City Of Chula Vista
MSCP Subarea Plan



February 2003

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1.0 INTRODUCTION

The Multiple Species Conservation Program (MSCP) is a comprehensive, long-term habitat conservation plan which addresses the needs of multiple species and the preservation of natural vegetation communities in San Diego County. The MSCP addresses the potential impacts of urban growth, loss of natural habitat and species endangerment, and creates a plan to mitigate for the potential loss of Covered Species and their habitat due to the direct, indirect and cumulative impacts of future development of both public and private lands within the MSCP area.

The MSCP is a subregional plan under the California Natural Community Conservation Planning (NCCP) Act of 1991. The Multiple Species Conservation Program: MSCP Plan (August 1998) (MSCP Subregional Plan) was prepared for the Subregion, an area encompassing twelve jurisdictions and 582,243 acres. The MSCP Subregional Plan is implemented through local Subarea Plans.

This document is the Subarea Plan for the City of Chula Vista (the City) and has been prepared pursuant to the general outline developed by the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) (Wildlife Agencies) to meet the requirements of the NCCP. The Subarea Plan is also consistent with the MSCP Subregional Plan and qualifies as a Subarea Plan document to implement the MSCP Subregional Preserve within the City.

The MSCP planning effort was initiated in 1990. *The Final EIR/EIS: Issuance of Take Authorizations for Threatened and Endangered Species due to Urban Growth within the Multiple Species Conservation Program (MSCP) Planning Area* dated January 1997 (Final EIR/EIS) analyzed several alternative MSCP Subregional Preserve designs, all of which included the Preserve design incorporated into this Subarea Plan. The environmental impacts associated with the establishment of this Subarea Plan Preserve were studied within the range of alternatives analyzed in the Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS).

This Subarea Plan will form the basis for a Federal 10(a)(1)(B) permit and State 2835 permit. In addition, an Implementing Agreement (IA), an agreement between the City and the Wildlife Agencies that ensures implementation will be completed based upon this Subarea Plan. The Chula Vista Subarea Plan and its associated IA will establish the conditions under which the City for the benefit of itself, public and private landowners, and other land development proponents within its Subarea boundaries, will receive from the Wildlife Agencies certain long-term Take Authorizations (and an acknowledgement that the MSCP satisfies conditions established in the Section 4(d) Special Rule for the coastal California gnatcatcher (*Polioptila californica californica*)) which will allow the taking of certain Covered Species incidental to land development and other lawful land uses which are authorized by the City. Take Authorization will be issued upon approval of this Subarea Plan by the Wildlife Agencies, execution of the IA, and issuance of Federal and State Take permits. The Federal and State Take permits for Covered Projects shall be issued upon approval of the Subarea Plan and its associated environmental documents, execution of the IA, and compliance with all applicable Federal and State requirements with respect to Take Authorization issuance.

This Subarea Plan is intended to implement all relevant sections of the MSCP Subregional Plan, including the habitat and species conservation goals and requirements found in Table 3-5 of the Subregional Plan (Appendix A). In addition, this Subarea Plan includes the Federal-listed endangered Quino checkerspot butterfly (*Euphydr*yas *editha quino*) as a Covered Species. Any project approved by the City must be in conformance with the Chula Vista Subarea Plan. For the areas covered under this Subarea Plan (the Chula Vista Subarea) the provisions of this Subarea Plan and IA supersede those of the overall MSCP Subregional Plan in the event of conflicts.

1.1 Subarea Plan Goals

The City has prepared this Subarea Plan with specific intent to meet the following goals:

1. To conserve Covered Species and their habitats through the conservation of interconnected significant habitat cores and linkages.

2. To delineate and assemble a Preserve using a variety of techniques including public acquisition, on- and off-site mitigation, and land use regulations.

3. To provide a Preserve management program that, together with Federal and State management activities, will be carried out over the long-term, further ensuring the conservation of Covered Species.

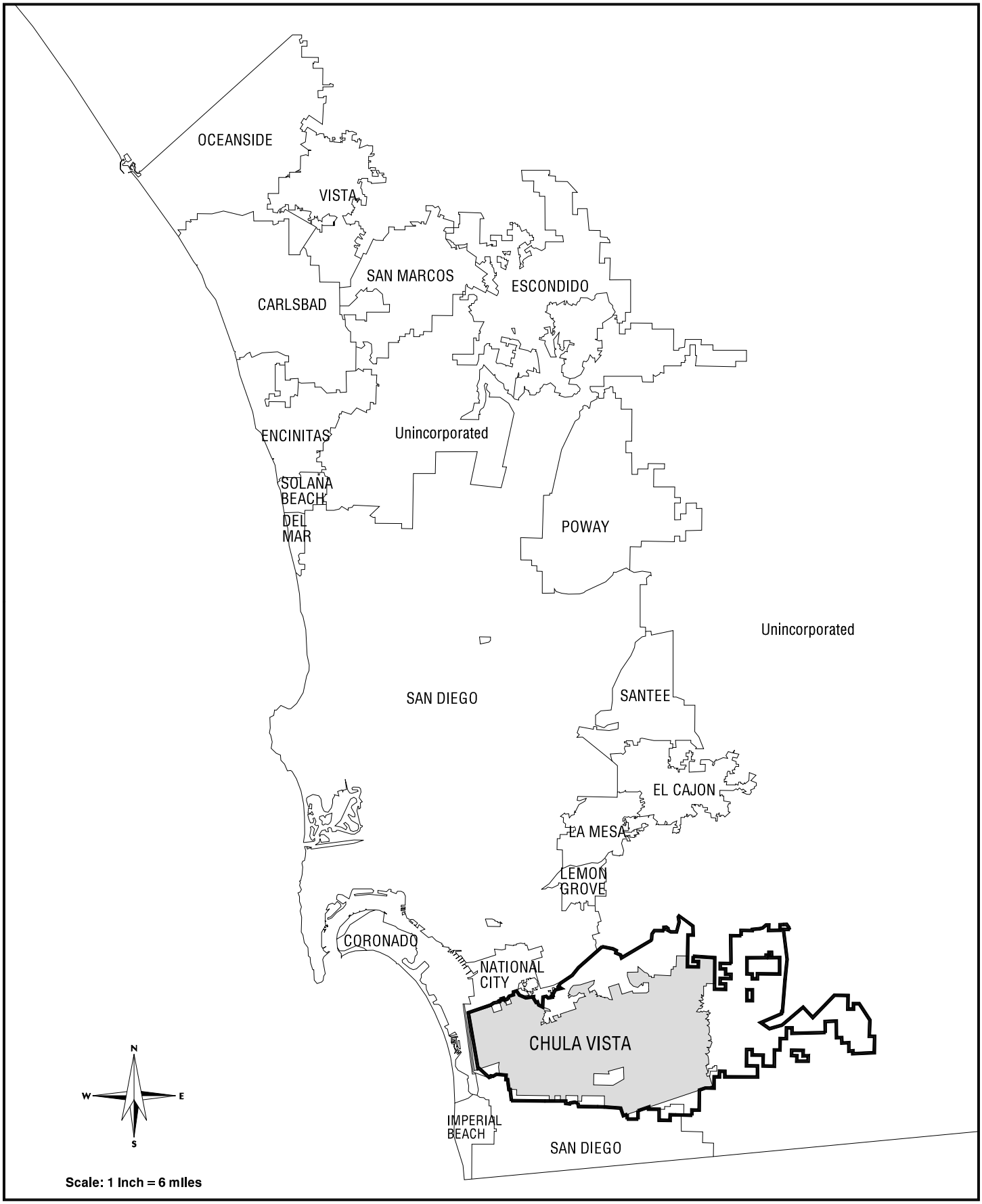
4. To provide necessary funding for a Preserve management program and biological monitoring of the Preserve.

5. To reduce or eliminate redundant Federal, State and local natural resource regulatory and environmental review of individual projects by obtaining Federal and State Take Authorizations for 86 species.

1.2 Consistency of the Chula Vista Subarea Plan with the MSCP Subregional Plan

The City is located in the southwest portion of San Diego County and is one of 12 jurisdictions included in the MSCP Subregion (Figure 1-1). Habitat conservation land, within the City is mapped on Figure 1-2 as either 100% or 75-100% Conservation Area (Preserve). The 100% Conservation Areas are delineated by hard-line boundaries, while the 75-100% Conservation Areas are defined by a quantitative and qualitative target for habitat conservation where final boundaries are not yet determined. The Preserve within the City was designed using the general preserve design principles in Section 5.0 of the MSCP Subregional Plan. Areas targeted for Preserve represent large, interconnected blocks of habitat, which follow natural topography and include areas with varying biodiversity and land with "High" and "Very High" biological values as depicted on the MSCP Subregional Plan Habitat Evaluation Map (Figure 1-3).

The Preserve will serve as an important link to key MSCP conservation resource areas, including Otay Mountain to the east and San Miguel Mountain to the north. Much of the area conserved within the Preserve is designated as biological "core" or "linkage" land on the MSCP Subregional Plan Generalized Core Biological Resource Areas and Linkages map (Figure 1-4).



CITY OF CHULA VISTA

GEOGRAPHIC INFORMATION SYSTEM

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Vicinity Map

FIGURE 1-1

Plot created: January 26, 2004

City of Chula Vista MSCP Subarea and Planning Area

LEMON GROVE
805
54
5
Sweetwater Reservoir
CITY of SAN DIEGO
NATIONAL CITY
COUNTY OF SAN DIEGO
SDG&E
Otay Ranch
Bella Lago
Golf Course
San Miguel Ranch
Salt Creek I
Rolling Hills Ranch
Bonita Long Canyon
Eastlake I
Eastlake Business Park
Eastlake Business Center II
Eastlake Woods West
Eastlake Woods
Upper Otay Reservoir
Village Center
Telegraph Canyon Estates E, S
Rancho Del Rey II
Terra Nova
Rancho Del Rey I
Rancho Del Rey III
Eastlake Greens
Eastlake Trails
Eastlake Vistas
Eastlake Land Swap
Olympic Training Center
Lower Otay Reservoir
Otay Ranch
Mid-Bayfront
Port District effort
Port District effort
San Diego Bay
Sunbow I
Sunbow II
Otay Ranch
COUNTY OF SAN DIEGO
Otay Park
Amphitheater and Water Park
COUNTY OF SAN DIEGO
IMPERIAL BEACH
CITY of SAN DIEGO
805
5

CITY OF CHULA VISTA
GEOGRAPHIC INFORMATION SYSTEM
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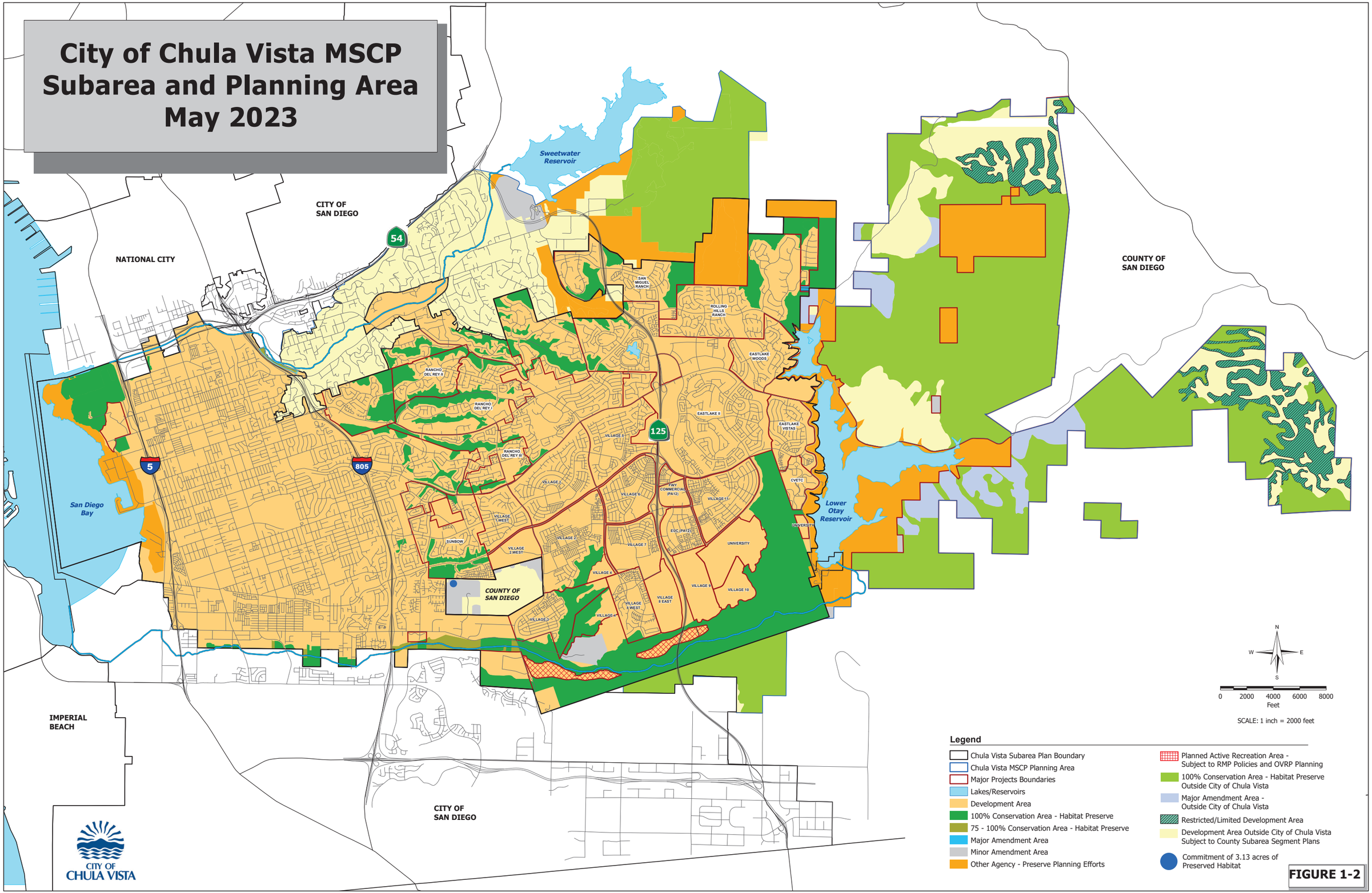
SCALE: 1 inch = 6500 feet

Legend

- Chula Vista Subarea Plan Boundary
- Chula Vista MSCP Planning Area
- Significant Biological Linkages
- Proposed SR-125
- Major Projects Boundaries
- Development Area
- Lakes / Reservoirs
- 100% Conservation Area - Habitat Preserve
- 75 - 100% Conservation Area - Habitat Preserve
- Major Amendment Area
- Minor Amendment Area
- Other Agency - Preserve Planning Efforts
- Planned Active Recreation Area - Subject to RMP Policies and OVRP Planning
- 100% Conservation Area - Habitat Preserve Outside City of Chula Vista
- Major Amendment Area - Outside City of Chula Vista
- Restricted/Limited Development Area
- Development Area Outside City of Chula Vista Subject to County Subarea Segment Plans

FIGURE 1-2

City of Chula Vista MSCP Subarea and Planning Area May 2023



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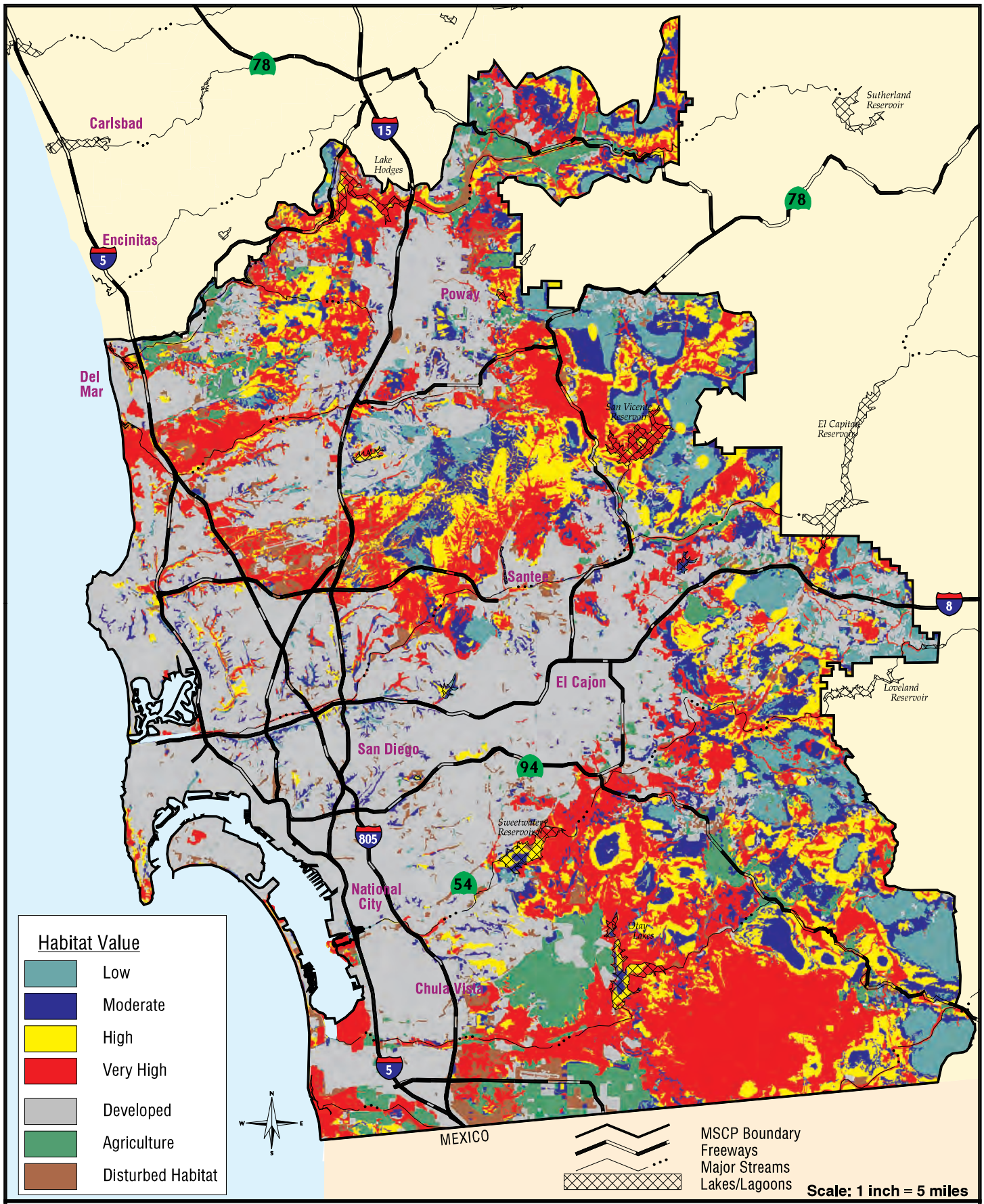
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Feet

SCALE: 1 inch = 2000 feet

Legend

- Chula Vista Subarea Plan Boundary
- Chula Vista MSCP Planning Area
- Major Projects Boundaries
- Lakes/Reservoirs
- Development Area
- 100% Conservation Area - Habitat Preserve
- 75 - 100% Conservation Area - Habitat Preserve
- Major Amendment Area
- Minor Amendment Area
- Other Agency - Preserve Planning Efforts
- Planned Active Recreation Area - Subject to RMP Policies and OVRP Planning
- 100% Conservation Area - Habitat Preserve Outside City of Chula Vista
- Major Amendment Area - Outside City of Chula Vista
- Restricted/Limited Development Area
- Development Area Outside City of Chula Vista Subject to County Subarea Segment Plans
- Commitment of 3.13 acres of Preserved Habitat

FIGURE 1-2

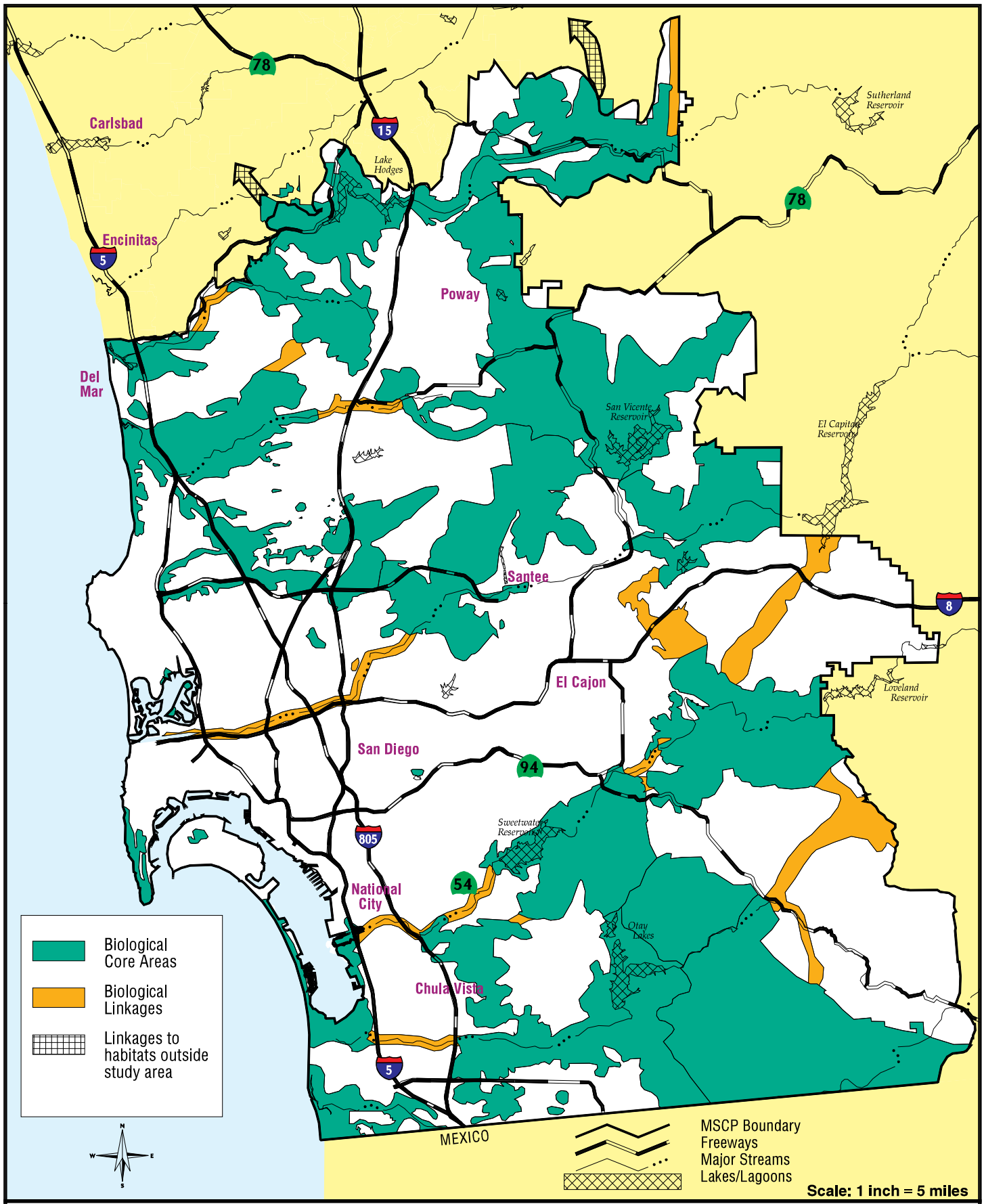


CITY OF CHULA VISTA
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Habitat Evaluation Map

FIGURE 1-3

Plot created: January 26, 2004



CITY OF CHULA VISTA
GEOGRAPHIC INFORMATION SYSTEM
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Generalized Core Biological Resource Areas and Linkages

FIGURE 1-4

Plot created: January 26, 2004

The MSCP Subregional Plan and Final EIR/EIS were adopted by the City of San Diego, the project's lead agency, and approved by the Wildlife Agencies in 1997. For the Final EIR/EIS evaluation, draft Subarea Plans from participating jurisdictions were used as the basis for consideration, including a draft City of Chula Vista MSCP Subarea Plan, dated August 1996 ("1996 Draft Subarea Plan"). This updated Chula Vista Subarea Plan includes changes which are consistent with the goals of the MSCP Subregional Plan and Final EIR/EIS, and which strengthen the conservation efforts detailed in the 1996 Draft Subarea Plan.

The Final EIR/EIS for the Take Authorization identifies "Vegetation Community Conservation Target Acres" for conservation within the MHPA by Subarea. This Subarea Plan meets or exceeds the conservation targets established for the City in the Final EIR/EIS and ensures conservation of an estimated 9,243 acres of core biological resource areas and associated habitat linkages identified in the MSCP Subregional Plan. Approximately 4,993 acres of land will be conserved within the jurisdictional boundaries of the City. In addition, implementation of this Subarea Plan will result in over approximately 4,250 acres of conservation of land located outside the City boundaries and within the County of San Diego Multiple Habitat Planning Area (MHPA). These contributions to the Subregional Plan conservation effort are the result of mitigation requirements for Covered Projects within the City.

1.3 Definitions

The following definitions apply only to the City of Chula Vista MSCP Subarea Plan and not to documents which have been incorporated to this Subarea Plan by reference.

75-100% Conservation Area – Lands for which hard-line Preserve boundaries have not yet been established, but where development or impact is limited to 25% or less of the mapped area and Preserve will total between 75% and 100% of the mapped area and where the conserved portion will be managed for its biological resources (Figure 1-2).

100% Conservation Area – Lands within the City of Chula Vista for which hard-line Preserve boundaries have been established and where the conserved portion will be managed for its biological resources (Figure 1-2).

Agricultural Operations – Soil disturbance activity for the preparation or maintenance of a site for the cultivation of crops or other agricultural purposes where the activity has occurred continuously within previous years in compliance with all applicable regulations and involves no intensification of the use.

Appropriate Managing Entity – The entity that manages any portion of the Preserve, including but not limited to the City, a third-party under the control of the City, or the Otay Ranch Preserve Owner/Manager.

Area-specific Management Directives (ASMD) – Detailed Preserve management plans for distinct geographic areas within the Preserve, tiered down from framework management plans. These plans will be used to implement adaptive management.

Biological and Open Space Easement – A permanent legal encumbrance established to protect biological resources and dedicate land to the Preserve.

Biological Functional Equivalency – A modification to a Preserve boundary which results in a Preserve configuration with a biological value that is equal to or higher than the original Preserve configuration. The comparison of biological value is based on the "like or equivalent" exchange concept for biological factors identified in Section 5.4.2 of the MSCP Subregional Plan.

Biologically Superior Preservation Alternative – A project design alternative which exceeds the Narrow Endemic Species threshold but demonstrates superior biological function of the onsite Narrow Endemic Species population when compared to a project design alternative within the Narrow Endemic Species threshold.

Bonita Planning Component – All territory within the *Chula Vista MSCP Planning Area* which is located outside the incorporated boundaries of the City of Chula Vista, exclusive only of that area outside the incorporated boundaries of the City of Chula Vista which is part of the Otay Ranch General Development Plan (Figure 2-1).

Boundary Adjustment – A change to the Preserve boundary resulting from: a) new biological information obtained through site-specific studies, b) unforeseen engineering design opportunities or constraints, c) request to change boundaries in the context of the Biological Functional Equivalency, and/or d) timely and adequate notice of objection by the Wildlife Agencies to a mapping conflict determination made by the City Director of Planning and Building, pursuant to Section 5.4 of this Subarea Plan.

Candidate Species – Those native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that the California Fish and Game Commission has formally noticed as being under review by CDFG for addition to either the list of endangered species or the list of threatened species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to add the species to either list, pursuant to Section 2068 of the California Fish and Game Code.

CDFG – The California Department of Fish and Game, a subdivision of the California Resources Agency charged with administering the California Endangered Species Act and the Natural Community Conservation Planning Act.

CEQA – The California Environmental Quality Act (California Public Resources Code 21000 et seq.), including all regulations promulgated pursuant to that Act.

CESA – The California Endangered Species Act (California Fish and Game Code 2050 et seq.), including all regulations promulgated pursuant to that Act. CESA prohibits CDFG from authorizing any incidental take of a state-listed threatened or endangered species if that take would jeopardize the continued existence of the species.

Chula Vista Covered Species – Those Covered Species which are adequately conserved by the Chula Vista Subarea Plan, together with other Subarea Plans within the MSCP Subregional Plan Area, in effect during the duration of the City's Section 10(a)(1)(B) permit issued by the USFWS and Take Authorization issued by CDFG, including Species Adequately Conserved. Adequate conservation for certain Chula Vista Covered Species shall include the measures contained in the findings for those species in Table 3-5 of the MSCP Subregional Plan which is incorporated in the Chula Vista Subarea Plan (Appendix A).

Chula Vista MSCP Planning Area – The area within the City of Chula Vista's General Plan boundaries, which includes area within the incorporated boundaries of the City of Chula Vista and unincorporated areas of the County of San Diego (Figure 1-2).

Chula Vista Subarea – The area of land within the incorporated boundary of the City of Chula Vista (Figure 1-2), as may be modified from time to time by annexation in accordance with this Subarea Plan.

Chula Vista Subarea Plan – the Subarea Plan prepared by the City of Chula Vista and reviewed and approved by the Wildlife Agencies, and adopted by the City of Chula Vista as part of the City's General Plan, to implement the MSCP Subregional Plan within the Chula Vista Subarea.

City Habitat Manager – The individual designated by the City to implement the Chula Vista MSCP Subarea Plan Preserve Management programs.

City Planning Component – All territory within the *Chula Vista MSCP Planning Area* which is located within the incorporated boundaries of the City of Chula Vista exclusive of that area which is part of the Otay Ranch General Development Plan (Figure 2-1).

Clearing – The cutting and removal of natural vegetation by any means, without disturbance to the soil and root system.

Covered Activities – Land uses, land and public infrastructure development, and conservation activities identified in this Subarea Plan and subject to the City of Chula Vista's jurisdiction and control that may result in Incidental Take of Covered Species during the term of this Subarea Plan and for which Incidental Take coverage is requested under the Take Authorizations.

Covered Projects – Those projects involving land use development within the City of Chula Vista for which hard-line Preserve boundaries have been established pursuant to the approved Chula Vista Subarea Plan, and where conservation measures consistent with the MSCP Subregional Plan and Chula Vista Subarea Plan have been or will be specified as binding conditions of approval in such Project's plans and approvals. Covered Projects are shown on Figure 5-1 of this Subarea Plan. The conditions of coverage for each Covered Project are specified at 7.5.6 of the Subarea Plan.

Covered Species – Those species within the MSCP Subregional Plan which will be adequately conserved by the MSCP when the MSCP is implemented through the Subarea Plans, including Species Adequately Conserved, listed on Table 4 –1, as well as the Covered Species listed on Tables 4-2 and 4-3 of this Subarea Plan.

Development – The uses to which land shall be put, including construction of buildings and structures and all alterations of the land incidental thereto, excluding Agricultural Operations.

Development Area – Mapped areas within which the Take of Chula Vista Covered Species is authorized by this Subarea Plan Section 10(a)(1)(B) and Section 2835 permit (Figure 1-2).

Emergency Management Plan (EMP) – The document to be prepared by the City of Chula Vista with concurrence from the Wildlife Agencies, upon issuance of Take Authorization assuring that the City will coordinate an emergency notification and response system to be used in the event of emergency incidents occurring in the Preserve. A timeline for preparation of the EMP is identified in Table 7-1.

Endangered Species – A species listed as "endangered" under the Federal Endangered Species Act (ESA) or the California Endangered Species Act.

ESA – The Federal Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), including all regulations promulgated pursuant to that Act.

Framework Management Plan – A plan providing guidelines for Preserve management.

Fully Protected Species – Those species listed in Sections 3511 (Fully Protected Birds), 4700 (Fully Protected Mammals), 5050 (Fully Protected Reptiles and Amphibians), 5515 (Fully Protected Fish) of the California Fish and Game Code for which all incidental Take is prohibited.

Future Facilities – Facilities that are necessary to support City services or planned development in the future and are not specifically listed as a Planned Facility.

Grading – Any excavating or filling or combination thereof and shall include the land in its excavated or filled condition.

Grubbing – The removal of natural vegetation by any means, including removal of the root system.

Habitat Loss and Incidental Take (HLIT) Ordinance – Ordinance which establishes mitigation standards for biological resources and implements the Chula Vista Subarea Plan outside of Covered Projects. Third Party Beneficiary status will be extended to per sons and entities under the jurisdiction and control of the City of Chula Vista through permits issued pursuant to the HLIT.

Hard-lines – The boundary between Preserve and development established on a project by project basis, after evaluation of habitat and species data collected and/or surveys conducted as part of project entitlement processing, evaluation by the Wildlife Agencies, and consideration of the contribution that will result to the overall MSCP Subregional Planning effort.

Implementing Agreement (IA) – The legal agreement between the City of Chula Vista and the Wildlife Agencies that ensures implementation of the Chula Vista MSCP Subarea Plan, 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.

Incidental Take – The Take of a species which is incidental to and not the purpose of the carrying out of an otherwise lawful activity. For purposes of the Section 10(a)(1)(B) Permit, Incidental Take refers solely to species other than plant species.

Land Development Permit – A permit issued pursuant to the Chula Vista Municipal Code Chapter 15.04.

Listed Non-covered Species – A species listed as threatened or endangered under the Federal Endangered Species Act or the California Endangered Species Act, but for which a Section 10 (a)(1)(B) nor a section 2835 permit has not been granted pursuant to the Chula Vista MSCP.

Major Amendment Area – Areas within the *Chula Vista Subarea* which have been excluded from the City's Take Authorization and which require approval by the City of Chula Vista Director of Planning and Building, the USFWS Field Supervisor and the CDFG NCCP Program Manager, as well as amendment of the Chula Vista Subarea Plan and issuance of new Take Authorization to obtain incidental take coverage.

Mapping Conflict – A request for alteration to Preserve boundaries when mapping errors have placed an area into the Preserve which is developed or expressly intended for development, and/or when mapping errors have removed from the Preserve, an area with sensitive resources expressly intended to be conserved.

MBTA – The Federal Migratory Bird Treaty Act (16 U.S.C. 701 et seq.), including all regulations promulgated pursuant to that Act.

Minor Amendment Area – Areas within the *Chula Vista Subarea* which contain habitat that could be partially or completely eliminated, with appropriate mitigation, without affecting the overall goals of the Subarea Plan. Take Authorization for Minor Amendment Areas will be provided pursuant to Section 5.1.3.1 of the Subarea Plan.

MSCP Annexation Agreement – A legal agreement between the City of Chula Vista, the detaching jurisdiction, and the Wildlife Agencies, as part of the annexation process to ensure that any development of the annexed land proceeds in accordance with the conservation goals of the MSCP and that Take Authorization is transferred from the detaching jurisdiction to the City.

MSCP Implementation Guidelines – Guidelines formulated by the City of Chula Vista Department of Planning and Building to aid in the interpretation and facilitate implementation of the HLIT Ordinance. These Guidelines are complementary to the Chula Vista MSCP Subarea Plan and HLIT Ordinance and do not include new substantive information or requirements.

MSCP Subarea Plan – A Habitat Conservation Plan prepared pursuant to and consistent with the Multiple Species Conservation Program (MSCP) Subregional Plan, in order to implement the conservation program and requirements established by the MSCP Subregional Plan within the boundaries of participating local jurisdiction.

MSCP Subregional Plan – The Multiple Species Conservation Program Plan, a comprehensive habitat conservation planning program dated August 1998 which addresses multiple species habitat needs and the preservation of native vegetation for a 900-square mile area in southwestern San Diego County, California.

MSCP Subregional Plan Area –An area of approximately 900 square miles in southwestern San Diego County, referred to in the MSCP Subregional Plan as the "MSCP Subregional Plan Study Area."

MSCP Subregional Preserve – Permanent open space established at the Multiple Species Conservation Program Subregional level and managed for its biological resources.

Multi-Habitat Planning Area (MHPA) – The area within the MSCP Subregional Plan Area where preserve planning is focused and within which permanent conservation of habitat lands will be accomplished through implementation of subarea plans. The MHPA is defined by mapped boundaries and/or by quantitative targets for habitat conservation and other criteria as specified in individual subarea plans.

Natural Vegetation – Vegetation identified as Tier I, II, or III on Table 5-3 of the Chula Vista MSCP Subarea Plan.

Narrow Endemic Species – Species that are highly restricted by their habitat affinities, or other ecological factors, and are listed in Table 5-4 of this Subarea Plan.

NCCP Act – The California Natural Community Conservation Planning Act of 1991, enacted by Chapter 765 of the California statutes of 1991 (A.B. 2172, codified in part at California Fish and Game Code 2800, et seq.), including all regulations promulgated pursuant to that Act. Amendments to the NCCP Act enacted effective January 1, 2003 (Chapter 4, sections 1 and 2 of California statutes 2002 (S.B. 107) expressly provide that the Chula Vista Subarea Plan will be solely governed in accordance with the NCCP Act as it read on December 31, 2001, and not by the other substantive provisions of S.B. 107.

NCCP Authorization – Any authorization issued by CDFG under the NCCP Act or by the California Fish and Game Commission under the NCCP Act to permit the Take of a species listed under CESA as threatened or endangered, or of a species which is candidate for such a listing, or of a species identified pursuant to Section 2835, except that the NCCP Authorization does not authorize any Take of five fully protected birds that are listed in Fish and Game Code section 3511 (golden eagle, American peregrine falcon, bald eagle, California brown pelican and California least tern) or the mountain lion, which is protected by Fish and Game Code section 4800.

NCCP Plan – A plan developed in accordance with the NCCP Act which provides for comprehensive management and conservation of multiple wildlife species and identifies and provides for the regional or area-wide protection and perpetuation of natural wildlife diversity while allowing compatible and appropriate development and growth.

Otay Ranch General Development Plan (Otay Ranch GDP/SRP) – The General Development Plan/Subregional Plan (GDP/SRP) prepared for the Otay Ranch and adopted by the City of Chula Vista and County of San Diego in 1993, and as amended from time to time. The Otay Ranch GDP delineates general planning policies and land uses for approximately 22,899 acres of the Otay Ranch located both within the City of Chula Vista and the County of San Diego unincorporated area, including residential, commercial/industrial, recreational, transportation and open-space uses.

Otay Ranch Planning Component – All territory within the *Chula Vista MSCP Planning Area* which is located within the Otay Ranch General Development Plan, which includes area within the incorporated boundaries of the City of Chula Vista and unincorporated areas of the County of San Diego (Figure 2-1).

Otay Ranch Preserve – An 11,375-acre habitat conservation area established by the Otay Ranch Phase 1 Resource Management Plan.

Participating Local Jurisdiction – Any of the 12 local governments that may prepare an MSCP Subarea Plan and receive a USFWS Section 10(a)(1)(B) permit and a Section 2835 permit from the CDFG.

Planned Facilities – Facilities that have been specifically identified by the City to serve development approved by the City and are specified in Table 6-1.

Planned Responses – The list of responses the City or other responsible agencies will utilize to respond to a Changed Circumstance.

Preserve – Areas within the City of Chula Vista incorporated limits which are dedicated and accepted by the City for permanent conservation and which will be managed for their biological resources.

Preserve Owner/Manager (POM) – The entity responsible for overseeing the day-to-day and long-range preserve management activities within the Otay Ranch Preserve, including but not limited to management of resources, restoration of habitat, and enforcement of open space restrictions.

Project Area – An area considered for development and shall include the entire contiguous land under the same ownership or like property interest or, in the case of development proposed by a public agency, the area required for development as determined by the Director of Planning and Building.

Restoration Areas – An area within the City's MSCP Preserve that is undergoing active restoration to either wetland or upland habitat and has not yet achieved the success criteria established as part of an approved restoration plan.

Resource Agencies – The USFWS, the United States Army Corps of Engineers (ACOE), and the CDFG.

Restricted Development Area (RDA) – Those open space areas identified by the Otay Ranch Resource Management Plan as either Restricted Development Areas or Limited Development Areas, where the precise configuration of open space and development will be determined pending the outcome of future technical studies.

Section 4(d) Special Rule – The regulation concerning the coastal California gnatcatcher published by the USFWS on December 10, 1993 (58 F.R. 65088) and codified at 50 C.F.R. 17.41(b), pursuant to the ESA which describes one particular set of conditions under which the Incidental Take of the coastal California gnatcatcher in the course of certain land use activities is lawful.

Section 7 – Section 7(a)(2) of the ESA (16 U.S.C. 1536 (a)(2)) which requires that any Federal agency that permits, licenses, funds, or otherwise authorizes activities that may affect species listed under the Act, must consult with the USFWS to ensure that its actions will not jeopardize the continued existence of any listed species or adversely modify the designated Critical Habitat of a listed species.

Section 10(a)(1)(B) Permit – A permit issued by the USFWS under Section 10(a)(1)(B) of the ESA (16 U.S.C. 1539(a)(1)(B)) to allow the Incidental Take of Species Adequately Conserved and/or Chula Vista Covered Species, to the extent Take of such species is otherwise prohibited under Section 9 of the ESA. The Take of listed plant species is not prohibited under the ESA or authorized under the Section 10(a)(1)(B) permit. However, plant species adequately conserved by the Chula Vista Subarea Plan, or by the Chula Vista Subarea Plan in conjunction with other approved MSCP Subarea Plans, are listed in the 10(a)(1)(B) permit in recognition of the conservation measures and benefits provided for them under the approved Subarea Plans. Such plant species receive assurances pursuant to the USFWS "No Surprises" Rule.

Section 404 – Section 404(b)(1) of the Federal Clean Water Act (33 U.S.C. 1344), which regulates discharge of dredged and fill material into Waters of the United States, including Wetlands.

Section 1600 – Section 1600 of the California Fish and Game Code, which regulates alterations to permanent or intermittent stream courses.

Section 2835 – Section 2835 of the California Fish and Game Code, which allows the Take of identified species whose conservation and management is provided for through a NCCP approved by the CDFG.

Sensitive Biological Resources – Lands that contain Natural Vegetation and/or Wetlands; and/or habitat occupied by Covered Species, other Listed Non-Covered Species, and/or Narrow Endemic Species.

Significantly Conserved Vegetation Communities – Those vegetation communities described in Section 4.2.4 of the MSCP Subregional Plan which will be significantly conserved through implementation of the MSCP Subregional Plan and the approved Chula Vista Subarea Plan.

Species Adequately Conserved – Those species listed on Table 4 -1 of this Subarea Plan, for which the Chula Vista Subarea Plan provides substantial conservation and for which the City of Chula Vista shall receive Take Authorization regardless of the participation or continued participation of any other Participating Local Jurisdiction.

Sufficiently Conserved Vegetation Communities – Those vegetation communities described in Section 4.2.4 of the MSCP Subregional Plan which will be sufficiently conserved through implementation of the MSCP Subregional Plan and the approved Chula Vista Subarea Plan.

Take – Refers to the meaning provided by the ESA and the California Fish and Game Code, including relevant regulations and case law.

Take Authorization – Permit authority granted through a Section 10(a)(1)(B) Permit pursuant to the ESA and/or the Section 2835 permit pursuant to the NCCP Act.

Third Party Beneficiary – Any landowner or other public or private entity that obtains Take Authorization through the City of Chula Vista's Take Authorization.

Threatened Species – A species listed as "threatened" under the ESA or CESA.

USFWS – The United States Fish and Wildlife Service, an agency of the United States Department of the Interior, charged with administering the ESA.

Wetlands – Wetlands are generally defined as those areas that are inundated or saturated by surface or ground water at a frequency or duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. For purposes of the Chula Vista MSCP Subarea Plan, Wetlands are those lands which contain naturally occurring wetland communities listed on Table 5-6 of the Chula Vista MSCP Subarea Plan and further described in Appendix B. Wetlands also include areas lacking wetland communities due to non-permitted filling of previously existing Wetlands.

Wildlife Agencies – The United States Fish and Wildlife Service and the California Department of Fish and Game.

1.4 Acronyms

ACOE – United States Army Corps of Engineers

ASMD – Area Specific Management Directives

BEP – Biological Enhancement Program

BLM – Bureau of Land Management

BMO – San Diego County Biological Mitigation Ordinance

BMP – Best Management Practices

CDFG – California Department of Fish and Game

CEQA – California Environmental Quality Act

CESA – California Endangered Species Act

CFD – Community Facilities District

CHD – Critical Habitat Designation

CSS – Coastal Sage Scrub

CVFD – Chula Vista Fire Department

CWA – San Diego County Water Authority

DOT – Department of Transportation

DWR – California Department of Water Resources

EIR – Environmental Impact Report

EIR/EIS – Environmental Impact Report/Environmental Impact Statement

EMP – Emergency Management Plan

ESA – Federal Endangered Species Act

FEMA – Federal Emergency Management Agency

HCP – Habitat Conservation Program

HEAT – Habitat Emergency Advisory Team

HIRT – Hazardous Incident Response Team

HLIT – Habitat Loss and Incidental Take Ordinance

HMMD – San Diego County Department of Health Hazardous Materials Management Division

HMTC – Habitat Management Technical Committee

HOA – Homeowners Association

HRP – Habitat Response Plan

IA – Implementing Agreement

IOD – Irrevocable Offer of Dedication

ITP – Incidental Take Permit

JEPA – Joint Exercise of Power Agreement

LCP – Chula Vista Local Coastal Program

MBTA – Federal Migratory Bird Treaty Act

MHPA– County of San Diego Multiple Habitat Planning Area

MMRP – Mitigation Monitoring and Reporting Program

MSCP – Multiple Species Conservation Program

NCCP – California Natural Community Conservation Planning Act of 1991

NEPA – National Environmental Policy Act

NPDES – National Pollution Discharge Elimination System Permit

OES – California Office of Emergency Services

Otay Ranch GDP/SRP – Otay Ranch General Development Plan/Subregional Plan

OVRP – Otay Valley Regional Park

OWD – Otay Water District

PMA – Preserve Management Area

PMEF – Preserve Management Endowment Fund

POM – Otay Ranch Preserve Owner Managers

QCB – Quino checkerspot butterfly

QSAC – Quino Scientific Advisory Committee

RAP– Response Action Plan

RDA – Restricted Development Area

RMP – Resource Management Plan

RWQCB – California Regional Water Quality Control Board

SANDAG – San Diego Association of Governments

SCADA – Supervisory Control and Data Acquisition

SDFD – San Diego Fire Department

SDNWR – San Diego National Wildlife Refuge

SMR – San Miguel Ranch

SPA – Sectional Planning Area

SUSMP – Standard Urban Storm Water Mitigation Plan

TMA – Tarplant Management Area

USFWS – United States Fish and Wildlife Service

2.0 DESCRIPTION OF THE CHULA VISTA MSCP PLANNING AREA

The City is located in the southern portion of the County of San Diego and includes 33,045 acres within its incorporated boundaries. Chula Vista is a growing municipality, with much of the new development occurring in the eastern portion of the City. Recent annexations have expanded the City boundary to the east and northeast, and the adopted General Plan for Chula Vista extends beyond the current jurisdictional boundaries, particularly to the east.

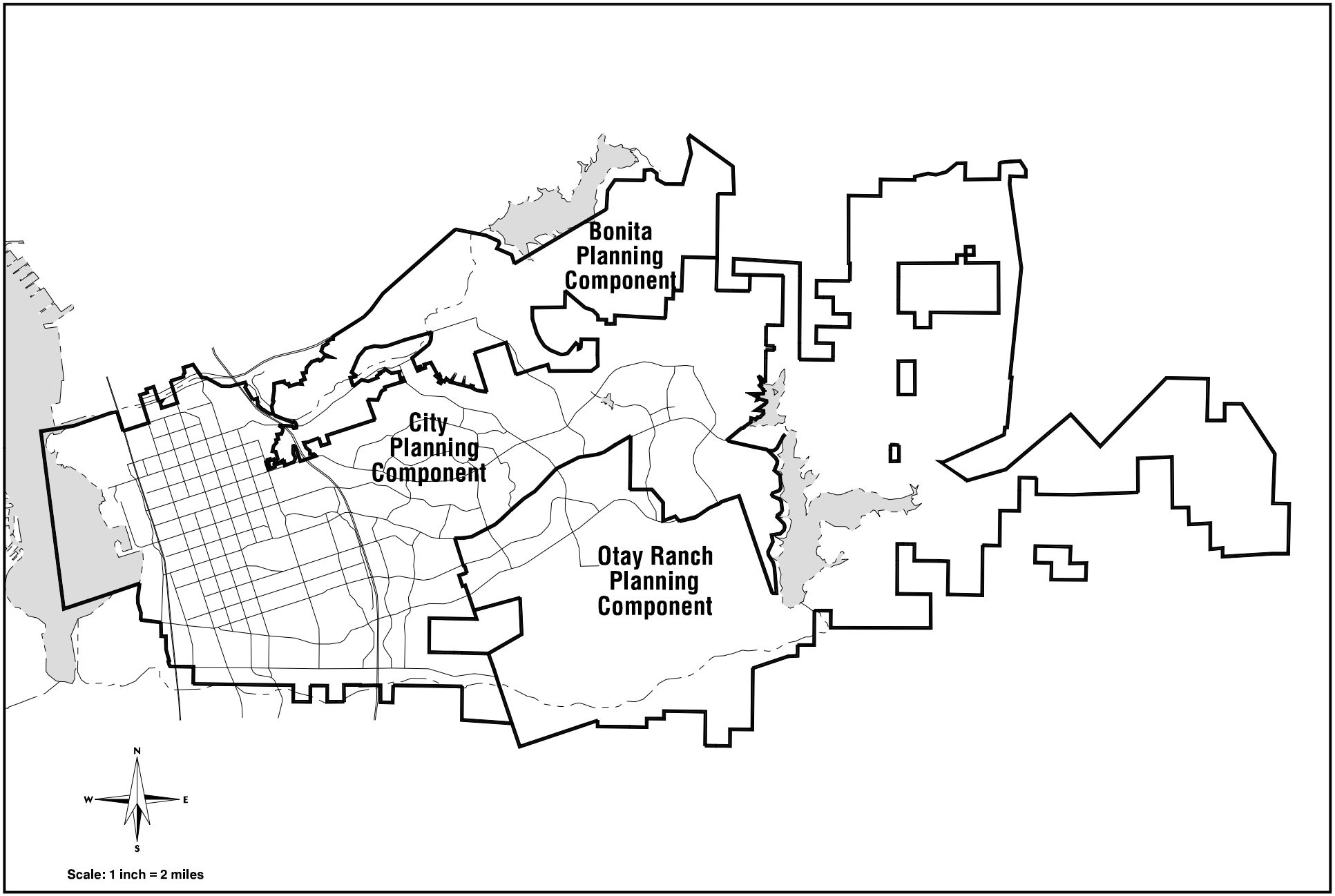
The ***Chula Vista Subarea*** is comprised of that territory located within the incorporated limits of the City, and for which Take Authorization will be granted. Section 3.0 of this Subarea Plan describes the *Chula Vista Subarea* in more detail and provides a summary of conservation and Take estimates for the Subarea. The area and configuration of the *Chula Vista Subarea* is anticipated to change over time as territory is annexed or detached by the City. Take Authorization for future annexation areas will be processed pursuant to Section 5.3.1 of this Subarea Plan.

The ***Chula Vista MSCP Planning Area*** is defined by the City's General Plan boundary and includes a total of 57,849 acres, both within and outside the City, within the unincorporated County of San Diego. Refer to Figure 1-2 for a depiction of the *Chula Vista MSCP Planning Area* and the *Chula Vista Subarea.* Although Take Authorization pursuant to this Subarea Plan will be issued only for the *Chula Vista Subarea*, this document includes information on the larger *Chula Vista MSCP Planning Area* because of the important inter-relationship between this Subarea Plan and the adopted County of San Diego MSCP Subarea Plan/South County Segment, which overlaps the *Chula Vista MSCP Planning Area.*

Through the combined, cooperative planning efforts of both the City and the County, new urban-level development for the South County/*Chula Vista MSCP Planning Area* has been deliberately directed into the City, adjacent to existing infrastructure. Conversely, much of the habitat conservation has been directed into the unincorporated County. Directing development within City limits creates a more compact development form, requires less onerous extension of public services, and results in fewer environmental impacts than would occur from historical suburban, "leap-frog" development patterns. This approach to urban planning enables conservation of habitats and species through dedication of large, contiguous blocks of open space, resulting in superior Preserve design and habitat connectivity.

Assembly of large blocks of conservation land anticipated by the County Subarea Plan/South County Segment will occur only if and when development plans are implemented within the City. Thus, implementation of the Chula Vista Subarea Plan will contribute to the achievement of the County Subarea Plan/South County Segment conservation goals, as well as achieve the conservation goals set forth for the *Chula Vista MSCP Planning Area* and the *Chula Vista Subarea.*

The *Chula Vista MSCP Planning Area* is divided into three Planning Components: 1) the City Planning Component, 2) the Otay Ranch Planning Component, and 3) the Bonita Planning Component. The three Planning Components are depicted on Figure 2-1, and descriptive



CITY OF CHULA VISTA

GEOGRAPHIC INFORMATION SYSTEM

r:/planning/mscp/finalreport/subarea.aml

MSCP Subarea Plan Components

FIGURE 2-1

Plot created: January 26, 2004

information for each Planning Component is provided in Sections 2.1 through 2.3 of this Subarea Plan.

The City, Otay Ranch, and Bonita Planning Components constitute the entire *Chula Vista MSCP Planning Area.* In addition, however, several public and quasi-public conservation efforts overlap the territory of the Planning Area. These separate conservation efforts are described in Section 2.4 and are separate from MSCP planning efforts being undertaken by the City.

2.1 City Planning Component

The City Planning Component lies entirely within the jurisdictional limits of the City and the boundaries of the *Chula Vista Subarea.* This planning component includes all territory located within the incorporated boundaries of the City, exclusive only of that area of the City which is a part of the Otay Ranch General Development Plan/Subregional Plan (GDP/SRP). Take Authorization throughout the City Planning Component will therefore be authorized pursuant to the Chula Vista Subarea Plan and conservation that occurs will become part of the Chula Vista Preserve.

Most of the City Planning Component is area that has been developed or planned for development, and all open space areas are currently reflected on the City's General Plan Land Use Diagram. The majority of the Preserve in the City Planning Component is represented by Preserve designations targeted for 100% Conservation. Approximately 97 acres located within the Otay Valley Regional Park west of Heritage Road and 36 acres located in the incorporated area of the Sweetwater River Valley are designated for 75-100% Conservation (Figure 1-2).

A portion of the Otay Landfill, approximately 137 acres, is included in the City Planning Component as a Minor Amendment Area. Final Preserve boundaries for this area will be determined at a future date through the Minor Amendment Process described in Section 5.1.3.1 of this Plan.

A total of approximately 1,940 acres of habitat will be conserved within the Preserve in the City Planning Component, representing 47% of the total acres of habitat found in this component. Upon completion, the Preserve within the City Planning Component will include representative areas of major canyon systems that support stands of coastal sage scrub and maritime succulent scrub, including Rice and Long canyons. A variety of plant species including San Diego goldenstar (*Muilla clevelandii*), variegated dudleya (*Dudleya variegata*) and Otay tarplant (*Deinandra [Hemizonia] conjugens*) will be conserved, as will known locations of the Quino checkerspot butterfly (QCB). This component will also include rare habitats associated with San Diego Bay as well as portions of the Sweetwater and Otay River systems to the Preserve.

Table 2-1 provides information on existing vegetation found within the City Planning Component and the habitat conservation anticipated to result from implementation of the Chula Vista MSCP Subarea Plan.

Table 2-1: Habitat Conservation Summary for City Planning Component

Vegetation Communities	City Planning Component (acres)	Estimated Preserve Contribution (acres)	Conservation Percentage
Coastal Sage Scrub (CSS)	2,114	1,285	61%
Maritime Succulent Scrub	17	10	59%
Chaparral	1	1	100%
CSS/Chaparral Scrub	0	0	N/A
Grassland (all types)	1,579	310	20%
Oak Woodland	2	2	100%
Tecate Cypress Forest	0	0	N/A
Eucalyptus Woodland	17	2	12%
Southern Coastal Salt Marsh	204	202	99%
Freshwater/Alkali Marsh	13	11	85%
Riparian Forest	10	10	100.0%
Oak Riparian Forest	0	0	N/A
Riparian Woodland	0	0	N/A
Riparian/Tamarisk Scrub	78	68	87%
Open Water/Freshwater	59	24	41%
Disturbed Wetlands	28	15	54%
Natural Flood Channel	13	0	0%
Total	**4,135**	**1,940**	**47%**

The following describes the major private development projects and associated open space included in the Preserve, within the City Planning Component:

2.1.1 Bonita Long Canyon

Bonita Long Canyon lies north of East H Street and south of Bonita Road. This 650-acre, fully-built subdivision includes 768 single-family and 56 apartment homes, an elementary school, equestrian center, and an active park. Approximately 281 acres of open space are preserved as dedicated open space, and a small acreage of Cleveland sage (*Salvia clevelandii*) is preserved.

2.1.2 Rancho Del Rey I, II and III

Rancho Del Rey is located north and south of East H Street between Interstate 805 and Otay Lakes Road, north of Telegraph Canyon Road. The completed project comprises 1,585 acres and includes over 4,000 residential units, a commercial/industrial center, schools, parks, and approximately 549 acres of dedicated open space including Rice Canyon. In addition to on-site preservation, 360 acres of habitat have been conserved

outside the Subarea but within the MSCP Subregional Preserve. The conserved canyons and hillsides contain a variety of coastal sage scrub plant and animal species, including San Diego barrel cactus (*Ferocactus viridescens*), snake cholla (*Opuntia parryi* var. *serpentina*), San Diego ambrosia (*Ambrosia pumila*), coastal California gnatcatcher and coastal cactus wren (*Campylorhynchus brunneicapillus couesi*).

2.1.3 Terra Nova

The Terra Nova project contains 419 acres located north and south of East H Street east of Interstate 805. The project has been fully developed with over 900 residential units, retail and commercial office space, an elementary school, and a neighborhood park. One hundred twenty-five acres of open space have been dedicated and will become part of the Preserve. The MSCP open space acreage includes coastal sage scrub, riparian vegetation, and Vernal Pools.

2.1.4 Sunbow II

Sunbow II includes 604 acres located on the south side of Telegraph Canyon Road at Medical Center Drive. The project is a master-planned community consisting of approximately 1,950 residential units, commercial, research and industrial uses, an elementary school site, and a recreation center. One hundred seventy-seven acres are set aside for open space, 65 acres of which are conserved outside the Subarea within the MSCP Subregional Preserve. Principally coastal sage scrub is conserved and some of the Preserve species include: coastal California gnatcatcher, coastal cactus wren, snake cholla, and barrel cactus. The Poggi Canyon portion of the Sunbow site also includes 7.0 acres of Wetlands that are regulated by ACOE and/or CDFG along with additional wetland transition habitat and upland sage scrub and grassland habitats.

2.1.5 Eastlake

This 3,106-acre project is located approximately 7.5 miles east of downtown Chula Vista. Bisected by Otay Lakes Road, the property extends west of the upper and lower Otay Lakes and south of Proctor Valley Road.

The planned community is a mixture of residential, employment-park, office, commercial, recreational and open space uses. The project is regulated by two General Development Plans which authorize construction of over 7,500 residential units, 230 acres of light industrial, 160 acres of retail/commercial, six schools, and 140 acres of parks. To date, over 4,000 residential units, three schools, 70 acres of parks, and a 160-acre golf course have been developed.

Although approximately 400 acres of Eastlake will be dedicated as open space, the entire project area has been extensively dry-farmed for over 100 years, leaving little indigenous habitat. Approximately 67 acres of the Eastlake open space are included in the Preserve, representing primarily coastal sage scrub and non-native grassland.

2.1.6 Rolling Hills Ranch (Salt Creek Ranch)

Rolling Hills Ranch encompasses approximately 1,200 acres and is planned for development of approximately 2,600 residential units. The project has an adopted General Development Plan and SPA Plan and received tentative map approval from the City in 1992. The project entitlements include residential uses, parklands, open space and community facilities, such as schools and a fire station. Regional roadway improvements have been constructed on- and off-site, about 40% of the residential units have been completed to date and approximately 50% of the project has been graded.

Rolling Hills Ranch is a Covered Project as defined by Section 5.1.1 of this Subarea Plan. The Rolling Hills Ranch conditions of coverage are contained in Section 7.5.6.3 of this Subarea Plan. An estimated 314.6 acres of upland habitat will be conserved to mitigate for habitat impacts resulting from Rolling Hills Ranch development, consisting of approximately 265.9 acres of habitat conserved onsite combined with approximately 48.7 acres of habitat conserved in the MSCP Subregional Preserve, within the *Chula Vista MSCP Planning Area*. Of the 265.9 acres conserved onsite, approximately 214.2 acres are incorporated into the Preserve. These areas include coastal sage scrub, native and non-native grassland and a variety of plant species, including San Diego goldenstar, the narrow endemic plant species variegated dudleya and Otay tarplant, and three known locations of QCB. In addition, the off-site mitigation contributed by Rolling Hills Ranch will include the following:

1. Conservation of 5.8 acres within the San Miguel Mitigation Bank and containing approximately 15,080 Otay tarplants;

2. Conservation of a separate off-site 10-acre parcel located within the MSCP Subregional Preserve, containing a minimum of 15,000 Otay tarplants;

3. Conservation of 30 acres of coastal sage scrub within the San Miguel Mitigation Bank to comply with a Section 7 Consultation completed through the issuance of Biological Opinion 1-5-00-F-F-28 on September 12, 2000;

4. Conservation of approximately 1.9 acres of Otay tarplant within the San Miguel Mitigation Bank to comply with the Section 7 Consultation cited in #3 above; and

5. Conservation of one acre of native grassland within the San Miguel Mitigation Bank to comply with the Section 7 Consultation cited in #3 above.

2.1.7 Bella Lago

Bella Lago lies north of Proctor Valley Road and sits at the base of San Miguel Mountain. It is a planned residential community consisting of 179.6 gross acres with approximately 93.07 acres of buildable area. It is anticipated that the project will be estate, single-family residential units.

The project will result in approximately 86.5 acres of onsite open space dedicated to the Preserve. An additional offsite dedication of approximately 2.5 acres will also be conserved, and contain at least 210 individual Otay Tar Plants within the 2.5 acres. Conserved areas onsite will include coastal sage scrub, non-native grasslands, native grasslands and riparian habitat communities. In addition, populations of the narrow endemic plant species Otay tarplant and variegated dudleya will be conserved onsite. The project has been designed to avoid any direct or indirect impacts to a golden eagle nest in the project vicinity. Conditions for coverage for the Bella Lago project are described in detail in Section 7.5.6.5 of this Subarea Plan.

2.1.8 Midbayfront

The Chula Vista Bayfront Specific Plan Area is generally located west of Interstate 5, south of the Sweetwater River and north of L Street. Within the Specific Plan area is a contiguous area of land known as the Midbayfront, which is comprised of several parcels totaling approximately 128 acres. The Midbayfront planning area abuts the 316-acre Sweetwater Marsh National Wildlife Refuge (NWR) and the F and G Street Marsh, a non-contiguous part of the Sweetwater NWR. The Sweetwater NWR is the largest remaining natural wetland on San Diego Bay and includes significant salt marsh habitats which support a number of sensitive plant and animal species, including several endangered species.

The majority of the Midbayfront site is comprised of ruderal land. Habitat on the Midbayfront site includes approximately 2 acres of brackish marsh, 3.7 acres of disturbed wetlands, 1 acre of Riparian Tamarisk Scrub and 8 acres of Diegan coastal sage scrub and disturbed coastal sage scrub.

Midbayfront is not a Covered Project as defined in Section 5.1.1 of this Subarea Plan and will therefore be subject to the new Habitat Loss and Incidental Take Ordinance discussed in Section 5.0. Development at Midbayfront will also be subject to a Local Coastal Plan Amendment.

2.1.9 San Miguel Ranch

The San Miguel Ranch includes approximately 2,595 acres of land located south and east of the Sweetwater Reservoir. San Miguel Ranch is divided into two major units: a northern parcel of 1,852 acres, which is located in the Bonita Planning Component and a southern parcel of 743 acres, which is located in the City Planning Component. The 743-acre southern parcel includes 4.5 acres of property under separate ownership located south of Proctor Valley Road. The northern and southern parcels are separated by property owned by San Diego Gas and Electric, which contains the Miguel Substation and associated transmission lines.

As part of the San Miguel Ranch Conservation Bank Agreement (dated August 27, 1997) between the San Miguel Ranch developers and the Wildlife Agencies, the entire 1,852-acre northern parcel will be conserved. All 1,852 acres of the northern parcel ultimately

will be included in the San Diego National Wildlife Refuge (SDNWR). Of these 1,852 acres 1,186 acres of the NWR property is also designated as conservation bank, within which conservation credits may be purchased.

The southern parcel has been approved for development of approximately 1,394 residential units, 14.3 acres of commercial use, 18.3 acres of institutional uses, and two active parks. Approximately 743 acres of the southern parcel were annexed into the City in December 2000. Prior to annexation, San Miguel Ranch was part of and subject to the County of San Diego MSCP Subarea Plan, South County segments, and Take Authorization was provided through the adopted County Subarea Plan. During the annexation process, an MSCP annexation agreement was completed which transferred the County Take Authorization for this project to the City.

The Annexation Agreement Concerning the Conservation and Biological Mitigation Program for the Implementation of San Miguel Ranch Sectional Planning Area Plan and Tentative Tract Map, dated December 2000 ("SMR MSCP Annexation Agreement") and contained in Appendix C of this Subarea Plan, is an agreement among five parties: the County of San Diego, the City of Chula Vista, the USFWS, the CDFG, and the San Miguel Ranch southern parcel property owner and developer, NNP-Trimark San Miguel Ranch, LLC ("Trimark"). The SMR MSCP Annexation Agreement is intended to accomplish the following:

- Recognize the Take Authorization applicable to the southern parcel under the County MSCP Subarea Plan and provide valid Take Authorization for Chula Vista Covered Species and associated habitats within the southern parcel of San Miguel Ranch prior to issuance of Take Authorization from the Wildlife Agencies to the City for its MSCP Subarea Plan;

- Ensure that conservation required by the adopted County MSCP Subarea Plan, including the conservation of natural open space constituting a minimum of 169 acres on the southern parcel and 166 acres (included in the 1,852 acres referenced above) on the northern parcel, will be realized;

- Require the conservation of 11 supplementary acres of habitat that will significantly add to the long-term viability of the Otay tarplant; and

- Ensure the conservation and management of approximately 352 acres to be transferred to the SDNWR (approximately 186 acres on the southern parcel and 166 acres on the northern parcel).

As required by the SMR MSCP Annexation Agreement, Trimark has entered into agreements to donate to the United States (for inclusion in the National Wildlife Refuge System) three areas of natural open space in the southern parcel and has executed an option agreement with the United States whereby approximately five acres will be added to the western-most of these three open space areas. These three areas comprise 186 acres of natural open space and are designated by this Subarea Plan as 100%

Conservation Areas. (It should be noted that the Chula Vista Subarea Plan only requires that a minimum of 181 acres ultimately be provided as managed open space on the southern parcel. Upon completion of project construction, Trimark intends to add voluntarily to the SDNWR any additional contiguous natural open space that was not required for other elements of the project.)

Overall, development of San Miguel Ranch will result in conservation of a total of 2,038 acres of habitat (over 78% of the total project area). The 1,852-acre northern parcel and approximately 186 acres of conservation on the southern parcel principally contain Diegan coastal sage scrub and include important populations of Otay tarplant. In addition, Wetlands, riparian areas, non-native grassland and disturbed grassland are present on the Preserve within the southern parcel. The Wetlands/riparian areas are being enhanced and created as part of other permitting processes and will include alkali marsh/meadow habitat and riparian woodland habitat.

2.2 Otay Ranch Planning Component

The Otay Ranch Planning Component comprises 22,899 acres of land which is a part of the Otay Ranch GDP/SRP. Due to the joint planning efforts undertaken for the Otay Ranch, this planning component includes territory within the City or *Chula Vista Subarea* and territory within the County of San Diego or *Chula Vista MSCP Planning Area*. The GDP/SRP was prepared jointly by the City and the County of San Diego for three major parcels of land: the Otay Valley Parcel (9,449 acres), Proctor Valley Parcel (7,895 acres) and the San Ysidro Parcel (5,555 acres). The majority of the Otay Valley Parcel (approximately 9,100 acres) was annexed into the City in 1997. The remaining 13,799 acres are located in the unincorporated County of San Diego. Conservation that results from implementation of the Otay Ranch Planning Component will occur both within and outside the *Chula Vista Subarea*.

The Otay Ranch GDP/SRP was adopted by both the County Board of Supervisors and the Chula Vista City Council on October 28, 1993. The Otay Ranch GDP/SRP is approved for approximately 24,224 dwelling units on a total of 22,899 acres. The project includes a regional commercial urban center and a University Site, with a potential final population of 68,000 to 70,000 persons. The approved project includes a series of 15 Villages. Within Village cores, densities range from 14.5 to 35.0 dwelling units per acre. Outside Village cores, lower densities reflect anticipated rural-type development. These Villages and rural-density areas combined would allow as many as 13,144 single-family units and 11,080 multi-family units. Five Villages and a regional urban center (Eastern Urban Center) will be served by light rail.

A variety of plans, policies and regulations are relevant to preservation of biological resources throughout the Otay Ranch Planning Component. The Otay Ranch documents and regulations include the Otay Ranch General Development Plan/Subregional Plan, Resource Management Plan, Phases 1 and 2 (adopted October 28, 1993 and June 4, 1996, respectively), as amended, and performance standards for preservation of biological resources incorporated into the Program EIR for the Otay Ranch GDP/SRP (October 1993).

The Otay Ranch Resource Management Plan ("RMP") is the Framework Management Plan for the Otay Ranch Preserve, and is the critical document for resource protection on the Otay Ranch. The RMP is described in detail in Section 7.6. The RMP Phase 1 ("RMP1"), Phase 2 ("RMP2") and Phase 2 Appendices are incorporated by reference to this Subarea Plan, and appended as a Framework Management Plan (Appendices D, E and F, respectively). The RMP is expected to evolve over time and may be amended by the City, from time to time, through the use of its jurisdictional authority without amendment to this Subarea Plan, if such amendments to the RMP are consistent with the goals of the MSCP Subregional Plan and this Subarea Plan.

An important part of the RMP1 is the creation of the Otay Ranch Preserve. The Otay Ranch Preserve is a hard-line preserve and includes 11,375 acres to be set-aside as mitigation for impacts to sensitive resources resulting from Otay Ranch development that will occur both within the City and in the County. The Otay Ranch Preserve has been designed and will be managed specifically for protection and enhancement of multiple species present on Otay Ranch. These dedicated conservation lands will also serve to connect large areas of open space through a series of wildlife corridors, including connections between large, regional open spaces, such as Otay Reservoir and San Miguel Mountain. The entire 11,375-acre Otay Ranch Preserve will be included in the MSCP Subregional Preserve.

The RMP1 designates an additional 1,166 acres as Restricted Development Area (RDA), where development is restricted pending future technical studies. The configuration of the RDAs may be revised pending the outcome of the future studies, but the acreage retained in open space must be at least 1,166 acres. While the RMP1 does not target these open space areas specifically for biological conservation, some or all of the RDA land may be added into the MSCP Subregional Preserve (if appropriate in the future).

The Otay Ranch planning documents establish specific conveyance standards for achieving assembly of the 11,375-acre Otay Ranch Preserve, which will mitigate for impacts to biological resources from development projects, including planned infrastructure within the Otay Ranch. A conveyance schedule was adopted as part of the RMP2, which provides that for each acre of development impact to land within Otay Ranch, 1.188 acres of habitat is dedicated into the Otay Ranch Preserve, regardless of the existence of habitat or of the habitat value of the land being developed. Because the first phases of development in Otay Ranch are occurring on the portions of the Otay Valley Parcel where there are few sensitive resources, substantial habitat land has been offered for dedication into the Otay Ranch Preserve well in advance of corresponding impacts.

The dominant feature linking the three Otay Ranch parcels is the Otay River system, which includes a tributary system of canyons and drainage courses and the Otay Lakes. The combination of coastal sage scrub and other habitats found on the Ranch, the varying geography and the presence of several plant communities make the Ranch a unique biological resource. Large undisturbed blocks of coastal sage scrub, maritime succulent scrub, chaparral and other habitats will be preserved throughout the Otay Ranch. Major populations of Covered Species that will be conserved include coastal California gnatcatcher, coastal cactus wren, Vernal Pools, San Diego thorn-mint (*Acanthomintha ilicifolia*), and willowy monardella (*Monardella linoides* ssp. *viminea*).

Approximately 11,284 acres of the 11,375-acre Otay Ranch MSCP Preserve represent undisturbed habitat types, as shown on Table 2-2. These 11,284 acres represent 66% of the 17,157 acres of identified vegetation communities throughout the Otay Ranch Planning Component. Conservation of habitat will occur both inside and outside the City boundaries. An estimated 2,617 acres of existing vegetation will be conserved within the *Chula Vista Subarea* (an additional estimated 125 acres of agricultural land and/or disturbed or developed area will also be conserved for a total Preserve within the Otay Ranch Planning Component within the City of 2,742 acres). Of the estimated 8,667 acres of existing habitat to be conserved in the County MHPA, outside the *Chula Vista Subarea*, approximately 3,610 acres (42%) will be conserved as a result of implementation of this Subarea Plan.

Table 2-2: Habitat Conservation Summary for Otay Ranch Planning Component

Vegetation Communities	Vegetation Acres in Otay Ranch Planning Component	Estimated Preserve Contribution within Subarea in Acres	Estimated Preserve Outside Subarea in Acres	Vegetation Preserved in Otay Ranch Planning Component	Overall Conservation percentage
CSS	10,788	1,133	5,985	7,118	66%
Maritime Succulent Scrub	291	180	14	194	67%
Chaparral	2,453	27	1,655	1,682	69%
CSS/Chaparral Scrub	120	0	120	120	100%
Grassland (all types)	2,134	586	286	872	41%
Oak Woodland	209	0	200	200	96%
Tecate Cypress Forest	181	0	181	181	100%
Eucalyptus Woodland	30	16	0	16	53%
Upland subtotal	16,206	1,942	8,441	10,383	64%
Southern Coastal Salt Marsh	0	0	0	0	N/A
Freshwater/Alkali Marsh	166	3	121	124	75%
Riparian Forest	1	0	1	1	100%
Oak Riparian Forest	43	0	35	35	81%
Riparian Woodland	8	0	8	8	100%
Riparian/Tamarisk Scrub	584	526	58	584	100%
Open Water/Freshwater	3	0	3	3	100%
Disturbed Wetlands	0	0	0	0	N/A
Natural Flood Channel	146	146	0	146	100%
Wetlands Subtotal	951	675	226	901	95%
Total	17,157	2,617	8,667	11,284	66%

The following describes the major geographical and biological features of each of the Otay Ranch parcels, and development planned for the approximately 9,100-acre portion of Otay Ranch within the *Chula Vista Subarea.*

2.2.1 Otay Valley Parcel

Most of the Otay Valley Parcel (9,100 acres) was annexed into the City in 1997. The southern portion of the parcel is characterized by a flat mesa that is incised by a series of tributary canyons draining to the Otay River Valley, which is the focus of the area, and bisects the southern portion east to west. North of the River Valley, the property is characterized by rolling hillsides. Onsite elevations range from 160 feet above mean sea level (msl) along the bottom of the Otay River Valley to 670 feet msl in the central ridge of the parcel. The natural landforms associated with this parcel are Wolf Canyon, Salt Creek Canyon, Poggi Canyon, Johnson Canyon, O'Neal Canyon and Rock Mountain.

The Otay Valley Parcel contains approximately 1,825 acres of coastal sage scrub. Maritime succulent scrub habitat is concentrated in three general locations on the Otay Valley Parcel: in the western and eastern corners and in the central southern area, covering 285 acres in all. Other vegetation found on the Otay Valley Parcel includes seven acres of chamise chaparral, 1,310 acres of non-native grassland, and 12 acres of southern willow scrub. Baccharis scrub, Baccharis floodplain scrub, and tamarisk scrub are also present. The Otay Valley Parcel contains Vernal Pools and associated mima mound topography. These Vernal Pools are generally located south of the Otay River. Sightings of sensitive animal species since 1989 or later include the American badger (*Taxidea taxus*), common barn owl (*Tyto alba*), coastal California gnatcatcher, yellow-breasted chat (*Icteria virens*), cactus wren, blue grosbeak (*Passerina caerulea*), and Bells sage sparrow (*Amphispza belli belli*).

Subsequent to annexation into the City, the approved development in this area of the Otay Ranch has been initiated. Sectional Planning Area One (SPA One) of the proposed Otay Ranch development was approved on June 4, 1996. This SPA Plan consists of Villages One and Five encompassing 1,375 acres and allows a total of 6,201 dwelling units. Village One and Village Five are both under construction. SPA One also includes four neighborhood parks and two elementary schools.

A future university is also planned for development within the Otay Valley Parcel. This Chula Vista MSCP Subarea Plan includes revisions to the Otay Ranch Preserve to refine the boundaries of the University Site approved by the Otay Ranch GDP and RMP2. The University Site is discussed in more detail in Section 3.1.6 of this Subarea Plan.

2.2.2 Proctor Valley Parcel

The Proctor Valley portion of Otay Ranch includes 7,895 acres and is composed of four unconnected parcels of land located north and east of Otay Lakes. The lands involved generally consist of broad gentle mesas gradually rising northward. The terrain in the central and eastern portions of the parcels becomes steep and rugged as the Jamul

Mountains gain elevation. Elevations range from approximately 500 feet msl near Upper Otay Lake to 1,550 feet msl in the southeast corner. The major landforms are the Jamul and Callahan Mountains.

The Proctor Valley Parcel contains approximately 4,843 acres of coastal sage scrub. Additional significant resources within the Proctor Valley parcel include 569 acres of southern mixed chaparral, approximately 49 acres of valley needlegrass grassland, and 138 acres of alkali meadows. Coast live oak woodland covers 176 acres while small areas contain southern willow scrub and eucalyptus. Vernal Pools occur primarily on weathered alluvial soils of mesas and floodplain terraces in Proctor Valley. Sightings of sensitive animal species since 1989 or later include the coastal California gnatcatcher, loggerhead shrike (*Lanius ludovicianus*), Bells sage sparrow, blue grosbeak, two-striped garter snake (*Thamnophis hammondii*), rufous-crowned sparrow (*Aimophila ruficeps canescens*), Quino checkerspot butterfly (*Euphydryas editha quino)* and the coastal rosy boa (*Lichanura trivirgata roseofusca*).

2.2.3 San Ysidro Parcel

The 5,555-acre San Ysidro portion of Otay Ranch is composed of two disconnected parcels located in the southeastern portion of Otay Ranch. The terrain is highly varied: portions slope steeply southward toward the mountains, while the north is more level.

The major landforms associated with this parcel are the Little and Big Cedar Canyons, and Hubbard Springs. Elevations range from 550 feet msl near Lower Otay Lake to 1,550 feet msl in the southeast corner of the parcel.

The San Ysidro Parcel contains important biological resources. Coastal sage scrub can be found on 3,698 acres of this parcel. Approximately 469 acres of uniform stands of chamise occur on mesas and some gentle slopes in the Otay Lakes portion of the parcel. In addition, approximately 474 acres of non-native grassland, 5 acres of coast live oak woodland, 75 acres of coast southern live oak riparian forest, 7 acres of sycamore alluvial woodland, and 165 acres of southern interior cypress forest occur on the San Ysidro Parcel. A small number of Vernal Pools occur on the level terraces south of the eastern arm of Lower Otay Reservoir. Most of the Vernal Pools are situated within the City of San Diego. Some of the larger contiguous masses of habitat within the San Ysidro Parcel include numerous sensitive plants and animals. Sightings of sensitive animal species since 1989 or later include the coastal California gnatcatcher, blue grosbeak, and San Diego horned lizard (*Phrynosoma coronatum*).

2.3 Bonita Planning Component

The Bonita Planning Component lies within the *Chula Vista MSCP Planning Area* but is entirely outside the *Chula Vista Subarea*. The area is included as part of the *Chula Vista MSCP Planning Area* because it is located within the City's General Plan Area, and development within the City has resulted in significant contribution of MSCP conservation located in this component area.

The Bonita Planning Component is entirely within the adopted County of San Diego Subarea Plan and includes property within both the Metro/Lakeside/Jamul and the South County Segments. Like the City Planning Component, most of this component area is built out or planned for development. Land which is incorporated into the Metro/Lakeside/Jamul segment is subject to the County's Biological Mitigation Ordinance (BMO). Areas which are located within the South County Segment are designated for development or Preserve through "hard-lines" and are not subject to the BMO. Any future annexations of land from the Bonita Planning Component into the City will be subject to MSCP Annexation Agreements pursuant to Section 5.3.1 of this Subarea Plan, insuring that conservation is consistent with the County Subarea Plan.

Preservation planned for the Bonita Planning Component includes large, undisturbed blocks of coastal sage scrub and chaparral, and will conserve major populations of Covered Species such as the coastal California gnatcatcher and Otay tarplant. The County's Subarea Plan proposes conservation of approximately 1,982 acres, or 53% of the total 3,752 acres of habitat found in this component. This conservation estimate may be exceeded, due to the unanticipated and now completed purchase of the 309-acre "Bonita Meadows" property by Caltrans for mitigation conservation.

The largest contiguous area of Conservation in the Bonita Planning Component consists of the 1,852-acre northern San Miguel property. Conservation of this rich habitat area is integral to the San Miguel Ranch agreements described in Section 2.1.9. The agreements provide that development may occur on portions of the San Miguel southern parcel within the City, while at least 181 acres of valuable habitat on the southern parcel and the entire habitat on the northern parcel are dedicated to conservation. Both the Bonita Meadows and the San Miguel Ranch conservation efforts provide important habitat connections between the City and County Subareas.

2.4 Other Public Agency Conservation Efforts

In addition to this Subarea Plan, other conservation efforts are being undertaken by public and/or quasi-public agencies that will lead to conservation of important habitat areas within the *Chula Vista Planning Area.* Together with this Subarea Plan, these conservation efforts will conserve key areas of sensitive habitat in the Southern San Diego region, including core biological resource areas and associated habitat linkages identified in the MSCP Subregional Plan. Core areas of conservation include the Sweetwater River/Sweetwater Reservoir/San Miguel Mountain area and the Otay Lakes/Otay Mesa/Otay River Valley area. Key linkages identified by the MSCP Subregional Plan that will be provided, in part, through this Subarea Plan and the projects summarized in the following Sections 2.4.2 – 2.4.9 include the Sweetwater River to the San Diego Bay, San Miguel Mountain to Rancho Del Rey, and significant portions of the western Otay River Valley.

2.4.1 Otay Valley Regional Park

The City is a participating local agency in planning for the Otay Valley Regional Park (OVRP). This major planning project will result in a regional park consisting of approximately 8,700 acres. The park includes land within the jurisdictional boundaries of the Cities of San Diego and Chula Vista and the County of San Diego. Approximately

3,861 acres of the OVRP lie within the *Chula Vista MSCP Planning Area*, and an estimated 3,010 acres will be conserved within the *Chula Vista Subarea* (2,742 acres in the Otay Ranch Planning Component and 268 acres west of Heritage Road in the City Planning Component). All three local agencies involved in planning for the Park are responsible for MSCP management within their respective jurisdictions.

The OVRP will provide for biological open space, active and passive recreation areas, trail corridors, staging areas, overlook areas, and interpretive centers. The conservation open space areas identified in the OVRP Concept Plan are intended to protect biologically sensitive habitat areas and provide a regional wildlife corridor from South San Diego Bay to the Otay Lakes. These areas consist of Wetland areas, permanent and seasonal ponds, Vernal Pools, steep slopes, biologically sensitive areas, habitat linkages, and disturbed areas where resources will be enhanced. The boundary of the OVRP open space is the same as the boundary of the MHPA designated in the MSCP Subarea Plans for the Cities of San Diego and Chula Vista and the County of San Diego South County Segment.

The uses identified in the OVRP Concept Plan are consistent with the goals of both the MSCP Subregional Plan and this Subarea Plan. Additional information pertaining to allowable park uses is described in Section 6.3.4 of this Subarea Plan.

2.4.2 Sweetwater Valley

The Sweetwater Valley runs from the Sweetwater Reservoir to San Diego Bay. The Sweetwater River meanders its way through the valley and serves as a significant biological linkage.

The Sweetwater Valley Regional Park is located in the valley in the unincorporated areas of the County of San Diego between the Sweetwater Reservoir on the east and Interstate 805 on the west. Situated centrally in the valley and bisecting the regional park is the 122-acre Chula Vista Municipal Golf Course and 60-acre Rohr Park, both located within the City boundary.

The Sweetwater Valley Regional Park, golf course, and Rohr Park serve as an open space connection through the Sweetwater Valley. Recreational activities such as picnicking, baseball, softball, golf, hiking and horseback riding occur throughout the valley in designated areas. Habitat located in the City's section of the Sweetwater Valley is associated with the Sweetwater River which traverses the golf course. These wetland habitats include natural flood channels, freshwater/alkali marsh, riparian tamarisk scrub, southern coastal salt marsh, and freshwater.

Existing uses within the 553-acre unincorporated portion of the Park include several houses, an equestrian center, limited retail commercial, a golf driving range, a pine tree nursery, abandoned dairy buildings, trails and a campground. Sensitive plants present in the area include Otay tarplant, San Diego barrel cactus, San Diego marsh elder (*Iva*

hayesiana), California adolphia *(Adolphia californica),* San Diego sunflower (*Viguiera laciniata),* variegated dudleya and ashy-spike moss *(Selaginella cinerascens).*

2.4.3 San Diego National Wildlife Refuge Complex

San Diego National Wildlife Refuge, Otay/Sweetwater Unit – The USFWS has established the San Diego NWR for purposes of protecting and managing key habitats for endangered and threatened species and maintaining areas of high biological diversity in San Diego County. The Otay/Sweetwater Unit of the San Diego NWR study area encompasses a refuge acquisition boundary of 43,860 acres located in southwestern San Diego County. This NWR area partly overlaps the *Chula Vista Subarea*, principally in the eastern portion of Otay River Valley in the Otay Ranch Planning Component of this Subarea Plan. Lands contained within this refuge acquisition boundary remain under the control of the owner until they are purchased by the USFWS or placed under a management agreement. Land managed by the Service is achieved through leases and cooperative agreements, conservation easements and fee-title acquisition. Additional lands to the Otay/Sweetwater Unit can also be acquired through donations, transfers or exchanges. Lands acquired by the Service will be managed according to the Comprehensive Management Plan and step-down Refuge management plans prepared for the Otay/Sweetwater Unit.

San Diego National Wildlife Refuge, South Bay Unit – The USFWS has designated 3,940 acres of South San Diego Bay as a wildlife refuge. This "South San Diego Bay Unit of the San Diego NWR" is partly located within the jurisdictional boundaries of Chula Vista. Within the refuge boundaries, USFWS will protect and manage the remaining wildlife habitat in and around the southern end of San Diego Bay using a variety of habitat protection methods. Coordinating with landowners, local agencies and the U.S. Navy, the USFWS is developing a management plan to conserve habitat resources through land acquisition, protection under the Sikes Act through interagency agreements with the Navy, and cooperative agreements, coordinated planning and shared resources with local, Federal and State agencies. Lands acquired by the USFWS through purchase, dedication, lease and/or conservation easements will be managed in accordance with the NWR System Improvement Act of 1997.

Sweetwater Marsh National Wildlife Refuge – The USFWS has designated a 316-acre site abutting San Diego Bay. Refuge lands surround the City of Chula Vista's MidBayfront planning area on three sides. The Refuge was established in 1988 as protected habitat to support several endangered or threatened species including the Light-footed Clapper Rail, California Least Tern and Western Snowy Plover. The Refuge also supports a population of the endangered plant salt-marsh bird's beak and many other rare or sensitive species including a population of Belding's Savannah sparrow, a state listed endangered species, as well as many species of migratory birds. The use of Sweetwater Marsh and F & G Street Marshes by shore and wading birds is extremely high given these areas contain over 90 percent of the remaining coastal salt marsh habitat found adjacent to San Diego Bay.

2.4.4 San Diego Port District

The Port District of San Diego has jurisdiction over property within the City's jurisdictional boundary but below the San Diego Bay mean high tide line. In addition, the Port has purchased the electric power-plant site located on San Diego Bay. The Port District is responsible for Preserve planning and maintenance within its jurisdiction, including the powerplant site. The Port is also participating with the United States Navy in the preparation of an Integrated Natural Resources Management Plan for San Diego Bay, which will include evaluation of natural resources on both Port and Navy lands.

2.4.5 Otay Water District

Otay Water District (OWD) owns approximately 670 acres of property located within the City's incorporated limits. Directly north of the Rolling Hills Ranch project, OWD owns approximately 509 acres. Approximately 250 acres of this area have been developed as a golf course and 230 acres have been set aside for habitat management. A portion of the remaining acreage is an ancillary operations area used by the OWD. The balance of the 670 acres owned by OWD is either utilized for existing water facilities or are lands acquired for Future Facilities or mitigation. OWD has prepared a draft NCCP Plan which includes its properties within the City as well as OWD activities elsewhere in its service area.

2.4.6 City of San Diego "Cornerstone Lands"

The City of San Diego Water Department owns and operates the Otay Lakes as a potable water resource for San Diego residents. Approximately 1,800 acres of land surrounding the Lakes are owned by the City of San Diego. The 1,800 acres and the biological resources that they support are subject to the Cornerstone Lands Conservation Bank Agreement between the City of San Diego and the Wildlife Agencies (dated July 16, 1997). These lands are within the *Chula Vista MSCP Planning Area* but outside the *Chula Vista Subarea.* They are incorporated into the City of San Diego MSCP Subarea Plan and form a cornerstone for a natural open space corridor in the South Bay area. Otay Lakes Road and Proctor Valley Road may be realigned and/or improved on these cornerstone lands.

2.4.7 Bureau of Land Management

The Bureau of Land Management (BLM) adopted the South Coast Resource Management Plan and Record of Decision on May 26, 1994. The BLM plan addresses management of approximately 296,000 acres of BLM-administered public land in the southwestern counties of California. The San Diego County Management Area located in the Otay Mountain Area includes 65,000 acres of BLM public land. This area is located immediately south of the *Chula Vista MSCP Planning Area* and outside the *Chula Vista Subarea.*

In June 1994, the BLM, the Wildlife Agencies and the San Diego Association of Governments (SANDAG) signed a Memorandum of Understanding for cooperation in habitat conservation planning and management, resolution of conflicts between land management prescriptions and conservation objectives, and cooperation in acquiring other habitat areas and corridors. In December 1999, then-President Clinton signed the "Otay Mountain Wilderness Act," which ensures conservation and management of over 18,000 acres of the Otay Mountain BLM land specifically for habitat conservation purposes.

The South Coast Resource Management Plan and Record of Decision identified the following resource objectives for the San Diego County Management Area:

1. Emphasize protection and enhancement of sensitive species and habitat and open space values.

2. Improve management effectiveness within the management area through disposal of isolated parcels and consolidation of BLM public land ownership.

3. Enhance habitats for all wildlife species, including deer and quail.

4. Provide opportunities for low-impact recreation through provision of facilities and services.

2.4.8 Sweetwater Authority

Sweetwater Authority Water District owns approximately 243 acres located along the southern banks of the Sweetwater Reservoir within the *Chula Vista MSCP Planning Area* but outside the *Chula Vista Subarea.* Equivalent NCCP Preserve planning for this property is currently being prepared by the Sweetwater Authority.

2.4.9 San Diego Gas and Electric

San Diego Gas and Electric (SDG&E), a wholly owned subsidiary of Sempra Energy, owns approximately 308 acres of property located on the west slopes of Mother Miguel Mountain. The property, which is within the *Chula Vista MSCP Planning Area* but outside the *Chula Vista Subarea*, includes the Miguel Substation, a bulk power and transmission facility that interconnects SDG&E's system with Mexico and other utilities to the east (Arizona and New Mexico) and is subject to the SDG&E Subregional NCCP Plan, adopted in 1995. The property is managed for both utility activities and conservation according to the SDG&E Plan. Future facility expansions are planned.

3.0 DESCRIPTION OF *CHULA VISTA SUBAREA*, AND SUMMARY OF CONSERVATION AND TAKE ESTIMATES

The *Chula Vista Subarea,* the area for which Take Authorization will be granted pursuant to this Subarea Plan, consists of the territory located within the City jurisdictional boundaries, as such may be adjusted for annexations from time to time. The *Chula Vista Subarea* lies wholly within the *Chula Vista MSCP Planning Area* and is comprised of the City Planning Component described in Section 2.1 of this Subarea Plan and that portion of the Otay Ranch Planning Component located within the City boundaries, as described in Section 2.2.

Implementation of the Chula Vista Subarea Plan will ensure conservation of core biological resource areas and associated habitat linkages identified in the MSCP Subregional Plan that are located within the boundaries of the *Chula Vista Subarea.* In addition, implementation of the Chula Vista Subarea Plan will contribute significant conservation outside the *Chula Vista Subarea* within the *Chula Vista MSCP Planning Area* in the unincorporated County MHPA. The boundaries of the *Chula Vista Subarea* and areas planned for conservation are shown on Figure 1-2.

Although most of the City Planning Component has been developed (or is developing currently), a total of approximately 2,251 acres of the Preserve (approximately 1,940 acres of which represents undisturbed habitat types) will be conserved within this portion of the *Chula Vista Subarea*. Upon completion, the Preserve within this component will include representative areas of major canyon systems that support stands of coastal sage scrub and maritime succulent scrub, including Rice and Long canyons. This Planning Component will also add rare habitats associated with San Diego Bay, as well as portions of the Sweetwater and Otay River systems to the Preserve.

The portion of the Otay Ranch Planning Component located within City boundaries and the *Chula Vista Subarea* is within the Otay Valley Parcel, described in Section 2.2.1 of this Subarea Plan. This part of the City includes substantial areas of land which have historically been used for dry farming. However, it also includes important habitat resources, most notably the Otay River Valley and its tributary canyons, Salt Creek Canyon, Poggi Canyon and Wolf Canyon. Approximately 2,742 acres within Otay Ranch will be conserved within the subarea boundaries (approximately 2,617 acres of which represents undisturbed habitat types). In addition, an estimated 3,610 acres will be conserved in the County MHPA, outside the Subarea, as a result of mitigation for development within the city related to Otay Ranch.

A total estimated 3,010 acres of the Otay River Valley will be conserved through implementation of this Subarea Plan: 2,742 acres within the Otay Ranch Planning Component and 268 acres west of Heritage Road within the City Planning Component. The Otay River Valley flows in an east to west direction along the southern boundary of the City, and is an important habitat link from Otay Mountain to San Diego Bay. Vegetation in this area of the Preserve includes coastal sage scrub, maritime succulent scrub, grasslands (primarily non-native), riparian scrub and disturbed riparian scrub, natural and disturbed streambed, and eucalyptus woodland. Principal species found in this area include the coastal California gnatcatcher, cactus wren, southern California rufous-crowned sparrow, least Bell's vireo, and yellow breasted chat.

In addition to conservation of biological resources found within the City and Subarea boundaries, implementation of the Chula Vista Subarea Plan will contribute an estimated total of 4,250 acres of habitat conservation outside of the *Chula Vista Subarea*, but within the MSCP Subregional Preserve. These contributions to the overall conservation effort are the result of mitigation requirements for Covered Projects throughout the Subarea. Dedication of land outside the *Chula Vista Subarea* which occurs as a result of implementation of Covered Projects included in this Subarea Plan will be made within the MHPA boundaries targeted for biological preserve by the MSCP Subregional Plan and generally within the *Chula Vista MSCP Planning Area.*

Section 3.1 which follows, describes the changes made to the Chula Vista Subarea Plan subsequent to public review of the 1996 Draft City of Chula Vista Subarea Plan. Section 3.2 provides a summary of estimated Take and the anticipated conservation that will result from implementation of this Subarea Plan.

3.1 Changes to this Subarea Plan and Analysis of Consistency

The MSCP Subregional Plan and Final EIR/EIS were adopted by the City of San Diego, the project's lead agency, and approved by the Wildlife Agencies in 1997. The Final EIR/EIS evaluation used as its basis for consideration draft Subarea Plans from participating jurisdictions, including the City (MSCP Subarea Plans, Volume II, August 1996). This City of Chula Vista Subarea Plan includes changes which have been made to the 1996 Draft City of Chula Vista Subarea Plan ("1996 Draft Subarea Plan"). Each of the changes depicted on Figure 3-1 and discussed in Sections 3.1.1 through 3.1.5 are consistent with the goals of the MSCP Subregional Plan and Final EIR/EIS. Additionally, one species, the QCB, is being added as a Covered Species as described in Section 3.1.6 of this Subarea Plan.

3.1.1 Rolling Hills Ranch

The Rolling Hills Ranch property is located in the northeast corner of the City. The project has an approved SPA Plan and Tentative Map from the City that is consistent with the Preserve boundaries shown in the MSCP Subregional Plan and 1996 Draft Subarea Plan.

In response to updated biological information, Pacific Bay Homes, the developer of Rolling Hills Ranch, agreed to terms with the City and the Wildlife Agencies in July 2001 to adjust the eastern-most area of the approved project (Subarea 3). The terms provide for implementation of a revised plan for Subarea 3, which will add conservation beyond that contemplated in the 1996 Subarea Plan. The revised plan, depicted on Exhibit A of Appendix G of this Subarea Plan, eliminates all development in the area originally approved as Neighborhood 13 in the Rolling Hills Ranch SPA Plan and redesigns Neighborhood 12 in order to expand conservation along the western ridgeline. While slightly expanding the development area of Neighborhood 12, the redesign will significantly expand the open space connection between Rolling Hills Ranch, the eastern habitat conservation on OWD land, and San Miguel Mountain. The 82.5 acres of new Preserve will ensure preservation of a strategic ridgeline that contains three known QCB locations and a substantial population of variegated dudleya. Implementation of the

terms will also provide for enhanced conservation of Otay tarplant and San Diego goldenstar.

The street located along the western edge of Neighborhood 11 will be moved easterly, and lots 9 through 12 and lot 19 on the approved Tentative Map will be eliminated in order to increase onsite Otay tarplant preservation by 2.6 acres. The internal open space corridor between Neighborhoods 9 and 10A and Neighborhoods 11 and 12 contains approximately 22.6 acres of onsite neutral open space that will be designated as a Tarplant Management Area (TMA). The TMA may also include the adjacent graded slopes if the management plan for the area determines that revegetation with Otay tarplant and other native plant species can be accomplished. To augment existing Otay tarplant in the TMA, topsoil containing Otay tarplant will be moved from development areas in Neighborhood 11 to the graded slopes in the TMA. Because of the location and configuration of the TMA, it will be conserved as onsite open space but will not be included in the Preserve. An Otay tarplant management program will be created to guide habitat management within the TMA and the program will be funded through establishment of a non-wasting endowment, in an amount not to exceed $100,000, to be provided by the developer. In addition, Rolling Hills Ranch will contribute off-site mitigation for Otay tarplant. Off-site mitigation will include preservation of 5.8 acres within the San Miguel Ranch Mitigation Bank containing approximately 15,080 plants and conservation of a separate off-site parcel located within the MSCP Subregional Preserve that is a minimum of 10 acres and contains a minimum of 15,000 Otay tarplants. Two locations outside the TMA will also receive special consideration. These two areas, located in the northwest corner of Neighborhood 11 (2.6 acres) and the southwest corner of Neighborhood 12 (2.9 acres), are part of the brush management area located between development and the Preserve. In order to encourage the viability of narrow endemic plant growth in these areas, a modified brush management protocol will be implemented to provide for selective thinning only during appropriate times during the tarplant seasonal cycle (i.e., before the plant emerges).

Overall, an estimated 314.6 acres of upland habitat will be conserved to mitigate for habitat impacts resulting from Rolling Hills Ranch development, consisting of approximately 265.9 acres of habitat conserved onsite combined with approximately 48.7 acres of habitat conserved off-site. Of the 265.9 acres conserved onsite, approximately 214.2 acres are incorporated into the Preserve. These areas include coastal sage scrub, native and non-native grassland and a variety of plant species, including Otay tarplant, variegated dudleya and San Diego goldenstar. In addition, three known locations of the QCB will be conserved in the Preserve. The remaining onsite open space (51.7 acres) is not included in the Preserve. The remaining onsite open space that is not included in the Preserve is comprised of two separate TMAs (approximately 5.8 acres and 16.8 acres) and three neutral open areas (approximately 27 acres).

3.1.2 Bella Lago

Located in the northeast area of the City (Figure 3-1), Bella Lago is a major project comprised of parcels previously designated as the Watson-McCoy, Clarkson, and Turner properties. The Watson-McCoy property was identified in the MSCP Subregional Plan and 1996 Draft City of Chula Vista Subarea Plan as a Minor Amendment Area while the Clarkson and Turner properties were identified as Major Amendment Areas. The Watson-McCoy property was identified as a Minor Amendment Area because a final configuration for open space had not been determined. Minor Amendment Areas were defined in the 1996 Draft Subarea Plan as "properties on which habitat could be partially or completely eliminated (with appropriate mitigation) without significantly affecting the overall goals of the City's Subarea Plan" (1996 Draft Subarea Plan, p. 55). The Clarkson and Turner properties were identified as Major Amendment Areas, requiring a formal amendment to the City's Take Authorization processed by the Wildlife Agencies.

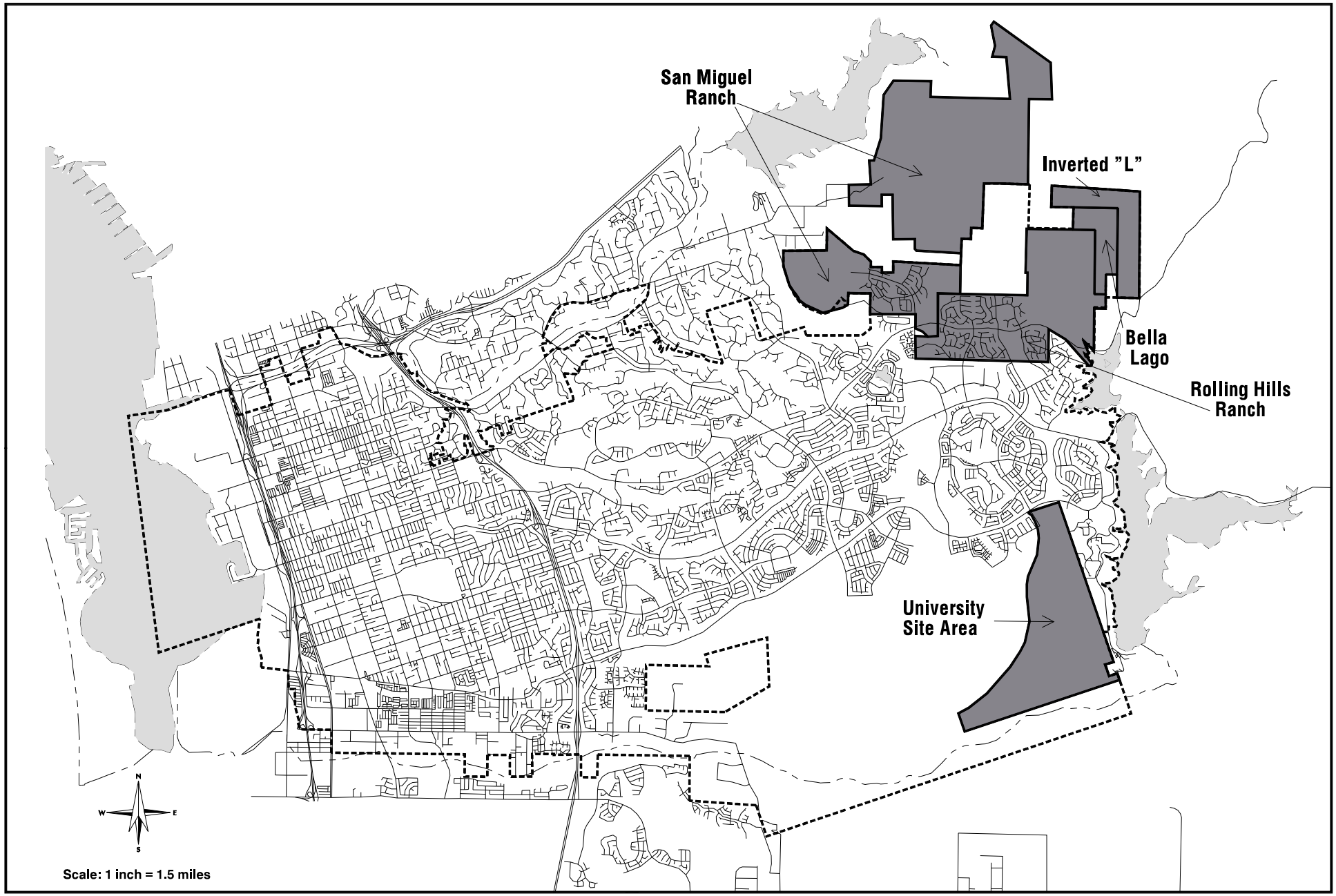
Development entitlements for the Bella Lago project have not been granted by the City. However, based on updated biological information, the property owner has now agreed to terms with the City and the Wildlife Agencies, for an onsite Preserve configuration, off-site mitigation, and conditions for coverage contained in Section 7.5.6.5 of this Subarea Plan. As a result of the terms for Bella Lago with the City and the Wildlife Agencies, Bella Lago is a Covered Project.

The onsite Preserve design and off-site mitigation, combined with the conditions for coverage established by this Subarea Plan, will ensure conservation of sensitive habitat and species in a manner consistent with conservation levels assumed in the MSCP Subregional Plan and Final EIR/EIS.

3.1.3 Inverted "L" Property

The property known as the Inverted "L," located in the northeast area of the City (Figure 3-1) was identified in the MSCP Subregional Plan and 1996 Draft Subarea Plan as a Major Amendment Area. The 1996 Draft Subarea Plan required that "requests for major amendments to the City's Subarea Plan's Take Authorization would be processed by the Wildlife Agencies consistent with applicable laws and regulations (including the National Environmental Policy Act (NEPA) and CEQA) in effect at the time the request for an amendment is received" (p. 56).

The northern, 139.25-acre portion of the Inverted "L" property has been purchased by the OWD for siting of a reservoir facility and conservation purposes. The Chula Vista MSCP Subarea and Planning Area map (Figure 1-2) therefore identifies this area as part of an Other Agency Preserve Planning Effort. The southern, 175.8-acre portion of the Inverted "L" property has been acquired by the USFWS for conservation purposes. The Chula Vista MSCP Subarea and Planning Area map (Figure 1-2) therefore identifies this portion as 100% Conservation Area. These modifications are considered consistent with the MSCP Subregional Plan and Final EIR/EIS.



CITY OF CHULA VISTA

GEOGRAPHIC INFORMATION SYSTEM

r:/planning/mscp/finalreport/prjchg.aml

Projects Changed From 1996 Draft Subarea Plan

FIGURE 3-1

Plot created: January 26, 2004

3.1.4 San Miguel Ranch

The approximately 743-acre southern parcel of the San Miguel properties, located west of Rolling Hills Ranch and the Otay Water District Auld Golf Course, was annexed into the City in December 2000. Prior to annexation, San Miguel Ranch was part of the County of San Diego MSCP Subarea Plan, South County segment, and Take Authorization for the San Miguel properties was provided through the adopted County Plan. During the annexation process, the SMR MSCP Annexation Agreement was completed, which transferred the County Take Authorization for this project to the City.

The SMR MSCP Annexation Agreement (Appendix C), is an agreement among five parties: the County of San Diego, the City, the Wildlife Agencies, and Trimark. The SMR MSCP Annexation Agreement is intended to accomplish the following:

- Recognize the Take Authorization applicable to the southern parcel under the County MSCP Subarea Plan and provide valid Take Authorization of Chula Vista Covered Species and associated habitats within the southern parcel of San Miguel Ranch prior to issuance of Take Authorization from the Wildlife Agencies to the City for its MSCP Subarea Plan;

- Ensure that conservation required by the adopted County MSCP Subarea Plan, including the conservation of natural open space constituting a minimum of 169 acres on the southern parcel and 166 acres on the northern parcel, will be realized;

- Require the conservation of 11 supplementary acres of habitat that will significantly add to the long-term viability of the Otay tarplant; and

- Ensure the conservation and management of approximately 352 acres to be transferred to the SDNWR (approximately 186 acres on the southern parcel and 166 acres on the northern parcel).

The provisions of the SMR MSCP Annexation Agreement are consistent with the adopted County of San Diego Subarea Plan, South County Segment, the MSCP Subregional Plan and the Final EIR/EIS. In fact, conservation provided for by the Agreement exceeds the original requirements of MSCP, providing additional conservation land and significantly enriching the conservation program for the Otay tarplant.

3.1.5 University Site

3.1.5.1 History of the University Site

The Final EIR/EIS for the MSCP Subregional Plan identified two alternatives relative to a University Site in the eastern portion of Otay Ranch: the "Existing GDP Alternative" which consists of a 400-acre University Site in the Salt Creek area and the "Modified GDP Alternative." Under the Modified GDP Alternative, two options were identified. Policy Option 1 addresses a smaller, 288-acre University Site that would be developed above the slopes that define Salt Creek Canyon. Policy Option 2 assumes that the 288-acre area identified in Policy Option 1 would be conserved. The method of conservation would be acquisition by the Wildlife Agencies and inclusion in the Preserve. Further, it was assumed that the Wildlife Agencies would facilitate acquisition of an alternative University Site acceptable to the City through a land exchange or other acceptable mechanism. Policy Option 2 was the alternative that was included in the project description for the MSCP and was analyzed in the Final EIR/EIS as the "MHPA Project." The Final EIR/EIS concluded that no significant unmitigated impacts would result from the adoption of Policy Option 2.

In further discussions between the City and the Wildlife Agencies, a proposal was forwarded that would reconfigure the boundaries of the University Site and the Preserve without any acquisition by the Wildlife Agencies. This proposal was defined as the "Alternative Preserve Design." In April 1999, the City completed a comparative analysis of the conservation value of the Alternative Preserve Design to Policy Option 2 ("Salt Creek Preserve Analysis," Appendix H). One of the conclusions of the Salt Creek Preserve Analysis was that rerouting the university road traversing Salt Creek Canyon to a location outside the Salt Creek watershed would "greatly improve the Alternative Preserve Design." Based on this and other conclusions, the City has further modified the University Site by eliminating the road traversing Salt Creek and adding a habitat restoration/enhancement component.

The University Site included in this Subarea Plan ("University Redesign") represents the product of an iterative process of refinement of the University Site. Alternatives that have been previously proposed and considered as a part of this iterative process have certain differences from and are superceded by the University Redesign. The University Redesign is the alternative proposed in the Subarea Plan based on the fact that, as demonstrated in the following analysis, it (1) does not result in any new significant environmental impacts; (2) offers equivalent or better biological value; and (3) is consistent with the objectives of Policy Option 2 as described in the MSCP Subregional Plan Final EIR/EIS.

3.1.5.2 University Site Preserve Boundary Adjustment Process

The MSCP Subregional Plan provides for adjustments to the boundaries of the MHPA or subarea plan preserves through a "like or equivalent" exchange concept. As per Section 5.4.2 of the MSCP Subregional Plan, since the physical configuration of Preserve in the University Site included in this Subarea Plan is different than the Preserve configuration of Policy Option 2, the Preserve biological value of the University Redesign must be analyzed and deemed the same or greater than the Preserve biological value of Policy Option 2. The MSCP Subregional Plan states:

> *Adjustments to the MHPA and/or Preserve boundaries can be made without the need to amend the MSCP Subregional Plan or subarea plan if the adjustment will result in the same or higher biological value of the Preserve. The determination of biological value of the proposed change is made by the local jurisdiction and must have concurrence of the wildlife agencies. No amendment of the subarea plan is needed for an approved equivalent exchange. The comparison of biological value will be based on the following biological factors:*
>
> - *Effects on significantly or sufficiently conserved habitats (i.e., the exchange maintains or improves the conservation, configuration, or status of significantly or sufficiently conserved habitats, as defined in Section 4.2.4 [of the MSCP Subregional Plan]);*
>
> - *Effects to covered species (i.e., the exchange maintains or increases the conservation of covered species);*
>
> - *Effects on habitat linkages and function of Preserve areas (i.e., the exchange maintains or improves a habitat linkage or wildlife corridor);*
>
> - *Effects on Preserve configuration and management (i.e., the exchange results in similar or improved management efficiency and/or protection for biological resources);*
>
> - *Effects on ecotones or other conditions affecting species diversity (i.e., the exchange maintains topographic and structural diversity and habitat interfaces of the Preserve); and/or*
>
> - *Effects to species of concern not on the Covered Species list (i.e., the exchange does not significantly increase the likelihood that an uncovered species will meet the criteria for listing under either the Federal or State Endangered Species Acts).*

3.1.5.3 Description of the University Redesign

A graphic comparison of the Preserve boundary of Policy Option 2 and the University Redesign is presented in Figure 3-2. The primary physical differences between the University Redesign and the MHPA Project is the addition of a development area on the east side of Salt Creek and removal of development from areas containing coastal sage scrub and maritime succulent scrub on the western slopes of Salt Creek. It should be noted that, while the University Redesign proposes development in roughly the same location as Policy Option 1, as identified and evaluated in the Final EIR/EIS, the University Redesign differs from Policy Option 1 by proposing less development east of Salt Creek (53 versus 288 acres) and by preserving important coastal sage scrub and maritime succulent scrub resources on the western slopes of Salt Creek.

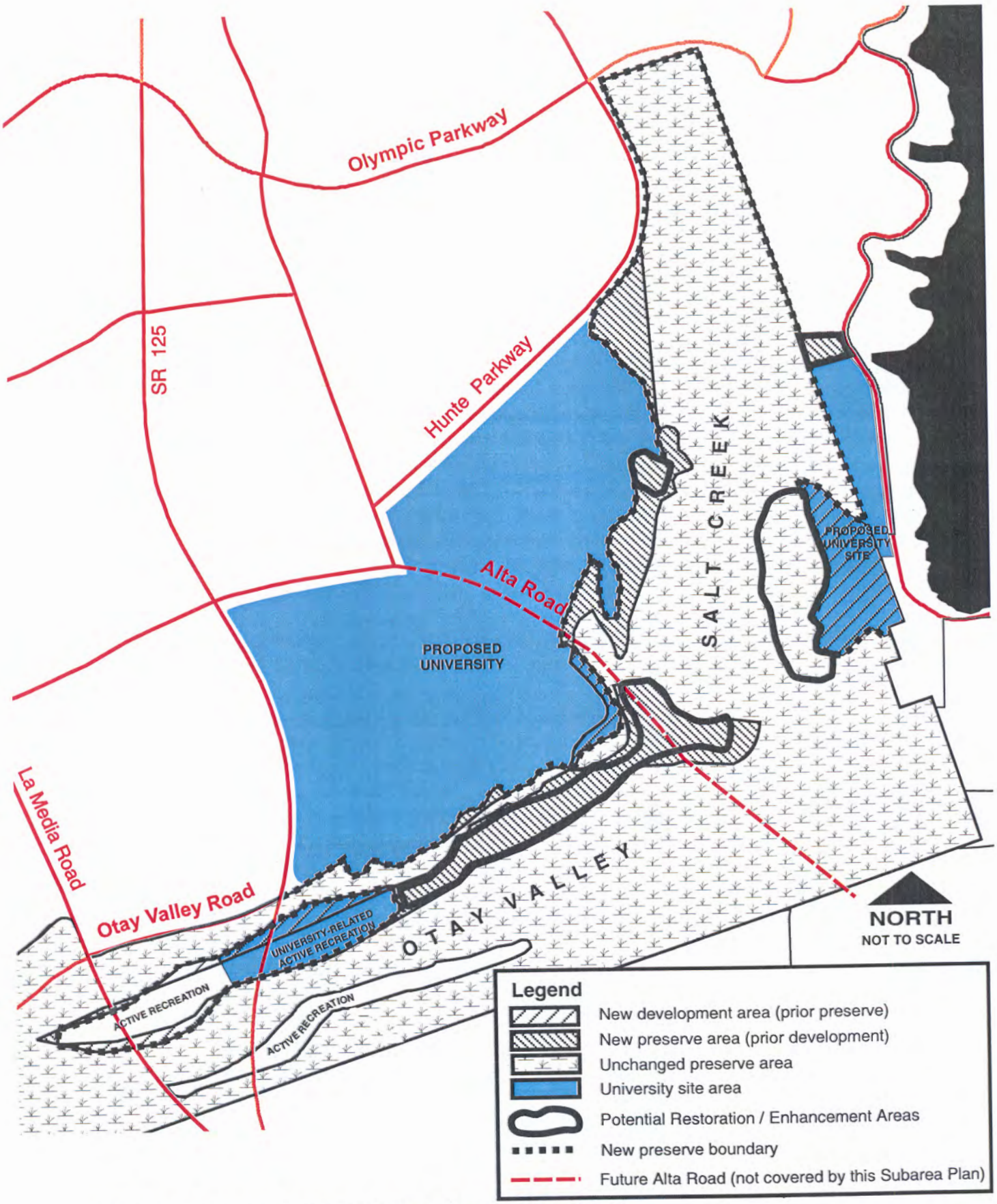
The University Redesign component of the project includes restoration and/or enhancement of 20.6 acres of coastal sage scrub/maritime succulent scrub within the Salt Creek area of the Preserve. Prior to development of this area, a restoration and enhancement plan will be prepared, consistent with the guidelines established in the Otay Ranch Coastal Sage Scrub and Maritime Succulent Scrub Replacement Master Plan (1995) prepared as part of the Otay Ranch Phase 2 Resource Management Plan. The Master Plan specifies enhancement and restoration goals, techniques and monitoring. Coastal sage scrub restoration and enhancement areas will be interspersed with maritime succulent scrub restoration/enhancement in a pattern that is consistent with the existing mosaic of the two habitats within the study area.

Disturbance of coastal sage scrub within the new university development areas on the east side of Salt Creek will be subject to grading restrictions during the gnatcatcher nesting season. Additionally, individual barrel cactus that are within the grading area will be salvaged prior to grading and translocated to suitable sites within the adjacent habitat areas. Translocation sites will have a similar slope aspect as the native location.

Any temporary impacts from grading that encroach into habitat areas will be restored consistent with the guidelines established in the Otay Ranch RMP. All brush management activities will be conducted within the development area boundaries, and will be consistent with brush management requirements of the Otay Ranch RMP.

3.1.5.4 Analysis of the Biological Value of the University Redesign

In the spring of 2000, the City contracted with Dudek and Associates, Inc. (Dudek) to perform an analysis of the University Redesign (Appendix I). The following, excerpted from the Dudek report, provides the analysis and findings of biological equivalency for the University Redesign.



UNIVERSITY SITE / COMPARATIVE BOUNDARY MAP

FIGURE 3-2

There are differences between the University Redesign and the existing MHPA boundary as described in the MSCP Subregional Plan and its associated Final EIR/EIS. Differences include changes in habitat and species conservation levels, differences in the location and type of edge effects, and differences in wildlife movement and linkage features of the Preserve. However, the University Redesign has been specifically designed to meet or exceed the conservation goals and the biological value for the Preserve in Salt Creek. As a result, there are no new potentially significant impacts arising from the University Redesign that were not previously analyzed in the Final EIR/EIS under the MHPA Project.

The University Redesign results in an overall increase of 78.8 acres in the amount of habitat conserved, including increases of 4.7 acres of disturbed coastal sage scrub, 11.4 acres of maritime succulent scrub and 59.3 acres of grassland (Table 3-1). The University Redesign would also result in conservation of additional habitat containing point data for sensitive species, including three gnatcatchers, four cactus wren and one Cooper's hawk (Table 3-2). The University Redesign would, however, result in a net decrease in conservation of coastal sage scrub of 10.3 acres (including the loss of 26.4 acres of coastal sage scrub and the gain of 4.7 acres of disturbed coastal sage scrub and 11.4 acres of maritime succulent scrub.) Also within the portion removed from conservation under the University Redesign are areas containing point data for three southern California rufous crowned sparrows and two San Diego barrel cactus.

The following is a detailed comparison of biological value of the University Redesign to the MHPA Project based on these six biological factors.

1. Effects on Significantly or Sufficiently Conserved Habitats – The physical boundaries of the University Redesign would result in a net decrease of 10.3 acres of coastal sage scrub habitats (including disturbed coastal sage scrub and maritime succulent scrub), as shown in Table 3-1. However, the project proposes to enhance/restore a total of 20.6 acres of coastal sage scrub habitat in a manner prescribed in the Otay Ranch RMP for such restoration/enhancement. Compensation for the loss of coastal sage scrub habitats by restoration/enhancement would maintain or improve the conservation of coastal sage scrub within the Preserve.

   Habitat within the Salt Creek area has been impacted by fire over the last several years. Field observations by biologists (Dudek, 1994, 1997, 1998, 1999) have revealed that many of the impacted areas are having difficulty recovering from the fires and are showing signs of invasion by exotics. These areas have a high likelihood for success of restoration and enhancement due to the abundance of adjacent high quality habitat and species density and diversity. This provides seed sources for plants and increased potential for repopulation by wildlife. It is anticipated that the 20.6 acres of proposed enhancement/restoration would result in a net increase in viable coastal sage scrub habitats in the Salt Creek area.

Table 3-1: Vegetation in MHPA Project Preserve[1] Versus University Redesign

Conserved Vegetation Type[2]	MHPA Project Preserve (Acres)[2]	University Redesign (Acres)[2]	Net Change
Coastal Sage Scrub	636.7	610.3	-26.4
Disturbed Coastal Sage Scrub	3.6	8.3	+ 4.7
Maritime Succulent Scrub	87.8	99.2	+ 11.4
Grassland	60.4	119.7	+ 59.3
Riparian Scrub	12.5	12.5	- -
Disturbed Riparian Scrub	119.8	119.8	- -
Disturbed Natural Flood channel/Streambed	115.8	117.0	+ 1.2
Eucalyptus Woodland	9.8	12.0	+ 2.2
Field Crops	0.3	26.7	+26.4
Total	**1,046.7**	**1,125.5**	**+ 78.8**

[1]MHPA Project Preserve is the Modified GDP Alternative – Policy Option 2.
[2]Based on 1996 MSCP GIS database; developed lands are not included in Preserve acreage calculations.

2. Effects to Covered Species – Covered Species in the Salt Creek area include coastal California gnatcatcher, coastal cactus wren, Cooper's hawk, golden eagle, least Bell's vireo, orange-throated whiptail, southern California rufous crowned sparrow, Otay tarplant, San Diego barrel cactus, snake cholla and variegated dudleya. The Dudek analysis identified a quantitative reduction in terms of point data for two species, rufous crowned sparrow and San Diego barrel cactus (Table 3-2,). It is important, however, to examine potential effects to all of the Covered Species since point data may not represent all species in all locations in the study area.

The Quino checkerspot butterfly is also found in the University Salt Creek area. This species was not included as a Covered Species in the MSCP Subregional Plan, and was not included in the Dudek analysis. A separate analysis for this species is provided in Section 4.4.

Table 3-2: Sensitive Species in MSCP Project Preserve[1] Versus University Redesign

Conserved Species	MHPA Project Preserve (Points)[2]	University Redesign (Points)[2]	Net Change
Coastal California Gnatcatcher	89	92	+ 3
Coastal Cactus Wren	60	64	+ 4
Cooper's Hawk	2	3	+ 1
Golden Eagle	1	1	- -
Grasshopper Sparrow	2	2	- -
Least Bell's Vireo	4	4	- -
Orange-throated Whiptail	3	3	- -
Southern California Rufous-crowned Sparrow	28	25	- 3
Otay Tarplant	1	1	- -
San Diego Barrel Cactus	111	109	- 2
Snake Cholla	6	6	- -
Variegated Dudleya	4	4	- -

[1] MHPA Project Preserve is the Modified GDP Alternative – Policy Option 2.
[2] Numbers represent points in the 1996 MSCP GIS database. No species polygons are within the existing, approved Preserve design or Alternative Preserve Design.

a. Coastal California gnatcatcher (*Polioptila californica californica*) – The point data for this species reveals that the University Redesign would conserve an additional 3 point locations. Coastal California gnatcatcher relies on coastal sage scrub as its primary habitat. The University Redesign results in conservation of 10.3 net acres less coastal sage scrub habitats (including Coastal Sage Scrub, disturbed Coastal Sage Scrub and Maritime Succulent Scrub) but provides for restoration/enhancement of 20.6 acres of coastal sage scrub habitat, with a high likelihood for success. In addition, the University Redesign provides for additional habitat linkages that would be important to the long-term viability of this species. These additional linkages include a connection to an archipelago of coastal sage scrub habitats leading up to Upper Otay Reservoir and habitat areas to the north and east. The second additional connection would be to the south through the elimination of proposed active recreational use areas in the Otay River Valley. With the restoration/enhancement of habitat and addition of linkages provided for in the University Redesign, this species is anticipated to be conserved at a similar or better level than would be expected with the MHPA Project.

b. Coastal cactus wren (*Campylorhynchus brunneicapillus*) – The University Redesign would result in additional habitat conservation for this specie (and additional 11.4 acres of maritime succulent scrub) and conservation of additional recorded point locations. In addition, the coastal sage scrub enhancement/restoration is proposed to be interdigitated with maritime succulent scrub, providing additional habitat resources for this species. Additional habitat linkages, as discussed above, will also benefit this species.

c. Cooper's hawk (*Accipiter cooperii*) – The University Redesign will conserve an additional 59.3 acres of grassland, which is important foraging habitat for this species.

d. Golden eagle (*Aquilla chrysaetos*) – As with the Cooper's hawk, this species would benefit from additional conservation of grassland habitats.

e. Least Bell's vireo (*Vireo bellii pusillus*) – Conservation of Wetlands and riparian scrub, the primary habitat for this species would remain the same under the University Redesign.

f. Orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*) – This species is primarily found in coastal sage scrub habitats, which will be conserved, restored or enhanced at an equivalent or better level under the University Redesign. Therefore, this species is expected to not be affected or potentially benefit from the revised project.

g. Southern California rufous crowned sparrow (*Aimophila ruficeps canescens*) – Primary habitat for this species is coastal sage scrub. The University Redesign would impact three point locations of this species. As indicated for other coastal sage scrub species, the overall net effect of the University Redesign on this species would be potentially beneficial.

h. Otay tarplant (*Deinandra [Hemizonia] conjugens*) – No point locations for this species are impacted by the University Redesign. With the additional conservation of 59.3 acres of grassland under the University Redesign, this species may be provided additional habitat opportunities.

i. San Diego barrel cactus (*Ferocactus viridescens*) – Two point locations of this species would be impacted by the University Redesign; however, the project includes measures to translocate these individuals to suitable sites within the Preserve. There are recent and local examples of successful translocation projects for this species. In addition, the coastal sage scrub restoration/enhancement to be carried out as a part of the University Redesign would include this species in the plant pallette. Based on the anticipated high level of success of barrel cactus translocation and the provision of suitable replacement habitat in restoration/enhancement areas,

the overall net effect of the University Redesign on this species is anticipated to be equivalent.

j. Snake cholla (*Opuntia parryi* var. *serpentina*) – No point locations would be affected. This species would also be included in the plant pallette for restoration/enhancement activities associated with the University Redesign, providing additional habitat opportunities. Therefore, the overall net effect of the University Redesign on this species is anticipated to be equivalent.

k. Variegated dudleya (*Dudleya variegata*) – No point locations would be affected. This species would also be included in the plant pallette for restoration/enhancement activities associated with the University Redesign, providing additional habitat opportunities. Therefore, the overall net effect of the University Redesign on this species is anticipated to be equivalent.

3. Effects on Habitat Linkages and Function of Preserve Areas – The University Redesign adds a wildlife corridor that provides a link between the lower Otay Reservoir and Salt Creek, connecting to an archipelago of coastal sage scrub habitat that continues to Upper Otay Reservoir an areas to the north and east. An additional linkage feature of the University Redesign is enhancement of the Otay River Valley corridor by preserving additional areas with the Otay River and removing proposed active recreation uses in the eastern portions of the Otay River Valley. Based on these factors, the University Redesign would maintain, or in some cases improve habitat linkages in the Preserve.

4. Effects on Preserve Configuration and Management – The modifications to the Preserve boundaries represented by the University Redesign are not significant in terms of management efficiency or effectiveness. Edge considerations would be related to the new development area proposed on the east side of Salt Creek. Such edge conditions are similar to those being removed as a result of the elimination of active recreation uses in the Otay River Valley. Total edge area for these two areas is similar, and the quality of potential edge effects is similar in nature (controlled recreational uses versus controlled university uses). Tables 3-3 and 3-4 provide a summary comparison of total edge area for the MHPA Project and the University Redesign (note that negative numbers on these tables represent a positive impact in terms of conservation, and vice versa). The total area subject to edge effects is reduced overall for the University Redesign as compared to the MHPA Project.

   Overall edge effects are therefore considered to be equivalent in nature and reduced quantitatively when comparing the MHPA Project to the University Redesign.

Table 3-3: Vegetation Communities within 150 Feet of Preserve Boundary

Vegetation Type	MHPA Project Preserve (Acres)[1, 2]	University Redesign (Acres)[1, 2]	Net Change
Coastal Sage Scrub	75.8	60.0	-15.8
Disturbed Coastal Sage Scrub	- -	3.3	+ 3.3
Maritime Succulent Scrub	24.9	17.9	- 7.0
Grassland	21.8	30.8	+ 9.0
Riparian Scrub	0.9	0.9	- -
Disturbed Riparian Scrub	12.1	0.6	- 11.5
Disturbed Natural Flood Channel/Streambed	8.3	0.25	- 8.05
Eucalyptus Woodland	1.8	1.7	- 0.1
Field Crops	0.3	8.0	+ 7.7
Total	**145.9**	**123.4**	**- 22.5**

[1]Acreage of conserved vegetation within 150 feet of Preserve boundary.
[2]Based on 1996 MSCP GIS database.

Table 3-4: Species Points within 150 Feet of Preserve Boundary

Species	MHPA Project (Points)[1,2]	University Redesign (Points)[1,2]	Net Change
Coastal California Gnatcatcher	17	20	+ 3
Coastal Cactus Wren	12	11	- 1
Cooper's Hawk	1	- -	- 1
Golden Eagle	- -	- -	- -
Grasshopper Sparrow	- -	- -	- -
Least Bell's Vireo	1	- -	- 1
Orange-throated Whiptail	1	1	0
Southern California Rufous-crowned Sparrow	6	5	- 1
Otay Tarplant	- -	- -	- -
San Diego Barrel Cactus	9	14	+ 5
Snake Cholla	1	3	+ 2
Variegated Dudleya	- -	- -	- -

[1]Number of conserved species points within 150 feet of Preserve boundary.
[2]Based on 1996 MSCP GIS database. No species polygons are within the MHPA Project or University Redesign.

5. Effects of Ecotones or Other Conditions Affecting Species Diversity – The University Redesign results in a Preserve with similar topographic and structural diversity as the MHPA Project. The general consideration for this issue is that the components of the Preserve reconfiguration are all within a confined geographical area with significant variation in ecotone elements and habitat diversity throughout. Therefore, minor adjustments in the Preserve boundary would not result in a significant overall difference in ecotone considerations. Areas added include the slopes on the west side of Salt Creek containing an interdigitated mosaic of coastal sage scrub, maritime succulent scrub and grasslands, similar to what is found on the eastern side of Salt Creek, which is being removed from the Preserve. In addition, the University Redesign adds areas in the Otay River Valley which contain favorable ecotone features, including a diverse mix of grassland and scrub habitats.

6. Effects to Species of Concern Not on the Covered Species List – Most of the species of concern found in areas affected by the Preserve boundary modifications that would result from the University Redesign are included on the Covered Species list. The species of concern that are not covered but that have the potential to occur in this area are mainly grassland associated species, such as the grasshopper sparrow and certain butterfly species. The University Redesign includes conservation of an additional 59.3 acres of grassland, providing for additional conservation potential for these species. The boundary modification, therefore, is not anticipated to increase the likelihood that an uncovered species will meet the criteria for listing under either the Federal or State ESAs.

7. Conclusion – The biological value for the University Redesign included in the Chula Vista Subarea Plan is the same or higher than the existing proposal under Policy Option 2 included in the MHPA Project. As a result, the University Redesign meets the requirements of the MSCP Subregional Plan for adjustments to the boundary of the MHPA, under the "Like or Equivalent" exchange concept. In some cases the University Redesign, provides additional benefits to conservation, including 78.8 acres of additional habitat conservation overall and the addition of two significant wildlife movement features: one connecting habitat in Salt Creek to habitat and species populations in the northern and northeastern areas and the other expanding the connection with the Otay River Valley and facilitating wildlife movement to the south, east and west. The University Redesign meets or exceeds and is therefore consistent with all conservation objectives for the Covered Species within the *Chula Vista Subarea* under the MSCP Subregional Plan.

3.1.6 Quino Checkerspot Butterfly Coverage

The QCB was listed by the USFWS as an Endangered Species on January 16, 1997 (62 FR 2313). This butterfly was not covered by the adopted MSCP Subregional Plan due to lack of sufficient information about the species at the time the Subregional Plan was prepared. Table 3-5 of the MSCP Subregional Plan states: "Unknown conservation level and lack of assurances that Plan will protect preferred habitat (mesa tops/grassland) and connection to known source populations; therefore, not covered by the Plan."

The Final EIR/EIS for the MSCP Subregional Plan evaluated 98 species for potential coverage by the Subregional MSCP program. The Final EIR/EIS evaluated each species with respect to the proposed regional MHPA. The MHPA defines the area within which the permanent regional preserve system will be assembled. As stated by the Final EIR/EIS "the MHPA reflects the culmination of a biological analysis of the MSCP study area with regard to the distribution and value of vegetation communities and sensitive species in the study area, as well as the configuration of private and public lands that potentially would be included in a preserve system."

The Final EIR/EIS found that the MHPA would provide adequate protection for 85 of the 98 species studied. The QCB was analyzed and discussed in the Final EIR/EIS but not included among the 85 species determined to be protected adequately under the program as proposed by the MSCP Subregional Plan. In making this finding, the Final EIR/EIS found that there was insufficient information to make the necessary determination, and included the following summary in Table 4.3-1: "One known extant location in San Diego County occurs near Vernal Pools with host plant *Plantago insularis.* Recent sightings indicate potential ability for recolonization into MSCP area."

Since the adoption of the MSCP Subregional Plan, QCB surveys have been undertaken throughout the southern California range. A QCB Recovery Team was assembled by USFWS in September 1999 to analyze existing information and new data collected from more recent surveys. A QCB Draft Recovery Plan was issued by USFWS in January 2001, and on February 7, 2001 the USFWS issued a Proposed Critical Habitat designation for the species. Based upon this information, a QCB conservation program for Chula Vista has been prepared and will be implemented as part of this Subarea Plan. The QCB conservation program is incorporated as Section 4.4 of this Subarea Plan.

3.2 Summary of Subarea Conservation and Take Estimates

Take of species within the *Chula Vista Subarea* will be allowed as follows:

1. Outside Preserve Boundaries – This Subarea Plan will authorize Take outside of the Preserve. Take outside the Preserve within Covered Project areas will be subject to the project entitlements for Covered Projects, and project-specific conditions for coverage established by this Subarea Plan. Take outside the Preserve in all other areas of the City will be subject to the City's HLIT Ordinance described in Section 5.2.2 of this Subarea Plan.

2. Inside Preserve Boundaries – Take within designated 100% Conservation Areas (Figure 1-2) within Covered Projects will be authorized in accordance with project entitlements for Covered Projects, project-specific conditions for coverage established by this Subarea Plan, Section 6.0 of this Subarea Plan, and the HLIT Ordinance. Take in mapped 100% Conservation Areas in all other parts of the City will be authorized subject to the City's HLIT Ordinance and Section 5.0 of this Subarea Plan.

   Take in 75-100% Conservation Areas (Figure 1-2), will be avoided or limited to a maximum of 25% of the Project Area, and impacts in these areas will be designed to avoid environmentally sensitive areas to the maximum extent practicable, in accordance with the HLIT Ordinance.

3.2.1 Conservation Summary

Estimates for Take and Conservation are shown on Table 3-5 of this Subarea Plan. Areas of habitat anticipated for Take are shown on Figure 3-3. The conservation program set forth in this Subarea Plan will be implemented when the Federal 10(a)(1)(B) and State 2835 permits are granted to the City. Implementation of this Subarea Plan will ensure conservation and management of approximately 9,243 acres. An estimated 4,993 acres will be located within the Subarea and will result in a Preserve that is managed by the City and/or designated Appropriate Managing Entities. An additional approximately 4,250 acres will be conserved in the MHPA outside the Subarea as a result of mitigation for development within the City and implementation of this Subarea Plan.

As shown on Table 3-5 of this Subarea Plan, the Preserve within the *Chula Vista Subarea* will be comprised of approximately 3,552 acres of upland habitats, approximately 1,005 acres of Wetlands, and 436 acres of disturbed, agricultural and/or developed land. Conservation of upland habitats within the Preserve constitutes approximately 49% of all upland habitats within the Subarea. The approximately 4,250 acres of additional upland habitat conservation occurring in the MHPA outside City boundaries through Subarea Plan implementation substantially increases the upland conservation to a total 7,802 acres, resulting in an overall upland conservation ratio of approximately 2:1.

Approximately 93% of the existing estimated 1,080 acres of Wetlands identified within the Subarea are located within the Preserve (1,005 acres). Seventy-five (75) acres of Wetlands have been identified in the Subarea located outside the Preserve. Eight (8) acres of Wetlands located outside the Preserve are in development areas. The remaining Wetlands located outside the Preserve are either currently held in public ownership or are included in Wetland preservation areas associated with previously approved Federal and/or State permits. Any impacts to Wetlands will be subject to the Wetland protections discussed in Section 5.4.2 of this Subarea Plan. Section 5.4.2 provides a complete inventory of the Wetlands located outside the Preserve, and discusses Wetlands protections provided by this Subarea Plan both inside and outside the Preserve.

The following Table 3-5 lists all existing habitat types, acreages and Take estimates, and levels of conservation anticipated for the *Chula Vista Subarea.*

Table 3-5: Take and Conservation Estimates for *Chula Vista Subarea*

Vegetation Communities	*Total in Subarea*	*Estimated Take**	*Est. Preserve Contributions*	*Conservation Percentage*
Upland Habitats				
Coastal Sage Scrub	3,815	1,397	2,418	65%
Maritime Succulent Scrub	293	103	190	65%
Chaparral	28	0	28	100%
CSS / Chaparral Scrub	0	0	0	N/A
Grassland (all types)	3,125	2,229	896	29 %
Oak Woodland	2	0	2	100%
Tecate Cypress Forest	0	0	0	N/A
Eucalyptus Woodland	43	25	18	42%
Upland Subtotals	7,306	3,754	3,552	49%
Wetlands				
Southern Coastal Salt Marsh	204		202	99%
Freshwater/Alkali Marsh	16		14	88%
Riparian Forest	10		10	100%
Oak Riparian Forest	0		0	N/A
Riparian Woodland	0		0	N/A
Riparian/Tamarisk Scrub	604		594	99%
Open Water/Freshwater	59		24	41%
Disturbed Wetlands	28		15	54%
Natural Flood Channel	159		146	92%
Wetland Subtotals	1,080		1,005	93%
Subtotal All Vegetation	*8,386*		*4,557*	*54%*
Other/Non-Habitat				
Disturbed	845		352	
Agriculture	6,192		62	
Developed	15,288		22	
Shallow Deep Bays	1,322		0	
Other Agencies	1,012		0	
Other Subtotal	24,659		436	
Subtotal Within Subarea	33,045		**4,993**	
Additional MSCP Preserve Contributions Outside Subarea				
Rancho Del Rey			360	
Sunbow II			65	
Rolling Hills Ranch			49	
Otay Ranch (City contribution)			3,610	
San Miguel (north parcel mitigation)*			166	
Subtotal Outside Subarea			*4,250*	
Total Chula Vista Contribution to Preserve			**9,243**	

*Take estimates include Planned Facilities which may cross Preserve land, described in Section 6.3.3.1.

City of Chula Vista MSCP with Sensitive Habitat Subject to Impact

LEMON GROVE
NATIONAL CITY
CITY of SAN DIEGO
IMPERIAL BEACH
COUNTY OF SAN DIEGO
805
5
54
Sweetwater Reservoir
San Diego Bay
Otay Ranch
Bella Lago
Golf Course
SDG&E
San Miguel Ranch
Rolling Hills Ranch
Bar Creek
Bonita Long Canyon
Eastlake
Eastlake Business Park
Eastlake Business Center II
Eastlake Woods West
Eastlake Woods
Upper Otay Reservoir
Village Center
Telegraph Canyon-Eastlake
Eastlake Greens
Eastlake Trails
Eastlake Vistas
Eastlake Land Swap
Olympic Training Center
Lower Otay Reservoir
Rancho Del Rey II
Rancho Del Rey I
Rancho Del Rey III
Terra Nova
Mid-Bayfront
Port District effort
Sunbow I
Sunbow II
Otay Ranch
Otay Park
Amphitheater and Water Park

CITY OF CHULA VISTA
GEOGRAPHIC INFORMATION SYSTEM
Plot Created: January 26, 2004

r:/planning/mscp/draftchgs/draftchgs/habtake.aml

N
W
E
S

0 3250 6500 13000
FEET

SCALE: 1 inch = 6500 feet

Legend

- Chula Vista Subarea Plan Boundary
- Chula Vista MSCP Planning Area
- Significant Biological Linkages
- Proposed SR-125
- Major Projects Boundaries
- Development Area
- Lakes / Reservoirs
- 100% Conservation Area - Habitat Preserve
- 75 - 100% Conservation Area - Habitat Pr
- Major Amendment Area
- Minor Amendment Area
- Other Agency - Preserve Planning Efforts
- Planned Active Recreation Area - Subject to RMP Policies and OVRP Planning
- 100% Conservation Area - Habitat Preserve Outside City of Chula Vista
- Major Amendment Area - Outside City of Chula Vista
- Restricted/Limited Development Area
- Development Area Outside City of Chula Vista Subject to County Subarea Segment Plans
- Tier I, II, & III Habitat to be Impacted by Development per Subarea Plan

FIGURE 3-3

4.0 CHULA VISTA SUBAREA PLAN COVERED SPECIES

The MSCP Subregional Plan provides an analysis for all 85 species covered under the Subregional Plan. Table 3-5 of the Subregional Plan includes a summary of the species coverage analysis, and specifies levels of conservation for the MSCP planning area as a whole (Appendix A).

Table 3-5 of the MSCP Subregional Plan includes important information regarding the regional distribution and conservation levels for the 85 MSCP species. In addition, specific conditions for coverage are provided in the species discussions in Table 3-5 of the Subregional Plan. All specific conditions for coverage from Table 3-5 of the MSCP Subregional Plan are incorporated into this Subarea Plan.

This Subarea Plan, in concert with the MSCP Subregional Plan and the other implementing Subarea Plans, provides for conservation of all 85 Covered Species plus the QCB, for a total of 86 Covered Species, within the *Chula Vista Subarea* (the Chula Vista Covered Species). The Chula Vista Covered Species are identified on Tables 4-1, 4-2 and 4-3. This Subarea Plan contributes to conservation for many of these species, and in some cases, provides conservation of key populations and/or habitats for a subgroup of the 86 species. On the other hand, some species covered under the Subregional Plan are not expected to occur within the *Chula Vista Subarea*, due to lack of suitable habitat or range restrictions of the various species.

This section is divided into four subsections. Section 4.1 contains a discussion of conservation and management proposed for Covered Species that are known to occur within the *Chula Vista Subarea* and for which Preserve design and management considerations within the City substantially contribute to subregional conservation of the Covered Species. These Covered Species are defined as Species Adequately Conserved and are those species for which the City shall receive Take Authorization regardless of the participation or continued participation of any other Participating Local Jurisdiction. Section 4.2 contains a discussion for each of the Covered Species that have the potential to occur in the Subarea, either because there is some known occurrence data within the Subarea or there is suitable habitat within the Subarea. Section 4.3 contains a brief discussion of each Covered Species that is not anticipated to occur within the Subarea, either because of lack of suitable habitat or other considerations, for which an explanation is provided. Section 4.4 provides an analysis of coverage for the QCB, a species covered by this Subarea Plan but not covered by the MSCP Subregional Plan.

For ease of reference, Tables 4-1, 4-2 and 4-3 provide the following species information:

- A list of each grouping of species, in alphabetical order by scientific name for plants and by taxonomic subgroup for animals;
- Common name;
- If applicable, legal and/or management status (see key below);
- Page reference to species information in Table 3-5 of the MSCP Subregional Plan provided as Appendix A of this Subarea Plan.

Key to Legal and Management Status of Each Species in Tables 4-1, 4-2 and 4-3:

FE	=	Federally Endangered
PE	=	Proposed for Federal listing as Endangered
FT	=	Federally Threatened
PT	=	Proposed for Federal listing as Threatened
C	=	Candidate for Federal listing
BEPA	=	Bald Eagle Protection Act
CE	=	State Endangered
CR	=	State Rare
CT	=	State Threatened
SSC	=	State Species of Special Concern
Protected	=	Moratorium on Hunting
None	=	No Federal or State status
NE	=	Narrow Endemic Species in *Chula Vista Subarea*, see Section 5.2.3 of the Subarea Plan for more information about protection for Narrow Endemic Species
FP	=	DFG Fully Protected Species

Table 4-1: Species Adequately Conserved

Scientific Name	Common Name	Status*	MSCP Subregional Plan Table 3-5 Page Ref.
Plants			
Cordylanthus maritimus ssp. *maritimus*	Salt marsh bird's-beak	FE/CE/NE	3-41
Cordylanthus orcuttianus	Orcutt's bird's-beak		3-42
Dudleya variegata	Variegated dudleya	NE	3-44
Ferocactus viridescens	San Diego barrel cactus		3-47
Deinandra [Hemizonia] conjugens	Otay tarplant	FT/CE/NE	3-48
Opuntia parryi var. *serpentina [Opuntia californica var. californica]*	Snake cholla	NE	3-54
Invertebrates			
Euphydryas editha quino	Quino checkerspot butterfly	FE	N/A
Panoquina errans	Salt marsh skipper		3-62
Birds			
Aimophila ruficeps canescens	California rufous-crowned sparrow	SSC	3-87
Campylorhynchus brunneicapillus couesi	Coastal cactus wren	SSC	3-84
Charadrius alexandrinus nivosus	Western snowy plover	FT/SSC	3-78
Numenius americanus	Long-billed curlew	SSC	3-79
Passerculus sandwichensis beldingi	Belding's savannah sparrow	CE	3-87
Passerculus sandwichensis rostratus	Large-billed savannah sparrow	SSC	3-88
Polioptila californica californica	Coastal California gnatcatcher	FT/SSC	3-85
Rallus longirostris levipes	Light-footed clapper rail	FE/CE/FP	3-77
Speotyto cunicularia hypugaea [Athene cunicularia]	Burrowing owl	SSC	3-82
Sterna antillarum browni	California least tern	FE/CE/FP	3-81
Vireo bellii pusillus	Least Bell's vireo	FE/CE	3-86

* Key to Status abbreviations is on page 4-2

Table 4-2: Species with known occurrences or suitable habitat within the *Chula Vista Subarea*[1]

Scientific Name	Common Name	Status	MSCP Subregional Plan Table 3-5 Page Ref.
Plants			
Acanthomintha ilicifolia	San Diego thorn-mint	FT/CE/NE	3-32
Ambrosia pumila	San Diego ambrosia	FE/NE	3-33
Brodiaea orcuttii	Orcutt's brodiaea	NE	3-38
Caulanthus stenocarpus	Slender-pod jewelflower	CR	3-40
Ericameria palmeri ssp. *palmeri*	Palmer's ericameria	NE	3-45
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE/CE	3-46
Muilla clevelandii	San Diego goldenstar		3-52
Navarretia fossalis	Spreading navarretia	FT	3-52
Orcuttia californica	California Orcutt grass	FE/CE	3-54
Pogogyne nudiuscula	Otay Mesa mint	FE/CE	3-56
Satureja chandleri	San Miguel savory		3-58
Solanum tenuilobatum [taxon considered to be invalid, combined with *Solanum xanti*]	Narrow-leaved nightshade		3-59
Invertebrates			
Branchinecta sandiegonensis	San Diego fairy shrimp	FE	3-62
Streptocephalus woottoni	Riverside fairy shrimp	FE	3-63
Amphibians			
Bufo californicus	Arroyo toad	FE/SSC	3-64
Reptiles			
Clemmys marmorata pallida	Southwestern pond turtle	SSC	3-65
Cnemidophorus hyperythrus beldingi	Orange-throated whiptail	SSC	3-66
Phrynosoma coronatum blainvillei	San Diego horned lizard	SSC	3-67

[1] City of Chula Vista coverage for Incidental Take Authorization for these species is reliant upon implementation of the City and/or the County of San Diego MSCP Subarea Plans.

Table 4-2: continued

Birds			
Accipiter cooperii	Cooper's hawk	SSC	3-73
Agelaius tricolor	Tricolored blackbird	SSC	3-89
Aquila chrysaetos	Golden eagle	BEPA/SSC/FP	3-75
Branta canadensis	Canada goose		3-70
Buteo regalis	Ferruginous hawk	SSC	3-74
Buteo swainsoni	Swainson's hawk	CT	3-74
Circus cyaneus	Northern harrier	SSC	3-79
Egretta rufescens	Reddish egret		3-69
Empidonax traillii extimus	Southwestern willow flycatcher	FE/CE	3-83
Falco peregrinus anatum	American peregrine falcon	CE/FP	3-77
Haliaeetus leucocephalus	Bald eagle	FT/CE/ BEPA/FP	3-71
Pelecanus occidentalis californicus	California brown pelican	FE/CE/FP	3-68
Plegadis chihi	White-faced ibis	SSC	3-69
Sialia mexicana	Western bluebird		3-85
Sterna elegans	Elegant tern	SSC	3-80
Mammals			
Taxidea taxus	American badger	SSC	3-90
Felis concolor	Mountain lion	Protected	3-91
Odocoileus hemionus fuliginata	Southern mule deer		3-92

Table 4-3: Species not likely to be found in the *Chula Vista Subarea*[1]

Scientific Name	Common Name	Status	MSCP Subregional Plan Table 3-5 Page Ref.
Plants			
Agave shawii	Shaw's agave	NE	3-32
Aphanisma blitoides	Aphanisma		3-34
Arctostaphylos glandulosa var. *crassifolia*	Del Mar manzanita	FE	3-34
Arctostaphylos otayensis	Otay manzanita		3-35
Astragalus tener var. *titi*	Coastal dunes milk vetch	FE/CE	3-36
Baccharis vanessae	Encinitas baccharis	FT/CE/NE	3-36
Berberis nevinii	Nevin's barberry	FE/CE/NE	3-37
Brodiaea filifolia	Thread-leaved brodiaea	FT/CE/NE	3-37
Calamagrostis densa	Dense reed grass		3-38
Calochortus dunnii	Dunn's mariposa lily	CR/NE	3-39
Ceanothus cyaneus	Lakeside ceanothus	NE	3-40
Ceanothus verrucosus	Wart-stemmed ceanothus		3-41
Corethrogyne filaginifolia var. *linifolia*	Del Mar sand aster		3-43
Cupressus forbesii	Tecate cypress		3-43
Dudleya blochmaniae ssp. *brevifolia*	Short-leaved dudleya	CE/NE	3-44
Dudleya viscida	Sticky dudleya		3-45
Erysimum ammophilum	Coast wallflower		3-47
Lepechinia cardiophylla	Heart-leaved pitcher sage		3-49
Lepechinia ganderi	Gander's pitcher sage	NE	3-49
Lotus nuttallianus	Nuttall's lotus		3-50
Monardella hypoleuca ssp. *lanata*	Felt-leaved monardella	NE	3-51
Monardella linoides ssp. v*iminea*	Willowy monardella	PE/CE/NE	3-51
Nolina interrata	Dehesa bear-grass	PT/CE/NE	3-53
Pinus torreyana	Torrey pine		3-55
Pogogyne abramsii	San Diego mesa mint	FE/CE	3-55
Rosa minutifolia	Small-leaved rose	CE	3-57
Senecio ganderi	Gander's butterweed	CR	3-59
Tetracoccus dioicus	Parry's tetracoccus		3-60

[1] City of Chula Vista coverage for Incidental Take Authorization for these species is reliant upon implementation of the City and/or the County of San Diego MSCP Subarea Plans.

Table 4-3 continued

Invertebrates			
Mitoura thornei	Thorne's hairstreak butterfly		3-61
Amphibians			
Rana aurora draytoni	California red-legged frog	FT/SSC	3-65
Birds			
Charadrius montanus	Mountain plover	PT/SSC	3-79

4.1 Species That Occur in the *Chula Vista Subarea* and For Which the Subarea Plan Provides a Significant Contribution to Subregional Conservation

The following is a discussion of species conservation and management efforts related to species that are known to exist in the *Chula Vista Subarea* and for which the Subarea Plan provides a significant level of conservation. The level of conservation provided for these species in the Subarea Plan is considered to be sufficient to maintain the City's Incidental Take Authorization regardless of the status of the City and/or County of San Diego MSCP Subarea Plans. The independent coverage identified for these species, is based on the information provided below, including a description of conservation for the species; the management framework, (the mechanism(s)) put in place by the Subarea Plan or other conservation planning efforts to ensure proper management of the species; and the relevant conditions for coverage from the MSCP Subregional Plan (Appendix A).

Cordylanthus maritimus* ssp. *maritimus
Salt marsh bird's-beak
Narrow Endemic Species

Habitat and Habitat Associations

Salt Marsh habitat, particularly slightly raised hummocks, is the preferred habitat of this small annual. Also known to occupy the edge of salt pans. Tidal inundation of this area is occasional.

Conservation in *Chula Vista Subarea*

Preserve design provides for conservation of 100% of southern coastal salt marsh habitat within the Sweetwater Marsh NWR. Additional protection against direct impacts outside the Preserve will be provided through the HLIT ordinance. As a Narrow Endemic Species, any populations of salt marsh bird's-beak within the City will be subject to impact restrictions pursuant to Section 5.2.3 of this Subarea Plan.

Management Framework in *Chula Vista Subarea*

Management for the Sweetwater Marsh populations will be provided through the management and maintenance of the Sweetwater Marsh NWR by the USFWS. Buffers outside the NWR as well as lighting and water quality controls for adjacent development are required as part of the land use controls within the Chula Vista LCP

to reduce edge effects from development outside the Preserve. Additional adjacency guidelines related to drainage, toxic substances, and invasive species are provided in Section 7.5.2 of this Subarea Plan. It should be noted that specific management for this species is entirely dependent upon federal management activities within the SDNWR, as no populations have been identified or are expected to occur outside of the SDNWR.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must: (1) include measures to reduce threats and stabilize populations (e.g., relocation of footpaths, establishment of buffer areas, etc.); (2) address opportunities for reintroduction; and (3) include measures to enhance existing populations (e.g., protect and improve upland habitat for pollinators). There is a Federal recovery plan for this species, and management activities should help achieve the specified goals. Any newly found populations shall be evaluated for inclusion in the Preserve strategy through acquisition, like exchange.

Cordylanthus orcuttianus
Orcutt's bird's-beak

Habitat and Habitat Associations

Seasonally dry drainage and upland adjacent to riparian habitat is the predominant habitat within which Orcutt's bird's-beak occurs.

Conservation in *Chula Vista Subarea*

100% of major populations in the Subarea are located in the Sweetwater Marsh NWR and the Otay River Valley.

Management Framework in *Chula Vista Subarea*

Management for the Sweetwater Marsh populations will be provided through the management and maintenance of the Sweetwater Marsh NWR by the USFWS. Buffers outside the NWR, as well as lighting and water quality controls for adjacent development, are required as part of the land use controls within the Chula Vista LCP to reduce edge effects from development outside the Preserve. Additional adjacency guidelines related to drainage, toxic substances, noise, lighting, and invasive species are provided in Section 7.5 of this Subarea Plan. A management framework for the Otay River populations is provided through the Otay Ranch RMP.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

At the time permit amendments are proposed, strategies to provide protection for this species within the amendment area must be included. Take Authorization amendments are subject to public review through CEQA and NEPA processes and require approval by the Wildlife Agencies.

Dudleya variegata
Variegated dudleya
Narrow Endemic Species

Habitat and Habitat Associations

Openings in sage scrub and chaparral, isolated rocky substrates in open grasslands, and a proximity to Vernal Pools and mima mound topography characterize habitats occupied by this species. Variegated dudleya usually grows in small areas quite devoid of shrub cover even though chamise, scrub oak, or sage scrub elements may occur nearby.

Conservation in *Chula Vista Subarea*

Preserve design provides for conservation of 100% of major populations located in the eastern Otay River Valley. Since the 1996 Draft Subarea Plan, new populations of variegated dudleya have been identified on Bella Lago and Rolling Hills Ranch Subarea 3. Preserve design on Rolling Hills Ranch Subarea 3 will provide for conservation of 74% of the onsite population. Preserve design on Bella Lago will provide for conservation of nearly 100% of the onsite population. Because of its status as a Narrow Endemic Species, any populations of variegated dudleya within the City and outside the Development Area of Covered Projects will be subject to impact restrictions pursuant to Section 5.2.3 of this Subarea Plan and the HLIT Ordinance.

Management Framework in *Chula Vista Subarea*

The Otay Ranch RMP provides the management framework for this species in Otay Ranch and the City Planning Component Framework Management Plan in Section 7.3 of the Subarea Plan provides the management framework for this species in the City Planning Component.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include species-specific monitoring and measures to protect against detrimental edge effects to this species, including effects caused by recreational activities.

Ferocactus viridescens
San Diego barrel cactus

Habitat and Habitat Associations

The optimal habitat for this cactus appears to be Diegan sage scrub hillsides, often at the crest of slopes and growing among cobbles. It occasionally is found on the periphery of Vernal Pools and mima mound topography. This presumably more mesic habitat (Stockpen gravelly clay loams) is unlike the very xeric situations where it is typically found. This barrel cactus utilizes a number of other soil types such as San Miguel-Exchequer rocky silt loams and Redding gravelly loams.

Conservation in *Chula Vista Subarea*

Preserve design provides for conservation of 75% of major populations located in Salt Creek, Wolf Canyon and the Otay River Valley. Otay Ranch RMP requires salvage and relocation of impacted specimens from development areas to suitable locations within the Preserve.

Management Framework in *Chula Vista Subarea*

The Otay Ranch RMP provides the management framework for this species in Otay Ranch and the City Planning Component Framework Management Plan in Section 7.3 of the Subarea Plan provides the management framework for this species in the City Planning Component.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to protect this species from edge effects and unauthorized collection. Directives shall also include appropriate fire management/control practices to protect against a too frequent fire cycle.

Deinandra [Hemizonia] conjugens
Otay tarplant
Narrow Endemic Species

Habitat and Habitat Associations

Fractured clay soils in grasslands or sparsely vegetated Diegan coastal sage scrub are the preferred habitat of the Otay tarplant. Soils on the occupied sites near Sweetwater Reservoir are mapped as Diablo clay. Usually, there is little competition from woody shrubs where this annual grows.

Conservation in *Chula Vista Subarea*

As a Narrow Endemic Species, Otay tarplant within the City and outside the Development Area of Covered Projects will be subject to impact restrictions pursuant to Section 5.2.3 of this Subarea Plan and the HLIT Ordinance. In addition, Preserve design provides for conservation of the species at the following levels: (1) Otay Ranch – 100% conservation of major populations in the Otay River Valley and conservation of 70% overall, including populations in the Wolf Canyon area; (2) Rolling Hills Ranch: a) 19% conservation of the onsite population in the Preserve and 29% of the onsite population in the project open space for an overall onsite conservation rate of 48%; b) creation of a Tarplant Management Area (TMA) for Otay tarplant conserved in the project open space between Neighborhoods 9 and 10A and Neighborhoods 11 and 12; c) creation of a $100,000 non-wasting endowment to fund management in the TMA, including the possibility of restoration/revegetation activities within the TMA; d) off-site conservation of 5.8 acres of land containing approximately 15,080 Otay tarplants within the San Miguel Ranch Mitigation Bank and off-site conservation of 10 acres containing a minimum of 15,000 Otay tarplants; and e) preservation of an additional 1.9 acres of Otay tarplant within the San Miguel Ranch Mitigation Bank; (3) Bella Lago – 80% conservation of the onsite population

and off-site conservation of 14,630 square feet of land containing at least 210 Otay tarplants; (4) San Miguel Ranch – conservation of a minimum of 48 acres of Otay tarplant habitat and donation of $545,000 for a conservation management endowment for natural open space on the project, the majority of which funds will be directed at management efforts for the tarplant under the direction of the San Diego NWR. Additional known habitat in Bonita Meadows is presently outside of the *Chula Vista Subarea* within the County of San Diego. The Bonita Meadows Property has been acquired by CALTRANS for mitigation purposes.

Management Framework in *Chula Vista Subarea*

Implementation of area-specific management directives will provide for focused management of major populations of Otay tarplant. Management of the Otay Ranch populations will be provided through the RMP and future area-specific management directives. The City Planning Component Framework Management Planing Section 7.3 of the Subarea Plan provides the framework for this species in the City Planning Component. Rolling Hills Ranch and Bella Lago will have area-specific management directives developed and carried out as conditions of project approvals. Populations of Otay tarplant within the northern and western open space area on San Miguel Ranch will be managed by the San Diego NWR. Management of remaining populations in existing open space areas will be subject to additional management directives to be developed and implemented by the City. This includes open space areas in the Sunbow and Rancho Del Rey areas.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures for monitoring of populations, adaptive management of Preserve areas (taking into consideration the extreme population fluctuations from year to year), and measures protecting against detrimental edge effects to this species. Management pursuant to the Otay Ranch RMP will be required as a condition of project development.

Opuntia parryi* var. *serpentina
Snake cholla
Narrow Endemic Species

Habitat and Habitat Associations

Diegan sage scrub on xeric hillsides is the preferred habitat for this species. Soils include Huerhuero loam in Otay Valley.

Conservation in *Chula Vista Subarea*

Preserve design provides for conservation of 65% of maritime succulent scrub habitat. As a Narrow Endemic Species, any populations of snake cholla within the City will be subject to impact restrictions pursuant to Section 5.2.3 of this Subarea Plan and the HLIT Ordinance.

Management Framework in *Chula Vista Subarea*

The Otay Ranch GDP/SRP and RMP require protection of 80% of existing occurrences and transplantation of any impacted occurrences to restored areas of comparable size.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include specific measures to protect against detrimental edge effects to this species and translocation, where appropriate.

Euphydras editha quino
Quino checkerspot butterfly

The Quino checkerspot butterfly is not a Covered Species of the MSCP Subregional Plan. A separate and complete QCB Recovery Component will be implemented through this Subarea Plan and is discussed in Section 4.4.

Panoquina errans
Salt marsh skipper

Habitat and Habitat Associations

In San Diego County, salt marsh skipper is associated with coastal lagoons and salt marshes and is dependent upon salt grass (*Distichlis spicata*) , which is the single larval host plant. Nectar sources for the skipper include heliotrope (*Heliotropum curvassavicum*), salty susan (*Jaumea carnosa*), sea rocket (*Cakile maritima*), deerweed (*Lotus scoparius*) and frankenia (*Frankenia salina*).

Conservation in *Chula Vista Subarea*

Preserve design provides for conservation of 100% of southern coastal salt marsh habitat in the Sweetwater Marsh NWR. Additional protection against direct impacts outside the Preserve will be provided through the HLIT Ordinance.

Management Framework in *Chula Vista Subarea*

Management will be provided through the maintenance of the Sweetwater Marsh NWR by the USFWS. Buffers outside the NWR, as well as lighting and water quality controls for adjacent development, are required as part of the land use controls within the Chula Vista LCP to reduce edge effects from development outside the Preserve. Additional adjacency guidelines related to drainage, toxic substances, noise, lighting, and invasive species are provided in Section 7.5.2 of the Subarea Plan.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to control exotic weeds and invertebrate predators where appropriate and control public access to saltmarsh habitat.

Rallus longirostris levipes
Light-footed clapper rail

Habitat and Habitat Associations

The light-footed clapper rail occurs in the lower littoral zone of coastal salt marshes where cordgrass is present; however, all marsh habitats and adjacent uplands are used to some extent. It is also known to occur in freshwater marsh areas of the Sweetwater River, east and west of I-805.

Conservation in *Chula Vista Subarea*

Preserve design provides for conservation of 100% of southern coastal salt marsh habitat in the Sweetwater Marsh NWR. Additional protection against direct impacts outside the Preserve will be provided through the HLIT Ordinance.

Management Framework in *Chula Vista Subarea*

Management will be provided through the maintenance of the Sweetwater Marsh NWR by the USFWS. Buffers outside the NWR, as well as lighting and water quality controls for adjacent development, are required as part of the land use controls within the Chula Vista LCP to reduce edge effects from development outside the Preserve. Additional adjacency guidelines related to drainage, toxic substances, noise, lighting, and invasive species are provided in Section 7.5.2 of this Subarea Plan.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include active management of Wetlands to ensure a healthy tidal salt marsh environment and specific measures to protect against detrimental edge effects to this species.

Charadrius alexandrinus nivosus
Western snowy plover

Habitat and Habitat Associations

The western snowy plover utilizes sandy beaches, dried mudflats, and saltpan within the MSCP study area. The species is known to nest in the D Street fill area, immediately north of the Sweetwater National Wildlife Refuge, within the portion of the Subarea that is within the jurisdiction of the San Diego Unified Port District.

Conservation in *Chula Vista Subarea*

Preserve design provides for conservation of 100% of southern coastal salt marsh habitat in the Sweetwater Marsh NWR. Additional protection against direct impacts outside the Preserve will be provided through the HLIT Ordinance.

Management Framework in *Chula Vista Subarea*

Management will be provided through the maintenance of the Sweetwater Marsh NWR by the USFWS. Buffers outside the NWR, as well as lighting and water quality controls for adjacent development, are required as part of the land use controls within the Chula Vista LCP to reduce edge effects from development outside the

Preserve. Additional adjacency guidelines related to drainage, toxic substances, noise, lighting, and invasive species are provided in Section 7.5.2 of this Subarea Plan.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include protection of nesting sites from human disturbance during the reproductive season and specific measures to protect against detrimental edge effects to this species. Incidental Take (during the breeding season) associated with maintenance/removal of levees/dikes is not authorized except as specifically approved on a case-by-case basis by the Wildlife Agencies.

Numenius americanus
Long-billed curlew

Habitat and Habitat Associations

Tidal mudflats and salt marshes are this species' preferred habitat however, it can also be found in the fall in agricultural fields. It is a migratory species that utilizes rangeland, cultivated land, tideflats, beaches, and salt marshes.

Conservation in *Chula Vista Subarea*

Preserve design provides for conservation of 100% of southern coastal salt marsh habitat in the Sweetwater Marsh NWR. Additional protection against direct impacts outside the Preserve will be provided through the HLIT Ordinance.

Management Framework in *Chula Vista Subarea*

Management will be provided through the maintenance of the Sweetwater Marsh NWR by the USFWS. Buffers outside the NWR, as well as lighting and water quality controls for adjacent development, are required as part of the land use controls within the Chula Vista LCP to reduce edge effects from development outside the Preserve. Additional adjacency guidelines related to drainage, toxic substances, noise, lighting, and invasive species are provided in Section 7.5.2 of this Subarea Plan.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

None identified.

Sterna antillarum browni
California least tern

Habitat and Habitat Associations

The California least tern nests along the California coastline from April through August in open sand, salt pans, or dried mudflats near lagoons or estuaries. They forage primarily in nearshore ocean waters and in shallow estuaries and lagoons, mostly within two miles of the breeding area. Unfrequented sandy beaches close to estuaries and coastal embayments have traditionally served as nesting sites for the California least tern.

Conservation in *Chula Vista Subarea*

Preserve design provides for conservation of 100% of southern coastal salt marsh habitat in the Sweetwater Marsh NWR. Additional protection against direct impacts outside the Preserve will be provided through the HLIT Ordinance.

Management Framework in *Chula Vista Subarea*

Management will be provided through the maintenance of the Sweetwater Marsh NWR by the USFWS. Buffers outside the NWR, as well as lighting and water quality controls for adjacent development, are required as part of the land use controls within the Chula Vista LCP to reduce edge effects from development outside the Preserve. Additional adjacency guidelines related to drainage, toxic substances, noise, lighting, and invasive species are provided in Section 7.5.2 of this Subarea Plan.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include protection of nesting sites from human disturbance during reproductive season, predator control, and specific measures to protect against detrimental edge effects to this species. Incidental Take (during the breeding season) associated with maintenance/removal of dikes/levees and/or beach maintenance/enhancement is not authorized except as specifically approved on a case-by-case basis by the Wildlife Agencies.

Speotyto cunicularia hypugaea
Burrowing owl

Habitat and Habitat Associations

The burrowing owl is typically found in open grasslands, prairies, and farmlands.

Conservation in *Chula Vista Subarea*

Preserve design provides for conservation of 29% of grassland habitat. In addition, through CEQA review the City will require surveys for the species, using appropriate protocols, in suitable habitat to determine if the species is present. If burrowing owls are detected in the Preserve, direct impacts will be avoided, and if found outside of the Preserve, impacts will be avoided to the greatest extent practicable. Impacted individuals will be relocated from impacted areas using passive and/or active methodologies that have been approved by the Wildlife Agencies.

Management Framework in *Chula Vista Subarea*

Habitat enhancement opportunities for the species within the Subarea occur in the Otay Ranch and Otay River Valley.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Management directives shall include identification of known historical and potential burrowing owl habitat and management for ground squirrels (the primary excavator of burrowing owl burrows). Enhancement measures may include creation of artificial burrows and vegetation management to enhance foraging habitat. Management plans

must also include monitoring of burrowing owl nest sites to determine use and nesting success, predator control, and establishing a 300-foot wide impact avoidance area (within the Preserve) around occupied burrows.

Campylorhynchus brunneicapillus couesi
Coastal cactus wren

Habitat and Habitat Associations

The cactus wren is found in coastal sage scrub and maritime succulent scrub habitats. Locally, the species inhabits coastal lowlands where they are restricted to native cactus thickets.

Conservation in *Chula Vista Subarea*

Preserve design provides for conservation of 65% of maritime succulent scrub habitat in the Subarea. In addition, translocation practices required for *Opuntia parryi* will further contribute to habitat enhancements for this species.

Management Framework in *Chula Vista Subarea*

The restoration of maritime succulent scrub habitat as specified in the Otay Ranch RMP and GDP shall occur at the specified 1:1 ratio.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include restoration of maritime succulent scrub habitat, including propagation of cactus patches, active/adaptive management of cactus wren habitat, monitoring of populations within preserves, and specific measures to reduce or eliminate detrimental edge effects. No clearing of occupied habitat may occur from February 15 through August 15.

Polioptila californica californica
Coastal California gnatcatcher

Habitat and Habitat Associations

The coastal California gnatcatcher is a strictly non-migratory passerine, which typically occurs in or near coastal sage scrub habitat and is most commonly found in moderately dense stands (40-70% cover) below 620 meters. Gnatcatchers use chaparral, grassland, and riparian habitats adjacent to sage scrub for normal dispersal.

Conservation in *Chula Vista Subarea*

Preserve design provides for conservation of 65% of coastal sage scrub habitat and 65% of maritime succulent scrub habitat in the Subarea.

Management Framework in *Chula Vista Subarea*

The Otay Ranch RMP provides for management and restoration of contiguous and/or interconnected patches of coastal sage scrub. No clearing of occupied habitat within 100 % conservation areas and 75-100% conservation areas may occur from February

15 through August 15.[1] Area-specific management directives must include specific adjacency guidelines related to noise (refer to Section 7.5.2 of this Subarea Plan).

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to reduce edge effects and minimize disturbance during the nesting period, fire protection measures to reduce the potential for habitat degradation due to unplanned fire, and management measures to maintain or improve habitat quality including vegetation structure. No clearing of occupied habitat in the MHPA may occur from March 1 through August 15.

Vireo bellii pusillus
Least Bell's vireo

Habitat and Habitat Associations

The least Bell's vireo is an obligate riparian breeder, typically inhabiting structurally diverse woodlands along watercourses. It occurs in a number of riparian habitat types, but selection of nesting sites does not appear to be strictly limited to riparian stands of a specific age. This vireo uses adjacent upland habitats, which may provide important supplemental food resources for the bird. Vireos also nest in adjacent upland habitat types. The understory of nesting areas frequently contains dense subshrub or shrub thickets dominated by sandbar willow, mule fat, young individuals of other willow species (e.g., arroyo or black willow), and one or more herbaceous species. Significant overstory species include mature arroyo willows, black willows, and cottonwood. Sites supporting vireos are wider and have a higher degree of vertical stratification with large amounts of tree and shrub cover, and comparatively little herbaceous cover or open area. Wide portions of the Otay River floodplain have potential for establishment of vireo habitat.

Conservation in *Chula Vista Subarea*

Conservation of 93% of Wetland habitat is provided through Preserve design in the Subarea. Of the 1,080 estimated acres of Wetland resources within the City, 1,005 acres are within the Preserve. Outside the Preserve, 22 acres are fully protected through existing permit mechanisms and 45 acres are located on properties owned by public agencies. Only 8 acres of Wetland resources are located in areas planned for development: approximately 2 acres of riparian–related Wetlands in Rolling Hills Ranch Subarea III, and an estimated 6 acres of combined marsh, disturbed Wetlands and riparian resources are located on the Midbayfront project site. Rolling Hills Ranch Subarea III is a Covered Project pursuant to this Subarea Plan. The Midbayfront project will be subject to the City's HLIT ordinance. Any proposed impacts to Wetlands in these areas will be subject to the Wetlands protection program detailed in Section 5.2.4 of this Subarea Plan and to Federal and State no-net-loss wetland policies. ASDMs must include specific adjacency guidelines related to noise (refer to Section 7.5.2 of this Subarea Plan).

[1] The City of Chula Vista utilizes a breeding season for the California gnatcatcher which commences two weeks prior to the California gnatcatcher breeding season identified in Table 3-5 of the MSCP Subregional Plan.

Management Framework in *Chula Vista Subarea*:

Management of Wetlands within the Preserve will include brown-headed cowbird control measures and specific measures to protect against detrimental edge effects.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Jurisdictions will require surveys (using appropriate protocols) during the CEQA review process in suitable habitat proposed to be impacted and incorporate mitigation measures consistent with 404(b)(1) guidelines into the project. Participating jurisdiction's guidelines and ordinances and Federal and State wetland regulations will provide additional habitat protection resulting in no-net-loss of Wetlands. Jurisdiction must require new developments adjacent to Preserve areas that create conditions attractive to brown-headed cowbirds to monitor and control cowbirds. Area-specific management directives must include measures to provide appropriate successional habitat, upland buffers for all known populations, cowbird control, and specific measures to protect against detrimental edge effects to this species. No clearing of occupied habitat may occur from March 15 to September 15.

Aimophila ruficeps canescens
California rufous-crowned sparrow

Habitat and Habitat Associations

This species is typically found in coastal sage scrub and chaparral habitats, within coastal sage scrub, and areas that are steep and rocky as well as open coastal sage scrub where there are scattered grasses.

Conservation in *Chula Vista Subarea*

Preserve design provides for conservation of 65% of coastal sage scrub and 65% of maritime succulent scrub.

Management Framework in *Chula Vista Subarea*

The Otay Ranch RMP provides for management and restoration of contiguous and/or interconnected patches of coastal sage scrub and maritime succulent scrub.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include maintenance of dynamic processes such as fire to perpetuate some open phases of coastal sage scrub with herbaceous components.

Passerculus sandwichensis beldingi
Belding's savannah sparrow

Habitat and Habitat Associations

This species is restricted to salt marshes around coastal lagoons that are dominated by pickleweed.

Conservation in *Chula Vista Subarea*

Conservation of 100% of southern coastal salt marsh habitat in the Sweetwater Marsh NWR. Additional protection against direct impacts outside the Preserve will be provided through the HLIT Ordinance.

Management Framework in *Chula Vista Subarea*

Management will be provided through the maintenance of the Sweetwater Marsh NWR by the USFWS. Buffers outside the NWR, as well as lighting and water quality controls for adjacent development are required as part of the land use controls within the Chula Vista LCP to reduce edge effects from development outside the Preserve. Additional adjacency guidelines related to drainage, toxic substances, noise, lighting, and invasive species are provided in Section 7.5.2 of this Subarea Plan.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to protect against detrimental edge effects to this species.

Passerculus sandwichensis rostratus
Large-billed savannah sparrow

Habitat and Habitat Associations

This species is a wintering species within the Subarea and is found in open fields and salt marshes.

Conservation in *Chula Vista Subarea*

This Subarea plan includes conservation of 100% of southern coastal salt marsh habitat in the Sweetwater Marsh NWR. Additional protection against direct impacts outside the Preserve will be provided through the HLIT Ordinance.

Management Framework in *Chula Vista Subarea*

Management will be provided through the maintenance of the Sweetwater Marsh NWR by the USFWS. Buffers outside the NWR, as well as lighting and water quality controls for adjacent development, are required as part of the land use controls within the Chula Vista LCP to reduce edge effects from development outside the Preserve. Additional adjacency guidelines related to drainage, toxic substances, noise, lighting, and invasive species are provided in Section 7.5.2 of this Subarea Plan.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to protect against detrimental edge effects to this species.

4.2 Species with Known Occurrences or Suitable Habitat

This section discusses those species from the MSCP Subregional Plan Covered Species list that either have some occurrence data available within the Subarea or for which the Subarea contains suitable habitat or conditions for the species. These species would not be expected to be adequately conserved by the Subarea Plan alone, and the City's Take Authorization would be dependent upon other Subarea Plans in the MSCP Subregion to be maintained. However, it is important to note Chula Vista's contribution to the overall subregional conservation efforts for these species.

Acanthomintha ilicifolia
San Diego thorn-mint
Narrow Endemic Species

Habitat and Habitat Associations

San Diego thorn-mint occurs on clay soils in depressions on mesa and slopes, and is often associated with Vernal Pools.

Conservation of Known or Potential Habitat in the Subarea

The MSCP database does not contain point data for this species within the Subarea. CNDDB identifies several locations within the Subarea in Otay Ranch (Village 2 north of Poggi Canyon) and in the Bonita Meadows area. The population in Village 2 was surveyed but not located in spring 2000. The most significant population in the area is within the resort site of Otay Ranch which is outside the Subarea and will be preserved. As a Narrow Endemic Species, any populations of San Diego thorn-mint within the City will be subject to impact restrictions pursuant to Section 5.2.3 of this Subarea Plan and the HLIT Ordinance.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives and the SPA Plan for the Otay Lakes Resort area must include specific measures to protect against detrimental edge effects from the surrounding development.

Ambrosia pumila
San Diego ambrosia
Narrow Endemic Species

Habitat and Habitat Associations

San Diego ambrosia occurs in open habitats in coarse substrates near drainage and in upland areas on clay slopes or in the dry margins of Vernal Pools. This species occurs in a variety of associations that are dominated by sparse grasslands or marginal wetland habitats such as river terraces, pools and alkali playas.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

The MSCP database does not contain point data for this species within the Subarea. CNDDB identifies three locations within the Subarea: one in Greg Rogers Park,

another in Terra Nova Plaza (now developed) and the third in Rice Canyon. Potential habitat exists in Preserve areas in Otay Ranch, including the Otay River Valley. As a Narrow Endemic Species, populations of San Diego ambrosia within the City will be subject to impact restrictions pursuant to Section 5.2.3 of this Subarea Plan and the HLIT Ordinance.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include monitoring of transplanted populations and specific measures to protect against detrimental edge effects.

Brodiaea orcuttii
Orcutt's brodiaea
Narrow Endemic Species

Habitat and Habitat Associations

Orcutt's brodiaea occurs in clay soils in mesic native grasslands often associated with Vernal Pools.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

The MSCP database does not contain point data for this species within the Subarea. CNDDB identifies two locations in the J23-24 and J29-30 vernal pool complexes, which are outside of the Subarea boundary but within the Otay Ranch Planning Component. As a Narrow Endemic Species, any populations of Orcutt's brodiaea within the City will be subject to impact restrictions pursuant to Section 5.2.3 of this Subarea Plan and the HLIT Ordinance.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to protect against detrimental edge effects.

Caulanthus stenocarpus* [subsumed into *Caulanthus heterophyllus var heterophyllus]
Slender-pod jewelflower

Habitat and Habitat Associations

Slender-pod jewelflower is found on dry slopes in burned or disturbed areas and is generally associated with chaparral habitats.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

The MSCP database does not contain point data for this species within the Subarea. There is a low likelihood of occurrence in the Subarea based on the known range of the species.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to address the autecology and natural history of the species and to reduce the risk of catastrophic fire. Management measures to accomplish this may include prescribed fire.

Ericameria palmeri* ssp. *palmeri
Palmer's ericameria
Narrow Endemic Species

Habitat and Habitat Associations

Palmer's ericameria is associated with coastal sage scrub habitats.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

The MSCP database does not contain point data for this species within the Subarea. Preserve design provides for conservation of 65% of coastal sage scrub habitats. As a Narrow Endemic Species, any populations of Palmer's ericameria within the City will be subject to impact restrictions pursuant to Section 5.2.3 of this Subarea Plan and the HLIT Ordinance.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

No specific conditions for management are identified in Table 3-5 for this species.

Eryngium aristulatum* var. *parishii
San Diego button-celery

Habitat and Habitat Associations

San Diego button celery occurs only in Vernal Pools with clay soils.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

The MSCP database does not contain point data for this species within the Subarea. CNDDB identifies several locations in the J23-24, J29-30, and J31 North+ and South+ vernal pool complexes, which are outside of the Subarea boundary but within the Otay Ranch Planning Component. Potential vernal pool habitat for this species exists within the portion of the Otay Ranch that is within the Subarea. The Otay Ranch RMP provides for preservation of substantial vernal pool resources, and states a policy of preservation of 95% of vernal pool habitat, including a vernal pool Preserve consisting of over 400 acres. However, most of the vernal pool preservation areas are outside of the Subarea boundary. It should be noted that implementation of the Otay Ranch RMP will be carried out by both the City and the County of San Diego, ensuring that the goals and policies of the RMP are met and enforced regardless of political jurisdiction.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to protect against detrimental edge effects.

Muilla clevelandii
San Diego goldenstar

Habitat and Habitat Associations

San Diego goldenstar is found on dry mesas and hillsides in chaparral and coastal sage scrub habitats.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*:

The MSCP database does not contain point data for this species within the Subarea: however, a new population has been identified in Rolling Hills Ranch and several individual plants have been identified in Bella Lago In addition, the USFWS has reported occurrences of the species on the inverted "L" parcel and within portions of San Miguel Ranch and Ames Ranch (outside of the Subarea) in the San Diego NWR (Draft Subarea Plan public review comments). CNDDB identifies a location in the vernal pool complexes on the Otay Mesa just outside the Subarea and within the Otay Ranch Preserve. Preserve design provides for conservation of this species.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include monitoring of the transplanted population(s) and specific measures to protect against detrimental edge effects to this species.

Navarretia fossalis
Spreading navarretia

Habitat and Habitat Associations

Known localities of this species are restricted to Vernal Pools and depressions that once supported Vernal Pools.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

The MSCP database does not contain point data for this species within the Subarea. Several known locations are in the vernal pool complexes on the Otay Mesa which are outside of the Subarea boundary but within the Otay Ranch Planning Component. Potential vernal pool habitat for this species exists within the portion of the Otay Ranch that is within the Subarea. The Otay Ranch RMP provides for preservation of substantial vernal pool resources, and states a policy of preservation of 95% of vernal pool habitat, including a vernal pool Preserve consisting of over 400 acres. However, most of the vernal pool preservation areas are outside of the Subarea boundary. It should be noted that implementation of the Otay Ranch RMP will be carried out by both the City and the County of San Diego, ensuring that the goals and policies of the RMP are met and enforced regardless of political jurisdiction.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to protect against detrimental edge effects to this species and must incorporate measures to conserve

and maintain surrounding habitat for pollinators and as part of the hydrological system for the Vernal Pools.

Orcuttia californica
California Orcutt grass

Habitat and Habitat Associations

All known California Orcutt grass localities are restricted to Vernal Pools.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

The MSCP database does not contain point data for this species within the Subarea. Four of the seven extant San Diego County populations are on the Otay Mesa, which is outside of the Subarea boundary. Potential vernal pool habitat for this species exists within the portion of the Otay Ranch that is within the Subarea. The Otay Ranch RMP provides for preservation of substantial vernal pool resources, and states a policy of preservation of 95% of vernal pool habitat, including a vernal pool Preserve consisting of over 400 acres. However, most of the vernal pool preservation areas are outside of the Subarea boundary. It should be noted that implementation of the Otay Ranch RMP will be carried out by the City and the County of San Diego, ensuring that the goals and policies of the RMP are met and enforced regardless of political jurisdiction.

Relevant Management Requirements, (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to protect against detrimental edge effects to this species and measures to maintain surrounding habitats for pollinators.

Pogogyne nudiuscula
Otay Mesa mint

Habitat and Habitat Associations

All known Otay Mesa mint localities are restricted to Vernal Pools.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

The MSCP database does not contain point data for this species within the Subarea. Several known locations are in the vernal pool complexes on the Otay Mesa, which are outside of the Subarea boundary but within the Otay Ranch Planning Component. Potential vernal pool habitat for this species exists within the portion of the Otay Ranch that is within the Subarea. The Otay Ranch RMP provides for preservation of substantial vernal pool resources, and states a policy of preservation of 95% of vernal pool habitat, including a vernal pool Preserve consisting of over 400 acres. However, most of the vernal pool preservation areas are outside of the Subarea boundary. It should be noted that implementation of the Otay Ranch RMP will be carried out by both the City and the County of San Diego, ensuring that the goals and policies of the RMP are met and enforced regardless of political jurisdiction.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to protect against detrimental edge effects maintain surrounding habitat for pollinators and maintain vernal pool watershed areas.

Satureja chandleri
San Miguel savory

Habitat and Habitat Associations

San Miguel savory occurs in rocky canyons below 2,500 feet msl and is associated with coastal sage scrub, chaparral, cismontane woodlands, riparian woodlands, and valley and foothill grasslands.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

The MSCP database does not contain point data for this species within the Subarea. The species is known to exist in the San Miguel and Jamul Mountain areas.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to address the autecology and natural history of the species and to reduce the risk of catastrophic fire. Management measures to accomplish this may include prescribed fire.

Solanum tenuilobatum
Narrow-leaved nightshade

Habitat and Habitat Associations

Narrow-leaved nightshade occurs in dry open places in chaparral habitats.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

A known major population exists on the Inverted "L" property within Otay Ranch. This property has been divided into two parcels. The southern parcel is owned by USFWS and is being conserved. The northern parcel is owned by the Otay Water District and any impacts to sensitive species on this site will be subject to other permitting.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

None identified.

Branchinecta sandiegonensis
San Diego fairy shrimp

Habitat and Habitat Associations

Known to occur in Vernal Pools or depressions in vernal pool habitat areas.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

The MSCP database does not contain point data for this species within the Subarea. Several known locations are in the vernal pool complexes on the Otay Mesa, which are outside of the Subarea boundary but within the Otay Ranch Planning Component. Potential vernal pool habitat for this species exists within the portion of the Otay Ranch that is within the Subarea. The Otay Ranch RMP provides for preservation of substantial vernal pool resources, and states a policy of preservation of 95% of vernal pool habitat, including a vernal pool Preserve consisting of over 400 acres. However, most of the vernal pool preservation areas are outside of the Subarea boundary. It should be noted that implementation of the Otay Ranch RMP will be carried out by both the City and the County of San Diego, ensuring that the goals and policies of the RMP are met and enforced regardless of political jurisdiction.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to protect against detrimental edge effects to this species.

Streptocephalus woottoni
Riverside fairy shrimp

Habitat and Habitat Associations

Known to occur in Vernal Pools or depressions in Vernal Pool habitat areas, including man-made depressions.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

The MSCP database does not contain point data for this species within the Subarea. Several known locations are in the vernal pool complexes on the Otay Mesa, which are outside of the Subarea boundary but within the Otay Ranch Planning Component. Potential vernal pool habitat for this species exists within the portion of the Otay Ranch that is within the Subarea. The Otay Ranch RMP provides for preservation of substantial vernal pool resources, and states a policy of preservation of 95% of vernal pool habitat, including a vernal pool Preserve consisting of over 400 acres. However, most of the vernal pool preservation areas are outside of the Subarea boundary. It should be noted that implementation of the Otay Ranch RMP will be carried out by both the City and the County of San Diego, ensuring that the goals and policies of the RMP are met and enforced regardless of political jurisdiction.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to protect against detrimental edge effects to this species.

Bufo californicus
Arroyo toad

Habitat and Habitat Associations

Arroyo toads are found in foothill canyons and valleys where a river is bordered by low hills and the stream gradient is low. The species has extremely specialized riparian habitat requirements. Arroyo toads are known to either breed, forage, and/or aestivate in aquatic habitats, riparian, coastal sage scrub, oak, and chaparral habitats.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Preserve design within the Otay River valley provides for conservation of 98% of potentially suitable riparian habitat areas.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Areas-specific management directives must address the maintenance of arroyo toad through control of non-native predators; protection and maintenance of sufficient suitable low-gradient sandy stream habitat (including appropriate water quality) to meet breeding requirements; and preservation of sheltering and foraging habitat within one kilometer of occupied breeding habitat within the Preserve. Area-specific management directives must include measures to control human impacts to the species within the Preserve (e.g., public education and patrol). Take Authorization holders must minimize impacts to upland habitats that are within the MHPA and are within one kilometer of riparian habitat that supports or is likely to support arroyo toad.

Clemmys marmorata pallida
Southwestern pond turtle

Habitat and Habitat Associations

The southwestern pond turtle inhabits slow-moving permanent or intermittent streams, small ponds, small lakes, reservoirs and sewage treatment lagoons. Abundant logs, rocks, submerged vegetation, mud, undercut banks and ledges are necessary habitat components for cover as well as a water depth of greater than 6 feet.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

The MSCP database does not contain existing locations of the species in the Subarea. Preserve design provides for conservation of 98% of potentially suitable riparian habitats and freshwater marsh habitats.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Maintain and manage areas with 1,500 feet around known locations within the Preserve for the species. Within this impact avoidance area, human impacts will be minimized, non-native species detrimental to pond turtles will be controlled/removed, and habitat restoration/enhancement measures will be implemented.

Cnemidophorus hyperythrus beldingi
Orange-throated whiptail

Habitat and Habitat Associations

Habitat types for the orange-throated whiptail include chaparral, non-native grassland, coastal sage scrub and maritime succulent scrub, and juniper and oak woodland. This species is tied to perennial vegetation because its major food source, termites, requires perennial plants as a food base.

Conservation of Known or Potential Habitat in the Subarea

Preserve design in the Subarea provides for conservation of 65% of coastal sage scrub habitat and 65% of maritime succulent scrub with suitable vegetation associations.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must address edge effects.

Phrynosoma coronatum blainvillei
San Diego horned lizard

Habitat and Habitat Associations

San Diego horned lizard is found in a wide variety of vegetation types, including coastal sage scrub, maritime succulent scrub, annual grassland, chaparral, oak woodland, riparian woodland and coniferous forest.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Important habitat to the species in the Subarea includes coastal sage scrub and maritime succulent scrub which will be conserved at 65% and 65% respectively through Preserve design within the Subarea.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to maintain native ant species, discourage the Argentine ant, and protect against detrimental edge effects to this species.

Pelecanus occidentalis californicus
California brown pelican

Habitat and Habitat Associations

The California brown pelican requires a variety of marine-related habitat types.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Some of the habitat requirements of the species include southern coastal salt marsh, which is conserved at 100% in the subarea within the Sweetwater Marsh NWR. Additional protection against direct impacts outside the Preserve will be provided through the HLIT Ordinance.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Most of the important roosting and foraging habitat occurs on military lands and waters under Port Authority jurisdiction which are not included as part of the MSCP. Participating jurisdictions' guidelines and ordinances and Federal and State wetland regulations will provide additional habitat protection resulting in no-net-loss of Wetlands. This species is a common to very common non-breeding visitor which uses mud flats, piers and jetties to roost, and it forages primarily in coastal ocean waters and San Diego Bay.

Egretta rufescens
Reddish egret

Habitat and Habitat Associations

The reddish egret utilizes a variety of marine-related habitats, including southern coastal salt marsh.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Some of the habitat requirements of the species include southern coastal salt marsh, which is conserved at 100% in the Subarea within the Sweetwater Marsh NWR. Additional protection against direct impacts outside the Preserve will be provided through the HLIT Ordinance.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Additional important habitat occurs in waters under Port Authority and military jurisdiction which are not included as part of the MSCP. Participating jurisdictions' guidelines and ordinances and Federal and State wetland regulations will provide additional habitat protection resulting in no-net-loss of Wetlands. This species forages in shallow lagoons, mud flats, tidal channels, and salt marsh and is a rare visitor in fall and winter and a casual visitor in spring and summer but does not nest in San Diego County.

Plegadis chihi
White-faced ibis

Habitat and Habitat Associations

Migrant and wintering white-faced ibis may be found foraging in shallow lacustrine waters, marshes, ponds, lakes and rivers. Extensive marshes are required for nesting. The species prefers shallow, grassy marshes and nests in dense, fresh emergent wetland.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Preserve design provides for conservation of 98% of suitable wetland, marsh and flood control habitats.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to protect against detrimental edge effects to this species.

Branta canadensis
Canada goose

Habitat and Habitat Associations

Habitat used by this species in San Diego County includes open water areas and other wetland associations.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Preserve design in the Subarea includes conservation of 98% of habitats that are considered suitable for this species.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

None identified.

Haliaeetus leucocephalus
Bald eagle

Habitat and Habitat Associations

Bald eagles occur primarily in or near seacoasts, rivers, swamps, and large lakes. Bald eagles must have an adequate food base, perching areas and nesting sites. Perching sites need to be composed of large trees with heavy limbs or broken tops.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Preserve design provides for conservation of 96% of potential foraging habitat, including open water and freshwater marsh habitats.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

None identified.

Circus cyaneus
Northern harrier

Habitat and Habitat Associations

This species frequents open wetlands, wet and lightly grazed pastures, agricultural fields, mesic grasslands, meadows, and fresh and saltwater emergent wetlands.

Conservation of Known or Potential Habitat in the Subarea

Preserve design provides for conservation of 29% of grasslands, with additional Wetlands protection provided through the HLIT Ordinance.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must: (1) manage agricultural and disturbed lands (which become part of the Preserve) within four miles of nesting habitat to provide foraging habitat; (2) include an impact avoidance area (900 feet or maximum possible within the Preserve) around active nests; and (3) include measures for maintaining winter foraging habitat in Preserve areas in Proctor Valley, around Sweetwater Reservoir, San Miguel Ranch, Otay Ranch east of Wueste Road, Lake Hodges, and San Pasqual Valley. The preserve management coordination group shall coordinate efforts to manage for wintering northern harriers' foraging habitat within the MSCP Preserve. (It should be noted that these measures are provided for information purposes only as they apply to areas outside the Subarea, including areas within the Otay Ranch Planning Component.)

Accipiter cooperii
Cooper's hawk

Habitat and Habitat Associations

The Cooper's hawk breeds primarily in riparian areas and oak woodlands. Migrant and wintering birds may be found with regularity in developed areas.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Preserve design and Wetlands protection provide for conservation of potential foraging habitat.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include 300-foot impact avoidance areas around active nests and minimization of disturbance to oak woodlands and oak riparian forrests.

Buteo swainsoni
Swainson's hawk

Habitat and Habitat Associations

This species is a Spring/Fall migrant within the Subarea. Typical habitat for this species in the MSCP Subregion is grassland, agricultural fields and sparse shrub lands.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Preserve design in the Subarea provides for conservation of 29% of grassland and 1% of agricultural fields.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Additional conservation of grassland habitats should be a priority and one of the primary factors in the design of preserves in the major amendment areas.

Buteo regalis
Ferruginous hawk

Habitat and Habitat Associations

This migrant species requires large tracts of open grassland for foraging.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Preserve design in the Subarea provides for conservation of 29% of grassland and 1% of agricultural fields.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Additional conservation of grassland habitats should be a priority and one of the primary factors in the design of preserves in the major amendment areas.

Aquila chrysaetos
Golden eagle

Habitat and Habitat Associations

Range-wide, golden eagles occur in open country (e.g., tundra, open coniferous forests, desert and barren areas). Within southern California, the species favors grasslands, brushlands, deserts, oak savannas, open coniferous forests and montane valleys.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Suitable habitat within the Subarea includes grasslands and coastal sage scrub habitats, which are conserved through Preserve design at a combined level of 45%.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives for areas with nest sites must include measures to avoid human disturbance while the nest is active, including establishing a 4,000-foot disturbance avoidance area within Preserve lands. Area-specific management directives must also include monitoring of nest sites to determine use/success.

Falco peregrinus anatum
American peregrine falcon

Habitat and Habitat Associations

Peregrine falcons are found in a wide variety of open habitats. The species breeds mostly in woodlands, forest and coastal habitats. During migration, the peregrine falcon may be found near marshes, lakes, and ponds with high concentrations of waterfowl, shorebirds and other birds. The recovery plan specifies habitat requirements for the species.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Suitable habitat within the Subarea for certain life history activities of the species are conserved in the Subarea at the following levels: southern coastal salt marsh, 99%; natural flood channel, 92%; coastal sage scrub, 65%; and grassland, 29%.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

None identified.

Sterna elegans
Elegant tern

Habitat and Habitat Associations

In the MSCP Subregion, the species typically associates with beach and saltpan habitats and forages open water.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Suitable habitat for the species in the Subarea includes southern coastal salt marsh, which is conserved at a level of 100% in the Sweetwater Marsh NWR. Additional protection against direct impacts outside the Preserve will be provided through the HLIT Ordinance.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include protection of nesting sites from human disturbance during reproductive season and specific measures to protect against detrimental edge effects to this species. Incidental Take (during the breeding season) associated with maintenance/removal of levees/dikes is not authorized except as specifically approved on a case-by-case basis by the Wildlife Agencies.

Empidonax traillii extimus
Southwestern willow flycatcher

Habitat and Habitat Associations

The southwestern willow flycatcher is restricted to riparian woodlands along streams and rivers with mature, dense stands of willows, cottonwoods, or smaller spring fed or boggy areas with willows or alders. Riparian habitat provides both breeding and foraging habitat for the species.

Conservation of Known or Potential Habitat in the Subarea

Preserve design in the Subarea provides for conservation of 100% of riparian scrub habitats that are considered suitable for the species.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Jurisdictions must require surveys (using appropriate protocols) during the CEQA review process in suitable habitat proposed to be impacted and incorporate mitigation measures consistent with the Federal 404(b)(l) guidelines into the project. Participating jurisdictions' guidelines and ordinances and Federal and State wetland

regulations will provide additional habitat protection resulting in no-net-loss of Wetlands. Management of Wetlands within the Preserve will include brown-headed cowbird control measures and specific measures to protect against detrimental edge effects. Area-specific management directives must include measures to provide appropriate successional habitat, upland buffers for all known populations, cowbird control, and specific measures to protect against detrimental edge effects to this species. Any clearing of occupied habitat must occur outside the nesting season, between May 1 and September 1.

Sialia mexicana
Western bluebird

Habitat and Habitat Associations

Western bluebird is typically associated with mature oak and riparian woodland habitats and grasslands.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Preserve design provides for conservation of 100% of riparian woodland habitats and 29% of grasslands.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

None identified.

Agelaius tricolor
Tricolored blackbird

Habitat and Habitat Associations

Tricolored blackbirds breed in large colonies and require nearby water, a suitable nesting substrate, and open range foraging habitat of natural grassland, woodland, or agricultural cropland.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Habitat that is considered to be suitable for the species in the Subarea includes grassland which is conserved at 29% and riparian scrub which is conserved at 99%.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Project approvals must require avoidance of active nesting areas during the breeding season. Area-specific management directives must include measures to avoid impacts to breeding colonies and specific measures to protect against detrimental edge effects to this species.

Taxidea taxus
American badger

Habitat and Habitat Associations

American Badgers are generally associated with dry, open, treeless regions, prairies, parklands, and cold desert areas. Habitat in the MSCP Subregion generally consists of open, grassy areas of coastal sage scrub.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Preserve design provides conservation for coastal sage scrub at a level of 65% and grassland at a level of 29%.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

Area-specific management directives must include measures to avoid direct human impacts to this species if it is present or likely to be present.

Felis concolor
Mountain lion

Habitat and Habitat Associations

Mountain lions use rocky areas, cliffs, and ledges that provide cover within open woodlands and chaparral as well as riparian areas that provide protective habitat connections for movement between fragmented core habitat areas.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Important habitat considerations in the Subarea include maintenance of habitat linkages. The major regional linkage in the Subarea is the Otay River Valley, which will be maintained and managed as part of the Preserve.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

None identified.

Odocoileus hemionus fuliginata
Southern mule deer

Habitat and Habitat Associations

The Southern mule deer requires significant areas of core habitat linked in a large regional system.

Conservation of Known or Potential Habitat in the *Chula Vista Subarea*

Area-specific management directives must include measures to avoid direct human impacts to this species if it is present or likely to be present.

Relevant Management Requirements (MSCP Subregional Plan Table 3-5)

None identified.

4.3 Species Not Likely to be Found in the *Chula Vista Subarea*

The following species are those that are covered under the MSCP Subregional Plan but for which suitable habitat conditions do not exist within the *Chula Vista Subarea*. An explanation of the rationale used for inclusion of each species on this list is provided below.

Agave shawii
Shaw's agave
Narrow Endemic Species

Shaw's agave is restricted to sandy coastal bluff areas in the northern coastal areas of the MSCP Subregion.

Aphanisma blitoides
Aphanisma

Aphanisma is restricted to sandy coastal bluff areas in the northern coastal areas of the MSCP Subregion.

Arctostaphylos glandulosa* var. *crassifolia
Del Mar manzanita

Del Mar manzanita is restricted to sandy coastal bluff areas in the northern coastal areas of the MSCP Subregion.

Arctostaphylos otayensis
Otay manzanita

Otay manzanita occurs on dry slopes at elevations between 1,800 and 5,000 feet msl and is generally associated with chaparral habitats. This species is not likely to occur within the elevation range found within the *Subarea.*

Astragalus tener* var. *titi
Coastal dunes milk vetch

Coastal dunes milk vetch is restricted to sandy beach strand areas which do not occur in the Subarea.

Baccharis vanessae
Encinitas baccharis
Narrow Endemic Species

Encinitas baccharis is not known or expected to occur in the southern portions of the MSCP Subregion.

Berberis nevinii
Nevin's barberry
Narrow Endemic Species

Nevin's barberry is found in coarse soils and rocky slopes in chaparral and gravelly wash margins in alluvial scrub. This species is associated with chaparral habitats and is generally found within the elevation range between 900 and 2,000 feet msl. It is not anticipated that this species exists or has potential habitat in the Subarea due to elevation restrictions in its range.

Brodiaea filifolia
Thread-leaved brodiaea
Narrow Endemic Species

The southernmost extent of the known range of thread-leaved brodiaea is just south of Lake Hodges and in Vista, San Marcos and Carlsbad. It is not anticipated that the species exists or has potential habitat in the Subarea.

Calamagrostis densa
Dense reed grass

Dense reed grass generally occurs at high elevations (3,000 to 4,000 feet msl) on dry slopes and is associated with chaparral habitats.

Calochortus dunnii
Dunn's mariposa lily
Narrow Endemic Species

Dunn's mariposa lily is found at elevations of 4,500 to 5,000 feet msl on dry slopes and is associated with chaparral habitats. It is not anticipated that this species exists in the Subarea due to elevation restrictions in its range.

Ceanothus cyaneus
Lakeside ceanothus
Narrow Endemic Species

The range of Lakeside ceanothus is limited to the Lakeside, Alpine, Ramona and El Capitan areas, and therefore this species is not expected in the Subarea.

Ceanothus verrucosus
Wart-stemmed ceanothus

Wart-stemmed ceanothus is a component of southern maritime chaparral habitat, which is generally confined to coastal areas near Del Mar. However, the USFWS has reported occurrences within the Subarea Plan, on the Inverted "L" Parcel portion of the San Diego NWR (Draft Subarea Plan public review comments).

Charadrius montanus
Mountain plover

Mountain plovers breed in dry, open, shortgrass prairies or grasslands and winter in shortgrass plains, plowed fields, open sagebrush areas and sandy deserts, and nests in high elevation grassland. No locations for this species were found within the Subarea.

Corethrogyne filaginifolia* var. *linifolia
Del Mar Mesa sand aster

Del Mar Mesa sand aster is confined to coastal bluff areas, which do not occur in the Subarea.

Cupressus forbesii
Tecate cypress

Tecate cypress is found on dry slopes at elevations of 1,500 to 5,000 feet msl. Known populations in the Otay Mountain area and the east end of the Otay River Valley occur within the Otay Ranch Planning Component but are not within the Subarea. It is not anticipated that this species exists in the Subarea due to elevation restrictions in its range.

Dudleya blochmaniae* ssp. *Brevifolia
Short-leaved dudleya
Narrow Endemic Species

Short-leaved dudleya is a coastal sage scrub species with a narrow range in the Del Mar and La Jolla areas. It is not anticipated that this species exists in the Subarea due to restrictions in its range.

Dudleya viscida
Sticky dudleya

Sticky dudleya is a coastal sage scrub species whose range is known to extend no further south than Escondido Creek. It is not anticipated that this species exists in the Subarea, due to restrictions in its range.

Erysimum ammophilum
Coast wallflower

Coast wallflower occurs in coastal strand areas and is not anticipated to occur in the Subarea due to the lack of suitable habitat.

Lepechinia cardiophylla
Heart-leaved pitcher sage

Heart-leaved pitcher sage occurs in closed-cone coniferous forest, chaparral and cismontane woodland at elevations of 1,600 to 4,000 feet msl. Because of elevation restrictions, this species is not anticipated to occur in the Subarea. No locations for this species are identified in the MSCP database or the CNDDB.

Lepechinia ganderi
Gander's pitcher sage
Narrow Endemic Species

Gander's pitcher sage occurs on dry slopes at elevations of 2,500 to 3,500 feet msl in chaparral habitats. Known populations on Otay and San Miguel mountain are outside of the Subarea. It is not anticipated that this species exists in the Subarea due to elevation restrictions in its range.

Lotus nuttallianus
Nuttall's lotus

Nuttall's lotus occurs in sandy soils, typically beach strand areas. The USFWS has reported occurrences within and adjacent to the Sweetwater NWR (Draft Subarea Plan public review comments).

***Monardella hypoleuca* ssp. *Lanata* Narrow Endemic Species**
Felt-leaved monardella

Felt-leaved monardella is generally restricted to San Diego County and occurs in chaparral. It is not anticipated to occur in the Subarea.

Monardella linoides* ssp. *viminea
Willowy monardella
Narrow Endemic Species

Willowy monardella occurs in rocky washes below 1,000 feet (msl) in coastal sage scrub and chaparral habitats.

The MSCP database does not contain point data for this species within the Subarea. CNDDB identifies locations outside of the Subarea to the southeast in the eastern Otay Mesa and Otay Mountain foothill areas.

Nolina interrata
Dehesa bear-grass

Dehesa bear-grass occurs on dry slopes in chaparral habitats and is not known or expected to occur in the Subarea.

Pinus torreyana
Torrey pine

Torrey pine is restricted in the MSCP Subregion to the Del Mar area and would not be expected to occur naturally in the Subarea.

Pogogyne abramsii
San Diego mesa mint

San Diego mesa mint is associated with Vernal Pools. The MSCP database does not contain point data for this species within the Subarea. It is not anticipated that the species would occur in the Subarea.

Rana aurora draytoni
California red-legged frog

The species is believed to be extirpated from the County of San Diego.

Rosa minutifolia
Small-leaved rose

The only known occurrence of small-leaved rose in the MSCP Subregion is outside of the Subarea.

Senecio ganderi
Gander's butterweed

Gander's butterweed occurs at elevations of 5,000 to 9,000 feet msl and is generally associated with montane or cismontane vegetation communities. It is not anticipated that this species exists in the Subarea due to elevation restrictions in its range.

Tetracoccus dioicus
Parry's tetracoccus

Parry's tetracoccus is restricted to gabbro soils and is generally found in chaparral at higher elevations. This species is not expected to occur in the Subarea due to lack of suitable conditions.

Mitoura thornei
Thorne's hairstreak butterfly

Thorne's hairstreak butterfly is dependent upon the Tecate cypress as its larval host food plant. This species is not anticipated to occur within the Subarea due to elevation restrictions in its range.

4.4 Quino Checkerspot Butterfly Recovery Component of Chula Vista Subarea Plan

The federally listed endangered QCB was not included as a Covered Species under the MSCP Subregional Plan. This Subarea Plan defines the actions which will be undertaken to provide for the long-term conservation and recovery of the species in the *Chula Vista Subarea*. Additionally, these actions are consistent with the Draft QCB Recovery Plan (USFWS 2001). The QCB is, therefore, included as a Chula Vista Covered Species and species adequately conserved under this Subarea Plan.

The QCB was federally listed as endangered on January 16, 1997 (62 FR 2313). The best available information indicates that it is highly endangered, as evidenced by the following:

- It was at such low densities prior to listing that it was thought to possibly be extinct (62 FR 2315);
- Populations have been reduced in number and size by more than 95% range-wide;
- It is known to undergo large population fluctuations related to weather (Murphy and White 1984); and
- Most current populations are threatened by ongoing development and invasion of non-native plant species (USFWS 2001).

Since the adoption of the MSCP Subregional Plan, QCB surveys have been undertaken throughout the Southern California range. A QCB Recovery Team was assembled by USFWS in September 1999 to analyze existing information and new data collected from more recent surveys. A QCB Draft Recovery Plan was issued by the USFWS in January 2001, and on February 7, 2001 the USFWS issued a proposed Critical Habitat designation for the species. On April 15, 2002, the final Critical Habitat designation was issued.

This section of the Subarea Plan presents a comprehensive, unified description of the suite of recovery actions the City intends to undertake in order to assist in the conservation and recovery of the Quino checkerspot butterfly. The recovery actions are based on the recommendations contained in the QCB Draft Recovery Plan (January 2001) prepared by USFWS in consultation with the Recovery Team. The Draft Recovery Plan presents the tasks necessary to ultimately reclassify the QCB to threatened and ensure the species' long-term conservation based on the best available scientific information and expert opinions. The recovery plan represents the best available direction on the actions required for the conservation and recovery of the species.

Upon issuance of Take authority to the City, Chula Vista intends to implement conservation measures for QCB that will provide for the long-term conservation and recovery of the species in its jurisdiction through the following actions:

1. Preserve the area within the final critical habitat designation for the QCB;

2. Maintain connectivity along key habitat linkages within the City's boundaries;
3. Manage the Preserve for the benefit of the QCB (along with other Covered Species);

4. Restore/enhance QCB habitat; and

5. Minimize project impacts to QCB.

This suite of recovery actions provides an extraordinary net biological benefit to the species when weighed against anticipated impacts. Background information for the QCB is provided in Appendix J of this Subarea Plan and includes information on physical characteristics and taxonomy, life history, metapopulation dynamics, and reasons for decline and current threats. This information is largely based on the Recovery Plan, which compiled the best available information about the species at the time of its preparation. For inclusion in Appendix J, the information in the Recovery Plan has been augmented with additional sources and updated information where appropriate. For more detailed information, the reader should refer to the Draft Recovery Plan.

4.4.1 Baseline Biological Information

The QCB is the southernmost subspecies of a widely distributed butterfly (*Euphydryas editha*) that ranges from British Columbia to northern Baja California, Mexico (Bauer 1975). It was formerly widespread in the coastal plains and inland valleys of southern California, including Los Angeles, Orange, Riverside, San Diego and San Bernardino counties, and northern Baja California, Mexico (Mattoni et al. 1997, USFWS database). As recently as the 1950s, collectors described the QCB as occurring on every coastal bluff, inland mesa top, and lower mountain slope in San Diego County and coastal northern Baja California (USFWS 2001). Throughout most of southern California, the native habitats of this butterfly have disappeared incrementally as development has progressed and undeveloped areas have been invaded by non-native plant species.

QCB show a preference for relatively open areas with cryptogamic crust and few vascular plants, surrounded by low-growing vegetation (Osborne and Redak 2000). Appropriate generalized habitat types include early and middle successional grasslands, open scrub communities, broken chaparral, and vernal pools (Murphy 1990). Within southwestern San Diego County, QCB have been observed north, east and south of Otay Lakes, the southwestern slope of Otay Mountain, on the San Diego National Wildlife Refuge northeast of Sweetwater Reservoir, along the mesa rim above the Otay River and at the Salt Creek confluence (USFWS 2001). The Otay Lakes area historically supported a large population that extended south to Otay Mesa and across the international border (Murphy and White 1984).

Normally, larvae consume the plant on which they hatch, and then migrate in search of new plants. Due to the limited ability of larvae to move among host plants, high local host density is necessary for larval survival (Osborne and Redak 2000). If larvae have accumulated sufficient reserves by the time their hostplants become inedible, they are able to enter diapause (USFWS 2001), a low-metabolic resting state that enables larvae to

survive for months during the summer without feeding. While in diapause, larvae are much less sensitive to climatic extremes. Larvae are able to re-enter diapause several times before maturing, which may extend their life cycle for several years (Singer and Ehrlich 1979). Because QCB larvae can re-enter diapause, it is possible that an adult flight period may only include a portion of the original larval population or may not occur at all in some occupied sites under adverse conditions. From the perspective of judging whether a population has been extirpated, it is important to know that a robust population may generate no adults at all under poor environmental conditions (USFWS 2001).

Adults are typically active during a four-to-six week flight period beginning between late February and May, depending on weather conditions (Emmel and Emmel 1973). Most *Euphydryas editha* subspecies exhibit generally sedentary behavior, with adults frequently remaining in the same habitat patch in which they developed as larvae (Ehrlich 1961, 1965; Boughton 1999, 2000). Data from mark-recapture studies indicate that long-distance dispersal (greater than 0.6 mile) in *Euphydryas editha* is rare (USFWS 2001). QCB generally fly close to the ground in a relatively slow, meandering flight pattern, and tend to avoid flying over trees, buildings, or other objects taller than six to eight feet. Their thermodynamic requirements and natural avoidance of shaded areas deters flight in densely wooded areas and other types of closed-canopy vegetation (USFWS 2001).

Murphy (1990) suggested that the human-induced decline in the distribution and abundance of the QCB is exacerbated by the complex "metapopulation dynamics" which affect the persistence of this butterfly. In metapopulation dynamics, butterflies exist in an assemblage of individual demographic units or populations that periodically exchange individuals. Metapopulation dynamics occur when (1) patches of habitat support local breeding populations; (2) no single population is large enough to ensure long-term survival; and (3) habitat patches are not too isolated to preclude simultaneous extinction of all populations (D. Murphy, pers.comm.). Metapopulation stability requires a minimum number of habitat patches connected by dispersal corridors (landscape connectivity) (USFWS 2001). Some habitat areas that would not be considered essential if geographically isolated are, in fact, essential when situated in locations where they facilitate continued connectivity between surrounding populations or play a significant role in maintaining metapopulation viability (66 FR 9475). Reserves should be designed to provide sufficient numbers of habitat patches such that (1) only a small number of habitat patches will likely be extirpated in a single year and (2) patches are close enough so that natural recolonization can occur at a rate sufficient to maintain a relatively constant number of patches occupied by larvae. Linkage areas must be free of dispersal barriers (artificial structures, dense stands of trees or tall shrubs) and mortality sinks (e.g., high-traffic roads). Habitat networks should also be buffered (i.e., embedded in natural areas as large as possible) to reduce indirect impacts of development and the need for future or ongoing restoration in occupied habitat.

QCB populations have been reduced in number and size by more than 95 percent range-wide primarily due to direct and indirect human impacts including habitat loss and fragmentation, invasion of non-native plant species, and disrupted fire regimes.

Conversion from native vegetation to non-native annual grassland will be the greatest threat to QCB reserves based on observations of the large-scale invasions throughout the range (Freudenberger et al. 1987, Minnich and Dezzani 1998, Stylinski and Allen 1999). The increased dominance of non-native species is reducing the abundance of QCB foodplants (Dodero pers. comm.), and habitat fragmentation exacerbates vegetation type conversion. Corridors of human activity through unfragmented natural areas such as unpaved roads, trails and pipelines are also conduits of non-native seed dispersal (Zink et al. 1995).

4.4.2 Assessment of Habitat Suitability within the City of *Chula Vista Subarea*

Historically, the QCB almost certainly occurred throughout the coastal plain and foothills of Chula Vista and would have occurred in highest densities around vernal pools. Much of the land within the City's Subarea has already been built out, and much of the remaining area (almost 7,000 acres) is either disturbed or agricultural land. Limited vernal pool complexes remain in the Subarea, and potential QCB habitat within the City has been degraded by previous agricultural activities and by invasion of non-native plant species. While there are some remaining areas of appropriate habitat and several QCB have been observed within the Subarea, the QCB is considered to have minimal potential for occurrence of large populations within the City in the absence of habitat restoration/enhancement.

The City and the Wildlife Agencies have worked together to assess the potential of extant habitat within the Subarea to support QCB. QCB populations fluctuate substantially from year to year. In addition, surveys are not available for all areas, and those surveys that are available contain differing amounts of detail. Where available, detailed habitat assessment and protocol survey information has informed the decision-making process and has been used to define potential impacts and anticipated conservation of QCB habitat.

Where detailed information was not available, analysis of anticipated impacts and conservation was based on a broader "landscape-level" habitat assessment. Actual QCB habitat utilization under current conditions is typically limited to small patches and depends heavily on habitat quality, particularly related to the extent of non-native plant invasion. As such, the total acreage of areas designated as "potential habitat" exceeds by orders of magnitude the areal extent of currently occupied habitat or areas that are likely to support QCB in the future without significant habitat restoration/enhancement.

A number of areas were immediately excluded from the habitat suitability analysis based either on regulatory factors or habitat type considerations and are graphically depicted on Figure 4-1. Only the portion of the City within the designated 2000 survey area was assessed for habitat potential. The total 2000 QCB survey area within the City equals approximately 14,174 acres. State Route 125, SDG&E rights-of-way and facilities, City of San Diego Cornerstone Lands, Otay Water District lands and the Otay Landfill were excluded because the City is not seeking Take Authorization in those areas under the Subarea Plan. These areas are shown in brown and labeled "Not a part" on Figure 4-1 and total approximately 1,619 acres. In addition, consistent with the remainder of the

Generalized Landcovers within 2000 USFWS QCB Survey Boundary

COUNTY OF SAN DIEGO

East Lake

Upper Otay Reservoir

Lower Otay Reservoir

Otay River

Otay Landfill

COUNTY OF SAN DIEGO

CITY of SAN DIEGO

COUNTY OF SAN DIEGO

Legend

- Excluded Areas
- Minor Ammendment Areas
- Not A Part
- Development Area Outside of Chula Vista; Subject to County Subarea Segment Plans
- Non-Preserve Habitat--Category A
- Non-Preserve Habitat--Category B
- Non-Preserve Habitat--Category C
- Preserve--Category A
- Preserve--Category B
- Preserve--Category C
- Areas with Protocol Surveys in 1999
- Areas with Protocol Surveys in 2000
- Areas with Protocol Surveys in 2001
- City Boundary
- 2000 QCB Survey Area

QCB Observations by Survey Year

- 1999
- 2000
- 2001

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0 2000 4000 8000
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SCALE: 1 inch = 4000 feet

Plot Created: January 26, 2004

CITY OF CHULA VISTA
GEOGRAPHIC INFORMATION SYSTEM

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FIGURE 4-1

Subarea Plan, the quarry totaling approximately 136 acres is considered a minor amendment area. It is designated "Minor Amendment" and is depicted in gray on Figure 4-1. Because they do not provide suitable habitat for QCB, developed, agricultural and riparian areas were excluded as potential habitat. Agricultural and riparian areas total approximately 9,522 acres; they are designated as "Excluded Areas" and shown in tan on Figure 4-1.

Non-excluded lands were assigned to habitat suitability Categories A through C and are also shown on Figure 4-1. These categories represent decreasing potential to support QCB, relative to other areas within the City only, not relative to the region as a whole.

Detailed 2001 habitat assessment and protocol survey information was available for Rolling Hills Ranch (HELIX 2001), Bella Lago (Klein-Edwards Professional Services 2001) and Otay Ranch Village 11 (Dudek 2001). Because 2001 was considered a good flight season, it is considered relatively unlikely (though not impossible) that butterflies will occur in areas with negative surveys in 2001 without habitat enhancement.

Four QCB were observed on Rolling Hills Ranch during 2001 protocol surveys. The approximate area believed to be occupied by these butterflies was drawn based on vegetation and topography. These areas were assigned to Category A. The area on Rolling Hills Ranch considered occupied did not extend as far to the north as to the south because the areas to the north lacked any host plants in 2001, and cryptogamic soils were more limited. The areas not considered occupied (and not excluded because of their agricultural use) were assigned to Category B because although no QCB were observed these areas were in close proximity to observed QCB locations. No butterflies were observed during protocol surveys on Bella Lago; therefore, that property also was assigned to Category B for the same reasons noted on Rolling Hills Ranch.

The remaining areas have been assigned habitat suitability categories based on habitat quality/connectivity and distance from known QCB locations. Areas surrounded by agriculture or developed land and narrow linear strips of vegetation surrounded by development on three sides were considered isolated. Based on edge effects and the likelihood of dispersing QCB to travel through the surrounding uses to encounter such an area, the likelihood of these areas supporting QCB was considered low. Similarly, areas known to consist of low quality habitat (i.e., high percentage of exotic plant species or subject to extensive human activity) are unlikely to support QCB and these areas were also placed in Category C. Proximity to known QCB locations was based on a 0.6-mile (1-kilometer) radius. This radius was selected because data from mark-recapture studies indicate that dispersal greater than this distance is rare in *Euphydryas editha quino* (USFWS 2001, page 20).

Category A includes:

- areas with a positive 2001 survey; and
- areas with no 2001 protocol survey, within 0.6 mile of a known QCB location.

Category B includes:

- areas with a negative 2001 protocol survey, within 0.6 mile of a known QCB location; and
- areas with no 2001 protocol survey, outside 0.6 mile of a known QCB location.

Category C

- includes isolated or low quality habitat.

Total area within the City was approximately 1,485 acres in Category A, 2,3981 acres in Category B and 633 acres for Category C (Figure 4-1).

4.4.3 Proposed Conservation Measures

Protection of suitable habitat patches and landscape connectivity are essential for preservation of the QCB. Approximately 62% (2,806 of 4,516 acres) of the identified potential habitat within the City will be conserved and managed as part of the Preserve. Furthermore, as described below, this area is primarily composed of areas with higher habitat suitability, includes all of the area within the final critical habitat for the species within the City, and maintains crucial linkages identified in the Recovery Plan. Given the extent of non-native plant invasion, long-term viability of the preserved habitat patches will depend heavily on habitat management, restoration and enhancement. The following subsections describe the relevant objectives identified in the Critical Habitat Designation and Draft Recovery Plan, followed by a description of how the Subarea Plan proposes to conserve the species within its jurisdiction.

4.4.3.1 Habitat Protection

The USFWS has designated critical habitat areas for the QCB (66 FR 9475). Critical habitat is defined in Section 3 of the ESA as (i) the specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside of the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. Critical habitat designations identify, to the extent known using the best scientific and commercial data available, habitat areas that provide essential life cycle needs of the species. The Critical Habitat Designation (CHD) was configured to provide for dispersal and migration corridors, as well as allowing room for population expansion. As described in the Federal Register notice, these areas "are designed to provide sufficient habitat to maintain self-sustaining populations of Quino checkerspot butterflies throughout its range." It should be noted, however, that the CHD does not necessarily capture all areas which may be important to the persistence and recovery of the species. The Subarea Plan considered this and has included additional lands outside of the CHD necessary for conservation of the QCB.

The habitat needs of the species are addressed in the Draft Recovery Plan. Protection of habitat within the distribution of described habitat complexes has been identified as Recovery Task 1.1 of the Draft Recovery Plan. Task 1.1.5 calls for protection and management of as much remaining undeveloped, suitable, and restorable linked habitat patches within and between the six habitat complexes of the Southwest San Diego Recovery Unit as possible. This includes protection and management of as much remaining undeveloped suitable and restorable habitat that is part of the known historic population distribution as possible in the Otay Lakes habitat complex, in a configuration designed to support a stable population.

Within the City of *Chula Vista Subarea*, the CHD extends onto lands held by independent agencies, Otay Ranch (and small areas immediately to the east), and small portions of Rolling Hills Ranch and Bella Lago (Figure 4-2). The final CHD within the City is conserved in the Preserve and seven of the eight known QCB locations in the City will be conserved.

Minor incursions into the CHD/Preserve will be made for Planned and Future Facilities, which are listed in Section 6.0 of the Chula Vista Subarea Plan. These facilities may result in impacts within the Preserve of up to 66 acres. Planned Facilities are estimated to impact four acres in Category A, nine acres in Category B and three acres in Category C for a total impact of 16 acres. This analysis conservatively assumed that all of the Future Facilities (up to 50 acres) would be constructed within Category A habitat.

In relation to the 3,021 acres of critical habitat within the Subarea, the total of up to approximately 66 acres (two percent) of potential incursion associated with all private and public projects in the City would not be considered substantial. However, all Planned and Future Facilities within the Preserve are subject to the Facilities Siting Criteria found in Section 6.3.3.4 of this Subarea Plan, and specific QCB impact avoidance and minimization measures found in Section 5.2.8.1 of this Subarea Plan in order to further minimize any potential direct impacts to QCB from these necessary public facilities.

Overall, conformance with the CHD would result in the preservation of 62% of the potential Category A, B and C QCB habitat in the City. While much of the proposed development would occur in areas with lower potential to support QCB, much of the proposed preservation would occur in areas with higher potential to support QCB. Table 4-4 identifies that 1,091 acres (73%) of Category A, 1,447 acres (60%) of Category B and 268 acres (42%) of Category C would be conserved. Expressed as a ratio, the conservation compared to impacts of Category A lands (those with the highest relative potential to support QCB) is 2.75:1; the ratio for Category B is 1.48:1.

USFWS Final Critical Habitat Designation for Quino Checkerspot Butterfly

Legend

- Chula Vista Subarea Plan Boundary
- Chula Vista MSCP Planning Area
- Planned SR-125
- Major Projects Boundaries
- USFWS QCB Survey Boundary
- Development Area
- 100% Conservation Area - Habitat Preserve
- 75 - 100% Conservation Area - Habitat Preserve
- Major Amendment Area
- Minor Amendment Area
- Other Agency - Preserve Planning Efforts
- Planned Active Recreation Area - Subject to RMP Policies and OVRP Planning
- Development Area Outside City of Chula Vista Subject to County Subarea Segment Plans
- Quino Checkerspot Butterfly Final Critical Habitat

LEMON GROVE
CITY of SAN DIEGO
NATIONAL CITY
Sweetwater Reservoir
COUNTY OF SAN DIEGO
Otay Ranch
Bella Lago
Golf Course
San Miguel Ranch
Rolling Hills Ranch
Bonita Long Canyon
Eastlake I
Eastlake Business Park
Eastlake Business Center II
Eastlake Woods West
Eastlake Woods
Village Center
Telegraph Canyon-Eastlake
Eastlake Greens
Eastlake Trails
Eastlake Vistas
Eastlake Land Swap
Olympic Training Center
Lower Otay Reservoir
Otay Ranch
Rancho Del Rey I
Rancho Del Rey II
Rancho Del Rey III
Terra Nova
Mid-Bayfront
Sunbow I
Sunbow II
Otay Ranch
COUNTY OF SAN DIEGO
Nobo Park
Amphitheater and Water Park
COUNTY OF SAN DIEGO
CITY of SAN DIEGO
IMPERIAL BEACH
San Diego Bay
54
805
5
805
5

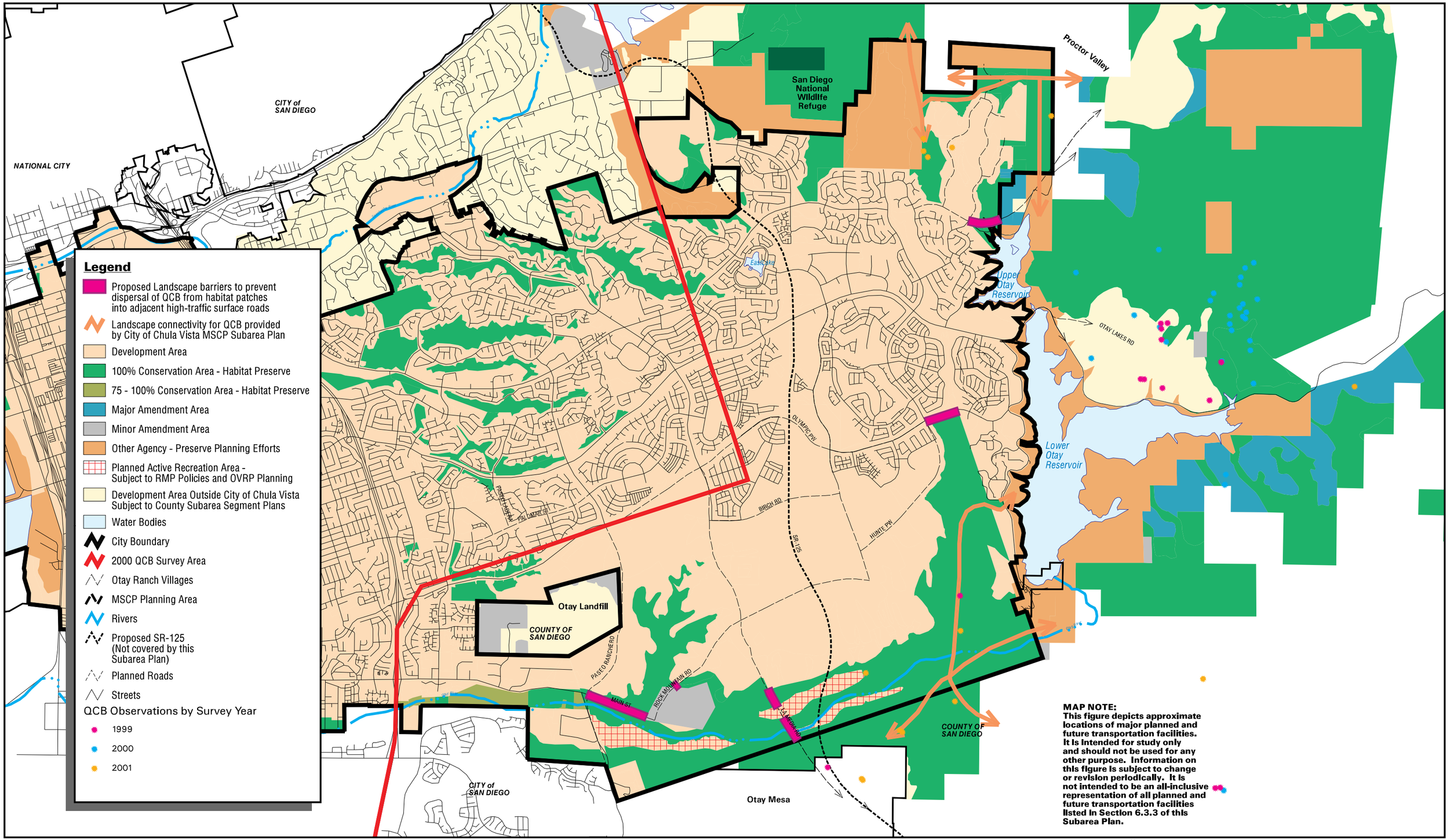
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FIGURE 4-2



CITY OF CHULA VISTA

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Landscape Connectivity and Barriers to Prevent QCB Mortality Sinks

FIGURE 4-3

Planned Facilities & Known QCB Locations

COUNTY OF SAN DIEGO

Upper Otay Reservoir

Lower Otay Reservoir

East Lake

Otay Landfill

COUNTY OF SAN DIEGO

PASEO RANCHERO

MAIN ST

ROCK MOUNTAIN RD

LA MEDIA RD

PASEO ADELA

PALOMAR ST

Otay River

Otay River

COUNTY OF SAN DIEGO

CITY of SAN DIEGO

Legend

- Excluded Areas
- Minor Ammendment Areas
- Not A Part
- Development Area Outside of Chula Vista; Subject to County Subarea Segment Plans
- Non-Preserve Habitat--Category A
- Non-Preserve Habitat--Category B
- Non-Preserve Habitat--Category C
- Preserve--Category A
- Preserve--Category B
- Preserve--Category C
- City Boundary
- Planned Sewer Lines
- Planned Water Lines
- Planned Reclaimed Water Lines
- Planned Roads

QCB Observations by Survey Year

- 1999
- 2000
- 2001

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0 2000 4000 8000
FEET

SCALE: 1 inch = 4000 feet

Plot Created: January 26, 2004

CITY OF CHULA VISTA
GEOGRAPHIC INFORMATION SYSTEM

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FIGURE 4-4

Table 4-4: Quino Checkerspot Butterfly Habitat Conservation[1]

	Category A	Category B	Category C	Total
Potential Habitat Total by Category	1,485	2,298	633	4,516
Anticipated Impacts	394	951	365	1,710
Anticipated Conservation	1,091	1,447	268	2,806
Conservation Percentage	73 %	60 %	42 %	62 %

By conserving the final CHD within its jurisdiction, the suite of recovery actions proposed by the City will make a significant contribution to the persistence and recovery of the QCB. Furthermore, these lands form important links in all of the corridors identified in the Southwestern San Diego Recovery Unit in the Recovery Plan, as described below.

It should also be noted that, in addition to lands anticipated to be conveyed to the City as part of its Preserve, the USFWS has acquired lands within the City (on San Miguel Ranch and a portion of the Inverted "L" parcel) and is anticipated to acquire other lands within or adjacent to the City. The USFWS is responsible for managing these lands for the benefit of all listed species. These lands, therefore, provide additional benefit to the QCB within the Subarea and Chula Vista MSCP Planning Area without requiring management funding from the City.

4.4.3.2 Maintaining Connectivity

Protection of linkage areas between habitat patches is crucial to conserving existing metapopulations. This paragraph describes the tasks contained in the Draft Recovery Plan; Chula Vista's proposed maintenance of connectivity is described immediately below. Recovery Task 1.2 calls for the enhancement of landscape connectivity within and between the distribution of the habitat complexes. In order to enhance or restore landscape connectivity, those linkage areas that would most effectively connect occupied habitat patches are to be determined, and any barriers are to be removed. Conversely, vegetative barriers should be erected to prevent dispersal from habitat patches into adjacent high-traffic surface roads (Recovery Task 1.3). Specifically, maintenance and enhancement of connectivity in the Southwestern San Diego Recovery Unit is to include: (1) protection and management of landscape connectivity through Proctor Valley between the habitats in the San Diego NWR and the Otay Lakes area in the San Diego NWR habitat complex; (2) enhancement of landscape connectivity along the western and eastern margins of Otay Lake in the Otay Lakes habitat complex; and (3) enhancement of landscape connectivity between

[1] Contains impact associated with Planned and Future Facilities in the Preserve.

the north rim (above the Otay River) and western mesa top of Otay Mesa (Figure 4-3). This Subarea Plan contributes to the preservation and enhancement of portions of these three critical areas.

Habitat near the Sweetwater River (now in the SDNWR) was historically and appears to still be connected to Proctor Valley, San Miguel Mountain, and thus to currently occupied habitat around Otay Lakes. Lands not known to be occupied between the SDNWR and Otay Lakes are considered important because they may provide landscape connectivity between these two areas that allows for a low rate of genetic exchange and recolonization events and, therefore, the long-term stability of both (USFWS 2001). The habitat set aside across the northern portions of the Rolling Hills Ranch and Bella Lago projects provides an east-west linkage through a portion of this area. Importantly, the open space on these parcels is contiguous with a large core block of open space surrounding Mount Miguel to the north, and the open space set aside on Rolling Hills Ranch conserves a major ridgeline which is perpendicular to prevailing breezes, so ideal for QCB movement and hilltopping. The corridor across the northern portions of these properties connects potential habitat on portions of San Miguel Ranch being placed in the SDNWR and the Otay Water District Habitat Management Area to the partially USFWS-owned Inverted "L" parcel. This parcel is in turn connected to lands planned for conservation by the City and County of San Diego around Otay Lakes.

Landscape connectivity along the western margin of Otay Lake is constrained by the Olympic Training Center and other development, although some habitat remains along the Salt Creek drainage (USFWS 2001). The Subarea Plan will provide a linkage up Salt Creek on the Otay Ranch site north of the eastern portion of the University Site to open space edging the Lower Otay Lake just south of the Olympic Training Center (Figure 4-3). Other connectivity along the western edge of the reservoir would be provided through City of San Diego Cornerstone Lands, and would not be affected by this Subarea Plan. The Eastlake Vistas project, within Chula Vista, would provide additional open space along its eastern edge, immediately west of the Cornerstone Lands, widening the potential movement corridor.

Landscape connectivity on the mesas northeast of Brown Field and southwest of Lower Otay Lake has been reduced through historical disturbance, although no significant dispersal barriers exist. The Draft Recovery Plan asserts that landscape connectivity could be restored where distance between habitat patches is now too great to provide adequate linkage (USFWS 2001). The southern extent of Otay Ranch will be preserved, providing a linkage from Otay Mesa across the Otay River Valley to the southern end of Lower Otay Lake. The Preserve configuration also maintains existing connectivity along the Otay River Valley to western Otay Mesa.

By conserving landscape linkages in these three critical areas, the City's Subarea Plan will contribute to potential dispersal of the QCB, including genetic exchange between existing populations and potential recolonization of suitable, but currently unoccupied, habitat. This conservation is consistent with the Draft Recovery Plan. As described above, maintenance and enhancement of such linkages is critical to the stability of QCB metapopulations.

In addition to maintaining linkages where appropriate, the City will implement actions to prevent population sinks along high-traffic roads. This action is consistent with guidance contained in the Draft Recovery Plan. Selected roads that represent potential population sinks will be landscaped with shrubbery that will mature to at least five feet in height. Native shrubbery will be considered preferable, but non-invasive non-native landscaping will also be acceptable. This requirement is to apply to the following road segments: Main Street between Paseo Ranchero and Rock Mountain Road, La Media Road crossing the Otay River Valley, Rock Mountain Road crossing Wolf Canyon, Olympic Parkway crossing Salt Creek, and Proctor Valley Road crossing the southeast corner of Rolling Hills Ranch (Figure 4-3).

4.4.3.3 Preserve Management

Preserve management also is a critical component for conservation and recovery of the QCB. The second recovery criterion of the Draft Recovery Plan is to "permanently provide for and implement management of described habitat complexes to restore habitat quality, including maintenance of hostplant populations, maintenance of diverse nectar sources and pollinators, control of non-native plant invasion, and maintenance of internal landscape connectivity" (USFWS 2001 page 69). This paragraph describes the tasks contained in the Draft Recovery Plan; Chula Vista's proposed management program is described immediately below. Management measures are to include removal of cattle and phasing in of weed control where habitat is currently grazed (Recovery Task 1.2.2), reduction of off-road vehicle activity within the distribution of described habitat complexes (Recovery Task 1.4), management of activity on trails where habitat occurs in recreational use areas (Recovery Task 6), and reduction of fire frequency and illegal trash dumping in habitat areas (Recovery Task 8).

A number of general preserve management considerations outlined in this Subarea Plan (see Section 7.0) would provide benefit to the QCB Management activities will be initiated upon conveyance of lands to the Preserve in association with project development. Open space within the North City and Otay Ranch Preserve Management Areas (PMAs) is of relevance to QCB conservation. Framework Management Plans have been completed for both PMAs, and are incorporated into the Subarea Plan (refer to Section 7.0). The Framework Management Plan outline principal Preserve maintenance activities and requirements; provide specifications to limit "edge effects" and impacts from adjacent development; furnish a framework to address potential impacts to the

Preserve from invasive, exotic species; and create a blueprint for managing public access, trails and recreational uses within the Preserve. In addition to the Framework Management Plans, the Subarea Plan identifies compatible, conditionally compatible, and incompatible uses.

A number of uses and activities have been determined to be incompatible with the biological objectives of the MSCP Subregional Plan and therefore not allowed in the Preserve. Incompatible uses include agriculture and public off-highway recreational vehicle activity. Grazing is also considered incompatible unless it is deemed to have a neutral or positive impact on habitat values by the City with concurrence by the Wildlife Agencies.

Limited public access and passive recreation are permitted uses within the Preserve. Access points, new trails and facilities, and control of public access will be consistent with the City Planning Component Framework Management Plan (Section 7.5 of this Subarea Plan) or the Otay Ranch RMP (Section 7.6 of this Subarea Plan). Specifically, within the City Planning Component Framework Management Plan, trails, view overlooks and staging areas are to be located in the least sensitive areas of the Preserve, and trail widths are to be minimized to reduce impacts to critical resources. Similarly, the Otay Ranch RMP includes a requirement that trails be sited and designed to be compatible with resource protection. Throughout the City's Preserve, the appropriate managing entity is authorized to close selected areas of the Preserve to public use, temporarily or permanently, if public access has resulted in or is expected to result in significant negative impact to sensitive species. This may manifest itself in closure of occupied QCB habitat during the flight season (Section 6.2.1 of this Subarea Plan).

The City Planning Component Framework Management Plan establishes two levels of priority of management activities for the Preserve. Priority 1 measures include those management tasks that are necessary to ensure that the Covered Species are adequately protected. These management directives will be included in each area-specific management plan, which will be completed for each project prior to the issuance of a grading permit. Priority 1 activities which will benefit the QCB address litter and off-road vehicle activities, public access, trails and recreation (as described above) and invasive exotics control and removal. Litter and trash are to be removed on a regular basis. Posting signage, providing and maintaining trash cans and bins at trail access points, and imposing penalties for littering and dumping are intended to discourage such activities. Preserve areas are to be monitored to prevent illegal activities such as off-road vehicle use. No invasive non-native plant species are to be introduced into areas immediately adjacent to the Preserve. Invasive non-native plant species within the Preserve are to be monitored and removed as necessary, pursuant to the area-specific management directives.

The City Planning Component Framework Management Plan includes a requirement for dissemination of educational information to residents and landowners adjacent to and inside the Preserve to heighten environmental awareness of the Preserve's goals and purpose, and inform residents of adjacency issues. For new communities, this course of action will be required as part of SPA or Precise Plan approvals and will be implemented as Priority 1; elsewhere in the City, it will be implemented as Priority 2 as funding becomes available. This educational information will include information about the QCB, consistent with Recovery Task 4 (Priority 2) of the Draft Recovery Plan to initiate and implement an educational outreach program.

Responsibilities of the Otay Ranch Preserve Owner/Manager (refer to Subarea Plan Section 7.4 and Otay Ranch Resource Management Plan, City of Chula Vista 1993) include maintenance of existing high quality resources through the prevention of further disturbance, including controlling access to the Preserve, prohibiting off-road traffic, enforcing "no trespassing" rules, and curtailing activities that degrade resources, such as grazing, shooting and illegal dumping; implementation of maintenance activities including removal of debris and control of exotic plant species; and development of educational facilities and interpretive programs. As described in Section 5.2.5 of this Subarea Plan, prior to the issuance of Take Authorization, the City will adopt a Grazing Ordinance which codifies the Otay Ranch Range Management Plan in the Otay Ranch Planning Component. This ordinance includes restrictions on the location and timing of grazing on the Otay Ranch prior to conveyance to the Preserve, and would permit no grazing once lands are conveyed, unless it were deemed to have a neutral or positive impact on habitat values by the City, with concurrence by the Wildlife Agencies.

The above-described overall Preserve management requirements are anticipated to provide a benefit to the QCB. Importantly, the Preserve management framework established by the MSCP provides a structure along with specific funding to implement required Preserve management activities, including weed control. Because the administrative structure is already in place, additional funds allocated for restoration and enhancement activities to benefit the QCB will be allocated directly to field efforts (refer to Section 8.0 of the Subarea Plan for detailed information about Preserve funding).

4.4.3.4 Habitat Restoration/Enhancement

In addition to management of existing habitat, restoration and enhancement of potential habitat is critical to the persistence and recovery of the QCB. Recovery Task 1.2 also calls for the restoration of those habitat patches which would most effectively connect occupied habitat patches. This paragraph describes the tasks contained in the Draft Recovery Plan; Chula Vista's proposed restoration/enhancement program is described immediately below. According to the Recovery Plan, the ultimate goal of restoration efforts should be self-sustaining functional native ecosystems similar to those that historically supported QCB metapopulations. Efforts can range from a minimum, such as adding seed

of larval food and adult nectar plants to enhance existing resources, to extensive, such as re-establishing native plant communities in fallow agricultural fields. Site-specific ecosystem restoration planning should include data on natural vegetation community composition and physical habitat structure in the vicinity, as well as soils and associated plant and animal populations. Natural physical and biological attributes must be restored, including nectar plants, pollinators and appropriate larval diapause and pupation sites (USFWS 2001; Osborne and Redak 2000).

The City proposes to fund and implement a program which will provide restoration and/or enhancement ("restoration/enhancement") of QCB habitat. This program will be in addition to any project-specific restoration required for temporary impacts. As discussed in detail below, restoration/enhancement will include both focused removal of non-native plant species and re-establishment of native annuals that serve as nectar sources and larval host plants. In consultation with a QCB Scientific Advisory Committee (QSAC), the City Habitat Manager will determine on an annual basis how best to apply the available funds in accordance with an adaptive management program. The QCB Scientific Advisory Committee will consist of qualified biologists from USFWS and CDFG (one from each agency) and two to three representatives selected by the City from the academic and/or consulting arena with experience in QCB and/or habitat management issues. Additional information about the QSAC is contained in Appendix J.

(1) Site Selection

Specific locations for habitat restoration/enhancement will be selected by the City Habitat Manager in consultation with the QSAC, upon conveyance of Preserve lands to the City (refer to Appendix J for additional information about the timing of the QCB habitat restoration/enhancement program). This plan establishes criteria for the selection process, aimed at ensuring that the benefit of the restoration/enhancement program is maximized. Restoration/ enhancement activities will not be undertaken in the vicinity of Planned or Future Facilities. The best scientific information currently available indicates that the following criteria should be considered in the selection of restoration/enhancement sites:

- Connect to or enhance known populations;
- Consist predominantly of native habitat with a low to moderate non-native component;
- Support other Covered Species;
- Have mima mound topography (if available); and

- Are defensible from re-invasion by non-native plant species.

The above criteria may be modified without a plan amendment as additional information from area-specific enhancement experience or general QCB research becomes available. Under these criteria, areas that would expand or provide "stepping-stones" between known populations would be prioritized. Restoration/enhancement areas would typically be located in areas identified as Category A habitat, as such areas are within 0.6 mile of a known QCB location and provide habitat generally considered to be better quality within the context of the City.

In order to be most cost-effective, the restoration/enhancement program would not focus on restoration/enhancement of areas that have been completely overtaken by invasive non-native species and would attempt to use areas that are appropriate for QCB restoration/enhancement but may also support other Covered Species as well. One of the most significant threats to the QCB is the invasion of non-native species into otherwise suitable habitats; this program would address this issue by ensuring that lands in the Preserve maintain or improve suitability for occupation. Several sensitive, covered plant species provide indicators of areas that may be suitable for the QCB. In addition, focusing on such areas allows the City to maximize the number of sensitive species that benefit from the limited public funds available for species conservation.

Anecdotal accounts indicate that areas with mima mound topography historically supported the highest densities of QCB. Areas with deep soils may have been subject to greater weed invasion because of their fertility, while areas with less fertile soil support remnant QCB populations. Areas that previously supported the most productive habitat for the species are likely to do so again given appropriate restoration/enhancement efforts.

As described in Appendix II, Habitat Restoration Methods, of the Draft Recovery Plan, non-native plant removal strategies should Take advantage of habitat breaks (e.g., large shrub patches, canyon edges, rock outcrops, roads) to serve as buffer zones from adjacent areas that are dominated by non-native plants. Again, this will allow the City Habitat Manager to use available funds most efficiently.

(2) Habitat Restoration/Enhancement Program

Three different levels (high, moderate and low intensity) of restoration/enhancement may occur within the Preserve. High-intensity restoration/enhancement involves de-thatching, weeding and spraying, as well as planting/relocation of native plant species, annually over a five-year period. The high intensity restoration/enhancement program (described below) is based on the De-thatch and Repeat Spray Method developed by Recon and

outlined in Appendix II of the Draft Recovery Plan, as slightly modified through subsequent personal communication. It would be employed in areas that have significant numbers of native plant species present but contain moderate to high levels of non-native plants. The moderate and low intensity programs would be used for areas that have significant numbers of native plant species present, but contain moderate or low levels of non-native plants. The moderate and low intensity program costs were developed specifically to address the individual requirements of a QCB program in the City. The moderate-intensity restoration/enhancement would occur annually over a five-year period with perpetual maintenance commencing in year six, while the low-intensity restoration/enhancement would occur annually over a four-year period with perpetual maintenance commencing in year five.

Appropriate timing of non-native plant removal should result in decreasing effort over a period of years. All areas that have been subject to restoration/enhancement will eventually be included as areas targeted for focused weeding on an appropriate rotating basis (i.e., every two to six years as needed). The following outlines the high-intensity restoration/enhancement program, representing the maximum amount of effort that is expected to be undertaken. This methodology may be modified or scaled back to suit the conditions at the selected site at the discretion of the QSAC.

Thick thatch associated with dead mustard or annual grasses can prevent native species from germinating and/or competing successfully for light and space with non-natives. In areas with this problem, dethatching will be used to enhance the areas. This will include removal of dead plant thatch using hand tools, and "weed eaters," and return visits for spraying with glyphosate. Timing of non-native plant control efforts is crucial to success. Non-native plants will be killed prior to seed set, so that removal effort and cost will decrease over time. Another crucial component of the non-native plant removal method described below is that workers must be trained to distinguish between native and non-native plants for restoration/enhancement to be successful.

The high-intensity restoration/enhancement program is as follows:

(a) Cut thatch and dead non-native plants with "weedeaters." This cutting can be done during the summer or early fall;

(b) Rake up and collect non-native plant thatch;

(c) Remove thatch from site and dispose of it in dumpsters, a landfill, or an area where it can be composted nearby to reduce disposal costs;

(d) Return to site and spray Roundup (or more selective herbicide, or selective weed-whacking) on non-native plant seedlings after sufficient rains have fallen in winter and spring;

(e) Repeat spraying (or selective weed-whacking) as necessary to prevent seed set. Other options include the use of pre-emergent herbicide prior to the first significant rain; and

(f) Repeat spraying (or selective weed-whacking) as necessary to maintain non-native plant density to a low level.

Frequent site visits are necessary during the growing season to assess non-native plant removal efforts and to determine whether changes are needed in the strategy being used or the intensity of non-native plant removal efforts. In particular, the non-native plant removal process must be carefully monitored to ensure that new non-native plant species do not flourish as the formerly dominant non-native species are removed. Up to five herbicide (or weed-eating) applications per season may initially be required. The amount of spray will be reduced as the season progresses and fewer non-native plants are present. After the first two years, weeding requirements decrease each year if the spraying program is timed to kill non-native plants before they set seed. Removal of non-native plants by hand may be required around small populations of herbaceous natives.

Populations of native annuals (larval host plants and nectar resources) may be enhanced or re-established in and between existing habitat patches by hand seeding. According to the Draft Recovery Plan, restoration/enhancement plantings should include nectar-producing plant species with overlapping flowering periods that extend throughout the typical southern California growing season. Seeds of native plant species used in each restoration/enhancement project should be collected within five miles of the site, or as close as possible within the same general climate zone. To ensure that adequate seed is available, seed bulking (growing seed in cultivation to increase the amount of seeds) of annuals, including plantago and nectar plants, will be necessary. This seed bulking should be done at growing areas that can provide reproductive isolation from related plants from different regions. The Otay RMP (City of Chula Vista and County of San Diego 1993) calls for the construction of a native plant nursery and/or botanic garden to be used for public education and restoration/enhancement activities. This could provide an appropriate place to accomplish seed bulking for QCB habitat restoration/enhancement activities in the Otay Ranch area.

In order to support a diverse assemblage of potential pollinators and native plant species, the Recovery Plan calls for areas of open ground within associated native plant communities to be restored to support ground nesting bees and other invertebrates. The goal of having open ground for pollinators

is compatible with QCB restoration/enhancement efforts because QCB larval food and adult nectar plants require open ground for successful reproduction and long-term persistence. Brush piles, scattered sticks, branches and rock cobbles can be brought to the restoration/enhancement site to increase the available cover for many animals, and will provide potential diapause and pupation sites for QCB.

Periodic maintenance of restoration/enhancement areas will likely be required at low levels in perpetuity. Adaptive management strategies would be used to address unanticipated circumstances. Maintenance needs are likely to include control of non-native species and measures to slow or reverse plant community succession (increased shrub density). Until the appropriate QCB larval food and adult nectar plants are fully established, monitoring and control of aggressive native species may be required, so that they do not dominate the vegetation and exclude QCB food plants through competition.

(3) Implementation

The City of Chula Vista QCB Habitat Restoration/Enhancement Program will provide 50 acres of QCB habitat. The first year of the program will be solely devoted to establishing the program, collecting and propagating the seed of larval host and nectar resource plants, and determining the areas to be restored/enhanced. The restoration/enhancement will begin in year two and end in approximately year ten. As each acre completes the five-year (moderate and high intensity) or four-year (low-intensity) restoration/ enhancement program, it will enter a program of perpetual maintenance.

Additional information about the timing of the QCB habitat restoration/ enhancement program and the relationship of impacts to restoration/ enhancement efforts is contained in Appendix J of this Subarea Plan.

(4) Funding

The QCB habitat restoration/enhancement program will be funded through the Preserve Management Enhancement Fund (PMEF), a non-wasting endowment program. The PMEF program is anticipated over time to generate a perpetual annual budget of $50,000 to over $92,000 (2002 dollars), as endowment contributions are made by the City in association with construction of public infrastructure (refer to Section 8.3.2.4 for a more detailed discussion of the PMEF). Priority for PMEF expenditures will be given first to the QCB habitat restoration/enhancement program. Irrespective of funding sources or anything to the contrary, coverage for the QCB is based on the habitat conservation and Preserve management provided through this Subarea Plan and 50 acres of QCB restoration/enhancement that collectively comprise the Chula Vista QCB program. Additional information about the funding of the QCB habitat

restoration/enhancement program is contained in Section 8.4 of this Subarea Plan.

(5) Monitoring

Consistent with USFWS Five-Point Policy (65 FR 35242) and the MSCP Subregional Plan, the City will monitor the effectiveness of QCB habitat restoration/enhancement efforts and will conduct limited annual census monitoring. Complete information about the QCB monitoring program is provided in Section 7.4.3.2 of this Subarea Plan.

4.4.4 Impact Minimization

The City has undertaken, or has committed to undertake upon issuance of Take authority, a number of measures to minimize potential impacts to the QCB. The Draft Recovery Plan identifies carbon dioxide as a potential threat to QCB relative to plant and insect development as well as global climate change. The City adopted a Carbon Dioxide Reduction Plan on November 14, 2000. This plan includes a number of completed or ongoing measures, such as purchase of alternative fuel vehicles, green power public education program, traffic signal and system upgrades, and municipal building upgrades and trip reduction.

Subsequent to conditional adoption of the Chula Vista MSCP Subarea Plan by the City Council in October 2000, the City immediately initiated preparation and processing of amendments to the City's Grading Ordinance for MSCP implementation. The ordinance amendments include regulations on clearing and grubbing of Sensitive Biological Resources to ensure compliance with the Chula Vista MSCP Subarea Plan. Specifically, impacts associated with Planned and Future Facilities within the Preserve and other development outside of the Preserve will be minimized according to the measures described below.

4.4.4.1 Infrastructure in the Preserve

Planned and Future Facilities within the Preserve will be subject to the Facilities Siting Criteria contained in Section 6.3.3.4 of this Subarea Plan, and to specific QCB impact avoidance and minimization measures found in Section 5.2.8.1 of this Subarea Plan. Impacts to QCB habitat in the Preserve will be minimized while allowing for construction of Planned and Future Facilities as provided for in this Subarea Plan. To the extent practicable as determined by the City, impacts to occupied QCB habitat will be avoided during the planning, design and construction of Planned and/or Future Facilities. The physical and engineering requirements of new roads and infrastructure shall be considered during the siting procedure. Road and/or right-of-way width may be narrowed from the existing City design and engineering standards where necessary to avoid impacts to occupied QCB habitat, to the maximum extent practicable.

Although siting facilities along existing dirt roadways or disturbed areas is typically considered preferable to siting in vegetated areas, the edges of such areas are frequently the locations of QCB observations. To the extent that such areas in a given project footprint are demonstrated to be occupied by QCB, avoidance of QCB will be prioritized over avoidance of vegetation not occupied by the QCB or other Covered Species. The prioritization for avoidance of QCB versus other Covered Species will be determined in consultation with the Wildlife Agencies on a project-specific basis. Unoccupied, but potentially suitable, QCB habitat should also be avoided if possible; areas with higher likelihood of supporting QCB represent a higher priority for avoidance. If grading must occur in areas within or adjacent to occupied habitat, a number of minimization measures will apply.

4.4.4.2 Development Projects

No development projects outside the Preserve will be subject to avoidance requirements. Those development projects grading in Non-Preserve Habitat-Category A areas after 2002 will, however, be required to comply with construction monitoring measures specified in Section 5.2.8.2; no such requirements will apply to other development areas.

As a means of reducing impacts to potential QCB habitat and other sensitive habitats from development allowed by the Subarea Plan, the City will continue its practice of requiring soil, seed and plant salvage on a project-by-project basis (Section 5.2.7 of this Subarea Plan). Project review and CEQA analysis will identify appropriate salvage opportunities. Mitigation measures and conditions of project approval would specify the soils, seed and plant material to be salvaged, identify the procedures for salvage, and specify locations and time frames for use of material, as appropriate.

4.4.5 Rationale for Identifying the Species as Covered

The conservation, restoration/enhancement and management program proposed for the QCB in the City's Subarea provides an extraordinary biological benefit to the species when weighed against anticipated impacts. As described above, there is minimal potential for QCB to occur in significant numbers in the *Chula Vista Subarea* in the absence of habitat restoration/enhancement efforts. In fact, it is anticipated that without effective management, especially weed control, habitat quality and the potential for long-term persistence of the QCB in the City will continue to decline. Any impacts associated with development within the City are therefore anticipated to be minimal. Conversely, the conservation and the QCB restoration/enhancement program proposed to be implemented through this Subarea Plan is anticipated to create extraordinary benefit to the QCB recovery program.

The City is proposing to provide for the long-term conservation and recovery of the species by implementing the actions specified in this Subarea Plan, and summarized below. These actions are consistent with the Draft QCB Recovery Plan.

1. Protection of the area within the critical habitat designation, as well as significant conservation outside of, but connected to, critical habitat, which will also enhance long-term conservation of QCB;

2. Preservation of 7 of the 8 documented QCB locations in the City;

3. Maintenance of a potential landscape linkage along the western edge of Lower Otay Lake, per Priority 1 Recommendation 1.1.5.2 of the Recovery Plan;

4. Maintenance of connectivity through the northeastern portion of the City from SDNWR to Otay Lakes, per Priority 1 Recommendation 1.1.5.1 of the Recovery Plan;

5. Minimization of impacts resulting from Planned and Future Facilities in the Preserve, and from private development projects adjacent to the Preserve, including monitoring and salvage of habitat constituents;

6. Re-establishment of viable habitat that maintains connectivity with existing populations, per Priority 1 Recommendation 1.1.5.3 of the Recovery Plan; and

7. Management of Preserve areas for the QCB and other Covered Species.

Through implementation of the Subarea Plan, seven of the eight QCB observation locations in the Subarea will be conserved. All eight known locations of QCB within the Subarea were single individual sightings. None of the eight locations are considered critical populations, thus, no critical populations of QCB will be impacted by Take Authorization. The seven conserved known QCB locations are within the boundaries of the Preserve. Planned Facilities that must cross the Preserve are located to avoid impacts to all seven known QCB locations (see Figure 4-4). In addition, all Planned and Future Facilities within the Preserve will be required to conduct QCB surveys based on the most recent protocols adopted by the Wildlife Agencies and demonstrate impact avoidance/minimization as described in Section 4.4.3 of this Subarea Plan.

Pursuant to the Subarea Plan, overall, 1.61 acres of potential QCB habitat will be protected for each one acre of potential QCB habitat impacted. Impacts are predominantly in areas in Category B and C, while conservation predominantly occurs in Categories A and B. For Category A habitat, that with the highest likelihood to support QCB, the ratio of habitat preserved to impacted is 2.75:1.

Areas identified for preservation are also in proximity to Preserve areas (including those of other high-potential restoration/enhancement) under the control of others, including the USFWS, City of San Diego, County of San Diego, and Otay Water District. The

efforts proposed by this Subarea Plan could therefore offer a springboard for efforts directed by these multiple jurisdictions at recovery of the QCB, providing a substantially increased benefit. Regardless of any potential future efforts by others, the City is proposing a suite of actions designed to effectively implement the portion of the Recovery Plan relevant to its jurisdiction.

In addition to the conservation of a majority of the habitat in the City with potential to support QCB, the City proposes a restoration/enhancement program designed to result in additional high-quality QCB breeding and dispersal habitat. Such activities would be directed to areas that provide for long-term viability of the species through connectivity with and between existing populations. Both habitat conveyance and restoration/enhancement of potential QCB habitat would occur in advance of or simultaneous with anticipated impacts to Category A potential QCB habitat, and all QCB enhancement/restoration will be managed through the Chula Vista management program described in Sections 4.4.2.3 and 7.0 of this Subarea Plan.

Through conservation, avoidance and minimization and the enhancement/restoration program, in comparison with the minimal anticipated potential impacts to QCB, this Subarea Plan provides an extraordinary net biological benefit, contributing to the long-term persistence and recovery of the subspecies.

5.0 SUBAREA PLAN IMPLEMENTATION AND PRESERVE ASSEMBLY

The *Chula Vista Subarea,* the area for which Take Authorization will be granted, consists of the territory located within the City's jurisdictional boundaries, and as such may be adjusted for annexations from time to time. Subarea Plan Take Authorization will be issued for impacts associated with development that will take place within the City's incorporated boundaries. Take Authorization for areas annexed into the City from the *Chula Vista MSCP Planning Area* will transfer to the Subarea (City) through future MSCP Annexation Agreement(s) and will exist independently under the *Chula Vista Subarea* Plan (refer to Section 5.3.1 of this Subarea Plan).

The City will enter into an Implementing Agreement (IA) with the Wildlife Agencies for this Subarea Plan. The IA will be the contract between the City and the Wildlife Agencies regarding their individual and collective roles in implementing the City of Chula Vista MSCP Subarea Plan. The IA will ensure that the Chula Vista MSCP Subarea Plan will be implemented over the next fifty years and that Federal and State Take Authorizations will be in effect for the same time period, subject to the terms of the IA.

5.1 Preserve Assembly

The Preserve will be assembled primarily through the development entitlement process. Acquisition of conservation lands with public funds will not be necessary or required in order to assemble the Preserve. Although not required, a small portion of the Preserve (up to 160 acres) has been identified for possible acquisition by the City. Land designated for potential acquisition is located in the Otay River Valley, west of Heritage Road, and in the planned Preserve. It includes smaller parcels, which are targeted for 75-100% preservation (Figure 1-2). Acquisition may be pursued if entitlements are not sought for these properties or may be pursued in order to reach conservation levels above the required 75%.

The total land estimated to be conserved through implementation of this Subarea Plan is shown on Table 3-5. As the Subarea Plan is implemented, conservation will occur both within and outside the City. Land conserved within the City will be conveyed into the Preserve. All land being conveyed will be accompanied by a conservation easement or other mechanism approved by the Wildlife Agencies as being sufficient to insure that lands are protected in perpetuity. Conservation outside the City will occur within the County of San Diego Subarea Plan MSCP (South County Segment) and will be conserved in accordance with the conservation mechanisms identified in the County Subarea Plan.

For development projects requiring subdivision approval, land will be offered for conveyance or dedication to the Preserve concurrent with City approval of a final map or parcel map. For development projects requiring a rezoning, SPA Plan or Precise Plan approval, the project proponent may choose to offer land for dedication simultaneously with City approval of a tentative map in order to obtain earlier third-party beneficiary status. For development projects requiring only issuance of a grading permit, land must be offered for conveyance or dedication to the Preserve prior to issuance of a grading permit.

Take will be extended to Covered Projects as part of the land development approval process. Covered Projects will dedicate conservation land as development occurs pursuant to individual project approvals and simultaneously with issuance of final map as required by tentative map conditions or with issuance of a grading permit, whichever is applicable. When Take is extended, projects will be conditioned to maintain habitat values in conservation areas until such conservation areas are dedicated and accepted into the Preserve. If not specifically set forth in Covered Project approvals, a conveyance ratio will be applied to ensure that open space dedication is proportionate to development. The conveyance ratio will be calculated as follows:

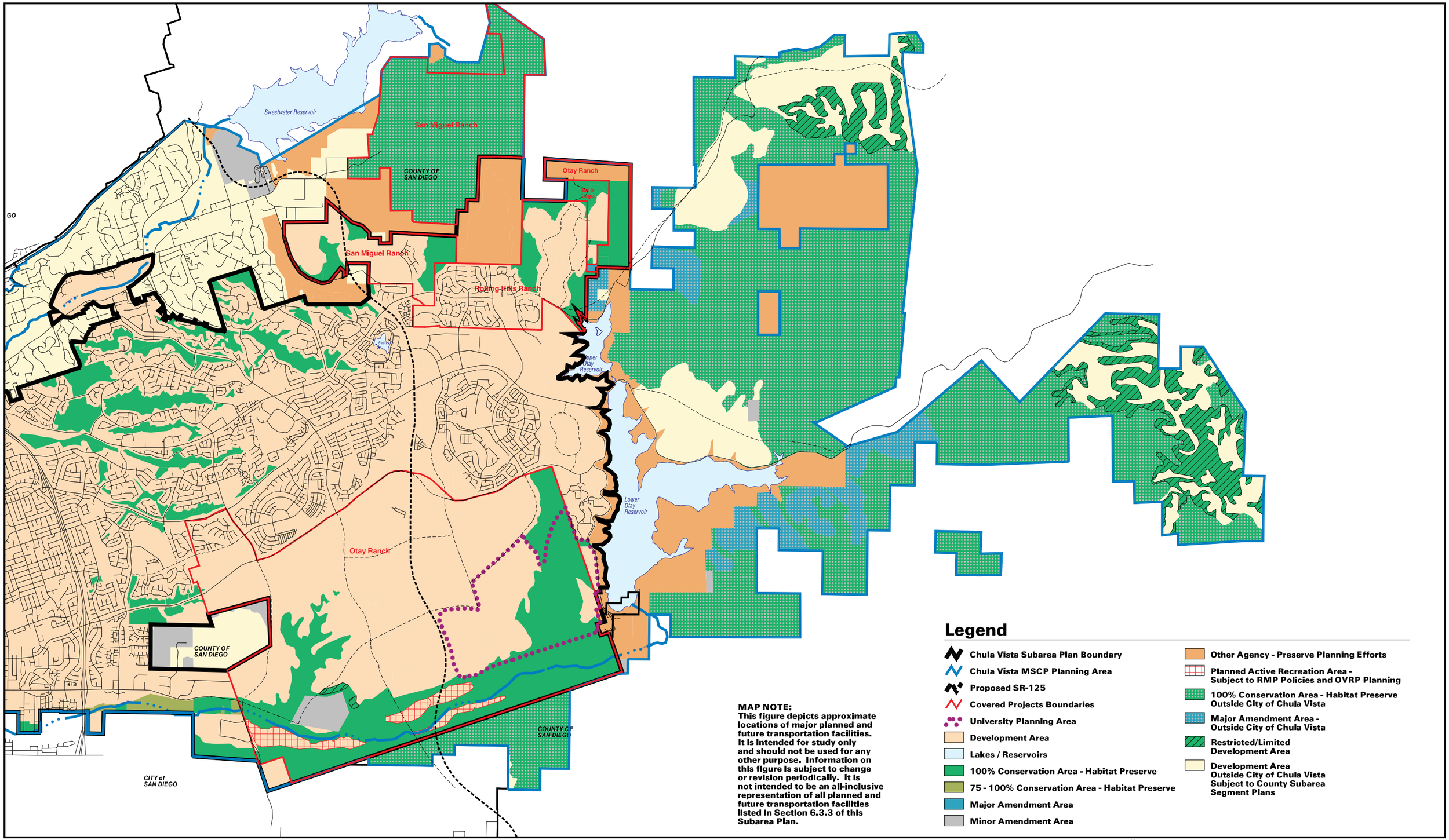
- Determine total acres to be developed;
- Determine total acres required for habitat conservation;
- Calculate relative percentage of habitat conservation acres to development; and
- Define a conveyance ratio that maintains the relative percentage of habitat conservation to development.

When Take is authorized through HLIT Permits, projects will mitigate impacts in accordance with the HLIT Ordinance, thus adding to the estimated conservation levels identified in Table 3-5 of this Subarea Plan. To ensure complete assembly of the Preserve as planned by this Subarea Plan, the City will encourage all mitigation to be conducted within the Preserve and will discourage purchase of land for mitigation outside the Preserve. Use of conservation banks approved by the Wildlife Agencies within the *Chula Vista MSCP Planning Area* boundaries is considered an acceptable mitigation method as well as direct purchase of land within the Preserve.

5.1.1 100% Conservation Areas / Covered Projects

The majority of the Preserve consists of hard-line areas designated for 100% conservation. These 100% Conservation Areas are either already in public ownership or will be dedicated into Preserve as part of the development approval process for Covered Projects. Preserve boundaries for Covered Projects have been established on a project-by-project basis after evaluation of habitat and species data collected and/or surveys conducted as part of project entitlement processing, evaluation by the Wildlife Agencies, and consideration of how such mitigation could best contribute to the overall MSCP subregional planning effort.

The Covered Projects (Figure 5-1) have identified preservation areas that comprise major segments of the Preserve, consistent with the goals and objectives of the MSCP Subregional Plan. The Preserve areas for these projects have been incorporated into adopted project plans and entitlements and have been made conditions of individual project approvals. Specific project conditions for coverage are enumerated in the City Planning Component Framework Management Plan, Section 7.5.6 and the Otay Ranch Planning Component Framework Management Plan (RMP1 and RMP2) discussed in Section 7.6.



MAP NOTE:
This figure depicts approximate locations of major planned and future transportation facilities. It is intended for study only and should not be used for any other purpose. Information on this figure is subject to change or revision periodically. It is not intended to be an all-inclusive representation of all planned and future transportation facilities listed in Section 6.3.3 of this Subarea Plan.

Legend

- Chula Vista Subarea Plan Boundary
- Chula Vista MSCP Planning Area
- Proposed SR-125
- Covered Projects Boundaries
- University Planning Area
- Development Area
- Lakes / Reservoirs
- 100% Conservation Area - Habitat Preserve
- 75 - 100% Conservation Area - Habitat Preserve
- Major Amendment Area
- Minor Amendment Area
- Other Agency - Preserve Planning Efforts
- Planned Active Recreation Area - Subject to RMP Policies and OVRP Planning
- 100% Conservation Area - Habitat Preserve Outside City of Chula Vista
- Major Amendment Area - Outside City of Chula Vista
- Restricted/Limited Development Area
- Development Area Outside City of Chula Vista Subject to County Subarea Segment Plans

CITY OF CHULA VISTA
GEOGRAPHIC INFORMATION SYSTEM
Plot created: January 26, 2004
r:/planning/mscp/covprojs.aml

Covered Projects

N W E S

0 5400 10800

FIGURE 5-1

Covered Projects contain areas delineated for development and 100% conservation. The Development Areas of Covered Projects will not be subject to the HLIT Ordinance or any other additional mitigation or habitat preservation requirements beyond those incorporated into individual project approvals and Section 7.0 of this Subarea Plan. Any uses in the 100% Conservation Areas of Covered Projects will be consistent with Section 6.0 of this Subarea Plan and pursuant to the HLIT Ordinance.
Table 5-1 identifies the Chula Vista Covered Projects.

Table 5-1: Covered Projects

Covered Project	Conditions for Coverage
Rolling Hills Ranch (Salt Creek Ranch)	Section 7.5.6.3
San Miguel Ranch	Section 7.5.6.4
Bella Lago	Section 7.5.6.5
Otay Ranch	Section 7.6 and Otay Ranch RMP
University Project	Section 7.6.2 and Otay Ranch RMP

Take Authorization for San Miguel Ranch has been issued and Coverage for San Miguel Ranch is based on the provisions of the Annexation Agreement Concerning the Conservation and Biological Mitigation Program for the Implementation of San Miguel Ranch Sectional Planning Area Plan and Tentative Tract Map, discussed in Sections 3.1.4 and 7.5.6.4 of this Subarea Plan. Coverage for all other Covered Projects is based on the assured dedication (through a conservation easement and/or fee title) of the open space related to each Covered Project, implementation of the project-specific mitigation programs detailed in this Subarea Plan as referenced above, and implementation of the area specific management directives found in Table 3-5 of the MSCP Subregional Plan (Appendix A) and as discussed in Section 7.0 of this Subarea Plan. If, at the time of development project approval, it is determined that the conditions of coverage and terms of the Subarea Plan have been met (including anticipated habitat values), Take will be extended to Covered Projects. Also at that time, maintenance of habitat values of the conserved lands will be assured.

5.1.2 75-100% Conservation Areas

Approximately 133 acres within the Subarea are designated as 75-100% areas (97 acres in the Otay River Valley and 36 acres in the Sweetwater River Valley). The 75-100% Conservation Areas (Figure 1-2) consist primarily of smaller private landholdings located within the planned Preserve. Habitats in these areas will be subject to the HLIT Ordinance, which will restrict development impacts to no more than 25% of the mapped Conservation Area, thus assuring a minimum conservation level of 75% of these Preserve lands. In some cases, property within the 75-100% Conservation Area may be acquired, in part or in whole, increasing conservation levels above the 75% target.

5.1.3 Subarea Plan Amendment Areas

Location of the Preserve and development areas was not resolved for all of the land in this Subarea Plan. Lands designated within the Subarea as Minor or Major Amendment Areas are shown on Figure 1-2. Take Authorization for Minor Amendment Areas may be extended only after a Subarea Plan Amendment has been completed pursuant to Section 5.1.3.1. Take Authorization for Major Amendment Areas will require an amendment to this Subarea Plan pursuant to Section 5.1.3.2, and issuance of a separate Take Authorization from the Wildlife Agencies. Minor and/or Major Amendments to the Subarea Plan will be initiated at the request of the property owner to the City, and approved by the Wildlife Agencies.

5.1.3.1 Minor Amendments to the Subarea

A small number of properties totaling approximately 137 acres within the *Chula Vista Subarea* are designated as "Minor Amendment Areas." These areas will require the processing of a Minor Amendment to this Subarea Plan before Take Authorization will apply to any portion of these properties.

Minor Amendment areas contain habitat that could be partially or completely eliminated (with appropriate mitigation) without affecting the overall goals of the Subarea Plan. Minor amendments require the written approval of the USFWS's Field Supervisor and the CDFG's NCCP Program Manager. The process for completing minor Subarea Plan amendments includes the following:

1. The project proponent must meet with the City to discuss proposed development project.

2. The project proponent must prepare and submit updated biological surveys (CEQA-level).

3. The project proponent may complete mitigation in one of three ways: by establishing Preserve boundaries within the project area, by establishing off-site mitigation, or by some combination thereof.

    a. If the project proponent proposes to establish Preserve boundaries within the project area, such Preserve boundaries must be designed pursuant to the Preserve design criteria in Section 3.6 of the MSCP Subregional Plan.

    b. Mitigation must meet the requirements of the HLIT Ordinance.

    c. An agreement must be reached between the City and the Wildlife Agencies for establishment of new Preserve boundaries within the project area, for establishment of off-site mitigation, or some combination thereof.

4. Project proponent must incorporate biological information for the Preserve boundaries or mitigation agreed-upon by the applicant, City, and Wildlife Agencies into projects environmental documentation.

5. The City will consider adoption of a Minor Subarea Plan Amendment during consideration of a project's SPA Plan or equivalent entitlement process for projects not requiring SPA Plan approval.

Area-specific management directives, as described in Section 7.3 of this Subarea Plan, will be required for Minor Amendment Areas and must incorporate the conditions for species coverage found in Table 3-5 of the MSCP Subregional Plan.

5.1.3.2 Major Amendments to the Subarea

Major Amendment Areas designated by this Subarea Plan are consistent with the Preserve designations found in the South County Segment Plan adopted as part of the County's Subarea Plan and MSCP Subregional Plan Final EIR/EIS. The total area designated as Major Amendment within the *Chula Vista Subarea* is approximately 7 acres. Pursuant to requirement by the Wildlife Agencies, "all lands shown as major amendment areas in the County Subarea Plan will require a formal amendment to the permit to receive Take Authorizations…. Requests for major amendments must be processed by the Wildlife Agencies in conformity with all applicable laws and regulations including the (NEPA), California Environmental Quality Act (CEQA), and the ESA."[1] These designated areas will therefore require processing of a Major Amendment before Take Authorization can be granted.

Requests by landowners for a Major Amendment will be submitted to the City. The City will coordinate processing the Major Amendment with the Wildlife Agencies. The process for completion of Major Amendments to the Subarea Plan include:

1. Project proponent must meet with the City and the Wildlife Agencies to discuss the proposed development project and required biological surveys.

2. Project proponent must submit updated biological surveys per City's MSCP Implementation Guidelines.

3. Project proponent must define Preserve boundaries consistent with the requirements of the HLIT Ordinance (including narrow endemic policies), Preserve design criteria in Section 3.6 of the MSCP Subregional Plan, and the conditions for species coverage under Table 3-5 of the MSCP Subregional Plan (Appendix A).

[1] Letter to City of Chula Vista from Ken Berg, USFWS and CF Raysbrook, CDFG: August 1999.

4. Project proponent must receive agreement from the City and the Wildlife Agencies for establishment of new Preserve boundaries.

5. Project proponent must incorporate biological information and Preserve boundaries agreed-upon by the City and Wildlife Agencies into project environmental documentation.

6. Project proponent must prepare Major Subarea Plan Amendment meeting the Habitat Conservation Plan standards of the ESA and required Federal and State environmental documents.

7. The City will consider adoption of a Major Subarea Plan Amendment during consideration of a project's SPA Plan or equivalent entitlement process for projects not requiring SPA Plan approval.

8. USFWS will process Major Subarea Plan Amendment and an amendment to the incidental Take permit in accordance with all statutory and regulatory requirements.

5.2 Subarea Plan Implementation Tools

The Chula Vista MSCP Subarea Plan will be incorporated as an element of the City's General Plan. The General Plan Amendment will be adopted concurrent with Subarea Plan approval by the City, prior to issuance of Take Authorization by the Wildlife Agencies. Certain land within the City will be assigned appropriate MSCP overlay designations. The City will implement the General Plan land use overlay designations for MSCP by creating overlay zones. Table 5-2 depicts the relationship between the Chula Vista MSCP Subarea Plan land use categories, General Plan land use overlay designations and overlay zones. The provisions of this Subarea Plan and IA supercede those of the Chula Vista General Plan in the event of conflicts. Future amendments to individual SPA/Precise Plans may be required to provide consistency between the Subarea Plan, General Plan and other existing planning documents. It is anticipated that these amendments would be processed concurrently with the overall planning documents for individual areas.

Table 5-2: Relationship between Chula Vista MSCP Subarea Plan and General Plan

MSCP Subarea Plan	General Plan Overlay Designation	Overlay Zone
100% Conservation Area	MSCP Open Space	MSCP Open Space Zone
75-100% Conservation Area	MSCP Take Authorized 1	MSCP Take Authorized Zone 1
Development Areas outside of Covered Projects	MSCP Take Authorized 2	MSCP Take Authorized Zone 2
Development Areas within Covered Projects	N/A	N/A

Development of land within MSCP overlay zones will be required to meet development standards consistent with the Chula Vista MSCP Subarea Plan. To achieve project consistency with the MSCP Subregional Plan and Chula Vista MSCP Subarea Plan and to implement the MSCP overlay zones, the City will create and utilize several implementation tools described in Section 5.2.1 through 5.2.6 of this Subarea Plan.

5.2.1 Amendment to Chula Vista Excavation, Grading and Fills Ordinance

Subsequent to conditional adoption of the Chula Vista Subarea Plan by the City Council in October 2000, the City immediately initiated preparation of amendments to the City of Chula Vista Excavation, Grading and Fills Ordinance (hereafter referred to as "Grading Ordinance"). The City's Grading Ordinance applies to all land within the City's incorporated limits and will be amended to include the following:

1. Regulations on clearing and grubbing of Sensitive Biological Resources to ensure compliance with the Chula Vista MSCP Subarea Plan.

2. Prohibition against issuance of a grading permit for areas within a project that will result in impacts to wetland habitats or species, or to Listed Non-covered Species, prior to issuance of applicable Federal and/or State permits (refer to Section 5.2.4 of this Subarea Plan).

3. Take Authorization exemption for clearing and grubbing activities located in a Development Area outside of a Covered Project in a Project Area that is one acre or less in size, not part of a larger contiguous clearing and grubbing project, and will not impact Wetlands or Listed Non-covered Species.

Amending the Excavating, Grading and Filling Ordinance will ensure that all projects, both within and outside of Covered Project areas, will comply with the requirements of this Subarea Plan. Such amendments will be adopted by the City prior to issuance of Take Authorization by the Wildlife Agencies to the City pursuant to this Subarea Plan.

5.2.2 Habitat Loss and Incidental Take Ordinance

Subsequent to conditional adoption of the Chula Vista Subarea Plan by the City Council in October 2000, the City initiated preparation and processing of a new City ordinance to establish a Habitat Loss and Incidental Take (HLIT) Permit. The HLIT Ordinance will be consistent with the conservation and mitigation goals of the MSCP Subregional Plan and this Subarea Plan, and will establish development standards for the MSCP overlay zones. The HLIT Ordinance will be completed and adopted prior to issuance of Take Authorization by the Wildlife Agencies to the City pursuant to this Subarea Plan. Subsequent to adoption of the HLIT Ordinance, Implementation Guidelines will be created by the City to assist applicants in meeting HLIT regulations.

Unless exempt, HLIT Ordinance compliance will be required for all development within the City's jurisdiction which is not located within the Development Areas of Covered Projects prior to issuance of any land development permit. Provisions for protection of

Narrow Endemic Species (pursuant to Section 5.2.3) will apply to all areas regulated by the HLIT Ordinance. Impacts to Wetlands will be avoided and minimized to the maximum extent practicable as further described in Section 5.2.4 of this Subarea Plan.

HLIT regulations and facilities siting criteria will be applied to all Planned and Future Facilities within the 100% Conservation Area. HLIT regulations and development design standards will also be applied to all development projects proposed within the 75-100% conservation areas. For property located within the 75-100% Conservation Area, the HLIT will limit development within the mapped 75-100% Conservation Area to 25% of the area so mapped, and will direct such development to the least environmentally sensitive portion of the site.

For projects within Development Areas outside of Covered Projects that contain sensitive biological resources, and the Project Area is greater than one acre, the HLIT Ordinance will require biological evaluation of all resources onsite. The HLIT will not limit encroachment into Tier I, II, and III habitats as defined in Table 5-3 of this Subarea Plan except where necessary to address potential impacts to Narrow Endemic Species and/or Wetlands.

Should focused surveys for certain sensitive species be required, they must be conducted by a qualified biologist and must follow the most recent survey protocol adopted by the Wildlife Agencies. In cases where no adopted protocol exists, general focused survey guidelines, developed in consultation with the Wildlife Agencies, will be incorporated in the MSCP Implementation Guidelines and must be followed.

Impacts to Tier I, II, and III habitats will be mitigated pursuant to HLIT mitigation standards contained in Table 5-3 of this Subarea Plan. For Wetland impact mitigation ratios refer to Section 5.2.4. To ensure complete assembly of the Preserve as planned by this Subarea Plan, the City will encourage all mitigation to be conducted within the Preserve and will discourage purchase of land outside the Preserve for mitigation.

Table 5-3: HLIT Upland Habitat Mitigation Ratios

Tier	Habitat Type	Location of Impact	Location of Preservation	
			Inside Preserve	Outside Preserve
TIER I: (rare uplands)	Southern Foredunes Coastal Bluff Scrub Maritime Succulent Scrub Native Grasslands Oak Woodlands	Inside Preserve	2:1	3:1
		Outside Preserve	1:1	2:1
TIER II: (uncommon uplands)	Coastal Sage Scrub CSS/Chaparral	Inside Preserve	1.5:1	2:1
		Outside Preserve	1:1	1.5:1
TIER III: (common uplands)	Mixed Chaparral Chamise Chaparral Non-native Grassland Scrub Oak/Chaparral	Inside Preserve	1:1	1.5:1
		Outside Preserve	0.5:1	1:1
TIER IV: (other uplands)	Disturbed Lands Agricultural Lands Eucalyptus	Inside Preserve	No Mitigation Required	No Mitigation Required
		Outside Preserve		
Covered Narrow Endemic Species	Listed on Table 5-4	N/A	1:1 to 3:1	1:1 to 3:1

5.2.2.1 HLIT Exclusions

Take of Covered Species and habitat within Development Areas of Covered Projects will not require a HLIT Permit. Covered Projects will be developed consistent with requirements of approved SPA or Precise Plans, Wildlife Agency Agreements, conditions of coverage cited in Section 7.5.6 of this Subarea Plan, and/or the Otay Ranch GDP/SRP and RMP. Development of Covered Projects within Preserve boundaries will be subject only to the Narrow Endemic Species protection provisions of the HLIT, as described in Section 5.2.3 of this Subarea Plan and Wetlands protection described in Section 5.2.4.

5.2.3 Avoidance and Minimization of Impacts to Narrow Endemic Species

Southwestern San Diego County includes specific geographic and climatological conditions that support species with limited habitat ranges. These species, referred to as "Narrow Endemic Species", are highly restricted by their habitat affinities, soil conditions and/or other ecological factors, and require additional measures to ensure that their long-term viability is maintained.

Impacts to Narrow Endemic Species will be mitigated in kind at ratios of 1:1 to 3:1, depending on the sensitivity of the species. Other strategies to achieve coverage for these species include avoidance and minimization of impacts; management directives from Table 3-5 of the MSCP Subregional Plan (Appendix A); enhancement of existing habitats and populations; and transplantation where appropriate, as implemented through project-specific mitigation for Covered Projects.

When focused surveys for Narrow Endemic Species are required, they must be conducted by a qualified biologist and must follow the most recent survey protocol adopted by the Wildlife Agencies. In cases where no adopted protocol exists, general focused survey guidelines will be developed, in consultation with the Wildlife Agencies, as part of the MSCP Implementation Guidelines.

Table 5-4 identifies those Narrow Endemic Species requiring additional conservation measures outlined in this section of the Subarea Plan to assure long-term survival. Additional management information for these species is contained in Table 3-5 of the MSCP Subregional Plan (Appendix A) and in Section 4.0 of this Subarea Plan.

Table 5-4: Narrow Endemic Species for Chula Vista Subarea*

Common Name	Scientific Name	Table 3-5 of the MSCP Subregional Plan Page Reference
Species that occur in *Chula Vista Subarea* and for which Subarea Plan provides a significant contribution to subregional conservation		
Salt marsh bird's-beak	*Cordylanthus maritimus* ssp. *maritimus*	3-41
Variegated dudleya	*Dudleya variegata*	3-44
Otay tarplant	*Deinandra [Hemizonia] conjugens*	3-48
Snake cholla	*Opuntia parryi* var. *serpentina*	3-54
Species with known occurrences or suitable habitat within the *Chula Vista Subarea*		
San Diego thorn-mint	*Acanthomintha ilicifolia*	3-32
San Diego ambrosia	*Ambrosia pumila*	3-33
Orcutt's brodiaea	*Brodiaea orcuttii*	3-38
Palmer's ericameria	*Ericameria palmeri* ssp. *palmeri*	3-45
Species not likely to occur within the *Chula Vista Subarea*		
Shaw's agave	*Agave shawii*	3-32
Encinitas baccharis	*Baccharis vanessae*	3-36
Nevin's barberry	*Berberis nevinii*	3-37
Thread-leaved brodiaea	*Brodiaea filifolia*	3-37
Dunn's mariposa lily	*Calochortus dunnii*	3-39
Lakeside ceanothus	*Ceanothus cyaneus*	3-40
Short-leaved dudleya	*Dudleya blochmaniae* ssp. *brevifolia*	3-44
Gander's pitcher sage	*Lepechinia ganderi*	3-49
Willowy monardella	*Monardella linoides* var. *viminea*	3-51
Felt-leaved monardella	*Monardella hypoleuca* spp. *lanata*	3-51
Dehesa bear-grass	*Nolina interrata*	3-53

The following specific provisions to insure avoidance and minimization of impacts to Narrow Endemic Species will also be implemented as part of this Subarea Plan.

5.2.3.1 Development Areas within Covered Projects

Covered Projects provide protection of Narrow Endemic Species through consideration of Narrow Endemic Species in the Preserve design for those projects. Take of Covered Species, including Narrow Endemic Species, for Development Areas within Covered Projects will be extended at the time of development approval, consistent with the provisions of this Subarea Plan. No limitations on impacts to Narrow Endemic Species within the Development Areas of Covered Projects, other than specified in Project-Specific Management

* See Section 4.0 for more detailed information on these species.

Requirements and/or Conditions for Coverage cited in Section 7.5.6 will be applied.

5.2.3.2 100% Conservation Areas within Covered Projects

Projects located within the 100% Conservation Areas of Covered Projects (i.e., within the Preserve) are limited to uses described in Sections 6.1, 6.2 and 6.3 of this Subarea Plan. Impacts to covered Narrow Endemic Species from Planned and Future Facilities located within the 100% Conservation Areas of Covered Projects will be avoided to the maximum extent practicable. Where impacts are demonstrated to be unavoidable, impacts will be limited to 5% of the total Narrow Endemic Species population within the Project Area. Findings of equivalency will be made by the City for such Take Authorization for covered Narrow Endemic Species, pursuant to Section 5.2.3.6 of this Subarea Plan. The City will forward written findings of equivalency to the Wildlife Agencies. Within 30 days of receipt of mailed notice of findings from the City the Wildlife Agencies may submit to the City a written finding of non-concurrence on the facts of the City's findings. If such finding of non-concurrence is made within 30 days, the City will confer with the Wildlife Agencies to develop agreement upon an appropriate location for the Planned or Future Facility in question. If the Wildlife Agencies do not respond within 30 days after receipt of mailed notice, the City shall deem the written findings accepted.

If impacts exceed 5% of the covered Narrow Endemic Species population within the Project Area after comprehensive consideration of avoidance and minimization measures, the City must make a determination of biologically superior preservation consistent with Section 5.2.3.7 of this Subarea Plan. The City will forward its written determination of biologically superior preservation to the Wildlife Agencies for review. The Wildlife Agencies may submit to the City within 30 days of receipt of mailed notice of findings from the City a written finding of non-concurrence on the facts of the City's findings. If such finding of non-concurrence is made within 30 days, the City will confer with the Wildlife Agencies to develop agreement upon an appropriate location for the Planned or Future Facility in question. If the Wildlife Agencies do not respond within 30 days after receipt of mailed notice, the City shall deem the written findings accepted.

The Planned and Future Facilities listed in Sections 6.3.3.1 and 6.3.3.2 of this Subarea Plan are an integral part of this Subarea Plan, and will necessarily traverse the Preserve. When consultation is required pursuant to this Section, the Wildlife Agencies will work cooperatively with the City to site Planned and Future Facilities in the least environmentally sensitive location(s). The consultation will not result in any prohibition of construction of any Planned or Future Facility through the Preserve.

5.2.3.3 Development Areas outside of Covered Projects

Development projects within Development Areas outside of Covered Projects and regulated by the HLIT will avoid impacts to covered Narrow Endemic Species to the maximum extent practicable. Where impacts are demonstrated to be unavoidable, impacts within these Development Areas will be limited to 20% of the total Narrow Endemic Species population within the Project Area. Findings of equivalency, as defined in Section 5.2.3.6 of this Subarea Plan, will be made by the City for such Take Authorization of the covered Narrow Endemic Species.

If, after comprehensive consideration of avoidance and minimization measures, impacts exceed 20% of the covered Narrow Endemic Species population within the Project Area, the City must make a determination of biologically superior preservation consistent with Section 5.2.3.7 of this Subarea Plan. The City will forward its written determination of biologically superior preservation to the Wildlife Agencies for review. Within 30 days of receipt of mailed notice of findings from the City the Wildlife Agencies may submit to the City a written finding of non-concurrence on the facts of the City's findings. If such finding of non-concurrence is made within 30 days, the City will confer with the Wildlife Agencies to resolve Narrow Endemic Species issues associated with the proposed development. If the Wildlife Agencies do not respond within 30 days after receipt of mailed notice, the City shall deem the written findings accepted.

5.2.3.4 100% Conservation Areas outside of Covered Projects

Projects within 100% Conservation Areas outside of Covered Projects and regulated by the HLIT Ordinance will be limited to uses described in Sections 6.1, 6.2 and 6.3 of this Subarea Plan. In 100% Conservation Areas, Planned and Future Facilities must avoid impacts to covered Narrow Endemic Species to the maximum extent practicable. Where impacts are demonstrated to be unavoidable, impacts within the 100% Conservation Areas will be limited to 5% of the total Narrow Endemic Species population within the Project Area. Findings of equivalency will be made by the City for Take of the covered Narrow Endemic Species, pursuant to Section 5.2.3.6 of this Subarea Plan. The City will forward its written findings of equivalency to the Wildlife Agencies. The Wildlife Agencies may submit to the City, within 30 days of receipt of mailed notice of findings from the City, a written finding of non-concurrence on the facts of the City's findings. If such finding of non-concurrence is made within 30 days, the City will confer with the Wildlife Agencies to develop agreement upon an appropriate location for the Planned or Future Facility in question. If the Wildlife Agencies do not respond within 30 days after receipt of mailed notice, the City shall deem the written findings accepted.

If impacts exceed 5% of the covered Narrow Endemic Species population within the Project Area after comprehensive consideration of avoidance and minimization measures the City must make a determination of biologically

superior preservation, consistent with Section 5.2.3.7 of this Subarea Plan. The City will forward its written determination of biologically superior preservation to the Wildlife Agencies for review. The Wildlife Agencies may submit to the City, within 30 days of receipt of mailed notice of findings from the City, a written finding of non-concurrence on the facts of the City's findings. If such finding of non-concurrence is made within 30 days, the City will confer with the Wildlife Agencies to develop agreement upon an appropriate location for the facility in question. If the Wildlife Agencies do not respond within 30 days after receipt of mailed notice, the City shall deem the written findings accepted.

5.2.3.5 75-100% Conservation Areas

Development within the 75-100% Conservation Areas is limited to 25% of the mapped 75-100% Conservation Area and will be directed to the least environmentally sensitive location. Development projects within the 75-100% Conservation Area will avoid impacts to covered Narrow Endemic Species to the maximum extent practicable. Where impacts are demonstrated to be unavoidable, impacts within the 75-100% Conservation Areas will be limited to 20% of the total Narrow Endemic Species population within the Project Area. Findings of equivalency will be made by the City for Take Authorization of the covered Narrow Endemic Species, pursuant to Section 5.2.3.6 of this Subarea Plan.

If impacts exceed 20% of the covered Narrow Endemic Species population within the Project Area after comprehensive consideration of avoidance and minimization measures the City must make a determination of biologically superior preservation, consistent with Section 5.2.3.7 of this Subarea Plan. The City will forward such written determination of biologically superior preservation to the Wildlife Agencies for review. The Wildlife Agencies may submit to the City, within 30 days of receipt of mailed notice of findings from the City, a written finding of non-concurrence on the facts of the City's findings. If such finding of non-concurrence is made within 30 days, the City will confer with the Wildlife Agencies to resolve Narrow Endemic Species issues associated with the proposed development. If the Wildlife Agencies do not respond within 30 days after receipt of mailed notice, the City shall deem the written findings accepted.

Table 5-5 provides a summary of the Narrow Endemic Species protection provisions described in narrative form in Sections 5.2.3.1 through 5.2.3.5 of this Subarea Plan.

Table 5-5: Summary of Protection Provisions for Narrow Endemic Species

	Development Areas within Covered Projects	100% Conservation Areas within Covered Projects *	Development Areas Regulated by the HLIT Ordinance	100% Conservation Areas Regulated by HLIT Ordinance *	75-100% Conservation Areas
No limit on encroachment	✓				
Encroachment limited to 5% of the Narrow Endemic Species population with findings of equivalency made by City and sent to Wildlife Agencies		✓		✓	
Encroachment limited to 20% of Narrow Endemic Species population with findings of equivalency made by City			✓		✓
Encroachment exceeds 5% of population with determination of biologically superior preservation made by City and sent to Wildlife Agencies		✓		✓	
Encroachment exceeds 20% of population with determination of biologically superior preservation made by City and sent to Wildlife Agencies			✓		✓

*Projects limited to uses described in Section 6.1, 6.2 and 6.3 of this Subarea Plan.

5.2.3.6 Equivalency Findings

The following information will be included in the equivalency findings related to impacts to covered Narrow Endemic Species:

1. Definition of the Project Area.

2. A written description of the project.

3. A written description of biological information available for the project site including the results of narrow endemic surveys.

4. Written finding of infeasibility of total avoidance of Narrow Endemic Species' population(s).

5. Quantification of impacts to Narrow Endemic Species associated with the project including direct and indirect effects.

6. A written description of project design features that reduce indirect effects such as edge treatments, landscaping, elevation differences; minimization; and/or compensation through restoration or enhancement.

7. Description of measures proposed to compensate for identified impacts in a manner that demonstrates that the proposed design including compensation would result in a long-term Preserve design for the species of concern that is functionally equivalent to or better than the Preserve design that would occur in the absence of the identified impact. The equivalency analysis will be based on the particular requirements of the species of concern.

8. A summary conclusion, including findings of consistency with the applicable percentage criterion.

5.2.3.7 Determination of Biologically Superior Preservation

A determination of biologically superior preservation by the City will be based upon the criteria for findings of equivalency defined in Section 5.2.3.6 of this Subarea Plan as well as an expanded written description of the project including information demonstrating that although the proposed project would exceed the 5% Narrow Endemic Species impact threshold, it would result in an overall Preserve design and configuration biologically superior to that which would occur under a project alternative within the 5% threshold.

Demonstration that the biologically superior alternative would provide benefits with respect to Preserve design and configuration should be considered in the context of the effects on following factors:

1. Conserved habitats;

2. Covered Species;

3. Habitat linkages and function of Preserve areas;

4. Preserve configuration and management;

5. Ecotones or other conditions affecting species diversity;

6. Species of concern not on the Covered Species list.

5.2.4 Wetlands Protection Program

Pursuant to this section of the Subarea Plan, Wetlands protection will be provided throughout the Subarea through individual project entitlement reviews and the associated CEQA process. The process will provide an evaluation of Wetlands avoidance and minimization and will ensure compensatory mitigation within the *Chula Vista Subarea* or *Chula Vista Planning Area* for unavoidable impacts to Wetlands, thereby achieving no overall net loss of Wetlands.

As part of the CEQA review, development projects which contain Wetlands will be required to demonstrate that impacts to Wetlands have been avoided to the greatest extent practicable and, where impacts are nonetheless proposed, that such impacts have been minimized. For unavoidable impacts to Wetlands, the City will apply the Wetlands mitigation ratios identified in Table 5-6. The Wetlands mitigation ratios provide a standard for each habitat type but may be adjusted depending on the functions and values of both the impacted Wetlands as well as the Wetlands mitigation proposed by the project. The City may also consider the wetland habitat type(s) being impacted and utilized for mitigation in establishing whether these standards have been met.

The Wildlife Agencies will review the mitigation program as part of the CEQA public review process. Projects that document highly degraded habitat value may request a reduced mitigation ratio from those shown in Table 5-6. If a reduced mitigation ratio has been proposed, the Wildlife Agencies may submit a letter of concurrence or non-concurrence to the City. If a letter of non-concurrence is received by the City from the Wildlife Agencies during the CEQA public review period, the City will not approve the mitigation ratio reduction. If no written concurrence or non-concurrence is received by the City from the Wildlife Agencies during the CEQA public review process, the mitigation ratio reduction may be approved by the City.

Additionally, this component of the Subarea Plan is not intended to result in subjecting projects to additive or, in some measure, duplicative, mitigation requirements for the same wetlands impacts evaluated under the Federal and/or State wetland permitting process. Thus, the City reserves the right to provide flexibility in the CEQA mitigation analysis and the Mitigation Monitoring and Reporting Program (MMRP) requirements to enable a project applicant to substitute the mitigation measures imposed by another Federal or State agency for the same wetlands impacts for the mitigation imposed under this City program; provided that the Federal or State agency mitigation measures are equivalent or greater than those imposed by the City.

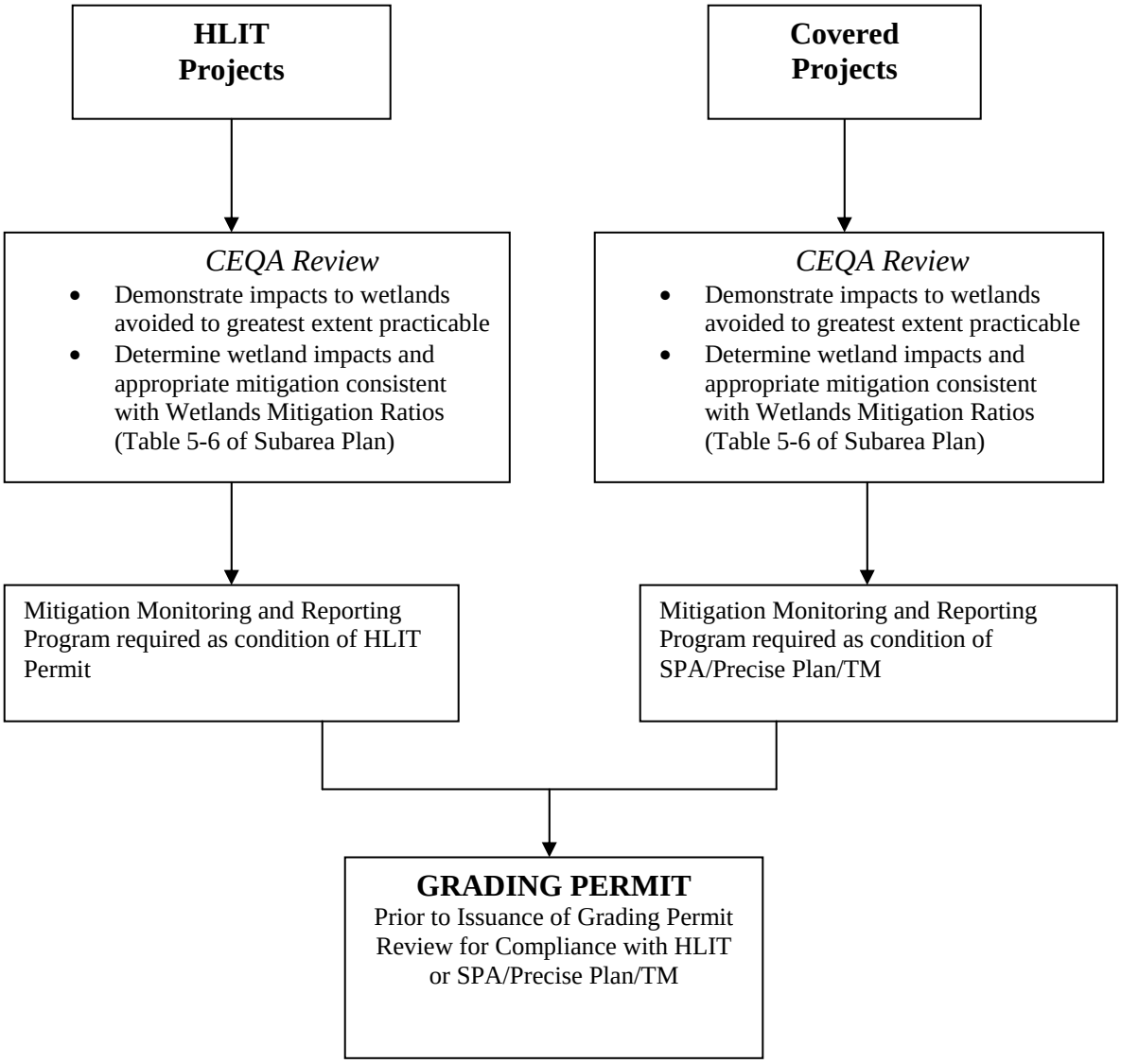
Table 5-6: Wetlands Mitigation Ratios

Coastal Wetlands	
Salt Marsh	4:1
Saltpan	4:1
Riparian Habitats	
Oak Riparian Forest	3:1
Riparian Forest	3:1
Riparian Woodland	3:1
Riparian Scrub	1:1 to 2:1
Riparian Scrub (Coastal Overlay Zone)	3:1
Open Water/ Freshwater	1:1
Freshwater Marsh	1:1 to 2:1
Freshwater Marsh (Coastal Overlay Zone)	4:1
Natural Flood Channel	1:1 to 2:1
Disturbed Wetlands	1:1 to 2:1
Vernal Pools	2:1 to 4:1
Marine Habitats	2:1
Eelgrass Beds	2:1

The Wetlands mitigation program will be included in the project's MMRP which is incorporated as a condition of the project's entitlement permit. For development outside of Covered Projects, implementation of Wetlands protection and the MMRP will be achieved through the HLIT permit. For Covered Projects, implementation of Wetlands protection and MMRP will be achieved through associated SPA/Precise Plans and/or Tentative Maps (TMs). For Covered Projects located in Otay Ranch, mitigation will be consistent with the policies and intent of the Otay Ranch RMP. Where internal inconsistencies occur, the more restrictive measure and/or policy shall apply. In addition, as described in Section 5.2.1, the City's Grading Ordinance will be amended to require verification of compliance with the conditions of the applicable entitlement permit prior to the issuance of a permit to impact the Wetlands (e.g. grading permit).

A brief overview of the process is outlined in the following flow chart:

Wetlands Protection Review Process



5.2.4.1 Avoidance and Minimization within the Preserve

Minimization of impacts to Wetlands within the Preserve will be assured through implementation of Subarea Plan requirements which restrict uses and apply siting criteria to development within the 100% Conservation Areas and 75-100% Conservation Areas. Permitted uses within the 100% Conservation Area are generally limited to public infrastructure (Planned and Future Facilities) as further described in Section 6.1 through 6.3 of this Subarea Plan. All Planned and Future Facilities are subject to specific siting criteria, detailed in Section 6.3.3.4, which

will direct public facilities away from sensitive resources such as Wetlands. In the 75-100% Conservation Areas, development is limited to 25% of the mapped area. Avoidance and minimization of impacts to Wetlands will be assured as all development in the 75-100% Conservation Areas is directed through the HLIT permitting process to the least environmentally sensitive portion of the site, pursuant to Section 5.2.2.

5.2.4.2 Wetland Conservation Projections

Implementation of this Subarea Plan is anticipated to result in conservation of over 99% of the existing Wetlands in the Chula Vista Subarea. Approximately 1,080 acres of Wetlands have been identified within the Chula Vista Subarea. Over 93% (1,005 acres) are located within the Preserve. Another 6% (67 acres) are fully protected through existing Federal and/or State permits, or are within public ownership. The remaining less than 1% of Wetland resources (approximately 8 acres) are located in areas planned for development. The following provides a summary of the status of Wetland resources located outside the Preserve.

An estimated 75 acres of Wetlands are located outside the Preserve. Approximately 22 acres represent Wetland mitigation areas that are fully protected through existing Federal and/or State permit requirements. These include 16.5 acres protected as part of the existing Eastlake 404/1600 permit mitigation program, and 5.0 acres included in and protected by the existing Rolling Hills Ranch Subarea II 404/1600 permit mitigation program.

Approximately 32 acres of Wetlands outside the Preserve are located adjacent to San Diego Bay and are owned by the State of California. An additional approximately 13 acres of Wetlands is owned by the City of Chula Vista. Located in the Sweetwater River basin and surrounded by the Chula Vista Municipal Golf Course, these Wetlands are not anticipated to be impacted by development, as redevelopment of the golf course site to other uses is not contemplated.

The remaining 8 acres of identified Wetlands outside the Preserve are located in development project areas. Approximately 2 acres of riparian-related Wetlands are located within the Rolling Hills Ranch Subarea III project area. Applications for 404 and 1600 permits related to proposed impacts to a portion of these Wetlands have been submitted by the project developer. In addition, approximately 6 acres of Wetlands are located adjacent to San Diego Bay, within the Midbayfront project site. If proposed for impact by development, the Wetlands on the Midbayfront project site will be subject to the HLIT regulations, including avoidance, minimization and mitigation, as well as Federal and State wetlands regulations.

5.2.4.3 Compliance with Existing Federal and/or State Wetlands Regulations

In addition to the City's Wetlands Protection Program, Wetlands are afforded protection under existing Federal and State law and regulatory programs. The Federal Clean Water Act, the California Porter-Cologne Water Quality Control Act and the California Fish and Game Code provide protection to Wetland habitats and species through Federal and State regulatory permitting and agreements. Where applicable, project proponents must submit an application for and receive Federal Section 404 and State Section 1600 permits prior to impacting most wetlands. Applicants must also apply to Regional Water Quality Control Board for Waste Discharge Requirements prior to any discharges, including discharges from land that may affect any waters of the state. Water Discharge requirements must implement Basin Plans that designate beneficial uses and water quality criteria for water-bodies, including wetlands.

Mitigation for an impact to wetlands must be consistent with the Federal policy of no overall net loss of wetland functions and values, and Section 404(b)(1) guidelines (40 C.F.R. Part 230). Habitats and species that are the subject of these permits require, as conditions of their approval, conservation and/or mitigation resulting in avoidance or functional equivalent value mitigation. State guidelines for wetland permitting also adhere to a no net loss policy for wetland acreage, functions and values. The CDFG Code (Section 1600 et seq.) states that projects which substantially alter the flow or bed, bank or channel of any river, stream or lake designated by the CDFG should first notify the CDFG, which may determine that a Streambed Alteration Agreement is required. As part of the City's Wetlands Protection Program, compliance with conditions of the Federal Section 404 and State Section 1600 permits must be demonstrated prior to issuance of a grading permit.

Projects that are regulated by Federal agencies will continue to be subject to Section 7 Consultations under the ESA. Those projects that are subject to a Section 7 Consultation will be evaluated to insure that the project is consistent with this Subarea Plan and wetlands mitigation program. The level of conservation afforded by the provisions of this Subarea Plan to Covered Species has been established through extensive consultation with, and review by, the Wildlife Agencies. Therefore, projects undergoing Section 7 Consultations which are consistent with the provisions of this Subarea Plan will receive Take Authorization for Covered Species through the Take Authorization permit issued to the City.

5.2.5 Otay Ranch Grazing Ordinance

Subsequent to conditional adoption of the Chula Vista Subarea Plan by the City Council in October 2000, the City immediately initiated preparation of a Grazing Ordinance, which will implement the Otay Ranch Range Management Plan (Appendix F7 of the RMP2), in the Otay Ranch Planning Component within the City. The ordinance would be effective once the City has received Take Authorization. The Range Management Plan analyzed current grazing conditions on Otay Ranch and identified the means by which to achieve the policies and standards identified in the RMP for managed grazing activities. The Otay Ranch Grazing Ordinance will codify the Preserve Management Goals and Recommendations of the Range Management Plan for the Otay River Valley Management Area, including the following:

1. No increase in irrigation will be allowed except for temporary irrigation that may be installed as part of habitat restoration plans;

2. Grazing by sheep and goats will not be allowed;

3. Elimination of grazing in the riparian habitat in the Otay River Valley (Horse, River Valley West, River Valley East, and O'Neal pastures shown on Figure 5-2) during the winter through summer months following the onset of winter rains;

4. Elimination of grazing in Salt Creek (O'Neal and Salt Creek Pastures shown on Figure 5-2) during the breeding season of the coastal California gnatcatcher from February 15 through August 15, annually;

5. Elimination of grazing in areas designated for restoration for a period of time prior to initiation of restoration activities to facilitate soil preparation and exotic plant control; and

6. Maintaining any existing or future fencing and gating installed for range management purposes.

5.2.6 Amendments to Chula Vista Local Coastal Plan

Development projects within the coastal zone will be required to be consistent with both the adopted City Local Coastal Plan (LCP), as amended from time to time, and this Subarea Plan. Projects within the coastal zone will be processed under the regulations of the adopted LCP and will be subject to the HLIT Ordinance for mitigating potential impacts to upland and Wetland habitats.

5.2.7 Soil Salvage

As a means of reducing impacts to sensitive species and habitats from development allowed by the Subarea Plan, the City will continue its practice of requiring soil, seed and plant salvage on a project-by-project basis. Project review and CEQA analysis will identify appropriate salvage opportunities. Mitigation measures and conditions of project

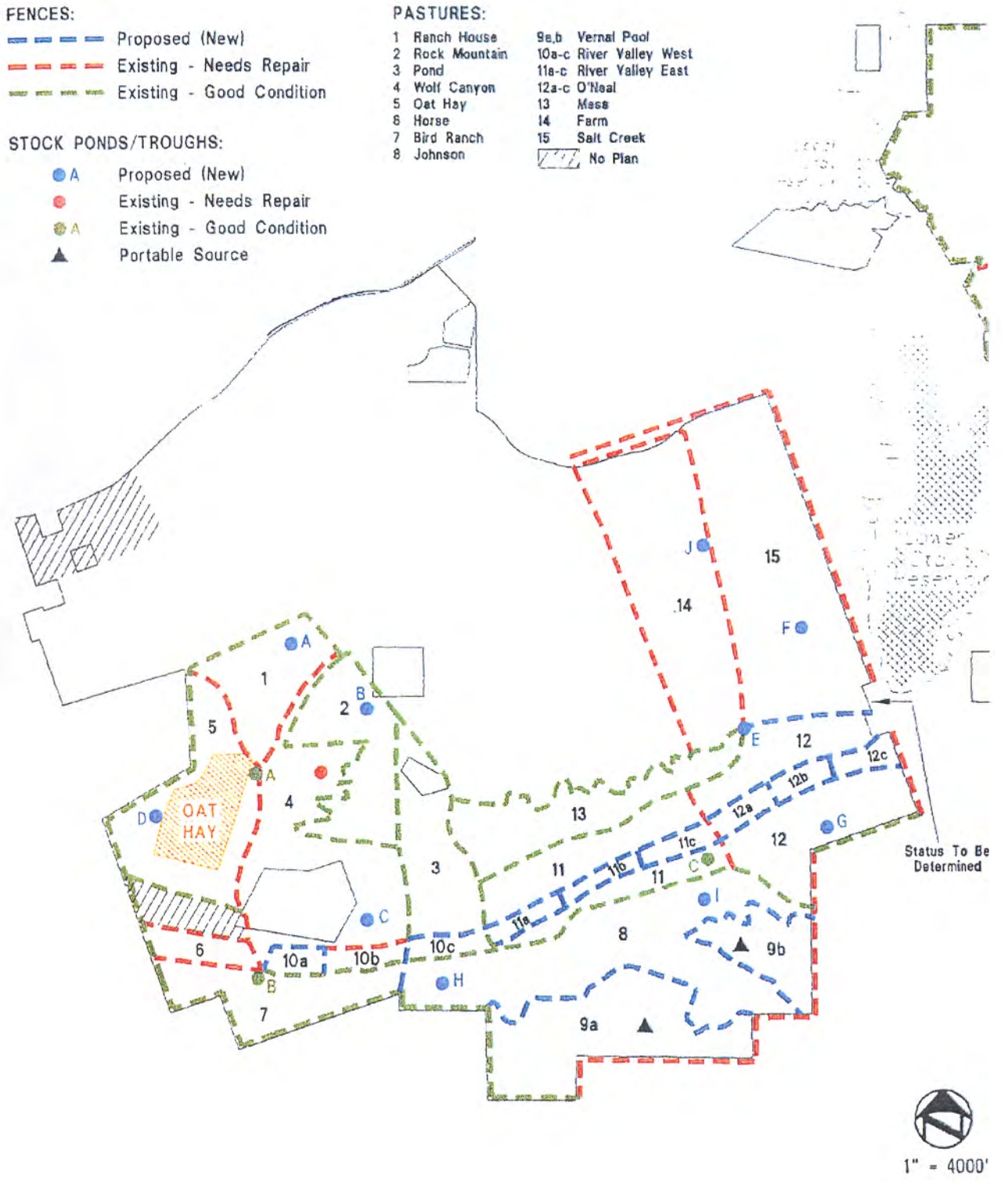


FIGURE 5-2

Otay Valley Management Area - Existing & Proposed Pastures

Source: Range Management Plan
For Otay Ranch
Prepared 1 September 1995

approval would specify the soils, seed and plant material to be salvaged, identify the procedures for salvage, and specify locations and time frames for use of material, as appropriate.

5.2.8 Implementation Tools for Conservation of the Quino Checkerspot Butterfly

Impacts associated with Planned and Future Facilities within the Preserve and other development outside of the Preserve will be minimized according to the measures described in Sections 5.2.8.1 and 5.2.8.2.

5.2.8.1 Infrastructure in the Preserve

Impacts will not be permitted within the Preserve except as provided in Section 6.0 of this Subarea Plan, generally in association with Planned and Future Facilities. Impacts to QCB habitat in the Preserve will be minimized, as described below, while still allowing for construction of Planned and Future Facilities as provided for in this Subarea Plan. Infrastructure projects constructed within the Preserve will be subject to the following sequence of measures to avoid and minimize impacts to QCB and QCB habitat**:**

(1) A habitat assessment will be conducted in potential facility locations as part of the project siting and design process.

(2) QCB surveys will be conducted in appropriate habitat by a qualified biologist in accordance with the most recent survey protocol adopted by the USFWS.

(3) If QCB are observed within the proposed Project Area, the project will be designed to avoid impacts to QCB habitat to the maximum extent practicable.

(4) The following avoidance criteria will be applied specifically to Preserve Habitat-Category A areas located east of SR 125:

a. For Preserve Habitat-Category A areas east of SR 125 that are within the Salt Creek drainage and the Otay River Valley and associated with the property known as the New Millennium Property, single patches of plantago equal to or greater than 50 square meters, or if less than 50 square meters any combination of patches within 200 meters of each other which are equal to or greater than 50 square meters, and as mapped in the habitat assessment prepared by Dudek and Associates (Appendix J) will be considered “significant QCB habitat patches”.

b. For Preserve Habitat-Category A areas located east of SR 125 that are within the Salt Creek drainage and the Otay River Valley and outside of the New Millennium Property, a detailed habitat assessment will be conducted using the same methodology employed by Dudek and Associates (1999) to identify patches of QCB habitat, including mapping

patches of *Plantago erecta* and other host plants, if applicable. In this area, single patches of plantago equal to or greater than 50 square meters, or if less than 50 square meters any combination of patches within 200 meters of each other which are equal to or greater than 50 square meters, will be considered "significant QCB habitat patches".

c. Projects shall be designed to avoid "significant QCB habitat patches" to the maximum extent practicable, regardless of whether QCB are observed. If impacts to these habitat patches cannot be avoided, the City will consult with the Wildlife Agencies and the Wildlife Agencies will cooperatively work with the City to site the proposed facility in a location that will best minimize impacts to QCB habitat. The City will submit a written request for input to the Wildlife Agencies. The Wildlife Agencies will meet and confer with the City and, no later than 60 days of receipt by the Wildlife Agencies of written notice from the City, resolution on the appropriate location of the proposed facility will be completed.

d. During joint review of a project proposing to impact one or more "significant QCB habitat patches", a cooperative assessment will be made by the City and Wildlife Agencies to determine the overall significance of the proposed impacts to "significant QCB habitat patches". The assessment will be made within the context of the quality and location of other QCB habitat within the Preserve at the time of the assessment. Evaluation of proposed project impacts to significant habitat patches shall also take into consideration all of the other components of the City's QCB program. In particular, if the planned QCB habitat restoration/enhancement component has demonstrated success, the City and the Wildlife Agencies shall consider the restoration/enhancement component in their evaluation of the individual project's impacts.

e. When the City has successfully completed, as determined by the Wildlife Agencies, at least 10 acres of QCB restoration/enhancement within the Preserve in the Salt Creek/Otay River Valley area, the provisions of Section 5.2.8.1 (4)(a-d) will no longer be applicable.

(5) For construction in areas adjacent to occupied habitat, dust control measures (i.e., watering) will be applied during grading activities.

(6) As part of the overall Preserve management strategy, a weed control program will be established for all water/sewer line access roads built through potential QCB habitat. This will include road construction using a concrete-treated base material with aggregate rock to prevent vegetation growth on the road surface, while allowing sufficient percolation to minimize flows. The zone of influence to be subject to the weed control program will be determined by the City's Habitat Manager based on site-specific conditions.

5.2.8.2 Development Areas

All areas outside of the Preserve will have Take Authorization for the QCB. Outside of the Preserve, protocol surveys for QCB presence will be required for Development Areas only within Non-Preserve Habitat-Category A east of SR-125.

For development projects proposed within Non-Preserve Habitat-Category A areas east of SR-125, project proponents will be required to work with the Wildlife Agencies to enable one-time only salvage by the Wildlife Agencies of larvae, butterflies and/or appropriate habitat constituents in areas identified to have QCB. In no case will a project proponent be required to delay project grading to allow for initiation of the QCB flight season for purposes of collecting larvae and/or butterflies. It will not be the responsibility of the City or landowner to establish a breeding facility or provide locations for placement of butterflies or larvae.

If, during surveys conducted in Development Areas in Non-Preserve Habitat-Category A areas east of SR-125, QCB are observed within 300 feet of the Preserve boundary, the project proponent will be required to notify the City and the Wildlife Agencies. A boundary adjustment may be initiated by either the applicant, the City or the Wildlife Agencies in order to minimize potential impacts to QCB. Any proposed boundary adjustment will be subject to the process set forth in Section 5.4.2 of this Subarea Plan. The Wildlife Agencies will work cooperatively with the City and the applicant to determine an appropriate adjustment to the Preserve boundary that will minimize impacts to QCB while still ensuring that the modified boundary does not result in a reduction of development area on the project site.

For all Development Areas adjacent to Preserve Habitat-Category A (refer to Figure 4-1), regardless of the QCB survey results, a qualified biological monitor will be onsite during clearing, grubbing and/or grading activities to ensure that the approved limits of disturbance are not exceeded and that dust control measures are being implemented. If high-visibility fencing that clearly demarcates the limits of disturbance is erected, the monitor will visit the site at least once a week during clearing, grubbing and/or grading operations to ensure that the fencing is being maintained and remains in the appropriate location. If the limits of disturbance are simply staked or flagged, the monitor will check the site daily to ensure that the approved limits of disturbance are not exceeded.

5.3 Incidental Take

The Take Authorization issued to the City of Chula Vista based on the Chula Vista Subarea Plan and IA will provide the City the authority to permit the Take of Covered Species and their habitats associated with development. Take of Chula Vista Covered Species and Species Adequately Conserved associated with development of park and related recreation facilities throughout the Otay Valley Regional Park, consistent with the Otay Valley Regional Park Concept Plan, will also be authorized consistent with this Subarea Plan. Permits will be issued by the City, consistent with this Subarea Plan, the Federal Section 10(a)(1)(B) permit and the State Section 2835 permit for projects within the City's incorporated limits.

Take permits for projects located outside the City boundaries in the *Chula Vista MSCP Planning Area* will be issued by the County of San Diego subject to the County Subarea Plan, South County Segment, County IA and the County's Section 10(a)(1)(B) Permit and State Section 2835 Permit. Take Authority for projects which subsequently annex into the City may be provided pursuant to Section 5.3.1.

5.3.1 Take Authorization and Annexations

When new territory is added to the City through annexation, the following will occur:

5.3.1.1 New Territory Added to the City from Jurisdiction with Approved Subarea Plan

When property is annexed into the City from another jurisdiction which has an approved Subarea Plan, the following applies:

1. An MSCP Annexation Agreement shall be reached between the City, the detaching jurisdiction, and the Wildlife Agencies as part of the annexation process, to ensure that any development of the annexed land proceeds in accordance with the conservation goals of the MSCP. If plans for development of the annexing area are consistent with this Subarea Plan and the detaching jurisdiction's approved Subarea Plan, the Wildlife Agencies will not withhold approval of the MSCP Annexation Agreement.

2. Take Authorization for the annexed territory will be transferred from the detaching jurisdiction to the City upon approval of the Wildlife Agencies, in accordance with applicable permit transfer requirements.

3. The City's IA shall apply to the annexed territory upon recordation of the annexation in the County Assessor's Office, without the need for amendment of the IA.

4. The MSCP Annexation Agreement will be automatically incorporated by reference into the Subarea Plan. If necessary, the Subarea Plan will be amended by administrative approval to incorporate the annexed territory,

including estimated Take and conservation acreage as reflected in the MSCP Annexation Agreement. Revisions to the Subarea Plan, if needed, will not be required to be completed prior to the transfer of Take Authority.

5.3.1.2 New Territory Added to the City from Jurisdiction without Approved Subarea Plan

If an annexing territory is detaching from a jurisdiction for which a Subarea Plan or other Habitat Conservation Plan has not been approved by the Wildlife Agencies, development within the area to be annexed must be consistent with the MSCP and this Subarea Plan, and an amendment to this Subarea Plan and incidental take permit will be required.

5.4 Preserve Boundary Adjustments

Adjustments to the Preserve boundaries may be made without the need to amend either this Subarea Plan or the MSCP Subregional Plan where the new Preserve boundary results in the same or higher biological value of the Preserve. For the purposes of this Subarea Plan, there are two categories of Preserve line adjustments: mapping conflicts, and boundary adjustments.

5.4.1 Mapping Conflicts

Correction of mapping conflicts may be made by the City when there is a discrepancy between the Preserve map and one or more of the other mapping databases (e.g., vegetation, approved "hard-line plan," updated topography, etc.). Mapping conflicts covered by this category include requests for Preserve line alterations when mapping errors have placed an area into the Preserve which is developed or expressly intended for development and/or when mapping errors have removed from the Preserve an area with sensitive resources expressly intended to be conserved. In the case of a mapping conflict, the City will determine the adjusted Preserve line pursuant to the following process:

1. City of Chula Vista Director of Planning and Building (or designee) declares that a mapping conflict has occurred and determines the revised Preserve line based on review of all available information and data.

2. The City notifies the Wildlife Agencies in writing of the mapping conflict and corresponding revised Preserve line. If the mapping conflict only affects existing developed/urban land, no response from the Wildlife Agencies is necessary.

3. The revised Preserve line becomes the adopted Preserve line unless the Wildlife Agencies object to the mapping conflict within 30 days of receipt of City's written notice to the Wildlife Agencies. Objections by the Wildlife Agencies to mapping conflicts must be in writing and must state the rationale in support of the objection.

4. If the City receives written objection from the Wildlife Agencies to a revised Preserve line resulting from a mapping conflict within 30 days of receipt of City's written

notice to the Wildlife Agencies, then the request will be elevated to a "boundary adjustment," described in Section 5.4.2 of this Subarea Plan.

5. If the Wildlife Agencies fail to respond to the City's notice within 30 days of receipt of the City's determination, the decision of the City Director of Planning and Building will be deemed accepted.

5.4.2 Boundary Adjustments

Boundary adjustments may occur for reasons such as: (1) new biological information obtained through site-specific studies; (2) unforeseen engineering design opportunities or constraints; (3) a landowner or other constituent request to change boundaries in the context of the equivalency standard set forth in this section, and/or (4) timely and adequate notice of objection by the Wildlife Agencies to a mapping conflict determination made by the City Director of Planning and Building as defined by Section 5.4.1 of this Subarea Plan. In the case of a Boundary Adjustment, the City will determine the adjusted Preserve boundary pursuant to the following process:

1. A preliminary determination of the biological value of a proposed boundary adjustment will be made by the City Director of Planning and Building (or designee) in accordance with Section 5.4.2 of the MSCP Subregional Plan and/or Section 5.2.3.6 of this Subarea Plan, if appropriate.

2. The City notifies the Wildlife Agencies in writing of the boundary adjustment, including written findings of equivalency made by the City Director of Planning and Building.

3. The adjusted boundary becomes the adopted boundary upon project approval unless the Wildlife Agencies object to the adjusted boundary within 30 days of receipt of City's written notice to the Wildlife Agencies. Objections by the Wildlife Agencies to boundary adjustments must be in writing and must state the rationale in support of the objection.

4. If the City receives written objection to a determination of a boundary adjustment by the Wildlife Agencies within 30 days of receipt of City's written notice to the Wildlife Agencies, then the City and Wildlife Agencies will have 60 days to meet, confer, and reach agreement upon final Preserve boundaries. If agreement is not reached, the boundary adjustment as proposed will not be approved.

5. If the Wildlife Agencies fail to respond to the City's notice within 30 days of receipt of the City's determination, the decision by the City Director of Planning and Building shall be deemed accepted.

Any adjustments to the Preserve boundary will be disclosed in any necessary environmental documentation prepared for the specific project. An evaluation of the proposed boundary adjustment will be provided in the biological technical report and summarized in the appropriate sections of the environmental document. If it is

determined through the process identified in Section 5.4.2 that the adjustment will result in the same or higher biological value of the Preserve area, no further action by the jurisdictions or Wildlife Agencies shall be required. An adjustment that does not meet the equivalency test will require an amendment to this Subarea Plan (or separate Federal Section 10(a)(1)(B) permit or Section 7 Consultation).

5.5 Preserve Assembly Accounting

The City will prepare and provide to the Wildlife Agencies an annual report of total habitat area lost and habitat area conserved within the *Chula Vista Subarea* and total conservation contributions made to the MSCP Subregional Preserve throughout the *Chula Vista MSCP Planning Area* as a result of development within the City. The annual report will provide this information by vegetation type consistent with Section 5.9 of the MSCP Subregional Plan and the MSCP regional "Habitrak" methodology.

5.6 Conservation and Mitigation Banks

Although formal conservation banks are not required for the sale of upland habitat as mitigation, landowners may establish conservation and/or mitigation banks in areas designated for Preserve with high biological values, such as Narrow Endemic Species or Vernal Pools. Landowners desiring to do so must work with and obtain the approvals of the Wildlife Agencies and the City. Mitigation banks must be established consistent with Federal and State guidelines.

5.7 Assurances for Unforeseen Circumstances

The primary purpose of the Chula Vista MSCP Subarea Plan is to provide for the conservation of Covered Species and address the potential impacts of urban growth, natural habitat loss and species endangerment by mitigating the impacts of Take of the Covered Species resulting from Covered Activities. If the Subarea Plan meets the criteria for issuance of an incidental Take permit ("ITP") under Section 10 of the ESA, the City will receive the assurances under the "No Surprises" rule of the United States Department of the Interior at 50 C.F.R. sections 17.22(b)(5) and 17.32(b)(5) for Chula Vista Covered Species and Species Adequately Conserved under the Subarea Plan, upon approval of the Subarea Plan and issuance of an ITP to the City and for so long as the Subarea Plan is being properly implemented. Pursuant to the "No Surprises" rule, in the event the USFWS makes a finding of Unforeseen Circumstances, the USFWS will not require the commitment of additional land, water or financial compensation or additional restrictions on the use of land, water, or other natural resources beyond the level agreed to in the Subarea Plan and the Implementation Agreement with respect to Covered Activities without the consent of the City.

The U.S. Department of Interior's "No Surprises" rule provides in pertinent part at 50 C.F.R. sections 17.22(b)(5)(iii) and 17.32(b)(5)(iii) that:

A. In negotiating Unforeseen Circumstances, the Director of USFWS will not require the commitment of additional land, water or financial compensation or additional restrictions on the use of land, water, or other natural resources beyond the level otherwise agreed upon for the species covered by the conservation plan without the consent of the permittee.

B. If additional conservation and mitigation measures are deemed necessary to respond to Unforeseen Circumstances, the Director of USFWS may require additional measures of the permittee where the conservation plan is being properly implemented, but only if such measures are limited to modifications within conserved habitat areas, if any, or to the conservation plan's operating conservation program for the affected species, and maintain the original terms of the conservation plan to the maximum extent possible. Additional conservation and mitigation measures will not involve the commitment of additional land, water or financial compensation or additional restrictions on the use of land, water or other natural resources otherwise available for development or use under the original terms of the conservation plan without the consent of the permittee.

If, due to Unforeseen Circumstances, additional conservation measures as defined in Section 5.7.1 become necessary, the provisions of this section will apply. However, in the event that Unforeseen Circumstances adversely affect any of the Chula Vista Subarea Plan's Covered Species within the life of the Plan, the City or its Third Party Beneficiaries would not be required to provide additional money, financial compensation, water, land, or land restrictions beyond that required under the Chula Vista Subarea Plan without the City's consent.

Pursuant to the No Surprises Rule, USFWS will not require the City or Third Party Beneficiaries to commit additional water, land, additional land restrictions, or additional money or financial compensation for the Covered Species beyond that provided pursuant to the Subarea Plan, provided that the City and beneficiaries are properly implementing the Subarea Plan. If the Wildlife Agencies subsequently determine that Unforeseen Circumstances have arisen and that additional water, land, additional land restrictions or additional financial compensation beyond that required pursuant to the Subarea Plan are necessary to provide for the conservation of a Covered Species, then the obligation for such additional measures will not rest with the City or Third Party Beneficiaries.

5.7.1 Unforeseen Circumstances Defined

"Unforeseen Circumstances" (defined in 50 C.F.R. Section 17.3) means changes in circumstances affecting a species or geographic area covered by a conservation plan that could not reasonably have been anticipated by plan developers and the USFWS at the time of the conservation plan's negotiation and development and that result in a substantial and adverse change in the status of the Covered Species.

5.7.2 Relevant Factors

Pursuant to the "No Surprises" rule at 50 C.F.R. Section 17.22(b)(5)(iii)(C), the USFWS has the burden of demonstrating that Unforeseen Circumstances exist using the best scientific and commercial data available. The findings must be clearly documented and based upon reliable technical information regarding the status and habitat requirements of the affected species. In its evaluation the USFWS will consider, but not be limited to, the following factors:

- The size of the current range of the affected Covered Species.

- The percentage of the range of the affected Covered Species that has been adversely affected by Covered Activities under the Subarea Plan.

- The percentage of the range of the affected Covered Species that has been conserved by the Subarea Plan.

- The ecological significance of that portion of the range of the affected Covered Species affected by the Subarea Plan.

- The level of knowledge about the affected Covered Species and the degree of specificity of the Covered Species' conservation program under the Subarea Plan.

- Whether failure to adopt additional conservation measures would appreciably reduce the likelihood of survival and recovery of the affected Covered Species in the wild.

5.7.3 Limits on Additional Conservation Measures

Pursuant to the "No Surprises" rule, if the USFWS makes a finding that Unforeseen Circumstances have occurred and assuming the Subarea Plan is being properly implemented, the USFWS may not require additional conservation and mitigation measures of the City beyond those provided for under the Subarea Plan that would involve the commitment of additional land, water or financial compensation or additional restrictions on the use of land, water or other natural resources otherwise available for development or use under the Subarea Plan without the City's consent. Further, any additional measure required of the City by the USFWS in the event of a finding of Unforeseen Circumstances must maintain the original terms of the Subarea Plan to the maximum extent possible and must be limited to modifications within Preserve and to the Subarea Plan's operating conservation program.

5.7.4 Notification

If either one of the Wildlife Agencies or the City becomes aware of the existence of a potential Unforeseen Circumstance, they shall immediately notify the others of the existence of a potential Unforeseen Circumstance. Except where there is substantial threat of imminent, significant adverse impacts to a Covered Species, USFWS will provide the City and CDFG thirty (30) calendar days notice of a written finding of Unforeseen Circumstances, during which time the Wildlife Agencies will meet with the City to discuss the proposed finding, provide the City and any affected Third Party Beneficiary an opportunity to submit information to rebut the proposed finding, and consider any proposed changes to the conservation strategies for the Preserve and the Subarea Plan's operating conservation program. During the time necessary to determine the nature and extent of any additional or modified mitigation, the City will avoid

contributing to appreciably reducing the likelihood of the survival and recovery of the affected Covered Species in the wild.

5.7.5 Effects of Unforeseen Circumstances or Jeopardy on Take Authorization

Notwithstanding the limits on conservation measures identified above under Section 5.7.3, the ITP may be revoked by the USFWS pursuant to 50 C.F.R. sections 17.22(b)(8) and 17.32(b)(8) where as a result of an Unforeseen Circumstance or any other cause, continuation of the federal permit would be inconsistent with the criterion set forth in 16 U.S.C. 1539(a)(2)(B) i.e. would appreciably reduce the likelihood of the survival and recovery of the species in the wild, and the inconsistency has not been remedied in a timely fashion. As recognized in the "No Surprises" rule at 50 C.F.R. sections 17.22(b)(6) and 17.32(b)(6), the USFWS, any Federal, State or local agency, or a private entity may take additional actions at their own expense to protect or conserve a species covered under the Subarea Plan.

Pursuant to the "No Surprises" rule, the City and the Wildlife Agencies agree that the following Subarea Plan components are not subject to modification as a result of Unforeseen Circumstances in a manner that would result in an additional commitment of land, water or financial compensation, or additional restrictions on the use of land, water or other natural resources available for development or use under the Subarea Plan on the part of the City, or Third Party Beneficiaries covered under the City's permit, without the City's consent:

1. Any in-kind mitigation ratios, including the HLIT Mitigation Ratios as described in Table 5-3;

2. The boundaries of the 100% Conservation Areas;

3. The boundaries of the 75-100% Conservation Areas;

4. The Planned and Future Facilities siting criteria identified in Section 6.3.3 of this Subarea Plan;

5. Preserve management funding, as described in Section 8.0 of this Subarea Plan; or

6. Any other change not provided for under the Plan's Operating Conservation Program as defined in the IA at Section 2 that would significantly increase the Plan's costs or significantly affect the interests in land of the City or any of the Third Party Beneficiaries covered under the Chula Vista Subarea Plan.

5.8 Assurances for Changed Circumstances

Changed Circumstances are defined under the Federal "No Surprises" rule as "changes in circumstances affecting a species or geographic area covered by a conservation plan that can

reasonably be anticipated by plan developers and the USFWS and that can be planned for". Changed Circumstances to be addressed by this Subarea Plan include the following:

1. Fire, occurring in the same location as a previous fire no sooner than three years following nor longer than ten years subsequent to an initial fire, and damaging up to 30 acres of Preserve habitat.
2. Flood events occurring within the Preserve Floodplains associated with the Otay River Valley and Salt Creek, at greater than 50-year levels and up to and including 100-year levels, as classified by the Federal Emergency Management Agency (FEMA) and determined by the Chula Vista Department of Public Works.
3. Climatic drought up to three years in length, as declared by the California State Department of Water Resources and/or the San Diego County Water Authority.
4. An increase of invasive species within the Preserve to the extent that, as determined by the City Habitat Manager in consultation with the Habitat Management Technical Committee, such increase is of sufficient magnitude to significantly, adversely affect any Covered Species.
5. Listing of a Non-Covered Species.

The USFWS and the City agree that the Changed Circumstances defined by this Section of the Subarea Plan represent all Changed Circumstances to be addressed by Chula Vista. These Changed Circumstances provisions reflect changes in circumstances that can reasonably be anticipated to occur to Covered Species or within dedicated Preserve areas. These Changed Circumstances provisions are not intended to cover the same or similar circumstances outside City jurisdiction nor if they occur within the *Chula Vista Subarea* but outside of the Preserve and where the City has no legal authority to carry out the Planned Responses, nor if they occur within the hard-line Preserve area depicted on Figure 1-2 but before the land is lawfully dedicated or conveyed to the Preserve.

Except for the future Listing of a non covered species, each of the defined Changed Circumstances includes an assessment of risk, a description of preventative measures, and a summary of Planned Responses (measures to be undertaken in the case of Changed Circumstances) as provided in Sections 5.8.1 – 5.8.4. Preventative measures are those measures that are or will be undertaken by the City to reduce the potential for occurrence of the Changed Circumstance, and/or that reduce the potential for damage to the Preserve resulting from a Changed Circumstance event. Planned Responses are the specific responses that will be undertaken in the event of a Changed Circumstance. Planned Responses will not include any actions beyond those expressly identified in this Section, nor for any event not specifically identified as a Changed Circumstance. Planned Responses will be implemented to the extent that it is possible to do so and remain consistent with the primary goal to prevent harm to the public health, safety and welfare. Planned Responses will be implemented by using the funding sources described in Section 8.4 for each of the Changed Circumstances, and only to the extent provided by the identified funding sources.

5.8.1 Repetitive Fire

For the purpose of defining Changed Circumstance, Repetitive Fire is defined as fire, occurring in the same location as a previous fire no sooner than three years following nor

longer than ten years subsequent to an initial fire, and damaging up to 30 acres of Preserve habitat.

5.8.1.1 Risk Assessment

Because fire is a natural feature of the *Chula Vista Subarea*, under normal circumstances natural re-growth of habitat is expected. However, the Wildlife Agencies have indicated that certain Repetitive Fires within the same location of the Chula Vista MSCP Preserve may adversely affect the Covered Species conserved by the Subarea Plan as a result of habitat type conversion from existing habitat(s) to invasive or non-native weeds.

USFWS has indicated that for the habitat types prevalent in this Preserve, including coastal sage scrub, maritime succulent scrub and riparian habitat, a re-burn within the same footprint within ten years of the original burn can adversely hamper natural re-growth and interrupt the ability of the habitat to rejuvenate. After ten years, habitat types prevalent in the Preserve are expected to be fully re-established and capable of natural regeneration. A "Repetitive Fire" (a fire anticipated to occur and to create the potential for type conversion) is therefore considered a fire incident which occurs in the same location as a previous fire incident (initial fire) no more than ten years subsequent to the initial fire.

In addition, Chula Vista Fire Department (CVFD) officials note that vegetation that has been burned requires approximately five years to grow before becoming a potentially hazardous fuel load. It is therefore not anticipated that Repetitive Fire, if it were to occur, would occur in the same location for at least three-to-five years subsequent to an initial fire. For the purpose of defining Changed Circumstances, the City has determined that a Repetitive Fire occurring within the first three years subsequent to an initial fire is therefore not reasonably anticipated.

In order to further estimate the potential for Repetitive Fire, a history of fire incidents throughout the Cities of Chula Vista and San Diego were evaluated. The fire incident history for the City of Chula Vista records 188 wildland fires for the years 1998 through 2001. Only one of these was actually located within the Preserve. Because the level of fire response in urban areas is rapid and responders are highly trained, fire incidents are contained more quickly. Thus, the average area of land burned in the fires was 0.39 acre, and no fire caused damage greater than five acres.

Fire incident data from the larger urban area of the City of San Diego was also reviewed. Fire incidents within the City of San Diego are recorded as "small", "medium" or "large. The relative percentages of small, medium and large fires experienced by the City of San Diego are consistent with data provided by the CVFD. Approximately 90% occurred in areas of 0-1 acres, 4% in area of 1-5 acres and 6% in areas greater than 5 acres. Both sets of data indicate that in urban areas most fire incidents are contained at an early stage. Because the level of fire

response in urban areas is rapid and responders are highly trained, fire incidents are contained more quickly and rarely damage areas larger than five acres. Thus, the scope of fire incidents within the Preserve is expected to be much smaller than that of wildland fires in less urban situations.

Because implementation of the Subarea Plan will result in larger areas of undeveloped, protected habitat than previously existed within City boundaries, the Chula Vista Fire Chief and Fire Marshal assembled key members of the CVFD to assess the potential that future repetitive fire incidents may burn areas greater than five acres before containment, during the life of the permit.

The Central City PMA is completely surrounded by urban, primarily residential development, which provides immediate access to fire equipment and limits the ability of fire to spread. The North City Preserve Management Area will also be substantially surrounded by new development and/or access roads. The Otay Ranch Preserve Management Area will be the largest contiguous Preserve area in the City and, because it is adjacent to County Preserve land to the east, the area most vulnerable to fire originating from outside the City and to larger burns.

The Otay Ranch Preserve Management Area includes principally the Otay River Valley and associated riparian habitats. Moist riparian vegetation does not represent high-risk fire fuel loads and, in fact, will serve to hinder fire activity. Chula Vista Fire Department staff noted that due to prevailing western winds, fire rarely approaches the City from the east. However, when such occurrences do happen, fire activity is retarded when it reaches the Otay River Valley, as was the case in the most recent fire to affect Salt Creek. Firefighters report that as that fire approached Lower Otay Lake and what is now the southeastern City boundary, the fire event was calmed. The area within Salt Creek was burned by the "tail" of the fire, after the vegetation in the River Valley reduced the intensity of the incident, enabling firefighters to control the burn.

Based on review of available data, knowledge of existing fire fuel loads, fire suppression experience and anecdotal information, the Chula Vista Fire Marshal has determined that fire damage from Repetitive Fire within the Preserve up to 30 acres is foreseeable during the life of the permit. Damage greater than 30 acres due to Repetitive Fire is not foreseeable and would be considered an Unforeseen Circumstance.

5.8.1.2 Preventative Measures

Preventative measures to reduce the likelihood of or harm from a single fire in the Preserve are included in the adaptive management provisions as specified in Section 7.0 of this Subarea Plan and will be more specifically identified in the area-specific management directives for each Preserve Management Area.

Proximity of Fire Services to Preserve Areas

The Chula Vista Preserve is primarily an urban Preserve that is, the Preserve is almost entirely surrounded by urban uses. Although the presence of urban uses may increase the potential for fire incidents, it greatly decreases the potential for large, non-contained fires due to the proximate location of fire stations and the proximity, training and experience of urban fire response teams. The overall average response time to fire incidents within the City is under seven minutes. Figure 5-3 depicts the current (shown in red) and planned (shown in blue) City fire stations that serve the Preserve. City of Chula Vista Fire Stations Number 3 and Number 4 are primary respondents to fire incidents within the Central City PMA. City Fire Station Number 6 currently serves both the North City PMA and the Otay Ranch PMA. All three stations are assisted, through an Automatic Aid Agreement by the Bonita Fire District station located on Bonita Road (shown in red with a blue star).

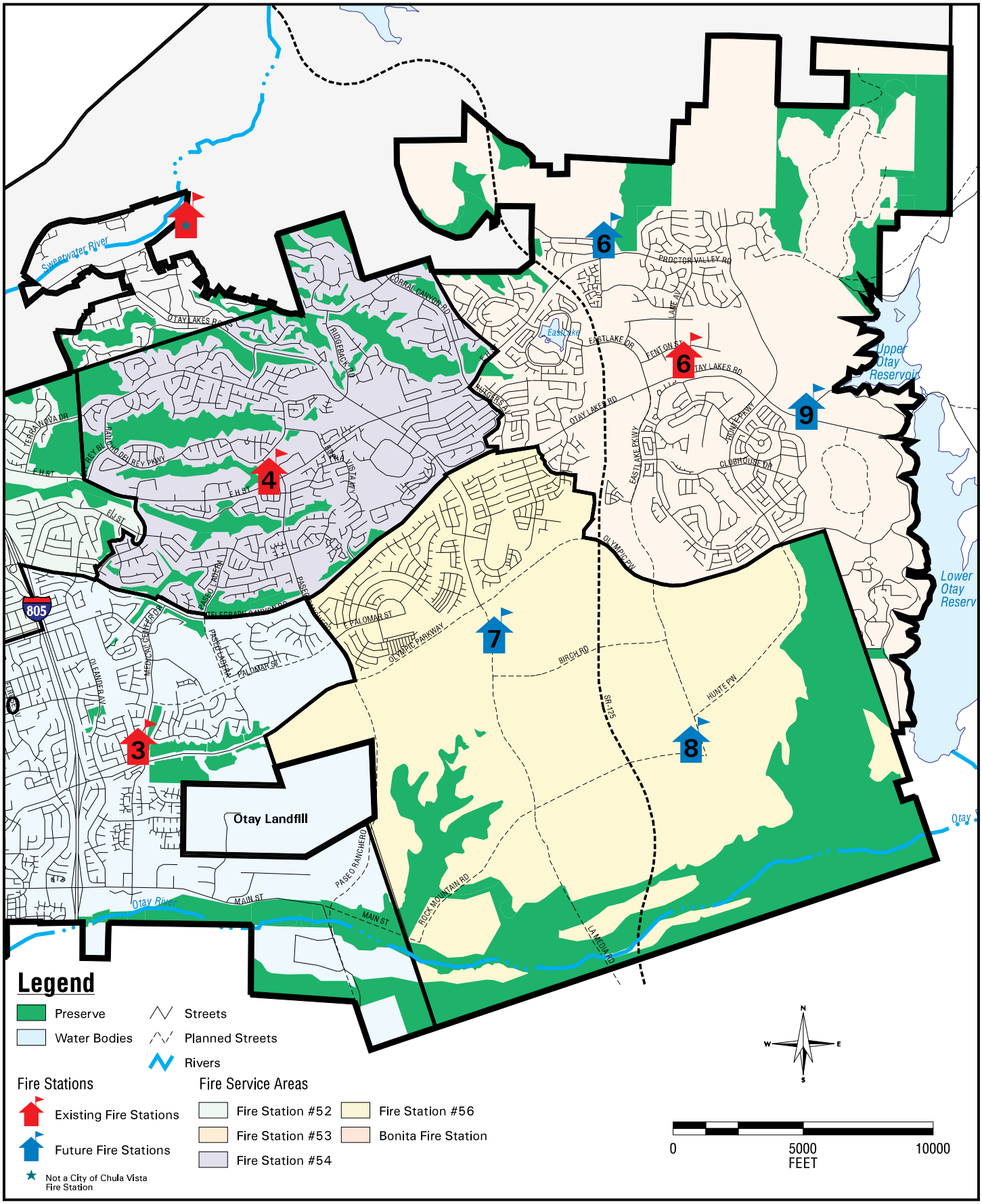
As development occurs within the City's new communities, additional fire stations are planned to be constructed and operated. Station Number 6 will be relocated north from its current location on Otay Lakes Road to Proctor Valley Road immediately adjacent to the North City PMA. In addition, a new fire station will be located on Olympic Parkway immediately adjacent to the Preserve edge of the Otay Ranch PMA. A new station will also be constructed on La Media Road, which will increase fire response capability to the Otay Ranch PMA, particularly for events occurring west of SR-125.

Brush Abatement Program

In order to further reduce the risk of fire, the City has instituted a special weed abatement and brush management program focused particularly on the edges between urban areas and open space Preserve lands. Through this Preserve edge fire risk assessment program, all urban/open space edges are walked annually and assessed for fire load and fire risk. Edge areas are categorized and mapped as high, medium or low fire risk. Figure 5-4 reflects the mapping for the Central City PMA for the year 2001. High fire risk areas are depicted in red moderate risk areas in yellow and low risk areas in green. Using this information, the City is able to annually structure its brush management program to intensify brush management and fire risk reduction efforts in the high risk edge areas between development and Preserve.

Emergency Management Plan

The City will prepare an Emergency Management Plan (Section 7.3.3) that will identify the procedures the City will implement both prior to and during any single fire in the Preserve. The Emergency Management Plan will provide that the City will coordinate an emergency notification and response system that will strive to protect the Covered Species and the Preserve, to the extent that it is



CITY OF CHULA VISTA

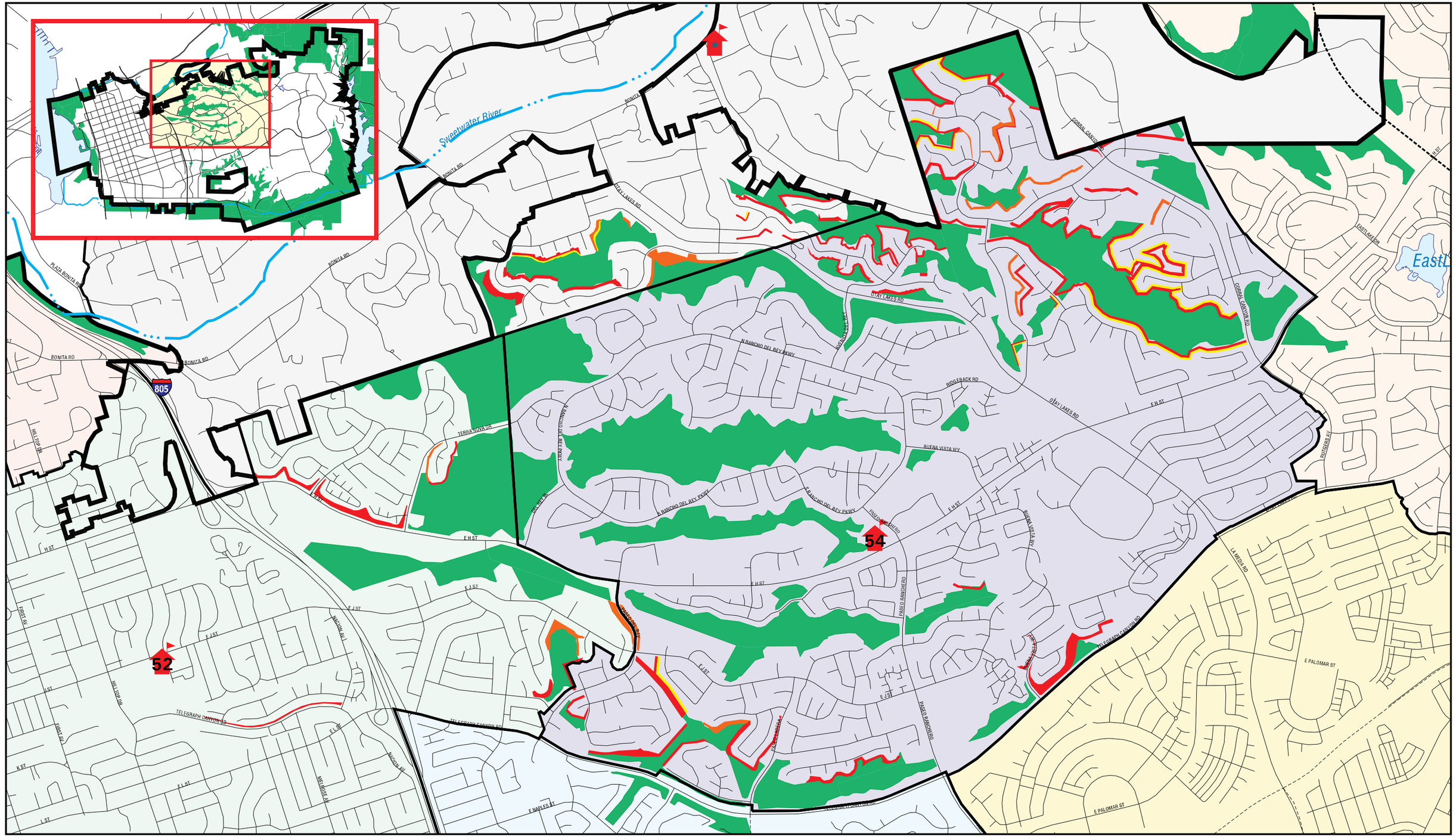
GEOGRAPHIC INFORMATION SYSTEM

Fire Stations and Service Areas

FIGURE 5-3

r:/planning/mscp/mngtplans/chgstance1.aml

Plot created: January 26, 2004



CITY OF CHULA VISTA

GEOGRAPHIC INFORMATION SYSTEM

r:/planning/mscp/mngtplans/fireRisk.aml

LEGEND

Fire Risk Level
- High
- Medium
- Low

Fire Service Areas
- Fire Station #52
- Fire Station #53
- Fire Station #54
- Fire Station #56
- Bonita Fire Station
- ★ Not a City of Chula Vista Fire Station

- Streets
- Planned Streets
- Rivers
- Preserve
- Water Bodies

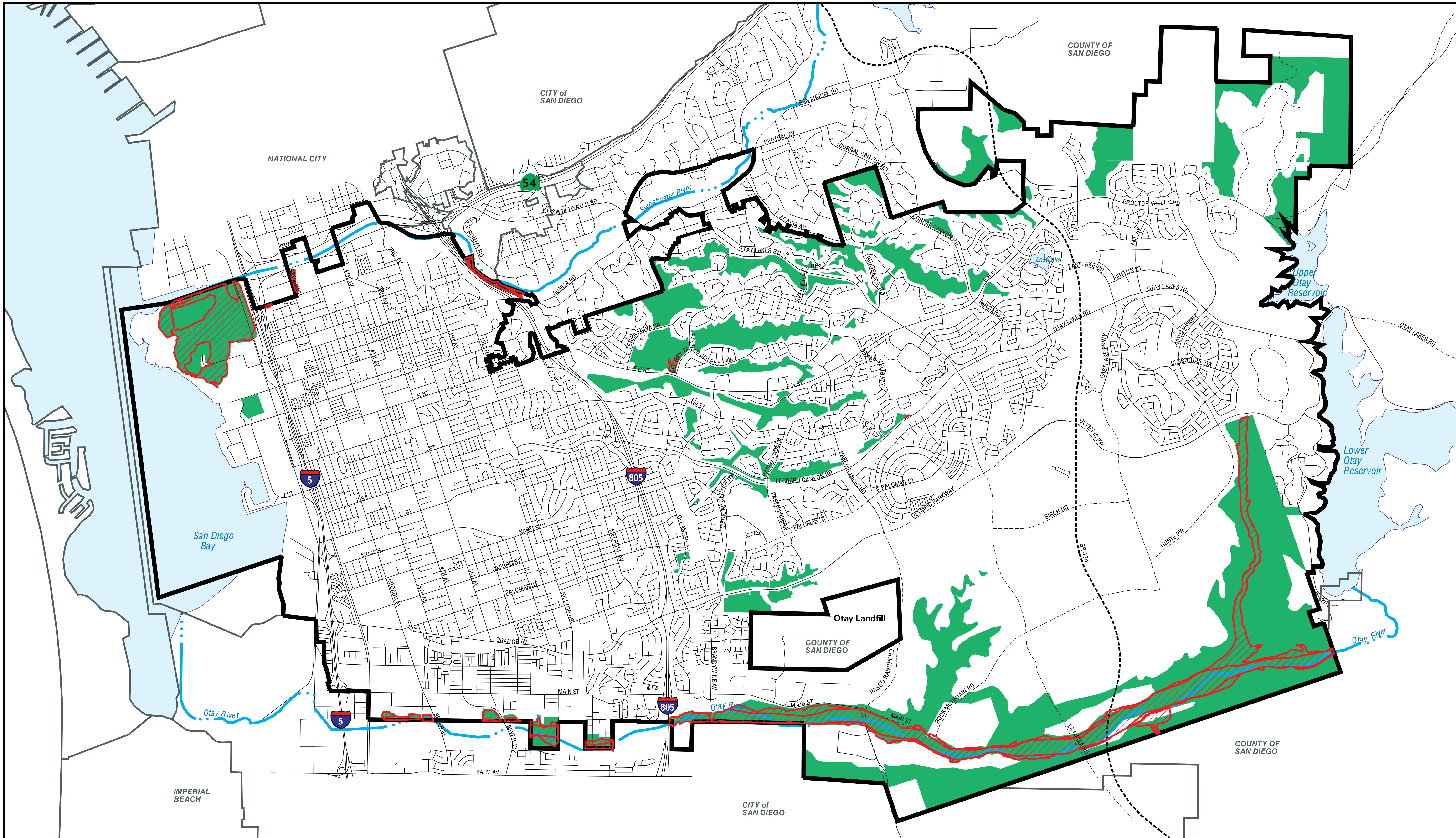
Fire Risk / Brush Abatement

N W E S

0 900 1800 3600
FEET

FIGURE 5-4

Plot created: January 26, 2004



Legend

- 100 Year Flood Plain
- Preserve
- Water Bodies
- City Boundary
- Municipal Boundaries
- Streets
- Planned Streets
- Rivers

CITY OF CHULA VISTA

GEOGRAPHIC INFORMATION SYSTEM

r:/planning/mscp/mngtplans/chgstance2.aml

100 Year Flood Plain in the Preserve

N W E S

0 2250 4500 9000
FEET

FIGURE 5-5

Plot created: January 26, 2004

possible to do so and remain consistent with the primary goal of containing and extinguishing the fire to prevent harm to the public health, safety and welfare. The Emergency Management Plan will provide for a triage system that includes notification of the Wildlife Agencies as soon as feasible after the onset of the fire. The Emergency Management Plan will also provide for restricted public access to the Preserve in times of drought, when fire hazard may be high.

5.8.1.3 Planned Responses to Repetitive Fire

Upon the occurrence of a Repetitive Fire Changed Circumstance as defined by this Section, the City Habitat Manager will notify the Wildlife Agencies pursuant to the protocol established by the City's Emergency Management Plan described in Section 7.3.3 of this Subarea Plan. Within 30 days of the Repetitive Fire incident, the City Habitat Manager will assess the damage caused by the Repetitive Fire within the Preserve. Depending upon the extent and severity of the fire damage, and as determined by the City Habitat Manager, with concurrence of the Wildlife Agencies, the City will take one of the following actions:

1. Develop and implement a monitoring program to monitor natural re-growth within the damaged area for a period of up to two years. The monitoring program will provide for site visits on a regular basis, as determined by the City Habitat Manager to be appropriate to the scope and severity of the burn. Should monitoring observations indicate that allowing habitat to re-grow without interference is resulting in increased opportunity for invasion by exotic species and/or increased potential for type conversion, as determined by the City Habitat Manager, the Preserve management program in effect at the time will be modified to reduce the potential for such invasion and/or type conversion. The City's Habitat Manager may, at his/her discretion, also activate the Habitat Emergency Advisory Team (HEAT) at any time during the duration of the monitoring program.

2. Immediately activate the Habitat Emergency Advisory Team (HEAT) to advise the City on response efforts to the damage caused by the Repetitive Fire. If/when activated, the HEAT will work with the City Habitat Manager to prepare a Response Action Plan (RAP) and will make recommendations for changes, to the extent feasible, to the Preserve monitoring and management program in response to the damage due to the Repetitive Fire incident. The RAP will assess the extent of damage from the Repetitive Fire to the vegetation communities and the Covered Species, including ancillary damage to the Preserve due to emergency response activities.

   The RAP will be completed within 60 days of the activation of the HEAT. If the RAP demonstrates that the damage to the Preserve is of regional concern, the City will seek the participation of other Participating Local Jurisdictions to assist with developing implementation of the RAP. One or more of the

following management activities will be incorporated into the RAP implementation program, as appropriate to the circumstance:

(i) Controlling non-native weeds and other invasive species through approved techniques; and/or
(ii) Reseeding with a native seed mix; and/or
(iii) Implementation of erosion control measures consistent with habitat values in the Preserve.

5.8.2 Flood

For the purpose of defining Changed Circumstance, Flood is defined as flood events occurring within Preserve floodplains associated with the Otay River Valley and Salt Creek, at greater than 50-year and up to and including 100-year levels, as classified by Federal Emergency Management Agency (FEMA) and determined by the Chula Vista Department of Public Works.

5.8.2.1 Risk Assessment

FEMA provides local jurisdictions with mapping that defines the areas that may be affected, or inundated, by flood. A 100-year flood, as defined by FEMA, produces a magnitude of inundation that has a one percent chance of occurring in any given year. The 100-year flood has a 39% chance of occurring in any given 50-year period, and thus is reasonably foreseeable during the life of the permit. However, flooding is a natural event and is not anticipated to cause damage sufficiently severe to prevent natural regeneration of existing habitats within the Preserve.

Figure 5-5 identifies the 100 year flood zones located within the Preserve. These areas primarily follow the Otay River Valley and Salt Creek Canyon, in the Otay Ranch PMA, and are essentially confined to natural drainage channels and riparian areas, where water has historically been known to occur. Both the Salt Creek and Otay River Valley Preserve areas are substantially broader than the width of a 100 year flood zone, which would allow these areas to accommodate natural storm flows from events even less frequent (more severe) than a 100-year flood.

City land use policies accommodate floods up to and including a magnitude of 100-year, and require that drainage facilities manage flows into tributary streams to approximate natural flows. This enables floodplains to function in their natural capacity, permitting unobstructed flows through natural riparian courses during flood events.

5.8.2.2 Preventative Measures

Preventative measures to reduce the likelihood of or harm from flooding in the Preserve are included in the adaptive management provisions as specified in Section 7.0 of this Subarea Plan, and in the Otay Ranch RMP 2. City land use

policy's ensure that land use regulations and public improvements accommodate flood events that approximate the rate, magnitude and duration of natural flood flows.

All development projects approved by the City will also include implementation of Best Management Practices for stormwater and surface runoff pursuant to the standards promulgated by the California Regional Water Quality Control Board (RWQCB). For all discretionary projects approved by the City, the City will include mitigation measures or other conditions, as appropriate, to reduce the likelihood that a flood would adversely impact Covered Species and the Preserve. As a co-permittee of the RWQCB National Pollution Discharge Elimination System (NPDES) Permit, the City is required to adopt a Standard Urban Storm Water Mitigation Plan (SUSMP). The large majority of new development projects and significant redevelopment projects must meet SUSMP requirements to reduce pollution and runoff flows. The City's SUSMP will include a list of recommended source control and structural treatment Best Management Practices (BMPs).

5.8.2.3 Planned Responses to Flood

Upon the occurrence of Flood as defined by this Section, the City Habitat Manager will notify the Wildlife Agencies pursuant to the protocol established by the City's Emergency Management Plan described in Section 7.3.3 of this Subarea Plan. Within 30 days of the Flood incident, the City Habitat Manager will assess the damage caused by the Flood within the Salt Creek and/or Otay River Valley floodplains to determine, with concurrence of the Wildlife Agencies, if a monitoring program is required.

Should the extent and severity of the Flood damage indicate a need for monitoring, the City Habitat Manager will develop and implement a monitoring program for a period of up to two years, to monitor natural re-growth within the damaged area. The monitoring program will provide for site visits on a regular basis, as determined by the City Habitat Manager to be appropriate to the scope and severity of the Flood damage.

At any time during the monitoring program, should monitoring observations indicate that allowing habitat to re-grow without interference is resulting in increased opportunity for invasion by exotic species and/or increased potential for type conversion, as determined by the City Habitat Manager, the Preserve management program in effect at the time will be modified to reduce the potential for such invasion and/or type conversion. One or more of the following management activities will be incorporated into the modified management program, as appropriate for the circumstance:

(i) Removal of sediment and/or debris; and/or
(ii) Controlling non-native weeds and other invasive species through approved techniques.

5.8.3 Drought

For the purpose of defining Changed Circumstance, Drought is defined as climatic drought up to three years in length, as declared by the California State Department of Water Resources and/or the San Diego County Water Authority (CWA).

5.8.3.1 Risk Assessment

Drought is a cyclical weather phenomenon that is beyond human control. Drought is not uncommon in Southern California, and it is a phenomenon to which local natural habitats and species have of necessity adapted over time. Drought occurs slowly over a multi-year period, differing from the catastrophic events of fire and flood, which occur rapidly and afford little time for preparing for disaster response. Drought conditions may adversely affect the Covered Species and the conserved vegetation communities, if the species and/or habitats are unable to adapt to the changing conditions.

The potential for drought to impact the Preserve increases with the length of a drought. As Preserve species and habitats begin to react to a prolonged reduction in rainfall, carry-over supplies in reservoirs are depleted and water levels in groundwater basins also decline, making imported water resources less available for non-potable uses. Both San Diego County and the City rely heavily on imported water. However, according to the California Department of Water Resources (DWR), in their document "Droughts in California," droughts exceeding three years are rare in Northern California, the area of California that is the source of much of the State's developed water supply and of imported water for Southern California. A drought period of over three years in length which restricts availability of water for Preserve purposes is therefore not foreseeable, and would be considered an Unforeseen Circumstance.

5.8.3.2 Preventative Measures

This Subarea Plan does not contain measures to prevent climatic drought because drought is not preventable by human intervention.

Eastern Chula Vista, where the majority of the Preserve is located, is served by the Otay Water District (OWD). OWD is a member of, and purchases imported water from, the San Diego CWA. In order to reduce reliance upon imported water, OWD has implemented a reclaimed water program. Reclaimed water distribution lines are in place or planned for construction throughout the City, including adjacent to the Preserve in the North City and Otay Ranch PMAs. Reclaimed water is used for non-potable water requirements such as landscape and park maintenance, and will be the primary source of water for Preserve maintenance, greatly reducing the risk of impact from drought on Preserve species and habitats.

To prepare for a potential diminished water supply, the City will assess its use of reclaimed water City-wide, and will reprioritize the use of reclaimed water to direct available reclaimed water to Preserve areas undergoing active restoration where water is needed, and where it is possible to do so. It is acknowledged that the City may not be able to lawfully control the availability of reclaimed water for active restoration areas in times of drought or diminished supply. However, to the extent that it is able, the City will work with responsible water agencies to reserve sufficient reclaimed water to sustain restoration areas in the Preserve.

5.8.3.3 Planned Responses to Drought

Upon the occurrence of Drought as defined by this Section, the City Habitat Manager will notify the Wildlife Agencies pursuant to the protocol established by the City's Emergency Management Plan described in Section 7.3.3 of this Subarea Plan. Within 60 days of the onset of Drought, the City Habitat Manager will assess the condition of the Preserve to determine, with concurrence of the Wildlife Agencies, if a monitoring program is required for all or portions of the Preserve.

Based upon the extent and severity of the Drought, the City Habitat Manager will develop and implement a monitoring program to monitor natural re-growth within the damaged area for a period of up to two years. The monitoring program will provide for site visits on a regular basis, as determined by the City Habitat Manager to be appropriate to the drought situation.

At any time during the monitoring program, should monitoring observations indicate that allowing habitat to re-grow without interference is resulting in increased opportunity for invasion by exotic species and/or increased potential for type conversion, as determined by the City Habitat Manager in consultation with the Wildlife Agencies, the Preserve management program in effect at the time will be modified to reduce the potential for such invasion and/or type conversion. One or more of the following management activities will be incorporated into the modified management program, as appropriate for the circumstance:

(i) Providing temporary irrigation to strategic areas of the Preserve; and/or

(ii) Controlling non-native weeds and other invasive species through approved techniques.

5.8.4 Invasion of Exotic Species

For the purpose of defining Changed Circumstance, invasion of exotic species is defined as an increase of invasive species within the Preserve to the extent that, as determined by the City Habitat Manager in consultation with the Habitat Management Technical Committee (HMTC), such increase is of sufficient magnitude to significantly, adversely

affect any Covered Species. For the purpose of implementing the actions specified by this Section, species to be considered potentially invasive are those included in Appendix N.

5.8.4.1 Risk Assessment

Although invasive, exotic, or pest species of plants and/or animals may currently be present within the Preserve, an unexpected and/or sudden increase in certain invasive species may create the potential for impacts to Covered Species which could have a significant adverse affect on one or more of the Covered Species within the Preserve. Opportunities for increases in invasive species could occur as urban development expands in areas surrounding the Preserve. The occurrence of a catastrophic event, including Changed Circumstances defined in Sections 5.8.1-5.8.3, may precipitate sudden increases of invasive species. Planned Responses to these Changed Circumstances, however, include measures to reduce the opportunity for invasion by exotic species.

5.8.4.2 Preventative Measures

Establishment of the Preserve and the management actions that will be undertaken as part of the implementation of this Subarea Plan will reduce the probability of sudden increases in invasive species. Sections 7.5.2 and 7.5.4 of this Subarea Plan and the Otay Ranch RMP discussed in Section 7.6 contain measures specifically designed to prevent invasive species from threatening the Preserve. These measures include restrictions on the use of invasive plant species in landscape palettes, visitor/resident invasive species education, training and use of volunteers in removing invasive plant species, and cooperation with the Department of Agriculture and University specialists in developing programs to limit invasive ants. Through implementation of the Framework Management Plans and ASMDs associated with this Subarea Plan, invasive species will, under normal circumstances, be discovered prior to becoming a threat to Covered Species. When invasive species are discovered, the Preserve management program is designed to be tailored to reduce and/or eliminate such species.

5.8.4.3 Planned Responses

If, as determined by the City Habitat Manager in consultation with the HMTC, an increase in invasive species has occurred within the Preserve at a magnitude sufficient to present a significant adverse affect to any Covered Species, the City Habitat Manager will notify the Wildlife Agencies pursuant to the protocol established by the City's Emergency Management Plan described in Section 7.3.3 of this Subarea Plan. If the influx of invasive species involves a species included on the CalEPPC "List A" or the NBII list (Appendix N), within 30 days of such notice to the Wildlife Agencies the City Habitat Manager will assess and implement changes to the adaptive management program in effect at that time, that may be necessary to control the invasive species. If the influx of invasive species involves a species listed on the CalEPPC "Red Alert" list (Appendix N),

the City Habitat Manager will also notify other relevant agencies as recommended by CalEPPC. Within 30 days of obtaining responses from the agencies contacted, the recommendations of the agencies will be used by the City with concurrence of the Wildlife Agencies to determine appropriate modifications to be made to the adaptive management program in effect at that time.

Modification of the adaptive management program to address an invasive species Changed Circumstance will include implementation of a monitoring program of up to two years, as determined by the City Habitat Manager. The monitoring program will provide for site visits on a regular basis, as determined by the City Habitat Manager to be appropriate to the type, scope and location of the exotic species infestation.

5.8.5 Future Listings of Non-Covered Species

The City recognizes, as noted in the USFWS discussion of its "Habitat Conservation Plan Assurances ('No Surprises') Rule", (63 F.R. 8859; February 23, 1998), that the future listing of a species whose conservation was not provided for in the MSCP to a level sufficient to include the species as a Chula Vista Covered Species or Species Adequately Conserved can be viewed as a Changed Circumstance. In the event that a species which is not a Covered Species pursuant to this Plan and associated Take Authority is listed by USFWS subsequent to the issuance of Take Authority pursuant to this Subarea Plan, such listing will be considered a Changed Circumstance.

In the event of a listing of a non-covered species, the City and Wildlife Agencies will jointly identify measures that the City will follow to avoid take, jeopardy and/or adverse modification of any designated Critical Habitat within the Subarea, until and unless the City's permit is amended to include coverage for the newly-listed species as a Chula Vista Covered Species or Species Adequately Conserved or the Wildlife Agencies notify the City that such measures are no longer required to avoid jeopardy, take or adverse modification of designated Critical Habitat of the newly listed species. Among other measures, the City will not issue any permit for land development, clearing and/or grubbing, except pursuant to the Chula Vista Excavation, Grading and Fills Ordinance (detailed in Section 5.2.1 of this Subarea Plan), which ordinance will require that prior to the City's issuance of any permit for land development, clearing and/or grubbing, applicants must obtain Take Authority for any listed, non-covered species through appropriate federal and/or state permit processes.

5.8.6 Changed Circumstances Not Provided for in the Subarea Plan

Pursuant to the "No Surprises" rule at 50 C.F.R. 17.22(b)(5)(ii), the USFWS may not require (1) any conservation or mitigation measures in addition to those provided for under Sections 5.8.1 – 5.8.4 in response to a Changed Circumstance; or (2) additional conservation or mitigation measures for any Changed Circumstance that is not identified in Sections 5.8.1 – 5.8.4 without the consent of the City, provided the City is properly implementing the Subarea Plan.

As recognized in the "No Surprises" rule at 50 C.F.R 17.22(b)(6) and 17.32(b)(6), the USFWS, any Federal, State or local agency, or a private entity may take additional actions at their own expense to protect or conserve a species covered under the Subarea Plan.

5.9 Critical Habitat

Critical habitat designations for at least three species covered by this Subarea Plan are or will be in place at the time of issuance of Take Authorization to Chula Vista. It is possible that the USFWS may designate critical habitat within the *Chula Vista Subarea* for other Covered Species throughout the life of the Subarea Plan.

In approving the Subarea Plan, the USFWS intends to issue a Biological Opinion which will, among other things, make findings addressing existing critical habitat designations for Covered Species. Where critical habitat has been finally designated for Covered Species at the time the City applies for Take Authorization, the USFWS will include in the Biological Opinion for this Subarea Plan findings of whether the activities permitted under the Section 10(a)(1)(B) permit will result in the destruction or adverse modification of the critical habitat, as defined at 50 C.F.R. Section 402.02.

The Chula Vista Subarea Plan:

1. Permits development in nonessential areas for each of the Covered Species,

2. Establishes a hard-line Preserve including key linkages and wildlife corridors,

3. Employs long-term conservation and restoration strategies with special management considerations for the protection of each of the Covered Species, and

4. Employs added protections for Narrow Endemic Species and Wetlands.

Because of these factors, it is anticipated that no additional special management considerations or protection will be necessary for the coastal California gnatcatcher, the QCB, or the Otay tarplant, as a result of either the implementation of the Subarea Plan or any future federally permitted Covered Activity within the areas designated as critical habitat for those species.

6.0 LAND USE CONSIDERATIONS IN THE PRESERVE

Land uses within the Preserve are limited to those uses which are considered compatible with the need to permanently protect Covered Species and their habitats. This Subarea Plan will be incorporated as a chapter of the City's General Plan and 100% Conservation Areas, 75-100% Conservation Areas and Development Areas outside of Covered Projects will be assigned appropriate MSCP overlay designations. The City will implement the General Plan land use overlay designations for MSCP by creating overlay zones (see Section 5.2 of this Subarea Plan, which discusses the relationship between the Chula Vista MSCP Subarea Plan land use categories, General Plan land use overlay designations and overlay zones).

6.1 Existing Legal Uses

All existing uses allowed by the current underlying zone on a property, as well as any uses designated as compatible with the applicable MSCP overlay zone, will continue to be allowed until such time as the property has been conveyed into the Preserve or is subject to an agreement with the City through an offer of dedication.

A landowner seeking development entitlements may enter into an agreement with the City through an Irrevocable Offer of Dedication (IOD) which will include, but not be limited to, the following:

- Discontinuance of legal existing uses unless deemed compatible with the MSCP overlay zone;

- Cessation of all grazing uses, unless it has been determined by the City, in consultation with the Wildlife Agencies, that continued grazing will be either neutral or desirable with respect to habitat values; and

- Maintenance of the habitat values of the land by the applicant until conveyance of the property into the Preserve.

Until land has been conveyed to the City, or an agreement has been reached through an IOD, the following uses will be allowed if in compliance with the applicable regulations set forth in the HLIT Ordinance:

- Permitted uses allowed by right in the underlying zone, including accessory and conditionally permitted uses;

- Legal, non-conforming uses operating at the time the underlying zone was established;

- Existing grazing uses outside of Otay Ranch; and

- Existing grazing uses in Otay Ranch, in accordance with the Otay Ranch RMP and Otay Ranch Grazing Ordinance.

No expansion of such uses, or the clearing of additional areas, shall occur unless appropriate Federal, State and local permits have first been obtained. If the City has determined that a legal, non-conforming use, or legal use of a non-conforming structure has been abandoned for a continuous period of six months, any new land use or uses of any structure shall be in accordance with the provisions of this Subarea Plan, except for cessation of uses due to acts of God. All uses shall comply with the standards of the Chula Vista Zoning Ordinance and applicable Planned Community (PC) District Regulations unless otherwise specified in this document.

After conveyance or agreement, land uses within 100% Conservation Areas will be limited to those uses which are considered compatible with the Preserve, or that are considered conditionally compatible and meet applicable regulations in the HLIT Ordinance. The following sections identify land uses that are considered to be compatible, conditionally compatible, or incompatible within the Preserve.

6.2 Compatible Uses

The following land uses and activities are considered compatible with the biological objectives of the MSCP Subregional Plan and thus will be allowed within the Preserve.

6.2.1 Public Access and Recreation

Recreational activities are permitted consistent with the goals of the MSCP Subregional Plan and Chula Vista Subarea Plan. Public access and recreation land uses allowed in the Preserve are as follows:

1. Limited public access and passive recreation are permitted uses within the Preserve. Trails are permitted pursuant to and consistent with the provisions of Section 6.3.2 of this Subarea Plan. Access points, new trails and facilities, and control of public access will be consistent with the City Planning Component Framework Management Plan (Section 7.5 of this Subarea Plan) or the Otay Ranch RMP (Appendices D, E and/or F), and future area-specific management directives. The Appropriate Managing Entity is authorized to close selected areas of the Preserve to public use, temporarily or permanently, if public access has resulted in or is expected to result in significant negative impact to sensitive species. Closures to public access may also occur during breeding seasons and QCB active flight season if deemed necessary by the Appropriate Managing Entity.

2. Litter and trash removal, maintenance, repair, refurbishment and replacement of structures in existing locations, trails and roads are allowed as needed. These activities will be provided through Preserve management programs identified in this Subarea Plan.

3. In order to allow passive recreational opportunities for the public, and ensure continued habitat values, riding and hiking trails will be allowed within the Preserve only when consistent with Section 7.5.3 of this Subarea Plan. Passive recreation includes hiking, bird watching and, under specified locations identified in approved

projects and/or area-specific management plans, mountain biking, horseback riding, boating, sun bathing, fishing and swimming. Equestrian use, hiking and bicycles may be allowed when in accordance with this Subarea Plan, as determined by the Appropriate Managing Entity.

4. Some areas of the Preserve may remain in private ownership. The owners of these areas may fence these areas of the Preserve to deter trespassing with appropriate City permits, if applicable. Any new fencing on private or public Preserve lands must not significantly, adversely effect the full functioning of the Preserve and must not significantly impede wildlife movement. Allowed uses and specific responsibilities of property owners regarding land designated as open space have been incorporated into Covered Project approvals and will be incorporated into HLIT Permits, tentative map conditions and/or SPA or Precise Plans on a project by project basis.

5. The public access to finger canyons will be limited through subdivision design, fencing or other appropriate barriers, and signage.

6.2.2 Preserve Management, Scientific and Biologic Activities

All scientific research related to habitat conservation, monitoring and habitat restoration and enhancement activities are permitted within the Preserve, subject to approval by the City and/or Appropriate Managing Entity, as applicable, and the underlying landowner, including obtaining any necessary permits. All such activities must be consistent with this Subarea Plan. This includes any conditions associated with 401 certifications, Army Corps 404 permits, 1600 permits or other resource conservation permits. In addition, reasonable access will be provided to the Wildlife Agencies for the purposes of monitoring species and habitat and evaluating compliance with the permit.

Any Take resulting from management and/or scientific activities undertaken pursuant to Section 7.0 of this Subarea Plan, including Section 7.5 – City Planning Component Framework Management Plan – and the Otay Ranch RMP (Appendices D, E and/or F), and/or pursuant to area-specific management directives prepared pursuant to this Subarea Plan, will be authorized by the Take Authorizations. All of the above activities shall be carried out under a regional program implemented by the Wildlife Agencies, City of Chula Vista or Preserve Owner/Manager.

6.2.3 Emergency, Safety and Police Services

The interface between current and future urban development and the Preserve requires increased coordination between the Preserve managers and agencies responsible for public safety and enforcement of immigration laws. The Preserve must accommodate access for emergency response, fire control and management, and enforcement of immigration laws.

All law enforcement agencies will be allowed access to the Preserve as necessary to enforce the law. All medical, rescue and other emergency agencies are allowed access to

the Preserve to carry out operations necessary to the health, safety and welfare of the public. In Preserve areas managed by the City or the City's authorized representative, the City shall allow emergency repairs to infrastructure to be made by the involved agency, consistent with normal practices and with Federal and State Take Authorization in conformance with existing Federal and State laws.

If permanent damage is caused to Preserve habitat, due directly to the action(s) of City emergency crews, the City will revegetate disturbed and/or destroyed habitat or will mitigate pursuant to this Subarea Plan. Law enforcement and fire control agencies, the National Guard, the Immigration and Naturalization Service (INS), the Border Patrol and organizations and agencies operating within the Preserve area are subject to all applicable requirements of Federal and State law. The MSCP Subregional Plan and this Subarea Plan will create no additional permit requirements beyond those of existing Federal and State law for the activities of these agencies.

6.3 Conditionally Compatible Uses

The following land uses and activities are considered conditionally compatible with the biological objectives of the MSCP Subregional Plan and thus will be allowed within the Preserve, subject to the guidelines and/or criteria incorporated into this Section.

6.3.1 Mining, Extraction and Processing Facilities

In the long-term, it is envisioned that no mining, extraction, or processing facilities and/or activities will occur in the Preserve. Exceptions may be granted by the City for new operations only if permitted on an interim basis and agreed to in writing by the Wildlife Agencies. Currently permitted operations that have approved restoration plans may continue to operate under legally existing permits. If new operations are permitted by the City and Wildlife Agencies, they would be considered to be conditionally compatible within the Preserve if:

- Impacts have been assessed and conditions incorporated to mitigate biological impacts and restore mined areas with native habitat;

- Adverse impacts to the Preserve design have been avoided and Covered Species have been avoided or impacts fully mitigated if impacts are unavoidable; and

- Requirements of City land use policies, regulations, and permits (e.g., Conditional Use Permit) have been satisfied.

Processing and other related mining activities (e.g., asphaltic processing) are incompatible with the Preserve. Newly permitted operations adjacent to or within the Preserve shall meet noise, air quality and water quality regulation requirements, as identified in the condition of any existing or new permit, in order to adequately protect adjacent Preserve areas and Covered Species. Such facilities shall also be appropriately

restored to native vegetation appropriate to the location upon cessation of mining activities.

All temporary sand mining and related activities must be consistent with the objectives, guidelines, and requirements of the MSCP Subregional Plan, the City of Chula Vista's ordinances and the State Surface Mining and Reclamation Act (SMARA) of 1975.

Any sand removal activities shall be monitored for noise impacts to surrounding sensitive habitats, and all new sediment removal or mining operations proposed in proximity to the Preserve or major changes to newly permitted operations must include noise reduction methods that take into consideration the breeding and nesting seasons of sensitive bird species. Monitoring for noise impacts shall occur at a frequency acceptable to the appropriate managing entity.

All future mined lands adjacent to or within the Preserve shall be reclaimed pursuant to SMARA and applicable Federal and State laws, including Federal Section 404 and State Section 1600 requirements. All future SMARA plans and/or amendments shall be designed to be consistent with this Subarea Plan and to contribute biologically to the Preserve. Native habitats shall be restored. When man-made ponds provide native wildlife and wetland habitats, they may be considered compatible with the Preserve.

In addition to considering impacts to Covered Species and any Non-Covered Listed species, any permitted activity including reclamation of sand mining shall consider changes and impacts to water quality, water table level, fluvial hydrology, flooding and Wetlands and habitats upstream and downstream and provide adequate mitigation.

6.3.2 Flood Control

Except as provided for in Section 6.3.3 of this Subarea Plan, flood control within the Preserve shall be limited to existing agreements with the Wildlife Agencies unless demonstrated to be needed pursuant to a habitat restoration plan or any other City plan for controlling U.S. waters. Floodplains within the Preserve should remain in a natural condition and configuration in order to allow for the ecological, geological, hydrological, and other natural processes to proliferate or be restored.

Except as provided for in Section 6.3.3 of this Subarea Plan, no berming, channelization, or man-made constraints or barriers to creek, tributary, or river flows shall be allowed in any floodplain within the Preserve unless approved by all appropriate agencies and adequately mitigated. Review must include impacts to upstream and downstream habitats, flood flow volumes, velocities and configurations, water availability and changes to the water table level.

Except as provided for in Section 6.3.3 of this Subarea Plan, no riprap, concrete, or other man-made material shall be used to stabilize river, creek, tributary, and channel banks within the Preserve unless approved through a Federal Section 404 or a State Section 1600 permit. All river, stream, and channel banks shall be constructed with natural

materials and bank stabilization shall be constructed utilizing natural, native plantings. Rock gabbions may be used where necessary.

6.3.3 Roads and Infrastructure

Two categories of facilities are contemplated by the Chula Vista Subarea Plan: Planned Facilities and Future Facilities. Planned Facilities are those that have been specifically identified by the City to serve development approved by the City and are specified in Table 6-1. Future Facilities are those that may be necessary to support City services or planned development in the future, or are ancillary to Planned Facilities. Because Future Facility needs cannot be specified at this time, Future Facilities are defined by facility categories, listed in Table 6-2.

Take Authorization for Planned Facilities is expressly provided for through this Subarea Plan. Impacts to Covered Species and habitats from Planned Facilities within or required as part of Covered Projects both outside and within the Preserve are mitigated by specific Covered Project conditions and mitigation requirements contained in this Subarea Plan and are not subject to the HLIT Ordinance. Impacts to Covered Species and habitats resulting from Planned Facilities located outside of Covered Projects both outside and within the Preserve, will be subject to and mitigated pursuant to the HLIT Ordinance. All Planned Facilities both outside and within the Preserve, are considered conditionally compatible with the Preserve, subject to the Facilities Siting Criteria contained in Section 6.3.3.4 and protection of Narrow Endemic Species contained in Section 5.2.3 of this Subarea Plan.

Take Authorization for Future Facilities is expressly provided for through this Subarea Plan. All Future Facilities located within the Preserve will be subject to a limit of impact to Covered Species and habitat on an individual facility basis and a cumulative basis as described in the Facilities Siting Criteria in Section 6.3.3.4 of this Subarea Plan. Impacts to Covered Species and habitats from Future Facilities which have been generally identified as necessary to support approved development in Covered Projects are mitigated by specific Covered Project conditions and mitigation requirements contained in this Subarea Plan, and are not subject to the HLIT Ordinance. All Future Facilities, both outside and within the Preserve, are considered conditionally compatible with the Preserve, subject to the Facilities Siting Criteria contained in Section 6.3.3.4 of this Subarea Plan.

Planned and Future Facilities located within the Preserve will avoid impacts to Narrow Endemic Species to the maximum extent practicable, and will be subject to the Facilities Siting Criteria in Section 6.3.3.4, protection of Narrow Endemic Species contained in Section 5.2.3 of this Subarea Plan and the HLIT Ordinance. Where impacts to Narrow Endemic Species cannot be avoided, compensation for species loss will be provided on an equivalent basis.

Take Authorization for Planned and Future Facilities pursuant to this Subarea Plan applies only within the *Chula Vista Subarea*; extensions of improvements outside the

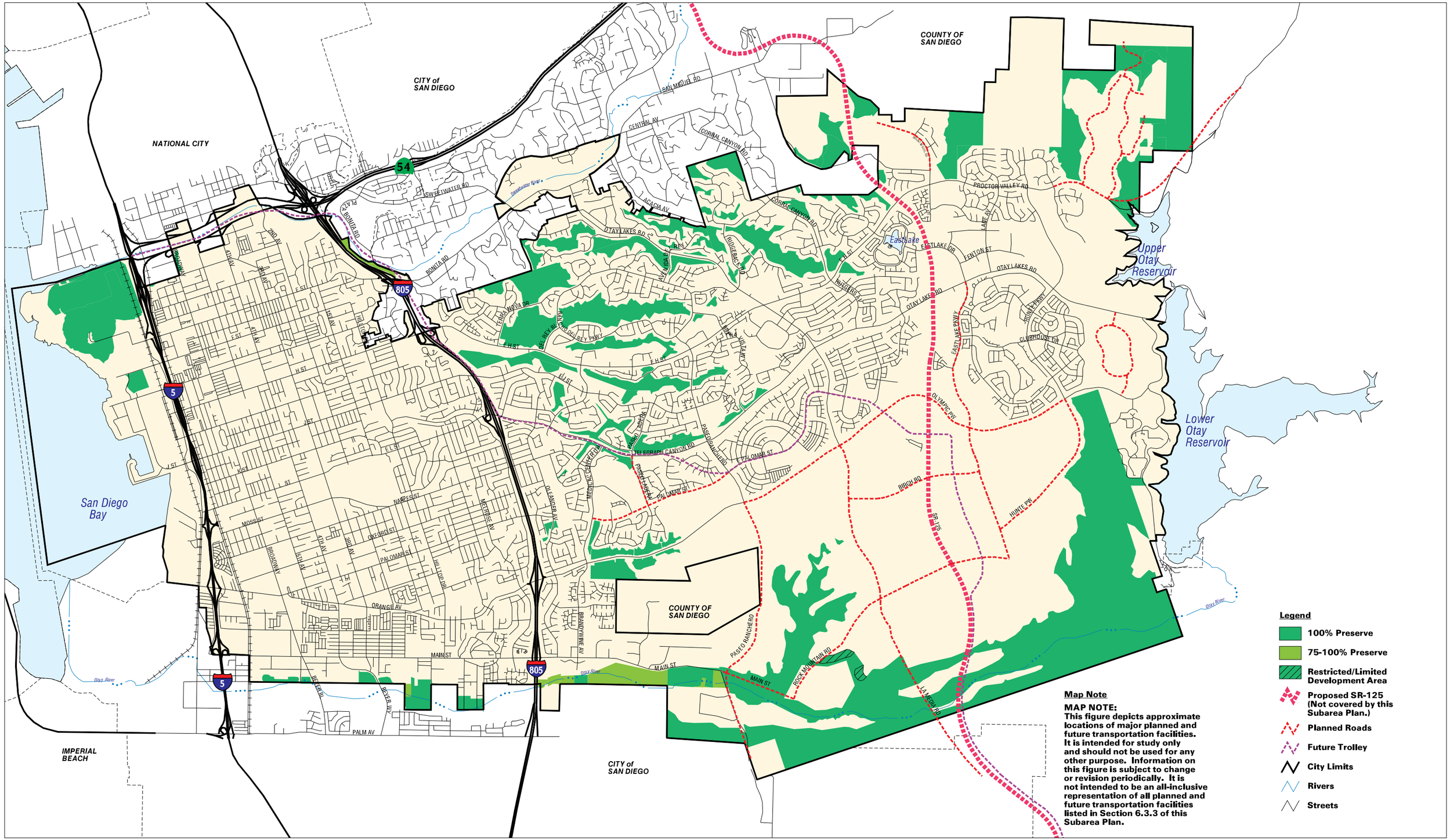
Chula Vista Subarea will be subject to applicable requirements of the relevant, affected jurisdiction.

6.3.3.1 Planned Facilities

Figures 6-1, 6-2 and 6-3 depict major roads and infrastructure that have been planned for development through existing plans and/or project approvals (i.e., General Plan, GDPs, SPA Plans or Precise Plans) and will be allowed to be constructed, operated and maintained within the Preserve. These Planned Facilities are anticipated to be required and are needed to serve development in areas authorized for Take. Construction of these facilities within the Preserve will be necessary to achieve development goals that will cluster and intensify development in the Development Areas, which therefore allows large, interconnected blocks of open space to be preserved, thus achieving biological conservation objectives.

The locations for the facilities shown on Figures 6-1, 6-2 and 6-3 may not be exact. Specific alignments will be determined at the time of facility alignment approval and will include appropriate environmental review pursuant to CEQA. Siting of such facilities will be subject to the Facilities Siting Criteria in Section 6.3.3.4 of this Subarea Plan. The alignments shown on Figures 6-1, 6-2 and 6-3 are those contemplated on already approved City documents such as the General Plan, Otay Ranch GDP/SRP and Otay Ranch RMP, and various project SPA or Precise Plans, and Tentative Maps. Environmental analysis in compliance with CEQA has already been prepared for these plans, which included the siting of these Planned Facilities. In addition, environmental analysis under CEQA and NEPA has been performed for the implementation of the MSCP Subregional Plan. In that Final EIR/EIS, the lead agencies concluded that the implementation of the MSCP Subregional Plan including the Chula Vista Subarea Plan, would not result in any significant land use impacts since the MSCP Subregional Plan allows for the siting of Planned Facilities within the Preserve subject to certain conditions. Additionally, the conservation analysis in the MSCP Subregional Plan concluded that the establishment of the Preserve, including these Planned Facilities, minimizes and mitigates impacts to Covered Species from Covered Projects to the maximum extent practicable. Therefore, no additional mitigation for Take of Covered Species for the implementation of these Planned Facilities, except pursuant to this Subarea Plan, is necessary.

The Planned Facilities shall be located in the Preserve, subject to compliance with the siting criteria identified in Section 6.3.3.4 of the Subarea Plan, and with no further mitigation required. The siting criteria and Table 6-1 sets forth the design standards for the proper alignment and construction of Planned Facilities within the Preserve. One of the criteria is that the facilities should be located in the least environmentally sensitive location feasible.



Legend

- 100% Preserve
- 75-100% Preserve
- Restricted/Limited Development Area
- Proposed SR-125 (Not covered by this Subarea Plan.)
- Planned Roads
- Future Trolley
- City Limits
- Rivers
- Streets

Map Note

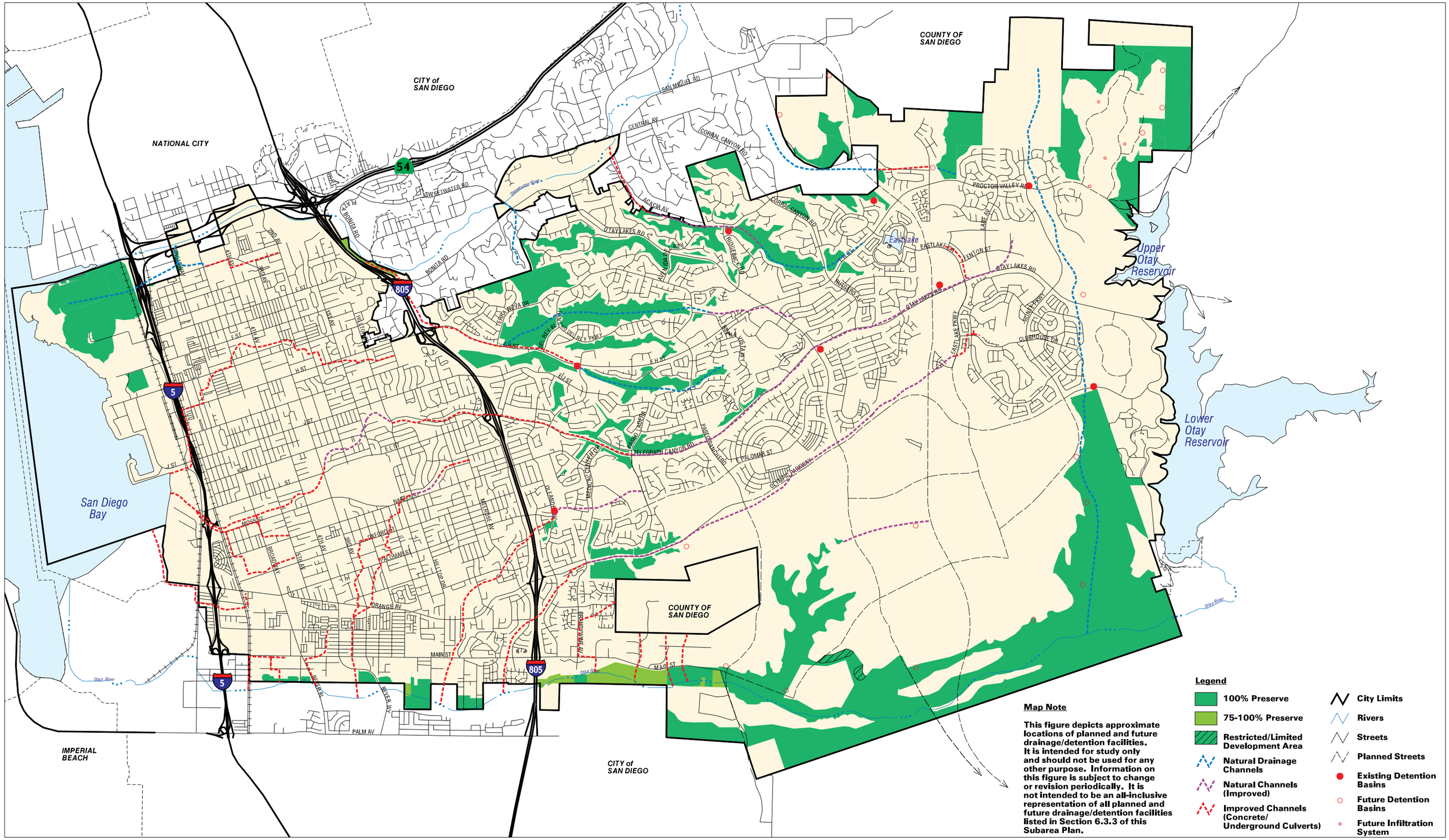
MAP NOTE:
This figure depicts approximate locations of major planned and future transportation facilities. It is intended for study only and should not be used for any other purpose. Information on this figure is subject to change or revision periodically. It is not intended to be an all-inclusive representation of all planned and future transportation facilities listed in Section 6.3.3 of this Subarea Plan.

CITY OF CHULA VISTA
GEOGRAPHIC INFORMATION SYSTEM
Plot created: January 26, 2004
r:/planning/mscp/infrapres3.aml

City of Chula Vista Transportation In or Near the Preserve

0 4500 9000
FEET

FIGURE 6-1



Map Note

This figure depicts approximate locations of planned and future drainage/detention facilities. It is intended for study only and should not be used for any other purpose. Information on this figure is subject to change or revision periodically. It is not intended to be an all-inclusive representation of all planned and future drainage/detention facilities listed in Section 6.3.3 of this Subarea Plan.

Legend

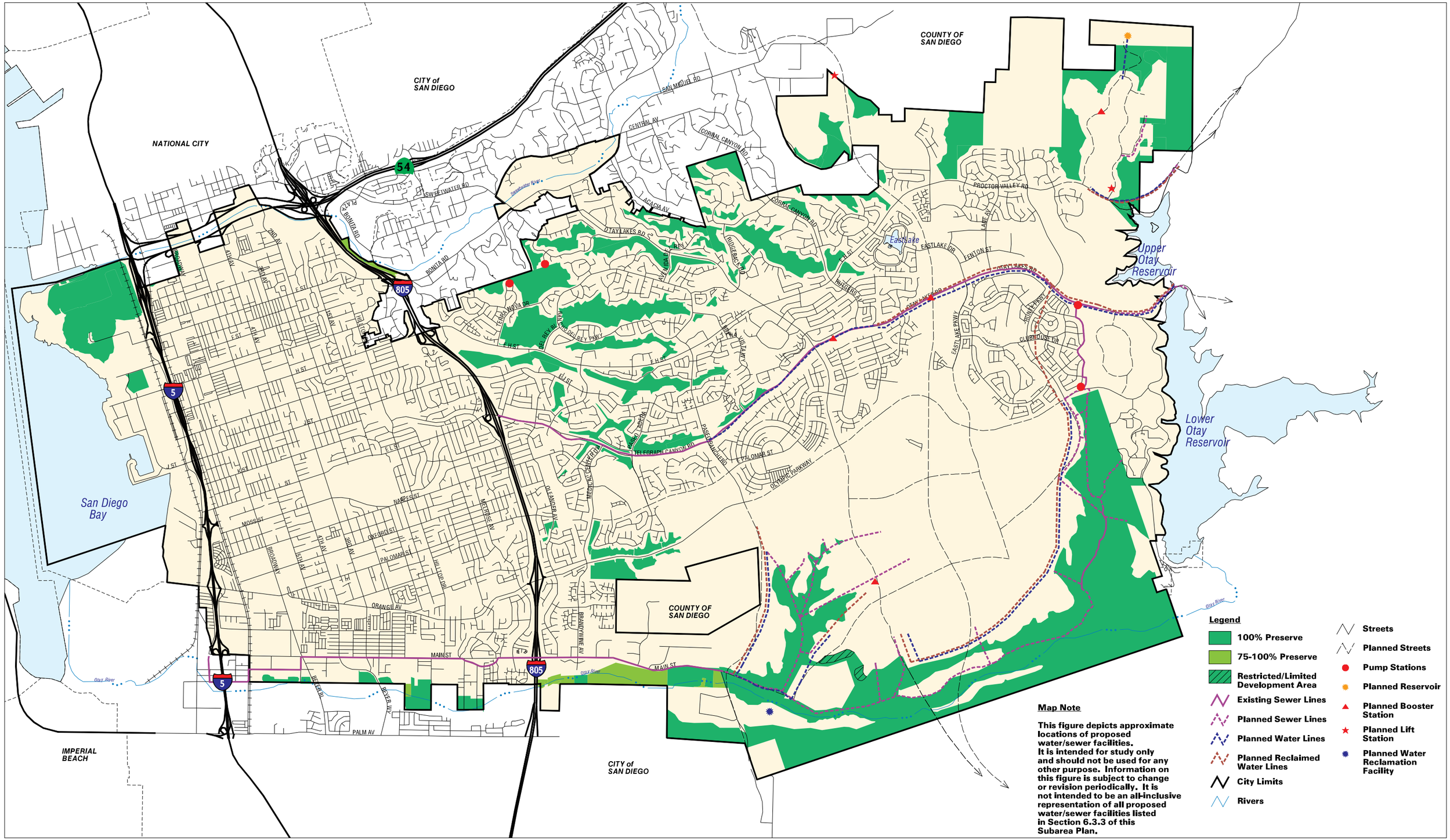
- 100% Preserve
- 75-100% Preserve
- Restricted/Limited Development Area
- Natural Drainage Channels
- Natural Channels (Improved)
- Improved Channels (Concrete/ Underground Culverts)
- City Limits
- Rivers
- Streets
- Planned Streets
- Existing Detention Basins
- Future Detention Basins
- Future Infiltration System

CITY OF CHULA VISTA
GEOGRAPHIC INFORMATION SYSTEM
Plot created: January 26, 2004
r:/planning/mscp/infrapres2.aml

City of Chula Vista
Drainage/Detention Facilities
In or Near the Preserve

0 4500 9000
FEET

FIGURE 6-2



CITY OF CHULA VISTA
GEOGRAPHIC INFORMATION SYSTEM
Plot created: January 26, 2004
r:/planning/mscp/infrapres1.aml

City of Chula Vista
Water/Sewer Infrastructure
In or Near the Preserve

FIGURE 6-3

In the context of Planned Facilities, "feasible" refers to minor changes in the alignments shown on Figures 6-1, 6-2 and 6-3 within the Preserve, in order to site facilities in the least environmentally sensitive location practicable, and where the fewest impacts to Covered Species would occur to minimize habitat disruption and fragmentation and to minimize impacts to covered Narrow Endemic Species. Those minor changes shall not involve extraordinary engineering design, including but not limited to tunnels, bridges and other significantly costly features, except where indicated on Table 6-1.

Table 6-1 lists all Planned Facilities authorized for Take pursuant to this Subarea Plan, and briefly identifies the implementation criteria for each specific facility. (Refer to Section 6.3.3.4 for specific Facilities Siting Criteria.) Nothing in this section relieves the project from compliance with any applicable CEQA and/or NEPA documents.

Table 6-1: Planned Facilities

FACILITY	IMPLEMENTATION CRITERIA/ASSURANCE
Otay Lakes Road	• Siting of this facility is subject to the: a. Otay Ranch RMP Phase 1 Policy 6.6 and the RMP Infrastructure Plan, Section 6.0 (Appendix D); and b. Otay Ranch RMP Phase 2 Conceptual Infrastructure Plan (Appendix E). • Take Authorization for the portions of this facility located outside the City will be pursuant to the County of San Diego Subarea Plan, South County Segment. • If Otay Lakes Road is not excluded from the Cornerstone Conservation Bank Agreement, the Wildlife Agencies will require that any Take within the Cornerstone Lands resulting from construction of the road must be deducted from the available conservation bank credits.
Proctor Valley Road	• Siting of this facility is subject to the: a. Otay Ranch RMP Phase 1 Policy 6.6 and the RMP Infrastructure Plan, Section 6.0 (Appendix D); and b. Otay Ranch RMP Phase 2 Conceptual Infrastructure Plan (Appendix E). • Siting of this facility is subject to the Rolling Hills Ranch SPA Plan and Tentative Map, which allow realignment of the City/County segment. • Take Authorization for the portions of this facility located outside the City will be pursuant to the County of San Diego Subarea Plan, South County Segment. • If Proctor Valley Road is not excluded from the Cornerstone Conservation Bank Agreement, the Wildlife Agencies will require that any Take within the Cornerstone Lands resulting from construction of the road must be deducted from the available conservation bank credits.
Otay Valley Road (will become Main Street)	• Siting of this facility is subject to the: a. Otay Ranch RMP Phase 1 Policy 6.6 and the RMP Infrastructure Plan, Section 6.0 (Appendix D); and b. Otay Ranch RMP Phase 2 Conceptual Infrastructure Plan (Appendix E).

FACILITY	IMPLEMENTATION CRITERIA/ASSURANCE
Otay Valley Road (continued)	• Take Authorization Otay Valley Road (which will be renamed "Main Street") will be extended easterly to connect to Rock Mountain Road. • That portion of the Otay Valley Road originally designed to continue easterly from Rock Mountain Road to SR 125 will be subject to further evaluation, and separate Take Authorization. Take Authorization for that portion is not provided through this Subarea Plan. The City will evaluate the potential to relocate that portion of the facility outside the Preserve and/or remove that portion of the facility. If the City determines, after full evaluation, that all or (a) portion(s) of the road may be eliminated from the Preserve, the City will amend the Otay Ranch GDP accordingly and/or incorporate such design changes into the final design of the facility, as appropriate.
La Media Road	• Siting of this facility is subject to the: a. Otay Ranch RMP Phase 1 Policy 6.6 and the RMP Infrastructure Plan, Section 6.0 (Appendix D); and b. Otay Ranch RMP Phase 2 Conceptual Infrastructure Plan (Appendix E). • Take Authorization for the portions of this facility located outside the City will be pursuant to the City of San Diego or County of San Diego Subarea Plans. • The data developed and analysis completed related to La Media Road as part of the SR 125 corridor study will be considered during siting analysis and CEQA review, as appropriate. • La Media Road will be a permitted use under the Take Permit authorized by this Subarea Plan. It is recognized that the City will seek a Section 404 permit, triggering consultation with the Federal agencies. In addition, the City commits to work jointly with the Wildlife Agencies during CEQA review for the project to identify an alignment of the road which results in the least adverse impact to sensitive resources feasible. The City will apply a standard of no-net-loss for mitigation of impacted Wetlands under CEQA review.

FACILITY	IMPLEMENTATION CRITERIA/ASSURANCE
La Media Road (continued)	• Although the siting of La Media Road has not yet been finalized: a. The Wildlife Agencies have reviewed the tentative alignment and have concluded that if impacts to covered Narrow endemic Species cannot be avoided as a result of the final alignment La Media Road, the City may purchase one acre of expanded Otay Ranch Tarplant Preserve land on the San Miguel Ranch; and b. The Wildlife Agencies concur that purchase of said property for inclusion into the San Miguel Ranch Otay Tarplant Preserve or other equivalent Otay tarplant Preserve land acceptable to the Wildlife Agencies will constitute equivalency for impacts to Narrow Endemic Species resulting from the final alignment of La Media Road. Alternatively, the City may mitigate potential impacts pursuant to Section 5.2.3 of this Subarea Plan.
Paseo Ranchero	• Siting of this facility is subject to the: a. Otay Ranch RMP Phase 1 Policy 6.6 and the RMP Infrastructure Plan, Section 6.0 (Appendix D); and b. Otay Ranch RMP Phase 2 Conceptual Infrastructure Plan (Appendix E). • Paseo Ranchero will be a permitted use under the Take Permit authorized by this Subarea Plan. It is recognized that the City will seek a Section 404 permit, triggering consultation with the Federal agencies. The City will apply a standard of no-net-loss for mitigation of impacted Wetlands under CEQA review.
Alta Road	• Take Authorization for Alta Road is not provided through this Subarea Plan. Alta Road will be subject to a separate permitting process for receiving Take Authorization.
Rock Mountain Road	• Siting of this facility is subject to the: a. Otay Ranch RMP Phase 1 Policy 6.6 and the RMP Infrastructure Plan, Section 6.0 (Appendix D); and b. Otay Ranch RMP Phase 2 Conceptual Infrastructure Plan (Appendix E).

FACILITY	IMPLEMENTATION CRITERIA/ASSURANCE
Mount Miguel Road	• Mount Miguel Road will be subject to the conditions of the San Miguel Ranch MSCP Annexation Agreement described in Section 7.5.6.4 of this Subarea Plan.
Rolling Hills Ranch; (Two-lane road)	• The two-lane road in Rolling Hills Ranch connecting Neighborhoods 9 through 12 are provided Take Authority pursuant to this Subarea Plan and in consideration for the Conditions of Coverage for Rolling Hills Ranch as discussed in this Plan and specifically cited in Section 7.5.6.3.
Rolling Hills Ranch Road to Future 1296 Reservoir	• This facility will be subject to mitigation pursuant to agreement between the OWD and the Wildlife Agencies.
Rolling Hills Ranch / Bella Lago roadway connections	• Two road connections from Rolling Hills Ranch to Bella Lago are provided Take Authorization pursuant to this Subarea Plan and in consideration for the Conditions of Coverage for Rolling Hills Ranch and Bella Lago as discussed in this Plan and specifically cited in Sections 7.5.6.3 and 7.5.6.5.
Southern Trolley Line	• Take Authorization for the southern trolley line is not provided through this Subarea Plan. The southern trolley line will be subject to a separate permitting process for receiving Take Authorization.
Salt Creek Interceptor, Wolf Canyon Sewer and Otay Valley Trunk Sewer (and associated ancillary sewer facilities including, but not limited to, pump stations, connections and maintenance access roads)	• Siting of these sewer facilities is subject to the: a. Otay Ranch RMP Phase 1 Policy 6.6 and the RMP Infrastructure Plan, Section 6.0 (Appendix D); and b. Otay Ranch RMP Phase 2 Conceptual Infrastructure Plan (Appendix E). • BMPs will be used to design and maintain these facilities. • Sewer lines will be sited to avoid mitigation sites created as mitigation for other projects. • Maintenance access roads related to these sewer facilities will be sited to avoid to the maximum extent practicable impacts to Covered Species and habitats, including covered Narrow Endemic Species, pursuant to the Facilities Siting Criteria in Section 6.3.3.4 of this Subarea Plan.

FACILITY	IMPLEMENTATION CRITERIA/ASSURANCE
Salt Creek Interceptor, Wolf Canyon Sewer and Otay Valley Trunk Sewer (and associated ancillary sewer facilities including, but not limited to, pump stations, connections and maintenance access roads) (continued)	• Through Salt Creek where new maintenance access roads must be developed, road widths will be limited to 12 feet, within a 20-foot disturbance corridor. Through the Otay River Valley where existing unpaved roads will be utilized, road widths will be limited to 20 feet. Maintenance access roads will be constructed as follows: a. Access roads will be constructed of concrete-treated base (CTB) material with aggregate rock to minimize frequency of maintenance. b. Where access roads exceed a 5% grade, concrete or asphalt may be permitted to ensure maintenance vehicle traction. c. Where cross-drainage occurs, concrete aprons may be permitted to minimize erosion. d. Appropriately sized concrete brow ditches on the uphill edge of access roads may be permitted to minimize erosion. • Temporary impacts related to these sewer facilities will be revegetated pursuant to Section 6.3.3.5 of this Subarea Plan. • Public access to finger canyons associated with the primary canyons involving these facilities will be limited, pursuant to the Otay River Valley Framework Management Plan, Section 7.6.3 of this Subarea Plan.
Poggi Canyon Sewer (and associated ancillary sewer facilities including, but not limited to, pump stations, connections and maintenance access roads)	• The Poggi Canyon sewer is under construction. The facilities located within the Sunbow II project that traverse the Preserve are subject to the Project Specific Management Requirements for Sunbow identified in Section 7.5.6.1 of this Subarea Plan.
Otay River Valley Equestrian Staging Areas (located in the active recreation area(s))	• The equestrian staging areas will be subject to the Otay Ranch RMP Phase 1, Policies 6.2 and 6.3 (Appendix D). • Equestrian staging areas in the Otay River Valley must be sited within the active recreation areas. • A brown-headed cowbird trapping program for these equestrian staging areas will be established and implemented as part of the area-specific management directives for the Otay River Valley.

FACILITY	IMPLEMENTATION CRITERIA/ASSURANCE
Trails designated in the OVRP Concept Plan	• The trails designated in the OVRP Concept Plan are authorized for Take pursuant to this Subarea Plan, subject to the provisions of the City Planning Component Framework Management Plan, Section 7.5, the Public Access, Trails and Recreation guidelines, Section 7.5.3, and the Otay River Valley Framework Management Plan, Section 7.6.3.
Otay River Valley Interpretive Centers (located in the active recreation area(s))	• The Otay River Valley interpretive centers are authorized for Take pursuant to this Subarea Plan, subject to the Otay Ranch and 6.3 (Appendix D). • Interpretive centers in the Otay River Valley must be sited within the active recreation areas.

6.3.3.2 Future Facilities

Future Facilities are those necessary to support planned development and have not been or cannot be identified and/or located at present. Permanent impacts to covered habitats in the Preserve from Future Facilities may not exceed a cumulative total of 50 acres, which may only be exceeded with concurrence from the Wildlife Agencies. In addition, no single facility may permanently impact more than two acres of covered habitat in the Preserve without concurrence from the Wildlife Agencies. Temporary impacts (i.e., from unforeseen required sewer laterals) will not be subject to these limitations, but all areas of temporary impact must be revegetated pursuant to Section 6.3.3.5 of this Subarea Plan.

Table 6-2 lists all the categories of Future Facilities, and briefly identifies the implementation criteria applicable to all Future Facilities. Refer to Section 6.3.3.4 for specific Facilities Siting Criteria.

Table 6-2: Future Facilities

FACILITIES	IMPLEMENTATION CRITERIA/ASSURANCE
Storm drain and flood control/detention facilities Desilting & sedimentation basins Extensions of electric and/or gas utility services to individual services Fire access roads Brush management roads Maintenance & operations roads New trails	• Each Future Facility is subject to a limit of two acres of permanent impact to Covered Species and habitats within the Preserve. Impacts that exceed this limit are subject to concurrence by the Wildlife Agencies, pursuant to the Facilities Siting Criteria in Section 6.3.3.4. • All Future Facilities are subject to a cumulative limitation of 50 acres of overall permanent impact to Covered Species and habitats within the Preserve. Impacts that exceed this limit are subject to concurrence by the Wildlife Agencies, pursuant to the Facilities Siting Criteria in Section 6.3.3.4. • All Future Facilities are subject to the Narrow Endemic Species policy detailed in Section 5.2.3 of this Subarea Plan for impacts to covered Narrow Endemic Species within the Preserve, pursuant to the Facilities Siting Criteria in Section 6.3.3.4. All impacts to Narrow Endemic Species within the Preserve are subject to equivalency findings, pursuant to Sections 5.2.3 and 6.3.3.4 of this Subarea Plan. • All impacts to Covered Species and habitats, excluding Narrow Endemic Species up to the individual and cumulative caps, are mitigated by the conservation strategies in this Subarea Plan, and are authorized under the Take Authorization pursuant to this Subarea Plan.

6.3.3.3 Facilities Covered by Other Habitat Planning Efforts

There are other major facilities planned within the *Chula Vista MSCP Planning Area* which are not covered by this Subarea Plan, but are permitted or proposed to be permitted through other habitat conservation programs. These include, but may not be limited to the following:

- State Route 125[1]
- San Diego County Water Authority (CWA) aqueduct easements (anticipated to be covered by separate CWA Subarea Plan)
- Otay Water District (OWD) water lines, pump stations and other related water facilities (anticipated to be covered by separate OWD Subarea Plan)
- City of San Diego Water Program reclamation facility and related water and sewer lines (covered by separate City of San Diego Subarea Plan)
- City of San Diego Otay Water Treatment Plant expansion (covered by separate City of San Diego Subarea Plan)
- SDG&E utility lines, facilities and related access roads are covered by a separate SDG&E NCCP Subregional Plan. Two substations and their associated facilities will be built in the Otay Ranch and are covered by the SDG&E NCCP Subregional Plan. Extensions of electric and/or gas utility services to individual users are covered by this Subarea Plan when not covered by the SDG&E NCCP Subregional Plan.

6.3.3.4 Facilities Siting Criteria

It is expressly intended that flexibility be allowed in locating Planned and Future Facilities within the Preserve. It is also recognized that it may be necessary to locate public facilities in the Preserve that are not currently planned, known or anticipated. To the extent practical and as determined by the City, covered habitats and species will be avoided during the planning, design and construction of Planned and/or Future Facilities. The physical and engineering requirements of new roads and infrastructure shall be considered during the siting procedure, and siting and construction of such facilities will be accomplished in accordance with the following criteria, as determined by the City:

[1] SR 125 is excluded from the requirements of the Chula Vista MSCP Subarea Plan. Take of listed species for this project has been authorized by the Wildlife Agencies through a separate process. However, Circulation Element Road Connections and interchanges to SR 125 are a permitted use within Development Areas. If impacts to wetlands result from this project, any required Section 7 Consultations on associated 404 permits requests will be consistent with this Subarea Plan.

1. Such facilities will be located in the least environmentally sensitive location feasible, and use existing roads, trails and other disturbed areas, including use of the active recreation areas in the Otay River Valley, as much as possible (except where such areas are occupied by the QCB). Facilities should be routed through developed or developing areas where possible. If no other routing is feasible, alignments should follow previously existing roads, easements, rights of way, and disturbed areas, minimizing habitat fragmentation.

2. Such facilities shall avoid, to the maximum extent practicable, impact to Covered Species and Wetlands, and will be subject to the provisions, limitations and mitigation requirements for Narrow Endemic Species and Wetlands pursuant to Sections 5.2.3 and 5.2.4 of this Subarea Plan.

3. Where roads cross the Preserve, they should provide for wildlife movement in areas that are graphically depicted on and listed in the MSCP Subregional Plan Generalized Core Biological Resource Areas and Linkages map (Figure 1-4) as a core biological area or a regional linkage between core biological areas. All roads crossing the Preserve should be designed to result in the least impact feasible to Covered Species and Wetlands. Where possible at wildlife crossings, road bridges for vehicular traffic rather than tunnels for wildlife use will be employed. Culverts will only be used when they can achieve the wildlife crossing/movement goals for a specific location. To the extent feasible, crossings will be designed as follows: the substrate will be left in a natural condition or revegetated if soils engineering requirements force subsurface excavation and vegetated with native vegetation if possible; a line-of-sight to the other end will be provided; and if necessary, low-level illumination will be installed in the tunnel.

4. To minimize habitat disruption, habitat fragmentation, impediments to wildlife movement and impact to breeding areas, road and/or right-of-way width shall be narrowed from existing City design and engineering standards, to the maximum extent practicable. In addition, roads shall be located in lower quality habitat or disturbed areas to the maximum extent practicable.

5. Impacts to Covered Species and habitats within the Preserve resulting from construction of Future Facilities will be evaluated by the City during project review and permitting. The City may authorize Take for impacts to Covered Species and habitats resulting from construction of Future Facilities located outside the Preserve, pursuant to this Subarea Plan and consistent with the Facility Siting Criteria in this Section.

6. The City may authorize Take for impacts to Covered Species and habitats resulting from construction of Future Facilities located within the Preserve, subject to a limitation of two acres of impact for individual projects and a cumulative total of 50 acres of impact for all Future Facilities. Wildlife Agency concurrence will be required for authorization of Take for any impacts to Covered Species and habitat within the Preserve that exceed two acres that may result from construction of any individual Future Facility. Wildlife Agency concurrence will be required for authorization of Take for impacts to Covered Species and habitat within the Preserve that exceed fifty acres that may result from all Future Facilities combined.

7. Planned and Future Facilities must avoid impacts to covered Narrow Endemic Species and the QCB to the maximum extent practicable. When such impacts cannot be avoided, impacts to covered Narrow Endemic Species within the Preserve that will result from construction of Planned and Future Facilities located within the Preserve are subject to equivalency findings and the limitations and provisions of Section 5.2.3.6 of this Subarea Plan. Impacts to QCB that will result from construction of Planned and Future Facilities within the Preserve are subject to the provisions of Section 5.2.8 of this Subarea Plan.

6.3.3.5 Maintenance and Repairs of Existing, Planned and Future Roads and Infrastructure

Construction, routine maintenance, and emergency repair activities for existing, planned and future roads and other infrastructure are permitted in the Preserve including but not limited to repair, replacement and refurbishment, cleaning (including maintenance of desilting, retention and detention basins and flood control facilities), and maintenance of cleared areas.

The affected agency will be allowed to enter the Preserve and complete necessary work consistent with normal "Best Management" practices. Construction, maintenance, and emergency repair of existing, planned, and future roads and facilities in the Preserve will to the maximum extent practicable avoid impacts to Covered Species and habitats. To the extent practicable, for non-emergency routine maintenance the City will limit access during bird breeding seasons (April 1 through June 31) in areas where breeding and/or nesting activity may occur. Where avoidance is not feasible, impacts must be minimized. Areas temporarily disturbed by construction, maintenance, and/or emergency repair will be revegetated in accordance with an approved revegetation plan. A framework plan for temporary impacts and revegetation plans will be provided as part of the HLIT Ordinance. The City will apply the requirements of the HLIT Ordinance in all cases where its jurisdictional authority governs. The agency responsible for road and/or infrastructure construction, maintenance, and emergency repair and

causing unavoidable disturbance, or the holder of the permit authorizing such work, will be responsible for necessary revegetation.

6.3.4 Otay Valley Regional Park Plan Uses

Land uses allowed in the OVRP are identified in the OVRP Concept Plan. All uses, identified by the Draft OVRP Concept Plan and located within the *Chula Vista Subarea* City Planning Component are compatible with this Subarea Plan if planned and developed consistent with this Subarea Plan, including the Otay River Valley Framework Management Plan, Section 7.6.3. All uses, identified by the OVRP Concept Plan within the *Chula Vista Subarea*, Otay Ranch Planning Component, are compatible with this Subarea Plan if planned and developed consistent with this Subarea Plan, including Section 7.6.3, and the Otay Ranch GDP, and RMP. Uses in the OVRP outside the *Chula Vista Subarea* are allowed pursuant to the ORVP Concept Plan and other applicable MSCP Subarea Plans.

Active recreation areas are identified in the OVRP Concept Plan and this Subarea Plan. These areas are not a part of the Preserve, and include both existing and proposed active and passive recreation sites. Active recreation uses are identified in the Otay Ranch GDP as allowed uses in the Otay Ranch Preserve and are not subject to the 100-foot Edge Plan requirements. Some of the identified recreation areas within the park boundary are still in private ownership. Any privately held property within the park boundary has existing development potential, which must be consistent with applicable land use and development regulations. The OVRP Concept Plan does not change existing zoning or planned land uses, or add new development regulations, nor does it preclude private development in designated recreation areas consistent with existing zoning or planned land uses.

Within the Otay Ranch portion of the OVRP, the GDP and RMP include policies and criteria for siting and developing up to 400 acres of active recreation uses. RMP1 Policy 6.2 stipulates that siting and design of active recreational uses must be consistent with the Otay Valley Regional Park Concept Plan when adopted. Two hundred forty-six acres are identified by this Subarea Plan for active recreation uses in the Otay Valley Regional Park, within the *Chula Vista Subarea.* Active recreation areas were sited according to the criteria contained in RMP1 Policy 6.2, as listed below:

1. Active recreation areas should be located in previously disturbed, non-sensitive areas.

2. Active recreation uses should be readily accessible from existing and planned public roads and should not intrude into core areas within the Preserve.

3. Active recreation uses should be clustered to minimize the extent of the edge between active recreation uses and sensitive resources within the Preserve.

4. Limited commercial uses/activities related to active recreation may be allowed within the 400 acres designated for active recreation.

5. Public parks and recreation facilities may be operated commercially by private operators within active recreation areas.

6. Emphasis shall be placed on providing the majority of the active recreation in the Otay River Valley to the extent that this is consistent with an Otay Valley Regional Park Concept Plan, as may be adopted.

The siting of the 246 acres of active recreation area in the *Chula Vista Subarea* is consistent with the RMP and adopted Otay Ranch GDP/SRP and EIR, the Otay Valley Regional Park Concept Plan, the MSCP Subregional Plan and Final EIR/EIS, and the County of San Diego Subarea Plan/South County Segment. The active recreation areas shown on Figure 1-2 are representative of the total 246 acres of Take Authority provided for active recreation uses by this Subarea Plan. Siting of the active recreational uses shown on Figure 1-2 considered data available at the time regarding Covered Species and habitats, including the presence and distribution of Narrow Endemic Species (including Otay tarplant). Based on those data, the active recreational areas were sited to minimize impacts to Covered Species and habitats. Final hard-line active recreation areas will be determined based upon updated biological data and application of the siting criteria found in the RMP, OVRP, and this Subarea Plan, at the time that specific recreational uses are planned and developed.

It is recognized, however, that observable presence of Otay tarplant varies from year to year. In consideration of this factor, and recognizing the importance of the Otay River Valley in the overall Preserve design within the City, surveys for Otay tarplant within the areas designated for active recreation will be conducted during the appropriate seasons in conjunction with design and environmental review of active recreation uses in the Otay River Valley. The results of these surveys will be considered in the design and construction process for future active recreation uses.

As part of the design and construction process, the City will review survey results and design information with the Wildlife Agencies. The Wildlife Agencies will work cooperatively with the City to develop configuration(s) for the active recreation areas that will minimize impacts to Narrow Endemic Species and ensure that such areas are configured in a manner that does not preclude intended active recreational use.

The total usable area of active recreation will not be reduced below 246 acres. If reconfiguration required to avoid impact to Narrow Endemic Species would result in the loss of the City's ability to incorporate all planned recreational uses into the designated active recreation sites, such reconfiguration may require that more than 246 acres be developed. It is, therefore, understood that if designated active recreation area is eliminated in order to avoid Narrow Endemic Species, additional Preserve land may be designated for active use in order to retain equivalent functional recreation values.

In addition to the potential recreational areas, other facilities listed below may occur within the OVRP boundary, subject to the relevant restrictions specified in Section 6.3.3

of this Subarea Plan.

1. Local roads for access.

2. Trails and staging areas for neighborhood or regional access.

3. Viewpoints and overlook areas.

4. An interpretive center within the Otay Ranch portion of the park, sited and developed in accordance with the Otay Ranch RMP1.

5. Existing rock quarry operation (approximately 135 acres) on Rock Mountain, just east of Otay Valley Road, is expected to continue for about the next 50 years, after which the site may be used for active recreation or other development.

6. The Gun Club/Bird Ranch and the area immediately north and east (approximately 110 acres) have been a gun club and ranch and would not be used for habitat management purposes under the conceptual park plan. This area is anticipated to be developed for active recreation or other purposes.

7. Habitat restoration and enhancement of disturbed areas in accordance with an adopted revegetation plan (referenced in Section 7.0, Preserve Management).

8. Passive recreational uses as defined in the OVRP Concept Plan, including hiking, biking and equestrian trails.

6.4 Incompatible Uses

The following uses and activities are considered incompatible with the biological objectives of the MSCP Subregional Plan and thus will not be allowed on lands which have been conveyed, through dedication of fee title or biological and open space easements, into the Preserve, except in association with an existing legal use, compatible use or conditionally compatible use as defined in Sections 6.1, 6.2 or 6.3 of this Subarea Plan:

- Clearing or grubbing of vegetation for purposes unrelated to biological enhancement or revegetation activity

- Grading

- Excavation

- Placement of soil, sand, rock, gravel, sludge or other material

- Construction

- Erection or placement of any building or structure

- Agriculture

- Grazing unless deemed to have a neutral or positive impact on habitat values by the City with concurrence by the Wildlife Agencies.

6.4.1 Off-Highway Vehicles (OHV)

Legal access across Preserve lands to private or public inholdings will not change as a result of implementation of the Subarea Plan; however, public off-highway recreational vehicle activity within Preserve areas is incompatible with the goals of the MSCP Subregional Plan and is prohibited within the Preserve.

6.4.2 Materials Storage

Storage of materials (e.g., chemicals and equipment.) will not be allowed within the Preserve. In areas adjacent to the Preserve and under the control of the City, storage of materials which may impact the Preserve (especially due to leakage, drainage or flood flows), will not be allowed, except that temporary storage of inert materials excavated during maintenance, repair, refurbishment and/or replacement activities shall be permitted on a short-term basis during such activities.

7.0 PRESERVE MANAGEMENT AND MONITORING

Management of the Preserve is an important element in its success, and to the overall success of the Subregional MSCP program. The overarching MSCP Subregional Plan goal is to maintain and enhance biological diversity in the region and conserve viable populations of Covered Species and their habitats, while enabling continued economic growth for the region.

7.1 Management Goals and Objectives

The overall management goal of the MSCP Subregional Plan and this Subarea Plan is to ensure that the biological values of natural resources, where land is preserved as part of the MSCP through acquisition, regulation, mitigation or other means, are maintained over time.

The City will be responsible for the maintenance and management of Preserve land owned in fee title by the City. Lands in the Preserve which are set aside as open space through the development process but are not dedicated in fee title to, and accepted by the City, will be managed by the landowner or a third-party managing entity under the control of the City. Within the Otay Ranch Planning Component, Preserve land will be maintained and managed by the Otay Ranch Preserve/Owner Manager (POM). Finally, Federal and State agencies will maintain, manage and monitor their present land holdings as well as those in which they acquire a legal interest.

Land located in the Preserve will be managed and maintained in accordance with specific management objectives as follows:

1. To ensure the long-term viability and sustainability of native ecosystem function and natural processes throughout the Preserve.

2. To protect existing and restored biological resources from intense or disturbing activities within the Preserve while accommodating compatible uses.

3. To enhance and restore, where feasible, appropriate native plant associations and wildlife connections to adjoining habitat in order to provide viable wildlife and sensitive species habitat.

4. To facilitate monitoring of selected target species, habitats, and linkages in order to ensure long-term persistence of viable populations of priority plant and animal species and to ensure functional habitats and linkages for those species.

7.2 Plan Implementation Overview

Implementation of the Subarea Plan will include two major elements: preparation of area-specific management directives (ASMDs) discussed in Section 7.3 and long-term Preserve management discussed in Section 7.4. While this Subarea Plan provides a general roadmap for Preserve management, the ASMDs discussed in Section 7.3 will detail the management tasks and approaches to adaptive management best applied to individual areas of the Preserve.

Each area of the Chula Vista Preserve is unique in terms of existing conditions, Preserve configuration, ownership of land, the existence and location of sensitive species, and management needs. For ease of management, the Preserve will be divided into three distinct Preserve Management Areas (PMAs). ASMDs will be used to guide long-term management in each PMA shown on Figure 7-1 and described below: Central City PMA, North City PMA and Otay Ranch PMA.

7.2.1 Central City Preserve Management Area

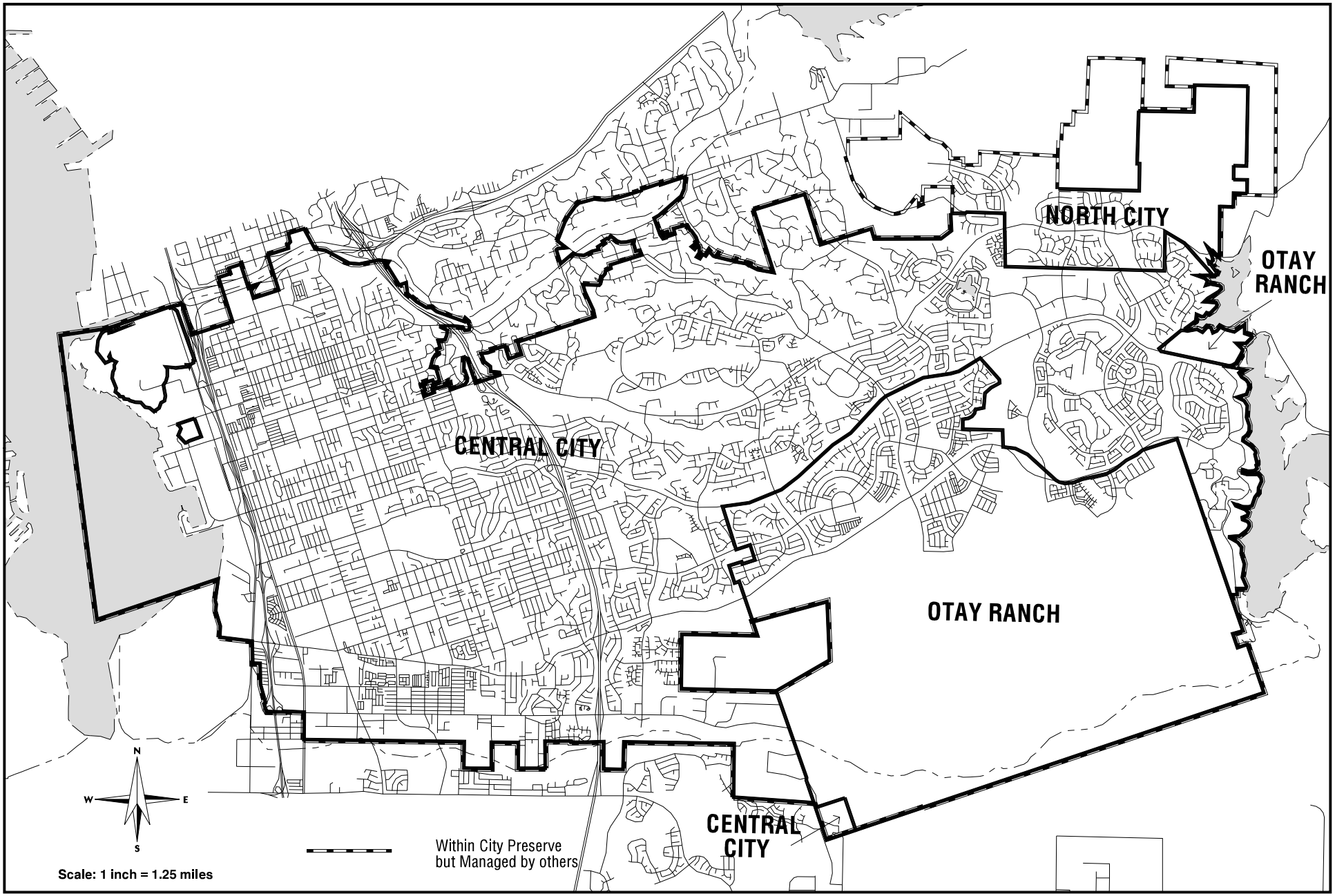
The Central City PMA encompasses the Preserve areas surrounded by the existing communities of Bonita Long Canyon, Rancho Del Rey, Terra Nova, Sunbow and EastLake. The Central City PMA will also include approximately 268 acres within the Otay River Valley, located west of Heritage Road and not in the Otay Ranch. The Central City Preserve areas total an estimated 1,586 acres and include primarily coastal sage scrub, and small areas of riparian vegetation and grassland habitats. The conserved canyons and hillsides in the Central City PMA contain a variety of coastal sage scrub, plant and animal species including San Diego barrel cactus, snake cholla, San Diego ambrosia, coastal California gnatcatcher, and coastal cactus wren. Isolated areas of Otay tarplant exist as well. The Central City PMA also includes any Preserve areas along the bayfront.

7.2.2 North City Preserve Management Area

The North City PMA includes the Preserve areas that will become part of the new communities of Rolling Hills Ranch and Bella Lago. These Preserve areas total approximately 303 acres and include primarily coastal sage scrub, native and non-native grassland and riparian scrub. Variegated dudleya, Otay tarplant and the QCB are also found in the North City PMA. An additional 362 acres in this northeastern area of the City are included in the San Diego NWR, and are managed by USFWS. These lands include approximately 186 acres of San Miguel Ranch, including critical areas rich in Otay tarplant, and approximately 176 acres of the Inverted "L" property.

7.2.3 Otay Ranch Preserve Management Area

The Otay Ranch PMA encompasses all Preserve areas of the Otay Ranch Planning Component within the City, including the Otay River Valley, Salt Creek and Wolf Canyon. These Preserve areas total approximately 2,742 acres. Upland habitats found within this Preserve area include coastal sage scrub, maritime succulent scrub, chamise chaparral and non-native grassland. Wetland habitats include southern willow scrub, Baccharis scrub, Baccharis flooplain scrub and tamarisk scrub. Sensitive plant and animal species to be protected in the Otay Ranch PMA include coastal California gnatcatcher, coastal cactus wren, Cooper's hawk, golden eagle, grasshopper sparrow, least Bell's vireo, orange-throated whiptail, southern California rufous-crowned sparrow, Otay tarplant, San Diego barrel cactus, snake cholla, and variegated dudleya.



CITY OF CHULA VISTA

GEOGRAPHIC INFORMATION SYSTEM

/projects/planning/mscp/finalreport/pma.aml

Preserve Management Areas

FIGURE 7-1

Plot created: January 26, 2004

7.3 Framework Management Plans and Area-Specific Management Directives (ASMDs)

The MSCP Subregional Plan indicates that each subarea plan will provide specific management guidelines to ensure preserved lands are managed for the long-term conservation of biological resources. Each Take Authorization holder is required to prepare a Framework Management Plan "to provide general direction for all Preserve management issues within the subarea plan." Subsequently, "area-specific management directives must be developed in accordance with the framework plan to address management issues at the site-specific level."

Framework Management Plans for all three PMAs have been completed, and are incorporated into this Subarea Plan. The Framework Management Plan for the Central and North City PMAs, the City Planning Component Framework Management Plan, is incorporated into this Subarea Plan as Section 7.5. The Framework Management Plan for the Otay Ranch PMA is embodied in the Otay Ranch RMP, which is summarized in Section 7.6 and incorporated in its entirety by reference into this Subarea Plan (Appendices C, D and E). Additional Framework Management priorities for the Otay River Valley Park and recreational uses are also incorporated into this Subarea Plan as Section 7.6.3.

The City Framework Management Plan and Otay Ranch Framework Management Plan provide general guidelines and standards for the management of the Preserve. The Framework Management Plans outline principal Preserve maintenance activities and requirements, provide specifications to limit "edge effects" and impacts from adjacent development, furnish a framework to address potential impacts to the Preserve from invasive, exotic species, and create a blueprint for managing public access, trails and recreational uses within the Preserve.

In addition to general guidelines and standards, both the City Planning Component Framework Management Plan and the Otay Ranch Framework Management Plan (RMP) contain certain specific management requirements. Section 7.5.6 of the City Planning Component Framework Management Plan details project-specific requirements related to Covered Projects within the Subarea's City Planning Component. Project-specific requirements include requirements for revegetation, surveys and monitoring, fencing or berming, prohibitions on drainage, and/or restrictions on grading or lighting that may impact the Preserve. Specific management requirements contained in the Otay Ranch Framework Management Plan are found in the RMP2 plans and programs. Based upon several studies specific to Otay Ranch, the RMP plans and programs (discussed in Section 7.6.1) provide specific guidelines and requirements for Vernal Pool management, biota monitoring, and management, and phasing-out of grazing activities within the Preserve.

The Framework Management Plans establish two levels of management activities for the Preserve (Priority 1 and Priority 2). The following summarizes the principles used to develop the recommendations for Preserve management priority levels.

Priority 1: Measures for managing and maintaining biological resources within the Preserve, including management tasks that are necessary to ensure that the Covered Species are adequately protected. These management directives will be funded through financing mechanisms created

by the City or through project financing pursuant to Section 8.0 and carried out by the City or Appropriate Managing Entity. These management directives will be included in each ASMD, which will be developed for each project prior to issuance of a grading permit

Priority 2: These measures are not required for Covered Species status; rather, they are recommendations for enhancing the quality and function of the Preserve, including public education and provision of barriers (vegetation, rocks/boulders and/or fencing) to direct public access. In future communities, development of educational materials will be required to be developed as part of SPA or Precise Plan conditions, to provide information to and heighten the awareness of new residents who will be living adjacent to the Preserve. Where provision of barriers is required to meet specific species management goals detailed in Table 3-5 of the MSCP Subregional Plan, installation of such barriers will become a condition of the related project SPA or Precise Plan and area-specific management directives and will be a Priority 1. Although Priority 2 directives will be incorporated into area-specific management directives to the extent feasible, it is recognized that many of these directives cannot be implemented immediately on approval of this Subarea Plan but will instead occur over the life of this Subarea Plan as funding sources become available.

Annexation of land into the City will affect the planning components in one of two ways. Annexation of land from the Bonita Planning Component will become part of the City Planning Component of this Subarea Plan and will be subject to the City Planning Component Framework Management Plan. Annexation of land from the Otay Ranch Planning Component will remain within that component and will be subject to the provisions of the Otay Ranch Planning Component Framework Management Plan described in Section 7.6.

7.3.1 Special Studies

In addition to the Framework Management Plans, "baseline" biological information for each PMA is being developed to incorporate into ASMDs. The City is undertaking two special studies for this purpose, one for the Central City and one for the Otay Ranch PMA. Biological baseline assessments for the North City PMA have been or will be conducted as part of project approvals for the Rolling Hills Ranch and Bella Lago projects.

The baseline biological information developed through the special studies will be used to better define the locations and biological values of resources found within the Central City and Otay Ranch PMAs. The primary goal of the studies will be to identify specific biological resources appropriate for management focus and to define "functional biological management unit(s)" for each PMA.

Grants have been obtained from the State of California Natural Community Conservation Planing grant program to fund the Central City study as well as preparation of area-specific management directives for the Central City PMA. Preparation of this study will require that the City actually undertake biological surveys for this PMA. The City anticipates that the Central City surveys will pay particular attention to potential locations for Narrow Endemic Species, and specifically Otay tarplant. Thus, future ASMDs for the

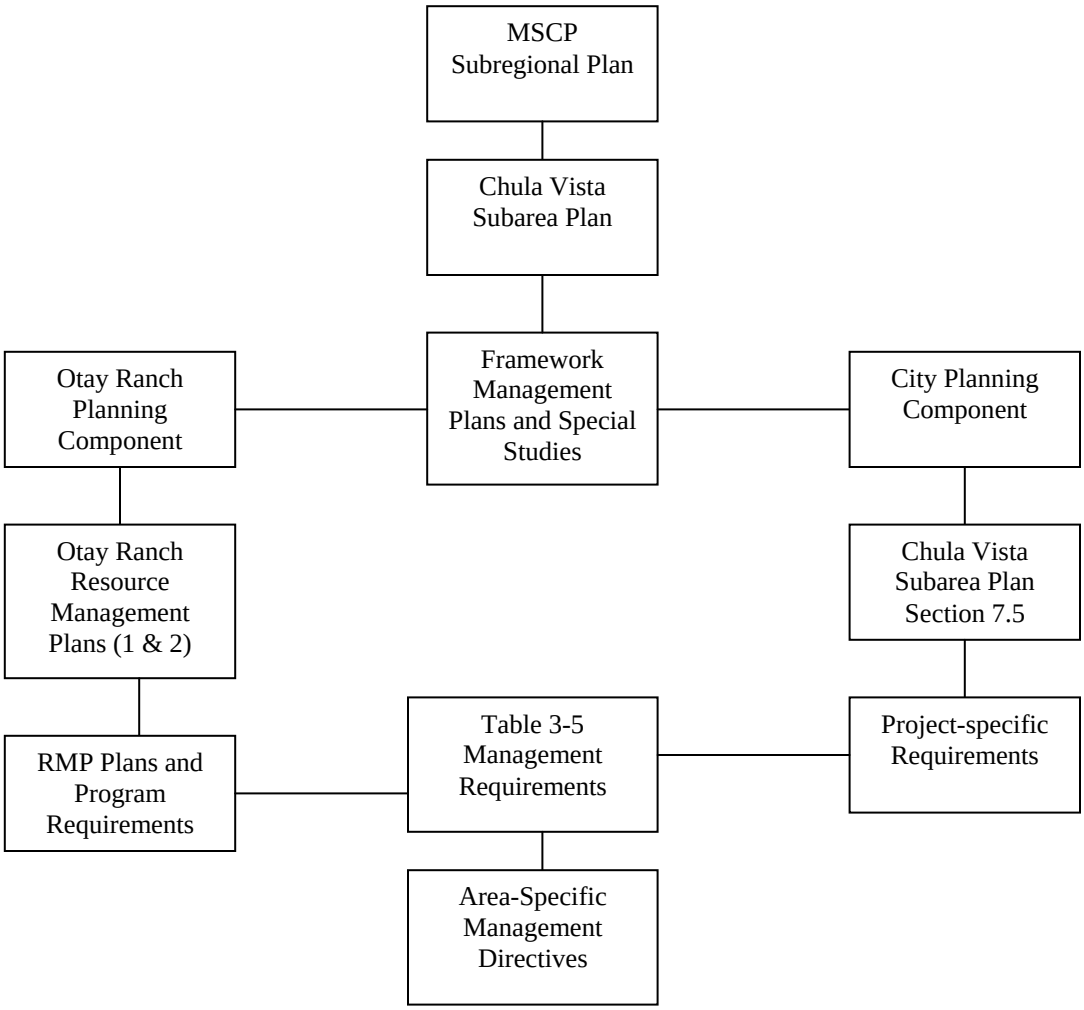
Central City may focus on developing management goals and activities to ensure survival of these important narrow endemic plant species.

Because of the richness of resources located within the Otay River Valley and the importance of the Otay Ranch PMA to the overall Preserve, the City has also initiated a special study of the Otay River Valley, including the Salt Creek and Wolf Canyons. Biological surveys will not be required to complete the Otay River Valley study, because data are available from surveys conducted for preparation of the Otay Ranch RMP. In addition to defining functional management units for future ASMDs, this special study will help to identify existing or expected (i.e., after restoration) functions for specific sites (e.g., breeding area for birds, linkages for mammals and herpetofauna, buffers to development, seed bank for rare plants). Another goal of this study will be to identify potential areas for future habitat restoration, enhancement and/or re-creation.

7.3.2 Area-specific Management Directives (ASMDs)

The Framework Management Plans and information developed through Special Studies will be incorporated into area-specific management directives, or ASMDs. ASMDs will incorporate the guidelines and specific management requirements from the appropriate Framework Management Plan, project-specific requirements for Covered Projects or requirements of the Otay Ranch RMP plans and programs, management requirements of Table 3-5 of the MSCP Subregional Plan and information and recommendations from relevant special studies. Guidelines and requirements from these documents will be evaluated in relationship to the Preserve configuration and specific habitats and species found within each ASMD study area, and incorporated into the ASMDs as applicable.

The following flowchart illustrates how the Framework Management Plans and Table 3-5 of the MSCP Subregional Plan lead to development of area-specific management directives.



7.3.3 Emergency Management

Existing regulations are in place within the Subarea which have been developed and implemented in order to limit unanticipated and unforeseen accidents, in and around the Preserve. Under the California Health and Safety Code, all businesses that store and/or generate reportable quantities of hazardous materials are required by the California State Health and Safety Code to submit a business plan to the Hazardous Management Materials Division (HMMD) of the County Department of Environmental Health. Business plans, updated every three years, are required to include an inventory of hazardous materials stored on site, an emergency response plan, and information related

to employee training. The HMMD conducts routine inspections at businesses required to submit business plans. The purpose of these inspections is to:

- Ensure compliance with existing laws and regulations concerning business plan requirements.
- Identify existing safety hazards that could cause or contribute to an accidental spill or release.
- Suggest preventative measures designed to minimize the risk of a spill or release of hazardous materials.

Responses to all hazardous materials emergencies within the County of San Diego and all of its incorporated cities is provided through the joint efforts of the San Diego Fire Department (SDFD) HAZMAT Response Team and the San Diego County Department of Health Services Hazardous Materials Management Division (HMMD). The combined team is referred to as the Hazardous Materials Incident Response Team (HIRT). HIRT is a program of the San Diego County Unified Disaster Council, which is the governing body of the Unified San Diego County Emergency Services Organization. The regional HIRT response program was established through a Joint Powers Agreement signed by the County of San Diego and all incorporated cities within the County, and is funded by participating JPA members, including the City of Chula Vista.

When responding to a toxic spill, SDFD is assigned responsibility to isolate and contain the incident, stop the release of potentially hazardous materials and effect rescues. HMMD is responsible to assess the risk to public health and safety and to determine potential environmental impacts. In this role, the HMMD responsibilities include determination of the need for evacuations; arrangements necessary for protective measures; assessment of need for and extent of clean-up of contaminated soil, water and/or vegetation; determining adequacy of clean-up; and implementing other enforcement measures as required.

In addition to State HMD requirements and HIRT incident responses, all new development within the City, including industrial and commercial uses, is subject to NPDES standards that require containment of urban runoff and potential toxic spills within development areas. Pollution Prevention and Best Management Practices (BMPs) are required to be implemented, as feasible. Some of the storm water management goals relevant to spills shall include but not be limited to the following:

- Conserve natural areas where feasible;
- Minimize storm water pollutants of concern from urban runoff;
- Remove pollutants of concern from urban runoff;
- Include additional storm water management quality provisions applicable to individual emergency incident.

In addition to the above existing programs and procedures, an Emergency Management Plan (EMP) will be prepared by the City to establish protocols for responding to emergencies in and/or immediately adjacent to the Preserve. New EMP protocols will

establish immediate actions to be taken to ensure that emergencies are handled in a manner consistent with the needs of wildlife protection, while allowing the City to meet its primary responsibility to ensure public health and safety.

The EMP will incorporate the following:

- Identification of procedures that the City may be able to implement prior to, during and after any emergency event in the Preserve; and

- Provision for implementation of a triage system that, when feasible, includes notification to the Wildlife Agencies as soon as feasible after the onset of an emergency that affects the Preserve; and

- Design of an emergency notification and response system that will strive to protect the Covered Species and the Preserve to the extent that it is possible to do so and remain consistent with the primary goal of responding to and containing catastrophic events and preventing harm to the public health, safety and welfare; and

- Provisions for restricting access to the Preserve, or portions of the Preserve when appropriate and necessary to protect Covered Species and habitat in the event of an emergency event; and

- Establishment of protocols to insure that Best Management Practices are applied during clean-up activity within the Preserve subsequent to emergency events. Whenever feasible and appropriate, a qualified biologist will be present during clean-up activities required within the Preserve subsequent to any emergency. The biologist will be tasked by the City Habitat Manager to coordinate with the responsible local agency to insure that clean-up activities are completed in a manner that minimizes impacts to Covered Species to the extent feasible; and

- Incorporation of relevant portions of the contingency spill plan notebook published by the USFWS, and any pertinent recommendations issued by CDFG's Office of Spill Prevention and Response to the extent feasible and consistent with the requirements and operating guidelines of the San Diego County Hazardous Materials Incident Advisory Team (HIRT) and City regulations; and

- Establishment of protocols to insure that the Planned Responses associated with a Changed Circumstance, as defined and described in Section 5.8 of this Subarea Plan, are implemented; and

- Establishment of an advisory committee, the Habitat Emergency Advisory Team (HEAT). Protocols will be established to provide that the HEAT will be activated by the City Habitat Manager at the onset of any Repetitive Fire as defined by Section 5.8 of this Subarea Plan. The HEAT may also, at the discretion of the City Habitat Manager, be activated at the time of or subsequent to any other emergency event and/or Changed Circumstance that may affect the Preserve. The HEAT will consist

of the City Habitat Manager, one or more qualified biologists selected by the City Habitat Manager who is knowledgeable about the species and/or habitats of concern, and a qualified biologist from USFWS and from CDFG. The HEAT will serve as an advisory committee and will make recommendations to the City regarding actions that should be undertaken to protect those areas of the Preserve affected by the emergency event, including during and after such event.

7.3.4 Preserve Management Studies Schedule

Because City fiscal resources are limited, not all preserve management studies and plans can be completed simultaneously. Table 7-1 provides a schedule for the completion of Special Studies, ASMDs and the City EMP.

Table 7-1: Implementation and Preserve Management Studies Schedule

Task	Trigger	Estimated Time to Complete Task
Development and adoption of Subarea Plan Implementation Tools (General Plan Amendment, Amendments to Excavation, Grading and Fills Ordinance, HLIT Ordinance, Otay Ranch Grazing Ordinance)	Adoption by City of Subarea Plan	Concurrent with Adoption of Subarea Plan
Participation in Otay River Valley Wetlands functions and values study, special training in cooperation with the U.S. EPA for City staff on Federal wetland permitting	Adoption by City of Subarea Plan	Undetermined
Completion of Otay Ranch PMA / Otay River Valley baseline biological study	Issuance of 10(a)(1)(B) permit to City from USFWS	4 – 6 months
Baseline biological study for Central City PMA	Execution of Agreement between State and City for NCCP Grant Award	12 – 18 months
Central City PMA area-specific management directives	Completion of baseline biological study for Central City PMA	12 – 24 months
Area-specific management directives for North City and Otay Ranch PMAs	Triggered by individual development projects	Will vary
Emergency Management Plan	Adoption of Subarea Plan	12-18 months

7.4 Preserve Management Overview

The City will designate a City Habitat Manager to oversee preparation of ASMDs and accomplish the long-term Preserve management activities as determined by the ASMDs. The City Habitat Manager will be tasked to accomplish the day-to-day operations associated with managing the Preserve and will be authorized to make decisions related to allocation of Preserve management program funding. Although the management structure for each of the PMAs may differ, the City Habitat Manager will be responsible for coordinating Preserve management activities within each PMA, and will oversee the City's Quino Habitat Restoration Program. The City Habitat Manager will determine Preserve management program priorities, and will be responsible for the allocation of the Biological Enhancement Program and the Preserve Management Endowment Funds discussed in Section 8.0. In addition, in the Otay Ranch PMA, the City Habitat Manager will represent the City on the Otay Ranch Preserve Owner/Manager project team. Finally, the City Habitat Manager will coordinate Planned Responses to Changed Circumstances in the Preserve, should they occur.

The City Habitat Manager will work with four advisory committees. The Habitat Management Technical Advisory Committee, established since approval of the MSCP Subregional Plan, will provide input on Preserve management issues, including adaptive management measures related to invasion of exotic species. An Otay River Valley/Salt Creek Stakeholders Committee, discussed in Section 7.4.7, will be established to provide input on Preserve management decisions that affect the Otay Ranch PMA. A Quino Scientific Advisory Committee (QSAC), described in Section 4.4.3.4, will be created to assist the City Habitat Manager in determining priority tasks for the Quino restoration program. Finally, a HEAT (Habitat Emergency Advisory Team), described in Section 7.3.3 will be formed to provide input in the case of Changed Circumstances and/or other emergencies as determined by the City Habitat Manager.

With advice from the advisory committees, the City Habitat Manager will supervise the ongoing accomplishment of four management elements: short-term management, long-term maintenance and management, long-term biological monitoring, and brush management. The following Sections 7.4.1 to 7.4.4 discuss the four management elements in the general context of this Subarea Plan. Sections 7.4.5 to 7.4.7 provide additional detail relative to management of each of the three individual PMAs.

7.4.1 Short-term Management

In the North City and Otay Ranch PMAs, short-term management involves restoration and/or maintenance required to be completed as part of conditions of development project entitlement approvals. Short-term management is undertaken during the period of time when designated Preserve areas are owned by private landowners, subsequent to City approval of development entitlements and prior to dedication of such land into the Preserve. These tasks may include restoration of habitat and/or requirements to ensure retention of habitat values on land that will be dedicated into the Preserve as a condition of entitlement.

The short-term management program provides management necessary to ensure the establishment of project-specific restoration and will also ensure the maintenance of habitat values associated with onsite conservation areas during the early phase of the Preserve management program. Accomplishing short-term management tasks is the responsibility of the project developer. The tasks are specified by each project Mitigation Monitoring and Reporting Program (MMRP) and the project Conditions of Coverage found in Section 7.5.6 of this Plan. Compliance with all short-term management requirements will be ensured prior to project grading. MMRP requirements are included as conditions on final maps. Subarea Plan Conditions of Coverage will be incorporated into conditions for clearing, grubbing and/or grading permits. When applicable, map and/or grading permit conditions will include requirements to post bonds and other financial assurances to ensure compliance.

Natural open space in the Central City PMA is currently protected through existing zoning and land use designations. Prior to completion of the ASMDs for existing City-owned open space lands in the Central City PMA, the City will continue to maintain these natural open space areas. Maintenance during this interim period will be consistent with City Open Space District maintenance standards for non-irrigated natural and/or native vegetation (Code 5) or for non-irrigated revegetated open space (Code 4) as described in the City's existing Open Space District contract specifications. Funding for this continued maintenance is provided through existing finance districts, discussed in Section 8.0 of this Subarea Plan.

7.4.2 Long-term Maintenance and Management

Long-term maintenance and management involves implementation of the Framework Management Plans and ASMDs discussed in Section 7.3 of this Subarea Plan. Long-term maintenance and management begins when property is conveyed into the Preserve, and is funded through financing mechanisms intended to provide maintenance and management in perpetuity (Section 8.0). Generally, maintenance and management may be broken into the following generic tasks:

1. Preserve Maintenance

    - Removal of trash, trimmings, debris and other solid waste
    - Maintenance of trails and fences
    - Implementation of security programs to enforce "no trespassing" rules and curtail activities that degrade resources, such as grazing, shooting, illegal planting, illegal dumping, off-road traffic, and enforcement of leash laws

2. Preserve Management

    - Implementation of programs to maintain and/or improve, operate and manage Preserve habitat values through removal and control of exotic plant species (weeds), treatment of disease or injury, and/or habitat restoration
    - Remediation necessary due to Changed Circumstances

The scope and complexity of the long-term maintenance and management tasks will be determined individually for each PMA by the applicable Framework Management Plan and relevant special studies, and by specific ASMD requirements. Preserve management also will include the QCB habitat restoration/enhancement activities described in Section 4.4.2.4 of this Subarea Plan. If any portion of the Preserve becomes part of the NWR and/or a State-owned Preserve, funding and implementation of all management will be the responsibility of the USFWS and/or the CDFG.

7.4.3 Long-term Biological Monitoring

Biological monitoring within the Subarea will be the responsibility of the City, although biological monitoring within the Otay Ranch PMA will be assumed by the POM or its designee, and the City may assign a designee to conduct monitoring within the Central City and/or North City PMAs. Both the City Planning Component Framework Management Plans and Otay Ranch RMP include provisions for monitoring sensitive biological resources, to ensure proper adaptive management. Biological monitoring will be accomplished in accordance with the City Planning Component Framework Management Plan or the Otay Ranch RMP and consistent with the MSCP Subregional Plan. If any portion of the Preserve becomes part of NWR and/or a State Owned Preserve, funding and implementation of all monitoring will be the responsibility of the USFWS and/or the CDFG.

Monitoring activity will begin as land is conveyed into the Preserve. The City may require applicants for land development permits to provide a map and description of existing conditions. Proper management of the Preserve will require ongoing analysis of the data collected through monitoring activities. Although field data may be collected by local agency Preserve managers, the Wildlife Agencies will assume primary responsibility for coordinating the monitoring programs, analyzing data, and providing information and technical assistance to the jurisdictions to ensure uniformity in the gathering and treatment of this data throughout the MSCP Subregion. Pursuant to the MSCP Subregional Plan, no additional fees will be charged to landowners for biological monitoring, although project developers will be required to assume responsibility for all activities incorporated into this Subarea Plan as project-specific conditions for coverage.

Consistent with the USFWS Five-Point Policy (65 F.R. 35242), Chula Vista will provide information necessary to assess habitat impacts and conservation, and verify progress toward the stated biological goals and objectives by preparing and submitting to the Wildlife Agencies an annual report. The report will summarize ongoing monitoring activities and will include an update of total habitat area lost and habitat area conserved within the *Chula Vista Subarea* by vegetation type. The report will also include a status report on the QCB restoration and monitoring programs described in Sections 4.4.3.4 and 7.4.3.2 of this Subarea Plan.

7.4.3.1 Otay Ranch Biota Monitoring Program

Many of the monitoring and management requirements found in Table 3-5 of the MSCP Subregional Plan (Appendix A) reflect requirements established by the plans and programs of the Otay Ranch RMP. Among the plans and programs prepared for Otay Ranch, the Biota Monitoring Program ensures continued biological monitoring of the many different sensitive habitats, plants, and wildlife species to be found in these areas of the Preserve. The Biota Monitoring Program for the Otay Ranch is funded through CFD levies on new homes built in Otay Ranch within the City; however, the monitoring program will be implemented by the POM throughout the Otay Ranch Preserve.

The purpose of the Otay Ranch Biota Monitoring Program is to provide the POM with guidelines and direction for implementing the monitoring program. The adopted program plan identifies specific monitoring techniques, providing monitoring guidance for each sensitive habitat type, for wildlife corridors, and for steep slopes. Timing and milestones for monitoring activities are also outlined in the plan. The Biota Monitoring Program requires tailored monitoring strategies for different resources. Monitoring will provide the data base from which to draw comparisons and to determine negative or positive changes in the biological resources of an area, including vegetation community composition, overall health and vigor of the biological resources, species richness, diversity, demographic structure of populations.

Monitoring techniques included in the Otay Ranch Biota Monitoring Program include the following:

1. Regularly updated aerial photographs to help detect large-scale changes in the biological resources.

2. Establishment of permanent photo-documentation stations in study plots to detect more fine-grained changes in vegetation communities and composition.

3. Field forms that are the same from survey to survey and consistently utilized by personnel.

4. Consistent field techniques for measuring biological resources.

5. Measurement of important environmental variables, as determined by the POM.

The Biota Monitoring Program establishes performance standards and a monitoring methodology for both existing vegetation and restoration sites for the following habitats in Otay Ranch:

- Diegan Coastal Sage Scrub/Maritime Succulent Scrub

- Floodplain Scrub, Southern Willow Scrub & Aquatic/Freshwater Marsh
- Valley Needlegrass Grassland/Perennial Grassland
- Alkali Meadow
- Woodlands
- Vernal Pools

In addition, the Program details monitoring methodologies for associated plant and wildlife species and wildlife corridors.

7.4.3.2 QCB Monitoring Program

The USFWS 2001 QCB Recovery Plan calls for monitoring to help to define adaptive management strategies for the QCB. The City proposes to implement this objective through a three-pronged effort:

1. Monitoring of overall habitat quality in the Preserve (as described above);

2. Monitoring effectiveness of QCB habitat enhancement/restoration efforts; and

3. Limited census monitoring of QCB populations.

As noted above, the Otay Ranch Biota Monitoring Program establishes performance standards and a monitoring methodology for both existing vegetation and restoration sites for a number of habitat types. The City proposes to use this monitoring program as a basis upon which to establish monitoring activities specifically directed at QCB habitat. A qualified restoration biologist, selected by the City Habitat Manager, will establish a baseline percentage of exotic weed species in QCB habitat restoration/enhancement areas through surveys. Locations of invasive non-native plant species will be mapped and scheduled for removal, monitoring or control as necessary. These areas will then be monitored for the occurrence of exotic invasive plants before and after enhancement to determine the effort's level of success. An adaptive management program will be implemented based on the results of the monitoring program.

In addition to monitoring the effectiveness of QCB habitat restoration efforts, the City will conduct limited annual census monitoring. Census monitoring for the QCB will have the primary goal of assessing the QCB population within the context of the QCB population throughout southern San Diego County. The methodology for census monitoring will be phased dependent upon the number of QCB occurring within the City.

Because there are a limited number of QCB locations currently known from the City, and because access is not available for Preserve lands until such lands are conveyed, initial monitoring efforts will consist of surveying on such conveyed lands that include all known QCB locations, all known suitable but currently unoccupied habitat, and all sites on which QCB restoration activities have been

initiated. This survey will be conducted during the second or third week of the QCB flight season to maximize the potential for detection, and will be conducted only during optimal weather conditions. The biologist conducting the surveys shall have a valid permit from the USFWS for conducting QCB surveys. This census methodology will be conducted until the observed QCB population in the City reaches 25 individuals for two consecutive years.

The data collected will be compared with population trends for the QCB in southern San Diego County. For example, if 100 QCB are observed in southern San Diego County in 2002 and 100 QCB are observed in 2003, the baseline against which the City's census data is compared does not change. If, however, the number of observed QCB increased to 200 individuals, the City's baseline would change from eight to 16 individuals. Because of the limited number of currently known QCB locations in the City, and the high variability typically found in its population numbers, interpretation of the results of these surveys will need to be broad in nature, especially during poor flight years for the QCB. Population estimates within 50% of the baseline (established as described above) will be considered acceptable variations in the City QCB population. For example, if all eight QCB locations were surveyed in 2003 and only four QCB were observed, and the baseline surveys for 2003 in southern San Diego County were no different than the previous year, then the City QCB population would be considered to be within acceptable variability limits. If, however, the baseline in southern San Diego County doubled from the previous year, then the City QCB population would not be meeting the 50% criterion (eight sightings would meet the 50% criterion). If the criterion is not met for two consecutive years, the City would meet with the QSAC to determine appropriate adaptive management measures to address the apparent decline.

Once the QCB population in the City reaches 25 individuals, a more intensive censusing effort will be conducted at the two locations within the City with the highest QCB densities (based on surveys from previous years). It is anticipated that these areas will be censused four times annually during the flight season using census techniques developed by the QCB Recovery Team. Similar to the program described above, these data will be compared with other population trend data within southern San Diego County to determine if the 50% criterion is being met. If the criterion is not met for two consecutive years, the City would meet with the QSAC to determine appropriate adaptive management measures to address the apparent decline.

The City will fund these efforts within the funding allocated for its MSCP Preserve management and habitat enhancement/restoration program, as discussed in Section 8.0 of this Subarea Plan. Although local agency Preserve managers will collect field data, the Wildlife Agencies will assume primary responsibility for coordinating QCB monitoring programs, analyzing data and providing information and technical assistance to the jurisdictions throughout the MSCP Subregion.

7.4.4 Brush Management

Brush management is required to be undertaken in the City in areas where urban development interfaces with open space, in order to reduce fire fuel loads and reduce potential fire hazard. The City recognizes three brush management "Zones," requiring different levels of brush management/fuel reduction activity. The three brush management Zones are described below:

- Zone 1 is the area closest to the structure. In this Zone, the fuel load (vegetation) adjacent to all structures on the property must be reduced to a minimum of 18 inches in height and irrigated. Zone 1 brush management is implemented in an area at least 30 feet from existing structures as required by the Fire Marshal in the following communities: Bonita Long Canyon, Rancho Del Rey, Terra Nova, and EastLake I and II. In all new communities, including EastLake III, Bella Lago, San Miguel Ranch and Otay Ranch, Zone 1 brush management will be required to extend 50 feet from structures. The communities of Rolling Hills Ranch and Sunbow II will conduct brush management according to the requirements of their respective approved SPA or Precise Plans.

- Zone 2 extends 50 feet beyond Zone 1, and requires that vegetation be limited to a height of two to four feet, depending upon conditions. The critical brush management activity in Zone 2 is the clearing of dead underbrush. Zone 2 brush management is accomplished through hand-clearing.

- Zone 3 may extend up to 50 feet beyond Zone 2, at the discretion of the Fire Marshal. In this Zone, brush management is undertaken only if severe fire hazards exist. When necessary, clearing of dead underbrush and thinning of canopies created by tall plants or trees is accomplished by hand. To the extent practicable, non-emergency brush management in zone 3 will be undertaken outside the bird breeding seasons (April 1 through June 31) in areas where breeding and/or nesting may occur.

Generally, all brush management activity is undertaken outside the Preserve. Exceptions to this may apply only in existing communities in the Central City PMA and/or North City PMA. Sections 7.4.5.1, 7.4.6.1 and 7.4.7.1 provide detailed information relative to how brush management is or will be conducted for each community within the three PMAs.

7.4.4.1 Urban-Wildland Interface Code

The City adopted the 1997 Urban-Wildland Interface Code as Section 15.38 of the Chula Vista Municipal Code, and it became effective on July 1, 1999. The purpose of the code is to lessen the risk to life and structures from intrusion of fire from wildland fire exposures and fire exposures from adjacent structures and to prevent structure fires from spreading to wildland fuels. Two key elements of the Urban-Wildland Interface Code as it relates to the Chula Vista MSCP Subarea

Plan are the special building construction regulations and the fuel modification provisions.

7.4.4.2 Wildland/Urban Interface: Fuel Modification Standards

The plant list contained in the "Wildland / Urban Interface: Fuel Modification Standards," dated November 1995, (Appendix K) must be reviewed and utilized to the maximum extent practicable when developing landscaping plans in areas adjacent to the Preserve.

7.4.4.3 Emergency Brush Management

In the event that the City Fire Marshal determines an emergency situation exists, minimal additional brush management may be undertaken under the direction of the Fire Marshal. In such an emergency situation, the Fire Marshal will adhere to the Memorandum of Understanding between the Wildlife Agencies, California Department of Forestry, the San Diego County Fire Chief's Association, and the Fire District's Association of San Diego County dated February 26, 1997 (Appendix L).

7.4.5 Central City PMA Management

The Central City PMA Preserve lands are already dedicated to the City and are surrounded by existing urban development. The City Planning Component Framework Management Plan, incorporated as Section 7.5 of this Subarea Plan serves as the Framework Management Plan for the Central City PMA. ASMDs for the Central City will incorporate the requirements of the City Planning Component Framework Plan, as well as the requirements incorporated into Table 3-5 of the MSCP Subregional Plan.

ASMDs for this PMA will be developed by the City, in accordance with the timeline presented on Table 7-1 in Section 7.3.4 of this Subarea Plan. Prior to preparing ASMDs for the Central City, the City will conduct surveys to establish baseline biological information about the habitats and species prevalent in these urban open space areas. The City has received grant awards from the CDFG NCCP local assistance grant funds to be used specifically to conduct a baseline biological study for the Central City PMA and prepare area-specific management directives for the Central City.

Lands within the Central City PMA are currently being managed by the City Parks and Recreation Department. Management tasks currently funded and undertaken include Priority I general maintenance tasks, including:

- Removal of trash, debris and other solid waste
- Maintenance of trails and fences
- Implementation of security programs to enforce "no trespassing" rules, curtail illegal activities and activities that may degrade resources, such as grazing, shooting, illegal planting, dumping and off-road vehicle traffic
- Limited weeding along Preserve/urban interfaces

Subsequent to adoption of the Subarea Plan and issuance of Take Authorization to the City from the Wildlife Agencies, the City Habitat Manager will be assigned to coordinate with the City Parks and Recreation Department and to expand Preserve management activities within the Central City PMA. As discussed in Section 8.3.1.1, a new Central City Preserve Biological Enhancement Funding Program will be established, providing funds for enhanced management within the Central City PMA. Working with a qualified biologist selected by the City, the City Habitat Manager will determine the priorities for enhanced management and long-term monitoring in the Central City PMA based upon ASMDs and will assume responsibility for allocation of the Biological Enhancement Funds.

7.4.5.1 Brush Management in the Central City PMA

Brush management for the communities of Bonita Long Canyon, Rancho Del Rey, Terra Nova, and EastLake I and II is funded by Open Space Districts or Landscape Lighting and Maintenance Districts, and the work is contracted by the City. In these communities, Zone 1 brush management extends 30 feet beyond any structure, as required by the Fire Marshal. In addition, if a property-line is located more than 30 feet from the structure, five to 10 feet of Zone 1 brush management is undertaken outside the property-line to ensure fire department access to the open space.

The Preserve boundary adjacent to existing communities begins 10 feet beyond property lines. Therefore in most cases Zone 1 brush management activity will , be accomplished outside of Preserve boundaries. Zone 2 activities are limited to the maximum extent practicable, as determined by the Fire Marshal, in order to reduce encroachment into the Preserve. Zone 3 does not apply to existing communities.

Brush management for the Sunbow II community is accomplished through a Community Facilities District (CFD). In this community the Sunbow SPA Plan dictates specific provisions for brush management. The approved Sunbow II SPA provides for 45 feet of fuel modification. Specifically, the mitigation measures adopted for the project state the following:

Slopes shall be maintained to the extent possible in a natural state in the open space areas. Where grading must occur on slopes adjacent to housing, 30 feet of succulent plant material shall be planted, followed by a decomposed granite trail 15 feet in width to act as a firebreak and planting of native drought tolerant, low fuel plant material farther down the slope. All landscape plans shall be subject to approval by the City Landscape Architect. If manufactured slopes are adjacent to open space areas, these slopes shall be replanted according to the Open Space City Coordinator, Landscape Architect and Fire Marshal standards.

7.4.6 North City PMA Management

The North City PMA includes the project areas for Rolling Hills Ranch and Bella Lago. These are developing communities with associated SPA or Precise Plans. Both projects are Covered Projects pursuant to Section 5.1.1 of this Subarea Plan. The San Miguel Ranch and Inverted "L" properties are also located in this north area of the City. Preserve land associated with these two properties has been, or will be dedicated into the San Diego NWR and will be managed by USFWS.

Conditions of Coverage for Rolling Hills Ranch and Bella Lago are incorporated into Sections 7.5.6.3 and 7.5.6.5, respectively. Short-term management responsibilities required through respective project entitlements are assured through SPA or Precise Plans and grading permit conditions.

Rolling Hills Ranch has completed the project entitlement process. The Rolling Hills Ranch SPA Plan includes MMRP requirements, which must be completed prior to issuance of grading permits. Other Conditions of Coverage required through this Subarea Plan will become conditions of grading permits.

A Precise Plan for Bella Lago is being processed, but has not yet been approved by the City. All Conditions of Coverage for Bella Lago pursuant to this Subarea Plan will be incorporated as conditions of the Bella Lago Precise Plan and to be completed or assured prior to issuance of grading permits.

As a Condition of Coverage for Rolling Hills Ranch and Bella Lago prior to project grading and/or conveyance of land into the Preserve, ASMDs will be prepared. A mechanism for financing long-term Preserve management must also be in place prior to grading. Upon conveyance of land into the Preserve in the North City PMA, the City will assume responsibility for long-term management and monitoring, consistent with the ASMDs. The City Habitat Manager will oversee this responsibility, although a designee may be assigned to perform actual management tasks.

7.4.6.1 Brush Management in the North City PMA

All brush management activity within Bella Lago will be required, as a condition of the Precise Plan, to be conducted outside the Preserve. Brush management in San Miguel Ranch is also required to take place outside of Preserve boundaries.

Bella Lago and San Miguel Ranch will be required to work with the Fire Marshal at the time of Tentative Map application to determine the total area that will be necessary for all Zones 1, 2 and 3 brush management activities. The relative fire hazard of the open space adjacent to structures will be determined by the Fire Marshal based upon slopes and fuel loads (types and extent of vegetation). If the Fire Marshal determines that the fire hazard in the open space area is *high,* and no other measures are undertaken to abate fire hazard, the Fire Marshal *may* require a brush management area up to 150 feet from structures. However, brush management requirements may be reduced (as determined and approved by the Fire Marshal) for projects which provide mitigation acceptable to the Fire Marshal, thus reducing the overall distance needed for brush management.

Rolling Hills Ranch accomplishes brush management through its Homeowner's Association (HOA). The Rolling Hills SPA Plan includes specific provisions relating to brush management, which are summarized below.

Fuel modification within the Rolling Hills Ranch project must be consistent with Section 3.6 of the Rolling Hills Ranch SPA Plan. In addition, Subarea 3 – the eastern-most development area of the project – must accomplish all fuel modification within the development area, pursuant to the following tentative map condition (No. 90):

> *Locate fuel modification areas in Subarea 3 entirely within affected lots. Indicate lot line extensions required to accommodate said areas on the Final Map(s) of Subarea 3, subject to the approval of the City Engineer, Fire Marshal and Director of Planning.*

In responding to potential design modifications required pursuant to the Conditions for East Area Coverage outlined in Section 7.5.6.3 of this Subarea Plan, the developer may request approval by the City for inclusion of the fuel modification area into a separate lot of record owned by or easement granted to a (HOA) for maintenance.

7.4.7 Otay Ranch PMA Management

The Otay Ranch General Development Plan (GDP) requires preparation and adoption of SPA Plans for each Village to be developed within the Otay Ranch. Each Village SPA Plan establishes the requirements for Preserve conveyance, in accordance with the requirements of the Otay Ranch GDP. Short-term management requirements are defined

in the SPA Plan through the MMRP, and are required to be implemented prior to issuance of grading permits.

As land is conveyed into the Preserve, the Otay Ranch POM begins long-term management. Within the City jurisdictional boundaries and this Subarea, the City is responsible to ensure that long-term management is fulfilled consistent with this Subarea Plan. In order to meet this responsibility, the City Habitat Manager will work directly with the Otay Ranch POM.

The Otay Ranch RMP provides a general committee framework for Preserve management oversight. This framework established an Otay Ranch Policy Committee, Executive Committee and Project Team. These three committees have oversight responsibilities for administration of the RMP and management of all Otay Ranch Preserve lands. The committees are constituted as follows:

1. Policy Committee

   The Policy Committee is comprised of the Mayor of the City of Chula Vista and the member of the County Board of Supervisors representing the South Bay Supervisorial District.

2. Executive Committee

   This committee is comprised of the County of San Diego Assistant Chief Executive Officer or his/her designee and the City of Chula Vista Assistant City Manager or his/her designee.

3. Project Team

   The Project Team is comprised of staff from the County of San Diego and the City, as determined by the Executive Committee. The Project Team is responsible to oversee the day-to-day operations associated with Preserve management.

Decisions related to acceptance of offers of Preserve land dedications, establishment of management priorities, allocation of CFD funding service contracting and other operational and management concerns will be made by the Project Team with periodic update reports to the Executive and Policy Committees. Upon approval of this Subarea Plan and issuance of Take Authorization to the City by the Wildlife Agencies, the City will assign the City Habitat Manager to the Otay Ranch Project Team. The City Habitat Manager will represent the City on all matters pertaining to Preserve management. In addition, the Habitat Manager will have authority to set priorities for allocation of PMEF funds (Section 8.0), which may be used only for Preserve enhancement programs within the City and *Chula Vista Subarea*.

Upon approval of this Subarea Plan and issuance of Take Authority to the City by the Wildlife Agencies, the City will also establish an Otay River Valley Stakeholders

committee (Stakeholders Group). The Stakeholders Group will include biologists, representatives from local environmental organizations, landowners who have conveyed land into the Preserve, and landowners with property in the Otay River Valley/Salt Creek area. The Stakeholders Group will meet quarterly with the City Habitat Manager to receive updates on Preserve management activities within the Otay River/Salt Creek area of the Otay Ranch PMA, and will provide input on setting management priorities for this area of the City's Preserve.

7.4.7.1 Brush Management in the Otay Ranch PMA

In the Otay Ranch PMA, all brush management will be outside the Preserve boundaries. All development within the Otay Ranch is subject to the "Otay Ranch GDP Edge Plan Goals, Objectives and Policies." Specifically, a 100-foot edge will be created between development and the Otay Ranch Preserve, within which brush management may occur.

> *Edge Plans' shall be developed for all SPAs that contain areas adjacent to the Preserve. The "edge" of the Preserve is a strip of land 100 feet wide that surrounds the perimeter of the Preserve. It is not a part of the Preserve – it is a privately or publicly owned area included in lots within the urban portion of Otay Ranch immediately adjacent to the Preserve. The edge plan shall be prepared in consultation with a qualified biologist to ensure that proposed land uses will not adversely affect resources within the Preserve. The edge plan shall include a list of plant species that may and may not be used for landscaping within the edge. Fuel modification zones may be incorporated into the edge. Development adjacent to the edge shall be restricted to development types that are least likely to impact specific adjacent biological resources. Landscaping or block walls shall be used in appropriate areas adjacent to the edge to reduce impacts of noise and light. No structures other than fencing and walls shall be allowed and are to be built and landscaped in such a way as to minimize visual impacts on the Preserve and the Otay Valley Regional Park.*

7.5 City Planning Component Framework Management Plan

The Preserve in the City Planning Component includes the existing open space encompassed by the communities of Bonita Long Canyon, Rancho Del Rey, Terra Nova, Sunbow and Eastlake I, and open space that will be dedicated as development occurs in the future communities of Rolling Hills Ranch and Bella Lago. Lands conserved on the southern parcel of San Miguel Ranch within the City are also included in the Preserve. However, these conservation areas have been dedicated to the USFWS SDNWR and will be maintained and managed by USFWS. The Preserve areas in the City Planning Component consist primarily of coastal sage scrub and include known populations of snake cholla, San Diego barrel cactus, Otay tarplant and coastal California gnatcatcher.

This Section of the Chula Vista Subarea Plan constitutes the Framework Management Plan for the City Planning Component of the Preserve. This Framework Mangement Plan will also apply to all properties within the Bonita Planning Component that annex into the City and become part of the City Planning Component.

The management directives listed in this section represent an initial view of the management requirements of the Preserve within the City. It is expected that modifications will be needed over time, based on realities encountered in the field as the Preserve is assembled. Monitoring of selected target species, pursuant to Section 7.4.3 of this Subarea Plan, is expected to show general trends of wildlife use and species preservation, as well as to indicate areas where species management focus is needed.

7.5.1 Litter, Materials Storage, and Illegal Activities

Priority 1:

1. Remove litter and trash on a regular basis; Post signage to prevent and report littering in trail and road access areas; provide and maintain trashcans and bins at trail access points.

2. Impose penalties as applicable for littering, dumping and violations of leash laws. Fines should be sufficient to prevent recurrence, cover reimbursement of costs to remove and dispose of debris, restore the area if needed, and pay for enforcement staff time.

3. Prohibit permanent storage of materials (e.g., and hazardous/toxic chemicals, equipment) within the Preserve and ensure appropriate storage per applicable regulations in any areas that may impact the Preserve, due to potential leakage.

4. Keep wildlife corridor crossings within the Preserve free of debris, trash, homeless encampments, and all other obstructions to wildlife movement.

5. Monitor Preserve areas to prevent illegal activities, such as off-road vehicle use, illegal plant harvesting, etc.

7.5.2 Adjacency Management Issues

Priority 1:

1. Enforce, prevent and remove illegal intrusions into the Preserve on an annual basis, as well as on a complaint basis.

2. Install barriers (fencing, rocks/boulders, appropriate vegetation) and/or signage in new communities where necessary to direct public access to appropriate locations.

3. Require all new development to adhere to the following adjacency guidelines:

   a. *Drainage*:

      1. All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials and other elements that might degrade or harm the natural environment or ecosystem processes within the Preserve. This can be accomplished using a variety of methods including natural detention basins, grass swales or mechanical trapping devices. These systems should be maintained approximately once a year, or as often as needed, to ensure proper functioning. Maintenance should include dredging out sediments if needed, removing exotic plant materials, and adding chemical-neutralizing compounds (e.g., clay compounds) when necessary and appropriate.

      2. Develop and implement urban runoff and drainage plans which will create the least impact practicable for all development adjacent to the Preserve. All development projects will be required to meet NPDES standards and incorporate BMP as defined by the City's Standard Urban Storm Mitigation Plan (SUSMP).

      3. Pursuant to the San Diego Regional Water Quality Control Board Municipal Permit, and the City of Chula Vista Storm Water Management Standards Requirements Manual, which includes the SUSMP, all development and redevelopment located within or directly adjacent to or discharging directly to an environmentally sensitive area (as defined in the Municipal Permit and the Local SUSMP) are required to implement site design, source control, and treatment control BMPs. The BMPs shall, at a minimum include:

         - Control post-development peak storm water runoff discharge rates and velocities to maintain or reduce pre-development downstream erosion and to protect stream habitat;
         - Conserve natural areas where feasible;
         - Minimize storm water pollutants of concern in runoff;
         - Remove pollutants of concern from urban runoff;
         - Minimize directly connected impervious areas where feasible;
         - Protect slopes and channels from eroding;
         - Include storm drain stenciling and signage;
         - Include additional water quality provisions applicable to individual project categories;
         - Ensure that post-development runoff does not contain pollutant loads which cause or contribute to an exceedance of water quality objectives or which have not been reduced to the maximum extent practicable; and,
         - Implement BMPs close to pollutant sources.

4. Require all NPDES-regulated projects to implement a combination of BMPs as close to potential pollutant sources as feasible.

b. *Toxic Substances*: All agricultural uses, including animal-keeping activities, and recreational uses that use chemicals or general by-products such as manure, potentially toxic or impactive to wildlife, sensitive species, habitat, or water quality need to incorporate methods on their site to reduce impacts caused by the application and/or drainage of such materials into the Preserve. Methods shall be consistent with requirements of the RWQCB and NPDES standards.

c. *Lighting*: Lighting of all developed areas adjacent to the Preserve should be directed away from the Preserve wherever feasible and consistent with public safety. Where necessary, development should provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the Preserve and sensitive species from night lighting. Consideration should be given to the use of low-pressure sodium lighting.

d. *Noise*: Uses in or adjacent to the Preserve should be designed to minimize noise impacts. Berms or walls should be constructed adjacent to commercial areas and any other use that may introduce noises that could impact or interfere with wildlife utilization of the Preserve. Excessively noisy uses or activities adjacent to breeding areas, including temporary grading activities, must incorporate noise reduction measures or be curtailed during the breeding season of sensitive bird species, consistent with Table 3-5 of the MSCP Subregional Plan.

Where noise associated with clearing, grading or grubbing will negatively impact an occupied nest for the least Bell's vireo during the breeding season (March 15 to September 15), noise levels should not exceed 60 LEQ. However, on a case-by-case basis, if warranted, a more restrictive standard may be used. If an occupied least Bell's vireo nest is identified in a pre-construction survey, noise reduction techniques, such as temporary noise walls or berms, shall be incorporated into the construction plans to reduce noise levels below 60 LEQ.

Where noise associated with clearing, grubbing or grading will negatively impact, an occupied nest for raptors between January 15 and July 31 or the coastal California gnatcatcher between February 15 and August 15 (during the breeding season), clearing, grubbing or grading activities will be modified if necessary, to prevent noise from negatively impacting the breeding success of the pair. If an occupied raptor or coastal California gnatcatcher nest is identified in a pre-construction survey, noise reduction techniques shall be incorporated into the construction plans.

Outside the bird breeding season(s) no restrictions shall be placed on temporary construction noise.

e. *Invasives*: No invasive non-native plant species shall be introduced into areas immediately adjacent to the Preserve. All open space slopes immediately adjacent to the Preserve should be planted with native species that reflect the adjacent native habitat. The plant list contained in the "Wildland / Urban Interface: Fuel Modification Standards," Appendix L, must be reviewed and utilized to the maximum extent practicable when developing landscaping plans in areas adjacent to the Preserve.

f. *Buffers*: There shall be no requirements for buffers outside the Preserve, except as may be required for Wetlands pursuant to Federal and/or State permits, or by local agency CEQA mitigation conditions. All open space requirements for the Preserve shall be incorporated into the Preserve. Fuel modification zones must be consistent with Section 7.4.4 of this Subarea Plan.

5. Extend the City Preserve Edge Risk Assessment Program to all new areas of the Preserve.

Priority 2:

1. Disseminate educational information to residents and landowners adjacent to and inside the Preserve to heighten environmental awareness of the Preserve's goals and purpose, and inform residents of access, appropriate plantings, construction or disturbance within Preserve boundaries, pet and livestock control, fire management and other adjacency issues. This will also provide educational information about the QCB. For new communities, development of educational materials will be required as part of SPA or Precise Plan approvals, and will be implemented as a Priority 1.

7.5.3 Public Access, Trails and Recreation

Priority 1:

1. Incorporate into the City's Greenbelt Master Plan the following: location of all trails within the Preserve; guidelines for trail construction; and guidelines for design of hiking and equestrian staging areas.

2. Develop all new recreation facilities in or adjacent to the Preserve consistent with the adjacency guidelines found in Section 7.5.2 of this Subarea Plan.

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

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

5. Minimize trail widths to reduce impacts to critical resources. To the maximum extent practicable, do not locate new trails wider than four feet in core Preserve areas or wildlife corridors. Core areas and wildlife corridors, where new trails will be limited to four feet, will be defined in area-specific management directives. Where trails are planned in concert with sewer or water utility easements, the trail width should consider the easement requirements for the utility. Trails should not be encouraged within SDG&E easements. Provide trail fences or other barriers at strategic locations when protection of sensitive resources is required.

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

7. Limit the access to finger canyons through subdivision design, fencing or other appropriate barriers, and signage.

8. Provide sufficient signage to clearly identify public access to the Preserve. Barriers such as vegetation, rocks/boulders or fencing may be necessary to protect highly sensitive areas. Use appropriate type of barrier based on location, setting and use. For example, use chain link or cattle wire to direct wildlife movement, and natural rocks/boulders or split rail fencing to direct public access away from sensitive areas. Lands acquired through mitigation may preclude public access in order to satisfy mitigation requirements.

9. Off-road vehicle activity is an incompatible use in the Preserve.

10. Restore areas disturbed by off-road vehicles to native habitat where possible or critical, or allow vegetation to regenerate.

7.5.4 Invasive Exotics Control and Removal

Priority 1:

1. Do not introduce invasive non-native species into the Preserve. Encourage adjacent residents to voluntarily remove invasive exotics from their landscaping.

2. Direct priority funding to the monitoring and removal of invasive non-native plant species within the Preserve consistent with ASMDs and pursuant to specific species requirements outlined in Table 3-5 of the MSCP Subregional Plan.

3. For new communities, see Section 7.5.2, Priority 3(e) of this Subarea Plan.

4. Adopt and implement a SUSMP, pursuant to requirements as a co-permittee of the RWQCB NPDES Permit, to minimize impacts to existing year-round runoff flow within the Preserve to the extent feasible in order to minimize potential invasion from non-native ant species, with specific focus on Salt Creek Canyon.

Priority 2:

1. Provide information on invasive plants and animals harmful to the Preserve, and prevention methods, to Preserve visitors and adjacent residents.

2. Utilize trained volunteers to monitor and remove exotic species as part of the Preserve, neighborhood, community, school or other organizational programs. If done on a volunteer basis, prepare and provide information on methods and timing of removal to staff and to the public if requested.

3. If eucalyptus trees or other non-native trees die or are removed from the Preserve area, and if replaced, use appropriate native species. Ensure that eucalyptus trees do not spread into new areas nor increase substantially in numbers over the years. Eventual replacement by native species is preferred if locations are not being used as raptor nesting sites.

4. Work with the California Department of Agriculture and/or University research specialists to develop an affirmative approach to limit the potential for invasion of non-native ant species into the Preserve.

7.5.5 Flood Control

Priority 1:

1. Perform standard maintenance, such as clearing and dredging of existing flood channels, and cleaning desiltation basins outside the nesting or breeding seasons (March 15 – June 31) of sensitive bird or wildlife species utilizing the riparian habitat. Standard maintenance should be performed to minimize any impacts to habitat, and limited to tasks required to maintain the channel in a state that can adequately carry anticipated water quantities. Standard maintenance activities include repairing erosion damage, removing excess siltation and debris, and repair of damaged fences or channel structures. New drainage channels should be designed to replicate, to the maximum extent possible, natural flows, and to require as little ongoing maintenance as possible. All activities in drainages will be evaluated for conformance with Federal and State wetland permitting regulations. If required by law, Federal (Clean Water Act, Section 404) and/or State (Fish and Game Code Section 1600 *et seq.*) permits will be obtained.

2. Implement the RWQCB NPDES Permit.

7.5.6 Project-specific Management Requirements and/or Conditions for Coverage

The following describes site-specific Preserve management activities that are currently or will be undertaken by developers associated with specific new communities. These Preserve management activities are the project-specific conditions that have either been incorporated into project approvals or will be included as conditions for coverage.

7.5.6.1 Sunbow II

The Sunbow II development project, currently under construction, completed a Section 7 Consultation which was approved by the USFWS in 1995. The Sunbow II parcel has been fully mapped and conservation areas established through the City environmental review and land-use approval process as well as environmental requirements established under the ESA, U.S. Clean Water Act, and California Fish and Game Code. These conservation areas are incorporated into the Preserve. Notwithstanding any provision to the contrary within this Subarea Plan, the Section 7 Consultation Agreement, incorporated herein by reference, shall govern development of the Sunbow II project. The Biological Opinion issued by USFWS includes the following obligations which the Sunbow developers must meet:

1. 19.4 acres of coastal sage scrub habitat is being preserved onsite, and 65.1 acres has been acquired for off-site mitigation in O'Neal Canyon. The 19.4 acres of coastal sage scrub habitat is being included in the Preserve and the 65.1 acres of habitat in O'Neal Canyon is being conserved outside the *Chula Vista MSCP Planning Area* but within the MSCP Subregional Preserve.

2. All graded slopes adjacent to natural open space north of Olympic Parkway are being revegetated with coastal sage scrub to provide a non-exotic species buffer to the preserved habitat.

3. A Community Facilities District (CFD) has been created to fund maintenance of the coastal sage scrub open space in perpetuity. Site-specific management activities within the Sunbow II open space are governed by the existing Section 7 Biological Opinion and include the control of access, trash removal, and as-needed restoration of trails and other disturbed areas. This activity is to be conducted by the CFD and shall not exceed $65,000 over every five-year period.

7.5.6.2 Rancho Del Rey (SPA III)

Biological mitigation for coastal sage scrub (CSS) impacts resulting from development of this nearly completed community was accomplished through the purchase of 360 acres of offsite mitigation land and through an onsite revegetation

program, as part of a 4(d) habitat loss permit. The revegetation program, currently in the monitoring stage, included a transplant program for snake cholla and San Diego barrel cacti. A golden-spined cereus (*Bergerocactus emoryi*) cactus clump was preserved in open space. The following monitoring obligations continue to be conducted by the developer pursuant to the Mitigation Monitoring and Reporting Program (MMRP) for Rancho Del Rey SPA III:

1. Complete a five-year monitoring program for coastal sage scrub revegetation undertaken within the project area.

2. Complete five-years of protocol gnatcatcher surveys as required by the MMRP within the CSS revegetation area and portions of the south leg of Rice Canyon adjacent to the revegetation area.

7.5.6.3 Rolling Hills Ranch (Salt Creek Ranch)

The approved General Development Plan and SPA Plan for Rolling Hills Ranch includes thirteen (13) separate neighborhoods divided into three Subareas. The first Subarea has been completely built out and Subarea 2 is currently under development. As part of the first phase of the project, Rolling Hills Ranch constructed an off-site section of Proctor Valley Road across San Miguel Ranch property resulting in a Take of coastal sage scrub. Mitigation for that Take was accomplished through the preservation of habitat in dedicated open space on San Miguel Ranch.

In July 2001 the developer of Rolling Hills Ranch, Pacific Bay Homes, agreed to terms with the City and the Wildlife Agencies to amend approved plans for Subarea 3 (the eastern-most portion of the approved project) in order to provide for additional habitat and species conservation. The terms provide for implementation of a new plan for Subarea 3, referenced as the "Proposed Alternative" and depicted in Exhibit A (Appendix G). The Proposed Alternative eliminates all development in the area originally approved as Neighborhood 13 in the Rolling Hills Ranch SPA Plan and redesigns Neighborhood 12 in order to expand conservation area along the Subarea's western ridgeline and adds a small development area on the north boundary of Neighborhood 12 that does not impact any narrow endemic plant species. Both Neighborhoods are located along the western ridge of Subarea 3, adjacent to lands owned by the OWD. The redesign of Neighborhoods 12 and 13 will significantly expand the open space connection between Rolling Hills Ranch, the eastern habitat conservation area on OWD land and San Miguel Mountain. The estimated 82.5 acres of the newly conserved ridgeline will ensure preservation of key habitat containing three known QCB locations and a substantial population of variegated dudleya.

Implementation of the Agreement will also provide for enhanced conservation of Otay tarplant. The street located along the western edge of Neighborhood 11 will be moved to the east, and lots 9 through 12 and lot 19 of the approved Tentative

Map will be eliminated in order to increase onsite Otay tarplant preservation by 2.6 acres. The internal open space corridor between Neighborhoods 9 and 10A and Neighborhoods 11 and 12 contains approximately 22.62 acres and will be designated as a TMA. To augment existing Otay tarplant in the TMA, as a provision of the Agreement, topsoil containing Otay tarplant will be moved from development areas in Neighborhood 11 to the graded slopes in the TMA. Because of the location and configuration of the TMA, it will be conserved as onsite open space, but will not be included in the Preserve (Figure 7-2). An Otay tarplant management program will be created to guide habitat management within the TMA and the program will be funded through establishment of a non-wasting endowment, in an amount not to exceed $100,000 to be provided by the developer. In addition, Rolling Hills Ranch will contribute off-site mitigation for Otay tarplant. Off-site mitigation will include preservation of 5.8 acres within the San Miguel Ranch Mitigation Bank containing approximately 15,080 plants and conservation of a separate off-site 10-acre parcel located within the MSCP Subregional Preserve and containing a minimum of 15,000 Otay tarplants. Two locations outside the TMA will also, pursuant to the Agreement, receive special consideration. These two areas, located in the northwest corner of Neighborhood 11 (2.58 acres) and the southwest corner of Neighborhood 12 (2.86 acres) are part of the brush management area located between development and the Preserve. In order to encourage the viability of narrow endemic plant growth in these areas, a modified brush management protocol will be implemented to provide for selective thinning only during appropriate times during the tarplant seasonal cycle (i.e., before the plant emerges).

Overall, an estimated 314.6 acres of upland habitat will be conserved to mitigate for habitat impacts resulting from Rolling Hills Ranch development, consisting of approximately 265.9 acres of habitat conserved onsite combined with approximately 48.7 acres of habitat conserved off-site. Of the 265.9 acres conserved onsite, approximately 214.2 acres are incorporated into the Preserve. These areas include coastal sage scrub, native and non-native grassland and a variety of plant species, including Otay tarplant, variegated dudleya and San Diego goldenstar. The remaining onsite open space (51.7) is not included in the Preserve. The remaining onsite open space that is not included in the Preserve is comprised of two separate TMAs (approximately 5.8 acres and 16.8 acres) and three neutral open areas (totaling approximately 27 acres).

In order to maintain compliance as a Covered Project pursuant to this Plan, Rolling Hills Ranch must meet the obligations of the July 2001 Agreement and the approved SPA Plan, (including the following specified SPA Plan obligations), and any obligations listed below which are not already incorporated into SPA Plan approvals. The following obligations are considered to be conditions of project coverage for Rolling Hills Ranch:

1. Selective (or phased) grading shall be required and enforced, i.e., only areas immediately subject to development should be graded.



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Rolling Hills Ranch

FIGURE 7-2

2. In the event that a fire or fuel break is deemed necessary, plant species used in this area shall be non-invasive.

3. Native plants in riparian and/or natural areas shall not be trimmed or cleared for aesthetic purposes.

4. Revegetation of cut slopes external and/or adjacent to natural open space shall be accomplished with native plant species which presently occur onsite or are typical for the area.

5. Fencing shall be installed around the natural open space area to prevent impacts to biological resources from domestic pets and human activity. An alternative would be the planting of native barrier plant species that would discourage pedestrian and pet activity into open space areas.

6. Area-specific management directives will be prepared and funding for implementation provided by the developer prior to issuance of a grading permit for any portion of Subarea 3.

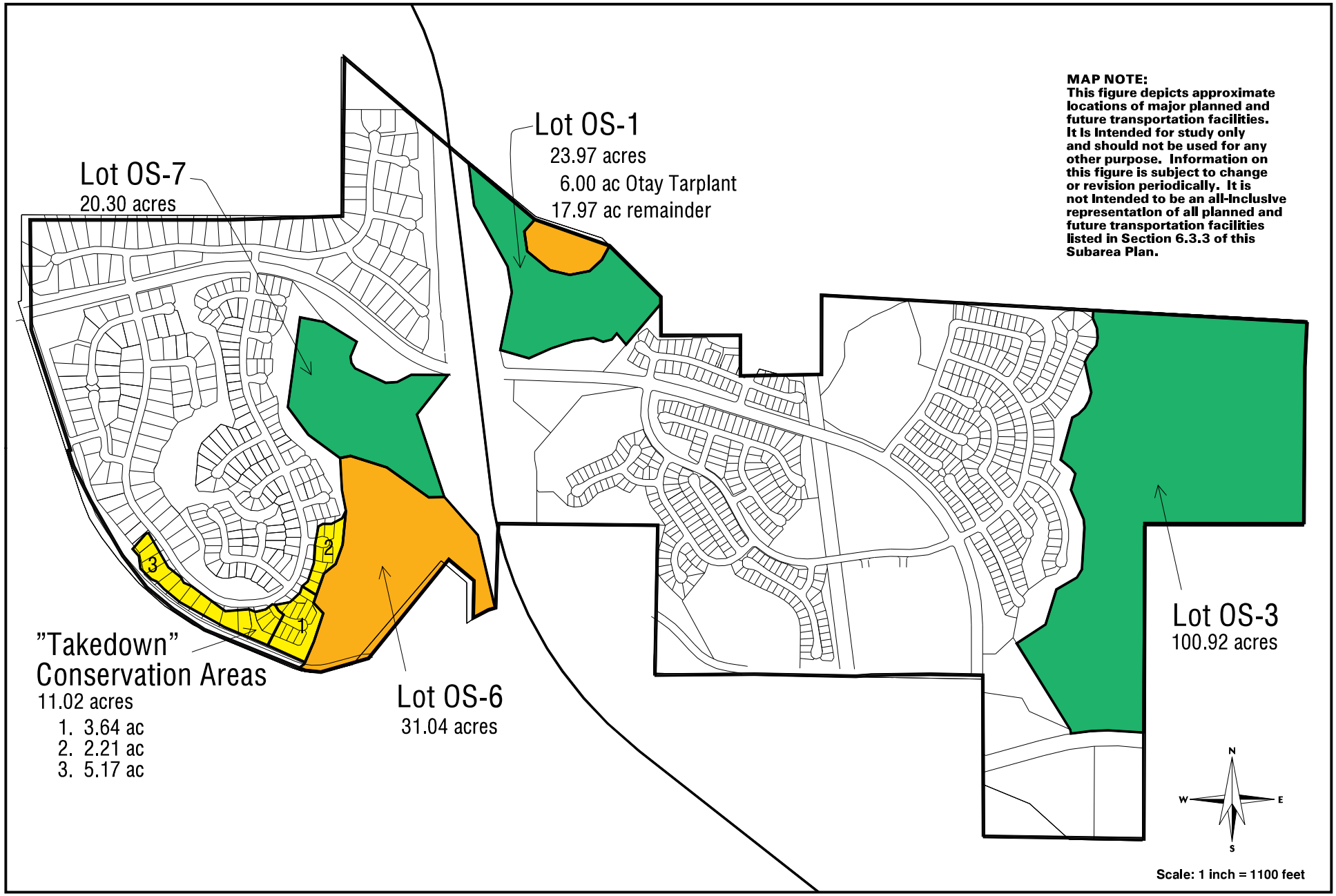
7.5.6.4 San Miguel Ranch

A total of approximately 2,038 acres of San Miguel Ranch open space on the north and south parcels will be incorporated into the MSCP Subregional Preserve. This includes conservation of the entire 1,852-acre northern parcel, and approximately 186 acres of the approximately 743-acre southern parcel.

All of the 1,852-acre northern parcel has been or will soon be included in the San Diego NWR, and 1,186 acres of the SDNWR property has been designated as a conservation bank, within which conservation credits may be purchased. Pursuant to project entitlements, 166 acres of the northern parcel, which is direct mitigation for development of the southern parcel, will be added to the SDNWR pursuant to the SMR MSCP Annexation Agreement (Section 2.1.9).

Approximately 557 acres of the 743-acre southern parcel will be developed or remain in open space uses which are not suitable for dedication to the Preserve. Approximately 186 acres of the southern parcel will be incorporated into the Preserve and will also become a part of the San Diego NWR, pursuant to the SMR MSCP Annexation Agreement (as shown on Figure 7-3).

Pursuant to the SMR MSCP Annexation Agreement, the San Diego NWR will monitor, maintain and manage the biological resources on the 352 acres of natural open space which the San Miguel Ranch project is contributing to the Preserve. To assist with biological conservation efforts, San Miguel Ranch prepared a management plan for the Otay tarplant conserved on the southern parcel and a management plan for the other sensitive biological resources on the natural open



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Legend

- Otay Tarplant Preserve Area
- Additional Otay Tarplant Conservation
- MSCP Open Space

San Miguel Ranch Conservation

FIGURE 7-3

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space on the southern parcel to be contributed to the Preserve. These plans have been provided to the USFWS and can serve as a resource for the San Diego NWR, as this entity deems appropriate. San Miguel Ranch is also providing $380,000 to assist with management of the MSCP Preserve areas on the southern parcel.

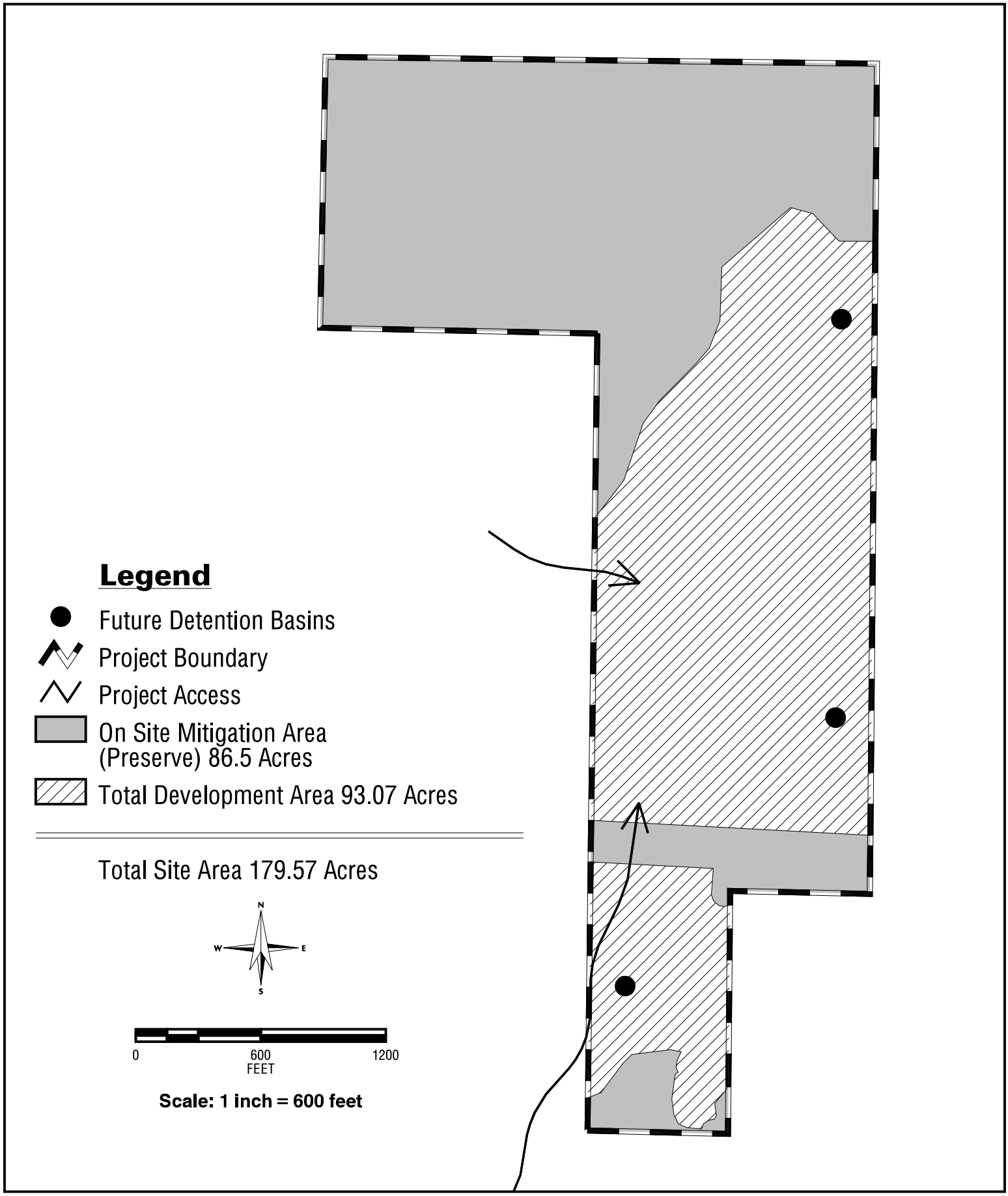
Additional project-specific conditions of coverage are set forth in the SMR MSCP Annexation Agreement, addressing issues such as: (1) revegetation along constructed roadways adjacent to the Preserve and within landscaped areas adjacent to the Preserve; (2) San Diego barrel cactus translocation; and (3) vegetation clearing during the gnatcatcher breeding season. The reader is referred to the SMR MSCP Annexation Agreement itself for more detail.

The Chula Vista MSCP Subarea Plan also prohibits drainage into the Preserve from project-related parking lots adjacent to the Preserve and prohibits the release of potentially toxic or otherwise impactive elements from developed and paved areas and recreational uses that might degrade or harm the natural environment or ecosystem processes within the Preserve.

7.5.6.5 Bella Lago

Bella Lago is a planned residential community consisting of 179.6 gross acres with approximately 93.7 acres of buildable area. Based on new narrow endemic plant surveys for the 18.2-acre southern portion of Bella Lago (former Clarkson and Turner properties), the property owner agreed to terms with the City and the Wildlife Agencies for an onsite Preserve configuration for the entire Bella Lago project area in July 2001. As a result, the project will provide 86.5 acres of onsite open space being included in the Preserve (Figure 7-4). Conserved areas onsite will include coastal sage scrub, non-native grasslands, native grasslands and riparian habitat communities as well as populations of the narrow endemic plant species Otay tarplant and variegated dudleya. In addition, off-site conservation of 14,630 square feet of land containing at least 210 Otay tarplants will be provided within 2.5 acres of acquired land.

As the property is rezoned and a Precise Plan, Tentative Map and environmental documents for compliance with CEQA are prepared, area-specific management directives for the Preserve area will also be prepared and adopted as part of Precise Plan approval. Implementation funding for Preserve management pursuant to the adopted ASMDs must be in place prior to issuance of a grading permit. The Bella Lago MMRP pursuant to CEQA will incorporate the project's area-specific management directives.



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Bella Lago

FIGURE 7-4

7.6 Otay Ranch Planning Component Framework Management Plan (RMP)

A portion of the Otay Ranch Planning Component, 9,100 acres of the 9,449-acre Otay Valley Parcel, is located within the *Chula Vista Subarea*. The portion of the Otay Ranch Preserve located within the *Chula Vista Subarea* consists of the Otay River Valley generally east of Heritage Road and west of the Otay Reservoir and includes the connecting Salt Creek and Wolf Canyon open spaces. This part of the Preserve includes coastal sage scrub, maritime succulent scrub and Wetlands associated with the Otay drainage basin. Species located in this area include coastal California gnatcatcher, coastal cactus wren, California rufous-crowned sparrow, San Diego barrel cactus, Otay Ranch tarplant and snake cholla. The adopted Otay Ranch RMP, constitute the Framework Management Plan for the Otay Ranch Planning Component, consistent with this Subarea Plan.

7.6.1 RMP Management Studies, Plans and Policies

The Otay Ranch RMP is the critical planning document for resource protection on Otay Ranch. The RMP1 provides general biological information and establishes overall Preserve conservation and management goals. The RMP2 provides detailed biological studies, specific plans and programs for habitat management, and a habitat conveyance plan.

The goal of the Otay Ranch RMP is to establish a permanent preserve within Otay Ranch to protect and enhance biological, paleontological, cultural and scenic resources; maintain biological diversity, and promote the survival and recovery of native species and habitats. The RMP1 is a comprehensive plan for the preservation, enhancement and management of sensitive, natural and cultural resources within Otay Ranch. The RMP1 was adopted by the County of San Diego and the City, concurrent with approval of the Otay Ranch GDP/SRP.

The RMP1 provides for establishment of a POM to oversee long-range management activities within the Otay Ranch Preserve. The RMP2 designates responsibility as the POM jointly to the City and County of San Diego. The City and County have entered into a Joint Powers Agreement (dated March 6, 1996) to collectively manage the Preserve for at least five years, after which time they may choose to extend the joint responsibilities or name a third-party POM. The POM may also elect to transfer a portion of the Preserve to the USFWS, and into the San Diego NWR.

The City supports the transfer of Preserve land east of Otay Lakes to the USFWS, provided the following commitments are first met:

1. USFWS agrees to assume all costs associated with management of lands so transferred. Management funding for Preserve lands transferred to USFWS will not be provided through the Otay Ranch CFD;

2. Easements or other equivalent assurances acceptable to the City for trails and infrastructure necessary to allow development contemplated by the Otay Ranch

GDP/SRP and applicable City and/or County General Plans, are provided and recorded as part of the transfer action; and

3. Concurrence by the County of San Diego for the proposed land transfer to the USFWS.

As development occurs in Otay Ranch, habitat is conveyed to the City and the County with an undivided interest. The RMP2 establishes a habitat conveyance schedule, requiring that 1.188 acres of habitat is to be conveyed for each acre of land developed. Habitat conveyances may be made of land located within the Otay Ranch Preserve either inside or outside the City, in accordance with RMP2.

The RMP2 also provides a conveyance forecast by Village; however, it should be emphasized that as SPA Plans are processed, the actual conveyance obligation may vary from the forecast due to more precise planning and engineering and based upon final calculations of total development area. The conveyance forecast projects a total of 6,352 acres of habitat conservation related to that portion of Otay Ranch which is located within the City boundaries and the *Chula Vista Subarea*. Approximately 2,742 acres of the Otay Ranch Preserve will be conserved within the *Chula Vista Subarea*. Thus, it is anticipated that 3,610 acres of the City's habitat contribution from Otay Ranch development and implementation of this Subarea Plan will occur outside the *Chula Vista Subarea* within the County MHPA and the *Chula Vista MSCP Planning Area.*

The RMP1 outlines objectives for identification, preservation and management of biological resources within the Otay Ranch Preserve. These objectives include identification, preservation, enhancement and restoration of sensitive resources. Additionally, policies to achieve these objectives include target preservation goals for species and habitats within Otay Ranch, which were incorporated into the performance standards as a part of the GDP/SRP. These standards provide for minimum habitat conservation levels, identification of specific locations for mitigation contributions, preservation, enhancement and/or restoration, buffers, transplanting, and monitoring and management.

In order to meet these objectives, the RMP2 encompassed a series of management and monitoring tasks that must be performed over time throughout implementation of the Otay Ranch GDP. These tasks include preparation of ranch-wide studies, plans and programs. The completed RMP2 studies provide a database from which RMP plans and programs are prepared. The RMP2 plans and programs involve efforts which require a continuing commitment to implementation. The following provides a list of studies, and plans and programs which were completed and adopted as part of the RMP2 adoption and are appended to the RMP2 and this Subarea Plan:

1. <u>Ranch-wide Phase 2 Studies</u>

    - Coastal California Gnatcatcher and Coastal Cactus Wren Studies
    - Vernal Pool Study

- Wildlife Corridor Study
- Raptor Study
- Resource Identification and Mapping (completed as part of GDP/SRP but not included in RMP2 Appendices)
- Otay Valley Parcel Cultural Resources Study

2. Ranch-wide Phase 2 Plans and Programs

- Vernal Pool Management Plan
- Range Management Plan
- Coastal Sage Scrub Master Plan
- Biota Monitoring Program

7.6.2 Conditions of Coverage for the University Project

The University Project located adjacent to the Otay River Valley and Salt Creek, is within the Otay Ranch and incorporated into the Otay Ranch GDP/SRP. As part of Otay Ranch, the RMP and its management studies, plans and policies serve as the Framework Management Plan for the university. In addition, the following are conditions of coverage for the development of the University Site:

1. 20.6 acres of disturbed area within Salt Creek will be restored/enhanced to coastal sage scrub habitat (Figure 3-2). Prior to approval of a grading plan for the university project, a restoration/enhancement plan will be prepared consistent with the guidelines established in the Otay Ranch Coastal Sage Scrub Master Plan.

2. Disturbance of coastal sage scrub within the university development areas on the east side of Salt Creek will be subject to grading restrictions during the coastal California gnatcatcher breeding season;

3. Any temporary impacts from grading that encroach into habitat areas will be restored consistent with the guidelines established in the Otay Ranch RMP;

4. All brush management activities will be conducted within the development areas and will be consistent with the brush management requirements of the Otay Ranch RMP; and,

5. University Road, as depicted on Figure 2 of the February 16, 2000, Draft City of Chula Vista Subarea Plan to traverse Salt Creek and connect the eastern and western University campuses, is no longer included in the University Redesign. Therefore, Take Authorization for University Road is not provided through this Subarea Plan.

7.6.3 Otay River Valley Framework Management Plan

An estimated 2,742 acres of the Otay Ranch Preserve are within the boundaries of the *Chula Vista Subarea* and, as such, will be part of the Preserve. This area is also located

within the Otay Valley Regional Park Concept Plan boundaries. The Concept Plan for the Otay Valley Regional Park has been prepared and provides for a mixture of uses. In addition to active recreation, the Concept Plan allows passive recreational uses, provides for protection of scenic, cultural and environmentally sensitive areas, and encourages compatible agriculture.

Much of the Otay River Valley within the City has been extensively mined for sand and aggregate materials, and many of these disturbed areas within the Preserve could be revegetated with appropriate wetland habitats. Additional areas, generally on river terraces long used for agricultural purposes, could be revegetated with various upland habitat types.

Active recreational uses planned for the Otay River Valley are discussed in Section 6.3.4 of this Subarea Plan. Active recreation development areas are identified in the Draft OVRP Concept Plan and this Subarea Plan. These areas are not a part of the Preserve. All active recreational uses within the Preserve must be consistent with the goals and policies of the Otay Ranch RMP, in particular Section 6.2 which establishes standards and guidelines for development. RMP guidelines require that active recreation areas be located in previously disturbed, non-sensitive areas; that they be readily accessible from existing and planned public roads and not intrude into core Preserve areas; and that they be clustered to minimize the extent of edge between active recreation uses and sensitive resources.

In addition, the following are the Framework Management Plan Preserve management priorities for the OVRP. These priorities will be considered during future park planning efforts, and addressed within the context of the more definitive biological analysis of the current study of the Otay River Valley.

Priority 1:

- Coordinate an invasive non-native plant removal program with the City of San Diego and the County or in conjunction with a regional MSCP management program in order to provide for long-term management of this problem.

- Prepare a Master Revegetation Plan for wetland and upland habitat types, as appropriate. The plan will not include the active recreation areas and will not preclude passive recreation, trails, trailheads/staging areas or other uses identified on the Otay Valley Regional Park Concept Plan or in the land use section of this plan. This Plan may be funded jointly by the three agencies involved in the Otay Valley Regional Park JEPA (Joint Exercise of Powers Agreement) and therefore include the entire Regional Park or may be conducted by the City for only that portion of the Park within its jurisdictional boundaries.

- Maximize the use of existing dirt roads and avoid, to the extent feasible, the construction of new trails and/or roads.

- Construct all recreational facilities consistent with the Preserve adjacency guidelines found in Section 7.5.2 of this Subarea Plan.

- Direct priority funding to the monitoring and removal of invasive non-native plant species in locations specific to species requirements outlined in Table 3-5 of the MSCP Subregional Plan.

- Where funding is available, install barriers for species-specific management pursuant to Table 3-5 of the MSCP Subregional Plan.

- Limit, to the greatest extent possible, public access to the finger canyons which are tributary to Wolf Canyon.

Priority 2:

- The City and Wildlife Agencies shall pursue grants to accomplish the revegetation of appropriate areas in accordance with the Master Revegetation Plan.

- Coordinate with the Otay Valley Regional Park management entity the installation of signage, fences, staging areas/parking lots and other public use facilities.

- Install barriers to deter human intrusion into particularly sensitive areas.

8.0 PRESERVE MANAGEMENT FUNDING

Section 7.0 of this Subarea Plan describes Preserve management goals and objectives, provides Framework Management Plans for the Central City, North City and Otay Ranch PMAs, and details City commitments for biological studies and long-term management activities within the Preserve. This section describes the funding mechanisms that will be used to finance the studies and management activities that will be undertaken within the *Chula Vista Subarea*.

8.1 Overview of Funding Mechanisms

The City will fund the Special Studies discussed in Section 7.3.1 of this Subarea Plan through a combination of resources. The City has received two grant awards totaling $227,666 from the CDFG NCCP local assistance grant funds. These grant monies are to be used specifically to conduct a baseline biological study for the Central City PMA, and to prepare ASMDs for the Central City.

The initial draft Otay River Valley biological study was funded by the City. The City has committed to complete this study, and may also apply for Federal, State and/or Regional grants or matching funds to assist in funding of this project.

Preserve management will include "short-term" management activities as well as "long-term" management tasks. Funding for management of the Preserve will be accomplished through four funding mechanisms:

1. Covered Project Conditions of Coverage (short-term management);

2. Open Space Management Financing Mechanisms (long-term management);

3. Central City Biological Enhancement Program (BEP) (long-term management); and

4. North City/Otay Ranch Preserve Management Endowment Fund (PMEF) (long-term Management).

Combined, these four financing programs ensure that the City will meet all of its short and long-term MSCP management goals.

8.1.1 Short-term Management

Short-term management involves restoration and/or maintenance required to be completed as part of conditions of development project entitlement approvals. Short-term management is undertaken during the period of time when designated Preserve areas are owned by private landowners subsequent to City approval of development entitlements and prior to dedication and acceptance of such land into the Preserve. Financing and implementing these tasks, which may include restoration of habitat and/or requirements to ensure retention of habitat values on land that will be dedicated into the Preserve as a condition of entitlement, is the responsibility of the respective property owner.

Compliance is assured by the City through entitlement conditions and, when applicable, requirements to post bonds.

The short-term management program provides management necessary to ensure the establishment of project-specific restoration and will also ensure the maintenance of habitat values associated with onsite conservation areas during the early phase of the Preserve management program.

8.1.2 Long-term Management

Long-term management involves implementation of the Framework Management Plans discussed in Section 7.0 of this Subarea Plan. These tasks are undertaken after land has been dedicated and accepted into the Preserve. Three long-term funding tools are detailed in Section 8.3: the use of existing and new open space financing mechanisms (Open Space Districts, Community Facilities Districts, HOAs), the Central City Biological Enhancement Program (BEP), and the North City/Otay Ranch Preserve Management Endowment Fund (PMEF). These three financing tools together will, when established, provide the financial resources to accomplish the following three principal long-term management goals:

1. Accomplishment of Priority 1 goals and requirements of the Framework Management Plan;

2. Adequate funding to ensure that a minimum of 50 acres of resource enhancement for the QCB will be completed, pursuant to Section 4.4 of this Plan, and resulting in Take Authorization for this species in addition to the MSCP Subregional Plan Covered Species; and

3. Funding to respond to Changed Circumstances within the Preserve.

8.2 Preserve Management Cost Estimates

The Chula Vista MSCP Subarea Plan is an implementing plan of the San Diego Subregional MSCP. Thus, the Chula Vista Preserve management program is reflective of the overarching MSCP Subregional Plan Preserve Management Framework Plan, issued for public review in the Federal Register in 1996.

Chula Vista's proposed funding program is consistent with Section 7.3 of the MSCP Subregional Plan. The budgets established for Preserve management in this Chula Vista MSCP Subarea Plan are based upon the research prepared for the MSCP Subregional Plan, combined with a current review of other projected and existing Preserve Management budgets within the MSCP Subregion, and application of a cost evaluation model developed by the City to evaluate the City's proposed Preserve Management Endowment Fund discussed in Section 8.3 of this Plan.

The City funds a minimum budget for primary Preserve management of approximately $54.00 to $55.00 per acre (FY 2002-03), to be adjusted annually consistent with the Consumer

Price Index (CPI). In addition, upon the issuance of Take Authorization, the City will establish the BEP and PMEF to increase Preserve management budgets throughout the City's MSCP Preserve. Discussed in more detail in Section 8.3, the BEP and PMEF would increase Preserve management budgets to approximately $64.00 per acre in the Central City PMA and approximately $88.00 per acre in the North City and Otay Ranch PMAs. These budgets are exclusive of direct costs for administration of the MSCP program, which are currently financed by the City through the General Fund.

In order to develop cost estimates to meet Preserve management requirements of the MSCP Subregional Framework Plan, an extensive review of Preserve management budgets was undertaken. A summary of the cost analysis for MSCP Preserve management is provided in Section 7.3 of the adopted Subregional Plan. Section 7.3 estimated the following average costs for Preserve maintenance, management and monitoring (in 1996 dollars):

Preserve Maintenance & Management	$39.63 per acre
Biological Monitoring	$1.46 per acre
Program Administration	$2.40 per acre
Total Estimated Cost	$43.49 per acre

Based on these cost estimates, the average per acre cost for maintenance and management of land conserved throughout the MSCP Subregion was anticipated to vary from a low of $37.00 to a high of $47.00 (FY 1996 dollars), depending on various factors. For example smaller, more fragmented Preserve areas are more costly to maintain and manage. Preserve areas surrounded by urban development also incur increased costs. Preserves comprised of high-quality habitat require less restoration. Larger, contiguous open space areas located beyond the urban fringe are less impacted by human contact and require less "hands-on" management, thus reducing overall costs.

In 1997, the County of San Diego prepared an examination of its annual operating budget for the management of five open space preserves in eastern portion of the County. Through its analysis, the County estimated the cost of operation of the five open space preserves at $37.00 per acre. Noting that costs varied, depending primarily upon an area's public access and level of habitat degradation, the County report developed a range of six categories of open space. Maintenance cost estimates for the six categories ranged from $16.00 per acre for pristine open space with no public use to $105.00 per acre for highly degraded habitat, requiring substantial restoration, with maximum public access.

Maintenance cost estimates for the two categories of preserve most consistent with the Chula Vista MSCP Preserve land were $38.00 per acre to $56.00 per acre. These reflected actual management costs for preserve land with minor habitat degradation and little public access, or with minor habitat degradation and accessible, public passive recreational use, respectively (designated as Categories "C" and "D" in the report).

The Chula Vista Preserve is smaller and closer to urban development than much of the County Preserve land. However, the quality of the habitat in Chula Vista is primarily good, and in many areas will be transferred into the Preserve after completion of restoration required as conditions

of development entitlements. Thus, the average cost per acre reflected by the Category C and D habitats referenced in the County report, $47.00, best projects the budget requirement for Chula Vista. Adjusted for inflation to FY 2002, the average per acre requirement for Preserve management for most areas of Chula Vista MSCP is estimated to be $54.00. This cost is slightly higher than the current MSCP budgets for the County and the City of San Diego. [In FY 2001, the County budgeted approximately $40.00 per acre for its preserve management activities. The City of San Diego budgeted approximately $51.00 per acre in 2001.]

The findings of the cost analysis prepared by the County of San Diego and the budget range discussed above are also consistent with the budget prepared in 1997 by the City for management of the Otay Ranch Preserve. Management for the Otay Ranch Preserve is funded through a Community Facilities District (CFD). In forming the Otay Ranch CFD and developing the required, associated tax rates, the City prepared a comprehensive budget based upon actual cost estimates for biological management and monitoring activities described in the Otay Ranch RMP.

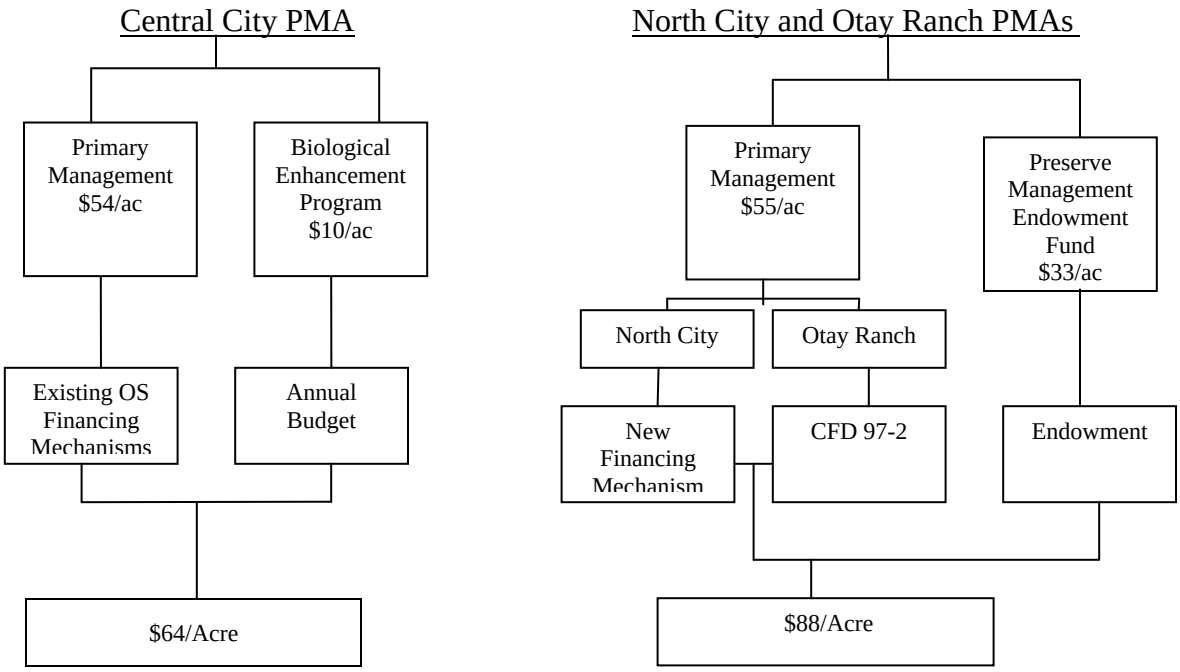
The budget for the Otay Ranch CFD provides for an estimated average per acre Preserve management budget of $55.00 (2002), excluding City administration costs. The Otay Ranch CFD budget and associated tax levy was based upon actual cost estimates for the provision of preserve maintenance, security activities, preserve improvements and implementation of the adopted Otay Ranch RMP, as described in the CFD Special Tax Report. The budget includes funding for general maintenance and specific management tasks required by the associated Vernal Pool Management Plan, Coastal Sage Scrub Master Plan and Biota Monitoring program. Capital and labor cost estimates were also provided. Monitoring cost estimates included costs provided for California gnatcatcher and coastal cactus wren monitoring and surveys, and special wildlife and sensitive plant surveys for coastal sage scrub, wetland/riparian habitats, valley needlegrass grassland, alkali meadow and woodlands, and wildlife corridor monitoring for both vegetation and wildlife. The biological consultants cost estimates also included vegetation transects, hydrology monitoring for alkali meadow, and data analysis and annual monitoring reports for the Preserve. (A copy of the Special Tax Report forming CFD 97-2, the adopted Council Resolution establishing tax rates, and other background information pertaining to the CFD budget is provided as Appendix M).

8.3 Preserve Management Budgets and Funding Sources

Management needs will differ within the three PMAs. In the Central City PMA, the MSCP Preserve is already in place; open space has already been dedicated to and is owned by the City, and maintenance and management activities are underway. The North City and Otay Ranch PMAs will be created as new development occurs and Preserve management will be phased in as land is conveyed. Because of the basic differences between the Central City and the North City and Otay Ranch PMAs, the funding programs for these areas will differ.

The Preserve Management Funding flowchart that follows provides a summary of the overall Preserve Management funding program. A detailed discussion of the funding programs for the Central City PMA, and the North City and Otay Ranch PMAs is contained in Sections 8.3.1 and 8.3.2, respectively.

Chula Vista MSCP
Preserve Management Funding Flow-Chart



8.3.1 Central City

The Central City PMA Preserve lands are surrounded by existing urban development. These open space areas have already been dedicated to the City and are being managed by the City through various financing mechanisms established under California law, including Open Space Districts (OSDs), Landscape Lighting and Maintenance Districts (LLMDs), and Community Facilities Districts (CFDs).

The Central City financing districts levy assessments or Special Benefit Taxes on property owners in order to create a revenue source to meet open space maintenance budget needs. The districts are established to create a perpetual funding source for open space maintenance. A maximum assessment or tax rate is established at the time of district formation, based upon the anticipated budget needed to fund maintenance activities. Formed under California law, the City may not levy a higher rate and no district may be dissolved, except pursuant to the process prescribed by State law. The responsible legislative body (City Council) or property owners subject to assessment or taxes must define the desired changes, actively seek support to make such changes, follow a public notice and public hearing process, and hold an election wherein two-thirds of all property owners must vote affirmatively for the proposed changes to the district.

The management activities currently funded and undertaken by the Central City districts include Priority I general maintenance tasks, including:

- Removal of trash, debris and other solid waste;
- Maintenance of trails and fences;
- Implementation of security programs to enforce "no trespassing" rules, curtail illegal activities and activities that may degrade resources, such as grazing, shooting, illegal planting, dumping and off-road vehicle traffic; and
- Limited weeding along Preserve/urban interfaces

Many of the districts finance not only these general Preserve maintenance and management activities but also provide a funding source for brush management along urban canyon edges. In these cases, the boundaries of the open space district encompass not only Preserve land but also brush management zones, which are located between the Preserve and urban development.

Management budgets for the Central City districts are not divided by task, thus the cost for brush management, where applicable, is included in the per-acre cost estimate provided. District budgets therefore vary greatly, from $28.00 per acre budgeted for a small improvement area within the Rancho Del Rey District (OSD 20) to over $400 per acre associated with another Rancho Del Rey canyon that abuts urban development and includes a brush management zone. The City estimates that the average expenditure for management in the Central City, exclusive of brush management activities, is approximately $54.00 per acre (FY 2002).

8.3.1.1 Central City Biological Enhancement Program

Funding available from existing open space maintenance financing districts in the Central City does not provide for restoration activities. In order to enhance the current levels of Preserve management throughout the City, Chula Vista will be instituting a new management program referred to as the BEP. The BEP will be funded and managed by the City in order to expand Preserve management programs now funded by open space financing districts.

For the Central City PMA, the City will establish the BEP with an annual budget of $20,000. A variety of funding sources may be used to insure this annual funding program. Such funding will include: grants, Federal and State funding programs, funds that may be made available through the Otay Valley Regional Park JEPA, other regional Preserve management funding sources, City General Fund revenue and/or other local funding sources.

The current Preserve management budget for the Central City PMA will be increased upon issuance of Take Authority by the Wildlife Agencies, through the establishment of the Central City BEP. For as long as the City has Take Authority, the BEP will increase the average per acre budget in the Central City by approximately $10.00 to a total average of $64.00 per acre, exclusive of

administrative costs. This represents a 20% increase above the MSCP Subregional management cost estimates, and will fund additional management activities identified and prioritized by the ASMDs being prepared for the Central City PMA.

8.3.2 North City and Otay Ranch PMAs

The MSCP lands in the North City and Otay Ranch Preserve Management Areas have not yet been dedicated into the Preserve. These Preserve areas are designated for conservation through approved development entitlement conditions. Through such conditions, the City has ensured that short-term management will be accomplished in future Preserve areas.

8.3.2.1 Short-term Management

Section 5.1.1 of this Subarea Plan describes those development projects that are designated as Covered Projects pursuant to this Plan. These projects have delineated "hard lines" for development areas and for on-site conservation. Coverage for these projects is based upon the assured dedication of the open space related to each project and through implementation of project-specific mitigation programs detailed in Section 7.5.6 of this Subarea Plan.

Management tasks undertaken as conditions for coverage will provide the short-term management necessary to ensure the establishment of project-specific restoration programs and will ensure the maintenance of habitat values associated with onsite conservation areas during the early phase of the Preserve management program.

Funding the management tasks that are required as conditions for coverage for the Covered Projects is the responsibility of each individual project developer. Special management tasks are specified by each project MMRP and by the project Conditions of Coverage found in Section 7.5.6 of this Plan. Compliance with all short-term management requirements will be ensured prior to project grading. MMRP requirements are included as conditions on final maps. Subarea Plan Conditions of Coverage will be incorporated into conditions for clearing, grubbing and grading permits. When applicable, map and/or grading permit conditions will include requirements to post bonds.

8.3.2.2 Long-term Management

Long-term management in the North City and Otay Ranch PMAs will be funded through the use of open space financing mechanisms and creation of a new Preserve Management Endowment Fund.

8.3.2.3 Open Space Financing Mechanisms

In the Otay Ranch PMA, a Communities Facilities District (CFD 97-2) was created to generate revenue for the purpose of Preserve management. CFD 97-2 was established in 1998 to fund the maintenance, management and biological monitoring program for the Otay Ranch Preserve in accordance with the Otay Ranch RMP and the terms of the CFD. The CFD finances both Priority I and Priority II-type Preserve management activity, including general maintenance, biological management and biological monitoring required by the Otay Ranch Planning Component Framework Management Plan (Section 7.6 of this Subarea Plan) and the Otay Ranch RMP. Brush management in Otay Ranch is provided for outside of Preserve boundaries, and is not funded by the CFD.

The Otay Ranch CFD levies a Special Benefit Tax on property owners within Otay Ranch in order to create the revenue source necessary to meet Preserve management funding requirements. Like the Central City financing districts, the CFD was established to create a perpetual funding source. Maximum tax rates were established at the time of district formation, based upon anticipated budget needs. The maximum tax rates are adjusted annually based upon CPI increases. An annual budget must be adopted each fiscal year, upon which the annual tax rates are established and assessed.

The City may not levy a tax rate that exceeds the established maximum rates, and the district may not be dissolved, except pursuant to the process prescribed by State law. The responsible legislative body (City Council) or property owners subject to assessment or taxes must define the desired changes, actively seek support to make such changes, follow a public notice and public hearing process, and hold an election wherein two-thirds of all property owners must vote affirmatively for the proposed changes to the district.

Pursuant to the CFD formation documents, specific maintenance, management and monitoring efforts funded through CFD 97-2 for the Otay Ranch Preserve include the following:

1. Maintenance

   Development and implementation of programs to maintain, operate and manage Preserve habitat values through cultivation, irrigation, trimming, spraying, fertilizing, or treatment of disease or injury; removal of trimmings, rubbish, debris, and other solid waste; maintenance of trails; removal and control of exotic plant species; and control of cowbirds through trapping efforts.

2. Security

   Development and implementation of security programs to enforce "no trespassing" rules; curtail activities that degrade resources, such as grazing, shooting, and illegal dumping; remove trash, litter, and debris; control access; prohibit off-road traffic; and maintain fences and trails.

3. Improvements

   Acquisition of equipment or installation of improvements necessary to perform maintenance, monitoring and security functions described in CFD 97-2.

4. Biota Monitoring

   Implementation of the annual biota monitoring and reporting program consistent with the RMP to identify changes in the quality and quantity of Preserve resources including wildlife species, sensitive plants and sensitive habitat types.

Habitat management funding plans for the newly developing North City communities will be prepared concurrent with future project approvals. The Bella Lago and Rolling Hills Ranch projects will be required to ensure that a funding program, such as CFD 97-2, is established for implementing area-specific management directives prior to City issuance of grading permits.

San Miguel Ranch, pursuant to its associated MSCP Annexation Agreement (refer to Section 2.1.9), has dedicated its Preserve lands to USFWS for inclusion in the San Diego NWR. Preserve management in the Refuge is the responsibility of USFWS.

8.3.2.4 North City and Otay Ranch Preserve Management Endowment Fund

In the North City and Otay Ranch PMAs, added funding for biological management will be derived through establishment of a Preserve Management Endowment Fund (PMEF). The PMEF will create an endowment program of approximately $1.85 million, funded through capital improvement programs associated with the projects identified on Table 8-1. The PMEF will be used for enhanced management programs within the North City and Otay Ranch PMAs. The endowment is anticipated to generate, over time, a perpetual annual budget of $50,000 to over $92,000 (2002 dollars) specifically dedicated to Preserve management activities as funding becomes available through the PMEF program.

The PMEF will be financed in association with the Planned Facilities described in Section 6.3.3 of this Subarea Plan. Construction of the Planned Facilities authorized for Take pursuant to this Plan is essential to the future development of

both Otay Ranch and the North City. In turn, development of these areas is fundamental to the City of Chula Vista MSCP conservation effort. If development of the Covered Projects associated with the North City and Otay Ranch PMAs does not occur, land designated to become part of the Preserve will not be conveyed or managed. Thus, the importance of the Planned Facilities and the nexus between construction of these facilities and Preserve acquisition and management is incontrovertible.

Through the PMEF, funding for conservation and habitat management will be provided similar to funding for other important infrastructure. The PMEF will be funded incrementally, simultaneous with the commencement of construction of four key Planned Facilities: the Salt Creek trunk sewer line, the Wolf Canyon trunk sewer line, Main Street and La Media Road. Although the endowment contributions are required to be provided with construction of each of these four infrastructure projects, the endowment program is established in consideration for all Planned Facilities described in Table 6-1 of this Plan and in the locations generally depicted on the Planned Facilities Maps shown on Figures 6-1, 6-2 and 6-3.

The PMEF contributions will be made upon commencement of construction of the following projects, as identified in Table 8-1.

Table 8-1: PMEF Contributions

Construction of Project	PMEF Contribution
Salt Creek Sewer (including access roads and trails)	$1,000,000
Wolf Canyon Sewer (including access road and trail along existing dirt road)	$ 500,000
Main Street	$ 250,000
La Media Road	$ 100,000

Construction of the Salt Creek and Wolf Canyon sewers is anticipated to commence in 2002 and 2005, respectively. Construction of Main Street and La Media Road are planned to be built in approximately 2010 and 2015 respectively.

The PMEF will add approximately $33.00 per acre of enhanced funding to the Otay Ranch and North City PMAs, creating a total available budget of approximately $88.00 per acre, exclusive of administrative costs, dedicated to Preserve management activities in these areas.

8.3.2.5 Quino Checkerspot Butterfly Habitat Restoration Funding

In the North City and Otay Ranch PMAs, the PMEF will also be used to fund the QCB habitat restoration program described in Section 4.4 of this Subarea Plan. A cost evaluation model was prepared by the City to analyze the funding requirement for the QCB restoration/enhancement program. The QCB cost evaluation model applied per-acre annual costs for three levels of QCB restoration: high intensity, moderate intensity and low intensity. The high intensity program is a dethatching and weeding regimen developed for the City and consistent with the dethatching and weeding program included as Appendix II in the USFWS QCB Draft Recovery Plan. The high intensity dethatching and weeding program would be applied in areas that have significant numbers of native plant species present, but contain high levels of nonnative plants. Moderate and low intensity restoration/enhancement programs, also consistent with the QCB Draft Recovery Plan, represent enhancement programs that would be used in areas that have significant numbers of native plant species present but contain moderate or low levels of nonnative plants.

Tables 8-2 and 8-3 identify the costs associated with each of the three levels of QCB restoration and the anticipated cost for seed stock assumed in the QCB Cost Evaluation Model.

Table 8-2: Dethatching and Weeding Costs

Program Type	Year 1	Year 2	Year 3	Year 4	Year 5	Subsequent Annual Maintenance
High Intensity	$5,000-5,600	$2,500-3,600	$1,000-2,700	$500-1,800	$250-1,200	$200
Moderate Intensity	$3,000	$1,500	$500	$250	$250	$200
Low Intensity	$1,500	$1,000	$500	$250	$200	$200

Table 8-3: Annual Seed Costs

Year	Seed Collection	Seed Propagation	Misc. Seed Stock
2003	$6,000	$6,800	
2004	$6,000	$6,000	
2005	$6,000	$6,000	
2006	$0	$6,000	
2007	$0	$3,600	
2008	$0	$2,400	
2009 & beyond	$0	$0	$2,000

As shown by Table 8-2, the high, moderate, and low intensity programs are most costly in the first year, with costs dropping each year through year five. The assumption is that the level of required weeding will decrease annually as fewer nonnative plants are present. After implementation of each five-year program, the costs stabilize at a fixed cost of $200 per acre, per year for periodic nonnative plant control activities and other habitat management tasks.

Fifty acres of QCB restoration will be funded through the PMEF. The level of QCB restoration that will be required will be determined in the field and will depend upon the quality of the habitat being restored. The cost evaluation model was used to evaluate if planned funding is sufficient to address two potential field conditions. The first model cost run assumed that a minimum of 15 acres of QCB habitat would require the highest level of restoration activity and cost. Thirty-five acres were assumed to require a moderate level of restoration work. The second model assumed that field conditions would allow for successful restoration through use of the moderate to low cost programs. This would reduce overall costs and allow for restoration of additional acres of QCB habitat.

When the required 50 acres of QCB habitat restoration/enhancement is complete, the model provides that restored areas continue to be maintained, using funds generated from the endowment. Funds generated which are in excess of necessary maintenance costs are available to enhance other areas of the Preserve or to expand the QCB program, at the direction of the City Preserve Manager and Director of Planning and Building. The results of the two model cost runs indicate that the anticipated PMEF endowment will generate sufficient funding to complete the 50-acre QCB restoration project and provide additional funds for other Preserve enhancements.

8.4 Funding for Changed Circumstances

Section 5.8 of this Subarea Plan defines the potential for Changed Circumstances within the Preserve and presents a series of Planned Responses that will be undertaken if/when a Changed Circumstance event should occur. Planned Responses to future listings of non-covered species will not require additional funding. Planned Responses to Changed Circumstances defined as Flood, Drought and/or Invasion of Exotic Species involve reprioritizing and, when necessary, modifying the Preserve management program(s) in place at the time and/or subsequent to the event. These Planned Responses will be funded through the two financing mechanisms established by this Subarea Plan for management enhancement programs, and described in Section 8.3: the Biological Enhancement Program (BEP) in the Central City PMA, and the Preserve Management Endowment Fund (PMEF) in the North City and Otay Ranch PMAs.

Planned Responses to the Changed Circumstance defined as Repetitive Fire may also be funded through the BEP (within the Central City PMA) and/or PMEF (within the North City and/or Otay Ranch PMAs). However, Planned Responses to Repetitive Fire may also involve activities beyond modification of existing management programs, and therefore may exceed the funding capability of the BEP or PMEF. The Planned Responses to Repetitive Fire include the possibility of implementing a re-seeding program to address up to 30 acres of damage to Preserve habitat caused by a Repetitive Fire event. In order to establish budget requirements to address this potential need, the City worked with consulting biologists to estimate costs for a three-year re-seeding and focused weeding program.

Table 8-4 summarizes the potential range in costs for a three-year re-seeding and weed control program associated with a potential Repetitive Fire event.

Table 8-4: Repetitive Fire Re-Seeding and Weed Control Program Costs

Site Condition	Cost Per Acre (expended over three-years)
Low Weed site	$6,000/acre
Moderate Weed Site	$9,000/acre
Heavy Weed Site	$11,500/acre

In order to ensure that sufficient funding will be available to address Repetitive Fire, upon issuance of Take Authority from the Wildlife Agencies the City will establish a new fund, the Repetitive Fire Restoration Reserve Fund (Restoration Reserve Fund). The Restoration Reserve Fund will be funded through proportionate annual contributions from reserve funds in existing and new open space financing districts. Such reserve funds are established in order to meet unanticipated maintenance needs that occur due to unanticipated events. The Restoration Reserve Fund will serve as a financing tool similar to a self-insurance program. Contributions to the fund will be made as lands are added into the Preserve. Upon complete assembly of the Preserve, contributions are expected to yield approximately $18,000-$35,000 annually. Through the Restoration Reserve Fund, resources will be available to meet Repetitive Fire Planned Response requirements within any of the PMAs. Once established, the fund will grow through interest earnings and, if funds are drawn to implement Planned Responses to a Repetitive Fire

event, the fund will be replenished if necessary, through continued annual open space financing district reserve contributions.

8.5 Preserve Acquisition Funding

Assembly of the Preserve does not rely on public acquisition of private property. One hundred percent (100%) of the Subarea Plan Preserve will be acquired through the entitlement process and/or pursuant to agreements between landowners and the Wildlife Agencies. If funding becomes available, private lands located in the Otay River Valley which are designated as 75-100% Conservation Areas may be purchased by the City. Public acquisition of all or part of this area would enable the City to increase conservation levels (above 75%), thus enhancing the Preserve.

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