

City of Carlsbad Habitat Management Plan Annual Report

Reporting Year 11, Nov. 2014 – Oct. 2015

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Acronyms and Definitions

Annual Reports – Preserve-specific annual reports, which summarize management and monitoring activities, threats, and monitoring results, are due in November of every year. Pre-HMP preserves are generally not required to prepare annual reports unless stipulated in previously negotiated agreements with the city and/or Wildlife Agencies. HMP-wide annual reports (e.g., the current report) are due to the Wildlife Agencies in December of every year. HMP annual reports summarize gains and losses in the HMP preserve system, current status of individual preserves and species, management and monitoring activities, and a financial summary. Every third year, the HMP annual report includes an analysis of species monitoring data. The latest three-year report was prepared as part of the 2010/2011 HMP annual report.

ASMD – Area Specific Management Directive.

BLF – Batiquitos Lagoon Foundation

California Gnatcatcher Core Area – An area identified in the MHCP that is considered critical to the recovery of the coastal 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 of conservation.

Caltrans – California Department of Transportation. Caltrans is responsible for the design, construction, maintenance, and operation of the California State Highway System and Interstate Highway segments within the state's boundaries.

City – City of Carlsbad.

CDFW – California Department of Fish and Wildlife (formerly CDFG – California Department of Fish and Game).

CNDDDB – California Natural Diversity Database, operated and maintained by CDFW.

CNLM – Center for Natural Lands Management, a non-profit organization that provides management and biological monitoring of mitigation and conservation lands in perpetuity.

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.

Critical Location – An area that must be substantially conserved for a particular sensitive species to be adequately conserved by the MHCP. Critical locations often coincide with major populations of the same sensitive species, but not all major populations are considered critical.

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 planned and if any adaptive management is needed.

EMP – SANDAG’s *TransNet* Environmental Mitigation Program, a funding allocation category for the costs to mitigate habitat impacts for regional transportation projects. Funding grants from this program may be used for habitat acquisition, management, and monitoring activities as needed to help implement the Multiple Habitat Conservation Program (MHCP).

ESA – Endangered Species Act.

Existing Hardline Preserve 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, or areas that were previously Proposed Hardline Areas or Standards Areas that have secured preservation, long-term management and monitoring, and a non-wasting endowment to fund activities in perpetuity.

FPA – Focused Planning Area.

GIS – Geographic Information System.

Habitrak – A GIS-based tool that was developed and is maintained by CDFW for habitat accounting. The tool calculates the acreage, type, and location of vegetation communities that are gained (conserved), or lost (impacted) from the HMP planning area.

HCP – Habitat Conservation Plan, a planning document required as part of an application for an incidental take permit from the USFWS that describes the anticipated effects of the proposed taking; how those impacts will be minimized, or mitigated; and how the HCP is to be funded.

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

HOA – Home Owners’ Association

HRS – Habitat Restoration Sciences, Inc. A for-profit native habitat restoration and general engineering firm specializing in installation and long term maintenance of natural areas.

IA – Implementing Agreement. The legal agreement between the City of Carlsbad, CDFW, and USFWS that ensures implementation of the Carlsbad Habitat Management Plan (HMP), binds each of the parties to perform the obligations, responsibilities, and tasks assigned, and provides remedies and recourse should any of the parties fail to perform.

Landowner – The legal entity that owns the land in 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.

LFMZ – Local Facility Management Zone, one of 25 Growth Management Plan sub-areas of the City of Carlsbad used for planning and financing infrastructure improvements and other city services and facilities concurrent with development.

Major Population – A population of sensitive species considered sufficiently large to be self-sustaining with a minimum of active or intensive management intervention (especially for plants) or that at least supports enough breeding individuals to contribute reliably to the overall metapopulation stability of the species (especially for animals). Also includes smaller populations that are considered important to long-term species survival.

Management Unit – Groupings of adjacent or nearby preserve parcels that have similar management needs.

MHCP – Multiple Habitat Conservation Program – a subregional conservation plan prepared and administered by SANDAG that encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. The goal of the MHCP is to conserve approximately 19,000 acres of habitat and contribute toward the regional habitat preserve system for the protection of more than 80 rare, threatened, or endangered species.

NCCP – Natural Community Conservation Planning Program – a program of CDFW that takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity throughout the State. The MHCP is a sub-regional component of the statewide NCCP.

Non-wasting Endowment – An endowment with sufficient principal that provides for the set up costs and management/monitoring of a preserve in perpetuity through investment returns. The endowment is designed to increase in value over time in order for the generated revenues to increase, and thus keep pace with inflation. Pre-HMP preserves generally did not require endowments to fund management, unless specified in a previously negotiated agreement with the city and/or Wildlife Agencies.

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

PAR – Property Analysis Record, a cost analysis that estimates the management and monitoring costs of a specific preserve in perpetuity, often in the form of an endowment to fund long-

term management. A PAR is based on industry accepted parameters, allows an objective cost/benefit analysis for each line item, and adjusts for inflation.

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 master PMP for all city-owned preserves which addresses each preserve individually.

Preserve – Land conserved with a conservation easement, restrictive covenant, deed restriction, or transfer of fee title to the city or California Department of Fish and Game that is being managed to HMP and MHCP standards. (Note: lands already set aside for preservation through an open space easement prior to HMP adoption have limited management activities until a regional funding source is available).

Preserve Manager – The entity responsible for monitoring and managing the preserve. The majority of preserve lands are owned/managed by the city, CDFW, CNLM, or private Homeowner’s Associations (HOAs). Pursuant to State due-diligence legislation that took effect January of 2007, preserve managers must be certified by either the city or CDFW before they can begin managing lands in the city.

Priority Species – Sensitive species that have site-specific permit conditions requiring populations to be tracked individually using GIS.

Proposed Hardline Preserve 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.

RY – Reporting Year, or from November 1, 2014 to October 31, 2015

Rough Step Assembly - A policy that requires development (losses) occur in “rough step” with land conservation (gains) during preserve assembly to ensure that development does not greatly outpace land conservation. It is generally understood by the Wildlife Agencies that losses should be no more than 10% greater than gains.

SANDAG – San Diego Association of Governments. SANDAG is the San Diego region’s primary public planning, transportation, transit construction, and research agency, providing the public forum for regional policy decisions about growth, transportation planning and transit construction, environmental management, housing, open space, energy, public safety, and binational topics.

SDHC – San Diego Habitat Conservancy; a non-profit organization that provides management and biological monitoring of mitigation and conservation lands in perpetuity. Prior to February of 2009, SDHC was called Helix Community Conservancy.

SDMMP – San Diego Management and Monitoring Program; The SDMMP is a science based program seeking to provide a coordinated approach to management and biological monitoring of lands in San Diego that have been conserved through various programs including the Multiple Species Conservation Program, the Multiple Habitats Conservation Program, the TransNet Environmental Mitigation Program, and various other conservation and mitigation efforts.

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 the city’s 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.

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, including impacts to the habitats upon which these listed species depend.

TET – The Environmental Trust. TET was a habitat management company that owned and managed several preserves in Carlsbad until declaring bankruptcy in 2005. Their properties were unmanaged until CDFW acquired title and management responsibility in early 2010.

TransNet - the San Diego County half-cent sales tax for transportation improvements first approved by voters in 1988 and extended in 2004. The Environmental Mitigation Program (EMP) is a component of TransNet that funds habitat related environmental mitigation activities required to implement projects identified in SANDAG’s Regional Transportation Plan, including a funding allocation for habitat acquisition, management, and monitoring activities as needed to help implement the Multiple Species Conservation Program (MSCP) and the Multiple Habitat Conservation Program (MHCP).

USACOE – U.S. Army Corps of Engineers

USFWS – U.S. Fish and Wildlife Service

Wildlife Agencies – Term used collectively for the California Department of Fish and Wildlife and U.S. Fish and Wildlife Service.

Executive Summary

This is the eleventh annual HMP summary report, covering the period of November 1, 2014 to October 31, 2015. This report summarizes the preserve status, implementation activities, and preserve gains and losses that have occurred during the current reporting period. Highlights of HMP activities are summarized below.

Current Status of Preserves

The existing preserves continued to be managed, monitored, and/or maintained during the reporting period. Established private and city-owned Hardline Preserves were managed and monitored in accordance with their approved Preserve Management Plans; California Department of Fish and Wildlife (CDFW) preserves were managed subject to available funding and resources; and pre-existing natural open space areas were maintained according to their respective Open Space Easements, if applicable. Descriptions of the different categories of preserves are contained in Section 1.3.

Lake Calavera Mitigation Parcel

There were no debits during the reporting period; cumulative debits and adjustments for wetland mitigation sites to date are 90.5 acres. The total credits available were adjusted based upon the Implementing Agreement and evaluation of habitat types, leaving a total of 115.6 acres (credits) remaining.

Gnatcatcher Core Area Conservation Obligation

The city has conserved 294.67 acres of the 307.60 acre Gnatcatcher Core Area conservation requirement and continued to explore opportunities to conserve the remaining 12.93 acres during the reporting period.

Land Acquisitions

There were no land acquisitions inside of the HMP Planning Area during the reporting period.

Habitat Gains and Losses

The only habitat gain and loss during the reporting period involved the Robertson Ranch West project with 219.4 acres impacted by development and 37.9 acres set aside for preservation.

Rough-Step Preserve Assembly

The rough step policy states that during preserve assembly, development (losses) must occur in “rough step” with land conservation (gains). Although a precise definition of “rough step” was not included in the MHCP or HMP, it is generally understood by the Wildlife Agencies that losses should be no more than 10% greater than gains (C. Beck, CDFW, pers. comm. 2007). This policy was developed for NCCP plans to ensure that development does not greatly outpace land preservation. To date, 1,784.1 acres have been lost in Carlsbad since inception of the HMP, and therefore, no less than 1,605.7 acres (1,784.1-178.4) must be preserved. A cumulative total of 5,969.7 acres have been gained in the preserve system, which greatly exceeds the minimum required by the rough step policy. The rough step policy will continue to be followed for all new development projects (e.g., in Standards Areas) because the city requires that native habitat be conserved (impact mitigation/habitat gain) prior to issuing a grading permit (habitat impact/habitat loss).

Regulatory Compliance

The city is in compliance with the terms and conditions of the Implementing Agreement, NCCP take authorization/permit, and federal ESA section 10(a)(1)(B) take authorization/permit, and HMP zone-specific standards, as summarized in Tables 5 – 8 in the body of the report. Three HMP permits were approved, and three minor amendments (two Consistency Findings and one mapping correction) were processed during the current reporting period.

Preserve Management and Monitoring

Key management and monitoring activities in HMP preserves conducted this year included invasive species removal, installation and maintenance of fences and signage, rare plant counts and habitat assessments, vegetation mapping, sensitive bird species surveys, wildlife corridor tracking, , and public outreach activities.

Patrolling and Enforcement

The Environmental Management division of Public Works continues to coordinate with preserve managers, Carlsbad Parks and Recreation Department, CDFW, and the Carlsbad and Oceanside Police Departments on a multi-pronged approach to enforcement within the preserve system using education, deterrence, and patrolling.

Financial Summary

In-lieu Mitigation Fee Program. A total of \$360,970.41 of *in-lieu* mitigation fees were collected and none was expended during the reporting period. As of October 31, 2015, the account had a negative balance of \$415,062.28. This shortfall will be reimbursed with future *in-lieu* mitigation fees.

Preserve Management Endowments. During the reporting period, a total of \$385,233 was used by CNLM, SDHC, HRS, and San Diego Urban Corps Habitat Services for management and monitoring activities on 14 preserves. Endowment and remaining initial funds for these properties totaled \$10,361,947 as of October 31, 2015.

1.0 Plan Administration

1.1 Introduction

The purpose of this document is to provide an update on the status of the Habitat Management Plan (HMP) preserve system, and implementation activities that have occurred during the current reporting period (November 1, 2014 – October 31, 2015). The information in this report will be used in compliance monitoring to determine if the HMP is being properly implemented pursuant to relevant regulations and permit conditions. Annual tracking and reporting of the HMP Preserve's gains, losses, management, and monitoring is required by Sections 12.1 and 12.2 of the Implementing Agreement (IA), dated November 12, 2004; the Federal Fish and Wildlife 10(a)(1)(B) Permit No. TE022606-0, dated November 12, 2004; and the NCCP Permit No. 2835-2004-001-05, dated November 15, 2004. This annual report covers year eight of the 50-year HMP implementation permits.

1.2 HMP Compliance Monitoring and Effectiveness Monitoring

1.2.1 HMP Conservation Goals

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 (See HMP p. A-2 for a complete list):

- 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 sufficient habitat, functional biological cores, wildlife movement corridors, and habitat linkages, including linkages that connect coastal California gnatcatcher (*Poliioptila californica californica*) 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 Endangered Species Act (ESA)-related mitigation and HMP implementation.

1.2.2 Compliance Monitoring

Compliance monitoring, also known as implementation or regulatory monitoring, is required pursuant to the city's HMP Implementing Agreement (permit) with the Wildlife Agencies (CDFW and USFWS) to ensure that the city is performing the conservation and implementation actions described in the Implementing Agreement. Compliance monitoring tracks whether the city is doing what it agreed to do from a regulatory perspective, such as conserving particular species locations and acres of habitat, monitoring the condition of the habitat and species, and performing required management actions (MHCP Vol. I). The Preserve steward assists the city by conducting compliance monitoring and reporting for agency review. Habitat tracking results are provided in Section 1.4; regulatory compliance is discussed in Section 1.5; and management and monitoring activities are summarized in Section 2.0.

1.2.3 Effectiveness Monitoring

Effectiveness monitoring, also known as biological, ecological or validation monitoring, determines the effectiveness of the conservation program. Effectiveness monitoring evaluates how well the conservation and management actions are achieving the biological goals stated in the MHCP and HMP within the city and across the MHCP planning area as a whole. The preserve-level monitoring program is used to evaluate the effectiveness of management actions at specific preserve areas (MHCP Vol. III). At the subregional (MHCP-wide) level, effectiveness monitoring involves assessing status and trends in populations of covered species, and assessing how well the conservation strategy is working to maintain natural ecological processes (MHCP Vol. III). The city is responsible for biological monitoring on city-owned properties and for reporting monitoring results from other properties within the HMP. The Wildlife Agencies are responsible for monitoring on their own properties (i.e., reserves owned by CDFW or lands within Batiquitos Lagoon owned by the California State Lands Commission) and for conducting subregional monitoring and analysis.

Monitoring the effectiveness of the MHCP and HMP is more challenging than compliance monitoring because the biological goals are broad and it may take many (upwards of ten) years before trends in species populations and habitat conditions are detectable. Species and habitat monitoring is conducted by the preserve managers. The city, Preserve steward, preserve managers, and Wildlife Agencies are currently working together to develop a functional city-wide monitoring program that will help answer questions about population trends and wildlife movement. In addition, the city is coordinating with the San Diego Management and Monitoring Program (SDMMP), which is developing regional and preserve-level monitoring and management protocols for use throughout San Diego County.

1.3 Current Status of Preserves

This section contains a description of the different categories of preserves within the HMP preserve system, accounting of the mitigation credits at the city's Lake Calavera Mitigation Parcel, status of the city's Gnatcatcher Core Area conservation obligation, and summary of in-lieu mitigation fee program.

1.3.1 Categories of HMP Preserves

Lands within the HMP preserve system can be grouped into four categories: (1) established private and city-owned Hardline Preserves; (2) California Department of Fish and Game Ecological Reserves; (3) pre-existing natural open space preserves; and (4) future preserves (Proposed Hardline Preserves and Standards Areas). These categories of preserve lands are distinguished by the level of management, ownership, and/or status as described below and shown in Figure 1.

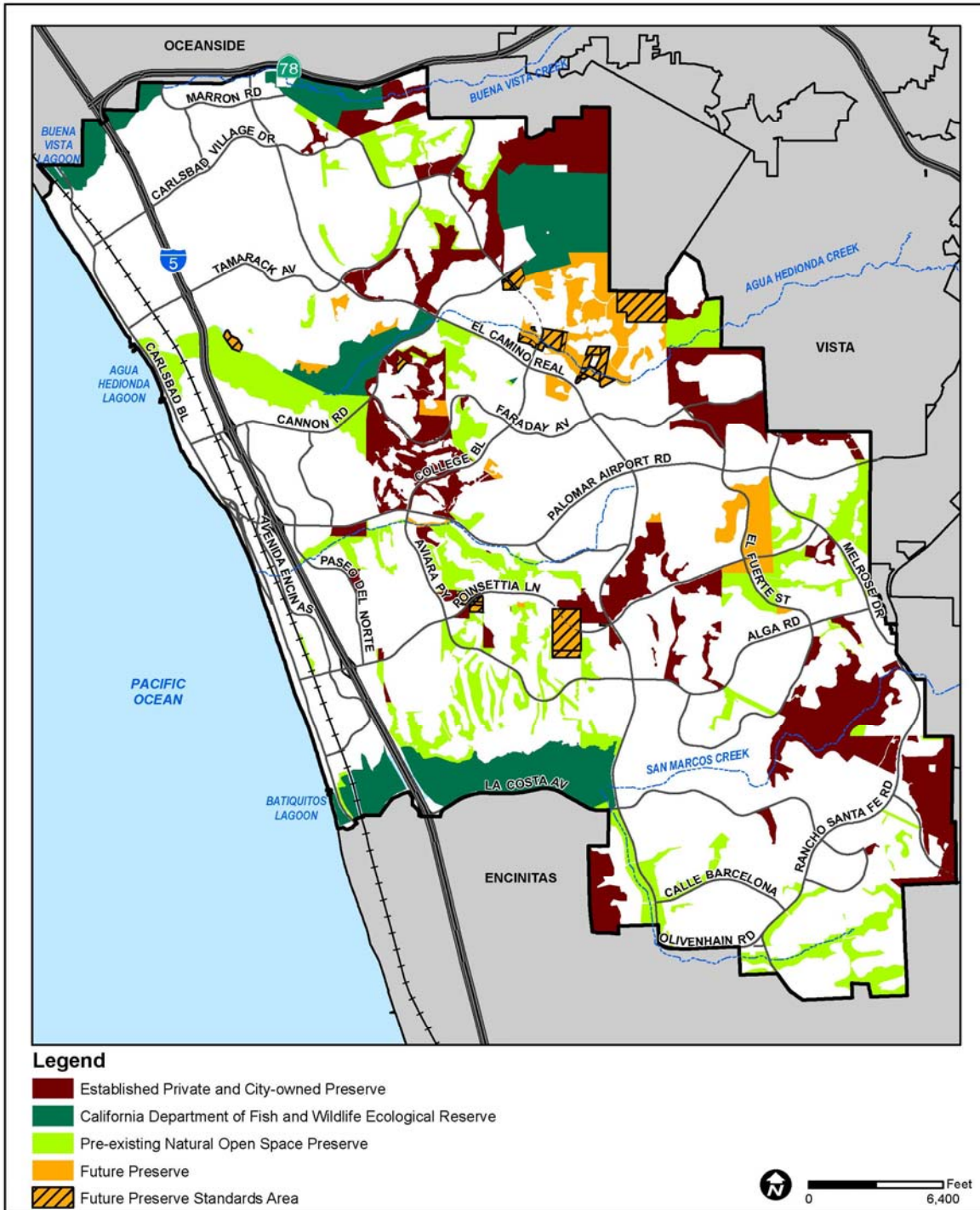
Established Private and City-owned Hardline Preserves

These Hardline Preserves were established during or after the adoption of the HMP. They have approved Preserve Management Plans implemented by preserve managers and funded through non-wasting endowments or, in the case of the city-owned preserves, through annual budget appropriations. The city requires annual reports for all of these preserves. The underlying property owners for these preserves are a preserve management entity, homeowner's association, or the city. Except for the city-owned properties, all of these Hardline Preserves are protected by a recorded Conservation Easement. Examples of these preserves include Rancho La Costa, Carlsbad Oaks North, Kelly Ranch, Lake Calavera, and the Crossings Golf Course, among others.

California Department of Fish and Game Ecological Reserves

These Hardline Preserves were established prior to or subsequent to the adoption of the HMP and are all owned by the State of California. According to the HMP Implementing Agreement, the level of management and monitoring of the CDFW preserves is based upon the available State funding and resources. Currently there are no finalized Reserve Management Plans for the CDFW ecological reserves in Carlsbad but management follows draft plans. CDFW obtains State Wildlife Grant funding annually for management and monitoring activities on preserves. Management accounts are established for Carlsbad Highlands Ecological Reserve and Agua Hedionda Lagoon Ecological Reserve. The Batiquitos Lagoon Ecological Reserve is managed and monitored by CDFW and funded through a mitigation account established by the Port of Los Angeles and held by CDFW. The Buena Vista Creek Ecological Reserve is managed by Center for Natural Lands Management (CNLM), a non-profit management entity, through a contract and funded by an endowment held by CNLM. The city receives some CDFW monitoring data for the lagoon preserves and a CNLM prepared annual report for the Buena Vista Creek Reserve.

Figure 1. Categories of HMP Preserves



City of Carlsbad
Categories of HMP Preserves

Figure 1

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Date: 02/08/2016

Pre-existing Natural Open Space Preserves

These Hardline Preserves predated the adoption of the HMP and are composed of natural open space areas within subdivisions or master plan communities (owned by the respective homeowner's association), the University of California's Dawson-Los Monos Reserve, and areas owned by Cabrillo Power, San Diego Gas and Electric, and the San Dieguito Union High School District. The lands were included in the HMP because of their biological resources and ecological value. There are no Preserve Management Plans or active management and monitoring associated with these preserves and maintenance of the property is the responsibility of the property owner. Generally, management consists of trash pick-up and fence maintenance. The HMP envisioned that future management and monitoring of these lands would be financed through a regional funding source. All of the preserves owned by homeowner's associations are protected by an Open Space Easement. The Dawson-Los Monos Reserve is owned by the Regents of University of California and has no open space or conservation easement protection. Examples of the homeowner's association owned preserves include Calavera Hills Phase I, Aviara, and Arroyo La Costa.

Future Preserves (Proposed Hardline Preserves and Standards Areas)

These preserves are identified in the HMP and are associated with developable lands but have yet to begin management and monitoring. As a condition of approval for any development on the property, the developer is obligated to establish the preserve by gaining approval of a Preserve Management Plan, contracting with a management entity, depositing a non-wasting endowment or other secure financing mechanism, and recording a Conservation Easement. An Equivalency Finding, approved by the city and Wildlife Agencies, is required for any alterations to the Proposed Hardline Preserve and the final preserve design for Standards Areas must be approved by the city and Wildlife Agencies through a Consistency Finding. Examples of these future preserves include Mandana and Kato.

1.3.2 Lake Calavera Mitigation Parcel

The city-owned Lake Calavera Mitigation Parcel, also known as the Lake Calavera Preserve, provides mitigation as needed for upland habitat impacts related to city construction projects. Credits are deducted on an acre-for-acre basis, regardless of the type of habitat being impacted, except for impacts to gnatcatcher-occupied coastal sage scrub, southern maritime chaparral, and maritime succulent scrub. No credits can be sold to outside entities.

There is a discrepancy between the acreage of available credit shown in the HMP (Section D.3.B) and Implementing Agreement (Section 10.7), with the former indicating 266.1 available acres and the latter showing 206.1 available acres. For the first five years of HMP implementation, from 2004 to 2009, the Wildlife Agencies and city used the 266.1 acre credit amount contained in the HMP. In reporting year 6 (Nov. 2009 to Oct. 2010), the city revised the initial credit amount to

256.0 acres to reflect the actual calculated acreage of the Lake Calavera property. The Wildlife Agencies and city have agreed to use the more conservative amount of 206.1 acres shown in the IA.

In addition to the use of the Lake Calavera for upland mitigation credits, the city also uses the property for active mitigation through habitat creation, restoration and/or enhancement. Once these mitigation sites are used for active mitigation, they are no longer eligible for mitigation credits and the acreage of the mitigation site is debited from the available balance. The locations of these habitat creation/restoration/enhancement sites is shown in Figure 2. Table 1 shows the revised accounting of credits using the 206.1 acres initial allowance contained in the IA.

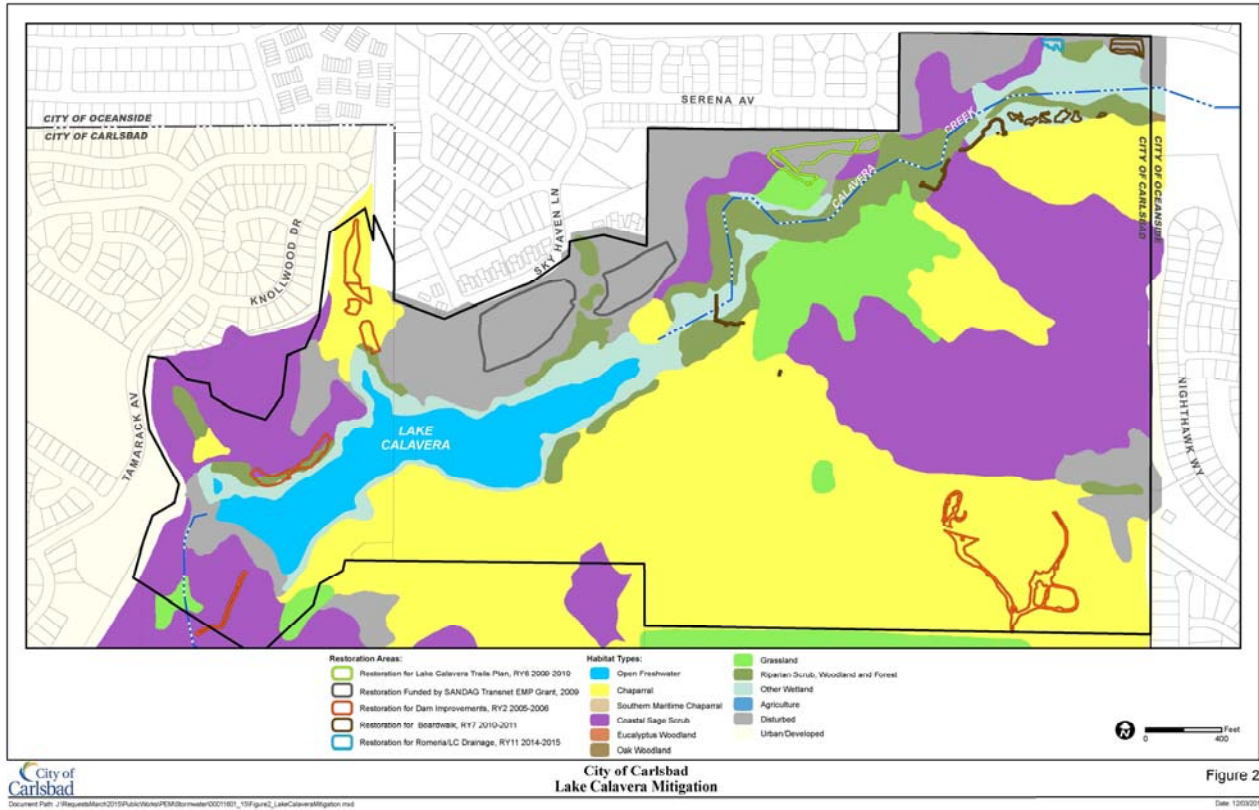
Table 1. Mitigation Acreage at Lake Calavera Mitigation Parcel through RY 11 (2014-2015)

Credits and Debits	Acres¹
<i>INITIAL CREDITS</i>	<i>206.1</i>
Pre-HMP Deductions (Prior to Nov. 2004)	
1. 100-ft wide fire break on northern boundary	17.6
2. Future police shooting range	10.0
<i>Subtotal pre-HMP debits</i>	<i>27.6</i>
Year 1 Deductions (Nov. 2004-Oct. 2005)	
1. Municipal Golf Course	20.0
2. Hub Park	10.0
3. South Agua Hedionda Sewer Interceptor	0.2
4. Approved future Water District projects	22.0
5. Lake Calavera Remedial Improvements	1.5
<i>Subtotal Year 1 debits</i>	<i>53.7</i>
Year 2 Deductions (Nov. 2005-Oct. 2006)	
1. Lake Calavera Remedial Improvements wetland and temporary mitigation sites	1.5
2. Lake Calavera Remedial Improvements upland creation mitigation site	1.1
<i>Subtotal Year 2 debits</i>	<i>2.6</i>
Year 3 Deductions (Nov. 2006-Oct. 2007)	
3. Fire Station No. 6	0.8
4. Rancho Carrillo Citywide Trail	0.2
5. Hosp Grove Drainage Project	0.1
<i>Subtotal Year 3 debits</i>	<i>1.1</i>
Year 4 Deductions (Nov. 2007-Oct. 2008)	
1. None	0.0
<i>Subtotal Year 4 debits</i>	<i>0.0</i>

Credits and Debits	Acres¹
Year 5 Deductions (Nov. 2008-Oct. 2009)	
1. None	0.0
<i>Subtotal Year 5 debits</i>	<i>0.0</i>
Year 6 Deductions (Nov. 2009-Oct. 2010)	
1. Romeria Street Channel Improvements	0.2
2. La Costa Avenue Slope Repair	0.2
3. Lake Calavera Trails Master Plan	0.1
4. Lake Calavera Trails Master Plan upland creation mitigation site	1.1
<i>Subtotal Year 6 debits</i>	<i>1.6</i>
Year 7 Deductions (Nov. 2010-Oct. 2011)	
1. Encinas Creek Bridge	0.3
2. Agua Hedionda Sewer Lift Station	1.2
3. Beech Avenue Sewer Replacement	0.2
4. Lake Calavera Boardwalk wetland mitigation sites	0.6
<i>Subtotal Year 7 debits</i>	<i>2.3</i>
Year 8 Deductions (Nov. 2011-Oct. 2012)	
1. None	0.0
<i>Subtotal Year 8 debits</i>	<i>0.0</i>
Year 9 Deductions (Nov. 2012-Oct. 2013)	
1. El Camino Real Southbound Widening	0.1
<i>Subtotal Year 9 debits</i>	<i>0.1</i>
Year 10 Deductions (Nov. 2013-Oct. 2014)	
1. El Camino Real Southbound Widening	1.4
<i>Subtotal Year 10 debits</i>	<i>1.4</i>
Year 11 Deductions (Nov. 2014-Oct. 2015)	
Romeria/La Costa Drainage wetland mitigation site	0.1
<i>Subtotal Year 11 debits</i>	<i>0.1</i>
Total Debits	90.5
TOTAL ACRES AVAILABLE AS OF OCTOBER 31, 2015	115.6

¹ Rounded to the nearest tenth of an acre.

Figure 2. Lake Calavera Habitat Types and Mitigation Sites



1.3.3 Gnatcatcher Core Area Preservation Obligation Acreage

As of the final approval of the HMP in 2004, 264.5 acres of the 307.6 acre Gnatcatcher Core Area preservation obligation had been met through project related mitigation in the Core Area and additional onsite restoration within the HMP Plan Area. The remaining obligation consisted of acquisition of 43.02 acres of occupied coastal sage scrub habitat and reimbursement for 50.13 acres of land that was acquired by a private developer in anticipation of the HMP Core Area requirements. The history of the Gnatcatcher Core Area, including how the previous obligations were met, is detailed in earlier annual reports.

The city has conserved 294.67 acres of the 307.60 acre Gnatcatcher Core Area conservation requirement and continued to explore opportunities to conserve the remaining 12.93 acres during the reporting period. Table 2 shows the current status of Core Area conservation credits.

Table 2. Status of Carlsbad HMP Gnatcatcher Core Area Obligation through RY 11 (2014-2015)

Core Area Components	Component Acreage		Total Acreage
TOTAL CORE AREA CONSERVATION REQUIREMENT			307.60
1. Acquisition by the City			
<i>Alemir Property</i> – land in excess of mitigation requirements.	50.13		
<i>Perkins Property</i> – 30.09 acres of conservation credit for endowing long-term management on portion of property.			
October 24, 2011	7.53		
October 11, 2012	7.52		
October 21, 2013	7.52		
October 22, 2014	7.52		
Subtotal of Acquisition		80.22	
2. Project-Related Mitigation	150.26		
3. Onsite Conservation Restoration Credits	64.19		
Total Core Area Conservation			294.67
REMAINING CORE AREA CONSERVATION REQUIREMENT			12.93

1.3.4 In-lieu Mitigation Fee Program

Under certain circumstances, project impacts to non-sensitive upland habitats that occur outside of the HMP preserve may be mitigated through a fee rather than onsite or offsite conservation. These funds can only be used to offset the cost of Gnatcatcher Core Area conservation. A total of \$360,970.41 of *in-lieu* mitigation fees were collected during the reporting period. A detailed accounting of the *in-lieu* mitigation fees and expenditures is given in Section 3 (Financial Summary).

1.4 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) the HMP preserve is being assembled as anticipated; (b) the habitat conservation goals of the HMP are being achieved; and (c) habitat conserved is in rough step with development. Habittrak is a GIS database 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.

1.4.1 Target Acreage

Habitrak, a CDFW maintained database, is used by the city to calculate the number of acres added to the HMP preserve every year (although it does not calculate gains within the Gnatcatcher 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 3 below 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.

**Table 3. HMP Target Conservation of Habitats
(Comparison of Habitat Categories in HMP and Habitrak)**

HMP Table 8		Habitrak	
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 Habitrak	N/A
Total HMP Target Conservation	6,786		

¹ Rounded to the nearest acre.

1.4.2 Land Acquisitions

There were no land acquisitions inside of the HMP planning area during the reporting period.

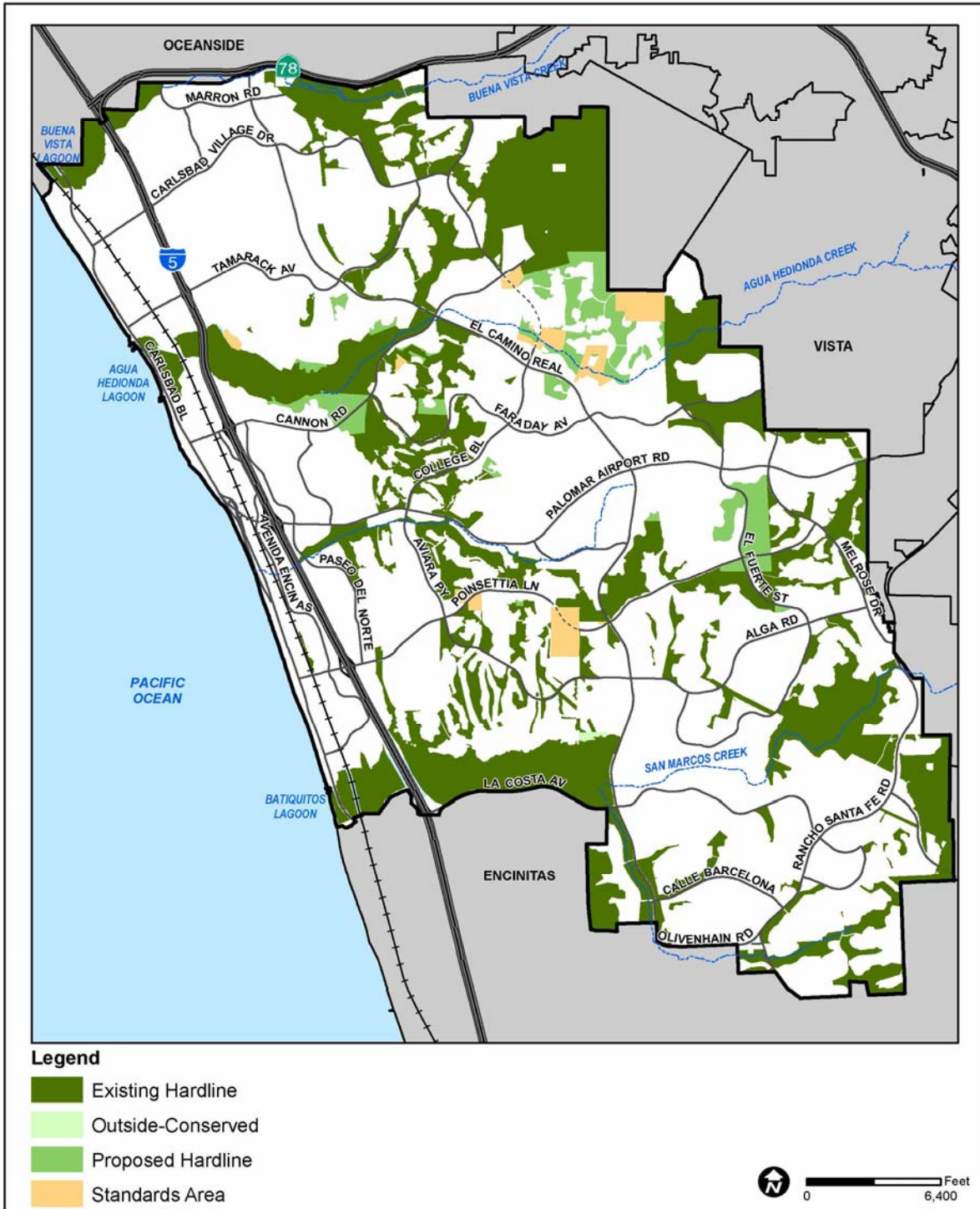
1.4.3 Habitat Gains and Losses

Habitat gain and loss during the reporting period involved the Robertson Ranch West project with 219.4 acres impacted by development and 37.9 acres set aside for preservation. The current HMP conditions are shown in Figure 2 and the areas of gains and losses in the HMP during the reporting period and from previous years are displayed in Figure 3.

1.4.4 Rough-Step Preserve Assembly

As stated in the IA (12.1 Record Keeping) “Habitat conservation under the HMP must proceed concurrently and in rough step with development.” Although ‘rough step’ has not been defined in the HMP or MHCP, the general standard adopted by the Wildlife Agencies is that acres of habitat gain must be within approximately 10% of habitat losses (Christine Beck, CDFG, pers. comm. 2007). This policy was developed for NCCP plans to ensure that development does not greatly outpace land preservation. To date, 1,784.1 acres have been lost in Carlsbad since inception of the HMP, and therefore, no less than 1,605.7 acres (1,784.1-178.4) must be preserved. A cumulative total of 5,969.7 acres have been gained in the preserve system, which greatly exceeds the minimum required by the rough step policy. The rough step policy will continue to be followed for all new development projects (e.g., in Standards Areas) because the city requires that native habitat be conserved (impact mitigation/habitat gain) prior to issuing a grading permit (project impact/habitat loss) pursuant to the mitigation ratios described in the HMP. Measures required to be in place prior to permit issuance include: management cost analysis, non-wasting endowment for perpetual management, conservation easement, preserve management plan, and a contract with an approved preserve manager. Some projects that were approved prior to final HMP approval were issued grading permits before all of these elements were put in place. The city continues to work towards ensuring permanent management for these properties, either in concert with Wildlife Agency sign-off of project mitigation sites or assisting USACOE and USFWS in enforcing the provisions of the project Biological Opinion. Habitat impacted *outside* of the HMP is mitigated through an *in-lieu* mitigation fee.

Figure 3. 2015 Current Conditions



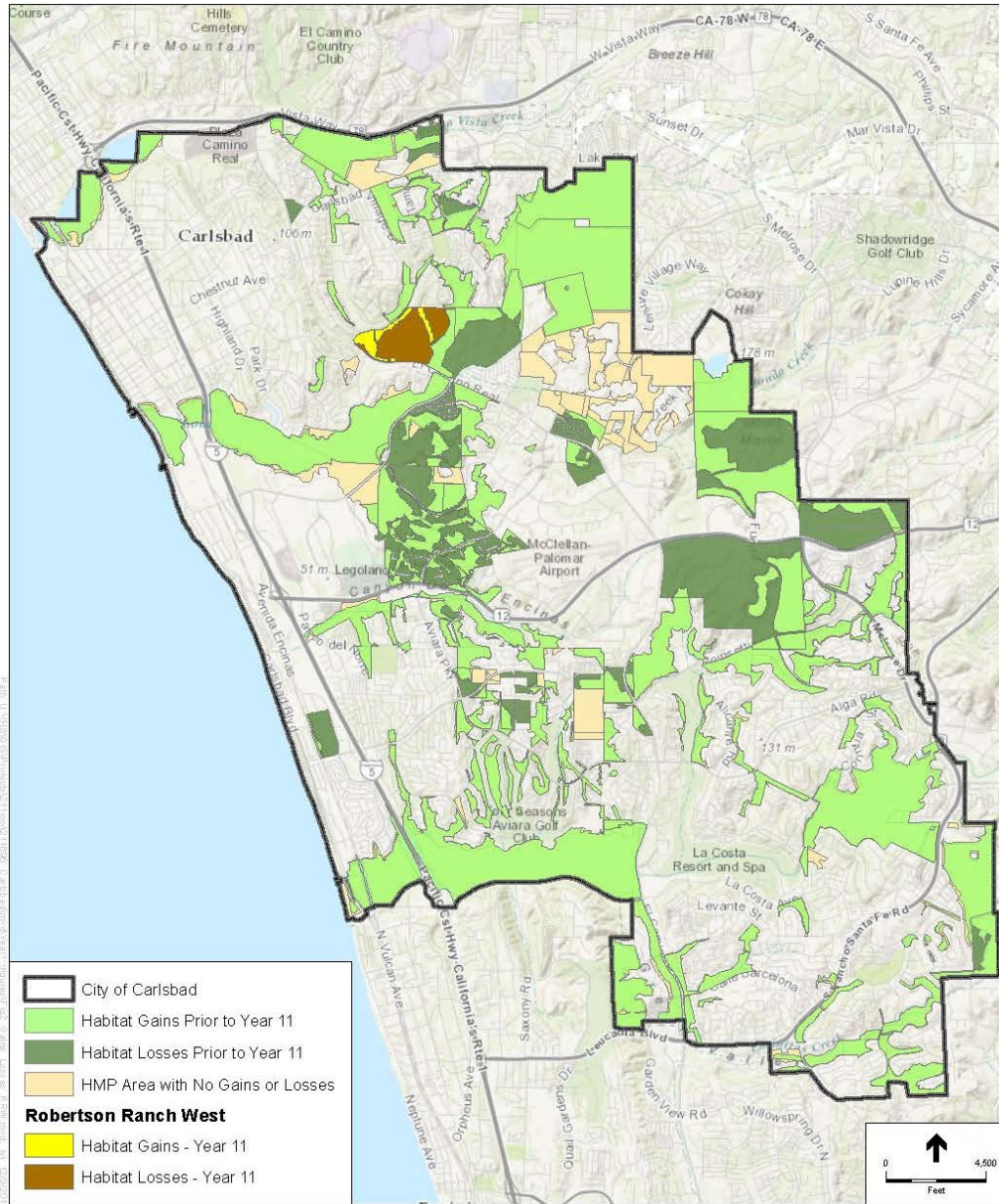
City of Carlsbad
2015 Current Conditions

Figure 3

Document Path: J:\Requests\March2015\PublicWorks\PEM\Stormwater\00011601_15\Figure3_CurrentConditions.mxd

Date: 02/08/2016

Figure 4. Project Gains/Losses by Report Year



SOURCE: ESRI 2015

Carlsbad Preserve . 211696

Figure 4
HMP Gains/Losses

1.5 Regulatory Compliance

To ensure regulatory compliance, the city is implementing the HMP (1) through the project review process for new development projects; (2) by issuing HMP permits when impacts to habitat or covered species are involved; (3) by issuing incidental take permits when take of a listed species is involved; and (4) by ensuring consistency with the terms and conditions of the IA, and State NCCP and Federal Fish and Wildlife permits.

1.5.1 HMP-related Permits and Amendments

During the current reporting period, two HMP permits for private development projects were approved by the city. Table 4 also includes a status update for HMP permits that have been submitted but are currently pending or incomplete. No incidental take permits were issued this reporting period.

Table 4. HMP Permits in Process during RY 11 (2014-2015)

HMP Permit No.	Project Name	Date	Status
HMP 07-05	Villagio – Kelly Ranch	05/14/2007	Pending
HMP 14-02	College Blvd Mitigation	07/28/15	Approved
HMP 14-04	Poinsettia 61	04/13/15	Complete
HMP 15-01	Martin Residence	01/27/15	Incomplete
HMP 15-02	Cantarini Ranch	02/03/15	Pending
HMP 15-03	Afton Way	09/02/15	Approved
HMP 15-04	Ponto Beachfront Village West	04/10/15	Incomplete
HMP 15-05	Ocean View Point	09/24/15	Complete
HMP 15-06	Rafferty Residence	06/26/15	Incomplete

Three Minor Amendments were processed during the reporting period as described below. See HMP Section E-3 and Implementing Agreement Section 20.1 for a description of Minor Amendment types and the HMP amendment process.

1. **Consistency Finding.** Two Consistency Findings were processed during the reporting period. The College Boulevard Reach A development project removed the alignment of future College Boulevard and associated improvements from a Standards Area in LFMZ 15 and was approved by the Wildlife Agencies on April 9, 2015. The College Boulevard Reach A mitigation site project, also within a Standards Area in LFMZ 15, received Wildlife Agency approval on May 18, 2015. The project will create, enhance, and preserve 3.1 acres of wetland/riparian habitat and 5.6 acres of coastal sage scrub in and adjacent to Agua Hedionda Creek.

2. **Equivalency Finding.** A modification to the boundary of the Quarry Creek Master Plan Preserve was processed and approved by the Wildlife Agencies on December 16, 2014, resulting in a net gain of 7.96 acres.
3. **Other Minor Amendments (pursuant to Section 20.1 of the Implementing Agreement).** No other minor amendments were processed during the reporting period.

1.5.2 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 5-7. 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 5. Summary of City Compliance with HMP Implementing Agreement Requirements through RY 11 (2014-2015)

A Section	Obligation	City Compliance
10.10	<p>Duty to Enforce: To enforce the terms of the Take Authorization, HMP, and IA and ensure HMP lands are conserved in perpetuity.</p>	<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 developing a coordinated multi-departmental trail enforcement program (Section 2.1.6) and continues to work with local preserve managers for enforcement activities. ▪ Complaints made by citizens regarding possible violations of the HMP within preserves are investigated on a case by case basis.
11.1	<p>Preserve System: To ensure the establishment and management in perpetuity of a 6,757-acre preserve system.</p>	<ul style="list-style-type: none"> ▪ The city has currently gained 5,969.7 acres of habitat within the HMP planning area and 294.67 acres of habitat within the MHCP Gnatcatcher Core Area (over 95% of the overall target acreage). See Section 1.4.3 for more details.
11.2	<p>Project Mitigation Measures: To require additional mitigation measures to mitigate impacts to covered species in all future development projects.</p>	<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, and/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 – application is under review. 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. City staff is working with Coastal Commission staff on the related implementation plan for the Local Coastal Program. 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 Coastal Commission on April 3, 2006. Compliance is enforced on a project-by-project basis during environmental review and in conjunction with other wetland permitting agencies such as Coastal Commission, CDFW and USACOE.

Table 5. Summary of City Compliance with HMP Requirements through RY 11 (2014-2015) *continued*

A 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. ▪ See Section 1.6 for details about additional implementation measures.
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 294.67 acres of its coastal sage scrub conservation obligation through acquisition (80.22 acres), project mitigation (150.26 acres), and habitat enhancement credit (64.19 acres). ▪ The city reimbursed Lennar (developer) for the 50.13 acres that were purchased up-front (see above) on April 26, 2011 ▪ The city entered into an agreement on July 26, 2011 with the Wildlife Agencies and Conservation Fund to acquire 30.09 acres of conservation credit over four years. The city made the fourth payment on October 22, 2014 and received 7.52 acres of credit. ▪ The Core Area properties are protected under a Conservation Easement, and are being monitored and managed by the Center for Natural Lands Management (CNLM).
11.6	Cooperative Regional Implementation: To participate in MHCP Elected Officials Committee.	<ul style="list-style-type: none"> ▪ To date, the City of 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; to hold a public meeting to discuss HMP implementation; and 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 Habittrak. Rough step preserve assembly is built into the city's permitting process (See Section 1.4.4 for details.) ▪ Currently the city is working with the Preserve steward, preserve managers, city GIS staff, the San Diego Management and Monitoring Program, and SDSU's Institute for Environmental Monitoring and Management 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. ▪ Annual public HMP workshops are held every year to give participants an opportunity to learn about current HMP preserve assembly, management, and monitoring, and to ask questions and provide comments. ▪ Annual HMP status reports are submitted to Wildlife Agencies each year. The public also has an opportunity to view these reports prior to the annual meeting and provide comments.

Table 5. Summary of City Compliance with HMP Requirements through RY 11 (2014-2015) *continued*

IA Section	Obligation	City Compliance
12.3	<p>Preserve Management and Monitoring Plan: To prepare a preserve management and monitoring plan that will detail recommendations in HMP Section F.</p>	<p>The Open Space Management Plan (OSMP) is the Preserve Management and Monitoring Plan described in IA Section 12.3, and the subarea framework management plan described in MHCP Vol. III, Section 1.2. The first complete draft was finalized in May 2004. The document was completed in September 2004 and accepted by the Carlsbad City Council in December 2005. Currently the OSMP is being reviewed by the California Coastal Commission as part of the HMP Local Coastal Program Implementation Plan; the city is implementing OSMP policies citywide.</p>
13.0	<p>Adaptive Management: To ensure that adaptive management actions do not result in less mitigation than provided for the HMP Covered Species under the original terms of the HMP, unless approved by the Wildlife Agencies.</p>	<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. ▪ The city is coordinating with the regional adaptive management and monitoring through the San Diego Management and Monitoring Program. ▪ The city has developed a compliance checklist for the preserve managers; the checklist includes 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 <i>In-lieu</i>-Mitigation Fees</p>	<p>14.1 The city has met 294.67 acres of its 307.6-acre coastal sage scrub conservation obligation. The city must cause conservation of an additional 12.93 acres; this obligation will be funded through <i>in-lieu</i> mitigation fees.</p> <p>14.2 The Preserve Management and Monitoring Plan (known as the Open Space Management Plan or OSMP) was completed in September 2004 using city funds and a Local Assistance Grant from CDFW.</p> <p>14.3 City-owned preserves are currently being actively managed and monitored by CNLM.</p> <p>14.4 The city requires all private development projects within the HMP to fully fund perpetual management of associated preserve land prior to issuing a grading permit.</p> <p>14.5 Hardline preserves in existence before final HMP approval are owned and managed by several other entities, including the CDFW, private HOAs, University of California, SDG&E, Cabrillo Power, and SDUHS.</p> <p>14.6 The HMP program is being overseen by Michael Grim (City of Carlsbad Property and Environmental Management Department). In addition, the city has contracted with Environmental Science Associates (ESA) to serve as the city's Preserve steward, who coordinates management throughout the HMP Preserve, and monitors HMP compliance and management effectiveness.</p> <p>14.7 The city has implemented an <i>in-lieu</i>-mitigation fee program for new development that will fund the city's remaining Gnatcatcher Core Area obligations.</p>

**Table 6. Summary of City Compliance with Terms and Conditions
of CDFW Permit through RY 11 (2014-2015)**

CDFW 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 12). They are summarized below.</p> <p>A. Urgency Ordinance –interim HMP enforcement.</p> <p>B. Amend Open Space and Conservation 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>	See Table 9, IA Section 11.3.
<p>G. This permit is subject to compliance with the MHCP Volumes I-III, HMP, including Addenda 1 and 2, and the IA.</p>	All project approvals within the city are subject to these requirements as a condition of approval.
<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 12).</p>	See Table 11, USFWS 10(a) Permit Condition 7 for a description of compliance.
<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 	See description for Condition G. 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 city's Guidelines for Biological Studies.

**Table 7. Summary of City Compliance with the Terms and Conditions
of USFWS Permit through RY 11 (2014-2015)**

Federal ESA 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>	Appropriate language has been integrated into the HMP and IA; therefore, compliance with these documents ensures compliance with Title 50 CFR sections.
<p>2. The permittee is subject to compliance with the MHCP, HMP, and IA.</p>	The city complies with all regulations as described in Tables 10 and 11.
<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>	See next page.

**Table 7. Summary of City Compliance with Terms and Conditions
of USFWS Permit through RY 11 (2014-2015) *continued***

Federal ESA 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 blochmaniae</i> ssp. <i>blochmaniae</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 browni</i> – California least tern <i>Charadrius alexandrinus nivosus</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>Empidonax trailii extimus</i> – Southwestern willow flycatcher <i>Vireo bellii pusillus</i> – Least Bell’s vireo <i>Polioptila californica californica</i> – Coastal California gnatcatcher</p> <p>Not yet listed: <i>Panoquina errans</i> – Salt marsh skipper <i>Euphyes vestris harbisoni</i> – Harbison’s dun skipper <i>Plegadis chihi</i> – White-faced ibis <i>Accipiter cooperii</i> – Cooper’s hawk <i>Pandion haliaetus</i> - Osprey <i>Icteria virens</i> – Yellow-breasted chat <i>Aimophila ruficeps canescens</i> – So. California rufous-crowned sparrow <i>Passerculus sandwichensis beldingi</i> – Belding’s savannah sparrow <i>P.s. rostratus</i> – Large-billed savannah sparrow <i>Cnemidophorus hyperythrus beldingi</i> – Orange-throated whiptail</p> <p><u>Table 2. Take authorization contingent upon other MHCP subarea plans being</u> permitted for the following species:</p> <p><i>Acanthomintha ilicifolia</i> – San Diego thornmint <i>Ambrosia pumila</i> – San Diego ambrosia <i>Ceanothus verrucosus</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</u> <u>access</u> to manage and monitor the following species:</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 did not authorize take for any of these species during the current reporting period.</p> <p><u>Table 2.</u> No other MHCP subarea plans have been permitted, and therefore take authorization for these species has not been granted by the city.</p> <p><u>Table 3 (a).</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. Take of this species was not granted during the reporting period. No take of any other species from this list has been granted by the city.</p>

**Table 7. Summary of City Compliance with Terms and Conditions
of USFWS Permit through RY 11 (2014-2015) *continued***

Federal ESA 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 mousetail <i>Navarretia fossalis</i> – Spreading navarretia <i>Orcuttia californica</i> – California Orcutt grass <i>Streptocephalus woottoni</i> - Riverside fairy shrimp <i>Branchinecta sandiegonensis</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><u>Table 3 (b).</u> 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>Empidonax 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 Buena Vista Creek Ecological Reserve</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 Wildlife Agencies must concur with the Fox-Miller project proposal, and the conserved area must be managed and monitored to MHCP standards in perpetuity; and (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 Wildlife Agencies have approved the Fox-Miller project. The restoration and non-restoration areas are currently under management and monitoring by Helix via annual contract with the landowner. Long term management of the property will be provided by SDHC when the 5-year restoration areas are signed off by the Wildlife Agencies. (d) Brodiaea coverage was granted by the Wildlife Agencies through a minor amendment December 2, 2005.</p>

**Table 7. Summary of City Compliance with Terms and Conditions
of USFWS Permit through RY 11 (2014-2015) *continued***

Federal ESA 10(a) Permit Terms and Conditions (T&C)	Description of City Compliance
<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</p> <p>(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 NE boundary of Carlsbad is conserved. Along the northern boundary, the Buena Vista Creek ER was acquired in 2007, resulting in 100% conservation, and the Summit (Kelly-Bartman) property was acquired by CDFW in 2010.</p> <p>(b) No other uses for this property have been proposed at this time.</p>
<p>9. As part of the project review process, a qualified biologist shall survey for all species with immediate and conditional coverage.</p>	<p>The city has included this as a condition of approval for all new projects.</p>
<p>10. The city will contact the USFWS Carlsbad Office immediately regarding any violations or potential violations of the FESA or the Migratory Bird Treaty Act.</p>	<p>The city regularly communicates with the USFWS on regulatory issues, and contacts the appropriate personnel immediately upon learning of any potential problems.</p>
<p>11. The city will notify the USFWS within one working day of finding any dead, injured, or sick threatened/endangered species.</p>	<p>No such individuals have been reported to or observed by the city.</p>
<p>12. All monitoring and reporting for this permit shall be in compliance with the MHCP (Vol. I and III) and the IA (Section 12).</p>	<p>See IA Section 12 discussion in Table 10 above for compliance information.</p>
<p>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.</p>	<p>A copy of this permit is on file with the city and is available to any interested parties.</p>

1.5.3 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 (Table 8). All projects that occur within a Standards Area are processed as a Consistency Finding. During this process, projects must demonstrate compliance with the standards before they receive concurrence from the Wildlife Agencies and are approved by the city; therefore, all approved development within Standards Areas is consistent with the HMP.

A total of 182.6 acres of coastal sage scrub occurs within Standards Areas throughout the HMP. To date, 16.1 acres have been lost (8.8%), and 62.5 acres have been conserved (34.2%). Zone-wide standards require at least 67% (122.3 acres) of the coastal sage scrub to be conserved. Therefore, the city must conserve at least 59.8 more acres of coastal sage scrub within the Standards Areas. Table 8 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 8. Compliance with Zone-Wide Standards through RY 11 (2014-2015)

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: 182.6 acres. Coastal sage scrub loss = 16.1 acres (8.8%). Coastal sage scrub gains = 62.5 acres (34.2%). An additional 59.8 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 gnatcatcher habitat within Standards Areas. The 75% standard is applied to every project individually.
Zone 1	Preserve at least 50% of coastal sage scrub 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 changed to a Proposed Hardline preserve during Coastal Commission processing of HMP. A tentative map conserving the Proposed Hardline preserve was approved however no grading permit has been issued.
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.	Kelly-Bartman property (Summit): Existing Hardline preserve approved with 50% conservation including an open space corridor from the SE to the northern site boundary. Spyglass property: has been developed and grassland impacts were mitigated at a 2:1 ratio through restoration at Carlsbad Highlands Mitigation Bank.
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: tentative map approved with 75% percent conservation however no grading permit has been issued. Callaghan property: no tentative 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.	Robertson Ranch encompasses the entirety of Zone 14. Due to agricultural activities, very little coastal sage scrub existed in the southern portion of the zone. The Existing Hardline Preserve, as approved by the Wildlife Agencies in 2005, 2007 and 2012, preserves 70% of the coastal sage scrub throughout the zone.
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 and Rancho Milagro, occur within Core Area 5 in the southern portion of Zone 15. No net loss of coastal sage scrub has occurred.
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, North Coast Calvary Chapel, and Muroya. All three 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.	Projects: Poinsettia Place and Manzanita Partners, both Existing Hardline Preserves, provide east-west connectivity from El Camino Real to the Local Facilities Management Zone boundary.
Zone 25	At least 75% of the Sherman property must be conserved.	As of March 2007, 100% of the Sherman property (Buena Vista Creek Ecological Reserve) has been conserved.

1.6 Other Implementation Activities

1.6.1 Public Outreach

In coordination with the Carlsbad Parks and Recreation Department, the Center for Natural Lands Management and the City's Preserve Steward offer information about the HMP and preserve management at volunteer events such as National Public Lands Day, National Trails Day, and trail maintenance events. The city also conducted the HMP Annual Meeting at the City Faraday Center on April 30, 2015.

1.6.2 Poinsettia Fire

During the reporting period, the city continued to work with open space property owners affected by the Poinsettia Fire, which burned 295 acres within 18 existing and four future HMP preserves.

Based on existing vegetation mapping data, the dominant native vegetation types included in the burn area are southern maritime chaparral (150.3 acres), southern mixed chaparral (60.9 acres), coastal sage scrub (27.1 acres), grasslands (15.5 acres), oak woodland (9.2 acres), and the vernal pool complex in the Manzanita Partners preserve. The fire also burned agricultural (28.3 acres) and disturbed areas (22.0 acres).

Sensitive species previously mapped within the burn area include: Coastal California gnatcatcher (*Polioptila californica californica*), Thread-leaved brodiaea (*Brodiaea filifolia*), Nuttall's scrub oak (*Quercus dumosa*), Wart-stemmed ceanothus (*Ceanothus verrucosus*), Engelmann oak (*Quercus engelmanni*), Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*), Summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*), Del Mar mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*), Coast live oak (*Quercus agrifolia*), and Ashy spike moss (*Seleginella cinerascens*).

In order to maximize the opportunity for natural habitat recovery on the preserves, the city, preserve managers and property owners focused on invasive weed treatment, access control, and erosion control. In January 2015, virtually all locations of castor bean (*Ricinus communis*) and pampas grass (*Cortaderia* ssp.) were treated through the Carlsbad Watershed Network's invasive vegetation control program, operated by San Elijo Lagoon Conservancy. For those property owners that did not immediately install fencing, the city continued to coordinate the location for future fencing and signage. In January 2015, the city installed erosion control measures in areas of high erosion potential and inspected and maintained them throughout the rainy season through agreements with the property owners to assume maintenance thereafter.

To gauge the status and trajectory of habitat regrowth, the city's Preserve Steward and preserve managers implemented the *Carlsbad HMP Post-Fire Monitoring Protocol* (City of Carlsbad, 2014). The protocol was based on CNLM's *Blossom Valley Habitat Conservation Area Post-fire Monitoring*

and Management Strategy (Tierra Data Inc., 2005), which includes a strong foundation in fire ecology by providing conceptual models relating fire to vegetation communities and species populations. A total of 24 study plots were established on eight preserves, which captured percent cover of native and non-native vegetation, shrub density, species richness, and photodocumentation. Areas with oaks were also inventoried.

Overall habitat recovery is currently following the trajectory envisioned by conceptual models, with many shrub species resprouting and/or providing seedlings. Total cover of upland vegetation communities is still low, but this is to be expected so early after the fire and most of the upland habitat has low non-native species cover. Species diversity is also following the expected course, with many “fire-follower” species being observed. Most scrub oaks are recovering from seedlings as well. The riparian and vernal pool areas are slower to recover, with high non-native species cover, and will likely need additional weed treatment.

The post-fire monitoring program is expected to continue for at least another four years and results will be included in subsequent HMP annual reports.

2.0 Preserve Management and Monitoring

2.1 Key Management Activities

2.1.1 City-Owned Preserves

All city-owned preserves have been actively managed by CNLM since December, 2008. The city preserves consist of 13 properties scattered throughout Carlsbad totaling 600.4 acres (Figure 4). Management activities this year included evaluation, assessment, and treatment of medium and zero tolerance invasive non-native plant species, enforcement patrols, installation of signs and kiosks, public education/outreach, participation in volunteer events, and coordination with police and fire departments on enforcement issues.

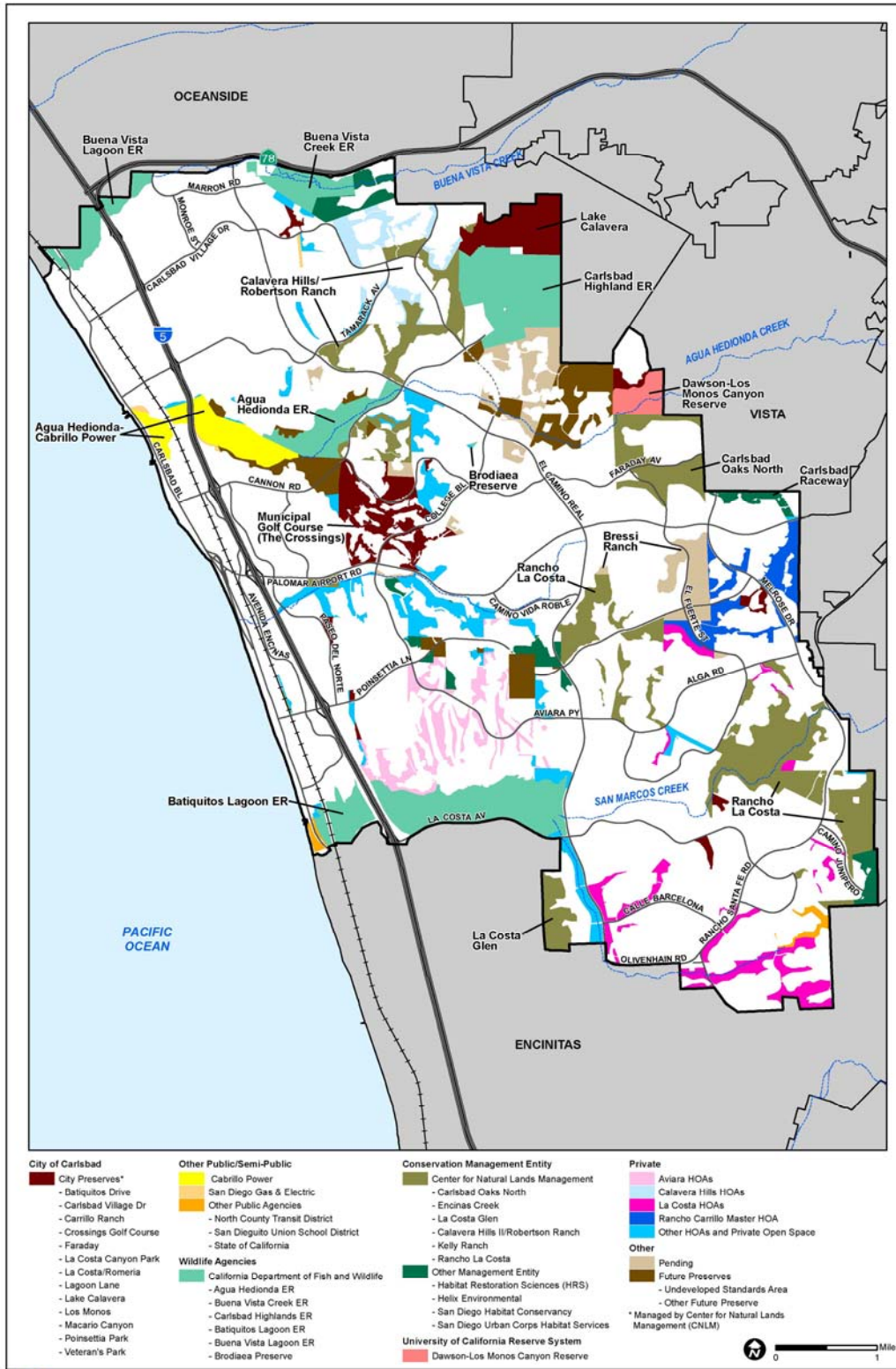
2.1.2 Other Actively Managed Preserves

Areas conserved since approval of the HMP are actively managed and monitored as required by the HMP and MHCP (Level 3, as defined in the MHCP). The preserves in this category are managed by CNLM, CDFW, San Diego Habitat Conservancy, San Diego Urban Corps Habitat Services, Habitat Restoration Sciences, and Helix Environmental. Ongoing management and monitoring activities on preserves throughout the HMP consist of invasive species removal, patrolling, vegetation mapping, species and habitat monitoring, installation and maintenance of fences, signs, and kiosks, and public outreach. These activities are summarized in Appendix A. A more detailed preserve-specific account of these activities is available in the preserve-specific annual reports submitted by preserve managers, which are available from the preserve managers upon request.

2.1.3 Pre-Existing Natural Open Space Preserves

Pre-existing natural open space preserves (i.e., areas that were already conserved at the time the HMP was approved) continue to be managed according to pre-existing management funding and arrangements. The majority of these preserves are managed by various HOAs. Other landowners responsible for management include University of California San Diego (Natural Reserve System), SDG&E, Cabrillo Power, North County Transit District (NCTD) and San Dieguito Union High School District. Pre-existing natural open space preserves are managed at a property maintenance level, which generally consists of fence maintenance and trash removal.

Figure 5. Preserve Ownership/Management



City of Carlsbad
Current Preserve Ownership/Management

Figure 5

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Date: 02/09/2016

2.2 Monitoring

2.2.1 Species and Habitat Monitoring

A variety of biological surveys were conducted throughout the preserve system during the reporting period (Table 9). In addition, incidental observations of sensitive plants and wildlife were recorded by CNLM on properties it manages.

Table 9. Biological Monitoring Conducted in RY 11 (2014-2015)

Preserve	Surveys Conducted
Agua Hedionda Ecological Reserve	Western snowy plover (<i>Charadrius alexandrinus nivosus</i>) breeding and wintering window surveys; light-footed Ridgeway's rail (<i>Rallus obsoletus</i>) and Belding's savannah sparrow (<i>Passerculus sandwichensis beldingi</i>) nesting surveys.
Batiquitos Lagoon Ecological Reserve	California least tern (<i>Sterna antillarum browni</i>) breeding season surveys; Western snowy plover breeding season and wintering window surveys, including banding; light-footed Ridgeway's rail and Belding's savannah sparrow nesting surveys; monthly bird counts.
Buena Vista Creek Ecological Reserve	Thread-leaved brodiaea (<i>Brodiaea filifolia</i>) population and life-stage monitoring; vegetation mapping using new classification system.
Buena Vista Lagoon Ecological Reserve	Western snowy plover breeding season and wintering window surveys; monthly bird counts.
Carlsbad Highlands	Thread-leaved brodiaea surveys.
Calavera Hills/Robertson Ranch	Coastal sage scrub monitoring; thread-leaved brodiaea population and life-stage monitoring; coastal sage scrub vegetation study plot monitoring; native grasslands assessments.
Carlsbad Raceway	Vegetation monitoring; vernal pool assessments; wildlife movement documentation using cameras.
Carlsbad Oaks North	Thread-leaved brodiaea index plot monitoring; flowering Blochman's dudleya (<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>) census; San Diego thornmint (<i>Acanthomintha ilicifolia</i>) census; coastal sage scrub vegetation study plot monitoring; gold spotted oak borer trap monitoring.
City Preserves	Thread-leaved brodiaea counts and habitat assessments; coast live oak (<i>Quercus agrifolia</i>) reconnaissance; gold spotted oak borer trap monitoring; sensitive animal sightings.
Emerald Pointe	San Diego thornmint focused survey.
Encinas Creek	Least Bell's vireo (<i>Vireo bellii pusillus</i>) focused surveys; wildlife movement monitoring using cameras; coastal California gnatcatcher (<i>Polioptila californica californica</i>) presence/absence surveys.
Kelly Ranch	Clay lens opening assessments.
La Costa Collection	Del Mar sand aster (<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>) population counts; Nuttall's scrub oak mapping.
Manzanita Partners	Post-fire vernal pool habitat transect monitoring.
Poinsettia Place	Post-fire southern maritime chaparral habitat transect monitoring.
Rancho La Costa	Wildlife corridor tracking; Orcutt's hazardia (<i>Hazardia orcuttii</i>), Orcutt's brodiaea (<i>Brodiaea orcutti</i>), and San Diego thornmint focused surveys;; thread-leaved brodiaea index plots and life stage tracking; coastal sage scrub vegetation study plot monitoring; gold spotted oak borer trap monitoring; post-fire southern maritime chaparral and oak monitoring.

2.2.2 Wildlife Movement

On March 31, 2015, the city completed the City of Carlsbad Wildlife Movement Analysis Final Report. The analysis was partially sponsored by a Local Assistance Grant from the California Department of Fish and Wildlife and included efforts by city staff, the city's Preserve Steward, the Center for Natural Lands Management and San Diego Tracking Team, with funding from Preserve Calavera. The purpose of the study was to:

- Inventory the potential wildlife movement corridors and pinchpoints within Carlsbad, including those noted in the MHCP;
- Document wildlife movement through selected corridors;
- Evaluate functionality of movement corridors;
- Identify adaptive management recommendations to potentially improve wildlife movement, and;
- Note areas of future study.

Linkages were categorized by size and anticipated function: major linkages generally trended east-west following the three major riparian systems of Buena Vista Creek, Agua Hedionda Creek, and San Marcos and Encinitas Creek; core-to-core linkages generally trended north-south and connected larger open space areas; minor linkages generally trended north-south and connected other linkages. The study focused on larger species, such as deer, coyote and bobcat; however, observations of smaller species, such as raccoon, opossum, rabbit, skunk, weasel, and squirrel were noted.

Documentation of wildlife movement spanned the period between January 29, 2014 and March 28, 2015 and included 23 wildlife camera locations and six tracking transects. Generally, movement was good through two of the three major linkages and most other linkages, with bobcat and coyote appearing at 18 and 19 locations, respectively. Although deer were only observed in the southwest portion of the city, there have been anecdotal deer sightings in the central and northern portions of the city and a camera at Agua Hedionda Creek after conclusion of the study period. It is likely that the Buena Vista Creek linkage has lower functionality for larger species due to the major circulation crossings such as Interstate 5 and El Camino Real, the constant presence of high water levels, and intense homeless activity. Smaller species were observed at all monitoring locations.

The study contained several adaptive management recommendations that could potentially improve animal movement, most commonly the clearing of vegetation at the entrances and approaches to pinchpoints. CNLM and Preserve Calavera have selected several linkages and pinchpoints to implement these recommendations.

A copy of the final report is available via the CDFW website at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=99723>.

2.3 Patrolling and Enforcement

Enforcement, as used in the habitat conservation and preservation realm, involves a combination of education, deterrence, and punitive actions. The goal of enforcement is to reduce or ideally eliminate human impacts to native flora and fauna, habitats, and ecological preserves from unauthorized human activities. The city continues to coordinate and cooperate with local preserve managers and the Carlsbad and Oceanside Police Departments in enforcing the rules and regulations within HMP preserves.

In general, human activity within most preserves, has minimal effect on the sensitive plant and animal species. There have been no reports of threatened or endangered plant populations being impacted or vernal pools being damaged by human activity. The majority of people accessing the preserves do so using authorized trails. However, serious impacts can occur with only a few individuals therefore frequent education and outreach, access control efforts, and patrolling are needed on an ongoing basis. Below is a summary of the reported enforcement activities on HMP preserves.

Buena Vista Creek Ecological Reserve (CDFW, managed by CNLM)

- Conducted biweekly visits;
- Removed 6 encampments;
- Continued to evict homeless individuals, resulting in reduced attempts to establish encampments.

Carlsbad Oaks North

- Conducted visits at least four times per month, combining patrolling with trash clean-up and invasive weed treatments;
- Responded to inquiries from neighboring residents about human usage of preserve;
- Stopped construction of an unauthorized mountain bike trail in progress.

Carlsbad Highlands

- Removed mountain bike jumps and ramps.

Carlsbad Raceway

- Conducted quarterly visits, combining patrolling with trash clean-up, mapping of invasive weeds, biological monitoring, and observations of biodiversity and coastal California gnatcatcher;
- Prepared and distributed informational brochure to adjacent Owner's Association.

City Preserves

- Conducted patrols for 12 to 16 hours per week at Lake Calavera preserve;
- Blocked entrances and destroyed 200 foot long bike trail at Lake Calavera preserve;
- Noted steady decline in unwanted activities at Lake Calavera preserve, with graffiti, kiosk vandalism, dogs-off-leash, dog excrement, and skateboarding in the dam spillway being the primary issue areas;
- Conducted quarterly to monthly patrols at other city preserves;

- Participated in city events to assist with public outreach and education about human usage of preserve;
- Repaired and maintained kiosks, and replaced damaged signs, as needed.

Emerald Pointe

- Conducted quarterly visits, combining patrolling with trash clean-up, mapping of invasive weeds, biological monitoring, and observations of biodiversity;
- Conducted public outreach with neighboring residents and adjacent Homeowner's Association.

Encinas Creek

- Conducted monthly visits, on average, combining patrolling with trash clean-up and invasive weed treatments;
- Noted dogs-off-leash resulting in minimal impacts to habitat.

Kelly Ranch

- Conducted visits two to three times per month, combining patrolling with trash clean-up and invasive weed treatments;
- Met with neighboring residents about preserve management;
- Removed a bench at a kiosk location due to homeowner association complaints about noise and trash.

La Costa Collection

- Conducted quarterly visits, combining patrolling with trash clean-up and biological monitoring;
- Removed burlap sacks of landscaping debris from an adjacent slope.

La Costa Glen

- Regular visits, combining patrolling with trash clean-up, invasive weed treatments, and sensitive species observations;
- Responded to inquiries from neighboring residents about human usage of preserve;
- Removed a few small encampments.

Manzanita Partners

- Conducted regular visits, combining patrolling with habitat and sensitive species monitoring;
- Removed trash exposed by the Poinsettia fire to increase aesthetic value of the preserve

Poinsettia Place

- Conducted quarterly visits, combining patrolling with biological monitoring;
- Removed bike jumps and leftover tools;
- Removed trash exposed by the Poinsettia fire to increase aesthetic value of the preserve

Rancho La Costa

- Portions of preserve visited weekly, sometimes combined with biological surveys;
- Noted significant increase in trespass attempts at Box Canyon, with 178 individuals in 56 trespass events during summer and an 86% deterrence rate;
- Former encampment site was reoccupied and trash and debris were removed;

- Continued coordination with San Diego Mountain Biking Association to block unauthorized trails and educate public about proper trail use within the preserve.

With regard to CDFW Ecological Reserves, Law Enforcement promotes compliance with laws and regulations protecting fish and wildlife resources; investigates habitat destruction, pollution incidents and illegal commercialization of wildlife. Wardens also serve the public through general law enforcement, mutual aid and homeland security. In the City of Carlsbad, CDFW enforcement officers conduct regular patrols of the CDFW preserves (i.e. Buena Vista Lagoon Ecological Reserve, Carlsbad Highlands Ecological Reserve, Agua Hedionda Lagoon, and Batiquitos Lagoon).

3.0 Financial Summary

3.1 City Funding in Support of HMP

The city uses funding to support implementation of the HMP in two ways: (1) permanent funding allocated specifically for HMP coordination and management of city lands, and (2) existing resources, including administrative staff and staff from the Property and Environmental Management Department, the Planning Division of the Community Development and Economic Department, the Parks and Recreation Department, and the Police Department.

3.1.1 HMP Implementation

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 (1) oversight of the HMP Preserve, and (2) direct, active management of 600.4 acres of preserve land owned by the city.

To fulfill the first responsibility, the city dedicated a senior-level staff planner and provides other administrative support for HMP coordination. The city also contracted with a biological consulting firm to serve as the city's Preserve steward, coordinating management throughout the HMP preserve, and monitoring HMP compliance and management effectiveness. According to IA Section 14.6, at the time of HMP adoption the annual cost of program administration was estimated to be approximately \$100,198 in 2015 dollars (U.S. Department of Labor Consumer Price Index). This reporting period, the city provided \$95,000 in the annual budget to fund the contract for Preserve steward costs.

The second responsibility is being accomplished through the city's contract with CNLM, a non-profit preserve management company for the management of city-owned HMP preserves. Installation and maintenance of boundary fencing was provided by the city; therefore, the cost for fence installation was not the responsibility of CNLM. However, CNLM installs and maintains sections of interior fencing to block off unauthorized trails as feasible.

3.1.2 *In-lieu* Habitat Mitigation Fees

As described in Section 1.3.5, *in-lieu* habitat mitigation fees are collected from developers for project-related impacts to certain types of native habitat outside of the preserve. These habitats include non-native grassland, disturbed lands, eucalyptus, agricultural lands, unoccupied coastal sage scrub, coastal sage/chaparral mix, and chaparral (except southern maritime chaparral).

The purpose of these fees is to fund the city's obligation to acquire, protect, and manage the Gnatcatcher Core Area. As noted in Section 1.3.3, the city conserved 30.09 acres of the Perkins

property between 2011 and 2014. The cost of this conservation exceeded the available *In-lieu* Mitigation Fee funds, requiring an advance from the General Fund. *In-lieu* fees will continue to be collected for habitat impacts, as appropriate, and will be used to reimburse the General Fund and to purchase the remaining required Core Area acreage.

As shown in Table 10, nine mitigation fees (totaling \$360,970.41) were collected during the current reporting period. As of the end of the reporting period, the shortfall in the *In-lieu* Mitigation Fee account was reduced to \$415,062.28.

Table 10. *In-lieu* Mitigation Fee Account Activity in RY 11 (2014-2015)

Date	Description	Habitat Impacted	Total
11/01/14	Beginning Fund Total		\$(776,032.69)
Fees Collected 11/01/14– 10/31/15			
11/20/14	Hallmark Home	0.20 ac. of disturbed lands	\$612.60
01/08/15	Bagher Residence	0.17 ac. of disturbed lands	\$514.08
02/19/15	Coastal Living 10	0.49 ac. of disturbed lands	\$1,481.76
03/11/15	Highland James Subdivision	0.57 ac. of non-native grassland, 0.04 ac. of disturbed lands	\$8,737.08
04/01/15	Sohaei Minor Subdivision	0.82 ac. of disturbed lands	\$2,479.68
05/07/15	La Costa Villas	0.39 ac. of disturbed lands	\$1,179.36
07/21/15	Miles Pacific Subdivision	5.40 ac. of disturbed lands	\$16,540.20
08/13/15	Hirschhoff Residence	0.18 ac. of disturbed lands	\$551.34
10/02/15	Robertson Ranch	107.37 ac. of disturbed lands	\$328,874.31
<i>Total Fees Collected 11/01/14 – 10/31/15</i>			<i>\$360,970.41</i>
<i>Total Revenue 11/01/14 – 10/31/15</i>			<i>\$360,970.41</i>
Funds Expended for Core Area Conservation 11/01/14 – 10/31/15			
			\$0.00
<i>Total Funds Expended 11/01/14 – 10/31/15</i>			<i>\$0.00</i>
10/31/13	Account Balance		\$(415,062.28)

3.2 Status of Preserve Management Endowments

The endowment activity and status for preserves funded through endowments are given in Table 11. This includes all preserves managed by CNLM, SDHC, HRS, and San Diego Urban Corps Habitat Services. CDFW's Carlsbad Highlands Ecological Reserve and Agua Hedionda Lagoon Ecological Reserve are funded through State Wildlife Grant funding. The Batiquitos Lagoon Ecological Reserve is funded through a mitigation account established by the Port of Los Angeles and held by CDFW.

Table 11. Endowment Status for HMP Preserves in RY 11 (2014-2015)

Site Name	Preserve Manager ¹	Inception Date	Original Endowment	Inflation Adj. Original Endowment as of 9/30/15 ²	Endowment 9/30/15	RY 14-15 Budget	RY 14-15 Expend.	Initial & Capital 9/30/15	Total Funds as of 09/30/15
Buena Vista Creek Ecological Reserve	CNLM	4/2007	\$776,644	\$891,274	\$1,101,084	\$38,901	\$34,282	\$0	\$1051321
Calavera Hills II/Robertson Ranch E ³	CNLM	6/2006	\$1,650,293	\$1,947,812	\$2,427,928	\$84,216	\$91,458	\$128,830	\$2,522,484
Carlsbad Oaks North	CNLM	3/2006	\$1,020,311	\$1,204,255	\$1,414,889	\$52,034	\$49,981	\$0	\$1,365,161
Cassia Professional Offices	CNLM	1/2007	\$100,844	\$115,728	\$144,429	\$5,175	\$5,180	\$0	\$139,426
Emerald Pointe	SDHC	12/2006	\$194,068	\$229,055	\$232,272	\$9,570	\$9,953	\$0	\$212,122
Encinas Creek	CNLM	5/2008	\$427,004	\$471,909	\$609,517	\$20,657	\$20,768	\$0	\$588,022
Kelly Ranch	CNLM	3/2002	\$296,125	\$391,670	\$488,346	\$15,856	\$14,917	\$0	\$474,208
La Costa Collection	SDUCHS	2012	\$378,756	\$392,532	\$436,107	\$12,671	\$17,429	\$0	\$398,581
La Costa Glen	CNLM	1/2013	\$624,800	\$638,178	\$811,287	\$28,638	\$31,017	\$38,115	\$796,462
La Costa Villages	CNLM	2/2002	\$1,364,400	\$1,804,626	\$2,062,354	\$89,515	\$97,228	\$0	\$2,011,109
Manzanita Partners	HRS	10/2012	\$51,000	\$52,855	\$51,565	\$1,600	\$1,600	\$0	\$53,103
Nelson	CNLM	6/2001	\$72,180	\$96,938	\$104,379	\$4,452	\$3,965	\$0	\$100,646
Poinsettia Place	SDUCHS	7/2011	\$167,935	\$177,645	\$187,792	\$6,991	\$7,417	\$0	\$170,763
Southern Preserve	SDUCHS	11/2013	\$428,747	\$437,927	\$426,251	\$0	\$0	\$52,288	\$478,539
TOTAL			\$7,124,360	\$8,852,404	\$10,498,200	\$370,276	\$385,195	\$219,233	\$10,361,947

¹ CNLM = Center for Natural Lands Management, SDHC = San Diego Habitat Conservancy, HRS = Habitat Restoration Sciences, SDUCHS = San Diego Urban Corps Habitat Services.

² Adjusted for inflation to the current dollar value as of 9/30/15 based on Bureau of Labor Statistics Consumer Price Index.

³ CNLM combined funds for these two projects to provide a cost savings for Robertson Ranch East Village

4.0 References

- Beck, Christine. 2007. Personal communication. Biologist. California Department of Fish and Game, San Diego, California.
- City of Carlsbad Open Space Management Plan (TAIC). 2005
- Habitat Management Plan for Natural Communities in the City of Carlsbad (City of Carlsbad). 2004.
- Multiple Habitat Conservation Program (MHCP). 2003. Final MHCP Plan. Volumes I-III. Prepared for the Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista, March 2003.

Appendix A

Summary of Management and Monitoring Activities within HMP Management Units

November 1, 2014 - October 31, 2015

Summary of HMP Management and Monitoring Activities, Nov 2014 – Oct 2015

Management Unit (MU)	Management Entity ¹	Management and Monitoring Activities
Agua Hedionda	Preserve Manager: CDFW	<p><u>Agua Hedionda Lagoon Ecological Reserve</u></p> <ul style="list-style-type: none"> ▪ Continued habitat restoration along Park Drive ▪ Conducted snowy plover breeding and wintering window surveys ▪ Conducted light-footed Ridgeway rail and Belding’s savannah sparrow nesting surveys
	AH Lagoon Foundation	<p><u>Agua Hedionda Lagoon</u></p> <ul style="list-style-type: none"> ▪ Public education including: bat pollination talk, World Water Day (water conservation, pollution, and wetlands education), Rubber Ducky Derby (<i>Caulerpa taxifolia</i> talk), and coyote spotlight hike ▪ Environmental Stewardship School field trip serving all CUSD students, other students residing in Carlsbad ▪ Community Outreach at businesses, schools, and City of Carlsbad events ▪ Conducted monthly basic birding walks around the lagoon ▪ Monitored trails and easements weekly ▪ Additional weekly monitoring and trash pick-up of the North Shore Hubbs Trail by volunteers ▪ Established trail of the month program that incorporates volunteer maintenance events on weekdays and weekends ▪ Assisted the City of Carlsbad and CDFW in maintenance of the Discovery Center Trail, and Kelly Trail ▪ Continued maintenance and monitoring of public access easements (Hubbs Sea World, Abeledo, Gallagher, Cade, and L&R Partnership) in conjunction with stakeholders, California Coastal Commission, and City’s ongoing programs ▪ Accepted OTD’s for four new conservation easements surrounding the Agua Hedionda Lagoon ▪ Mechanical removal of non-native species including fennel (<i>Foeniculum vulgare</i>), pampas grass (<i>Cortaderia selloana</i>), fountain grass (<i>Pennisetum setaceum</i>), tree tobacco (<i>Nicotiana glauca</i>), and black mustard (<i>Brassica nigra</i>) ▪ Erosion repairs to disturbed areas on public access easements and trails. ▪ Worked with eagle scouts and other groups to install new kiosks on Kelly and Hubbs Trail. ▪ Redesigned and replaced informational signage along trails and public access easements. ▪ Native plant outreach, as well as weekly native plant gardening by volunteers and the Carlsbad Garden Club. ▪ Partnered with the city on several trail maintenance projects surrounding the lagoon ▪ Produced new interpretive signage for Hubbs Trail
Arroyo La Costa	Preserve Manager: CNLM	<p><u>La Costa Glen</u></p> <ul style="list-style-type: none"> ▪ Conducted biweekly patrols to deter homeless encampments from being established; removed trash from such encampments ▪ Treated six acres of veldt grass (<i>Erhardta calycina</i>) with herbicide ▪ Removed castor bean (<i>Ricinus communis</i>), pampas grass, fountain grass, fennel, and several other non-native plant species ▪ Updated detailed vegetation maps ▪ Mapped all sensitive flora and fauna encountered ▪ Conducted two California Native Plant Society (CNPS) rapid Relevé assessments in the southern maritime chaparral ▪ Operated wildlife cameras, monitored cameras, and tabulated data ▪ Contacted adjacent land owners regarding invasive species control ▪ Organized public outreach for the National Trails Day Event with the City of Carlsbad

Summary of HMP Management and Monitoring Activities, Nov 2014 – Oct 2015 *continued*

Management Unit (MU)	Management Entity ¹	Management and Monitoring Activities
Arroyo La Costa (cont'd)	HOAs	Property-level management
Batiquitos Lagoon	Preserve Manager: CDFW	<p><u>Batiquitos Lagoon Ecological Reserve</u></p> <ul style="list-style-type: none"> ▪ Site preparation including control of nonnative plant species with herbicide application, weed-whipping, raking, and removing off-site at the W1, W2, E1 and E3 nest sites. ▪ Enhancement of W1 and E1 through the addition of oyster shells for better camouflage of eggs and chicks and to help control sand erosion. ▪ Enhancement of E1 snowy plover habitat using cut typha covered with sand to create small hummocks and artificial dunes to build topography on the west side of E1 and help with sand erosion. ▪ Enhancement of snowy plover foraging habitat by mowing northern shoreline vegetation to improve shoreline access for snowy plover broods. ▪ Attempted to create more unvegetated shoreline for foraging snowy plovers by digging a shallow pit along the northern shoreline. ▪ Funded predator control for the protection of least tern and snowy plover. ▪ Conducted breeding season monitoring for least tern and snowy plover. ▪ Initiated a color-banding study of the breeding snowy plovers on E1. A total of 6 adults and 12 chicks were uniquely color-banded and monitored throughout the breeding season. Post-breeding movement data for the adults has also been collected. ▪ Conducted snowy plover breeding and wintering window surveys in appropriate habitat areas. ▪ Conducted light-footed Ridgway's rail and Belding's savannah sparrow nesting surveys.
	Batiquitos Lagoon Foundation	<p><u>Batiquitos Lagoon</u></p> <ul style="list-style-type: none"> ▪ Continued management of Cholla Point property, including erosion control and installation of new signage ▪ Maintained native plant demonstration garden near Park Hyatt-Aviara North Shore trailhead ▪ Managed Weed-Whacking/Trail Maintenance program for community, colleges, high schools, elementary schools, scouting organizations, corporations and other groups, which takes place twice a month ▪ Conducted ninth annual Kayak Batiquitos Lagoon Clean-Up two-day event ▪ Released six Ridgeway rails as part of the breeding program, bringing total to 50 released as part of a breeding program ▪ Conducted monthly bird counts ▪ Conducted educational public walks and talks ▪ Hosted over eleven thousand visitors at the educational nature center ▪ Hosted City of Carlsbad Arts Council Club Pelican art and environmental education program ▪ Operated educational nature center, open to the public ▪ Hosted six high school and college interns, as well as six Eagle Scout projects ▪ Continued work to acquire approximately 11 acres of additional property adjacent to the ecological reserve ▪ Removed non-native trees and replanted with fast-growing natives to improve nesting habitat along the North Shore Trail ▪ Obtained all permits required to build new and expanded nature center ▪ Hosted community service and Earth Day events for Marstel-Day, North Coast Church, Thermo-Fisher Scientific Solana Beach Presbyterian Church, Callaway Golf, and Eli Lilly ▪ Received and continued to work on grants to restore habitat along North Shore trail ▪ Worked with local and state agencies to implement California's Marine Life Protection Act

Summary of HMP Management and Monitoring Activities, Nov 2014 – Oct 2015 *continued*

Management Unit (MU)	Management Entity ¹	Management and Monitoring Activities
Batiquitos Lagoon (cont'd)	Batiquitos Lagoon Foundation (cont'd)	<p><u>Batiquitos Lagoon (cont'd)</u></p> <ul style="list-style-type: none"> ▪ Served on Southern California Wetlands Recovery Project Task Force, North San Diego County Land Management Group, Carlsbad Watershed Network, San Diego Conservation Resources Network, City of Carlsbad Open Space Advisory Council, and Envision Carlsbad Citizens Committee ▪ Public outreach and education about open space, lagoons, and marine environment at Street Faire, Science Saturday at Dove Library, and community service sessions at Palomar College and Thermo-Fisher Scientific.
Bressi/Carrillo	Preserve Manager: San Diego Habitat Conservancy	<p><u>Carlsbad Raceway</u></p> <ul style="list-style-type: none"> ▪ Conducted quarterly property inspections to assess the condition of the preserve, remove trash, and flag non-native plants ▪ Documented quarterly inspection, including observations and activities using quarterly log reports ▪ Installed preserve signs ▪ Conducted presence/absence surveys for Cooper's hawk and yellow-breasted chat ▪ Conducted baseline documentation and sensitive species surveys to map habitat and locations of sensitive plants and animals. ▪ Established an additional two photo monitoring points to monitor preserve health ▪ Installed an additional wildlife camera ▪ Assessed vernal pool on preserve ▪ Performed non-native plant flagging, mapping, and removal ▪ Provided public outreach and education in the form of an annual newsletter
Buena Vista Creek	Landowner: CDFW Preserve Manager: CNLM	<p><u>Buena Vista Creek Ecological Reserve</u></p> <ul style="list-style-type: none"> ▪ Removed trash from former encampments and other localities ▪ Treated invasive plant species in riparian corridors and upland enhancement areas, monitored for new occurrences ▪ Installed native forb and trees in riparian corridor ▪ Continued maintenance of Supplemental Environmental Project (SEP) restoration area ▪ Conducted thread-leaved brodiaea (<i>Brodiaea filifolia</i>) population assessments and life-stage monitoring
	Preserve Calavera	<p><u>Buena Vista Creek</u></p> <ul style="list-style-type: none"> ▪ Continued to work towards mitigation plan and site clean-up after sewer spill ▪ Supported planning for public trails. ▪ Implementation of settlement agreement conditions to reduce impacts of development ▪ Continued work with Coastkeeper to conduct water quality and stream condition evaluations of Buena Vista Creek
	Preserve Manager: San Diego Habitat Conservancy	<p><u>Quarry Creek</u></p> <ul style="list-style-type: none"> ▪ Conducted property inspection ▪ Performed baseline documentation including: general biological surveys for habitat and sensitive species mapping, establishing photo points, and preparing for future work. ▪ Work next year will include: presence/absence surveys for coastal California gnatcatcher, (<i>Polioptila californica californica</i>), least Bell's vireo (<i>Vireo bellii pusillus</i>), white-tailed kite (<i>Elanus leucurus</i>), yellow warbler (<i>Setophaga petechia</i>), and yellow-breasted chat (<i>Icteria virens</i>); installation of up to 45 permanent preserve signs; monthly inspections and log reports; non-native plant removal; outreach and education; and other tasks as needed.

Summary of HMP Management and Monitoring Activities, Nov 2014 – Oct 2015 *continued*

Management Unit (MU)	Management Entity ¹	Management and Monitoring Activities
Buena Vista Lagoon	Preserve Manager: CDFW	<p><u>Buena Vista Lagoon Ecological Reserve</u></p> <ul style="list-style-type: none"> ▪ Removed cattails to improve habitat for Ridgway’s rail and improve site conditions for vector control activities. ▪ Conducted snowy plover breeding and wintering window surveys in appropriate habitat areas.
	Preserve Calavera	<p><u>Buena Vista Lagoon/Watershed</u></p> <ul style="list-style-type: none"> ▪ Partnered with Buena Vista Audubon Society to hold third Endangered Species Day event ▪ Supported community education on native plants, wildlife, and preserve management issues at various fairs and outreach events.
	Buena Vista Audubon Society	<p><u>Buena Vista Lagoon Ecological Reserve</u></p> <ul style="list-style-type: none"> ▪ Conducted monthly bird counts, birding walks, and classes ▪ Conducted school tours and summer camps ▪ Performed weekly lagoon clean-up with challenged individuals ▪ Conducted native plant club, outreach, and gardening ▪ Raised \$1.6 million in grants for the acquisition of a neighboring 3.5-acre parcel ▪ Provided lagoon access and staging area for mosquito abatement program
Calavera	Preserve Manager: CNLM	<p><u>Calavera Hills Phase II/Robertson Ranch East</u></p> <ul style="list-style-type: none"> ▪ Assessed clay lens habitat ▪ CSS Restoration of Village H was continued ▪ CSS plots were monitored ▪ Native grasslands in Village H were assessed ▪ Village X area was enhanced and maintained ▪ Both chemical and mechanical treatments of non-native plant species were performed at Village X ▪ Thread-leaved brodiaea index plots and population trend monitoring was performed ▪ Non-native plant species were controlled throughout the property ▪ Annual work plans, budgets, and annual reports were developed ▪ Controlled seepage issues in Village U ▪ Performed regular patrol, site enforcement, and trash pickup ▪ Existing trail blockages were maintained and new blockages were added
	Preserve Manager: CDFW	<p><u>Carlsbad Highlands Ecological Reserve</u></p> <ul style="list-style-type: none"> • Took down jumps and ramps to deter unauthorized uses in the Reserve. • Surveyed for <i>Brodiaea filifolia</i> in areas where it was previously known to occur.

Summary of HMP Management and Monitoring Activities, Nov 2014 – Oct 2015 *continued*

Management Unit (MU)	Management Entity ¹	Management and Monitoring Activities
Calavera (cont'd)	Preserve Calavera	<p><u>Calavera area</u></p> <ul style="list-style-type: none"> ▪ Continued quarterly wildlife tracking surveys ▪ Supported planning and implementation and provided continued funding of Phase 2 of study of wildlife pinchpoints ▪ Conducted trail user survey and documented reported results. ▪ Held public education hikes on native plants and birds ▪ Partnered with the city on several trail building and clean-up projects ▪ Continued Year 2 of Village H restoration grant ▪ Served as trail co-captain—stocking kiosks, picking up dog feces, and monitoring trail conditions
Faraday	Preserve Manager: CNLM	<p><u>Kelly Ranch</u></p> <ul style="list-style-type: none"> ▪ Noted and mapped sensitive plants and animals when observed ▪ Completed two clay lens habitat assessments ▪ Counted Orcutt's hazardia (<i>Hazardia orcuttii</i>) seedlings and adults ▪ Removed or treated non-native plant species, including dozens of Natal grass (<i>Melinis repens</i>) and dozens Saharan mustard (<i>Brassica tournefortii</i>) individuals ▪ Performed regular patrol, site enforcement, and trash removal ▪ Conducted annual CE compliance visit ▪ Replaced kiosk materials as necessary
	Preserve Manager: CDFW	<p><u>Thread-leaved Brodiaea Reserve</u></p> <ul style="list-style-type: none"> ▪ Nonnative plant control through hand weeding and herbicide application.
Los Monos	Preserve Manager: CNLM	<p><u>Carlsbad Oaks North</u></p> <ul style="list-style-type: none"> ▪ Any sensitive animals observed were mapped ▪ Performed coastal sage scrub monitoring ▪ Index plots and life-stage tracking studies of thread-leaved brodiaea (<i>Brodiaea filifolia</i>) were performed ▪ Maintained thread-leaved brodiaea impact area ▪ Blochman's dudleya (<i>Dudleya blochmaniae</i> spp. <i>blochmaniae</i>) index plots were installed and assessed ▪ San Diego thornmint (<i>Acanthomintha ilicifolia</i>) population was counted and habitat conditions were assessed ▪ Non-natives were controlled within the preserve ▪ Conducted CE compliance on County parcels ▪ Developed annual work plan for coming year ▪ Patrolled the area regularly, cleaned up trash, and performed site enforcement
	Preserve Calavera	<p><u>Dawson Los Monos Preserve</u></p> <ul style="list-style-type: none"> ▪ Supported clean-up along Agua Hedionda Creek

Summary of HMP Management and Monitoring Activities, Nov 2014 – Oct 2015 *continued*

Management Unit (MU)	Management Entity ¹	Management and Monitoring Activities
Poinsettia/Aviara	Helix Environmental	<p><u>North Coast Calvary Chapel Open Space</u></p> <ul style="list-style-type: none"> ▪ Performed wart-stemmed ceanothus (<i>Ceanothus verrucosus</i>) assessments ▪ Treated non-native invasive species, including black mustard, castor bean (<i>Ricinus communis</i>), fennel (<i>Foeniculum vulgare</i>) and pampas grass (<i>Cortaderia selloana</i>) ▪ Noted presence of coastal California gnatcatcher (<i>Poliophtila californica californica</i>)
	Aviara Master HOA	Property-level management
	Other HOAs	Property-level management
	Preserve Manager: San Diego Habitat Conservancy	<p><u>Emerald Pointe</u></p> <ul style="list-style-type: none"> ▪ Performed quarterly inspections to document habitat composition and needs, remove trash, and flag non-native plants ▪ Documented quarterly inspection, including observations and activities, using quarterly log reports ▪ Reviewed vegetation mapping in the field to determine if vegetation mapping data from 2009 was still accurate for the area ▪ Performed non-native plant flagging, mapping, and removal ▪ Monitored San Diego thornmint (<i>Acanthomintha ilicifolia</i>) population ▪ Provided public outreach and education in the form of an annual newsletter
	Preserve Manager: San Diego Urban Corps Habitat Services	<p><u>City Ventures</u></p> <ul style="list-style-type: none"> ▪ Annual biological monitoring ▪ Non-native plant species mapping and removal ▪ Trash and debris removal and monitoring ▪ Landscaping debris clearing ▪ Del Mar mesa sand aster (<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>) monitoring ▪ Conducted site monitoring to inspect overall condition, remove trash and debris, monitor sensitive plant and animal species
	Preserve Manager: CNLM	<p><u>Encinas Creek/North County Habitat Bank</u></p> <ul style="list-style-type: none"> ▪ Performed surveys for least Bell's vireo (<i>Vireo bellii pusillus</i>) ▪ Performed camera surveys to determine presence and use of the preserve by large mammals ▪ Controlled non-native plant species ▪ Habitat restoration continued in the southeastern area of the property ▪ Conducted regular patrols, site enforcement, and trash pickup ▪ Composed budgets, annual reports, and work plans ▪ Performed revisions to the management plan
	Preserve Manager: Habitat Restoration Sciences	<p><u>Manzanita Partners</u></p> <ul style="list-style-type: none"> ▪ Controlled and removed non-native species ▪ Patrolled and conducted site assessments on a regular basis, removed trash, and monitored non-native presence ▪ Noted all animal and plant species observed and mapped locations of any sensitive species

Summary of HMP Management and Monitoring Activities, Nov 2014 – Oct 2015 *continued*

Management Unit (MU)	Management Entity ¹	Management and Monitoring Activities
Poinsettia/Aviara (cont'd)	Preserve Manager: Dudek	<p><u>Morning Ridge</u></p> <ul style="list-style-type: none"> ▪ Conducted qualitative biological monitoring ▪ Performed post-fire monitoring ▪ Provided guidance to Green Valley Landscape. Green Valley Landscape removed trash and debris, controlled invasive species, installed straw wattles and applied hydromulch, planted containerized plants next to walking trail, and maintained supplemental irrigation for newly installed plants.
	Preserve Manager: San Diego Urban Corps Habitat Services	<p><u>Poinsettia Place</u></p> <ul style="list-style-type: none"> ▪ Performed annual biological monitoring/post-fire monitoring ▪ Removed burnt tree stumps ▪ Conducted general monitoring to survey for fire-breaks, trash, and illegal encampments ▪ Removed trash and debris on-site and disbanded bike jumps
	Preserve Manager: San Diego Habitat Conservancy	<p><u>Muroya</u></p> <ul style="list-style-type: none"> ▪ Performed initial property inspection and baseline documentation ▪ Conducted first quarterly monitoring and removed or flagged trash and invasives for future removal ▪ Future planned tasks include continued baseline documentation, community outreach, sensitive species surveys, protocol-level coastal California gnatcatcher survey.
Villages of La Costa	Preserve Manager: CNLM	<p><u>Rancho La Costa</u></p> <ul style="list-style-type: none"> ▪ Installed monitoring transects at Cocos-Washingtonia and Poinsettia Fire burn areas. These areas were also monitored for invasive plant species. ▪ Continued long-term monitoring plots for coastal sage scrub ▪ Performed wildlife corridor tracking ▪ Focused surveys were conducted for sensitive plants: San Diego thornmint (<i>Acanthomintha ilicifolia</i>), Orcutt's brodiaea, and Orcutt's hazardia ▪ Habitat conditions of the San Diego thornmint were assessed ▪ Orcutt's hazardia habitat improvements were made ▪ Continued long-term research of the sensitive thread-leaf brodiaea; index plots and a life stage tracking study were continued ▪ Non-native plant species were controlled; a long-term eucalyptus (<i>Eucalyptus</i> sp.) removal project was initiated in Copper Creek ▪ To capture human and wildlife activity, motion-sensing cameras were installed within Copper Creek ▪ Erosion control was installed and replaced, as necessary ▪ Considerable time was spent dealing with internment camps, cleaning up trash, preventing trespass, and educating the public about conservation and site sensitivities of the HCA ▪ Trail improvements were conducted by staff and volunteers

Summary of HMP Management and Monitoring Activities, Nov 2014 – Oct 2015 *continued*

Management Unit (MU)	Management Entity ¹	Management and Monitoring Activities
Villages of La Costa (cont'd)	Preserve Manager: CNLM (cont'd)	<u>Rancho La Costa (cont'd)</u> <ul style="list-style-type: none"> ▪ Volunteers made improvements to various structures and trails ▪ Fence and signs were installed at locations throughout ▪ Fuel breaks were maintained per City of Carlsbad Fire Department regulations ▪ CE compliance monitoring was conducted and all required documents were prepared ▪ Rangers patrolled the HCA throughout the year and ensured summer visitors to Box Canyon did not enter the area
Multiple MUs	Preserve Manager: CNLM	<u>City of Carlsbad Preserves</u> <ul style="list-style-type: none"> ▪ Performed habitat assessments and counts of thread-leaved brodiaea ▪ Non-native species considered to be zero or moderate-tolerance plants were treated or removed ▪ Non-native plant species occurring within the Crossing Golf restoration area were removed ▪ Conducted routine patrols to protect the preserve, maintain fences, and provide information to visitors ▪ Visitors to Lake Calavera were provided with outreach materials ▪ CNLM staff met with City staff and the Preserve Steward to discuss Preserve management, monitoring, and other issues within the city ▪ Oak tree assessment was conducted and gold-spotted oak borers (<i>Agrilus coxalis</i>) were trapped ▪ Participated in volunteer events organized by the City
	City Parks and Recreation Department	<ul style="list-style-type: none"> ▪ Trail clean up and maintenance monthly through volunteers ▪ Quarterly trail volunteer meetings ▪ Public outreach events such as National Trails Day and National Public Lands Day

Appendix B

Habitrak Reports Year 11

November 1, 2014 - October 31, 2015

Summary of Project Gains

MHCP West San Diego County



From 11/1/2014 To 10/31/2015

City of Carlsbad

Project Tracking #	Project Name	Location	Applicant	APN	Date Cons.	Status	Mgmt Resp.	Conservation Type	Mit. Bank Credits Used	Acres Outside Habitat Preserve	Acres Inside Habitat Preserve	Total Acres
CT 13-03	Robertson Ranch West		Planning Systems	208-010-44	11/3/2014	Gain	Non-Profit	Easement	0.00	0.54	37.31	37.85
Total for Agency: City of Carlsbad									0.00	0.54	37.31	37.85

Summary of Project Losses

MHCP West San Diego County



From 11/1/2014 To 10/31/2015

City of Carlsbad

Project Tracking #	Project Name	Location	Applicant	APN	Date of Loss	Status	CEQA Doc.	Activity Type	Acres Outside Habitat Preserve	Acres Inside Habitat Preserve	Total Acres
CT 13-03	Robertson Ranch West		Planning Systems	208-010-44	11/3/2014	Loss			2.63	121.77	124.40
Total for Agency: City of Carlsbad									2.63	121.77	124.40

Summary of Habitat Losses and Gains



Plan: MHCP West San Diego County

Project Gain Status: Gain

Date Range: 11/1/2014 - 10/31/2015

Project Loss Status: Loss

City of Carlsbad

Habitat Type	Target Cons.	Acres Inside the Habitat Preserve Planning Area					Acres Outside the Habitat Preserve				Total Acres			
		Habitat Loss		Habitat Gain			Habitat Loss		Habitat Gain		Habitat Loss		Habitat Gain	
		Current Period	Cummulative	Current Period	Cummulative	Cons. to Date %	Current Period	Cummulative	Current Period	Cummulative	Current Period	Cummulative	Current Period	Cummulative
Southern Coastal Bluff Scrub	0	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maritime Succulent Scrub	29	0.00	1.55	0.00	25.51	87.96 %	0.00	0.03	0.00	5.54	0.00	1.58	0.00	31.05
Coastal Sage Scrub	2,003	10.27	27.15	16.03	1,686.22	84.18 %	0.18	177.48	0.18	15.37	10.45	204.63	16.22	1,701.59
Chaparral	676	0.00	1.92	0.00	605.27	89.54 %	0.00	65.68	0.00	0.03	0.00	67.60	0.00	605.29
Southern Maritime Chaparral	342	0.00	3.55	0.00	344.64	100.77 %	0.00	16.24	0.00	1.52	0.00	19.79	0.00	346.16
Coastal Sage-Chaparral Scrub	107	0.00	0.00	0.00	112.43	105.08 %	0.00	153.48	0.00	0.00	0.00	153.48	0.00	112.44
Grassland	707	0.13	25.57	0.00	638.90	90.37 %	0.00	230.50	0.00	2.02	0.13	256.06	0.00	640.92
Southern Coastal Salt Marsh	143	0.00	0.00	0.00	127.79	89.36 %	0.00	0.00	0.00	0.01	0.00	0.00	0.00	127.80
Alkali Marsh	9	0.00	0.00	0.00	0.00	0.00 %	0.00	0.13	0.00	0.00	0.00	0.13	0.00	0.00
Freshwater Marsh	165	0.00	0.00	0.00	138.83	84.14 %	0.00	0.89	0.00	0.28	0.00	0.89	0.00	139.10
Riparian Forest	82	0.00	0.92	0.00	62.84	76.64 %	0.00	1.25	0.00	0.42	0.00	2.18	0.00	63.27
Riparian Woodland	17	0.00	1.33	0.00	11.66	68.59 %	0.00	0.00	0.00	0.00	0.00	1.33	0.00	11.66
Riparian Scrub	395	0.00	0.16	0.00	376.57	95.33 %	0.00	9.81	0.00	0.59	0.00	9.97	0.00	377.16
Englemann Oak Woodland	0	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coast Live Oak	20	0.00	0.00	0.00	7.65	38.27 %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.65
Other Oak Woodland	4	0.00	0.00	0.00	4.82	120.54 %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.82
Freshwater	53	0.00	0.00	0.00	51.42	97.03 %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51.42
Estuarine	789	0.00	0.00	0.00	776.50	98.42 %	0.00	0.00	0.00	0.01	0.00	0.00	0.00	776.51
Disturbed Wetland	93	0.01	0.01	1.60	90.23	97.02 %	0.07	11.79	0.01	0.50	0.08	11.80	1.60	90.72
Natural Floodchannel	0	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Beach	0	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Saltpan/Mudflats	0	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agriculture	185	111.01	239.55	18.86	241.63	130.61 %	1.95	464.11	0.33	3.54	112.96	703.67	19.19	245.17
Eucalyptus Woodland	99	0.00	1.34	0.00	94.92	95.88 %	0.00	0.47	0.00	0.02	0.00	1.81	0.00	94.94
Disturbed Land	244	0.09	3.37	0.00	239.25	98.05 %	0.17	190.72	0.02	18.20	0.26	194.10	0.02	257.45
Urban/Developed	0	0.25	13.31	0.82	307.83		0.26	42.61	0.00	0.86	0.52	55.92	0.82	308.69
Southern Foredunes	0	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agency Total:		121.77	319.75	37.31	5,944.91		2.63	1,365.19	0.54	48.92	124.40	1,684.95	37.85	5,993.84

Note: The Agriculture and Urban/Developed category is included to account for all land included within a project and habitat preserve planning area.