of 1.66 acres (a net gain of 2.57 acres).

Table 24. HMP Permits Issued During Years 1-3.

HMP Permit No.	Project Name	Date	Status
HMP 04001	Carlsbad Golf Course	11/24/2004	Approved
HMP 04002	NAHI – West	12/08/2004	Approved
HMP 04003	Javaheri Residence	12/09/2004	Approved
HMP 04004	Rancho Cazadero	12/10/2004	Approved
HMP 05001	Fox/Miller Property	01/06/2005	Approved
HMP 05002	Palomar Pointe	02/24/2005	Approved
HMP 05003	Lake Calavera Improvements	03/24/2005	Approved
HMP 05004	Shelley Property	04/20/2005	Approved
HMP 05005	Fox/Miller	06/01/2005	Approved
HMP 05006	Cassia Professional Offices	08/10/2005	Approved
HMP 05007	Worsch Residence	11/22/2005	Approved
HMP 05008	Encina Generating Station	11/23/2005	Approved
HMP 06001	Fire Station No. 6	03/20/2006	Approved
HMP 06002	Johnson Residence	03/31/2006	Pending
HMP 06003	Agua Hedionda Creek	04/04/2006	Pending
HMP 06004	Robertson Ranch	04/14/2006	Approved
HMP 06005	Chevron Environmental	05/23/2006	Approved
HMP 06006	La Costa Condominiums	08/28/2006	Approved
HMP 06007	Encina East Stormwater	09/21/2006	Pending

Table 24. HMP Permits Issued During Years 1-3 *continued*

HMP Permit No.	Project Name	Date	Status
HMP 06008	Poinsettia Place	09/25/2006	Approved
HMP 06009	Dos Colinas	10/19/2006	Incomplete
HMP 06011	La Costa Glen Corporate	11/02/2006	Approved
HMP06012	Aura Circle	12/15/2006	Pending
HMP 07001	Rancho Carrillo Trail Extension	01/04/2007	Pending
HMP 07002	Muroya Subdivision	01/10/2007	Incomplete
HMP 07003	Admani Residence	03/14/2007	Approved
HMP 07004	Adams Street Subdivision	04/23/2007	Incomplete
HMP 07005	Villagio – Kelly Ranch	05/14/2007	Pending
HMP 07006	S. Coast Materials Quarry	07/31/2007	Pending
HMP 07007	Seascape	08/23/2007	Pending
HMP 07008	El Camino Real Rd Widening	09/19/2007	Pending

3.1.4 Implementing Guidelines

In support of the HMP, the City and Preserve Steward are working together to develop a series of guidelines that will clarify HMP-related policies and regulations for staff, private developers, consultants, and the general public. These documents do not create additional policies or requirements, rather they are intended to assist users in understanding and fulfilling HMP requirements. Table 25 summarizes the status of these efforts as of October 2007.

Table 25. Status of HMP-Related Guidelines and Policies.

Guideline/Policy	Description	Status
Guidelines for Biological Studies	Developed by Preserve Steward. Describes HMP process and associated regulations; impact mitigation; biological resources reporting; checklist to determine which regulations pertain to a given project.	<ul style="list-style-type: none"> • Administrative Draft completed November 2006 • Test run for City Planners through December 2006 • Administrative Draft currently under City review
Permit Guidelines	Developed by the City. Describes HMP permitting process, including minor and major permits, and permit fees.	<ul style="list-style-type: none"> • In progress
Guidelines for Riparian and Wetlands Buffers	Developed by Preserve Steward. Guidelines to protect wetland and riparian resources through the use of buffers; appropriate width, design, allowable uses.	<ul style="list-style-type: none"> • Met with SCWRP WP subcommittee June 2007 • First Administrative Draft complete and under City review

Table 25. Status of HMP-Related Guidelines and Policies *continued*

Guideline/Policy	Description	Status
Penalties and Enforcement Policies	Developed by the City. Policies outlining penalties and enforcement structure for non-compliance with HMP regulations.	<ul style="list-style-type: none"> • In progress
Restoration/Revegetation Guidelines	Developed by the City. Outlines methods, management, monitoring, and success criteria for restoration projects in the preserve.	<ul style="list-style-type: none"> • Draft complete • To be revised using most current information
HMP Public Outreach Plan	Developed by the Preserve Steward. Framework plan describing goals and components of outreach program	<ul style="list-style-type: none"> • Administrative Draft complete and under City review
Guidelines for Preserve Management	Developed by the Preserve Steward. Provides compliance checklist and guidance for Preserve Managers.	<ul style="list-style-type: none"> • In progress

3.2 Management and Monitoring

This section describes monitoring and management expectations, issues of concern, and key management activities. The discussion begins with a review of interim and permanent management responsibilities required for pre-existing (i.e. pre-HMP) preserves, City-owned lands, and post-HMP preserves. The four levels of monitoring and management responsibilities are then described, followed by a list of major threats and issues that have been identified for each management unit. The key management and monitoring activities that have been conducted within the Carlsbad Preserve System during the past three years are then summarized. Finally, results of the monitoring conducted during the three year reporting period are discussed.

3.2.1 Interim and Permanent Management

As described in Section F of the HMP, the Preserve System will be developed over time, and interim arrangements to manage existing conserved habitat areas are necessary during the first three years of HMP implementation. Interim management would be the responsibility of the public and private landowners of conserved lands. During this period, the City was required to develop a permanent management plan for the Preserve System in cooperation with land owners, preserve managers, and Wildlife Agencies.

City Compliance

Rather than prepare a single permanent management plan for the entire Preserve System, the City currently requires that all individual preserves resulting from new development have (1) an area-specific preserve management plan (PMP) approved by the City and/or Wildlife Agencies, (2) a non-wasting endowment which will provide for permanent management and monitoring, (3) a Conservation Easement or other mechanism to permanently conserve the land, and (4) a management agreement with a qualified preserve manager as a condition of project approval. PMPs for new preserves (post-HMP approval) will include Area Specific Management Directives (ASMDs) to address management issues at the site-specific level (HMP, Section F.2.) and will be updated every three years.

City-owned lands have been managed at the preserve management level (see Section 3.2.2 below) by the City during the initial three years of HMP implementation. This includes basic land management, erosion control, and invasive species removal. The Carlsbad Watershed Network has conducted extensive invasive species removal in riparian areas owned by the City, include the Lake Calavera area. The City is finalizing negotiations with CNLM to provide management and monitoring services for City preserves. A PAR and PMP were submitted to the City for review on January 16, 2007 and permanent funding for management and monitoring of City lands was approved by the City Council in June, 2007. The final preserve management plan is expected to be completed (including Wildlife Agency review) by mid 2008.

Lands not Owned by the City

Existing Hardline Areas (i.e., areas that were already conserved at the time the HMP was approved) will be managed according to pre-existing management funding and arrangements. The majority of Existing Hardline Areas are managed by CDFG (five ecological reserves), and various HOAs. Subject to available funding, and in consultation with the USFWS, CDFG will prepare and implement a preserve management plan consistent with HMP Section F for those portions of habitat areas under its jurisdiction and control. (IA Section 15.2). At this time little management or monitoring information has been provided to the City by CDFG, and, after numerous requests, no current preserve management plans, annual work plans, or annual reports have been provided.

Areas conserved since approval of the HMP will be managed as required by the HMP and MHCP.

3.2.2 Levels of Management Responsibilities

As described in the OSMP (Section 2.4), there are four levels of preserve management. Individual preserves in the HMP Preserve System may have different levels of required management responsibility depending on criteria such as land ownership, and time that the preserve was established (pre- or post-HMP). The four levels of management are:

Level 1 - Property Management: Management of property boundaries and trash removal.

Level 2 - Preserve Management: Level 1 management plus management of the overall natural character of the preserve, maintenance of existing habitat values, fire prevention (note that fuel modification zones for new projects are prohibited within preserve boundaries), invasive species control, and management of public use facilities such as trails, fences, and signage.

Level 3 - Species Monitoring and Management: Management Levels 1 and 2 plus species-specific and habitat-specific monitoring as required in conditions of HMP approval and species coverage, existing mitigation agreements, and/or the MHCP (Vol. III). This standard is required for all post-HMP projects and associated preserves.

Level 4 - Regional Monitoring: Monitoring trends in species populations, habitat condition, and wildlife movement across the MHCP planning area and beyond by analyzing data collected on Level 3 preserves. The Wildlife Agencies are responsible for analysis of regional monitoring data.

3.2.3 Major Threats and Issues of Concern

Managing preserve land in an urban environment, such as the City of Carlsbad, is challenging. The Preserve Managers must be aware of the potential threats to sensitive species, habitats, and ecosystem function so that preventative measures can be taken to avoid detrimental effects. Climate-related threats, such as drought or flooding, cannot be prevented, and the resulting impacts may be difficult to avoid or repair. Most other threats are directly or indirectly caused by humans. In general, these threats (edge effects) exert greater pressure on the local ecosystem in an urban environment than in a more rural setting because they are more pronounced along the urban/wildlands interface. The HMP Preserve System is highly fragmented, resulting in a very high edge-to-area ratio. In general, based on discussions with Preserve Managers, the greatest threats to the Preserve System include:

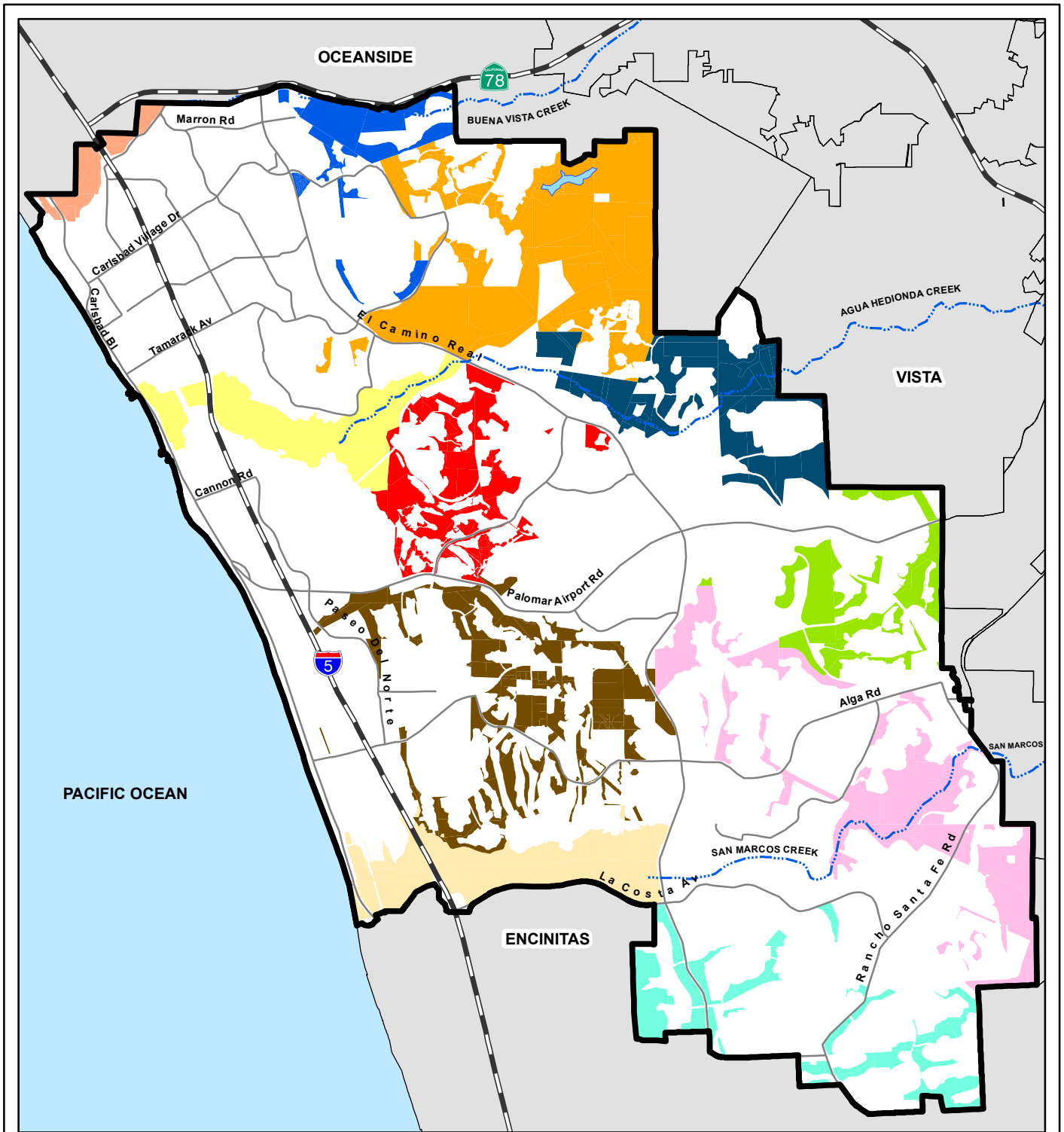
1. Unmanaged public use
 - Long history of unauthorized use.
 - High-impact activities (mountain bikes, motorcycles, and equestrians), on passive-use trails, resulting in erosion and habitat degradation.
 - Year-round use of trails that should have seasonal closures (e.g. activities that disturb nesting birds resulting in nest abandonment, or use of trails after a heavy rain resulting in rapid degradation of trails and adjacent habitat.)
2. Adjacent development
 - Uncontrolled pets such as cats and dogs, or released pets such as aquarium species, amphibians, reptiles, or rodents.
 - Feeding wildlife in or adjacent to the preserve creating an unnatural condition that may attract non-native and/or predatory animals.
 - Non-native landscaping resulting in introduction of invasive species or irrigation runoff which may alter the hydrology and introduce pesticides, herbicides, and fertilizers.
3. Fragmented ecosystem - May impede genetic flow and wildlife movement
4. Wildfires – The following characteristics may lead to catastrophic wildfires, which could devastate the native habitat and species within the Preserve System:
 - A Mediterranean climate (little to no rain during six months of the year)
 - Native flora that is dormant (and therefore dry and brittle) in the summer
 - Strong, hot, dry Santa Ana winds
 - Long periods of drought
 - A mosaic of urban areas adjacent to native habitat throughout the Preserve
 - Fire suppression management (no prescriptive burning, for example)
 - Nonnative vegetation that is highly flammable including eucalyptus, palms, and arundo, adjacent to preserve areas.

Threats specific to each Management Unit were identified in the OSMP, as shown in Table 26 below. Management Units are groupings of adjacent or nearby preserve parcels that have similar management needs (Figure 10).

Table 26. Threats to the HMP Preserve System and Potential Effects.

Threats	Management Units										
	Citywide (all MUs)	Agua Hedionda	Arroyo La Costas	Batiquitos Lagoon	Bressi /Carrillo Ranch	Buena Vista Creek	Calavera Hills	Faraday	Los Monos Canyon	Poinsettia /Aviara	Villages of La Costas
<u>Public Use</u>											
Off-road vehicles						X	X				X
Noise from off-road vehicles				X	X	X	X				X
Mountain biking	X										X
Equestrian uses		X			X						X
Hiking	X										X
<u>Urban Edge</u>											
Fuel breaks	X										
Landscaping	X										X
Irrigation runoff	X										X
Herbicides and pesticides	X										X
Urban noise				X	X	X	X				X
Lighting		X	X	X	X		X	X		X	X
Unsupervised pets/children		X	X	X	X		X	X		X	X
Illegal dumping						X	X	X			X
Migrant worker camps		X				X	X	X			X
<u>Habitat Fragmentation</u>											
Roads/utility corridors	X										X
Development	X										X
<u>Altered Ecological Processes</u>											
Fire regime (too frequent)	X										X
Hydrology		X	X	X	X				X		X
Drought	X										X
Predator-Prey	X										X
Host-Pollinator	X										X







Source: Open Space Management Plan (2004) Table 1-3.



Management Units

- | | |
|--|--|
|  Agua Hedionda |  Calavera |
|  Arroyo La Costa |  Faraday |
|  Batiquitos Lagoon |  Los Monos |
|  Bressi/Carrillo |  Poinsettia/Aviara |
|  Buena Vista Creek |  Villages Of La Costa |
|  Buena Vista Lagoon | |

Basemap Legend

-  City of Carlsbad
-  Jurisdictional Boundary
-  Freeway
-  Major Road
-  River
-  Lake



Feet

0 6,250

3.2.4 Key Management Activities

A review of management and monitoring activities across the HMP Preserve System during the current three-year reporting period was conducted at the level of the Management Unit rather than the individual preserve. Although each preserve is the responsibility of a single preserve management entity (the primary Preserve Manager), secondary management entities such as local organizations and volunteer groups often contribute significantly to preserve management, biological resource management, and public outreach within a given management unit. Table 27 provides a summary of the primary and secondary management entities within each Management Unit and the level of required management, and Appendix A describes specific management and monitoring activities conducted during the reporting period.

Table 27. Primary and Secondary Management Entities within HMP Management Units.

Management Unit (MU)	Management Entity ¹	Level of Management Responsibility ²
Agua Hedionda	CDFG (primary) AH Lagoon Foundation	Levels 3 and 4 None Required
Arroyo La Costa	HOAs (primary)	Levels 1-3
Batiquitos Lagoon	CDFG (primary) Batiquitos Lag Found.	Levels 3 and 4 None Required
Bressi/Carrillo		Level 3 for future preserves
Buena Vista Creek	CDFG (primary)	Levels 3 and 4
Buena Vista Lagoon	CDFG (primary) BV Lagoon Foundation BV Audubon Society	Levels 3 and 4 None Required None Required
Calavera	CNLM (primary) CDFG (primary) Preserve Calavera	Level 3 Levels 3 and 4 None Required
Faraday	CNLM (primary)	Level 3
Los Monos	CNLM (primary) UCSD (primary)	Level 3 Level 3
Poinsettia/Aviara	Aviara HOA (primary) Other HOAs (primary)	Level 3 Level 1
Villages of La Costa	CNLM (primary)	Level 3
Multiple MUs	City of Carlsbad CWN City Parks and Rec.	Level 3 (all City owned HMP open space) None Required Assist with Level 2 (non-HMP open space)

¹ CDFG – California Department of Fish and Game. CNLM – Center for Lands Management. CWN – Carlsbad Watershed Network. “Other” – HOAs (other than Aviara HOA) and private open space; generally these were preserved prior to HMP approval.

² Levels of Management Responsibility (See sec. 3.3.1 above): Level 1 -Property Management; Level 2 -Preserve Management; Level 3 -Species Monitoring and Management; Level 4 -Regional Monitoring.

3.2.5 Three-Year Monitoring Results

The OSMP recommends that the City submit a three-year monitoring summary report describing status and trends of covered species and habitats. It is still very early in the Carlsbad HMP implementation process to make such an assessment at the Preserve System scale for the following reasons: (1) Many of the preserves are still undergoing management negotiations and therefore annual monitoring has not begun; (2) Most of the pre-existing (pre-HMP) preserves are not required to do annual species or habitat monitoring; (3) Monitoring data on pre-existing Ecological Reserves have not been provided; (4) Secondary management entities that are conducting species monitoring on pre-existing preserves are not required to submit these data to the City or Wildlife Agencies; and (5) a systematic approach to collection, management, and analysis of data has not been developed. These challenges to three-year monitoring are further exacerbated by the lack of other subarea plans in the MHCP area and the absence of an MHCP-wide inventory of existing Wildlife Agency authorized take and the related HCPs. However, CNLM has been managing several preserves for a number of years and has collected sufficient data and on-the-ground experience to comment on the status of species in these areas. Appendix C provides a summary of the current status of all sensitive species (six plant species and six wildlife species) being monitored on CNLM-managed preserves.

The priority issue for the Preserve Managers working group, which has just been established, will be to address species monitoring and trends analysis. Some examples of agenda items include:

- Identify species and habitat monitoring priorities based on currently available resources.
- Identify specific type of data needed to determine changes in condition of habitats or trends in covered species populations.
- Determine if current monitoring methods will give us the type of results needed to make the trends assessment. Monitoring programs are already in place for Belding's savannah sparrow, clapper rail, California least tern, and snowy plover.
- Develop a monitoring program that will enable Preserve Managers to work together to assess trends across the Preserve System in the most efficient manner.
- Develop a component of the monitoring program that will assess wildlife movement, traffic mortality, effectiveness of corridors and undercrossings, etc.
- Standardize the collecting, attributing, and managing of GIS monitoring data.

- Coordinate with efforts to revise the MSCP Biological Monitoring Program (undergoing revisions since 2003).

3.3 Enforcement

The City is taking a multipronged approach to enforcement within the HMP preserve. The City's HMP Ordinance (Chapter 21.210 of the Zoning Ordinance) codifies the enforcement measures and remedies available for enforcement. These measures include: stop work notice, corrective action, owner notification, recordation of a Notice of Violation, prohibition of development permits, investigation fee, criminal penalties, abatement of public nuisance, and civil action. The City is currently discussing enforcement policies, programs, and techniques with the Wildlife Agencies and other jurisdictions with approved subarea plans to develop enforcement guidelines for staff use, as well as codifying minimum financial penalties and corrective actions. Given the potentially overlapping areas of authority, coordination with the enforcement activities of CDFG, USFWS, and USACOE is essential to a successful enforcement program.

In addition to the regulatory framework and guidance, preserves within the HMP area need varying amounts of on-site patrolling and enforcement. The City's Police, Parks and Recreation, and Planning Departments are working with CNLM, as the predominant Preserve Manager within the HMP, and other organizations within the City to coordinate efforts on reporting and addressing unauthorized habitat impacts. The HMP Ordinance allows enforcement only for unauthorized habitat impacts, therefore other issues such as trespassing on existing private trails, are within the jurisdiction of the property owner and Police Department (if signs are properly posted) rather than the HMP. In addition, while Preserve Managers are most likely to be on the property and witness infractions, they do not typically have citation authority and therefore must coordinate with the Police Department for maximum enforcement ability.

3.4 Acquisitions

3.4.1 Open Space Committee Nominations

On October 18, 2005, the City Council created the Proposition C Open Space and Trails Ad Hoc Citizen's Committee (Open Space Committee) to establish priorities for open space property acquisition and trail linkage projects using money from the City's General Fund. Proposition C was passed by the citizens of Carlsbad in 2001 and authorized the

City Council to spend the funds on four capital projects: swimming pool complex, trail linkages and open space, City safety training facility, and construction of a portion of Cannon Road, east of El Camino Real. The City defines Open Space as lands to be used for:

- The preservation of natural resources, such as wetlands and other valuable habitats;
- The managed production of resources, such as agricultural lands;
- Outdoor recreation, including parks and other recreation areas;
- Aesthetic, cultural, and educational purposes, including key scenic and cultural resources;
- Public health and safety, such as floodways; and
- Proposed Carlsbad Trail System.

The committee was charged with ranking candidate properties using a set of criteria that included biological and cultural resources, trails, connectivity, and water quality. Thirteen properties were nominated for acquisition by members of the public and City staff. On December 1, 2006 the Open Space Committee ranked these properties in order of priority. The rankings did not include whether there was a willing seller, the future development plans of the property, or alternative funding opportunities. Given that the Committee's criteria were heavily based upon habitat, all 13 properties would be beneficial additions to the HMP Preserve System. The Committee presented a report of the final rankings to the City Council for approval March 13, 2007. Subsequently, staff conducted additional research to determine if there were any willing sellers, and to identify potential development plans and alternative funding sources. A workshop was conducted in September 2007 to review five properties for which willing sellers had been identified. This information was presented to the City Council who then recommended three additional properties, which are currently being analyzed by City staff. To date, while no funds have been specifically earmarked for the purchase of open space parcels, adequate funding remains in the General Fund to pursue open space acquisitions.

3.4.2 Sherman Property (Buena Vista Creek)

The Sherman Property (also called Buena Vista Creek), is indicated in the MHCP as a part of an important regional habitat linkage between Carlsbad and Oceanside. The property was identified in the MHCP as a Priority 1 property for acquisition and incorporation into the MHCP preserve. Rare species known to occur on this property include the California gnatcatcher, least Bell's vireo (*Vireo bellii pusillus*), yellow-breasted chat (*Icteria virens*), and loggerhead shrike (*Lanius ludovicianus*). The property

is located primarily in Carlsbad (south of SR-78 and east of El Camino Real) and a small portion is located in Oceanside. On November 16, 2006 the final funding component for purchase of this property was approved (see Section 4.3.1 for fiscal details). As of March 31, 2007, CDFG holds fee title to this property and has entered into a contract with CNLM to provide management and monitoring.

4.0 Financial Summary

4.1 City Funding in Support of HMP

The City uses two sources of funding to support implementation of the HMP: (1) new, permanent funding that has been allocated specifically for management of City lands and HMP coordination, and (2) existing resources, including planning and administrative staff. The following sections describe these funding sources and how they are being used.

4.1.1 Funding Targeted to Support the HMP

The majority of the City's ongoing costs to support HMP implementation are activities required by the HMP or the IA. Two of the City's main responsibilities are:

- City oversight of the overall HMP Preserve System which includes more than 6,000 acres of protected open space, and
- City responsibility for the direct management of more than 600 acres of preserve land owned by the City.

To accomplish the first goal, the City dedicated a senior-level staff planner at 50 percent time for HMP coordination and contracted with TAIC to develop guidelines to (1) assist City planners, developers, biologists, and the public through the HMP process; and (2) to serve as the City's Preserve Steward, coordinating management throughout the Preserve System, and monitoring HMP compliance and management effectiveness (Table 28).

The second goal will be accomplished through the efforts of CNLM, a non-profit preserve management company. CNLM will be submitting a revised area-specific Preserve Management Plan for City-owned preserves and a cost estimate for preserve management services in February 2008. It is expected that this plan will be finalized (including Wildlife Agency review) by mid 2008. The management plan includes natural resources information for each individual preserve, and management/monitoring plan goals and tasks, which will apply to all City-owned preserve lands. Based on the PAR submitted by CNLM, start-up costs and ongoing management for the first three years will be \$818,130. In June 2007, the City Council approved a budget of \$357,000 for start-up costs, and \$154,000 for annual maintenance. The city is currently reviewing the PAR for any potential costs saving opportunities.

Table 28. Consultant Contracts

Contractor¹	Contract Date	Contract Amount	Services	Status
TAIC	7/24/06	\$82,000	1. Reconciliation of HMP GIS baseline data. 2. Guidelines Preparation a. Biological Studies b. Wetland Buffers c. Preserve Management d. Public Outreach	1. Completed in 2006 2.a. Draft completed 11/06; under City review b. in progress c. in progress d. in progress
TAIC	9/01/06	\$125,000 per year	Half-time Preserve Steward and GIS services to assist with HMP implementation	Technology Associates (TAIC) hired; assists City with project review, preserve coordination, and compliance and effectiveness monitoring.
CNLM	7/31/06	\$28,123	Complete Preserve Management Plan and cost analysis for City-owned HMP preserve lands	Revised management plan and cost analysis to be submitted to the City in February 2008.
CNLM	Pending	\$357,000 start up; \$154,000 annual maintenance	Manage and monitor City owned preserve lands.	City Council approved funding for permanent management of City-owned properties (Jun-07). Management contract under negotiation.

¹ CNLM – Center for Natural Lands Management; TAIC – Technology Associates

4.1.2 Other City Resources Used to Support the HMP

In addition to funding specifically targeted for HMP implementation (described above), the City uses its existing infrastructure, staff, and budget to further support HMP goals, including:

1. Public Outreach. The City is currently creating a City-wide public education and outreach program that will allow the general public to learn more about the HMP Preserve System, and the importance of protecting biological resources. This program will tie into existing environmental education and volunteer programs provided by the City and local organizations. One of the new tools under development is an interactive HMP website that will include the following elements:
 - Interactive map showing location and basic information about the individual preserves.

- Links to HMP-related regulatory documents, preserve management plans, area-specific annual reports, and HMP Preserve System annual reports.
- FAQs related to management, edge effects, biological monitoring, etc.
- Links to local environmental organizations and state and federal agencies that provide additional information about the natural environment.
- Information about volunteer opportunities.
- Information about recreational opportunities within the Preserve System.

In addition, the City has created a brochure that discusses edge effects (Appendix D). The brochure defines “edge effects” and describes specific things the public can do to reduce their own impacts on the environment. The brochure was originally developed for residents living adjacent to a preserve, but it provides useful information to anyone interested in protecting the City’s natural open space.

2. Facility Maintenance. Current, ongoing facility maintenance in the City benefits the HMP Preserve System by providing a resource for important management needs such as remediation of erosion problems, installing fencing for access control, and erecting signage to post regulations and educational information. In addition, the Department of Parks and Recreation manages a volunteer trail maintenance program, which has been used within the Preserve System.
3. Administrative. Administrative costs include time spent processing HMP permits, reviewing development projects and associated components for HMP compliance, negotiating with the Wildlife Agencies, coordinating with preserve managers, etc. These activities are currently supported by existing City Planning Department staff, including the Planning Director, Assistant Planning Director, Principal Planner, HMP Coordinator, individual planners, and administrative staff. Other administrative needs are supported by the City’s GIS Department (spatial data management and map production), Department of Parks and Recreation (HMP-related public concerns), Fire Department (fuel modification zones and fire prevention), and Police Department (patrolling of some open space areas).

4.2 In-Lieu Habitat Mitigation Fees

As described in Section 2.2.5, in-lieu habitat mitigation fees are collected from developers for project-related impacts to some native habitat outside of the preserve. These habitats include all habitat types in Groups E and F (non-native grassland, disturbed lands, Eucalyptus, and agricultural lands) and some habitat types in Group D

Table 29. In-Lieu Mitigation Fee Account Activity through FY 06-07.

Date	Project or Developer Required to Pay Mitigation Fee	Fee Paid
Fees Paid		
04/22/2004	Palomar Forum	\$133,867.80
08/05/2004	Mammoth Sierra	\$2,160.00
10/21/2004	Hoffman Planning	\$225,865.90
12/13/2004	HMP04003 Javaheri Henry R&Efi	\$5,804.86
12/13/2004	HMP04004 Cazadero Homes	\$979.30
05/16/2005	CDP03012 Adams St. SFR North	\$4,600.00
08/25/2005	Grand Pacific	\$3,949.00
11/03/2005	SDP02013 El Camino Family Housing Partners	\$2,101.40
12/06/2005	HMP05005 HG Fenton (Fox/Miller)	\$14,650.79
01/24/2006	HMP05006 Franz-Yut El Camino Real (Cassia)	\$9,081.69
01/25/2006	HMP05007 Hungerford (Worsch residence)	\$469.00
03/29/2006	GR050079 Golden residence	\$590.87
05/23/2006	Copies	\$29.00
06/23/2006	GR060007 Johnson residence	\$3,416.70
09/12/2006	FR060042 Spadaro residence	\$7,705.20
10/04/2006	GR0600062 Thompson residence	\$616.56
11/06/2006	GR050054 Highland Drive	\$6,525.26
12/15/2006	GR060027 Balhagi	\$1,618.40
01/02/2007	CB061728 Refold Residence	\$282.59
01/17/2007	GR060058 Black Rail	\$950.53
02/08/2007	GR060075 Carlsbad Medical Village	5,677.49
12/13/2007	GR070003 Robertson Ranch	220,368.82
03/06/2007	GR060071 Eucalyptus Subdivision	4,982.75
05/17/2007	CB063517 Berger Residence	899.15
09/18/2007	CB071750 Rihan Residence	1,078.98
10/10/2007	CB071141 Admani Residence	15,744.12
11/15/2007	GR070046 Robertson Ranch	52,407.60
11/15/2007	GR070047 Robertson Ranch	38,946.04
	Total as of 11/30/2007	765,369.80
Interest Earned		
Through 10/31/04		2,470.80
11/01/04-10/31/05		16,109.93
11/01/05-10/31/06		21,151.73
11/01/06-11/30/07		33,170.47
	Total Interest Earned as of 11/30/2007	72,902.93
	Total Cash Available in Fund	838,272.73

(unoccupied coastal sage scrub, coastal sage/chaparral mix, and chaparral, except southern maritime chaparral). These fees will be used to fulfill the City's obligation to acquire, protect, and manage the Gnatcatcher Core Area. Table 29 summarizes the mitigation fee account activity from final HMP approval to present. As of December 31, 2007, approximately \$765,370 in fees has been collected and \$72,903 in interest has accrued, bringing the total to \$838,272. No withdrawals have been made from this account to reimburse or acquire acreage in the Core Area.

4.3 Grants and Other Funds

4.3.1 Wildlife Agency Partnership

Proposition C Open Space and Trails Citizen's Committee

Because the City has an approved MHCP subarea plan, it is eligible to apply for certain state grants and other funds intended for habitat acquisition, management, and monitoring. No other MHCP city is eligible for these funds. For the last two years, the City has worked with the Wildlife Agencies to apply for funds from the Endangered Species Act Section 6 Grant Program. No grants were received for the 2007 fiscal year. The current application under review for the 2008 Fiscal Year Habitat Conservation Plan Land Acquisition Program includes four properties identified by the Proposition C Open Space and Trails Citizens Committee, totaling 295 acres. The City requested a grant of \$12.5 million, with a 35 percent non-Federal match. The status of the application is unknown at the time of this Annual Report.

Sherman Property (Buena Vista Creek Ecological Reserve) Acquisition

The Trusts for Public Land (TPL) coordinated the acquisition of the Sherman Property (now called Buena Vista Creek Ecological Reserve) that had been identified as a high priority by the wildlife agencies in the MHCP. Key project funding partners included state and federal wildlife agencies, and Preserve Calavera, a local conservation organization. The land is now owned by CDFG who is currently contracting with CNLM for preserve management. The project included \$8 Million for land acquisition, \$928,000 for a non-wasting endowment for preserve management, and \$94,000 in acquisition related expenses. Funding sources included:

Federal

- National Fish and Wildlife Foundation (NFWF)
- Habitat Conservation Planning Land Acquisition Grant (HCP)

State

- Wildlife Conservation Board Habitat Conservation Fund –Proposition 117 (WCB)

Non-Profit

- Buena Vista Audubon Society
- California State Audubon Society
- Preserve Calavera
- Sierra Club – San Diego Chapter.

4.4 Status of Funding for Preserve Management

The endowment activity and status for preserves managed by CNLM are given in Table 31. CNLM operates on a fiscal year from October through September. The City funds management of its own properties through the operating budget of the Planning Department. As discussed in Section 4.0, all anticipated costs have been budgeted and a contract is in negotiation. Properties owned and managed by CDFG are funded through regular Department funds, with the exception of Batiquitos Lagoon which is funded through an endowment established by the Port of Los Angeles. The original endowment of \$8,654,135 has been reduced to \$5,973,045 over the last ten years (1997-2007) due to dredging operations, predator control, least tern monitoring, and other operations and equipment (Table 31).

Table 30. Endowment Status for HMP Preserves.

Site Name	Preserve Manager	Inception Date	Original Endowmt	Expenditures FY 04-05	Budget FY 05-06	Expenditures FY 05-06	Endowment 10/31/2007
La Costa Villages	CNLM	2/2002	\$1,364,400	\$77,254	\$68,367	\$57,553	\$1,883,152
Kelly Ranch	CNLM	3/2002	\$296,125	\$13,130	\$13,342	\$11,289	\$421,922
Carlsbad Oaks No.	CNLM	3/2006	\$1,020,311	N/A	N/A	N/A ²	\$1,097,072
Calavera Hills II / Robertson Rch E ¹	CNLM	6/2006	\$1,441,093	N/A	N/A	N/A ²	\$1,621,518
Nelson	CNLM	6/2001	\$72,180	8,057	\$3,173	\$3,514	\$91,116
Cassia Prof. Offices	CNLM	1/2007	\$100,884	N/A	N/A	N/A	\$105,023
Buena Vista Ck ER	CNLM	4/2007	\$776,644	N/A	N/A	N/A	\$789,757
Batiquitos Lagoon ER	CDFG	1997	\$8,654,135	unknown ³	unknown ³	unknown ³	\$5,973,045

¹ CNLM merged funds for these two projects to provide a cost savings for Robertson Ranch. East Village

² CNLM received the project in 2006, but minimal expenditures occurred within the fiscal year (which ended September 30, 2006).

³ Detailed information about expenditures for the Batiquitos Lagoon Ecological Reserve was not provided to the City.

5.0 Opportunities and Constraints

Assembling and managing the HMP Preserve System has provided the City with an opportunity to significantly contribute to the conservation of ecological diversity and ecosystem integrity within the regional context of Southern California. These efforts provide protection for numerous sensitive species, sensitive habitats, wildlife movement corridors, and habitat linkages. However, there are many constraints that may hamper the City's conservation efforts. The most challenging issues are related to limited resources and human presence. Sections 5.1 and 5.2 below discuss opportunities for the future, and the most pressing constraints to effective management of the Carlsbad Preserve System.

5.1 Opportunities

There are many opportunities for improvement of the condition of preserve lands in Carlsbad, some of which are outside of the direct requirements of the HMP and IA. The City is currently working towards some of these goals already. Others will require longer-term planning. The following is a list of major goals and opportunities identified by the City and the Preserve Steward.

1. Public Outreach and Education

- General public (including public schools); HOAs; equestrian and biking stakeholder groups, landscape nurseries, etc.
- Engage the public to act as land stewards
- Educate home owners about protecting resources. Why is it important? What can they do?
- Education about the ecology of our local ecosystems, plants and animals of the region, threats to habitat vitality, etc.

2. Preserve Management and Monitoring

- Coordinate with Preserve Managers and Multiple Species Conservation Plan (MSCP) biological monitoring working group, and researchers at San Diego State University (SDSU) to standardize monitoring methods, data collection, and data management so that monitoring results can be analyzed regionally.
- Coordinate with Wildlife Agencies and Preserve Managers to determine gaps in baseline data, monitoring priorities, methods for assessing regional trends, what is working and what is not, etc.

- Coordinate with Wildlife Agencies and Preserve Managers, and local organizations to develop and implement a wildlife movement monitoring study to determine effectiveness of (a) regional (MHCP study area and beyond) wildlife movement corridors, (b) local (within HMP Preserve System) wildlife movement corridors, and (c) local roadway crossings.
- Enhance wildlife movement throughout the preserve system.
 - Implement wildlife movement monitoring program to assist in the assessment of wildlife movement and constriction throughout the preserve: enhance road-kill data collection and set up wildlife tracking stations at appropriate locations.
 - Manage fencing to enhance wildlife movement: remove fencing that impedes movement through movement corridors and/or use fencing to funnel wildlife to undercrossings and away from traffic.
 - Design and site undercrossings appropriately and according to the most current standards.
 - Maintain key undercrossings. This is the responsibility of the responsible preserve management entity.
- Coordinate with Preserve Managers to ensure the implementation of passive and active adaptive management (which will include an invasive species removal program) at the Preserve System level. Determine priorities for questions that need to be answered, and develop pilot studies to answer these questions. Disseminate results and coordinate with other jurisdictions.

3. Data Management

- Collect, manage, and update spatial data on an annual basis, including project-specific vegetation mapping, preserve monitoring data, parcel boundaries, etc.
- Develop digital data submittal policies to ensure standardization and completeness of data, including project boundary mapping (Conservation Easement areas, fuel modification zones, restoration areas, and impact boundaries), and biological resource mapping (vegetation communities, sensitive habitats, and sensitive species).

4. Enhance Enforcement Program

- Establish a program that coordinates with ongoing and future efforts by stakeholders such as City Parks and Recreation Department, Police Department, Fire Department, wildlife agencies, preserve managers, lagoon foundations, and other interested parties.

5. Partnering Opportunities

- Seek partnering opportunities for funding, public outreach, volunteer opportunities, watershed management, regional and local preserve management and monitoring, etc.

5.2 Constraints

In general, resources and time are the major constraints to assembling, managing, and monitoring the HMP Preserve System. It takes sufficient resources to provide funding and personnel to acquire land, manage preserve lands to HMP standards, monitor species and habitats, and provide recreational and educational opportunities for the public. And it takes sufficient time for the administrative steps required to conserve a piece of land, deal with human-related problems, and acquire enough monitoring data to enable long-term trends analyses. Below is a list of the most prevalent constraints identified for the HMP Preserve System. These constraints do not cause the City to be out of compliance with the HMP; however, they may slow the process or preclude the City from going above and beyond minimal requirements of the HMP.

1. Limited Resources

- Long term regional funding and grants are needed to support regional monitoring, land acquisition, restoration projects, and higher levels of pre-HMP preserve management (e.g. providing additional resources to ensure Level 3 management where Level 1 or 2 is currently required).
- Currently there are few management entities available that have the appropriate credentials and experience to provide management services. The TET bankruptcy shows that proper long term planning and money management is essential.
- Funding is needed to enhance the enforcement program by pooling resources with other City departments that have enforcement needs, as well as using volunteers and relevant non-profit organizations.
- Budgetary constraints of DFG has impacted their ability to manage lands to Level 3 or 4 management. Likewise, there is no MHCP-wide inventory of existing take permits outside of Carlsbad's HMP area therefore no assessments on the state of the regional habitat can be made.

2. Administrative Difficulties

- Several steps must be taken before a Preserve Manager can start baseline surveys and habitat management on new preserve lands, including a Property Analysis Records non-wasting endowment sufficient to support land management in perpetuity, Preserve Management Plan, Conservation Easement, and Management

Agreement. Each step may involve multiple reviewers (City Planning Department, Preserve Steward, City Attorney, Wildlife Agencies, etc.), and multiple review cycles.

- The Conservation Easement has been the biggest bottleneck; there is concern about liability, disagreement among interested parties regarding specific language in the document, and the status of grantee/grantor relationship. Without a commonly accepted easement template, each property owner is required to negotiate the easement language on a case-by-case basis. As a consequence, recordation of the Conservation Easement has taken several years for some of the project-related preserves.

3. Human-Related Impacts

- The HMP preserve is very urbanized, and the population continues to increase. Associated impacts include:
 - High level of edge effects
 - More contaminants into the system (pesticides, herbicides, and fertilizers)
 - A prevalence of invasive species (nurseries currently sell pampas grass and artichoke thistle, two of the most destructive exotic species)
 - More wildlife traffic fatalities as movement corridors become more constrained
- Long-term historical uses (e.g. off-road vehicles, illegal dumping, and migrant camps) of preserve require changing human behavior toward a less destructive way of enjoying the open space.
- Unmanaged access. If managed properly, the density and type of recreational use would be balanced with biological resource protection.

4. Monitoring

- It can take a number of years to detect trends in species populations or habitat conditions. It is necessary to “filter” out seasonal variation from long-term trends.
- The habitat in the Preserve System is highly fragmented; some preserves are quite small. Preserve Managers should work together to monitor trends at the landscape level rather than at the individual preserve level to acquire more meaningful data.
- There is currently no clear consensus on the best way to monitor long-term trends (however current efforts are underway by the MSCP biological monitoring group researchers at SDSU to determine the most effective monitoring strategies).

6.0 Conclusions

The City is implementing the HMP in a manner that is consistent with the Implementing Agreement and the HCP/NCCP Take Authorization/Permits. The General Plan Land Use and Open Space and Conservation policies, Municipal Codes, and development permitting process have been revised to ensure that all new development complies with HMP regulations, including coastal zone requirements and zone-specific standards within Standards Areas. The City is currently supporting the HMP through pre-existing resources (public outreach programs, existing Planning Department staff including the HMP Coordinator, facility maintenance, etc.) and targeted funding (new Preserve Steward position and permanent management funding). In addition, the City continues to work closely with Wildlife Agencies, Preserve Managers, local organizations, and the general public to keep the lines of communication open and to improve its efforts towards HMP implementation. Specific conditions of the IA that are still in process are:

- MHCP California Gnatcatcher Core Area requirement: Approximately 50 acres (currently conserved) to be reimbursed with in-lieu mitigation fees, and 43 acres to be acquired (IA 11.5).
- Preserve System consisting of 6,757 acres of conserved land: To date, the City has preserved 5,957 acres within the City limits (IA 11.1).
- Record keeping: (IA 12.1)
 - Projects that mitigated impacts through in-lieu fees need to be incorporated into Habittrak.
 - Project gains and losses outside of the HMP need to be incorporated into Habittrak.
 - Habittrak data needs to be reviewed for errors due to misregistration, precision, and GIS processing.
- Annual Reporting and Meeting: (IA 12.2)
 - The current annual report which includes HMP implementation information for years one through three brings the City back on schedule for annual report submission.
 - The first public workshop will be given in the spring of 2008.
- Management of Lake Calavera and other City-owned lands: Funding for permanent management of City-owned lands was approved by the City Council in 2007 (IA 14.3).
 - A PAR and Preserve Management Plan, which include Lake Calavera, was submitted to the City by CNLM in January 2007. The City needs to

complete negotiations and approve a management agreement so active management can begin.

- The City is currently working with the Wildlife Agencies to ensure active management begins as soon as possible.

The City will continue to work toward the goals and opportunities outlined in Section 5.1 within the constraints listed in Section 5.2. For example, without penalties and enforcement, it is difficult to change the behavior of preserve users who may be impacting sensitive species and habitats. The City has assembled a stakeholder group to discuss needs, priorities, and funding possibilities. The group includes the Planning Department, Department of Parks and Recreation, Police Department, HOA representatives, and CNLM. In the coming year, the City and Preserve Steward will develop a public outreach program, which will educate the public about the Preserve System and the importance of conservation. Public support and coordination with local organizations are critical to accomplishing conservation goals by building a sense of stewardship in the general public and by pooling resources to accomplish more with less.

7.0 References

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Appendix A

Summary of Management and Monitoring Activities within HMP Management Units

Nov 2004-Dec 2006

Summary of HMP Management and Monitoring Activities, 2004-2006

Management Unit (MU)	Management Entity ¹	Management and Monitoring Activities
Agua Hedionda	CDFG	<p>Ongoing management activities included treatment of exotic plants, maintenance of fencing and signage, and trash pick-up. Species specific management activities for 2004-2007 included:</p> <p><u>California gnatcatcher</u>: protocol surveys during Spring 2005 and 2007.</p> <p><u>Belding's savannah sparrow</u>: presence/absence surveys during Spring 2005 by CDFG staff. CDFG contracted with Zembal et. al. for statewide census spring 2006. Published report available.</p> <p><u>Light-footed clapper rail</u>: presence/absences surveys conducted spring and winter all years by Zembal et al. Spring surveys in 2007 included nest searches, nest platform augmentation and other conservation activities. Published annual reports available. In 2004, 5 captive-bred rails were released into the marsh on the inland edge of the inner lagoon.</p> <p>HIGHLIGHTS:</p> <p>Loma Laguna Slope Restoration_ In cooperation with the Carlsbad Watershed Network, California Forestry Service and other entities, the Department initiated coastal sage scrub restoration on the north slope of the Agua Hedionda Lagoon Ecological Reserve. Nonnative plants and trees were removed and replaced with native plants.</p>
	AH Lagoon Foundation	<p>Prepare public outreach and educational materials. Raise funds through grants and local donations. Provide information about plants, animals, lagoon ecology, etc at Discovery.</p> <p>HIGHLIGHTS:</p> <p><u>Discovery Center</u>. updated with new educational and historical interpretive panels outside the center.</p> <p><u>Caulerpa taxifolia Eradication Program</u>. In March 2005, AHLF received a \$2,266,000 grant from the Regional Water Quality Control Board to eradicate <i>Caulerpa taxifolia</i> in the Agua Hedionda Lagoon and other coastal waterways. Eradication of <i>Caulerpa taxifolia</i> was formally declared on July 12, 2006 by the California Department of Fish and Game.</p> <p><u>Ecology Exhibit</u>. The AHL Foundation will be partnering with two professors from CSU-San Marcos and their students for a major ecology exhibition, with funding provided by the Metropolitan Water District.</p> <p><u>Native Plant Garden</u>. A native plant garden was planted at the Discovery Center. It was funded by a grant from the Metropolitan Water District, and funding from the City of Carlsbad Community Activity Grant. The project includes an accompanying interpretive trail with signage and brochures.</p>
Arroyo La Costa	HOAs	Property-level management
Batiquitos Lagoon	CDFG	<p>Ongoing management activities included lagoon dredging, treatment of exotic plants, maintenance of fencing and signage, predator management, and trash pick-up. Species specific management activities for 2004-2007 include:</p> <p><u>California least tern</u>: site preparation including vegetation removal and chick fencing repair. Nesting terns have been annually monitored at this site since 1995. Annual reports summarizing breeding success for this species for each California breeding location are published annually by CDFG.</p> <p><u>Snowy plover</u>: nesting pairs annually monitored since spring of 1994.</p> <p><u>Belding's savannah sparrow</u>: CDFG contracted with Zembal et. al. to conduct statewide survey Spring 2006. Report available.</p>

Management Unit (MU)	Management Entity ¹	Management and Monitoring Activities
		<p><u>Light-footed clapper rail</u>: Zembal et al. perform annual census (often funded through Section 6 grants). Spring surveys in 2007 included nest searches, nest platform augmentation and other conservation activities. Published annual reports available. In 2004 and 2005, 8 captive bred rails were released each year into the marsh to enhance the genetic diversity and viability of this growing subpopulation.</p> <p>California gnatcatcher: CDFG staff conducted protocol surveys all three years.</p> <p>General avian surveys: CDFG staff conducted quarterly avian surveys of the entire lagoon 2004-05 and 2005-06.</p> <p>HIGHLIGHTS</p> <p>Applied for and received funding for acquisition of the Mitsuuchi property.</p>
	Batiquitos Lagoon Foundation	<p>Manage volunteer programs to conduct trail repairs, trash pickup, weed removal, and to install interpretive signs, trail markers, and trail barriers. Prepare public outreach and educational materials. Raise funds through grants and local donations. Provide information about plants, animals, lagoon ecology, etc at volunteer-run visitor center.</p> <p>HIGHLIGHTS:</p> <p><u>Restoration</u>. Final planting of a restoration project completed Dec-04). Funded by a \$13,123 community-based grant (Southern California Wetlands Recovery Program).</p> <p><u>Monitoring</u>. Conduct monitoring for clapper rails and nesting least terns.</p> <p><u>Grant Funds</u>. Received \$50,000 from the California Coastal Conservancy for pre-acquisition funding support, to take advantage of various land acquisition and open space/conservation/trail easement opportunities to help complete the trail system and protect sensitive habitats.</p> <p><u>Recognition</u>. On December 12, 2006, REI selected the BLF as the <i>Nonprofit of the Quarter</i>, which includes recognition of the Outreach Resource Center board.</p>
Bressi/Carrillo		Information unavailable
Buena Vista Lagoon	CDFG	<p><u>Buena Vista Lagoon Ecological Reserve</u>: Ongoing management activities included treatment of exotic plants, maintenance of fencing and signage and trash pick-up. Species specific management activities for 2004-2007 include:</p> <p><u>Belding's savannah sparrow</u>: CDFG contracted with Zembal et. al. to conduct statewide survey Spring 2006. Report available.</p> <p><u>Light-footed clapper rail</u>: Zembal et al. perform annual census (often funded through Section 6 grants). Spring surveys in 2007 included nest searches, nest platform augmentation and other conservation activities. Published annual reports available.</p> <p>Annual reports available.</p> <p>HIGHLIGHTS</p> <p>CDFG and USFWS are co-Lead Agencies for the Buena Vista Lagoon Restoration Plan pursuant to the California Environmental Quality Act (CEQA) and National Environmental Protection Act (NEPA), respectively. A public scoping meeting was held on April 18, 2007 in preparation of the project's Draft Environmental Impact Report.</p>

Summary of HMP Management and Monitoring Activities, 2004-2006 *continued*

Management Unit (MU)	Management Entity¹	Management and Monitoring Activities
	BV Lagoon Foundation	<p>HIGHLIGHTS</p> <p>The Buena Vista Lagoon Foundation is assisting with the following projects.</p> <p><u>Proposed restoration project.</u> Buena Vista Lagoon Restoration Project would restore approximately 200 acres of wetland habitat at Buena Vista Lagoon to a predominantly tidal saltwater system (regime). CDFG and the Service will seek public input on topics, issues, and alternatives to be considered in the EIR/EIS during a scoping meeting to be held in April, 2007.</p> <p><u>Proposed development on Buena Vista Lagoon:</u> The BVLF is working to stop a project that could negatively impact the lagoon. The project would be located across South Coast Highway from the Buena Vista Audubon Nature Center. The proposed hotel, restaurant and condominium complex was rejected by a 6-1 vote of the Oceanside Planning Commission October 2006; however, funds are now available to purchase this land and preserve it as permanent open space if the landowner is a willing seller. (CalTrans has made this purchase a priority as mitigation for the coming widening of I-5 across Buena Vista Lagoon.)</p>
Buena Vista Lagoon <i>continued</i>	BV Audubon Society	<p>Promote nature education, conservation and birding opportunities (field trips and classes) in coastal northern San Diego County. Participate in discussions on numerous land use issues, offering a voice in favor of natural open space and wildlife in North County. Prepare public outreach and educational materials. Raise funds through grants and local donations. Provide information about plants, animals, lagoon ecology, etc at volunteer-run Nature Center. BVAS is involved in the long-term plans now underway to restore and enhance Buena Vista lagoon. Annual reports to National Audubon Society, are presented each year in August and are kept on file in the Nature Center where they are available to the public.</p> <p>HIGHLIGHTS:</p> <p><u>Opportunities for children and adults.</u> Hosted nature open house days, and nature-themed summer art camps. Provided nature walks and talks to more than 2500 schoolchildren in 2006.</p> <p><u>Trail improvements.</u> We expect to have installed soon a small pontoon bridge to complete a nature trail loop in and alongside the lagoon.</p> <p><u>Fundraising for Sherman Property acquisition.</u> Generated \$20,000 in grants and contributions towards the acquisition of the Sherman Property (See Section 3.1.2 in this report).</p> <p><u>Proposed development on Buena Vista Lagoon.</u> See description for Buena Vista Lagoon Foundation above.</p> <p><u>Watershed management plan.</u> BVAS recently submitted a request to the Southern California Wetlands Recovery Project for \$375,400 to prepare a comprehensive Buena Vista Creek Watershed Management Plan, integrating current restoration plans being developed for Buena Vista Lagoon with the upstream creek system. Key actions will include development of a coordinated watershed mapping framework and resource data base from primary and secondary sources, and identification of potential land acquisition, restoration, bioengineering, resource enhancement, and recreational use projects within the watershed.</p> <p><u>Monitoring.</u> BVAS has conducted a monthly bird count of species seen at Buena Vista Lagoon for decades. The results are on file in the Nature Center and available to the public. Our annual reports to National Audubon Society are presented each year in August and are kept on file in the Nature Center and are available to the public.</p>

Management Unit (MU)	Management Entity ¹	Management and Monitoring Activities
Calavera	CNLM	<p><u>Calavera Hills Phase II (2006).</u> Only basic on-site activities occurred during the 2005-2006 fiscal year because the CE was not in place until late in the year.</p> <p>2006 ACTIVITY SUMMARY</p> <ul style="list-style-type: none"> • Known locations were surveyed for thread-leaved brodiaea, but none were found. • Established baseline conditions; took photos/notes on all Calavera villages; documented site conditions (trash, itinerant camps, weeds) • Met with client and fence contractor to have pipe gates installed on San Diego Gas & Electric easements • Sought to clear out itinerant camps and inhabitants • Removed large infestations of myoporum, fennel, eucalyptus, and pampas grass
	CDFG	<p><u>Carlsbad Highlands Ecological Reserve.</u> Ongoing management activities included treatment of exotic plants, maintenance of fencing, trails, and signage, and trash pick-up. Species specific management activities for 2004-2007 include:</p> <p><u>California gnatcatcher:</u> protocol surveys conducted spring 2004-05.</p> <p><u>Grasshopper sparrow:</u> presence/absence surveys conducted spring 2004-05.</p> <p>General <u>avian</u> survey data was also collected during surveys listed above.</p> <p><u>Thread-leaved brodiaea:</u> presence/absence surveys were conducted in 2004.</p> <p><u>Buena Vista Creek Ecological Reserve.</u> The Sherman property was recently acquired through funding from private sponsors and local, state and federal government sources. The Center for Natural Lands Management has been retained for management of the property and treatments to eradicate exotic species have begun.</p> <p>HIGHLIGHTS:</p> <p>CNLM has established numerous clean-up days for this property. Numerous volunteers helped remove homeless encampment debris and other trash.</p>
	Preserve Calavera	<p>Preserve Calavera's mission is to protect and preserve the open space around Mount Calavera and Lake Calavera as habitat for native plants and animals; to promote the use of these areas by a responsible public; to support education and restoration programs; to minimize the adverse effect of development; to promote citizen action on local environmental issues; and to use any lawful means to carry out these objectives.</p> <p>HIGHLIGHTS:</p> <p><u>Sherman Property acquisition.</u> Helped raise \$100,000 towards the acquisition of the Sherman Property (See Section 3.1.2 of this report).</p>
Faraday	CNLM	<p><u>Kelly Ranch</u></p> <p>General management: signage and fences (capital improvements), biological surveys, habitat restoration, public services and reporting. Monitoring: plant surveys, bird community surveys and focused surveys for coastal California gnatcatcher</p> <p>2005 ACTIVITY SUMMARY</p> <ul style="list-style-type: none"> • Two pair of coastal California gnatcatchers were detected. • Growth and status of the 100 Orcutt's hazardia that were planted near Cannon Road was monitored. • Regular patrol, site enforcement and trash pickup was conducted to protect the Preserve.

Management Unit (MU)	Management Entity ¹	Management and Monitoring Activities
<p style="text-align: center;">Faraday continued</p>	<p style="text-align: center;">CNLM continued</p>	<ul style="list-style-type: none"> • Vegetation communities were assessed using CNPS Rapid Assessment protocols. • Non-native species were removed as necessary. • Restoration was coordinated with CDF&G and Planning Systems, Inc. <p>2006 ACTIVITY SUMMARY</p> <ul style="list-style-type: none"> • Three pairs of coastal California gnatcatchers were detected • Located several new western dichondra (<i>Dichondra occidentalis</i>) populations and one new Palmer's grappling hook (<i>Harpagonella palmeri</i>) population • Orcutt's hazardia (<i>Hazardia orcuttii</i>) that were planted near Cannon Road were counted • Regular patrol, site enforcement and trash pickup were conducted to protect the Preserve • Nonnative species were removed as necessary • Photo view point locations were established and photos were taken • Attended several meetings with the HOA and Shea Homes (developer) and continued homeowner communication/education • Restoration was coordinated with Planning Systems, Inc. (the environmental consultant for the Kelly Ranch development)
<p style="text-align: center;">Los Monos</p>	<p style="text-align: center;">CNLM</p>	<p><u>2006 Carlsbad Oaks North Habitat Conservation Area</u></p> <p>2006 ACTIVITY SUMMARY Only basic on-site activities occurred during the 2005-2006 fiscal year because the Center had not received fee title to the property and because the on-site projects (El Fuerte and Faraday extensions and the CON business park) have not been completed. Accessing the site was difficult and, at times, dangerous. Even though access was difficult, the Center did manage to complete several field and report related tasks.</p> <ul style="list-style-type: none"> • The site was visited several times each month and patrolling activities were conducted. • Photo viewpoints were established for both the CE and fee portions of the preserve and photos were taken at each visit. • A CE binder was prepared that includes the baseline property conditions for the CE including photographs. • Sensitive plant surveys were conducted, specifically for thread-leaved brodiaea (<i>Brodiaea filifolia</i>) and San Diego thornmint (<i>Acanthomintha ilicifolia</i>). Both species were located with Geographic Positioning Systems (GPS) and individuals were counted and noted. • The Center has been coordinating with the USFWS on the establishment of critical habitat and preparation of a USFWS recovery plan and management plan for San Diego thornmint, and one on-site meeting/field survey occurred to assess the on-site San Diego thornmint population and several office meetings between the Center and USFWS staff occurred.
	<p style="text-align: center;">UCSD</p>	<p>HIGHLIGHTS: Restoration Ecology: Conduct stream bank restoration. Fire Ecology: Old-growth and postburn chaparral monitored since a 1982 fire. Field Courses: Site visits by university courses in ecology, human biology, and natural history; facilities are expanding to enhance teaching use. Public outreach: The San Diego Natural History Museum collects plant specimens.</p> <p><u>Selected Research:</u></p> <ul style="list-style-type: none"> • The effects of floral predation on the pollination biology and reproductive success of <i>Yucca whipplei</i>. • Parasite diversity of small mammals in fragmented areas. • Suitability of soils and habitat types for the federally endangered Pacific pocket mouse.

Management Unit (MU)	Management Entity ¹	Management and Monitoring Activities
Poinsettia/Aviara	Aviara Master HOA	Information unavailable
	Other HOAs	Property-level management
Villages of La Costa	CNLM	<p><u>Rancho La Costa</u></p> <p>2005 ACTIVITY SUMMARY</p> <ul style="list-style-type: none"> • 30 pair and a single male coastal California gnatcatcher were observed during bird surveys. Of the 31 CAGN territories, 17 were on properties within the City of Carlsbad, 6 pair were in San Marcos and 8 pair were in the County (La Costa Villages off-site mitigation properties located in the County of San Diego). • Other sensitive bird species were observed, mapped and noted. • Vegetation transects were permanently set up in coastal sage scrub habitat and measurements were taken in the spring of 2005. • 5 vegetation plots were created within the <i>B. filifolia</i> habitat at La Costa Greens and measurements were taken. • Signs were placed where appropriate within the Preserve. • Non-native plant species such as fennel, tamarisk, eucalyptus, castor bean, mustard, acacia and pampas were removed. • Revised and submitted a Preserve Management Plan for the property. • The Center spent considerable time and resources enforcing unwanted trespass. <p>2006 ACTIVITY SUMMARY</p> <ul style="list-style-type: none"> • Bird community surveys were conducted using point counts • Wildlife corridor tracking was completed at several locations within the HCA • The condition of the thread-leaved brodiaea (<i>Brodiaea filifolia</i>) habitat at La Costa Greens was assessed • Focused surveys for thread-leaved brodiaea and San Diego thornmint (<i>Acanthomintha ilicifolia</i>) were conducted. • Pilot studies for ant species composition and distribution were initiated. • A 5 to 6-mile trail system was developed using existing trails. Seven kiosks and about 300 linear feet of post and rail fencing were installed. Trail signs were posted throughout the trail system. • Non-native plant species were controlled or removed • Herbicide experiments were conducted on onion weed (<i>Asphodelus fistulosus</i>) and a herbicide experiment was established to test the effects of specific herbicide treatments on thread-leaved brodiaea • CNLM spent considerable time and resources enforcing unwanted trespass
Multiple MUs	CWN	<p>HIGHLIGHTS:</p> <p><u>Watershed Stewards Training.</u> A program to train community stewards to provide public outreach, monitoring and restoration activities for the protection of the natural resources of the Carlsbad Watershed (October 2005).</p> <p><u>Invasive Species Removal.</u> In June 2004, CWN received \$3.96 Million in funding from the State of California Proposition 13 for the Dr. Alan Thum Invasives Removal Project, a three year project to remove the most threatening invasive plant species (i.e. arundo, tamarix, pampas grass, and palms) from the Carlsbad Hydrologic Unit, which includes the HMP planning area. The San Elijo Lagoon Conservancy is coordinating all project tasks and engaging contractors to supplement their own staff and is carrying out the physical, analytical, educational, and administrative tasks.</p> <p>The project removed 280 acres of invasive plant species and mapped an additional 280 acres to be treated with other funds; and planted 55,624 native plants to revegetated select treatment areas. The monitoring component of this project included habitat monitoring, bioassessment sampling, water quality sampling, and the installation of five stream gauges. Outreach efforts educated the public and community leaders about the effects of invasive plants through stakeholder meetings, personal contact with hundreds of landowners, and outreach to school and community groups.</p>

Management Unit (MU)	Management Entity ¹	Management and Monitoring Activities
<p>Multiple MUs continued</p>	<p>City Parks and Rec.</p>	<p>The Citywide Trails Program manages and monitors trail improvements, construction and maintenance activities in some of Carlsbad's open spaces that are part of the HMP, and conducts public outreach. This is done primarily by a volunteer group and the City's Parks Maintenance Divisions.</p> <p>HIGHLIGHTS:</p> <p><u>National Public Lands Day Clean-Ups</u>- Held for the past 3 years at Lake Calavera, this has been the most successful clean-up program of Open Space in the City of Carlsbad.</p> <p><u>Lake Calavera Trails Master Plan</u>. In an effort to manage the large City owned lands that have many unofficial trails, a plan is in progress to formally dedicate a trail system and enhance the open space through trail signage, closure of badly eroded trails, interpretive signage, fencing and other management activities.</p> <p><u>Citywide Trail Volunteer Program</u>. Oversee volunteers that work on a monthly basis to improve and construct trails by picking up litter, installing trail signage, repairing erosion, and removing weeds from the trails. Quarterly Trail Volunteer Meetings are held which are open to the public. A schedule is provided on the City's Website</p> <p><u>Trail School</u>. Offered once a year to all trail volunteers, as an opportunity to learn trail safety, correct trail building skills and how to protect the environment and be safe while performing the duties as a trail volunteer.</p> <p><u>Trail Blast</u>. A Fitness program using the City's Trails, but in addition information on trail safety and the trail volunteer program is provided.</p>

¹ Primary management entities (Preserve Managers) are in bold. CDFG – California Department of Fish and Game. CNLM – Center for Lands Management. CWN – Carlsbad Watershed Network. “Other” – HOAs (other than Aviara HOA) and private open space; generally these were preserved prior to HMP approval.

Appendix B

Habitrak Tables **Summaries of Habitat Losses and Gains** **Nov 2004 – Oct 2007**

Summary of Habitat Losses and Gains

Year 0 - Year 3

Begin Period: 1/1/2000

End Period: 10/31/2007

Duration in days: 2861

Habitat Type	Target Cons.	Inside the Habitat Preserve Planning Area					Outside the Habitat Preserve				Total			
		Habitat Loss		Habitat Gain			Habitat Loss		Habitat Gain		Habitat Loss		Habitat Gain	
		Current Period	Cumulative	Current Period	Cumulative	Cons. to Date %	Current Period	Cumulative	Current Period	Cumulative	Current Period	Cumulative	Current Period	Cumulative
Maritime Succulent Scrub	29	1.6	1.6	5.1	25.5	88.0	0.0	0.0	0.0	0.0	1.6	1.6	5.1	25.5
Coastal Sage Scrub	2,003	11.4	11.4	466.3	1,731.1	86.4	223.5	223.5	0.0	0.0	234.9	234.9	466.3	1,731.1
Chaparral	676	0.6	0.6	71.6	597.6	88.4	70.3	70.3	0.0	0.0	70.9	70.9	71.6	597.7
Southern Maritime Chaparral	342	0.0	0.0	42.9	328.5	96.1	20.2	20.2	0.0	0.3	20.2	20.2	42.9	328.8
Coastal Sage-Chaparral Scrub	107	0.0	0.0	87.1	112.4	105.1	153.5	153.5	0.0	0.0	153.5	153.5	87.1	112.4
Grassland	707	21.2	21.2	218.4	637.0	90.1	233.5	233.5	0.2	0.2	254.7	254.7	218.6	637.2
Southern Coastal Salt Marsh	143	0.0	0.0	0.0	127.8	89.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	127.8
Alkali Marsh	9	0.0	0.0	4.5	4.5	49.9	3.0	3.0	0.0	0.0	3.0	3.0	4.5	4.5
Freshwater Marsh	165	0.0	0.0	13.8	148.1	89.8	1.4	1.4	0.0	0.3	1.4	1.4	13.8	148.3
Riparian Forest	82	0.9	0.9	40.8	63.3	77.2	1.3	1.3	0.4	0.4	2.2	2.2	41.2	63.7
Riparian Woodland	17	1.3	1.3	13.8	14.1	82.9	0.1	0.1	0.0	0.0	1.4	1.4	13.8	14.1
Riparian Scrub	395	0.1	0.1	110.1	370.5	93.8	10.0	10.0	0.5	0.5	10.0	10.0	110.6	371.0
Coast Live Oak	20	0.0	0.0	12.0	12.0	59.9	0.4	0.4	0.0	0.0	0.4	0.4	12.0	12.0
Other Oak Woodland	4	0.0	0.0	0.0	4.8	120.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Freshwater	53	0.0	0.0	0.5	51.7	97.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	51.7
Estuarine	789	0.0	0.0	0.0	776.4	98.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	776.4
Disturbed Wetland	93	0.0	0.0	18.3	88.6	95.3	11.7	11.7	0.0	0.0	11.7	11.7	18.3	88.6
Agriculture	185	117.0	117.0	155.0	207.1	112.0	497.6	497.6	0.1	0.1	614.6	614.6	155.1	207.2
Eucalyptus Woodland	99	1.3	1.3	9.2	97.3	98.3	9.6	9.6	0.0	0.0	11.0	11.0	9.2	97.3
Disturbed Land	244	0.0	0.0	57.3	245.8	100.7	124.2	124.2	0.0	0.0	124.2	124.2	57.3	245.9
Urban/Developed	316	13.0	13.0	30.0	310.5	0.0	121.3	121.3	0.0	0.1	134.3	134.3	30.0	310.7
Grand Total:	6,478	168.4	168.4	1,356.6	5,954.7		1,481.6	1,481.6	1.3	2.0	1,650.0	1,650.0	1,357.9	5,956.7

Summary of Project Gains

Year 0

Start Date: 1/1/2000

End Date: 10/31/2004

Duration in days: 1766

Project Tracking #	Project Name	Location	Applicant	APN	Date Cons.	Status	Mgmt. Resp.	Conservation Type	Mit. Bank Credits	Acres Outside Habitat Preserve	Acres Inside Habitat Preserve	Total Acres
001-001	Aviara		Aviara		4/26/04	Gain	Local	Easement		0.00	43.94	43.94
001-003	Bressi Ranch		Bressi Ranch		1/24/03	Gain	Local	Easement		0.00	153.74	153.74
001-004	Calavera Heights Village K		Calavera Heights		1/2/02	Gain	Local	Easement		0.00	33.34	33.34
001-011	Kelly Ranch		Kelly Ranch		6/18/03	Gain	Local	Easement		0.00	52.82	52.82
001-012	Manzanita		Manzanita		9/26/03	Gain	Local	Easement		0.00	30.72	30.73
001-014	Redeemer		Redeemer		10/29/02	Gain	Local	Easement		0.00	0.77	0.77
001-042	Tabata 2004		Tabata		9/1/04	Gain	Local	Easement		0.00	0.42	0.42
001-018	Terraces at Sunny Creek		Terraces at Sunny Creek		4/26/00	Gain	Local	Easement		1.18	43.18	44.36
Total Acres Conserved/Mitigation Bank Credits:									0	1.18	358.93	360.11

Summary of Project Losses

Year 0
 Start Date: 1/1/2000
 End Date: 10/31/2004
 Duration in days: 1766

Project Tracking #	Project Name	Location	Applicant	APN	Date of Loss	Status	CEQA Doc. #	Activity Type	Acres Outside Habitat Preserve	Acres Inside Habitat Preserve	Acres
001-001	Aviara		Aviara		4/26/04	Loss			140.69	0.00	140.69
001-002	Aviara PT		Aviara		10/29/04	Loss			0.00	4.53	4.53
001-043	Black Rail Ridge		Black Rail Ridge		5/18/04	Loss			0.00	3.16	3.16
001-003	Bressi Ranch		Bressi Ranch		1/24/03	Loss			419.19	0.00	419.19
001-004	Calavera Heights Village K		Calavera Heights		1/2/02	Loss			16.16	0.00	16.16
001-011	Kelly Ranch		Kelly Ranch		6/18/03	Loss			133.84	0.00	133.84
001-012	Manzanita		Manzanita		9/26/03	Loss			12.67	0.00	12.67
001-014	Redeemer		Redeemer		10/29/02	Loss			9.67	0.00	9.67
001-017	Spyglass		Spyglass		7/3/01	Loss			0.00	10.61	10.61
001-040	Steiner Property		Steiner Property		1/5/00	Loss			0.00	1.84	1.84
001-041	Tabata 2001		Tabata		1/17/01	Loss			5.60	0.00	5.60
001-042	Tabata 2004		Tabata		9/1/04	Loss			0.00	4.48	4.48
001-018	Terraces at Sunny Creek		Terraces at Sunny Creek		4/26/00	Loss			49.16	0.90	50.05
Total Acres Lost:									786.98	25.53	812.50

Summary of Project Gains

Year 1

Start Date: 11/1/2004

End Date: 10/31/2005

Duration in days: 365

Project Tracking #	Project Name	Location	Applicant	APN	Date Cons.	Status	Mgmt. Resp.	Conservation Type	Mit. Bank Credits	Acres Outside Habitat Preserve	Acres Inside Habitat Preserve	Total Acres
001-005	Cantatini and Holly Springs		Cantarini and Holly Springs		12/7/04	Gain	Local	Easement		0.00	234.15	234.15
001-006	Carlsbad Municipal Golf Course		Carlsbad Municipal Golf Course		12/6/04	Gain	Local	Easement		0.02	207.07	207.10
001-007	Carlsbad Oaks North		Carlsbad Oaks North		11/12/04	Gain	Local	Easement		0.00	221.26	221.26
001-008	Carlsbad Raceway		Carlsbad Raceway		12/1/04	Gain	Local	Easement		0.00	44.71	44.71
001-010	Hieatt		Hieatt		2/3/05	Gain	Local	Easement		0.00	6.51	6.51
001-013	North Coast Calvary Chapel		North Coast Calvary Chapel		11/17/04	Gain	Local	Easement		0.00	10.70	10.71
001-016	Shelley		Shelley		8/17/05	Gain	Local	Easement		0.00	48.86	48.86
Total Acres Conserved/Mitigation Bank Credits:									0	0.03	773.26	773.29

Summary of Project Losses

Year 1

Start Date: 11/1/2004

End Date: 10/31/2005

Duration in days: 365

Project Tracking #	Project Name	Location	Applicant	APN	Date of Loss	Status	CEQA Doc. #	Activity Type	Acres Outside Habitat Preserve	Acres Inside Habitat Preserve	Acres
001-005	Cantatini and Holly Springs		Cantarini and Holly Springs		12/7/04	Loss			138.12	0.00	138.12
001-006	Carlsbad Municipal Golf Course		Carlsbad Municipal Golf Course		12/6/04	Loss			188.13	0.00	188.13
001-007	Carlsbad Oaks North		Carlsbad Oaks North		11/12/04	Loss			195.43	0.00	195.43
001-008	Carlsbad Raceway		Carlsbad Raceway		12/1/04	Loss			92.61	0.00	92.61
001-010	Hieatt		Hieatt		2/3/05	Loss			7.11	0.00	7.11
001-013	North Coast Calvary Chapel		North Coast Calvary Chapel		11/17/04	Loss			14.56	0.00	14.56
001-016	Shelley		Shelley		8/17/05	Loss			28.55	0.00	28.55
Total Acres Lost:									664.50	0.01	664.51

Summary of Project Gains

Year 2

Start Date: 11/1/2005

End Date: 10/31/2006

Duration in days: 365

Project Tracking #	Project Name	Location	Applicant	APN	Date Cons.	Status	Mgmt. Resp.	Conservation Type	Mit. Bank Credits	Acres Outside Habitat Preserve	Acres Inside Habitat Preserve	Total Acres
001-019	Emerald Point Estates		Emerald Point		3/21/06	Gain	Local	Easement		0.01	9.41	9.43
001-009	Fox-Miller		Fox-Miller		12/28/05	Gain	Local	Easement		0.00	16.33	16.33
Total Acres Conserved/Mitigation Bank Credits:									0	0.01	25.75	25.76

Summary of Project Losses

Year 2

Start Date: 11/1/2005

End Date: 10/31/2006

Duration in days: 365

Project Tracking #	Project Name	Location	Applicant	APN	Date of Loss	Status	CEQA Doc. #	Activity Type	Acres Outside Habitat Preserve	Acres Inside Habitat Preserve	Acres
001-019	Emerald Point Estates		Emerald Point		3/21/06	Loss			0.07	6.42	6.49
001-009	Fox-Miller		Fox-Miller		12/28/05	Loss			35.62	0.00	35.62
001-020	Yamamoto		Yamamoto		4/17/06	Loss			4.92	0.00	4.92
Total Acres Lost:									40.60	6.42	47.02

Summary of Project Gains

Year 3

Start Date: 11/1/2006

End Date: 10/31/2007

Duration in days: 365

Project Tracking #	Project Name	Location	Applicant	APN	Date Cons.	Status	Mgmt. Resp.	Conservation Type	Mit. Bank Credits	Acres Outside Habitat Preserve	Acres Inside Habitat Preserve	Total Acres
001-028	Robertson Ranch - East		Robertson Ranch - East		1/16/07	Gain	Local	Easement		0.02	71.95	71.97
001-029	Sherman		Sherman		3/31/07	Gain	Local	Easement		0.04	133.47	133.51
Total Acres Conserved/Mitigation Bank Credits:									0	0.06	205.42	205.48

Summary of Project Losses

Year 3

Start Date: 11/1/2006

End Date: 10/31/2007

Duration in days: 365

Project Tracking #	Project Name	Location	Applicant	APN	Date of Loss	Status	CEQA Doc. #	Activity Type	Acres Outside Habitat Preserve	Acres Inside Habitat Preserve	Acres
001-028	Robertson Ranch - East		Robertson Ranch - East		1/16/07	Loss			0.00	125.95	125.95
Total Acres Lost:									0.00	125.95	125.95

Appendix C

**Summary of Monitoring Results
for CNLM-Managed Properties
through October 31, 2008**

Biological Monitoring Status on CNLM-Managed Preserves through October 31, 2007

Common Name	Covered by HMP	NE	OW	Listed Spp	Preserve	Population Status	Most Recent Survey	Survey Schedule	Survey Type	Notes
PLANTS										
Cliff spurge	X				Kelly Ranch	11 individuals	2007	Every 3 years	Direct count	
Nuttall's scrub oak	X				Kelly Ranch	Common, but probably less than 100 individuals	2003	Every 5 years (next survey 2008)	Estimation	Steep terrain, difficult to count
					Carlsbad Oaks North	161	2006	Undetermined at this pt, but probably every 3-5 years	Direct count	161 individuals were gps'd, but this was only a partial survey. In 2008, CNLM will finish surveys for this species.
					Rancho La Costa/La Costa Villages	600-700	2003	Every 5 years	Estimation	Direct Count to occur in 2008
					Cassia Professional Offices	Unknown, potential to occur	2005 (Planning Systems)	Every 5 years	Direct Count	Direct Count to occur in 2008
Del Mar Manzanita		X			Carlsbad Oaks North	0	2007	No future surveys planned at this time	Direct count	<i>ssp zacanensis</i> known to occur. CNLM to conduct focused surveys in 2008 to determine whether <i>ssp crassifolia</i> occurs within the preserve
					Rancho La Costa/La Costa Villages	TBD, see notes	2007	2008	Direct count	<i>ssp zacanensis</i> known to occur. CNLM to conduct focused surveys in 2008 to determine whether <i>ssp crassifolia</i> occurs within the preserve
					Kelly Ranch	<50	2003	Every 3-5 years (next survey 2008)	Estimation	Steep terrain, difficult to count. May not be <i>ssp crassifolia</i> , which will be determined in 2008. <i>ssp zacanensis</i> known to occur. CNLM to conduct focused surveys in 2008 to determine whether <i>ssp crassifolia</i> occurs within the preserve
					Cassia Professional Offices	0	2005 (Planning Systems)			Not expected to occur
Orcutt's hazardia	X	X		ST	Kelly Ranch	106 adults and 3 seedlings	2007	Yearly	Direct count	Individuals at this preserve were propagated from seeds collected at the Manchester Habitat Conservation area in Encinitas and planted at Kelly Ranch in 2003 and 2004.
					Rancho La Costa/La Costa Villages	160	2006	Every few years	Direct count	Individuals at this preserve were propagated from seeds collected at the Manchester Habitat Conservation area in Encinitas and planted at this preserve in 2004.
San Diego Thornmint		X			Rancho La Costa/La Costa Villages	26	2007	Yearly	Direct count	Low numbers in 2007 likely due to low rainfall, 1,000 individuals estimated in 2003
					Carlsbad Oaks North	210	2007	Yearly	Direct count	First known census in 2007
Thread-leaved brodiaea	X	X		FT/SE	Carlsbad Oaks North	Less than 10	2007	2008	Direct count	Only vegetative portion of a few individuals observed in 2007 due to low rain. Merkel & Assoc reported 20 individuals in 1997
					Rancho La Costa/La Costa Villages	Estimated 11,000+	2007	Yearly	Direct count via plots, and estimation	
					Calavera Hills Phase II	No current data	2007	Yearly	Direct Count	Insufficient rainfall in 2007, but about 10 individuals thought to be TLB were observed.

Common Name	Covered by HMP	NE	OW	Listed Spp	Preserve	Population Status	Most Recent Survey	Survey Schedule	Survey Type	Notes
WILDLIFE										
Orange-throated whiptail	X				Kelly Ranch	Not observed by CNLM, observed in 1988, prior to CNLM	2002-2007	None		Although not observed, no focused surveys have been conducted. This species is likely to occur in low numbers (less than 100)
					Carlsbad Oaks North	Unknown	None to date	Not planned		This species was observed "in moderate" numbers in 1997 by Merkel and Assoc.
					Calavera Hills/Robertson Ranch	Unknown	None to date	Not planned		
					Rancho La Costa/La Costa Villages	0	2004	Not planned		None observed in reptile pit arrays run between 2002-2004 and no anecdotal sightings from 2002-2007 during other biological surveys. Likely absence from most of this preserve due to soil type. However, the species is likely to occur at the La Costa Greens preserve areas, but no surveys have been conducted by CNLM in these areas (in addition to dense vegetation within this area).
California rufous-crowned sparrow	X				Kelly Ranch	Not observed by CNLM, observed in 1988, prior to CNLM	2002-2007	Every 3 years	Focused surveys	Although not observed, this species has potential to occur in low numbers (i.e. less than 2 or 3 territories)
					Carlsbad Oaks North	Likely to occur		Every year for next 3 years		Next survey in 2008
					Calavera Hills/Robertson Ranch	No current status		Every few years	Focused surveys	2 territorial males heard along Calavera Creek in Robertson Ranch East Village in 2007
					Rancho La Costa/La Costa Villages	Abundant, 4-6 per survey plot per day	2004	None planned	Point Counts	Box Canyon and adjacent areas provide ideal habitat for this species, which is one of the most abundant per CNLM point count data (50 acre plots with 6 points). Data collected in 2005 has not been analyzed to date.
					Cassia Professional Offices	No current status				
Coastal California gnatcatcher	X			FT	Kelly Ranch	4 pairs	2007	Every 3 years	Focused surveys	The site has supported between 2 and 4 pairs since CNLM started management
					Carlsbad Oaks North	2 pair and 1 single male in 2007	2007	Every year for the next 3 years	Focused surveys	
					Calavera Hills/Robertson Ranch	12 pair and 1 single male	2007	Every year for the next 3 years	Focused surveys	
					Rancho La Costa/La Costa Villages	27 pair and 4 single males	2007	Every 2 years	Focused survey	Data includes off-site mitigation areas located in County of San Diego
					Cassia Professional Offices	Unlikely to occur	2005	None planned		
Cooper's Hawk	X				Kelly Ranch	Observed	2007	None planned	Anecdotal	Unlikely to nest, likely to forage, observed every year between 2002-2007
					Carlsbad Oaks North	1 Observed in 2007	2007	None planned	Anecdotal	Observed during CAGN surveys
					Calavera Hills/Robertson Ranch	Likely to occur		None planned		
					Rancho La Costa/La Costa Villages	Common		None planned	Anecdotal	Species is commonly observed during focused surveys for other species and regular patrolling efforts

Common Name	Covered by HMP	NE	OW	Listed Spp	Preserve	Population Status	Most Recent Survey	Survey Schedule	Survey Type	Notes
					Cassia Professional Offices	No current status		None planned		
Least Bell's vireo	X			FE/SE	Rancho La Costa/La Costa Villages	2 territorial males	2005	None planned	Anecdotal	Males were observed at La Costa Greens.
					Calavera Hills/Robertson Ranch	1 pair	2007	None planned	Anecdotal	1 pair observed along Calavera Creek near to where Village U and Robertson Ranch East Village meet
Yellow-breasted chat	X		X		Rancho La Costa/La Costa Villages	3 territorial males	2005	None planned	Anecdotal	Males were observed at La Costa Greens
					Calavera Hills/Robertson Ranch	2 territorial males	2007	None planned	Anecdotal	2 territorial males hear along Calavera Creek in Robertson Ranch East Village
					Carlsbad Oaks North	No current status	2008	Every few years	No recent survey, 2 chats observed in 1997 by Merkel and Associates	

NE = Narrow Endemic; OW = Obligate Wetland species

Preserves: BVC = Buena Vista Creek Ecological Reserve; CH = Calavera Hills Phase II; CP = Cassia Professional Offices; CON = Carlsbad Oaks North; KR = Kelly Ranch; NCHB = North County Habitat Bank; RLC = Rancho La Costa; RRE = Robertson Ranch East Village; GCA = Gnatcatcher Core Area (Alemir, Choumas-Pappas, Nelson);

Appendix D

Help Protect Carlsbad's Natural Open Space

Brochure about edge effects

Did you know?

- ✧ A mature pampas grass plant can produce about 50 plumes each season; each plume can produce up to 100,000 seeds; and the seeds can travel up to 20 miles!
- ✧ A single domestic cat can kill hundreds of native birds, lizards, and other wildlife every year! Contrary to common belief, well-fed cats and cats with bells do kill birds!
- ✧ Feeding wildlife (including bird-feeders) can impair health, reproduction, diminish foraging skills, and attract pests such as rats or non-native bird species.



For more Information

For more information, see the website dedicated to the Carlsbad Preserve System. (Look for the link on the City's website <http://ci.carlsbad.ca.us/>) Here is a list of some of the things you will find:

- ✧ Information about the preserve system and individual preserves.
- ✧ Volunteer opportunities.
- ✧ Information about native species, habitats, and local ecology.
- ✧ Additional information about edge effects.
- ✧ FAQs.
- ✧ Maps.
- ✧ And more!



Contact Information

Mike Grim
HMP Coordinator /Senior Planner
Carlsbad Planning Department
City of Carlsbad
760-602-4623
mgrim@ci.carlsbad.ca.us

Rosanne Humphrey
Carlsbad Preserve Steward
Technology Associates (TAIC)
760-519-0873
rhump@ci.carlsbad.ca.us



Help
protect
Carlsbad's
natural
open space

Gabbos checkerspot



Carlsbad Preserve System

What are edge effects?

“Edge effects” is a general term for a variety of impacts to natural communities across a boundary such as the transition from developed land to scrub habitat. In our urbanized area, the edge effects of concern are those associated with human activity in or around the preserve. These edge effects often don’t just affect the plants and wildlife on the edges, but can damage the entire area of the preserve. Examples of edge effects include invasive non-native plants, which may compete with native species; excessive noise and nighttime lighting, which may disrupt the breeding behavior of some birds; and ornamental landscaping, which may result in runoff containing fertilizer, pesticides, and herbicides, all of which are harmful to our natural lands.

How does that affect me?

Anyone who lives adjacent to or recreates within natural open space may be contributing to harmful edge effects. What you do in your yard, how you manage your pets, the kinds of recreational activities you participate in may all affect the natural ecosystem. Even if you live miles away from the nearest preserve, the plants in your yard could be invading the natural habitat!

What can I do?

Landscaping

- ✗ Don't plant invasive species, such as pampas grass, fountain grass, fennel, or artichoke thistle (see www.cal-ipc.org).
- ✗ Plant native species to reduce usage of water, pesticides, and fertilizer (see <http://www.cnps.org/cnps/nativeplants/> for more info).
- ✗ Use only organic pesticides such as insecticidal soap or neem oil.
- ✗ Don't over water or allow runoff to flow into native habitat.



Pampas grass

Managing Pets

- ✗ When hiking in a preserve keep your dog on a leash and pick up the poop!
- ✗ Keep cats indoors if you live within a mile of a preserve area.
- ✗ Don't release your pets in the wild! Pets can be devastating to the native fauna. Pets can't survive on their own in the wild and will suffer needlessly.
- ✗ Don't dump your aquarium, including the water, fish, plants, or snails, into storm drains, gutters, streams, ponds, or lakes.



Living with Wildlife

- ✗ Never leave pet food outside.
- ✗ Bring pets in at night.
- ✗ Don't try to “tame” a wild animal.
- ✗ Don't feed wildlife, including birds (if you live next to a preserve), coyotes, and squirrels.
- ✗ Use garbage cans that have a locking mechanism on the lid.



Other Things you can do

- ✗ Report road kill observations to the Preserve Steward to help assess wildlife movement corridor issues (see contact information on the back page).
- ✗ Stay on formal trails when hiking to help reduce erosion and disturbance to native species and their habitat.
- ✗ Keep motorized vehicles out of the preserve! Mountain bikes may be used on authorized multiple-use trails only.
- ✗ Don't leave trash when you go on a hike or picnic.

Use methods other than poisons to kill or remove pests such as gophers and rats. If they get eaten by another animal, the poison can kill, affect reproduction, and may remain in the food chain.