RANCHO PALOS VERDES

NATURAL COMMUNITIES CONSERVATION PLANNING SUBAREA PLAN

Prepared for

City of Rancho Palos Verdes

URS Project No. 27644296.08000

July 29, 2004

URS

1615 Murray Canyon Road, Suite 1000
San Diego, CA 92108-4314
619.294.9400 Fax: 619.293.7920

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

Tables

Figures

Appendices

ACOE	U.S. Army Corps of Engineers
CCC	California Coastal Commission
CDFG	California Department of Fish and Game
CE	State of California-listed endangered species
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CHP	Chaparral
CNDDB	California Natural Diversity Data Base
CR	State of California-listed rare species
CSS	Coastal Sage Scrub
CT	State of California-listed threatened species
ESHA	Environmentally Sensitive Habitat Area
FE	Federally endangered species
FESA	Federal Endangered Species Act
RA	Focused Planning Area
FT	Federally listed threatened species
HCP	Habitat Conservation Plan
LCP	Local Coastal Plan
MBTA	Migratory Bird Treaty Act
MOA	Memorandum of Agreement
NCCP	Natural Community Conservation Plan (State Initiative)
NEPA	National Environmental Policy Act
PE	Proposed for Federal listing as endangered species
PT	Proposed for Federal listing as threatened species
PUMP	Public Use Master Plan
PVPLC	Palos Verdes Peninsula Land Conservancy
RTP	Reserve Trail Plan
SAP	Subarea Plan
SSC	State of California species of special concern
SPA	Specific Planning Area
SPCA	Society for the Preservation of Cruelty to Animals
ssp.	Subspecies
USFWS	United States Fish and Wildlife Service

SECTION 1 INTRODUCTION

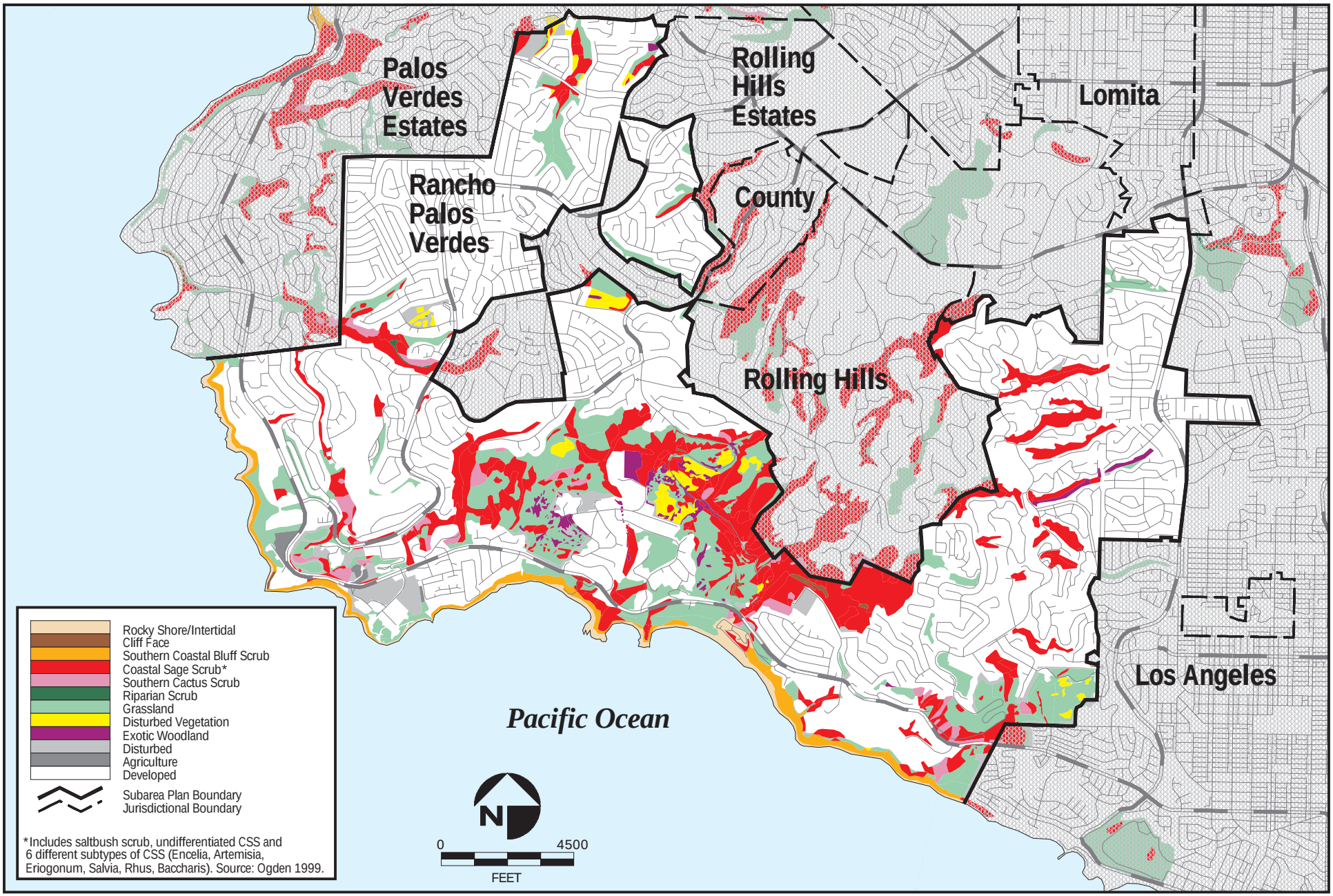
The Natural Communities Conservation Planning Act of 1991 (NCCP, California Fish and Game Code Section 2800, et seq.) provides for the preparation and implementation of large-scale natural resource conservation plans. An NCCP plan must identify and provide for the regional or area-wide protection and perpetuation of natural wildlife diversity while allowing for compatible and appropriate development and growth. An NCCP plan is intended to provide comprehensive management and conservation of multiple species, including but not limited to species listed under state or Federal Endangered Species Acts (ESA).

The NCCP Act is intended to promote cooperation and coordination among public agencies, landowners, and other interested organizations or individuals. The City of Rancho Palos Verdes (City) has entered into an NCCP planning agreement with the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) to develop an NCCP Subarea Plan that will encompass the entire City. The NCCP subregion includes the entire Palos Verdes Peninsula; however, only Rancho Palos Verdes has currently entered into an NCCP planning agreement. The remaining Palos Verdes Peninsula cities have been encouraged to formally participate in the Peninsula NCCP process.

As the lead agency of the Palos Verdes Peninsula NCCP, the City needed to develop a landscape scale database of biological resource and land-use information in a way that would allow for the City and Wildlife Agencies to make informed land-use and conservation decisions for future projects. The primary goal of the Phase I program was to provide a biological analysis of the remaining naturalized open space in and adjacent to the City. At the initiation of Phase I of the Peninsula NCCP program, questions regarding the regional importance of parcels to a potential biological reserve system were outstanding (Ogden 1999). Syntheses of vegetation mapping, sensitive-species distributions and their potential habitat, and the preliminary development of alternative reserve designs were the primary focus of the Phase I effort (Figures 1-1 and 1-2). Three alternatives reserve designs were developed to span the range of potential designs that are biologically appropriate. Alternatives A and B were rejected for a variety of reasons and the City's Alternative C was initially a compromise between the other two alternatives.

The Phase II program refined the City's alternative reserve design and the development of the draft Subarea Plan for agency and public review and comment. Based on extensive discussions with the Wildlife Agencies and the NCCP Rancho Palos Verdes working group and evaluations of potential development on the largest properties supporting natural vegetation, the City has decided to emphasize acquisition of key private properties and conservation of existing habitats on City-owned lands as the primary form of conservation.

Habitat restoration of disturbed areas in conserved areas will be a secondary form of conservation, with a required minimum level of restoration and enhancement to be accomplished each year. Having a restoration program in place will allow additional restoration to be accomplished as additional funding sources are identified. The Palos Verdes Peninsula Land Conservancy (PVPLC) will be the Habitat Manager for the Rancho Palos Verdes Habitat Reserve. A significant portion of the undeveloped lands in Rancho Palos Verdes support nonnative plant communities that, pending available funds, will be restored to native plant communities to increase the local habitat carrying capacity of selected covered species. The restoration potential of these degraded lands was assessed during the Phase I program to allow for prioritization of restoration efforts within the context of the proposed reserve design.



URS TAIC

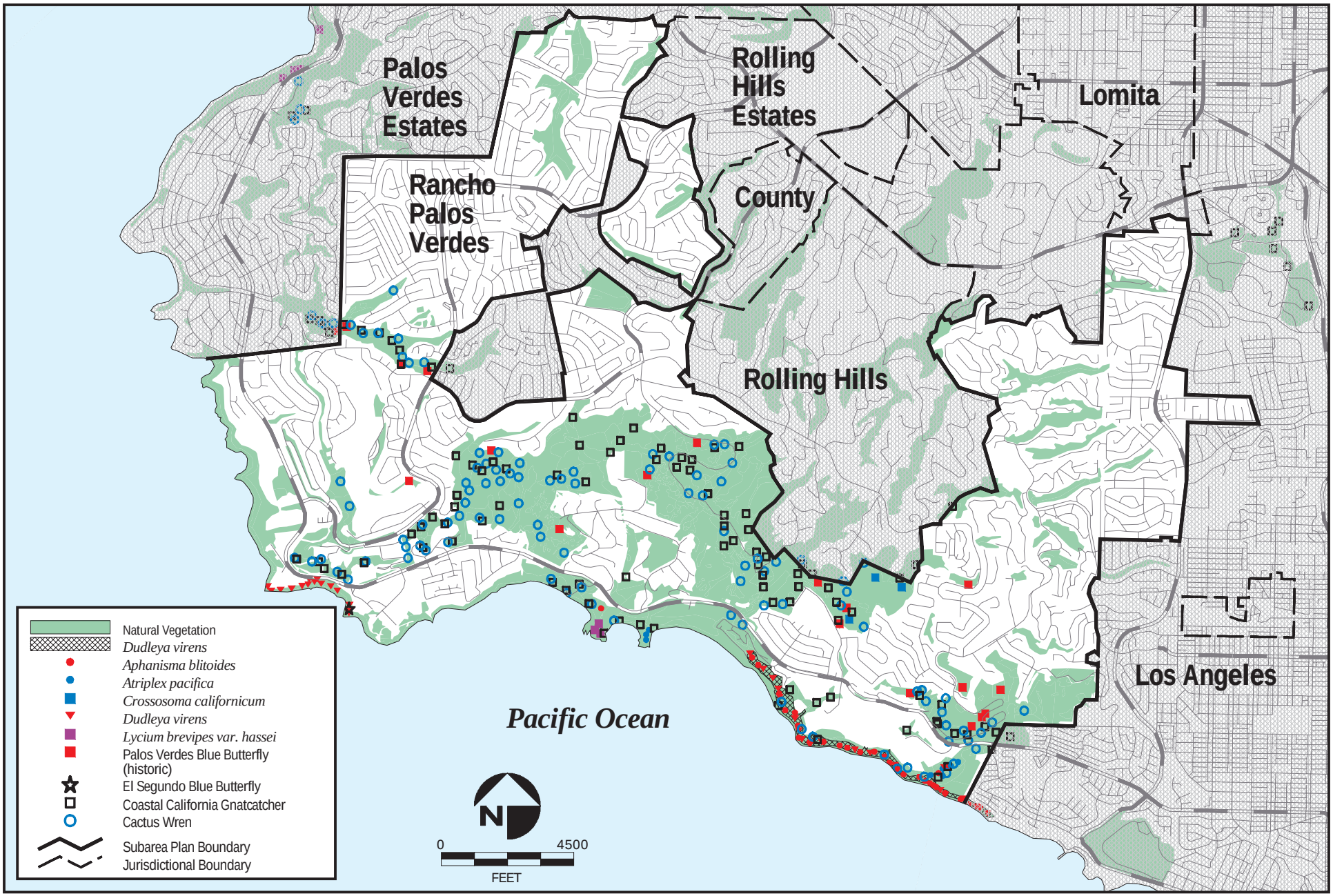
Natural Vegetation of Rancho Palos Verdes

FIGURE

1-1

/gis/projects/mios/rpv/plots/figures/sap_figs.aml

03/26/04



URS TAIC

Covered Species Distributions

FIGURE 1-2

/gis/projects/mios/rpv/plots/figures/sap_figs.aml

06/24/04

1.1 PURPOSE AND NEED

The City of Rancho Palos Verdes (City) NCCP Subarea Plan (Subarea Plan) has been prepared to maximize benefits to wildlife and vegetation communities while accommodating appropriate economic development within the city and region (Figure 1-1) pursuant to the requirements of the Natural Communities Conservation Planning Act of 1991 (NCCP, California Fish and Game Code Section 2800, *et seq.*). This Subarea Plan provides for the comprehensive management and conservation of multiple species, including but not limited to species protected under the State or Federal Endangered Species Act (ESA).

An important benefit of this Subarea Plan is that the habitat conservation and management actions will compensate for the impacts of current and future development needs within the city. As intended by the NCCP Act, implementation of this Subarea Plan will facilitate cooperation and coordination among public agencies, landowners, and other interested organizations.

This Subarea Plan identifies habitat to be conserved in the City's proposed Reserve, the mechanism for this conservation (e.g., acquisition and easement), and interim protection measures for habitats not expected to be ultimately conserved. This Subarea Plan establishes actions the City will take to obtain ESA Section 10(a) take authorizations for covered species, including current and future management, maintenance, and compatible uses (e.g., passive recreation) of conserved lands, as well as funding for habitat management. The process for mitigating development on habitat not conserved, and how permits and take authorizations for covered species will be obtained, is also identified. These considerations form the basis for developing an Implementing Agreement with the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) (Wildlife Agencies). In this manner, the authority for infrastructure development and land-use decisions is to be retained by the City, and will be enhanced by its ability to self-issue endangered species take authorizations.

Through implementation of this Subarea Plan, the City has considered regional planning before conducting site-specific project proposals. In this manner, individual project impacts can be analyzed in a regional context. The City will coordinate with adjacent jurisdictions to maximize shared conservation benefits. Although the NCCP subregion includes the entire Palos Verdes Peninsula, the City of Rancho Palos Verdes is currently the only jurisdiction in the subregion to enter into an NCCP planning agreement with the Wildlife Agencies.

The City's primary conservation strategy is to acquire several key privately owned parcels, dedicate selected City-owned lands, and have the Palos Verdes Peninsula Land Conservancy manage this reserve network with the assistance of the City and the Wildlife Agencies. The proposed Reserve is designed to be consistent with NCCP conservation and management standards and guidelines and the issuance criteria for ESA Section 10(a) take authorizations for species covered by the city-wide permit. The Reserve conserves regionally important habitat areas and provides adequate habitat linkages between patches of conserved habitat. Based on a habitat restoration plan to be approved by the Wildlife Agencies, the City and the PVPLC will enhance/restore the most practicable amount of disturbed habitats within the Reserve. To enhance habitat patch size and habitat linkage function (i.e., areas with moderate to high potential for successful restoration), this plan will emphasize habitats directly adjacent to conserved habitat.

1.2 REGULATORY COMPLIANCE OF THE SUBAREA PLAN

1.2.1 Federal

The USFWS has the legal authority to issue permits and enter into Subarea Plan implementing agreements based on completion of the subregional NCCP and pursuant to the ESA, Fish and Wildlife Coordination Act (16 U.S. Code [USC], Sections661to 666c), and Fish and Wildlife Act of 1956 (16 USC Section742(f) et seq.). Section 10(a)(l)(B) of the ESA, 16 USC Section1539(a)(1)(B), expressly authorizes the USFWS to issue a Section l0(a) permit to allow incidental take of species listed as threatened or endangered under the ESA. The legislative history of 10(a)(l)(B) clearly indicates that Congress also intended that the USFWS would approve Habitat Conservation Plans (HCP) that protect unlisted species as if they were listed under the ESA, and that in doing so the USFWS would provide Section l0(a)(l)(B) assurances for protection of such unlisted species (H.R. Rep. No. 97-835, 97th Cong., 2d Sess. 30-31, 1982. Conference Report on 1982 Amendments to the ESA). The USFWS routinely approves HCPs that address both listed and unlisted species.

The Secretary of the Interior set forth the "Habitat Conservation Plan Assurances Policy" on August 11, 1994, which became a final rule on February 23, 1998 (Federal Register 63[35]:8859-8873). Also known as the "No Surprises" policy, the policy provides regulatory assurances to holders of HCP incidental take permits.

Approval and implementation of the Subarea Plan will facilitate compliance with Section 10(a)(1)(B) of the Federal ESA. Through this planning process, the City will obtain ESA Section 10(a) incidental take authorizations. A "take" includes the direct killing, harming, or harassing of a species, or destruction of habitat that may be important for the species' survival or recovery. The take permit authorizes take by the City as long as it does not violate the terms and conditions established by the City's Implementing Agreement with the Wildlife Agencies. This Subarea Plan is the basis for this agreement.

The Subarea Plan also provides the City the benefits of the Section 4(d) rule associated with the listing of the threatened coastal California gnatcatcher. This special rule under Section 4(d) of the ESA, streamlines the Wildlife Agencies permitting for development in CSS habitat areas that does not preclude regional conservation options. This rule allows for a limited amount of incidental loss of CSS habitat while this Subarea Plan is being developed and processed.

Permits issued pursuant to this Subarea Plan do not include Army Corps of Engineers (ACOE) 404 permit, 401 water quality certification, or CDFG 1602 permits for impacts to wetlands. This Subarea Plan, however, shall largely fulfill the requirements for endangered species consultation relative to wetland permitting. This Subarea Plan provides the basis for ESA Section 7 consultation and issuance of a Biological Opinion by the USFWS for ACOE 404 permits within this Subarea Plan area. Thus, approval of this Subarea Plan should streamline the endangered species consultation process for wetland permits.

1.2.2 State

The Natural Communities Conservation Planning Act (NCCP Act; Section 2800 et seq. of the California Fish and Game Code) establishes the NCCP program "to provide for regional protection and perpetuation of natural wildlife diversity while allowing compatible land use and appropriate development and

growth." The NCCP Act calls for the preparation of subregional and Subarea Plans that address habitat conservation and management on an ecosystem basis rather than one species or habitat at a time. The CDFG and California Resources Agency prepared the "Southern California Coastal Sage Scrub NCCP Process Guidelines" (November 1993). Based on the definition established by the guidelines and the precedent established through acceptance of subregional plans prepared by local general purpose agencies, this Subarea Plan meets the requirements and standards of the NCCP program. Approval and implementation of the Rancho Palos Verdes Subarea Plan will secure City compliance with and be consistent with, Section 2081 of the California Endangered Species Act (CESA) and Section 2835 of the NCCP Act in the California Fish and Game Code.

In addition to Fish and Game regulations, this plan is also intended to be consistent with the City's Local Coastal Plan and California Coastal Act regulations (California Code of Regulations Title 14, Section 30000, *et seq.*) for lands within the Coastal Zone.

1.2.3 Local

Implementation of this Subarea Plan will rely on the City's land-use authority provided through General Plan policies, Local Coastal Program, zoning ordinances, community plan amendments, and environmental land-use regulations.

1.3 SPECIES FOR WHICH TAKE AUTHORIZATIONS ARE REQUESTED

This Subarea Plan is intended to provide for the take of covered species and their habitats associated with developments. Take authorizations are requested by the City for the following federally protected species: endangered Palos Verdes blue butterfly (*Glaucopsyche lygdamus palosverdesensis*), endangered El Segundo blue butterfly (*Euphilotes battoides allyni*), threatened coastal California gnatcatcher (*Polioptila californica californica*), and endangered Lyon's pentachaeta (*Pentachaeta lyonii*). Lyon's pentachaeta is the only species listed by the CDFG under the State ESA currently known to occur near this Subarea Plan Area. Take authorization is requested for eight additional covered species not currently listed under the State or Federal ESA that have specific known locations in the city and would have sufficient levels of conservation under this Subarea Plan. These species include the California Native Plant Society (CNPS) Lists 1B and List 4 plants and the cactus wren (*Campylorhynchus brunneicapillus*), a State Species of Concern (SSC) that is also a NCCP focal species. Species covered by this Subarea Plan are identified in Table 1-1.

Table 1-1
Proposed Covered Species List for
the RPV Subarea Plan

Status	Common Name	Scientific Name
CNPS List 1B	Aphanisma	*Aphanisma blitoides*
CNPS List 1B	South Coast Saltscale	*Atriplex pacifica*
CNPS List 4	Peirson's Morning-glory	*Calystegia peirsonii*
CNPS List 1B	Southern Tarplant	*Centromadia parryi* ssp. *australis*
CNPS List 4	Catalina Crossosoma	*Crossosoma californicum*
CNPS List 1B	Bright Green Dudleya	*Dudleya virens*
CNPS List 1B	Santa Catalina Island Desert-thorn	*Lycium brevipes* var. *hassei*
FE, CE, CNPS List 1B	Lyon's Pentachaeta	*Pentachaeta lyonii*
CNPS List 4	Woolly Seablite	*Suaeda taxifolia*
FE	Palos Verdes Blue Butterfly	*Glaucopsyche lygdamus palosverdesensis*
FE	El Segundo Blue Butterfly	Euphilotes battoides allyni
FT	Coastal California Gnatcatcher	*Polioptila californica californica*
SSC	Cactus Wren	*Campylorhynchus brunneicapillus*

FE – Federally endangered
FT – Federally threatened
CE – State of California endangered
SSC – State Species of Concern
CNPS List 1B – Plants, rare, threatened, or endangered in California and elsewhere
CNPS List 4 – Plants of limited distribution -- a watch list

SECTION 2 DESCRIPTION OF RPV SUBAREA

2.1 REGIONAL SETTING

The 13.6-square-mile coastal community of Rancho Palos Verdes is on the southwest side of Palos Verdes Peninsula (Peninsula). It is bounded on the north by Rolling Hills, Rolling Hills Estates and Palos Verdes Estates and to the east by San Pedro with the high-density urbanized core of South Bay communities farther to the north(Figure 2-1).

Beginning in the early 1900s, the Peninsula enjoyed prosperity as a cattle ranch and rich farming area. By 1913, the residential future of Palos Verdes was envisioned as the "most fashionable and exclusive residential colony" in the nation. The 1940s saw 300 acres of the northern Peninsula used for mining of diatomaceous earth. Municipal incorporations occurred in 1939 and 1957, with the founding of Palos Verdes Estates, Rolling Hills and Rolling Hills Estates.

Residents in the remaining unincorporated area soon became aware that the only way to preserve the environment and to gain control over local zoning issues was to incorporate as a fourth city. The drive for incorporation of the fourth city intensified in February 1970 with the election finally held on August 28, 1973. An overwhelming majority of 5 to 1 voted in favor of incorporation of Rancho Palos Verdes (City). All citizens elected to the first City Council ran on similar platforms of low-density land uses, minimum taxes, and responsiveness to residents.

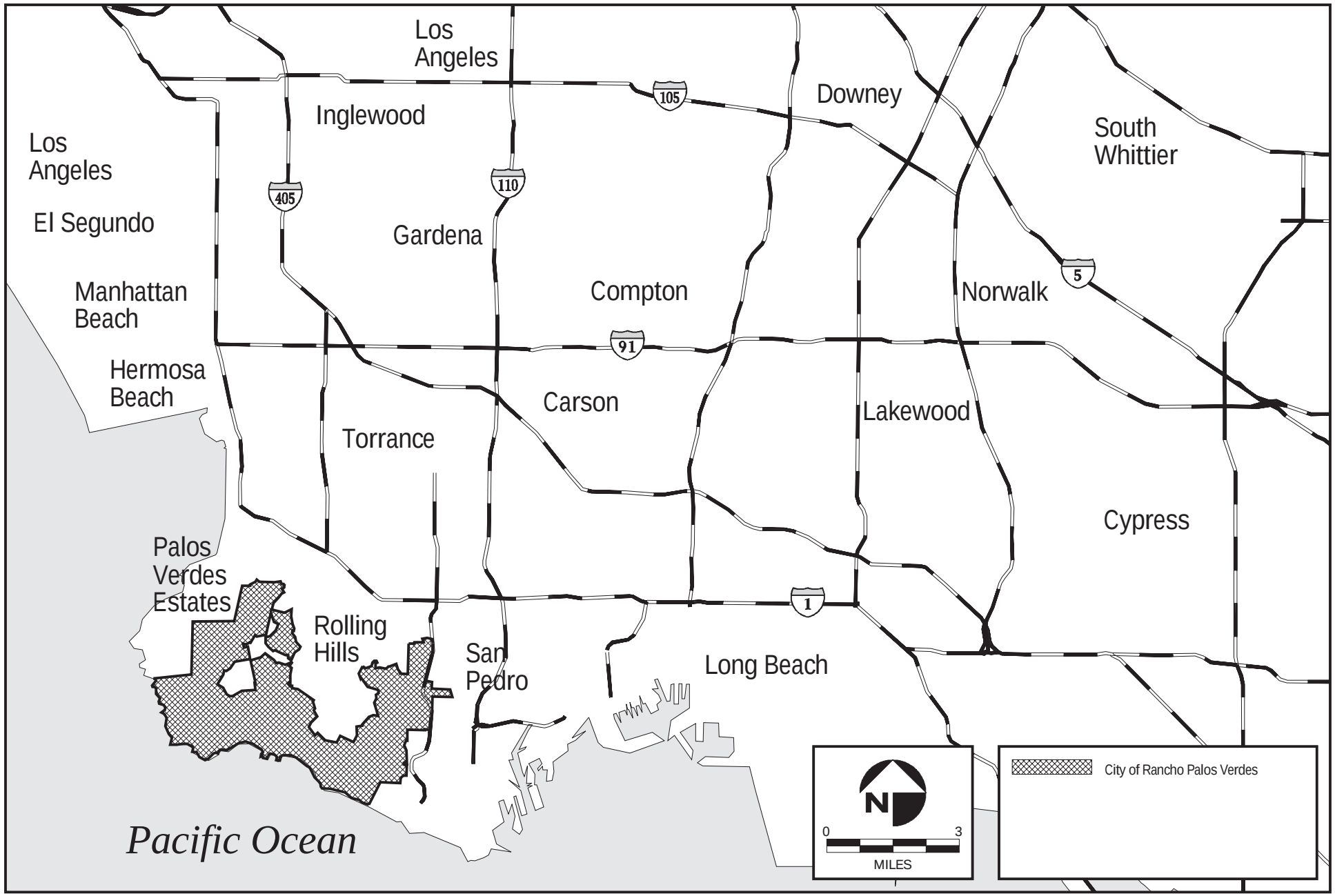
These principles still guide the City today with the resulting land uses dominated by single family detached dwellings, scattered higher density residential, and neighborhood-oriented commercial. Industrial activities are excluded on the Peninsula (Figure 2-2). The 40,000 people comprising the bedroom community are predominantly employed at Los Angeles harbor and in the space and high technology industries in nearby cities.

2.1.1 City of Rancho Palos Verdes Municipal Code

As a regulatory document, the Municipal Code provides another layer of environmental protection (either directly or indirectly) to lands located in the preserve. Each cited section of the Code in effect at the time of adoption of the Subarea Plan by the city addresses a different aspect of environmental protection.

Title 3, Chapter 20, Section 010 establishes an Environmental Excise Tax:

> In that construction of new residential living units and of new commercial or industrial structures within the city creates an immediate and present danger to the existing quality of life and ecology of the city and threatens to contaminate and pollute the air, water and land within and surrounding the city…[therefore] the imposition and collection of a special, nonrecurring tax upon the occupancy and construction of new residential dwelling units and of new commercial and industrial buildings within the city is the most practical and equitable method of providing revenues with which the city may meet and deal with and solve the serious ecological and environmental problems created by the occupancy and construction of such facilities within the city.



FIGURE

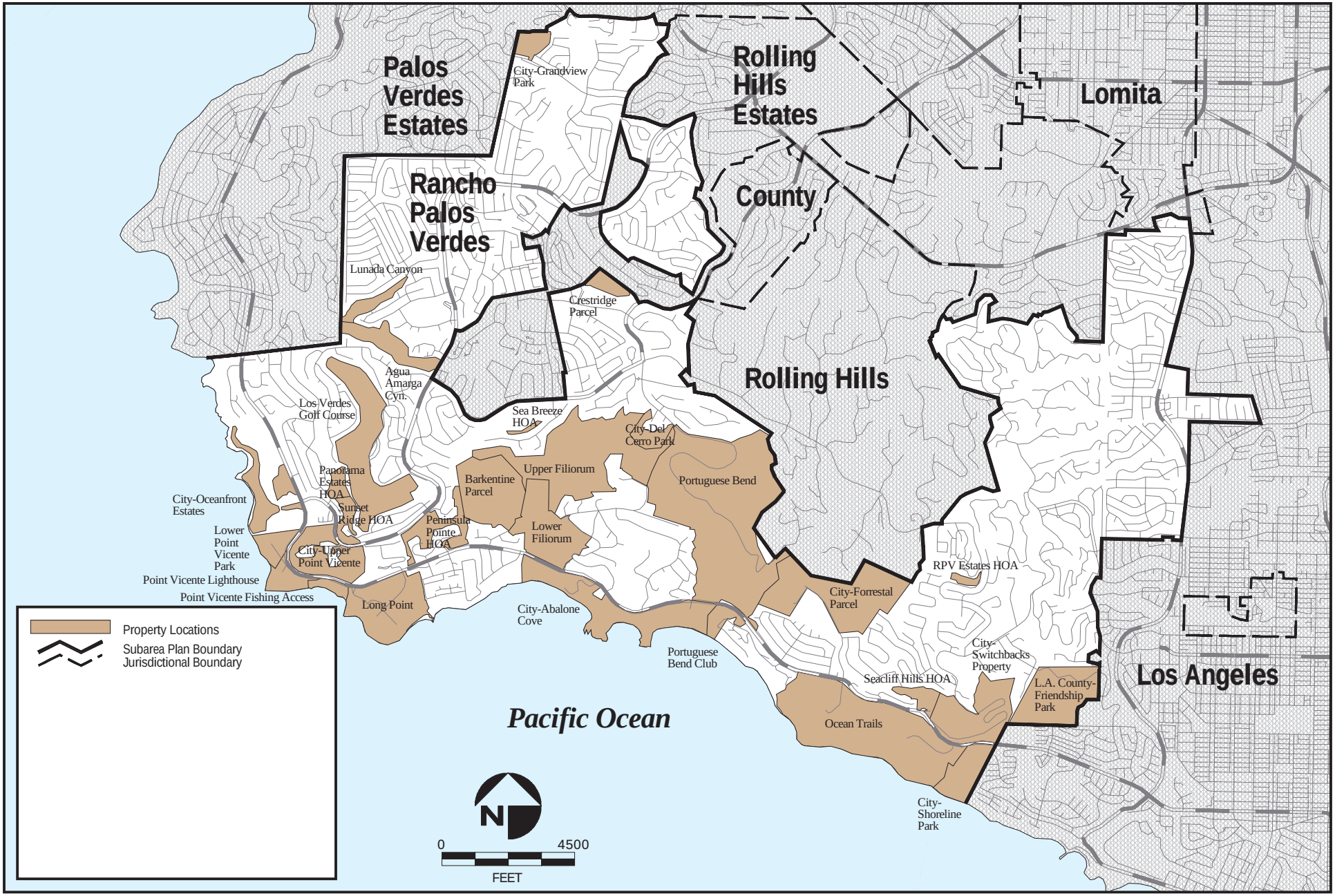
2-1

URS TAIC

Regional Vicinity Map

/gis/projects/mios/rpv/plots/figures/regional.aml

03/26/04



FIGURE

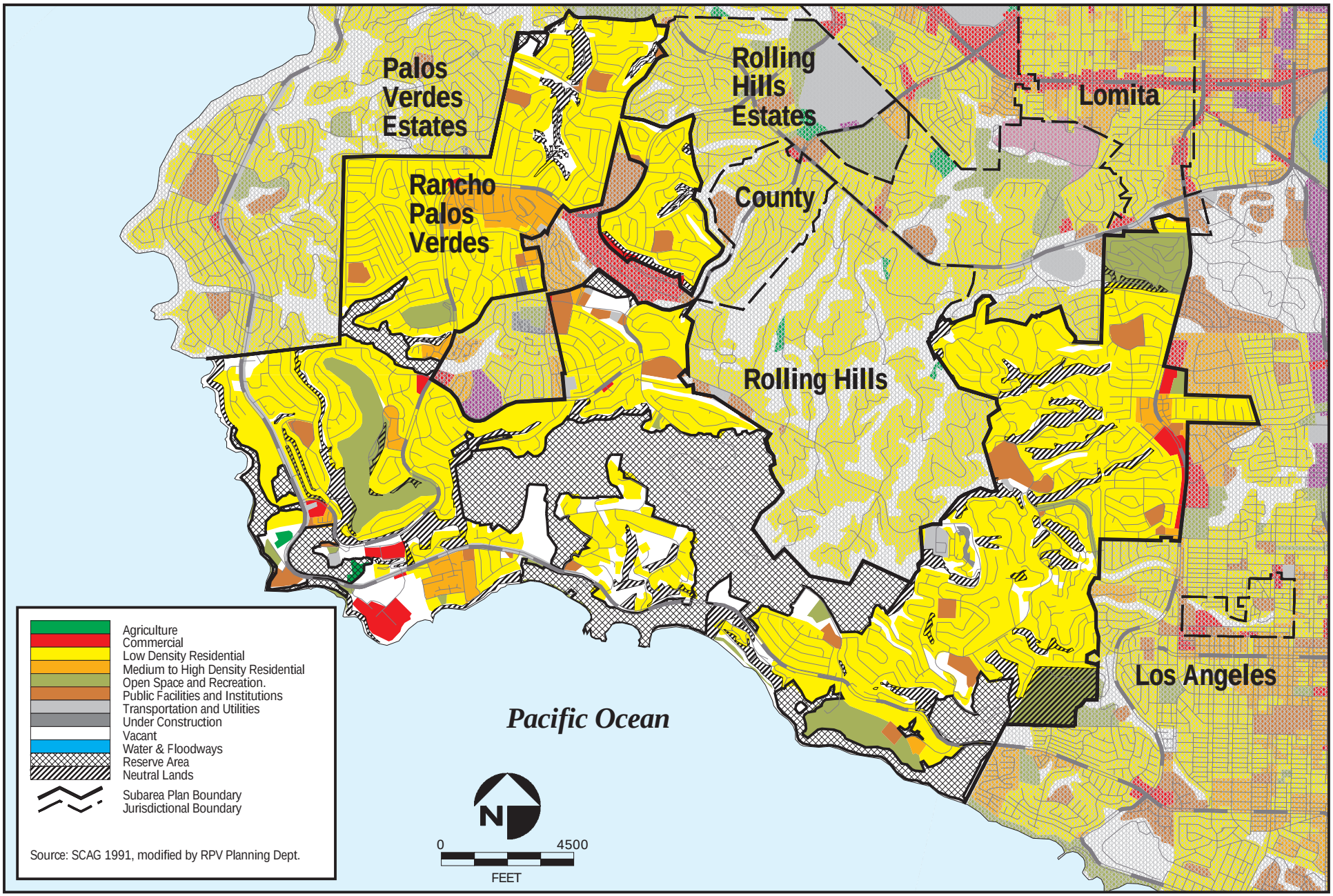
2-2

URS TAIC

Planning Area Map

/gis/projects/mios/rpv/plots/figures/sap_figs.aml

07/16/04



FIGURE

2-3

URS TAIC

Existing Land Use within Rancho Palos Verdes

/gis/projects/mios/rpv/plots/figures/sap_figs.aml

07/16/04

Title 13 Chapter 10, Section 010 – 070:

Establishes standards and procedures for reducing pollutants in storm water discharges into preserve areas to the maximum extent practicable by; regulating illicit connections and illicit discharges and thereby reducing the level of contamination of storm water and urban runoff into the municipal storm water system; and regulating non-storm water discharges to the municipal storm water system; and setting forth requirements for the construction and operation of certain commercial development, new development and redevelopment and other projects) that are intended to ensure compliance with the storm water mitigation measures prescribed in the current version of the Standard Urban Storm Water Mitigation Plan (SUSMP) approved by the Regional Water Quality Control Board.

Title 15 Chapter 34, Section 010:

Establishes standards and procedures for the design, installation and management of water-conserving landscapes thereby reducing problems of over-watering and the resultant change in hydrologic regimes in adjacent more xeric preserve lands.

Title 17, Chapter 32, Section 010:

Establishes open-space hazards districts that provide the regulatory foundation for many lands located in the preserve.

Title 17, Chapter 32, Section 020:

Requires that lands [such as those found in the preserve] be placed in the open-space hazard district when the use of said land would endanger the public health, safety and welfare. Open-space hazard districts shall include the following:

A. Areas where the existing natural slope exceeds 35 percent, areas experiencing downslope movement, areas unstable for development, areas where grading or development of the land may endanger the public health and safety because of erosion or flooding, and the ocean bluffs; and

B. Areas subject to flooding or inundation from stormwater.

Title 17, Chapter 32, Section 030

Stipulates that land in open-space hazard districts in the preserve may be used (provided, that the applicable natural overlay control district performance criteria is satisfied) for:

The preservation of areas of outstanding scenic, geologic, historic or cultural value; the preservation of natural resources, including but not limited to plant and animal life; and the conservation of water supply land, including but not limited to watershed and groundwater recharge areas.

Title 17, Chapter 40, Section 040

Establishes the natural overlay control district to:

1. Maintain and enhance land and water areas necessary for the survival of valuable land and marine-based wildlife and vegetation; and

2. Enhance watershed management, control storm drainage and erosion, and control the water quality of both urban runoff and natural water bodies within the city.

This overlay district identifies the following lands and waters included in this district:

1. All lands identified in the natural environment element of the general plan under category RM-5 (Old Landslide Area) and all lands identified in the coastal-specific plan under categories CRM-3 (Hazard), CRM-4 (Marginally Stable) and CRM-5 (Insufficient Information);

2. All lands identified in the natural environment element of the general plan under category RM-6 (Hydrologic Factors); and all lands identified in the coastal-specific plan under categories CRM-7 (Flood/Inundation Hazard) and CRM-8 (Hydrologic Factors), including all identified major and minor natural drainage flows, storm channels and storm drains existing on April 25, 1975, the effective date of Ordinance No. 78 of the city, storm channels and drains proposed after that date, and outfall areas;

3. All water areas identified in the natural environment element of the general plan under category RM-7 (Marine Resource), including all intertidal marine resources, tide pools, and the ocean waters and bottom within the projected boundaries of the city to the legally established, 3-mile offshore limit, and all ocean beaches, bluffs and cliffs;

4. All lands identified in the natural environment element of the general plan under category RM-8 (Wildlife Habitat) and lands identified in the coastal-specific plan under category CRM-9 (Wildlife Habitat);

5. All lands identified in the natural environment element of the general plan under category RM-9 (Natural Vegetation) and all lands identified in the coastal-specific plan under category CRM-10 (Natural Vegetation), also including such areas as are within category RM-8 (Wildlife Habitat) described in this section; and

6. All such lands and water areas that may be added to any of the above categories, pursuant to Chapter 17.68 (Zone Changes and Code Amendments).

These lands are to be maintained in compliance with the following criteria:

1. Cover or alter the land surface configuration by moving earth on more than 10 percent of the total land area of the portion of the parcel within the district, excluding the main structure and access;

2. Alter the course, carrying capacity or gradient of any natural watercourse or drainage course that can be calculated to carry over 100 cubic feet per second once in 10 years;

3. Fill, drain or alter the shape or quality of any water body, spring or related natural spreading area of greater than 1.0 acre;

4. Develop otherwise permitted uses within 50 feet of the edge of a watercourse or drainage course that can be calculated to carry more than 500 cubic feet per second once in 10 years;

5. Clear the vegetation from more than 20 percent of the area of the portion of the parcel within the district, or remove by thinning more than 20 percent of the vegetation on the parcel, excluding dead material and excluding brush-clearance activities necessary for fire protection;

6. Use herbicides to control or kill vegetation;

7. Remove vegetation within a designated wildlife habitat area;

8. Cover more than 20 percent of a parcel known to contain sand, gravel or other materials that may aid in natural beach replenishment;

9. Alter the characteristics of the surface soils to allow surface water to stand for over 12 hours; make the soil inadequate as a bearing surface for pedestrian, equestrian, bicycle or motorized emergency vehicle access; make the soil unstable and subject to sliding, slipping, or water or wind erosion;

10. Result in chemicals, nutrients or particulate contaminants or siltation being discharged, by stormwater or other runoff, into a natural or manmade drainage course leading to the ocean or any other natural or manmade body of water;

11. Propose a sewer or wastewater disposal system involving the spreading, injecting or percolating of effluent into the ocean or into the soil of a natural or manmade drainage course, if alternative locations are available;

12. Alter, penetrate, block or create erosion or significant change of the area within 100 feet of an ocean beach or top edge of an ocean bluff or cliff;

13. Alter, penetrate, block or create erosion on the shoreline measured at mean high tide or alter the characteristics of the intertidal marine environment;

14. Alter, dredge, fill or penetrate by drilling, the ocean floor within the jurisdiction of the city; or

15. Alter any land area that has previously experienced massive downslope movement, to reactivate or create conditions that could lead to the reactivation of downslope movement.

Title 17, Chapter 40, Section 050:

Establishes the socio-cultural overlay control district to provide protection for archaeological and paleontological sites.. Development in the socio-cultural overlay control district shall not:

1. Result in the blockage or impeding of views and controlled physical access by easement or passage to land and water areas, as well as improvements, covered by this chapter when such views or access are deemed critical to the historical, archaeological, paleontological, scientific, or educational value of the designated site, areas, or improvement.

2. Be related to development of otherwise permitted uses in lands adjacent to and surrounding areas in the district in such a way as to prevent proper functioning of such permitted uses without significant exception to these performance standards, thus tying this district to other uses in a nonseverable manner.

3. Result in modifications to terrain, vegetation, or other natural features that serve to protect designated archaeological and paleontological sites and sensitive areas from the effects of wind and other climatic factors, including natural or manmade water runoff, or that would similarly alter adjacent lands within 200 feet of the boundaries of lands covered by this district in such a way as to render lands within the district susceptible to such impacts.

4. Result in the use or conversions of such designated historical, archaeological, paleontological, scientific, or educational lands, water, or improvements as commercial profit-making ventures open to the general public without application of specific approval and control by the City over hours, types, intensities, purposes, fees, and other operations of such areas or facilities, including organized tours by motor vehicle, bicycle, pedestrian, or boat.

5. Result in the provision of inadequate security protection against vandalism or uncontrolled public exposure to archaeological or paleontological sites under excavation or study, historic structures, or areas undergoing renovation or maintenance, or scientific or educational research being conducted on site.

Title 17, Chapter 40, Section 060

Establishes the urban appearance overlay control district (OC-3) to:

1. Preserve, protect and maintain land and water areas, structures and other improvements that are of significant value because of their recreational, aesthetic and scenic qualities, as defined in the visual aspects portion of the general plan and the corridors element of the coastal-specific plan;

2. Preserve, protect and maintain significant views and vistas from major public view corridors and public lands and waters within the city that characterize the city's appearance as defined in the visual aspects portion of the general plan and the corridors element of the coastal-specific plan;

3. Ensure that site planning, grading and landscape techniques, as well as improvement planning, design and construction will preserve, protect and enhance the visual

character of the city's predominant land forms, urban form, vegetation and other distinctive features, as identified in the general plan and the coastal-specific plan; and

4. Preserve, protect and maintain significant views of and from slope areas within the community that characterize the city's dominant landform appearance.

The following lands, water and improvements shall be included in this district and shall be maintained in compliance with the criteria of this section, unless otherwise excluded:

1. All visual accents, view corridors, adjacent lands, affecting corridors and viewing areas, as generally defined by the general plan and the coastal-specific plan.

The following criteria shall be used in assessing any and all uses, developments and alterations of lands included in this district, and shall provide that these actions not:

1. Result in the change in elevation of the land or construction of any improvement that would block, alter or impair major views, vistas or viewsheds in existence from designated view corridors, view sites or view points at the dates of adoption of the general plan and the coastal-specific plan in such a way as to materially and irrevocably alter the quality of the view as to arc (horizontal and vertical), primary orientation or other characteristics;

2. Cause the removal or significant alteration of structural focal points and natural focal points, as defined and designated in the general plan;

3. Cause the mass and finish grading or any topographic alteration that results in uniform, geometrically terraced building sites that are contrary to the natural land forms, which would substantially detract from the scenic and visual quality of the city, which would be contrary to the grading criteria contained in Section 17.76.040 (Grading permit) or that would substantially change the natural characteristics of a drainage course, identified natural vegetation or wildlife habitat area;

4. Create site plans, building or other improvement designs that would result in other significant changes to the natural topography or that would prevent or hinder the use of naturalized minimum grading techniques to restore an area to its natural contours;

5. Grade any area or remove vegetation from such an area without replacing such areas with properly drained, impervious surfaces or suitable vegetation within six months of the beginning of such activities;

6. Propose the use of any vegetative materials incompatible with the visual, climatic, soil and ecological characteristics of the city or that require excessive water;

7. Create a cut or embankment with a slope greater than 3 feet horizontal to 1 foot vertical (3:1) and more than 15 feet in total elevation that is adjacent to a publicly maintained

right-of-way or area unless an agreement with the city for the vegetation and perpetual maintenance of such slope at no cost to the city is executed and bonded; and

8. Result in changes in topography or the construction of improvements that would block, alter or otherwise materially change significant views, vistas and viewshed areas available from major private residential areas of the community that characterize the visual appearance, urban form and economic value of these areas.

Title 17, Chapter 56, Section 010

Sets tolerance levels for adverse environmental effects created by any use or development of land, including dust control, construction fencing, and construction site maintenance.

Title 17, Chapter 70, Section 010

Establishes the site plan review procedure enabling the director and/or planning commission to check development proposals for conformity to the above environmental protections.

The above Ordinances address a wide range of environmental protection. The cumulative effect of these Ordinances is to safeguard and enhance the natural lands included in this Subarea Plan.

2.1.2 Other City Ordinances

Other City of Rancho Palos Verdes ordinances, including the Grading and Subdivision Ordinance, address protection of resources.

- **Grading Ordinance.** All grading exceeding 20 c.y., clearing, brushing, or grubbing of natural or existing grade in the City of Rancho Palos Verdes, including sensitive habitats (e.g., CSS) is subject to the Grading Ordinance. Permits are reviewed for compliance with established controls. Applications for a grading permit can be modified or denied to ensure environmental quality. Erosion-control guidelines require protection of environmentally sensitive areas such as wetlands.
- **Subdivision Ordinance.** The Subdivision Ordinance complements the City of Rancho Palos Verdes General Plan and Zoning Ordinance. CEQA review is required for all subdivisions. A project can be modified or denied if it is found to cause substantial damage or substantially and unavoidably injure fish or wildlife or their habitat. Additionally, all subdivisions must be found consistent with the General Plan and Zoning Ordinance.
- **Stormwater Discharge Ordinance.** The intent of the Stormwater Discharge Ordinance is to protect and enhance the quality of the watercourses, water bodies, and wetlands in the city and region. A Stormwater Pollution Prevention Plan (SWPPP) is required before major construction activity and is used as the tool to review proposals for compliance with established guidelines to reduce or eliminate pollution. If necessary, the City Engineer may require a SWPPP for business-related activities not already operating under such a plan.
- **Fire Protection.** The City of Rancho Palos Verdes has adopted the Los Angels County Fire Code which, among other things, establishes regulations for the clearance of brush and combustible growth. The Fire Marshall determines the required clearance width of the fuel management area

for existing and proposed development. The City consults with the Fire Marshall during the environmental review of proposed projects.

2.1.3 City of Rancho Palos Verdes General Plan

The City's General Plan, adopted on June 26, 1975, is organized into the following elements, all of which are relevant to this Subarea Plan:

- *Natural Environment Element.* This element is a composite of areas requiring considerations of public health and safety and preservation of natural resources.
- *Socio/Cultural Element.* This element identifies the City's goals and policies for preservation of its paleontological, historical, and archaeological resources and for social, service, and cultural organizations.
- *Urban Environment Element.* This element addresses concerns for city areas set aside for development, with consideration for natural environmental concerns. This element also provides goals and policies for circulation, noise, visual aspects, public services, and infrastructure.
- *Land Use Plan.* According to the General Plan, the City's Land Use Plan is a composite of the other elements and focuses on the City's overall development, conservation, and fiscal balance. According to the Land Use Plan, Overlay Control Districts are incorporated into the General Plan to further reduce impacts that could be induced by proposed and existing development in sensitive areas. Major disruptive treatment of these land areas would alter features, including significant natural, urban, and socio/cultural characteristics, that form the city's character and environment.

2.1.4 Coastal-Specific Plan

The Coastal Specific Plan (CSP) was adopted by the RPV City Council on December 19, 1978. The CSP provides a series of polices to guide development, as well as protect natural features in the Coastal Zone along the 7.5 miles of coastline within the City's jurisdiction. Although this Subarea Plan contains focused policies directed toward native lands management, the CSP clearly contains similar elements thereby enforcing and complementing the goals of the Subarea Plan.

The plan identifies natural habitat "*which is not only vital to local animal life, but is the key to the migratory species*" (Page N-1) while acknowledging that the "*Peninsula has already experienced the lowest ebb in habitat quality*" and notes that "*Recent programs are providing indicators that this habitat is recovering*" (Page N-2).

To ensure this successful "recovery," the following policies address the protection of these valuable resources while providing for the public health, safety, and welfare.

- Page N-45 through N-47 of the local CSP identifies 20 polices addressing the Natural Environment.
  - **Policy 1** allows only low intensity activities within the coastal resource management districts.
  - **Policy 2** requires any development within the coastal resource management districts to provide geotechnical engineering studies to assess soil stability.
  - **Policy 3** prohibits new permanent structures within extreme hazard areas of the coastal resource management district.
  - **Policy 4** encourages non-residential structures (i.e., Recreational Facilities) within coastal resource management districts.
  - **Policy 5** calls for stringent site design and maintenance criteria for areas with high wild-land fire hazard.
  - **Policy 6** prohibits grading activities or structures within areas having flood or inundation hazards.
  - **Policy 7** prohibits siltation and implements non-point discharge in the resource management districts.
  - **Policy 8** requires disclosure and mitigation for impacts to wildlife habitats.
  - **Policy 9** encourages revegetation within coastal resource management districts.
  - **Policy 10** protects, enhances and encourages restoration of marine resources.
  - **Policy 11** encourages the establishment of marine reserves.
  - **Policy 12** encourages acquisition of rights over offshore tidelands.
  - **Policy 13** encourages the support of activities of other agencies concerned with marine water quality.
  - **Policy 14** encourages the support of activities of other agencies concerned with avoiding thermal discharge in marine waters.
  - **Policy 15** requires mitigation measures, where possible, to mitigate.
  - **Policy 16** encourages increased enforcement activity of the California Department of Fish and Game.
  - **Policy 17** encourages the exploration of additional enforcement activities to protect the marine environment.
  - **Policy 18** encourages climatic sensitive site and structure design.
  - **Policy 19** supports monitoring of oil and gas extraction activities.
  - **Policy 20** encourages restoration of marine environments.

The cumulative effect of these policies is to safeguard and enhance the natural lands covered in this Subarea Plan.

- Page S/C-7 contains policies addressing Social/Cultural concerns:
  - **Policy 1,** although protecting cultural resources, will also as a secondary benefit protect habitat associated with Native American sites.
- Page U-67 contains policies addressing the urban environment:
  - **Policy 6** requires existing trails (where allowed in the reserve) to be left in their natural state.
  - **Policy 7** restricts coastal access points thereby prohibiting habitat destruction via trail "cutting."
  - **Policy 8** requires sewer pump stations to be minimized thereby protecting native habitat.
- Page C-16 contains the major policy protecting Natural Corridors defined as slopes above 35 percent and all areas having habitat designated as sensitive to human intrusion, both terrestrial and marine.

The CSP then identifies site-specific policies for subregions within the Plan's jurisdiction.

- Page S 1-10 contains the following policies for Subregion One:
  - **Policy 1** requires that the major drainage course in this subregion be protected.
  - **Policy 2** requires native landscaping in developed areas to be beneficial to migratory and resident bird species.
  - **Policy 3** calls for the establishment marine reserves.
  - **Policy 5** calls for the coordination in the design and placement of open-space areas.
  - **Policy 6** ensures that flood control improvements do not affect natural habitat.
- Page S 2-15 contains the following policies for Subregion Two:
  - **Policy 1** requires native landscaping in developed areas to be beneficial to migratory and resident bird species.
  - **Policy 2** calls for the establishment marine reserves.
  - **Policy 3** encourages restoration of kelp beds off Point Vicente.
  - **Policy 5** ensures that noise and lighting impacts are mitigated at the point of origin.
  - **Policy 7** allows for the upgrading of Marineland, as long as there are no adverse impacts to surrounding areas.
  - **Policy 9** restricts access to fragile beach areas.

- Page S 3-14 contains the following policies for Subregion Three:
  - **Policies 1 and 2** encourage the use of Transfer of Development Rights (TDRs) relocate development away from coastal bluffs.
- Page S 4-14 contains the following policy for Subregion Four:
  - Policy 2 requires development abutting natural drainage areas to maintain that character of the watercourse.
- Page S 5-16 contains the following policy for Subregion Five:
  - **Policy 1** ensures that flood control improvements within the subregion will be carried out in a manner consistent with preserving natural habitats.
  - **Policy 3** encourages that a carrying capacity for beaches be established so that impacts to fragile marine environments are minimized.
- Page S 6-12 contains the following policy for Subregion Six:
  - **Policy 1** requires that that native vegetation of the two major canyons in the areas is protected.
  - **Policy 2** encourages the establishment marine reserves to protect fragile marine environments.
  - **Policy 4** ensures that flood control improvements are carried out in manner consistent with the preservation of natural habitat.
  - **Policy 5** prohibits new structures in hazard areas.
- Page S 7-12, 13 contains the following policy for Subregion Seven:
  - **Policy 1** requires that natural vegetation be maintained and protected in major drainage courses.
  - **Policies 2 and 3** initiate and support the establishment marine reserves to protect fragile intertidal marine environments.
  - **Policy 9** requires sewer pump stations to be minimized thereby protecting native habitat.
  - **Policy 10** requires that the natural drainage course in this subregion be protected and where flood control is necessary, sensitive to the natural environment.
  - **Policy 12** prohibits dirt fill for traversing identified drainage courses.

The above policies address a wide range of environmental protection. The cumulative effect of the Coastal Specific Plan is to safeguard and enhance the natural lands covered by this Subarea Plan.

2.2 BIOLOGICAL RESOURCES

2.2.1 Vegetation Communities

The initial vegetation mapping and gnatcatcher and cactus wren distribution data of the Peninsula were prepared by Atwood et al. (1994) and updated and verified during the first phase of the NCCP program (Ogden, 1999). The vegetation map was compiled from 1 inch = 1,200 feet color aerial photographs and from field mapping efforts that used U.S. Geological Survey topographic maps enlarged to a scale of 1 inch = 1,000 feet. The vegetation mapping was ground-verified, and vegetation polygons were assessed for plant cover. A vegetation category was assigned to each polygon according to plant species cover based on Holland (1986). These vegetation data were digitized into the geographic information system (GIS) database. Additional source data were also obtained from representatives of the local chapters of the CNPS, Audubon Society, and Endangered Habitats League, as well as digital information from the major landowners and Southern California Association of Governments (SCAG). These data sources were collated and reviewed for spatially relevant information for inclusion in the GIS database. Ogden updated this base vegetation map using project-specific vegetation data from existing environmental reports. Minor updates to the vegetation map were made during formation of the public review draft of this Subarea Plan document to account for changes in vegetation cover associated with recently completed development projects (URS Corporation, 2003). Approximately 8,558.7 acres of land occurs in Rancho Palos Verdes, including native habitats, non-native habitats, agricultural lands, disturbed areas, and developed lands. These communities are listed in Table 2-1 and described below (see Figure 1-1).

Sensitive habitats within the Rancho Palos Verdes NCCP planning area are those that are considered rare in the region, support sensitive species of plants and animals, and/or are subject to regulatory protection through various federal, state, or local policies or regulations. In the case of habitats in Rancho Palos Verdes, these include all wetland habitat types (riparian scrub), as well as all upland scrub habitats. No native grasslands have been delineated in Rancho Palos Verdes, but if patches of native grassland occur, this habitat would also be considered sensitive if the patch exceeded 0.3 acre and supported at least 10 percent cover of native grassland plant species. Habitats dominated by non-native plant species (non-native grassland, exotic woodland, and disturbed vegetation) are generally not considered sensitive. Non-native grassland, however is considered sensitive where it occurs in large, contiguous areas because it may provide vital foraging habitat for raptors and support other sensitive plant and wildlife species. Because most grasslands in southern California are now dominated by non-native annual grasses, conservation of some non-native grassland is necessary to achieving NCCP planning goals for a multiple habitat reserve design. Patches of non-native grassland that exceed 5 acres are considered to have some conservation value. Smaller patches of non-native grassland that are contiguous with larger areas of biological open space are also important because they contribute to a habitat mosaic that can be used by sensitive species.

2.2.1.1 Coastal Sage Scrub

Coastal sage scrub is composed of low, soft-woody subshrubs approximately 1 meter (3 feet) high, many of which are facultatively drought-deciduous (Holland 1986). This association is typically found on dry sites, such as steep, south-facing slopes or clay-rich soils slow to release stored water. Dominant shrub species in this vegetation type may vary, depending on local site factors and levels of disturbance.

Dominants within the study area include California sagebrush (*Artemisia californica*), ashy-leaf buckwheat (*Eriogonum cinereum*), California sunflower (*Encelia californica*), coyote bush (*Baccharis pilularis*), lemonadeberry (*Rhus integrifolia*), purple sage (*Salvia leucophylla*), and black sage (*Salvia mellifera*). Other less frequent constituents of this community include California buckwheat (*Eriogonum fasciculatum* ssp. *fasciculatum*), goldenbush (*Isocoma menziesii*), toyon (*Heteromeles arbutifolia*), laurel sumac (*Malosma laurina*), coyote bush (*Baccharis pilularis*), and bladderpod (*Isomeris arborea*).

Numerous CSS sub-associations have been identified in Rancho Palos Verdes and classified according to the dominant species. Such sub-associations include *Artemisia*-dominated scrub, *Eriogonum*-dominated scrub, *Salvia*-dominated scrub, *Encelia*-dominated scrub, *Baccharis*-dominated scrub, and *Rhus*-dominated scrub. These sub-associations correspond to the California sagebrush series, California buckwheat series, black sage series, purple sage series, and California encelia series, and/or coyote bush series, as described in Sawyer and Keeler-Wolf (1995). These sub-associations have been delineated and digitized into a GIS database. Where the CSS cannot be clearly differentiated by a single dominant species, it was classified as "undifferentiated" CSS. There are approximately 1,003 acres of CSS in the city, of which 93 acres are *Artemisia*-dominated scrub, 14 acres are *Eriogonum*-dominated scrub, 21 acres are *Salvia*-dominated scrub, 8 acres are *Encelia*-dominated scrub, 7 acres are *Baccharis*-dominated scrub, 225 acres are *Rhus*-dominated scrub, and 635 acres are undifferentiated.

The shrub layer in this community ranges from a continuous canopy with little understory cover to a more open canopy with widely spaced shrubs and a well-developed understory. Native understory species present in this association include foothill needlegrass (*Nassella lepida*), purple needlegrass (*Nassella pulchra*), golden yarrow (*Eriophyllum confertiflorum*), wishbone bush (*Mirabilis californica* var. *californica*), and common goldenstar (*Bloomeria crocea*). Common non-native species in open or disturbed sage scrub include wild oat (*Avena* spp.), tocalote (*Centaurea melitensis*), foxtail chess (*Bromus madritensis* ssp. *rubens*), and Russian thistle (*Salsola tragus*), among others. Disturbed CSS is also present in Rancho Palos Verdes. A disturbed qualifier is placed on CSS (or any other native habitat) based on mechanical disturbance (e.g., vegetation clearing and off-road vehicle activity). Disturbed CSS typically has a high percentage of nonnative species, low percent cover of CSS indicator species, and is fragmented to some degree.

2.2.1.2 Southern Cactus Scrub

Southern cactus scrub is a low, dense scrub (less than 2 meters [6.6 feet]) with succulent shrubs consisting primarily of prickly pear species (*Opuntia littoralis, O. oricola*) and coastal cholla (*Opuntia prolifera*) as dominant constituents (Magney, 1992; Sawyer and Keeler-Wolf, 1995). Although the dominant species are succulent, woody species can also be present as co-dominants with the succulents. Typical woody species in this association include California sagebrush, California buckwheat, California sunflower, bladderpod, and wishbone bush. Southern cactus scrub ranges from coastal southern Santa Barbara County southward to northern San Diego County and inland to the cismontane valley areas of San Bernardino and Riverside Counties (Magney, 1992). Southern cactus scrub occurs mostly on steep, south facing slopes in sandy soils or rocky areas below 1,200 meters (3,397 feet) elevation (Magney, 1992; Sawyer and Keeler-Wolf, 1995). Examples of this community occur on the Rancho Palos Verdes City Hall site and in the Ocean Trails project open space. Approximately 97 acres of southern cactus scrub occur in Rancho Palos Verdes.

Table 2-1
Vegetation Communities in
Rancho Palos Verdes [1]

Vegetation Community	Acres
Coastal Sage Scrub Sub-associations	
CSS – Artemisia Dominated	93.0
CSS – Baccharis Dominated	7.2
CSS – Encelia Dominated	7.9
CSS – Eriogonum Dominated	13.9
CSS – Rhus Dominated	225.0
CSS – Salvia Dominated	21.0
CSS – Undifferentiated	635.5
Saltbush Scrub	7.3
Southern Cactus Scrub	96.9
Southern Coastal Bluff Scrub	137.0
Grassland	955.3
Riparian Scrub	2.5
Exotic Woodland	75.4
Disturbed Vegetation	88.3
Subtotal Vegetation	**2366.2**
Other	
Cliff Face	8.8
Disturbed	162.4
Agriculture	17.6
Developed	6,003.7
Subtotal Other	**6,192.5**
Total Acreage	**8,558.7**

1. Vegetation inventory from Ogden (1999) with minor updates in 2003 associated with Ocean Trails and Ocean Front Estates projects.

2.2.1.3 Saltbush Scrub

Saltbush scrub is dominated by quailbush (*Atriplex lentiformis*) and the nonnative species *Atriplex glauca*. Shrubs are less than 3 meters (10 feet) with closed to open canopies (Sawyer and Keeler-Wolf, 1995). Saltbush scrub corresponds to the mixed saltbush series, as described in Sawyer and Keeler-Wolf (1995). The understory consists of ruderal species, such as black mustard (*Brassica nigra*), wild radish (*Raphanus sativus*), and cliff aster (*Malacothrix saxatile*). Approximately 7 acres of saltbush scrub was mapped in the city, and was also mapped in the Portuguese Bend area.

2.2.1.4 Southern Coastal Bluff Scrub

Southern coastal bluff scrub is a low, sometimes prostrate scrub that occurs at localized sites along the coast south of Point Conception (Holland, 1986). Plants in this association cling to nearly vertical rock faces just above the surf. The coastal bluff scrub community is widespread along the California coastline as a very narrow band, often not extending more than a few meters inland (Holland and Keil, 1990). Dominant plants are mostly woody and/or succulent species, such as California sagebrush, California buckwheat, ashy-leaf buckwheat, lemonadeberry, coast cholla, and coast prickly pear. Other less-frequent constituents of this community include boxthorn (*Lycium californicum*), bright green dudleya (*Dudleya virens*), aphanisma (*Aphanisma blitoides*), seacliff buckwheat (*Eriogonum parvifolium*), sea blite (*Suaeda taxifolia*), and bladderpod. Development along the southern California coastline has reduced this community throughout its range. Potential inclusions within coastal bluff scrub are CSS and beach habitat. Coastal bluff scrub occupies 137 acres along the steep ocean cliffs of Rancho Palos Verdes.

2.2.1.5 Grassland

Nonnative annual grasses and other annual species dominate grasslands in the city. Small patches dominated by native perennial bunchgrasses were observed within the annual grassland, as discussed below, but were generally too small in extent to map adequately. Annual or nonnative grassland generally occurs on fine-textured loam or clay soils that are moist or even waterlogged during the winter rainy season and very dry during the summer and fall. This association is characterized by a dense to sparse cover of annual grasses, often with native and nonnative annual forbs (Holland 1986). The number of natives versus nonnatives is site-specific, and varies according to rainfall and other factors (Heady 1995). Estimates for the proportion of nonnative species in this association range from 29 to 80 percent (White 1967; Bentley and Talbot 1948; Heady 1956, 1995; Holland and Keil 1990). Talbot et al. (1939) report that annuals comprise approximately 94 percent of the herbaceous cover in annual grassland; Ewing and Menke (1983) state that annuals comprise 50 to more than 90 percent of the vegetative cover in annual grassland, and that most of the annuals are nonnative species. Species composition varies within annual grassland and is a function of climatic conditions, soils, and allelopathic effects of above-ground plant residue (e.g., mulch) (Evans and Young 1989; Heady 1995; Bartolome et al. 1980).

Annual grassland is a disturbance-related community most often found in old fields or openings in native scrub habitats. This association may have replaced native grassland and CSS at many localities throughout the study area. Typical grasses within the study area include wild oat, foxtail chess, ripgut grass (*Bromus diandrus*), barley (*Hordeum murinum* ssp. *leporinum*), and Bermuda grass (*Cynodon dactylon*). Characteristic forbs include red-stem filaree (*Erodium cicutarium*), mustard (*Brassica* spp.), tarweed (*Centromadia* spp.), tocalote, and cliff aster. Within annual grassland, grasses are less than 1 meter (3 feet) high and form a continuous or open cover. Emergent shrubs and trees may be present as well (Sawyer and Keeler-Wolf 1995). Native grasses in the study region are characterized by the perennial, tussock-forming needlegrass species (*Nassella* spp.). Native and introduced annuals occur between the needlegrass, often exceeding the bunchgrasses in cover (Holland 1986). Native grasses in Rancho Palos Verdes occur in small areas within annual grassland and CSS habitats and have been mapped as such. Grassland communities totaling 955 acres cover large areas in the city.

2.2.1.6 Riparian Scrub

Riparian scrub varies from a dense, broad-leafed, winter-deciduous association dominated by several species of willow to an herbaceous scrub dominated by mule fat (*Baccharis salicifolia*) (Holland 1986). Typical willow species on site include black willow (*S. gooddingii*) and arroyo willow (*S. lasiolepis*). Understory vegetation in this association is usually composed of nonnative, weedy species or is lacking altogether. Riparian scrub may represent a successional stage leading to riparian woodland or forest or may constitute a stable community. Riparian scrub occurs in Agua Amarga Canyon and south of Palos Verdes Drive South on the Ocean Trails project property. This association occupies approximately 2.5 acres of land in Rancho Palos Verdes.

2.2.1.7 Exotic Woodland

Exotic Woodland includes non-native trees and shrubs planted in Rancho Palos Verdes in the past. Some of these introduced species are invasive and have dispersed into the adjacent grassland and native habitats. Exotic species include everblooming acacia (*Acacia longifolia*), Sydney golden wattle (*Acacia cyclops*), Peruvian pepper tree (*Schinus molle*), Brazilian pepper tree (*Schinus terebenthifolia*), black locust (*Robinia pseudoacacia*), myoporum (*Myoporum laetum*), gum tree (*Eucalyptus* spp.), and pines (*Pinus* spp.). Most of the exotic woodlands occur in the Portuguese Bend and Lower Filiorum areas and occupy approximately 75 acres.

2.2.1.8 Disturbed Vegetation

Disturbed vegetation refers to plant associations that occur on highly disturbed sites in urbanized areas (e.g., along roadsides, footpaths, in parking lots, or in previously graded areas) that support weedy broadleaf species. Areas with disturbed vegetation are typically characterized by heavily compacted soils that limit the species that can thrive here (Holland and Keil, 1990). Typical species associated with disturbed vegetation include horseweed (*Conyza canadensis*), sow thistle (*Sonchus oleraceus*), knotweed (*Polygonum* spp.), mallow (*Malva* spp.), Russian thistle, sweet fennel (*Foeniculum vulgare*), castor bean (*Ricinus communis*), goosefoot (*Chenopodium* spp.), and tocalote (*Centaurea melitensis*). Other common species that can be found in disturbed areas, as well as other communities, include mustards, star thistle, rye grass (*Lolium* spp.), burclover (*Medicago polymorpha*), wild radish, milk-thistle (*Silybum marianum*), and cocklebur (*Xanthium* spp.), among others. True ruderal species are those found mainly or solely in areas with previous surface disturbance (California Exotic Pest Plant Council, 1999; Beatty and Licari, 1992). Disturbed vegetation occupies approximately 88 acres in Rancho Palos Verdes.

2.2.1.9 Cliff Faces

Cliff faces are steep, sometimes vertical slopes with little vegetative cover. Constant erosion from wind and rain prevents vegetation establishment. Typically, there is little soil available for plants to become established. Cliff faces in the city are found along the sea cliffs, in the landslide area, west of Coolheights Drive, and north of Forrestal Road. Cliff faces can also occur as inclusions in coastal bluff scrub habitat. Cliff faces occupy about 9 acres of land in Rancho Palos Verdes.

2.2.1.10 Disturbed Areas

Disturbed areas are lands where the vegetation has been significantly altered by frequent disking or mowing for fire protection and vegetation control and little to no vegetation cover remains. Typical plant species found scattered in disturbed areas include Russian thistle, black mustard, storksbill (*Erodium* spp.), and annual grasses, among others. Disturbed areas primarily consist of maintained firebreaks and occupy approximately162 acres in the city.

2.2.1.11 Agriculture

Agriculture includes actively cultivated lands and lands that support nursery operations. Only two areas in Rancho Palos Verdes are actively farmed, comprising approximately 18 acres. These two areas are in the western portion of the city near the Rancho Palos Verdes City Hall.

2.2.1.12 Developed Areas

Developed areas in the city are lands that have been permanently altered by human activities and that support no native vegetation. These areas include roads, buildings, ornamental landscapes, and other areas where the land has been altered to such an extent that natural vegetation cannot become reestablished. Areas graded for development in the late 1990s (i.e., Ocean Trails and Subregion One) were mapped as they were being developed, but a portion of these areas are in the process of being revegetated with CSS and other native vegetation. Developed areas occupy 6,113 acres in the city limits.

2.2.2 Sensitive Species

Sensitive species, through the circumstance of natural distribution or habitat destruction, have declined in population to a level so low that professional biologists are concerned about the longevity or vitality of the species. Sensitive species include species listed by the State or Federal Wildlife Agencies under the ESA, CDFG as an Species of Special Concern (SSC), or on the California Native Plant Society's inventory of rare or endangered plants (CNPS, 2001). The distribution of sensitive species is based on cumulative sighting data compiled during the Phase I NCCP program and focused rare plant surveys conducted in spring 1998. Butterfly habitat was also assessed during the Phase I NCCP program. Only recently has El Segundo blue butterfly been documented in Rancho Palos Verdes. All the sensitive species are associated closely with scrub habitats on the Peninsula. Sensitive species in the Rancho Palos Verdes Subarea Plan area are described below (see Figure 1-2).

Aphanisma blitoides

Aphanisma
USFWS: No status
CDFG: No status
CNPS: List 1B, 2-2-2

Aphanisma is a small, annual herb that occurs on sandy soils near the coast in coastal bluff scrub and CSS (CNPS, 2001). It occurs at elevations from 3 to 60 meters (10 to 200 feet) and is found from Santa Barbara County to northern Baja California, Mexico, and is on all the Channel Islands except San Miguel (Junak et al., 1995). This fleshy species blooms from April to May. Aphanisma is in steep decline on the mainland and on the islands (CNPS, 2001). Mainland populations are declining because of recreational

use of beaches and development along the coast (Reiser, 1994). Aphanisma was located in Rancho Palos Verdes in the coastal bluff scrub from Portuguese Point along the coast to the Rancho Palos Verdes/San Pedro city limit.

Atriplex pacifica

South Coast Saltscale
USFWS: No status
CDFG: No status
CNPS: List 1B, 3-2-2
South coast saltscale occurs in coastal bluff scrub, CSS, and alkali playas (CNPS, 2001). This small, wiry, prostrate, annual herb grows in openings between shrubs in xeric, often mildly disturbed locales. This species occurs from Ventura County to Sonora and Baja California, Mexico, and on San Clemente, Anacapa, Santa Catalina, Santa Cruz, San Nicholas, and Santa Rosa islands (Reiser, 1994). South coast saltscale is severely declining throughout its coastal range on the mainland (Reiser, 1994). In Rancho Palos Verdes, this species has been detected on Portuguese Point and along the coast between Halfway Point and Shoreline Park.

Calandrinia maritima

Seaside Calandrinia
USFWS: No status
CDFG: No status
CNPS: List 4, 1-2-1
Seaside calandrinia typically occurs on sandy bluffs near the beach and sandy openings in CSS at elevations below 300 meters (1,000 feet) (Reiser, 1994; Hickman, 1993). It occurs from Santa Barbara County to Baja California, Mexico, and is found on Anacapa, Santa Barbara, San Clemente, Santa Catalina, Santa Cruz, and Santa Rosa Islands (Reiser, 1994; CNPS, 2001). In Rancho Palos Verdes, seaside calandrinia occurs on the coastal bluffs in Abalone Cove and immediately west of Portuguese Bend to the Rancho Palos Verdes/San Pedro city limit.

Calochortus catalinae

Catalina Mariposa Lily
USFWS: No status
CDFG: No status
CNPS: List 4, 1-2-3
Catalina mariposa lily is a perennial bulb species that flowers from February to May (CNPS, 2001). It occurs below 700 meters (2,300 feet) in open chaparral, cismontane woodland, valley and foothill grassland, and CSS (Hickman, 1993; Reiser, 1994; CNPS, 2001). Catalina mariposa lily occurs in CSS near the Rancho Palos Verdes City Hall, in the canyon north of Barkentine Road, in the Forrestal area, in the northern part of the Portuguese Bend landslide near the closed portion of the Crenshaw Road extension, at the West Bluff and the Upper La Rotonda Preserves in Ocean Trails, and in the Switchbacks enhancement area north of the intersection of Palos Verdes Drives North and East.

Calystegia peirsonii

Peirson's Morning-glory

USFWS: No status

CDFG: No status

CNPS: List 4, 1-2-3

Peirson's morning-glory is found in chaparral, CSS, chenopod scrub, and woodlands (CNPS, 2001). It is a perennial herb from a rhizome and blooms from May to June. The elevation range of this species is 30 to 1,500 meters (100 to 5,000 feet; CNPS, 2001). Peirson's morning-glory was previously known only from Antelope Valley in the San Gabriel Mountains of Los Angeles County (Hickman, 1993); recent studies, however, indicate that this species frequently intergrades with other *Calystegia* species (CNPS, 2001). This species has not been observed in Rancho Palos Verdes but is known to occur in the San Pedro area of the Peninsula.

Centromadia parryi ssp. australis

Southern Tarplant

USFWS: No status

CDFG: No status

CNPS: List 1B, 3-3-2

Southern tarplant occurs in the margins of salt marsh margins, mesic valley and foothill grasslands, vernal pools, and alkaline areas below 425 meters (1,400 feet) elevation (CNPS, 2001). It ranges from Santa Barbara County to northern Baja California, Mexico, and possibly occurs on Santa Catalina Island (CNPS, 2001; Reiser, 1994). This summer blooming annual occurs mostly in seasonally moist saline grassland. Southern tarplant is severely declining throughout its range because of development and recreation (Reiser, 1994). This species has not been detected in Rancho Palos Verdes, but occurs northeast of the city near Machado Lake.

Convolvulus simulans

Small-flowered Morning-glory

USFWS: No status

CDFG: No status

CNPS: List 4, 1-2-2

Small-flowered morning-glory is found between 30 to 700 meters (100 to 2,300 feet) on clay soils typically devoid of shrubs, in chaparral, sage scrub, and grassland (Reiser, 1994; Hickman, 1993). Occurrences have been recorded in San Diego, Orange, Riverside, Los Angeles, Santa Barbara, San Luis Obispo, Kern, San Joaquin, Contra Costa, San Benito, and Stanislaus Counties, as well as on Santa Catalina and San Clemente Islands and in Baja California, Mexico (CNPS, 2001). In Rancho Palos Verdes, small-flowered morning-glory occurs at two locations: north of Forrestal Drive and northwest of the terminus of Coolheights Drive.

Crossosoma californicum

Catalina Crossosoma

USFWS: No status

CDFG: No status

CNPS: List 1B, 2-2-2

Catalina crossosoma is a deciduous shrub that can reach 5 meters (16 feet) high. This shrub is usually found on dry, rocky slopes and canyons in CSS below 500 meters (1,600 feet) elevation (CNPS, 2001; Hickman, 1993). It is known from the Peninsula, San Clemente and Santa Catalina Islands, and Guadelupe Island, Mexico (Hickman, 1993). Catalina crossosoma has been detected at three locations in Rancho Palos Verdes: north of Pirate Drive, and on the ridgeline and in the canyon west of Ganado Drive, south of Crest Road.

Dichondra occidentalis

Western Dichondra

USFWS: No status

CDFG: No status

CNPS: List 4, 1-2-1

This perennial herb generally occurs at elevations from 50 to 500 meters (165 to 1,650 feet) on dry, sandy banks in CSS, chaparral, grassland, or southern oak woodland and often proliferates on recently burned slopes (CNPS, 2001, Reiser, 1994). This species occurs in Sonoma and Marin Counties, disjunct to San Barbara County, and south along the coast to northern Baja California, Mexico (Reiser, 1994). In Rancho Palos Verdes, western dichondra occurs northwest of Coolheights Drive in CSS.

Dudleya virens spp. virens

Bright Green Dudleya

USFWS: No status

CDFG: No status

CNPS: List 1B, 2-2-2

Bright green dudleya is a succulent perennial with a basal rosette of leaves from a caudex (i.e., a short woody stem at or below the ground; Hickman, 1993). This species occurs on steep slopes in chaparral, coastal bluff scrub, and CSS habitats below 400 meters (1,300 feet) (CNPS, 2001; Hickman, 1993). It is known from Los Angeles County, San Clemente, San Nicholas, and Santa Catalina Islands, and Guadelupe Island, Mexico (Hickman, 1993). In Rancho Palos Verdes, bright green dudleya occurs along the coastal bluffs from Point Vicente east to the Rancho Palos Verdes/San Pedro city limit.

Erysimum insulare ssp. suffrutescens

Suffrutescent Wallflower

USFWS: No status

CDFG: No status

CNPS: List 4, 1-2-3

Suffrutescent wallflower is a perennial herb that occurs at elevations of less than 150 meters (500 feet) (Hickman, 1993). It is found in coastal bluff scrub, coastal dunes, and CSS habitats along the coast from San Luis Obispo County to Los Angeles County (CNPS, 2001). Suffrutescent wallflower occurs on the Peninsula, but has not been detected in Rancho Palos Verdes.

Lycium brevipes var. hassei

Santa Catalina Island Desert-thorn

USFWS: No status

CDFG: No status

CNPS: List 1B, 3-3-3

Santa Catalina Island desert-thorn is a deciduous shrub that can reach 4 meters (13 feet) high (Hickman, 1993). It is found on coastal bluff slopes in coastal bluff scrub and CSS habitats at elevations below 300 meters (1,000 feet) (CNPS, 2001; Hickman, 1993). This species was rediscovered on the Peninsula in 1976. Historical localities include San Clemente and Santa Catalina Islands. In Rancho Palos Verdes, Santa Catalina Island desert-thorn occurs on Portuguese Point.

Pentachaeta lyonii

Lyon's Pentachaeta

USFWS: Endangered

CDFG: Endangered

CNPS: List 1B, 3-3-3

Lyon's pentachaeta is an annual herb that blooms from March to August (CNPS, 2001). It occurs in openings in chaparral and valley and foothill grasslands near the coast at elevations below 150 meters (500 feet) (CNPS, 2001; Hickman, 1993). This species is known from Los Angeles and Ventura Counties (i.e., Santa Monica Mountains and Simi Hills) and Santa Catalina Island. Currently, fewer than 20 populations are known to occur (CNPS, 2001). Lyon's pentachaeta has not been reported in Rancho Palos Verdes.

Suaeda taxifolia

Woolly Seablite

USFWS: No status

CDFG: No status

CNPS: List 4, 1-2-1

Woolly seablite is a herbaceous perennial usually restricted to coastal salt marsh; it rarely grows in peripheral scrublands adjacent to salt marshes or as isolated plants along beaches (Reiser, 1994). This species occurs along the coast from Santa Barbara County to Baja California, Mexico, and on Santa Barbara, San Clemente, Santa Cruz, Santa Catalina, San Nicholas, and Santa Rosa Islands and on Guadalupe Island, Mexico (CNPS, 2001). In Rancho Palos Verdes, woolly seablite occurs as isolated plants along the peninsula shoreline from Torrance Beach to San Pedro.

Glaucopsyche lygdamus palosverdesensis

Palos Verdes Blue Butterfly

USFWS: Endangered

CDFG: No status

The Palos Verdes blue butterfly (PVB) is a rare subspecies of the silvery blue butterfly (Perkins and Emmel, 1977; Arnold, 1987). The PVB is restricted to open CSS habitats that support either ocean milk vetch (*Astragalus trichopodus* var. *lonchus)* or deerweed (*Lotus scoparius*), which are this species' larval food plants (Mattoni, 1992). Currently, PVB is known to occur only at the Naval Fuel Depot in San Pedro (between Western Avenue and Gaffey Street, south of Palos Verdes Drive North; Mattoni, 1992), at Malaga Dunes, and was recently reintroduced at the Chandler Preserve. Historical occurrences of PVB in

Rancho Palos Verdes include locations near "The Switchback" area of Palos Verdes Drive East, locations within the landslide moratorium area (Edward's Canyon in Area 4, Portuguese Canyon, and Forrestal [Klondike] Canyon), and Agua Amarga (Arnold, 1984, 1986, 1987, 1990; Mattoni, 1992). Habitat for PVB is typified by open CSS and ecotone areas between sage scrub and grassland. Milk vetch is the primary larval host plant present in Rancho Palos Verdes. Deerweed does not generally occur in Rancho Palos Verdes and is restricted mostly to the northeast slope of the Peninsula. Milk vetch is an early successional or disturbance-associated species and would therefore decline if there is an extended period without disturbance (e.g., fire). Habitat loss and fragmentation associated with agriculture and residential development, fire suppression (e.g., fuel modification activities), severe weather conditions, and over-collecting by butterfly enthusiasts have contributed to the current endangered status of this species (Arnold, 1987; Mattoni, 1992). Federal Designated Critical Habitat includes "The Switchback" area of Palos Verdes Drive East and Agua Amarga Canyon (USFWS, 1980; Federal Register Vol. 45, No. 129, pp. 44942).

Euphilotes battoides allyni

El Segundo Blue Butterfly

USFWS: Endangered

CDFG: No status

The El Segundo Blue (ESB) is a rare subspecies of the square-spotted blue butterfly (Subfamily Polyomattinae) restricted to remnant coastal dune habitats at four locations: Ballona Wetlands south of Marina del Rey, Los Angeles International Airport Dunes, Chevron El Segundo Preserve and adjacent habitat in El Segundo, and Torrance Beach/Malaga Cove (Mattoni et al., 1997). Coast buckwheat (*Eriogonum parvifolium*) is the larval food plant of this subspecies. The historical distribution of ESB included dune habitats in Redondo and Manhattan Beaches. A recovery plan for ESB has been prepared with the Malaga Cove population as the most southern management unit (Torrance Recovery Unit) of the recovery plan. The Malaga Cove population is small, between 10 and 30 individuals using between 50 and 100 individuals of *E. parvifolium* (R. Arnold, pers. comm.). There is no dune habitat within the jurisdiction of Rancho Palos Verdes, but coast buckwheat is known to occur within the coastal bluff scrub habitat between Point Vicente and Abalone Cove. Dr. Richard Arnold conducted a butterfly survey in summer 1998 with negative results for ESB in this area of the city. Subsequent biological surveys in 2000 for proposed development of the York Long Point site detected a population of ESB in coastal bluff scrub habitat (RBF, 2001).

Phrynosoma coronatum blainvillei

San Diego Horned Lizard

USFWS: No status

CDFG: SSC

This subspecies is endemic to extreme southwestern California (Stebbins, 1985) from south of the Transverse Ranges to Baja California. This species is relatively widespread and locally common from the coast to the western edge of the desert, where extensive suitable habitat is still available—mostly in Orange and San Diego Counties (San Diego Herpetological Society, 1980). This horned lizard has been reported in the Malaga Cove area of the Peninsula (Mattoni et al., 1997) but was not observed during any of the gnatcatcher studies or spring plant surveys. It occurs from sea level to elevations of over 8,000 feet and frequents a variety of habitats from coastal dune, sage scrub, and chaparral to coniferous and broadleaf woodlands (Stebbins, 1985). It is most often found on sandy or friable soils with open scrub.

Habitat requirements include open areas for sunning, bushes for cover, and fine loose soil for rapid burial. Harvester ants are the primary food item of the horned lizard and indicate potential for occurrence of the lizard in an area. This taxon is primarily active in late spring (April to May) and early summer (June to July), after which individuals typically aestivate. Threats to this species include urban development, conversion of habitat to agriculture, collecting of individuals for the pet trade, and reduction of food base because of introduced Argentine ants (*Linepithema humile*) displacing native ant species (Jennings and Hayes, 1994; Brattstrom, 1997; Holway et al, 2002).

Polioptila californica californica

Coastal California Gnatcatcher

USFWS: Threatened

CDFG: SSC, NCCP focal species

The California gnatcatcher population in the U.S. is estimated to exceed 3,400 pairs (USFWS, 1996). The Peninsula supports a remnant population of 26 to 56 pairs considered isolated from the remainder of the U.S. population (Atwood et al., 1994, 1998; Atwood and Bontrager, 2001). The center point locations of gnatcatcher territories within the GIS database include cumulative data gathered during the Manomet Center five-year study. The primary cause of this species' decline is the cumulative loss of CSS vegetation to urban and agricultural development (Atwood, 1993). This species' habitat is being formally protected and managed through the NCCP program, ESA Sections 10 (HCP processes) and 7 (agency consultations on federal lands). Federal Designated Critical Habitat for the gnatcatcher includes suitable habitats throughout the Peninsula. This species is probably extirpated from much of Ventura and San Bernardino Counties and declining proportionately with the continued loss of CSS habitat in the four remaining southern California counties within the coastal plain. The territory size requirements of the gnatcatcher vary with habitat quality and distance from the coast. Documented home ranges have varied from 1 to 7 acres on the Peninsula (Impact Sciences, 1990; Atwood et al., 1995). Over five years, gnatcatcher productivity and survival have varied on the Peninsula. Annual reproduction has varied from 2.3 to 3.9 fledglings per pair. Annual adult survival has varied from 23 to 70 percent; juvenile over-winter survival varied from 20 to 43 percent. Studies of the species' habitat preferences on the Peninsula and elsewhere indicate that California sagebrush (*Artemisia californica*) and flat-topped buckwheat (*Eriogonum fasciculatum*) are the primary plants used by gnatcatchers when foraging for insects (Atwood et al., 1995; Impact Sciences, 1990; RECON, 1987; ERCE, 1990; Ogden, 1992a). Breeding gnatcatchers on the Peninsula are noticeably absent from most sage scrub dominated by lemonade berry (*Rhus integrifolia*).

Campylorhynchus brunneicapillus

Cactus Wren

USFWS: No status

CDFG: SSC, NCCP focal species

Coastal southern California populations of cactus wren are seriously endangered throughout the coastal plain from Ventura to the Mexican border (Rea and Weaver, 1990). This species is common throughout the deserts of the Southwest. Coastal populations breed in CSS dominated by extensive stands of tall prickly pear or cholla cacti. Once widespread in coastal southern California, by 1990 cactus wrens had been reduced to fewer than 3,000 pairs scattered into colonies of widely varying size; many colonies are isolated by distance from other colonies (Ogden, 1992b). The Peninsula cactus wren population was relatively stable at approximately 58 ± 5 pairs during the mid-1990s (Atwood et al., 1998). Reproduction

averages above three fledglings per pair, and adult survivorship varies from 57 to 73 percent; juvenile over-winter survivorship varies from 9 to 36 percent. Home range size for Peninsula cactus wrens varies from 1 to 3 acres.

Perognathus longimembris pacificus

Pacific (Little) Pocket Mouse

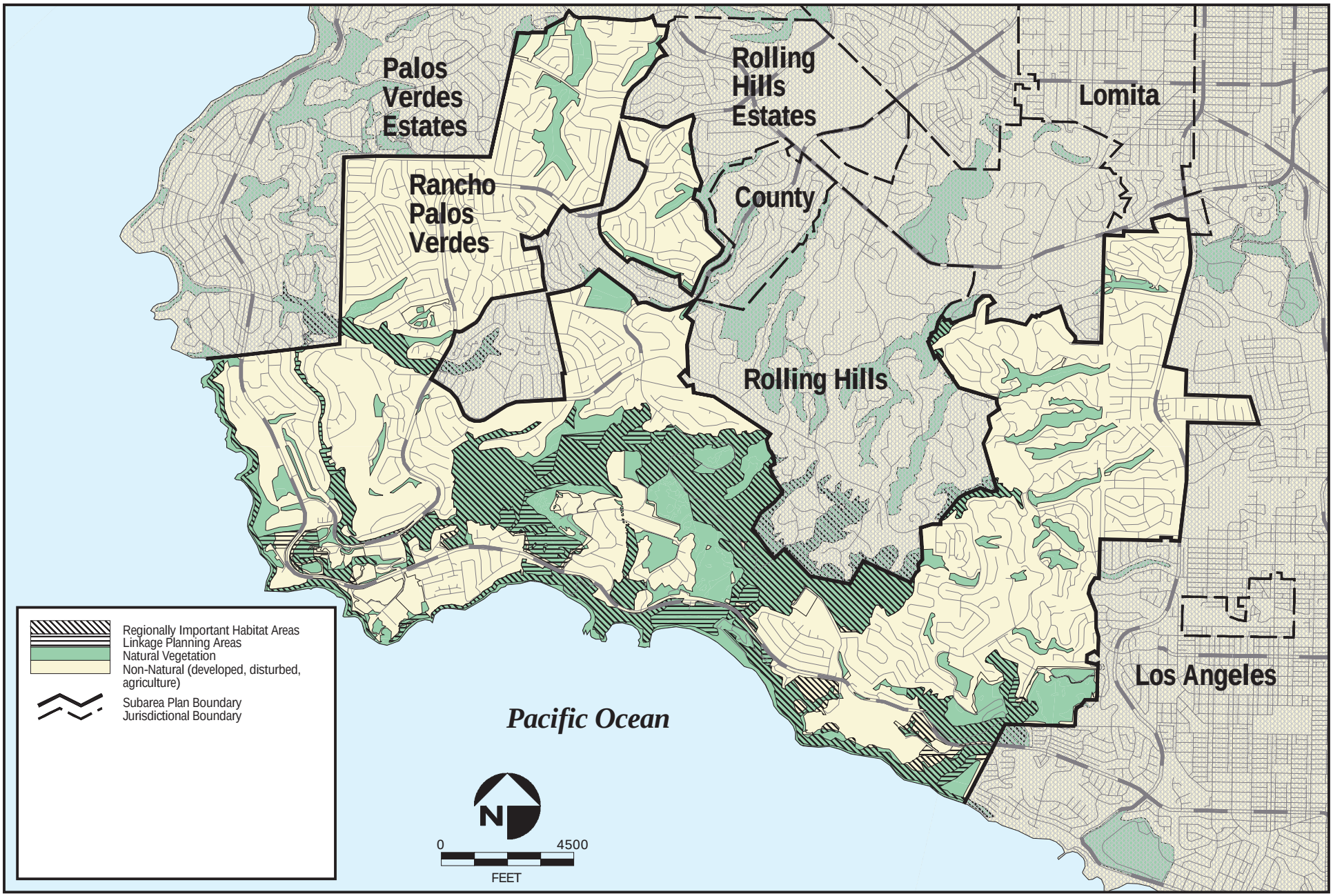
USFWS: Endangered

CDFG: SSC

Historic records of this smallest subspecies of little pocket mouse extend along the immediate coast from Marina del Rey in Los Angeles County, south to the Mexican border. Only eight definite localities have been documented, most of which were subsequently lost to development (USFWS, 1994). Few records are known after the 1930s, and the species was not definitively identified by trapping studies after 1971 until a small population was discovered on the Dana Point Headlands, Orange County in 1993 (Brylski, 1993). Habitats of the Pacific pocket mouse include coastal strand, sand dunes, ruderal vegetation on river alluvium, and open CSS on marine terraces. Three populations were subsequently located on Camp Pendleton in northern San Diego County. Potential habitat beyond Camp Pendleton is very limited and highly fragmented by coastal land development and agriculture. No populations of Pacific pocket mouse have been detected on the Peninsula, despite several trapping surveys within potentially suitable habitat. This species is not expected to be currently extant in Rancho Palos Verdes (Dudek and Associates, 1994; Marquez and Associates, 1995; BonTerra Consulting, 1997; Ogden, 1999). Several authors have noted that this species is found in fine, alluvial, sandy soil near the ocean and adjacent terraces dominated by open sage scrub (Brylski, 1993). The Pacific pocket mouse remains in its plugged burrow during the day and is active only at night. Its peak activity tends to occur early in the night. It becomes torpid during periods of food stress or low temperatures. It is inactive above ground from October to January, varying with food reserves and minimum night temperatures. Breeding occurs from January to August, peaking from March to May. Litter size ranges from two to eight, with usually one or two litters per year. Pacific pocket mice are predominantly granivorous, eating mostly seeds of grasses and forbs.

2.2.3 Regionally Important Habitat Areas

A key step in developing an NCCP plan for the City was to prioritize the most critical biological resource areas for potential conservation so that (1) conservation is maximized; (2) acquisition, restoration and management funds are efficiently used, and (3) relatively less important habitat areas can be developed. Regionally Important Habitat Areas (RIHA) were identified through the overlay of vegetation and target species information; they include areas where there is relatively extensive native vegetation supporting concentrations of target species. Linkage Planning Area that provide a habitat connection between larger habitat areas were also identified. Approximately 55 percent (1,292 acres) of the existing naturalized vegetation in Rancho Palos Verdes was identified as RIHAs (Figure 2-3).



FIGURE

2-4

URS TAIC

Regionally Important Habitat Areas and Linkage Planning Areas

/gis/projects/mios/rpv/plots/figures/sap_figs.aml

07/16/04

SECTION 3 PROPOSED RESERVE DESIGN

3.1 BIOLOGICAL RESERVE DESIGN

The Subarea Plan promotes biodiversity, allows for continued economic development, and avoids property taking. Consequently, designing the reserve system (Reserve) involves balancing two major goals:

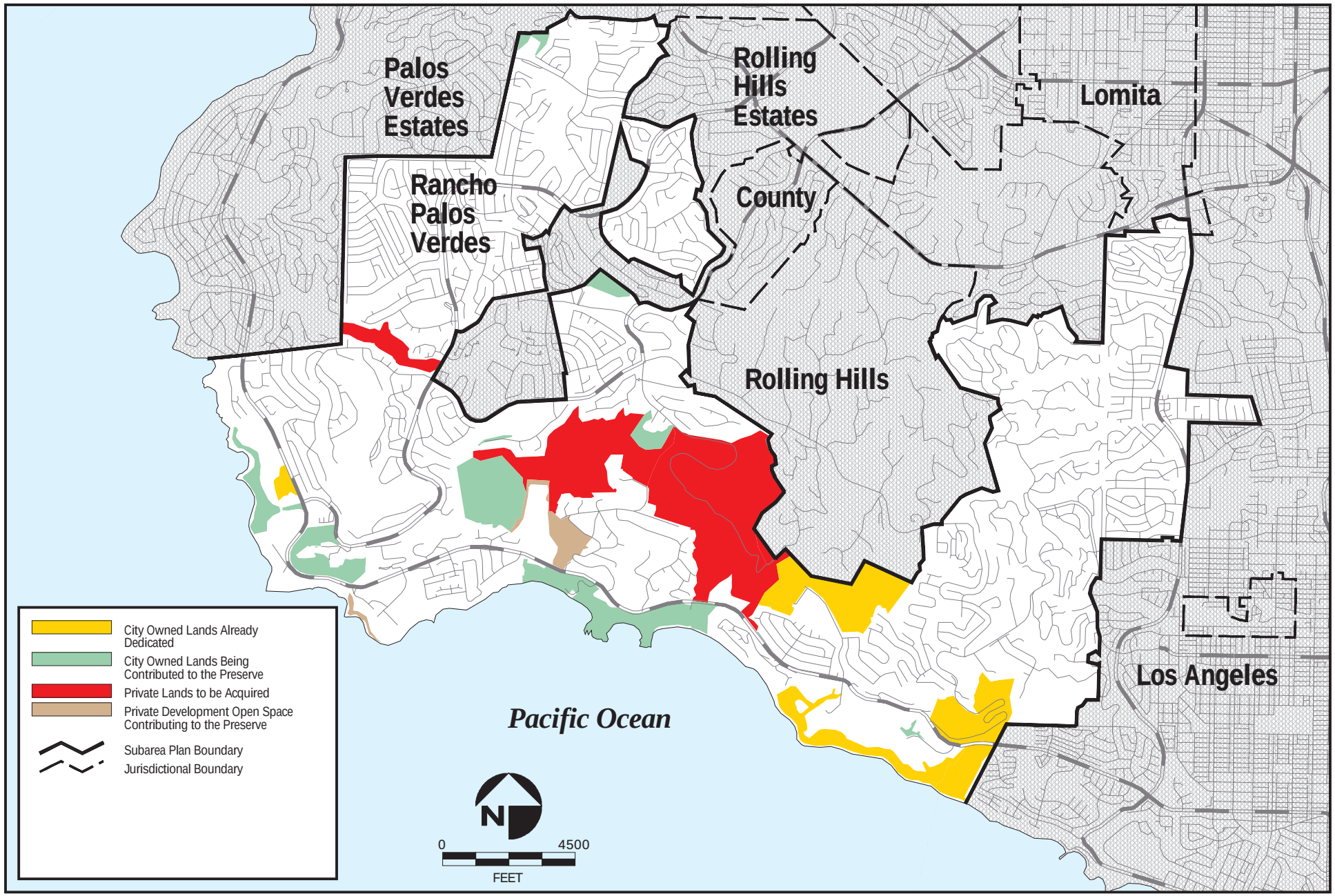
- Biological conservation;
- Property development, property rights, and economic development.

The approach taken to design a functional Reserve was to identify properties where conservation would best achieve biological goals with the least detrimental effects on other land use, property rights, or economic goals. This approach involved examining opportunities and constraints and incorporating biologically valuable lands into the Reserve.

The City's primary conservation strategy is to acquire several key privately owned parcels deemed regionally important, dedicate selected City-owned lands (Figure 3-1), and have the Palos Verdes Peninsula Land Conservancy manage this Reserve with the assistance of the City and the Wildlife Agencies. The proposed Reserve was designed to be consistent with NCCP standards and guidelines and the issuance criteria for ESA Section 10(a) take authorizations for species covered by the city-wide permit. The Reserve conserves the most practicable amount of regionally important habitat areas and provides adequate habitat linkages between patches of conserved habitat. Based on a habitat restoration plan to be approved by the Wildlife Agencies, the City and PVPLC will enhance/restore the most practicable amount of disturbed habitats within the Reserve, emphasizing those directly adjacent to conserved habitat to enhance habitat patch size and habitat linkage function (i.e., areas with moderate to high potential for successful restoration).

The proposed reserve design includes approximately 1,504 acres, of which 1,435 acres are dominated by naturalized vegetation (Figure 3-2, Table 3-1). An additional 663 acres of land are categorized as Neutral Lands that contribute to reserve function as natural open space and cannot be developed because of extreme slopes, open-space hazard zoning, or official designation as deed restricted HOA open space. The exact boundaries of the Neutral Lands shall be determined by the City based on a slope analysis calculation for extreme slope areas (+35%), by the City's zoning map for the OH zoning and by survey for any recorded deed restrictions. Because Neutral Lands are currently not accessible for active habitat management, they are not included in the Reserve. If agreements can be reached with the property owners to allow management, these lands would be added to the Reserve. Including Neutral Lands, approximately 96.3 percent (1,200 acres) of existing sage scrub habitats would be conserved and precluded from future development under the proposed reserve design.

The Reserve acreages noted below are approximations. The actual acreages will be calculated after the Reserve Map boundary lines are refined using the City's 2004 orthographic maps and L.A. County Assessor parcel line data. This will be done after the Wildlife Agencies complete their review of the Subarea Plan. The Reserve includes:



FIGURE

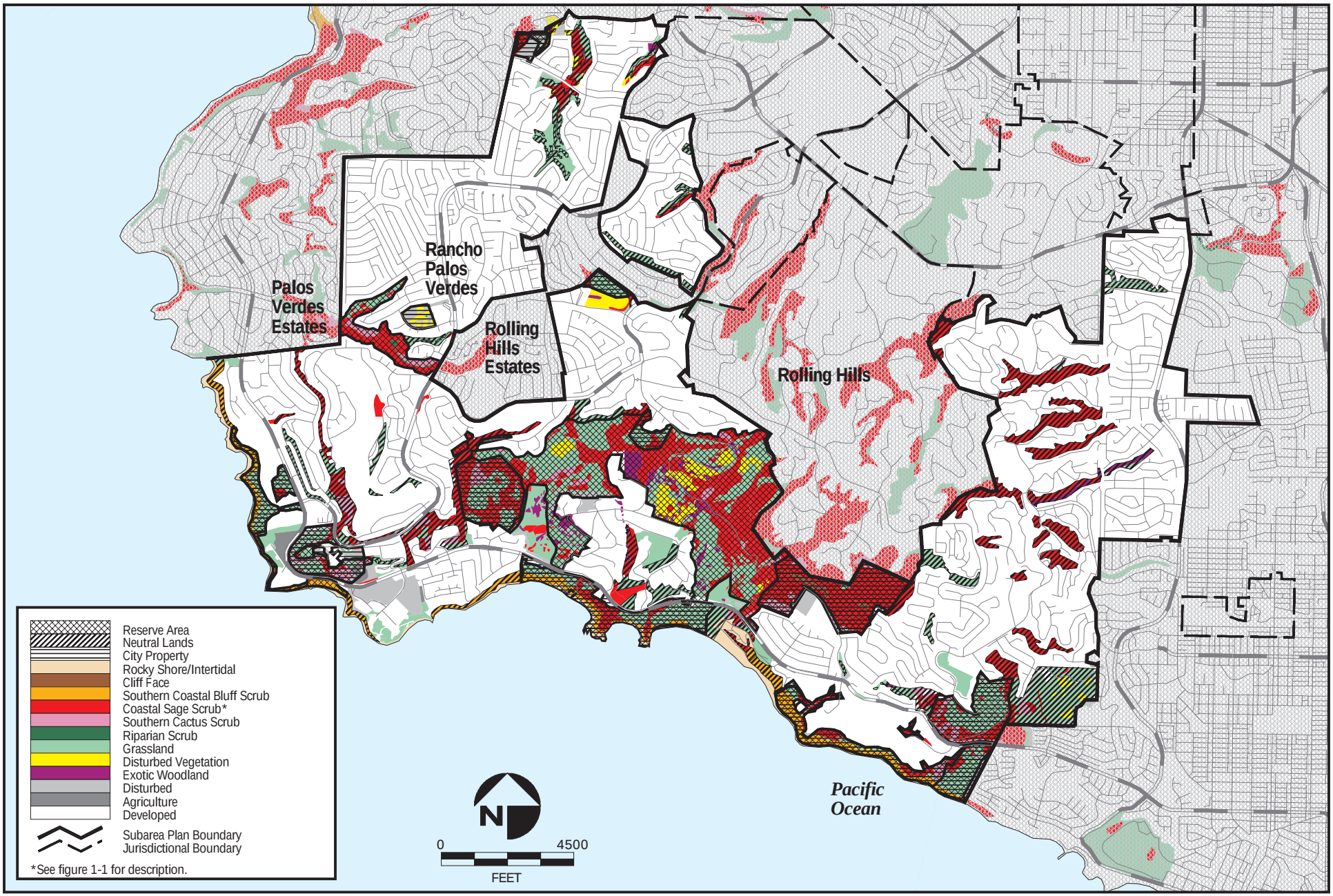
3-1

URS TAIC

City-Owned and Private Parcels Being Contributed to the Reserve

/gis/projects/mios/rpv/plots/figures/sap_figs.aml

06/22/04



FIGURE

Reserve Design

3-2

/gis/projects/mios/rpv/plots/figures/sap_figs.aml

06/22/04

Table 3-1
Proposed Conservation Acreage
by Vegetation Community

Vegetation Community	Existing (acres)	In Habitat Reserve (acres)	Neutral Lands (acres)	Outside Reserve (acres)	Total Conserved (acres)[1]	Total Percent Conserved[1]
Coastal Sage Scrub Associations						
CSS – Artemisia Dominated	93.0	48.4	33.7	10.9	82.1	88.3
CSS – Baccharis Dominated	7.2	7.2	0.0	0.0	7.2	100.0
CSS – Encelia Dominated	7.9	7.9	0.0	0.0	7.9	100.0
CSS – Eriogonum Dominated	13.9	6.8	7.1	0.0	13.9	100.0
CSS – Rhus Dominated	225.0	127.4	96.0	1.6	223.4	99.3
CSS – Salvia Dominated	21.0	19.2	1.8	0.0	21.0	100.0
CSS – Undifferentiated	635.5	412.2	191.8	31.5	604.0	95.0
Southern Cactus Scrub	96.9	70.9	24.9	1.1	95.8	98.9
Southern Coastal Bluff Scrub	137.0	96.3	39.8	0.9	136.1	99.3
Saltbrush Scrub	7.3	7.1	0.0	0.2	7.1	97.3
Subtotal CSS	**1,244.7**	**803.4**	**395.1**	**46.2**	**1,198.5**	**96.3**
Other Vegetation						
Grassland	955.3	530.7	216.1	208.5	746.8	78.2
Riparian Scrub	2.5	2.4	0.0	0.1	2.4	96
Exotic Woodland	75.4	47.1	9.1	19.2	56.2	74.5
Disturbed Vegetation	88.3	52.1	12.1	24.1	64.2	72.7
Subtotal Other Vegetation	**1,121.5**	**632.3**	**237.3**	**251.9**	**869.6**	**77.5**
Total Naturalized Vegetation	**2,366.2**	**1,435.7**	**632.4**	**298.1**	**2,068.1**	**87.4**
Other						
Cliff Face	8.8	8.8	0.0	0.0	8.8	100.0
Disturbed	162.4	42.2	16.1	104.1	58.3	35.9
Agriculture	17.6	2.9	0.0	14.7	2.9	16.4
Developed	6,003.7	14.5	14.6	5,974.6	29.1	0.5
Subtotal Other	**6,192.5**	**68.4**	**30.7**	**6,093.4**	**99.1**	**1.6**
Total Acreage	**8,558.7**	**1,504.1**	**663.1**	**6,391.5**	**2,167.2**	**25.3**

1. Acreage in Habitat Reserve and Neutral Lands categories combined.

3.1.1 Existing Public Lands (836.5 acres)

- City-owned lands (423.5 acres) already dedicated as biological open space to be included in the Reserve
  - 102-acre Switchbacks Parcel
  - 53-acre Shoreline Park Parcel
  - 163-acre Forrestal Parcel
  - 69 acres within the 70.5-acre open space area in the Oceanfront Estates Project now owned by the City

1. City/Redevelopment Agency -owned lands to be dedicated to the Reserve (322.2 acres)

- The entire 98-acre Barkentine Parcel

  The 98-acre Barkentine Parcel was purchased by the City in 2001 with funds from the Los Angeles County Regional Park and Open Space District Specified Grant Program (1996 Proposition). Even though the proposition states that the property was purchased to acquire "critical natural lands and wildlife habitat", the proposition does not require that the entirety of the property be devoted solely to that purpose. Nonetheless, the City proposes to dedicate the entire 98-acre property into the Reserve to ensure its conservation in perpetuity.

- 65 acres of the 79.3-acre Upper Point Vicente Property

  The City's Upper Pt. Vicente property consists of the following three (3) separate parcels: a 71.0-acre parcel that was deeded to the City by the federal government in December 1979 and is subject to a federally approved Program of Utilization; a 6.0-acre parcel that was purchased by the City from the federal government and deeded to the City in March 1979 for use as a civic center site; and a 2.2-acre parcel that was previously owned by the Palos Verdes Peninsula School District which was deeded to the City from the federal government in June 1987. Together these parcels make up 79.3 acres that is owned and controlled by the City. This acreage does not include a 3.9-acre parcel that is owned by the U.S. Coast Guard and surrounded by the City parcels. Approximately 65 acres of the 79.3-acre City owned property is proposed to be dedicated to the Reserve. Excluded from the Reserve is a 14.3-acre area that constitutes the level, disturbed, developed portion of the property. The 14.3-acre area includes the entirety of the 6.0-acre property, the entirety of the 2.2-acre parcel and 6.0 acres of the 71.0-acre parcel that is subject to the Program of Utilization.

- 10 acres of the 26.4-acre Lower Point Vicente Property

  In 2004, the County of Los Angeles deeded the 26.4-acre Lower Point Vicente property to the City. The City's Pt. Vicente Interpretive Center is located on this property. The only portion of this property that is proposed to be included in the Reserve is the coastal bluff area, which is the area between the mean high tide line and the bluff trail. This area is estimated to be approximately 10 acres in size.

- 6 acres of the 10.5-acre Fishing Access Property

  In 2004, the County of Los Angeles deeded the 10.5-acre Fishing Access property to the City. The only portion of this property that is proposed to be included in the Reserve is the coastal bluff area, which is the area between the mean high tide line and the top of the coastal bluff. This area is estimated to be approximately 6 acres in size.

- 100 acres of the 124.3-acre Abalone Cove Property

  The Abalone Cove property is owned by the City's Redevelopment Agency (RDA). The property consists of the following two (2) separate parcels: a 79.2-acre "Abalone Cove Shoreline Park" parcel that was acquired by the RDA from the County of L.A. in 1987 and the 45.2-acre "archery range" parcel that was also purchased from L.A. County in 1987. Together these parcels make up 124.3 acres that is owned and controlled by the City's RDA. Approximately 100 acres of the 124.3-acre City owned property is proposed to be dedicated to the Reserve. Excluded from the Reserve is the Abalone Cove upper parking lot and picnic area and the lower parking lot and pre-school/lifeguard area.

- 17.4-acre Del Cerro Buffer Property

  The City purchased this 17.4-acre property in 2003, which is located adjacent to the City's Del Cerro park. The entire parcel is proposed to be dedicated to the Reserve as it will serve as a buffer between Del Cerro Park and the adjoining Upper Filiorum property.

- 16.8 acres of the 19.6-acre Crestridge Property

  The City's RDA currently owns a 19.6-acre parcel at the corner of Crestridge Road and Crenshaw Blvd, that along with a adjoining 9.8-acre privately owned parcel, is the site of a proposed senior condominium/affordable housing/park/senior center project. As currently proposed, the parcels would be further subdivided to create two development parcels and one 16.8-acre open space parcel. Therefore, it is proposed to dedicate 16.8 acres of the RDA owned 19.6-acre Crestridge parcel to the Reserve.

- 9 acres of the 17.5-acre Grand View Park

  Grand View Park is a 17.5-acre undeveloped park site that was obtained by the City in 1976. It is proposed to include the northern slope and canyon portions of the park in the Reserve. The area that would be in the Reserve is estimated at 9 acres, leaving approximately 8.5 acres of moderately sloping land outside of the Reserve.

2. Other public/conserved lands (90.8 acres):

- 66.9 acres within the Ocean Trails Project (not yet transferred to the City)

  Eventually, the Ocean Trails Golf/Residential project will dedicate to the City a total of 74.9 acres of open space. Of this open space, 66.9 acres will contain habitat and passive trail uses, which will be maintained by the developer. Therefore, it is foreseen that when the 74.9 acres of open space is dedicated to the City, 66.9 acres will be dedicated to the Reserve.

- 20-acre Lunada Canyon Preserve owned by the Palos Verdes Peninsula Land Conservancy

- 3.9-acre Coast Guard property

  It is expected that the federal government will include the entirety of the 3.9-acre Coast Guard property in the Reserve. This property is located in Upper Pt. Vicente and is completely surrounded by City owned open space.

3.1.2 Private Lands to be Contributed (216.6 acres)

1. Private development projects will contribute 80 acres of biological open space to the Reserve:

   - 40 acres within the Long Point Parcel (bluff face).

     Although not required to do so, it is anticipated that the developer of the Long Point Resort Hotel Project will dedicate the bluff areas of the property to the Reserve after the project is constructed. It is estimated that the bluff area constitutes approximately 40 acres of surface area.

   - 40 acres within the Point View (Lower Filiorum) Parcel

     Based on the location of the Reserve boundary line as depicted through the 94-acre Point View (Lower Filiorum) property, it is estimated that approximately 40 to 45 acres of the property would be dedicated to the Reserve. Although a more precise location of the Reserve boundary will be determined before the Implementing Agreement is signed, at a minimum the Reserve area must be at least 40 acres in size and the minimum reserve corridor width should be no less than 300 feet in width at its narrowest location. The 40 acres of dedicated Reserve include 1.5 acres to be provided as mitigation for previous brush clearing activities and 38.5 acres of mitigation for CSS and grassland losses resulting from any future development of the 95-acre Lower Filiorum parcel.

     The inclusion of Lower Filiorum acreage in the Reserve will be a condition of approval for any development project subsequently approved for theLower Filiorum property. If no approvals are obtained, there will be no obligation on the part of present or future property owner to donate these lands. Designating these lands as included in the Reserve in the text and maps of this Subarea Plan does not constitute approval of development on the Lower Filiorum property.

2. Seven local Homeowners Associations (HOA) are being requested to contribute 136.6 acres of open space to the Reserve:

   - 11.5 acres belonging to the Panorama Estates HOA
   - 18 acres belonging to the Portuguese Bend Club
   - 20 acres belonging to the Sea Breeze HOA
   - 42.3 acres belonging to the Peninsula Pointe HOA
   - 16.6 acres belonging to the Sunset Ridge HOA
   - 13.2 acres belonging to the Seacliff Hills HOA
   - 15 acres belonging to the Rancho Palos Verdes Estates HOA

The City and PVPLC are actively working with these HOAs to sign agreements to include a portion of their open space lots within the Reserve to be actively managed by the PVPLC. Because they currently are not accessible for active habitat management, they are not included in the Reserve. If agreements can be reached with the property owners to allow management, these lands will be added to the Reserve. Until such agreements are obtained, however, these lands are categorized as Neutral Lands that cannot be developed and habitat loss is not permitted except for compatible uses identified in this Subarea Plan. These lands can be incorporated into the reserve system through the "Additions to the Reserve process"(Section 5.9.1).

3.1.3 Private Lands to be Purchased (684.5 acres)

1. The City, PVPLC, Los Angeles County, and the Wildlife Agencies will provide funds for the purchase and dedication of the Reserve 684.5 acres of privately owned lands considered regionally important:

- 422.3-acre Portuguese Bend Parcel (397.3 acres will be included in the Reserve, and 25.0 acres in the lower active landslide area will be an "active recreation area" outside of the Reserve that would serve as a public-access point to trail network within the Reserve and could include an equestrian facility.)
- 43.8-acre Agua Amarga Canyon Parcel
- 218.4-acre Upper and Middle Filiorum Parcels

3.1.4 Regionally Important Habitat Areas and Linkages Conserved

Figure 2-3 shows the Regionally Important Habitat Areas. Approximately 78 percent of the RIHAs are included within the Reserve, as are all primary habitat linkages between relatively large patches of habitat, including a key linkage associated with proposed development within Lower Filiorum. Existing linkages to habitat areas elsewhere on the Peninsula will also be conserved. Planned linkages are consistent with reserve design guidelines in terms of dimensions and habitat characteristics (Mock et al., 1992; Soule, 1991; Beier and Loe, 1992; Lovio, 1996).

3.1.5 Habitat Restoration/Enhancement Potential

A significant portion of the undeveloped lands within Rancho Palos Verdes support nonnative plant communities. As funding becomes available, these communities will be restored to native plant communities to increase the local habitat carrying capacity of covered species. All restoration will benefit covered species and will not result in decreasing conservation of vegetation necessary to support covered species.

Non-native habitats that can be restored to native scrub habitats include non-native grassland and disturbed vegetation communities, disturbed areas, and previously developed areas within the Reserve boundary. The restoration potential of degraded lands was assessed during the Phase 1 program to allow for prioritization of restoration efforts within the context of preliminary alternative reserve designs. The areas of potential habitat restoration within the Reserve are shown in Figure 3-3. Areas with the greatest

potential for successful restoration within Regionally Important Habitat Areas of the Reserve should have the highest priority for restoration funding.

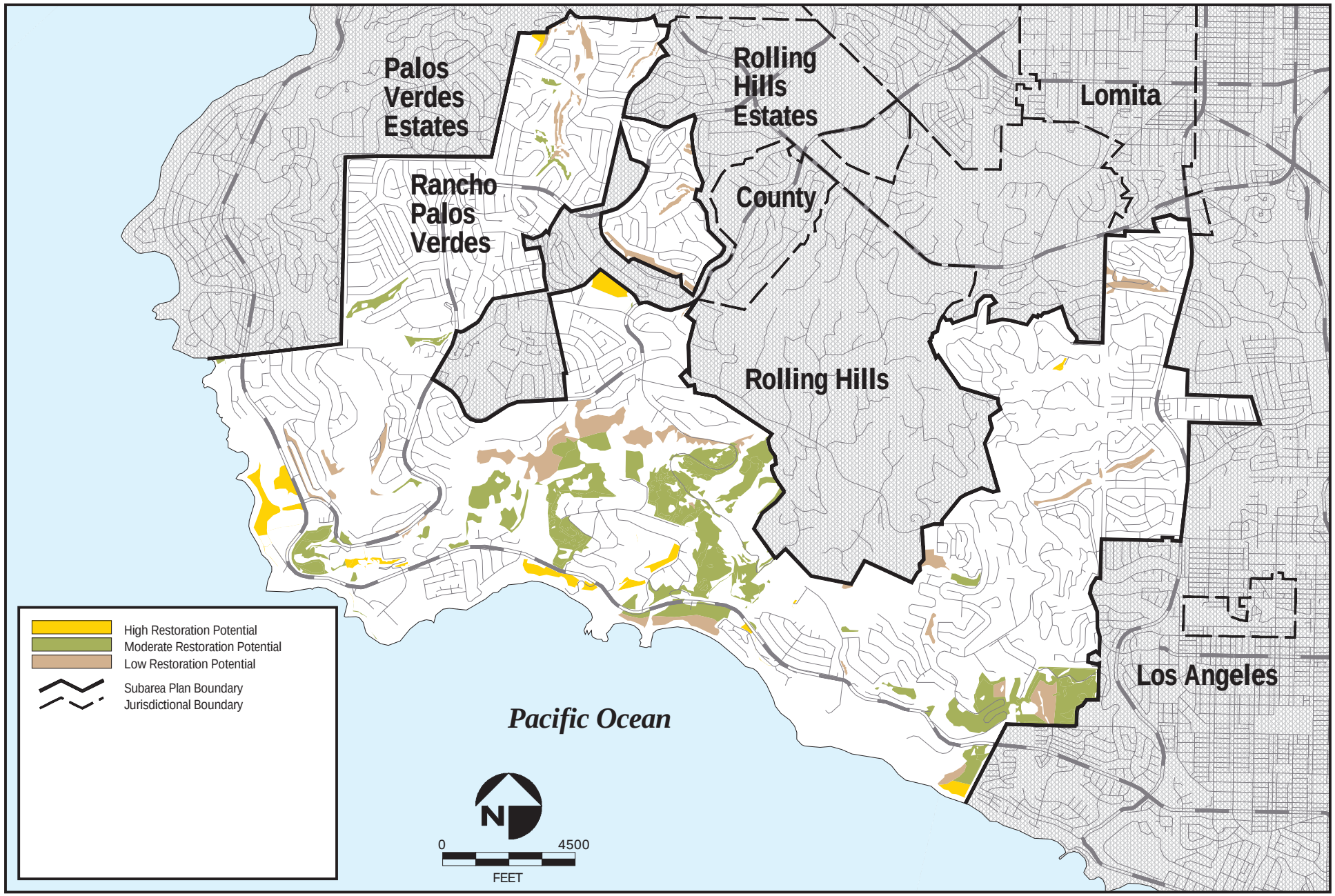
Current habitat restoration programs within the proposed Reserve include 30 acres of CSS revegetation on the Oceanfront Estates property and 50 acres of CSS revegetation associated with the Ocean Trails development. The City and PVPLC are committed to enhancing the Reserve with a long-term habitat restoration program as detailed below. Additional restoration work will be facilitated by the existence of the restoration program as additional grant funds and required mitigation work add to the scope of the restoration effort. Over the life of this Subarea Plan, the amount of sage scrub habitats within the Reserve could potentially exceed the current inventory of CSS within Rancho Palos Verdes. Over 642 acres of disturbed/developed areas, non-native grassland, and other non-native habitats assessed as having high to moderate potential of being successfully restored are within the Reserve, and would be available for restoration as funds become available (Figure 3-3). The priority for restoration would be to enlarge existing patches of CSS in the larger blocks of conserved lands within the Reserve that support covered species and enhance the habitat linkages between large blocks of habitat to improve linkage function. This restoration program will provide the opportunity to expand or create new populations of covered species by providing new suitable habitat for covered species.

3.1.6 Proposed Potential Loss of Habitats

The City has identified 21 City projects and 9 private projects that will be covered by this Subarea Plan, resulting in unavoidable loss of approximately 55.4 acres of CSS and 187.3 acres of non-native grassland within or outside the proposed Reserve (Tables 3-2 and 3-3). Mitigation for these habitat impacts will be at a 3:1 ratio (conserved or restored acreage to affected acreage) for CSS and a 0.5:1 ratio for non-native grasslands. Mitigation for impacts of City projects (40.2 acres of CSS and 106.3 acres of non-native grassland) will be provided by the dedication of 322.2 acres of City-owned land and 5.6 acres of revegetation within the Reserve (2.1 acres of revegetation has already been completed). Mitigation for impacts of private projects will be provided by dedication of private land or donation of monies to the habitat restoration fund by the private entities.

A total of 13.7 acres of sage scrub habitats and 72 acres of non-native grassland are estimated to occur outside the boundaries of the Reserve and Neutral Lands and are not associated with planned projects detailed in this Subarea Plan (Table 3-1). Any potential unanticipated future impacts to habitats outside the Reserve would be mitigated through dedication of additional acreage to the Reserve or restoration of priority areas within the Reserve at a 3:1 mitigation ratio for CSS and other native habitats, and a 0.5:1 ratio for non-native grassland.

A small amount of riparian scrub (0.1 acres) is excluded from the Reserve. Additional unmapped riparian habitats, other waters, or native grassland may also occur outside the Reserve. Wetland habitats and streambeds within this Subarea Plan area would be subject to CWA Sections 401 and 404 and Fish and Game Code 1602 permit requirements if they are included within areas proposed for development. Impacted vegetated wetlands would be mitigated at a 3:1 ratio.



URS TAIC

Habitat Restoration Potential

FIGURE

3-3

/gis/projects/mios/rpv/plots/figures/sap_figs.aml

06/22/04

Native grasslands greater than 0.3 acre documented during subsequent project-specific environmental review would be mitigated at a 3:1 ratio. Native grasslands are defined as patches greater than 0.3 acre in area that supports at least 50 percent cover of grass species and 10 percent cover of native grassland species.

No fuel modification areas for new development will be allowed within the Reserve. Fuel modification impacts to sensitive habitats from new development would be assessed as part of the development impact area and mitigated at a 3:1 ratio for CSS and 0.5:1 ratio for non-native grassland.

Approximately 43.3 acres of other habitats (19.2 acres of exotic woodland and 24.1 acres of disturbed vegetation) are excluded from the Reserve and Neutral Lands and would be available for potential development. Any incremental biological value that these non-sensitive habitats may have would be offset by the proposed reserve design, habitat restoration, and habitat management programs included in this Subarea Plan.

City Projects

The following City Capital Improvement Plan (CIP) Projects have or will involve an unavoidable loss of 40.2 acres of CSS and 106.3 acres of non-native grassland (Table 3-2, Figure 3-4). These impacts will be mitigated by the dedication of 322.2 acres of City-owned land and 5.6 acres of revegetation within the Reserve (2.1 acres of revegetation has already been completed).

1 Altamira Canyon Drainage Project (Proposed)

The City proposes to place an impermeable liner along the portion of the Canyon that traverses the active landslide area to prevent water from percolating into the landslide. The removal of the Canyon's existing vegetation will cause the loss of 2.5 acres of CSS habitat and 3.0 acres of non-native grassland. The City proposes 2.5 acres of onsite CSS revegetation,5 acres of offsite CSS mitigation, and 1.5 acres of offsite non-native grassland mitigation. However, if the onsite revegetation is not feasible, all 7.5 acres of CSS will be provided off site (city property dedication).

2. Dewatering Wells (Proposed)

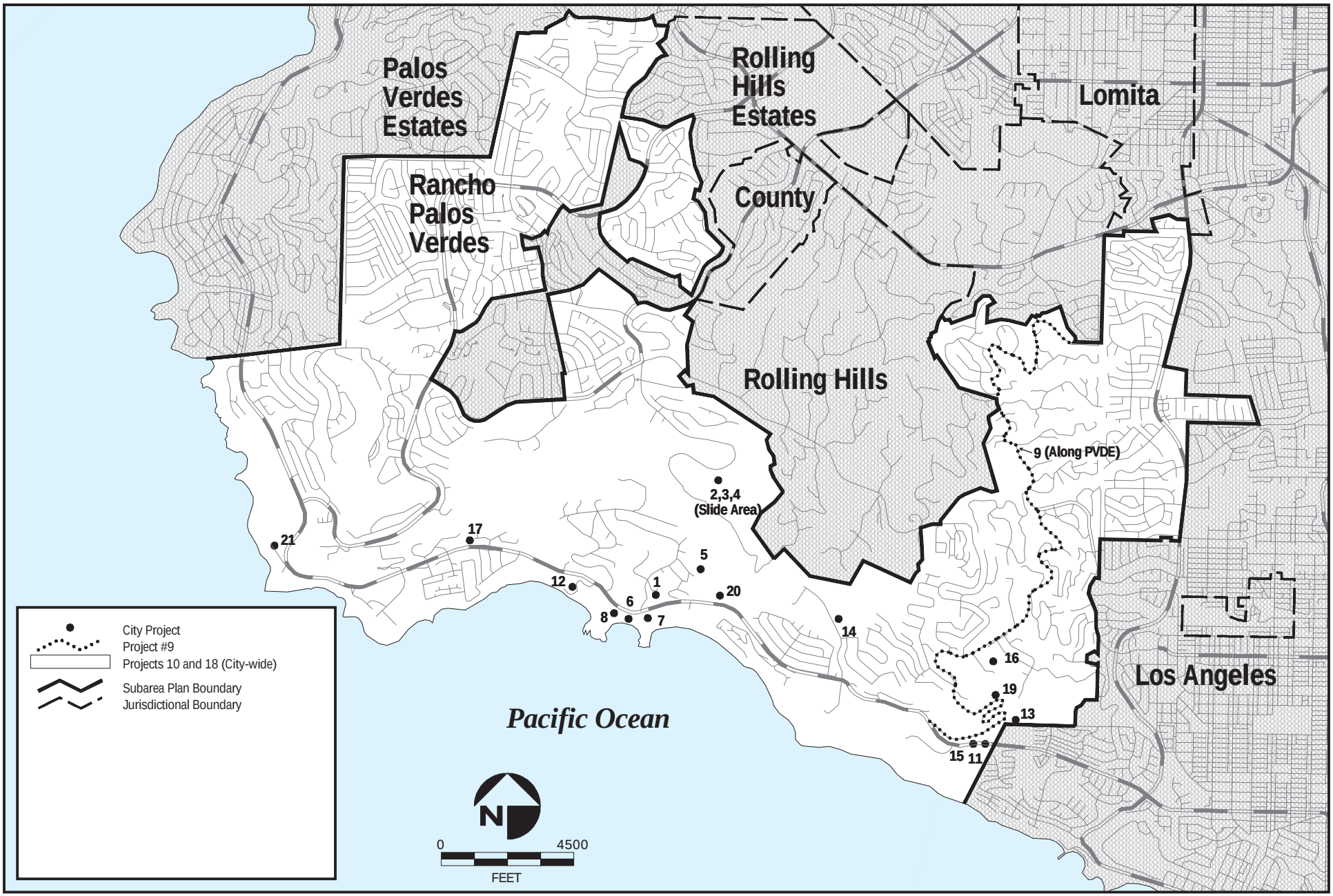
The installation of dewatering wells within the Portuguese Bend landslide area by the City has proven to be an effective method of slowing down landslide movement by removing groundwater from the slide plane. It is anticipated that at least 10 wells will be installed in the future in or near areas of existing CSS habitat and grassland throughout the landslide area. It is estimated that such CSS habitat losses would total 2.5 acres (0.25 × 10) and non-native grassland loss would total 2.5 acres. The City proposes 7.5 acres of offsite CSS mitigation and 1.25 acres of offsite non-native grassland mitigation (city property dedication).

Table 3-2
Total Loss of Habitat by City Projects

City Project Name	Project Status	Habitat Loss (Acres)		Onsite Mitigation Acreage[1]		Offsite Mitigation Acreage[1]	
		CSS	Grassland	CSS	Grassland	CSS	Grassland
1. Altamira Canyon Drainage Project	Proposed	2.5	3.0	2.5	0.0	5.0	1.5
2. Dewatering Wells (10 Wells)	Proposed	2.5	2.5	0.0	0.0	7.5	1.25
3. Misc. Fissure Filling	Proposed	3.0	3.0	0.0	0.0	9.0	1.5
4. Misc. Damaged Drain Repair	Proposed	5.0	15.0	0.0	0.0	15.0	7.5
5. Portuguese Canyon Drainage Project	Completed	0.5	N/A[2]	0.0	N/A[2]	1.5	N/A[2]
6. Sacred Cove Geologic Investigation	Completed	0.1	N/A[2]	0.0	N/A[2]	0.3	N/A[2]
7. PVDS Roadway Rehabilitation	Completed	0.2	N/A[2]	0.0	N/A[2]	0.6	N/A[2]
8. PVDS Emergency Washout Project	Completed	0.4	N/A[2]	0.0	N/A[2]	1.2	N/A[2]
9. PVDE Drainage Improvement Project	Proposed	4.0	12.0	0.0	0.0	12.0	6.0
10. Misc. Drainage Improvement Projects	Proposed	10.0	24.0	0.0	0.0	30.0	12.0
11. 25th Street Road Repair (Phase 2)	Completed	0.4	N/A[2]	0.4	N/A[2]	0.8	N/A[2]
12. Abalone Cove Beach Project	Proposed	0.2	1.0	0.6	0.0	0.0	0.5
13. Tarapaca Sewer Line Relocation	Completed	0.5	N/A[2]	0.0	N/A[2]	1.5	N/A[2]
14. Forrestal Property Trail Clearing	Completed	0.1	N/A[2]	0.0	N/A[2]	0.3	N/A[2]
15. 25th Street Road Repair (Phase 1)	Completed	0.1	N/A[2]	0.1	N/A[2]	0.2	N/A[2]
16. San Ramon Canyon Repair	Completed	1.0	N/A[2]	2.0	N/A[2]	1.0	N/A[2]
17. McCarrell Canyon Outlet Improvement	Completed	0.2	N/A[2]	0.0	N/A[2]	0.6	N/A[2]
18. RPV Trails Plan Implementation	Proposed	5.0	15.0	0.0	0.0	15.0	7.5
19. Lower San Ramon Canyon Repair	Proposed	2.0	6.0	0.0	0.0	6.0	3.0
20. Active Recreation Area	Proposed	1.0	13.6	0.0	0.0	3.0	6.8
21. Lower Point Vicente	Proposed	1.5	11.2	0.0	0.0	4.5	5.6
Total Acreage of Habitat Loss		**40.2**	**106.3**	**5.6**	**0.0**	**115.0**	**53.15**

1. City would provide mitigation acreage as part of the City-owned lands to be dedicated to the Reserve based on a 3:1 mitigation ratio for CSS and 0.5:1 ratio for non-native grassland, and accounting for onsite habitat restoration of temporarily disturbed habitat areas.

2. City would provide mitigation for non-native grassland loss for proposed projects only. Acreage of impacts and mitigation for non-native grassland is therefore not provided for completed projects.



FIGURE

Locations of City Projects Covered by the Plan

3-4

/gis/projects/mios/rpv/plots/figures/sap_figs.aml

03/26/04

3. Misc. Fissure Filling (Proposed)

From time to time, the filling of fissures by the City becomes necessary in the active Portuguese Bend landslide area to safeguard trails, roads and drainage systems. It is anticipated that there will be a need to fill such fissures on an as-needed basis. It is estimated that such activity would result in the combined loss of 3 acres of CSS habitat and 3 acres of non-native grassland. The City proposes 9 acres of offsite CSS mitigation and 1.5 acres of offsite non-native grassland mitigation (city property dedication).

4 Misc. Drainage Repair (Proposed)

From time to time, the repair of existing drainage systems becomes necessary by the City in the Portuguese Bend landslide area because of excessively heavy rainfall or damage by landslide movement. It is anticipated that there will be a need to repair such drains on an as-needed basis. It is estimated that such activity would result in the combined loss of 5 acres of CSS habitat and 15 acres of non-native grassland. The City proposes 15 acres of offsite CSS mitigation and 7.5 acres of offsite non-native grassland mitigation (city property dedication).

5 Portuguese Canyon Drainage Project (Completed)

This City project involved the installation of a drainage pipe at the bottom of Portuguese Canyon in 1995. The project resulted in a loss of 0.5 acres of CSS habitat. The City proposes 1.5 acres of offsite mitigation (city property dedication).

6. Sacred Cove Geologic Investigation Project (Completed)

This City project involved the grading of a road from Palos Verdes Drive South down to the shoreline in June 1995, to perform a series of geologic borings at the shoreline. The project resulted in a loss of 0.1 acre of CSS habitat. The City proposes 0.3 acre of offsite mitigation (city property dedication).

7. PVDS Roadway Rehabilitation Project (Completed)

This City project involved the repair of a segment of damaged Palos Verdes Drive South roadway in 2001 that is located within the active Portuguese Bend Landslide. The City reconstructed the roadway between Peppertree Lane and Klondike Canyon and replaced the storm drains underneath the roadway. The project resulted in a loss of 0.2 acre of CSS habitat adjacent to the roadway. The City proposes 0.6 acre of offsite mitigation (city property dedication).

8. PVDS Emergency Washout Project (Completed)

This City project was completed in December 2001 and involved the emergency stabilization and repair of an existing storm drainage pipe, located between Palos Verdes Drive South and Inspiration Point. The pipe had been severed because of movement of an underlying landslide caused by the 1999/2000 storm season, which eroded the area underneath the pipe and created a washout area that extended to the beach below. The related grading adjacent to the roadway resulted in a loss of 0.4 acre of CSS habitat. The City proposes 1.2 acres of offsite mitigation (city property dedication).

9. PVDE Drainage Improvement Project (Proposed)

Based on a comprehensive drainage study, the City has identified numerous drainage system deficiencies in the eastern portion of the city along Palos Verdes Drive East. To address these drainage deficiencies,

the City proposes to carry out 17 individual drainage improvement projects over an extended period of time. Although it is anticipated that most of the projects will occur within the existing improved street right-of-way, some projects may necessitate work in the adjoining canyon areas. It is estimated that such activity would result in the combined loss of 4 acres of CSS habitat and 12 acres of non-native grassland. The City proposes 12 acres of offsite CSS mitigation and 6 acres of offsite non-native grassland mitigation (city property dedication).

10. Misc. Drainage Improvements (Proposed)

The City anticipates that there will be the need to repair or improve other drainage systems in areas of the city that are not located within the Portuguese Bend Landslide Area or the PVDE drainage study area. It is also anticipated that some of the projects may necessitate work in habitat areas. It is estimated that such activity would result in the combined loss of 10 acres of CSS habitat and 24 acres of non-native grassland. The City proposes 30 acres of offsite CSS mitigation and 12 acres of offsite non-native grassland mitigation (city property dedication).

11. 25th Street Road Repair – Phase 2 (Completed)

This City project was completed in 2002 and involved the repair of instability and settlement beneath the Palos Verdes Drive South roadway (adjacent to 25th Street in San Pedro). Phase 2 included the installation of a drainage system on the surface of the slope. The project resulted in a loss of 0.4 acre of CSS habitat. The City has completed 0.4 acre of onsite mitigation and proposes 1.2 acres of offsite mitigation (city property dedication).

12. Abalone Cove Beach Project (Proposed)

The City proposes to improve public access and beach amenities at the existing Abalone Cove beach site. The project involves the construction of a restroom/storage area, a gate house, parking lot, and shade structures, as well as improving the access road that leads from Palos Verdes Drive South to the beach and foot trails in the area. The grading associated with the proposed project will cause the loss of 0.2 of CSS habitat and 1 acre of non-native grassland. The Resource Agencies and Coastal Commission have required 0.5 acre of CSS revegetation, all of which will be performed on site. The amount of CSS mitigation required is 0.1 acre short of a 3:1 mitigation ratio. The City proposes 0.5 acre of offsite non-native grassland mitigation (city property dedication). Although this project is not being proposed at this time, it is likely that the project will be actively pursued during the life of this plan.

13. Tarapaca Sewerline Relocation (Completed)

This project was performed by the LA County Sanitation Department in May 1998 to relocate its Tarapaca sewerline around the Tarapaca landslide. The relocation project included demolition of a bridge that carried the pre-existing sewerline across San Ramon Canyon. The demolition of the bridge caused a loss of 0.5 acre of CSS habitat. At the time of the project, the City agreed to mitigate for the loss so that the work could proceed without delay. The City proposes 1.5 acres of offsite mitigation (city property dedication).

14. Forrestal Property Trail Improvement (Completed)

In an effort to repair erosion damage, a trail on the City's Forrestal property was widened by the City in July 1998. The Quarry Bowl trail, which leads from Forrestal Drive to the Quarry Bowl, was widened from approximately 2 to 6 feet. In performing the widening, a loss of 0.1 acre of CSS habitat occurred. The City proposes 0.3 acre of offsite mitigation (city property dedication).

15. 25th Street Road Repair – Phase 1 (Completed)

This City project was completed in 1999 and involved the repair of instability and settlement beneath the Palos Verdes Drive South roadway (adjacent to 25th Street in San Pedro). Phase 1 included the installation of a series of horizontal sub-drains into the adjacent fill slope. The project resulted in a loss of 0.1 acre of CSS habitat. The City has completed 0.1 acre of onsite habitat restoration and proposes 0.2 acre of offsite mitigation (city property dedication).

16. San Ramon Canyon Repair Project (Completed)

This City project was completed in 2002 and involved the stabilization of the upper reach of San Ramon Canyon. The project involved remedial grading to construct a buttress fill to stabilize the area and the re-construction of a drainage system. The grading within the canyon resulted in a loss of 1.0 acre of CSS habitat. The City has completed 2.0 acres of onsite revegetation and proposes 1.0 acre of offsite mitigation (city property dedication).

17. McCarrell Canyon Outlet Clearing (Completed)

This City project was completed in November 1997 and involved the removal of overgrown vegetation at the outlet of the canyon before the onset of winter rains to improve the performance of the drain. The vegetation removal resulted in a loss of 0.2 acre of CSS habitat. The City will perform 0.6 acre of offsite mitigation (city property dedication).

18. Rancho Palos Verdes Trails Plan Implementation (Proposed)

It is anticipated that implementation of the City's Conceptual Trails Plan will result in the loss of some CSS habitat. Although, the establishment of new trails through CSS habitat will be avoided where possible, it is anticipated that some trail maintenance, erosion repair and re-routing for public safety reasons may not be avoided within habitat areas. It is estimated that such activities would result in the combined loss of 5 acres of CSS habitat and 15 acres of non-native grassland. The City proposes 15 acres of offsite CSS mitigation and 7.5 acres of offsite non-native grassland mitigation (Barkentine property dedication).

19. Lower San Ramon Canyon Repair (Proposed)

It is anticipated that the City will need to do some remedial grading in Lower San Ramon Canyon to prevent a landslide from blocking water flow in the canyon. Geologic studies have identified a landslide in the canyon that has the potential to create blockage of the stream flow. Blockage of the stream flow could cause water to percolate into the adjacent South Shores Landslide. It is estimated that the grading activity would result in the loss of 2.0acres of CSS habitat and 6.0 acres of non-native grassland. The City proposes 6.0 acres of offsite CSS mitigation and 3.0 acres of offsite non-native grassland mitigation (city property dedication).

20. Active Recreation Area (Proposed)

The City is proposing to locate a recreation area within the Portuguese Bend active landslide area of the city to provide a staging area for accessing the Reserve trail system to provide recreation uses, including but not limited to a potential equestrian facility. The area would encompass approximately 25 acres and be located adjacent to Palos Verdes Drive South between the Cherry Hill privately owned lots and Klondike Canyon. The area lies within the active Portuguese Bend Landslide and is completely disturbed because of previous landslide stabilization activities. The uses of this area would be determined through the Public Use Master Plan process, and could include equestrian riding rings and stables, outdoor educational program areas, and unpaved vehicular access roads and parking areas. It is anticipated that development of the facility will result in a maximum of 1.0 acre of CSS habitat loss and 13.6 acres of non-native grassland. The City proposes 3.0 acres of offsite CSS mitigation and 6.8 acres of offsite non-native grassland mitigation (city property dedication).

21. Lower Point Vicente (Proposed)

The City is considering developing recreational uses in an area of City-owned land referred to as Lower Pt. Vicente. The property is located between the Pt. Vicente Lighthouse property owned by the Coast Guard and the CPH residential development project. It is anticipated that development of the site may result in a maximum of 1.5 acre of CSS habitat loss and 11.2 acres of non-native grassland loss. The City proposes 3.0 acres of offsite CSS mitigation and 5.6 acres of offsite non-native grassland mitigation (city property dedication).

Private Projects

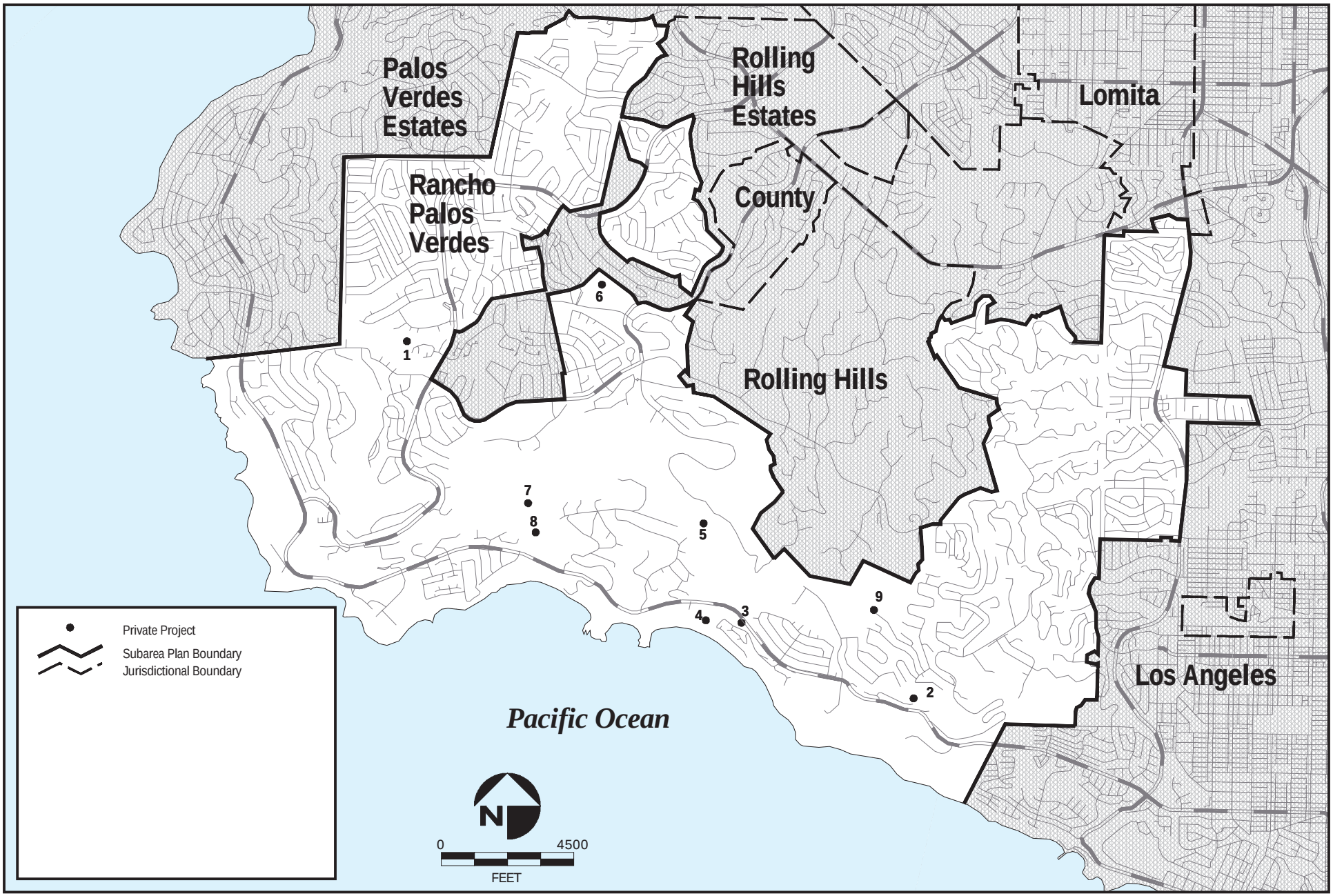
The City expects 9 recent and future planned private projects will involve unavoidable loss of 15.2 acres of CSS and 81.0 acres of non-native grassland (Figure 3-5). Table 3-3 includes recent past projects and planned future projects. Mitigation for these losses would include dedication to the Reserve of 3.9 acres by the City and 82.2 acres provided by the project applicants as additions to the Reserve or equivalent funds for habitat restoration of disturbed areas within the Reserve.

1. Brush Clearance at Windport Canyon (Completed)

In 1994, unauthorized vegetation clearing occurred on vacant private property by then owner Steve Taylor, in the upper portion of Windport Canyon. The clearing resulted in the estimated loss of 0.5 acre of CSS habitat. The City, as lead agency for the preparation of the NCCP, has taken responsibility to mitigate for the loss and 1.5 acres of offsite mitigation is proposed (city property dedication).

2. Brush Clearance at 3303 Palo Vista (Completed)

In 1996, unauthorized vegetation clearing occurred on the developed private property known at 3303 Palo Vista. The clearing occurred on the resident's rear yard slope, which resulted in the estimated loss of 0.3 acre of CSS habitat. The City, as lead agency for the preparation of the NCCP, has taken responsibility to mitigate for the loss and 0.9 acre of offsite mitigation is proposed (city property dedication).



FIGURE

3-5

URS TAIC

Locations of Private Projects Covered by the Plan

/gis/projects/mios/rpv/plots/figures/sap_figs.aml

03/26/04

Table 3-3
Total Loss of Habitat by
Private Projects and Mitigation

Private Project Name	Project Status	Habitat Loss (Acres)		Mitigation by City [1]		Mitigation By Project Applicant [2]	
Private Projects with City-Provided Mitigation							
		CSS	Grassland	CSS	Grassland	CSS	Grassland
1. Brush Clearance at Windport Canyon	Completed	0.5	N/A[3]	1.5	N/A[3]	0.0	N/A[3]
2. Brush Clearance at 3303 Palo Vista	Completed	0.3	N/A[3]	0.9	N/A[3]	0.0	N/A[3]
3. Portuguese Bend Club Slope Repair	Completed	0.5	N/A[3]	1.5	N/A[3]	0.0	N/A[3]
Subtotal City-Provided Mitigation		**1.3**	**N/A[3]**	**3.9**	**N/A[3]**	**0.0**	N/A[3]
Other Private Projects							
		CSS	Grassland	CSS	Grassland	CSS	Grassland
4. Portuguese Bend Club Remedial Grading	Proposed	3.0	10.0	0.0	0.0	9.0	5.0
5. Hon Geologic Investigation	Completed	0.6	N/A[3]	0.0	N/A[3]	1.8	N/A[3]
6. Crestridge Development	Proposed	2.0	12.0	0.0	0.0	6.0	6.0
7. Brush Clearance at Lower Filiorum	Completed	0.5	N/A[3]	0.0	N/A[3]	1.5	N/A[3]
8. Lower Filiorum Development	Proposed	7.3	59.0	0.0	0.0	21.9[4]	29.5[4]
9. Coolheights Residential Lot Development	Completed	0.5	N/A[3]	0.0	N/A[3]	1.5	N/A[3]
Subtotal Other Private Projects		**13.9**	**81.0**	**0.0**	**0.0**	**41.7**	**40.5**
Total Acreage Private Projects		**15.2**	**81.0**	**3.9**	**0.0**	**41.7**	**40.5**

1. City would provide mitigation acreage as part of the City-owned lands to be dedicated to the Reserve at a 3:1 mitigation ratio for CSS and 0.5:1 ratio for non-native grassland.
2. Habitat mitigation at a 3:1 ratio for CSS and 0.5:1 ratio for non-native grassland in the form of habitat contributed to the reserve or funds for habitat restoration within the reserve.
3. City would provide mitigation for non-native grassland loss for proposed projects only. Acreage of impacts and mitigation for non-native grassland is therefore not provided for completed projects.
4. Project applicant would dedicate a total of 40 onsite acres to the Reserve and an additional 11.4 offsite acres or equivalent habitat restoration funds.

* Please note that some anticipated impacts are preliminary estimates and could change during subsequent project specific CEQA analysis.

3. Portuguese Bend Club Slope Repair (Completed)

In June 1996, remedial grading was undertaken by the Portuguese Bend Club, a private residential community, to stabilize a failing slope that was threatening the main access road to the community and adjoining homes. The slope repair was performed on private property owned by the Beach Club and involved 20,000 c.y. of cut and 5,000 c.y. of fill for a buttress at the toe of the slope, adjacent to Yacht Harbor Drive. The project resulted in the estimated loss of 0.5 acre of CSS habitat. At the time, the City

agreed to mitigate for the loss so that the emergency work could occur without delay. The City proposes 1.5 acres of offsite mitigation (city property dedication).

4. Portuguese Bend Club Remedial Grading (Proposed)

Because of its proximity to the active Klondike Canyon Landslide, the homeowners association of the gated residential community known as the Portuguese Bend Club periodically needs to perform remedial grading on its property to prevent damage to its roads and to resident's homes. The remedial grading activity usually takes place on property owned by the association, located on the western end of the community, between the residences and adjoining City-owned property. It is anticipated that the continuous remedial grading activity will result in a loss of 3.0 acres of CSS habitat and 10.0 acres of non-native grassland. Any losses of habitat would be mitigated by the property owner through 14.0 acres of habitat to be contributed to the reserve or funds for habitat restoration within the Reserve.

5. Hon Geologic Investigation (Completed)

In February 1996, a geologic investigation project was undertaken within the Portuguese Bend Landslide area on vacant private property owned by Barry Hon. The project involved the creation of access roads and clearings to conduct a series of geological borings. The project resulted in the estimated loss of 0.6 acre of CSS habitat. The loss is proposed to be mitigated by the property owner through the contribution of 1.8 acres of privately owned land to the Reserve.

6. Crestridge Development (Proposed)

A project is proposed on privately owned land and City-owned land that would involve the development of age-restricted condominiums, a public park, and a senior center. The project site is located along Crestridge Road, between Crenshaw Blvd. and existing Institutional uses. It is anticipated that development of the project will result in a loss of 2.0 acres of CSS habitat and 12.0 acres of non-native grassland. Any losses of habitat would be mitigated by the property owner through 12.0 acres of habitat to be contributed to the Reserve or funds for habitat restoration within the Reserve.

7. Brush Clearance at Lower Filiorum (Completed)

In November 2000, unauthorized vegetation clearing occurred on vacant private property owned by York Long Point Associates. The clearing occurred in the northwest portion of the privately owned property referred to as Lower Filiorum. The clearing resulted in the estimated loss of 0.5 acre of CSS habitat. The loss is proposed to be mitigated by the property owner through the dedication of 1.5 acres of privately owned land to the Reserve.

8. Lower Filiorum Development (Proposed)

A project is proposed on privately owned land that would involve the exclusion of approximately 62 acres from the City's Moratorium Area and a subsequent residential development encompassing approximately 55 acres. The project site is located north of Palos Verdes Drive South, between the Wayfarers Chapel and the Upper Abalone Cove residential tract. It is anticipated that development of the project will result in a loss of 7.3 acres of CSS habitat and 59.0 acres of non-native grassland. Losses of habitat would be mitigated by the project proponent through dedication of 40 onsite acres to the Reserve and 11.4 offsite acres to the Reserve (or equivalent habitat restoration funds).

9. Coolheights Residential Lot Development (Completed)

A project has been approved that involves the construction of a new single-family residence on a vacant lot at 3787 Coolheights Drive. Because the property is located adjacent to a natural canyon, the LA County Fire Department regulations require a significant amount of brush clearance for fire protection purposes. The required brush clearance resulted in the loss of 0.5 acre of CSS habitat. The property owner has mitigated the loss at a 3:1 ratio by establishing a conservation easement over 1.5 acres of his property.

3.1.7 Covered Species List

Through the configuration of the proposed City reserve design, and implementation of the habitat restoration and management programs, all 12 proposed covered species listed in Table 1-1 would be adequately conserved by this Subarea Plan. The covered species include all species listed as endangered or threatened by the State and/or Federal ESA, as well as selected species that are currently not listed, but could be listed during the permit period. Once the Wildlife Agencies have approved this Subarea Plan and signed the Implementing Agreement, the City will receive permits and/or management authorizations to directly affect or "take" individuals of listed species covered by this Subarea Plan. The term "take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect. Take will be allowed for Covered Species in one of two categories: 1) Covered Species not listed and 2) Covered Species subject to Incidental Take (i.e., listed species). When an unlisted covered species becomes listed, it will continue to receive coverage under this Subarea Plan, only under the latter category.

The Implementing Agreement will assure that the conservation/mitigation identified in this Subarea Plan and implementing regulations are implemented and the City will not be required to commit additional land, land restrictions, or financial compensation, beyond that described in this Subarea Plan, for the protection of any covered species. If in the future, a covered species not listed becomes listed as endangered or threatened by the Federal or State governments, the take authorization will become effective concurrent with its listing.

The standards for protecting covered species and issuance of take authorizations contained in this Subarea Plan are consistent with the State's NCCP Planning Guidelines (CDFG, 1993), the State ESA, and criteria in Section 10(a) of the Federal ESA. This Subarea Plan meets the following key NCCP planning criteria in the NCCP Planning Guidelines:

1. Conserve target species throughout planning area:
   - 96 percent of existing CSS habitat is conserved.
   - 93 to 100 percent of covered species locations are conserved.
   - A habitat-restoration program will contribute additional habitat to the Reserve, eventually exceeding the current inventory of CSS habitats in the city.
2. Larger reserves are better:
   - The largest, most contiguous habitat areas are included in the Reserve.
3. Keep Reserve areas close together:
   - Reserve planning areas are within a relatively small area and linked by corridors.

4. Keep habitat contiguous:
   - Most contiguous patches of habitat are within the Reserve.
5. Link Reserve areas with corridors:
   - All regionally important habitat linkages are conserved.
6. Reserves should be biologically diverse:
   - 93 to 100 percent of cover species locations are conserved.
   - 96 percent of existing CSS habitat is conserved.
   - All known native habitat types are included in the Reserve (upland scrub habitats [11 subtypes] and riparian scrub).
7. Protect Reserves from encroachment:
   - A habitat management and monitoring program is included in this Subarea Plan.
   - A habitat restoration program is included in this Subarea Plan.

This Subarea Plan is also consistent with the following criteria in Section 10(a) of the Federal ESA:

- The taking will be incidental to otherwise lawful activities;
- The impacts of the taking will, to the maximum extent practicable, be minimized and mitigated;
- Adequate funding for long-term protection of the species will be provided; and
- The taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

3.1.8 Estimated Take of Covered Species

The proposed reserve design does not include all point locations where covered species have been sighted recently or historically. The GIS database developed for this Subarea Plan (Ogden 1999 and recently updated for *Crossosoma*) indicates that several species point locations are excluded from the Reserve (Table 3-4, Figure 3-6). If these locations are still occupied by the covered species, a take of a covered species is assumed if these areas are developed. In addition to habitat conservation, the restoration activities provided for in this Subarea Plan will increase the inventory of potential habitat for covered species by about 16 percent above the current inventory of CSS habitats within the city. A detailed conservation analysis and justification for incidental take for each covered species is provided in Appendix B. Because approximately 93 percent or more of the species point locations and approximately 96 percent of their potential habitats are being conserved and the long-term habitat restoration program is likely to substantially increase the availability of suitable habitat for covered species during the permit period, it is expected that the populations of covered species will increase over time, particularly for PV Blue Butterfly, California gnatcatcher, and cactus wren. The Reserve will provide the opportunity for the establishment of new populations of covered species where they are currently absent.

Table 3-4
Estimated Take of Covered Species Point Locations

Covered Species	Existing	Conserved [1]	Percent Conserved [1]	Expected Take
California Gnatcatcher	88	88	100.0	0
Coastal Cactus Wren	99	95	96.0	4
Historical PVB Butterfly Historical Sighting	18	17	94.4	1
Historical PVB Butterfly Host Plant, *Astragalus trichopodus*	84	78	92.9	5
El Segundo Blue Butterfly Sighting	1	1	100.0	0
El Segundo Blue Butterfly Host Plant, *Eriogonum parvifolium*	19	18	94.7	1
Dudleya virens	35	35	100.0	0
Aphanisma blitoides	26	26	100.0	0
Atriplex pacifica	8	8	100.0	0
Crossosoma californicum	3	3	100.0	0
Calystegia peirsonii [2]	N/A	N/A	96.3	0
Centromadia parryi ssp. *australis* [2]	N/A	N/A	96.3	0
Lycium brevipes var. *hassei*	3	3	100.0	0
Pentachaeta lyonii [2]	N/A	N/A	96.3	0
Suaeda taxifolia [2]	N/A	N/A	99.3	0

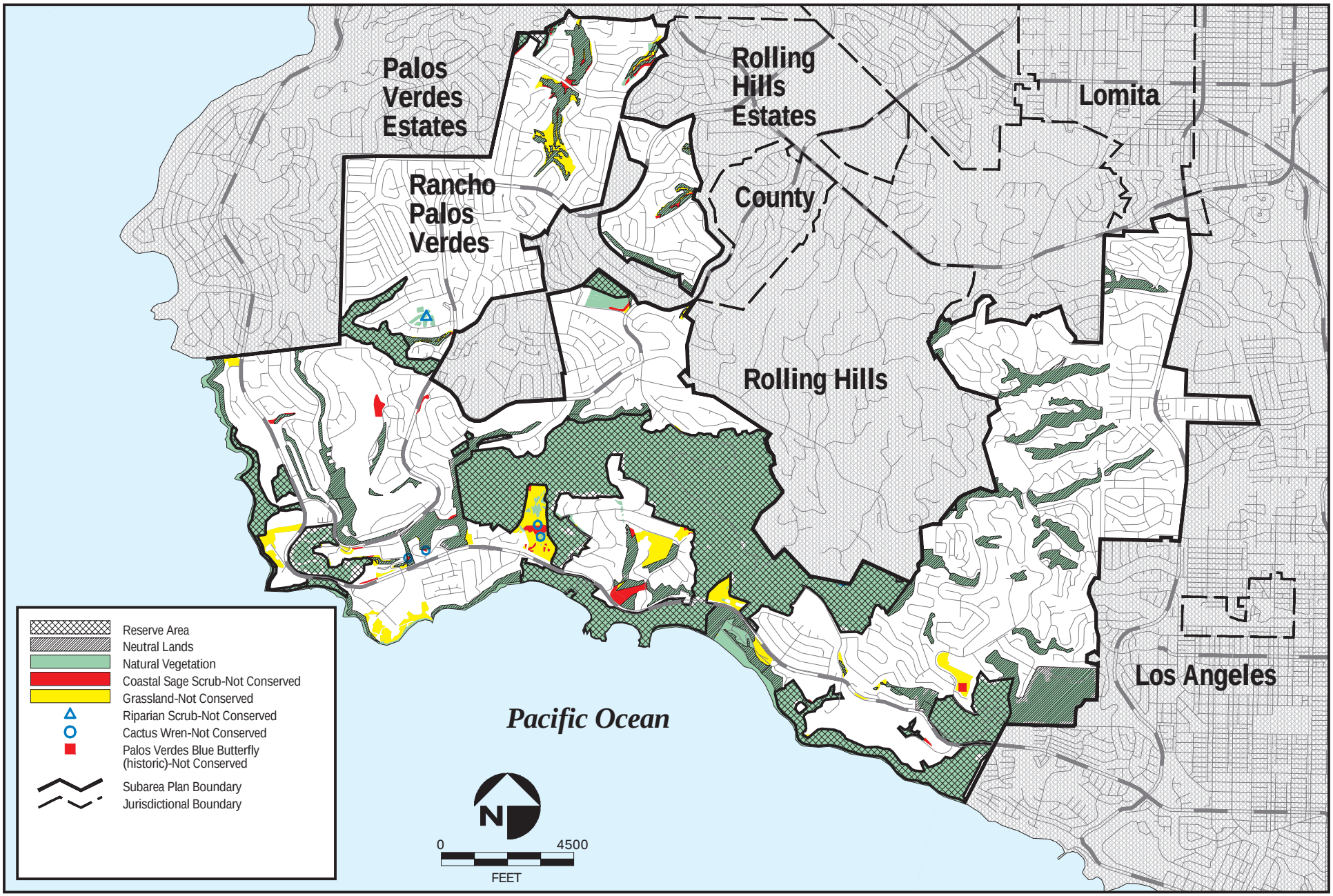
1. Includes point locations within Reserve and Neutral Lands.
2. *Calystegia peirsonii, Centromadia parryi* ssp. *Australis, and Pentachaeta lyonii* are not known to occur in the Subarea Planning area; *Suaeda taxifolia* occurs regularly within coastal bluff scrub, which is 99.3% conserved.

3.2 LAND USES WITHIN AND ADJACENT TO THE RESERVE

Within two years of the signing of the Implementing Agreement, a Public Use Master Plan (PUMP) shall be developed jointly by the City and PVPLC to address issues such as public access, trailhead locations, overlooks, parking, trail use, fencing, signage, lighting (if any), and firebrush management, minimizing impacts to adjacent neighborhoods, public involvement in advisory capacities, and other issues that may arise. The PUMP must be reviewed and approved by the Wildlife Agencies. Compatible lands uses within the Reserve and Neutral Lands would, to the extent practicable, be sited to minimize impacts to sensitive resources and are limited to the following:

- Creation and maintenance of a recreational trail system consistent with the City's Conceptual Trails Plan (dated 1993, and as amended by the city council thereafter). A Reserve Trail Plan (RTP) will be developed through the PUMP process, which is consistent with the City's Conceptual Trail plan and considers impacts to habitat and covered species.

- Existing trails within the Reserve not included in the Reserve Trail Plan approved by the city council will be closed and appropriate measures shall be taken to prevent public access and restore CSS habitat.
- Creation and maintenance of passive overlook areas with benches, picnic tables, tie rails, portable toilets, and trash cans, to be located near preserve boundaries where no existing habitat would be lost. The location of these overlooks shall consider impacts to habitat and covered species, and their location shall be reviewed and approved as a part of the PUMP by the city council and the Wildlife Agencies before any work to implement them is initiated. Overlooks and staging areas for trailheads will be located adjacent to existing roads and away from sensitive resource areas.
- Existing recreational uses, such as the archery range or paragliding activities, can be allowed in areas where impacts to habitat can be minimized.
- Where required, landslide abatement activities may occur within the Reserve and Neutral Lands. Such activities shall be scheduled outside the gnatcatcher breeding season if practicable. Temporary disturbance areas will be revegetated with CSS species after completion of abatement activities.
- Selected drainage improvements, linear utility easements, and existing access roads within the Reserve and Neutral Lands will be maintained and upgraded as required. An access protocol will be created to facilitate access by utility agencies to areas within the Reserve and Neutral Lands while minimizing, to the maximum extent possible, environmental damage.
- Emergency access roads.
- Geologic testing, if deemed necessary by the City's geotechnical consultants, with impacts to be minimized and unavoidable habitat impacts fully restored.
- Utilities and related infrastructure serving existing and future developments, such as sewers, water, cable, gas, electric, and storm drains.
- Water quality basins, retention basins, and debris basins, if such features are required to meet water quality standards, and if the design incorporates native vegetation where practicable and minimizes the amount of hardscape.
- Groundwater monitoring wells, and GPS stations for landslide monitoring, with associated equipment such as pumps, electrical, drainage pipes, and access pathways, if such equipment is deemed necessary by the City's geotechnical consultants.
- All brush management and fuel modification requested by the L.A. County Fire Department for new development should occur outside the Reserve. Existing brush management and fuel modification for existing development adjoining the Reserve boundaries may continue in the Reserve provided it is not expanded. Any new development adjacent to the Reserve that requires brush management within the Reserve shall mitigate impacts to CSS at a 3:1 mitigation ratio.
- Existing agricultural uses within the Reserve and Neutral Lands can be allowed to continue as long as all agricultural practices and improvements remain consistent with this Subarea Plan.



FIGURE

3-6

URS TAIC

Covered Species Point Locations Not Being Conserved by the Plan

/gis/projects/mios/rpv/plots/figures/sap_figs.aml

06/22/04

SECTION 4 PLAN IMPLEMENTATION

Any proposed development of land in the city would first require consistency with the appropriate provisions of the Municipal Code. Subsequent entitlements cannot be secured without compliance with applicable provisions of the General Plan, Zoning Ordinance, Grading Ordinance, Subdivision Map Act, and other applicable provision of the Municipal Code. Upon approval of this Subarea Plan, the City will use its land-use authority to implement the provisions of this Subarea Plan. Consistency with this Subarea Plan will be a mandatory finding of the CEQA review and planning process.

4.1 RESERVE COMPONENTS

The Reserve will be composed of public and private biological open-space lands as discussed below.

4.1.1 Existing Public Lands

City-owned lands (423.5 acres) already dedicated as biological open space to be included in the Reserve (Figure 4-1)

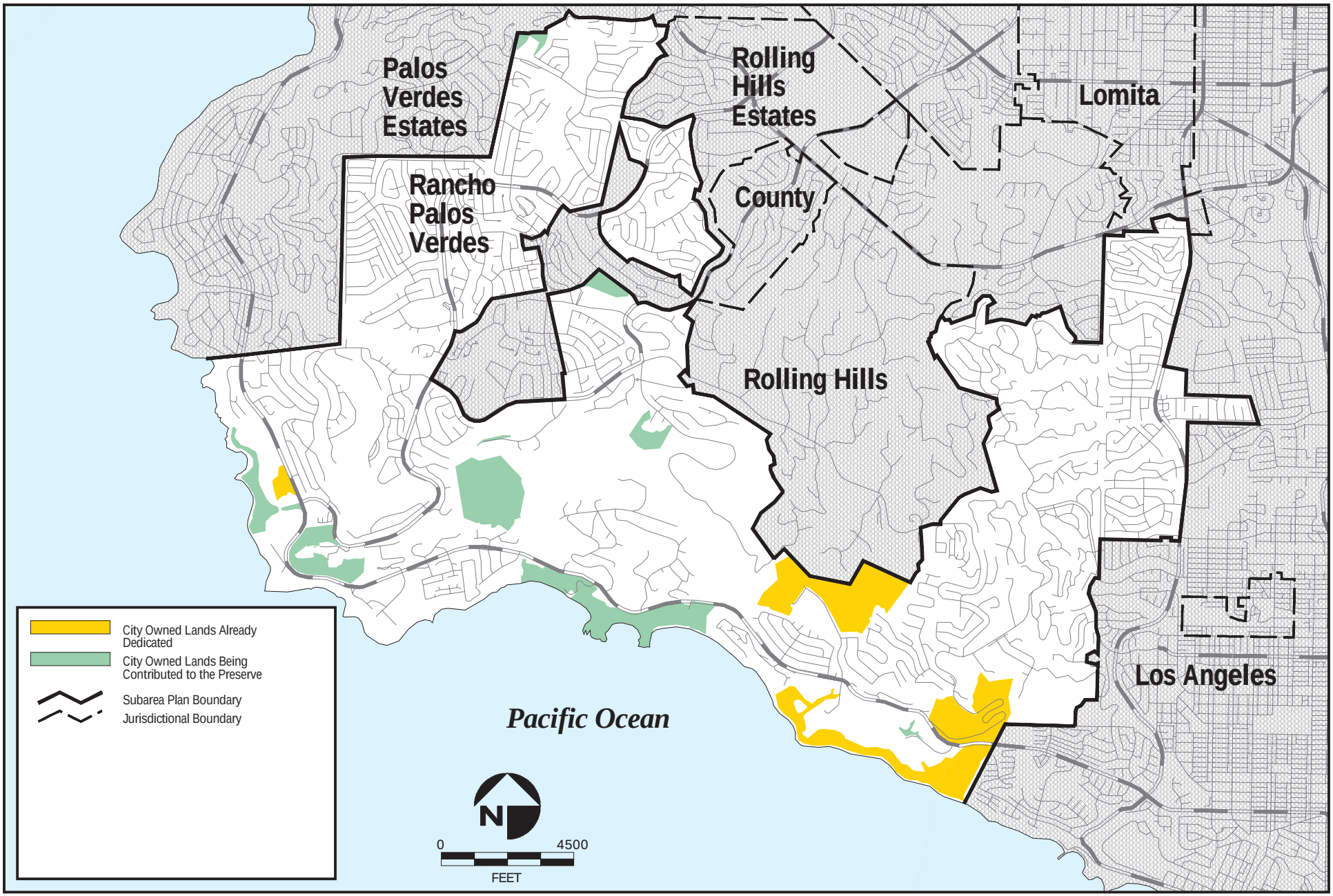
- 102.0-acre Switchbacks Parcel
- 53.0-acre Shoreline Park Parcel
- 163.0-acre Forrestal Parcel
- 69.0 acres within the Oceanfront Estates Project now owned by the City

City-owned lands to be dedicated to the Reserve (322.2 acres) upon adoption of the Implementation Agreement.

- 98.0-acre Barkentine Canyon (Parcel 4)
- 65 acres of Upper Point Vicente Parcel (City Hall Parcel)
- 10 acres of Lower Point Vicente Parcel
- 6 acres of the Fishing Access Property
- 100 acres of Abalone Cove Parcel
- 17.4-acre Del Cerro Buffer
- 16.8 acres of the Crestridge Parcel
- 9 acres of Grandview Park

Other Public/Conserved Lands (90.8 acres)

- 69.9 acres within the Ocean Trails Project (not yet transferred to the City)
- 20-acre Lunada Canyon Preserve owned by the Palos Verdes Peninsula Land Conservancy
- 3.9-acre Coast Guard Property



FIGURE

4-1

URS TAIC

City-Owned Parcels Being Contributed to the Reserve

/gis/projects/mios/rpv/plots/figures/sap_figs.aml

06/22/04

4.1.2 Private Lands

Private development projects will contribute 216.6 acres of biological open space to the Reserve (Figure 4-2):

Future private development projects would contribute 80 acres of biological open space to the Reserve pending subsequent project approvals:

- 40.0 acres within the Long Point Parcel (bluff face)
- 40.0 acres within the Lower Filiorum Parcel

The inclusion of Lower Filiorum acreage in the Reserve will be a condition of approval for any development proposals on the Lower Filiorum property. If no approvals are obtained, there will be no obligation on the part of present or future property owner to donate these lands. Designating these lands as included in the Reserve in the text and maps of this Subarea Plan does not constitute approval of development on the Lower Filiorum property.

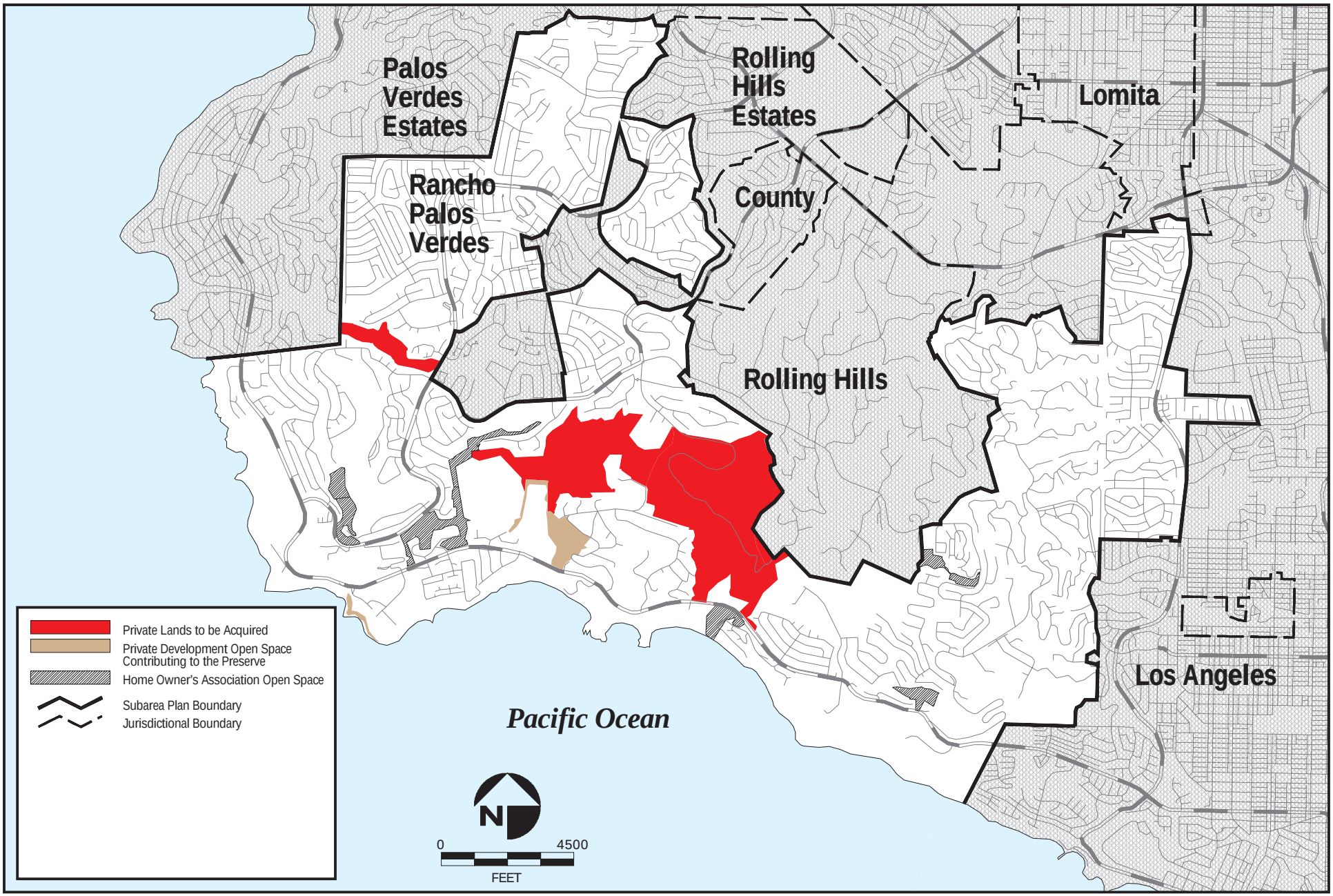
Seven local Homeowners Associations (HOA) are being requested to contribute 136.6 acres of biological open space to the Reserve.

- 11.5 acres belonging to the Panorama Estates HOA
- 18.0 acres belonging to the Portuguese Bend Club
- 20.0 acres belonging to the Sea Breeze HOA
- 42.3 acres belonging to the Peninsula Pointe HOA
- 16.6 acres belonging to the Sunset Ridge HOA
- 13.2 acres belonging to the Seacliff Hills HOA
- 15.0 acres belonging to the Rancho Palos Verdes Estates HOA

The City and PVPLC are actively working with these HOAs to sign agreements to include their biological open space with in the Reserve and to be actively managed by PVPLC. Until such agreements are obtained, these lands are categorized as Neutral Lands that cannot be developed.

The City, PVPLC, Los Angeles County, and the Wildlife Agencies will provide funds for the purchase and dedication of the Reserve 684.5 acres of privately owned lands considered regionally important:

- 422.3-acre Portuguese Bend Parcel (397.3 acres will be included in the Reserve, and 25 acres in the lower active landslide area will be an “active recreation area” outside of the Reserve that would serve as a public-access point to trails within the Reserve and could include an equestrian facility)
- 43.8-acre Agua Amarga Canyon Parcel
- 218.4-acre Upper and Middle Filiorum Parcels



FIGURE

4-2

URS TAIC

Private Parcels Being Contributed to the Reserve

/gis/projects/mios/rpv/plots/figures/sap_figs.aml

06/22/04

4.1.3 Neutral Lands

Approximately 663 acres of "Neutral Lands" will exist outside the Reserve boundary, but are unlikely to be developed in the future (Figure 4-3). The Neutral Lands designation has been applied to privately owned properties in the City that contain development constraints due to existing City zoning code restrictions. The designation is not intended to prohibit development on these properties but only recognize the development constraints that already exist on these properties pursuant to the City's Municipal Code. By definition "Neutral Lands" are those areas that are considered to be extreme slopes (35% or greater slope), are zoned Open Space Hazard or exist as deed restricted open space belonging to a Homeowners Association. If any of these three conditions exist on a private property the area has been designated Neutral Lands. Given the scale of the NCCP map, the mapped "Neutral Lands" areas are approximations. The Neutral Lands designation is noted in the Subarea Plan because these areas of the City cannot be developed under the City's Codes and therefore will likely remain as open space which thus contributing to the function of the Reserve. Except for specific HOA lands, Neutral Lands are not proposed to be included in the Reserve and therefore not subject to the restrictions that apply to properties within the Reserve. The Neutral Lands are mapped solely to provide an estimation of their area and location relative to the actual NCCP Reserve. The Land Conservancy and the City will work to obtain conservation easements over some of these lands (HOA open space) and add as many of these parcels to the Reserve as is practical.

These Neutral Lands can be placed into the following two categories: Extreme Slopes on Private Property and Lands Zoned Open Space Hazard.

Extreme Slopes on Private Property

Extreme slopes have greater than 35 percent grade and occur in undeveloped canyons and developed residential tracts scattered throughout the city, although they are mostly concentrated on the city's east side. These slopes are protected from development by City Ordinance.

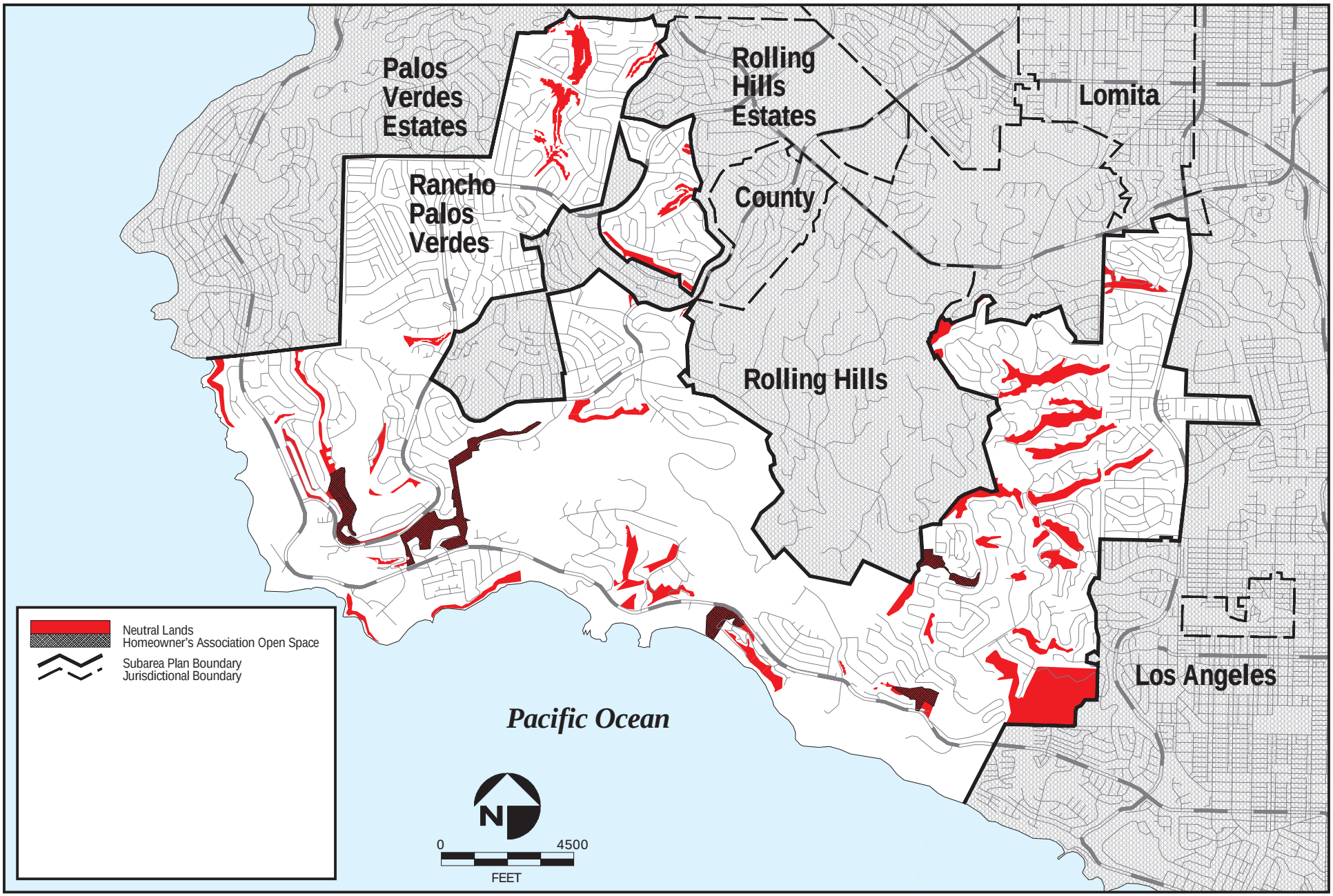
Lands Zoned Open Space Hazard

Unstable geologic conditions or other physical constraints occurring on public and private properties zoned Open Space Hazard may result in a prohibition against development. Any proposed development must be accompanied by a detailed geotechnical investigation establishing the absence of geologic hazards and an approved City application to remove the land from the Open Space Hazard designation.

4.2 CONSERVATION ACTIONS

Conservation consists of three separate actions:

1. *Dedication*: The City will dedicate 745.7 acres of City-owned lands to the Reserve.
2. *Acquisition*: The City, PVPLC, Los Angeles County, and the Wildlife Agencies will provide funds for the purchase in fee and dedication to the Reserve 684.5 acres of privately owned lands considered regionally important.
3. *Management*: PVPLC, with assistance from the City and the Wildlife Agencies, will actively manage all areas within the Reserve, including implementing habitat restoration activities in priority areas of the Reserve annually. Additional habitat restoration may be performed as available funding permits.



FIGURE

4-3

URS TAIC

Neutral Lands

/gis/projects/mios/rpv/plots/figures/sap_figs.aml

06/22/04

4.2.1 Compensation Mitigation

All project-specific habitat mitigation will be in the form of providing lands to the Reserve or providing funds toward implementation of habitat restoration within the Reserve. The mitigation ratio for habitat restoration funding is 3:1 for CSS, riparian scrub, and native grassland (exceeding 0.3 acre of native grassland impact; i.e., sufficient funds to purchase or restore three times the affected acreage of habitat) and 0.5:1 for non-native grassland and native grasslands less than 0.3 acre. The estimated cost for habitat restoration is $20,000 per acre (2003 dollars).

4.2.2 Priority Acquisition Areas to be Purchased (684.5 Acres)

The City, PVPLC, Los Angeles County, and the Wildlife Agencies will provide funds for the purchase and dedication of approximately 684.5 acres of privately owned lands considered regionally important to the Reserve:

- 422.3-acre Portuguese Bend Parcel (397.3 acres will be included in the Reserve, and 25 acres in the lower active landslide area will be a recreation area outside of the Reserve that would serve as a public-access point to trails within the Reserve and a potential equestrian facility.)
- 43.8-acre Agua Amarga Canyon Parcel
- 218.4 acres of Upper and Middle Filiorum Parcels

4.2.3 Priority Restoration/Enhancement Areas

Current habitat restoration programs within the proposed Reserve include 30 acres of CSS revegetation on the Oceanfront Estates property and 50 acres of CSS revegetation associated with the Ocean Trails development. The City and PVPLC are committed to long-term enhancement of the Reserve via annual Revegetation and Targeted Exotic Plant Removal programs, as allowed by available funds.

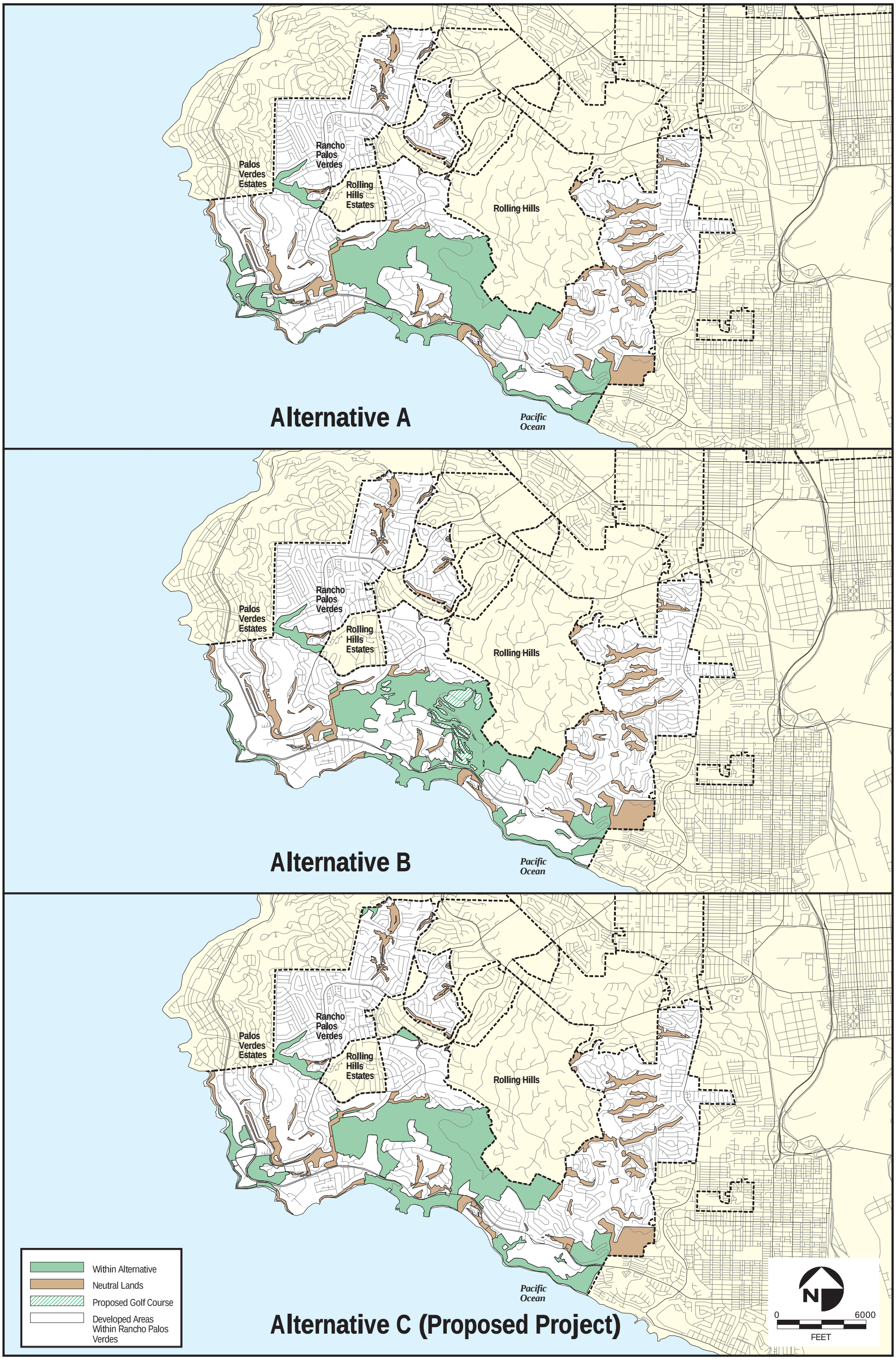
4.3 FUNDING AND FINANCING OF SUBAREA PLAN

4.3.1 Estimated Implementation Cost

Implementation of the Subarea Plan will require funding of habitat acquisition, restoration and management. Implementation costs were estimated for three alternative preserve configurations (Figure 4-4). Estimated costs for these actions are summarized in Table 4-1. See Appendix C for details.

4.3.1.1 Habitat Acquisition

Generally, privately owned, biologically important habitat may be conserved onsite as mitigation, or compensation for impacts to biological resources from development elsewhere on the project site. In some cases, however, this Subarea Plan's conservation goals would be better served through acquisition of properties containing important biological resources.



URS TAIC

Reserve Design Alternatives

FIGURE 4-4

/net/kearnymesa/gis/projects/mios/rpv/plots/figures/altall_eir.aml

06/24/04

Table 4-1
Comparison of Alternative Conservation Plans

	Alternative A	Alternative B	Alternative C (Proposed Project)
Planning Area (Ac.)			
Conserved [1]	1540	1,174	1,504
Neutral Lands [2]	663	663	663
Not Conserved	6,356	6,722	6,392
Total Land Area	*8,559*	*8,559*	*8,559*
Components of Conserved Area			
Dedicated for Conservation	577	458	4349
Conserved for Mitigation Credit [3]	176	478	471
Additional Conservation [4]	787	165	684
Subtotal Natural Habitat	*1,442*	*101*	*1,436*
Conserved--Other [5]	98	73	68
Total Conserved Area	**1,540**	**1,174**	**1,504**
Estimated Land Acquisition			
Potential Acquisition Area (Ac.)	787	165	684
Estimated Acquisition Cost [6]	$ 25.7 – 36.0 Mill.	$ 5.3 – 7.5 Mill.	$ 22.3 - 31.3 Mill.
Appraised Acquisition Cost [7]	30.9 Mill	6.5 Mill	26.7 Mill
Management/Maintenance (x $1000)			
Start-up/One-time Cost [8]	$ 320	$ 244	$ 312
Annual Cost [8]	$ 322	$ 246	$ 313
TOTAL PROGRAM COST [9]	**$31.6 Mill.**	**$7.0 Mill.**	**$27.3 Mill.**

SOURCE: City of Rancho Palos Verdes, Palos Verdes Peninsula Land Conservancy, URS Corporation, TAIC (2003 GIS data), Onaka Planning & Economics.

1. Includes natural habitat and other areas, such as agricultural, disturbed, and developed.
2. Neutral lands outside of the Reserve boundary. Includes very steep slopes and areas of open-space hazard.
3. Natural habitat lands that would be conserved as mitigation for impacts of public or private development projects.
4. Natural habitat to be conserved in potential acquisition areas.
5. Agricultural, disturbed, and developed areas.
6. Acquisition cost of land for habitat or open-space use is estimated to range from $0.75 to $1.05 per square foot, or an average of $39,200 per acre. This estimate is intended for general planning use only; it is not an appraisal or estimate of site-specific value.
7 City-commissioned appraisals estimated value at less than $39,000 per acre applied to all three alternatives.
8. Based on "PAR" analysis by URS Corporation and Palos Verdes Peninsula Land Conservancy for Alternative C; estimated for others based on per acre cost estimate of Alternative C.
9. Sum of estimated acquisition cost based on appraised per acre value, startup and ongoing management costs.

The City acquired the Forrestal property (160 acres) in 1996, which subsequently became the Forrestal Nature Preserve, and the Barkentine property (98 acres) in 2001. Both of these are important components of the NCCP reserve system. Under Alternatives A and C, approximately 787 acres and 684 acres,

respectively, would be acquired for conservation, and under Alternative B, approximately 165 acres would be acquired (Table 4-1).

Based on a review of over 2,400 acres of land sales for habitat or open-space use in coastal Los Angeles and Orange Counties, it is estimated that the price of undeveloped land in the city, when purchased for biological open space, would range from $0.75 to $1.05 per square foot, or approximately $39,000 per acre (see Appendix C). The City recently commissioned appraisals for the proposed acquisition parcels, which resulted in a more accurate acquisition cost estimate of $26.7 million for the 684.5-acre purchase proposed in Alternative C. Alternative A and B acquisition costs would be $30.9 million and 6.5 million, respectively, using the appraised per acre value determined for Alternative C.

As in the Forrestal Nature Preserve Management Agreement, the City will be responsible for services such as storm drain maintenance and control, public security, trash disposal, fire management, utility services, and maintenance of some signs. PVPLC will be responsible for the restoration and monitoring of the habitat areas, covered species surveys, trail maintenance, installation and maintenance of fences and benches. These activities may be provided in the form of in-kind services, or funded by cash, as appropriate for each item. Annual management costs for Alternative C are estimated at $313,000 (Table 4-1). Initial start up management costs are estimated at $312,000. .

PVPLC is responsible for raising funds from public and private sources to fulfill its obligations. The City is responsible for oversight and review of PVPLC's performance with respect to the management and maintenance of the Reserve

4.3.1.2 Habitat Management

The network of habitat lands conserved under the Subarea Plan will be managed for their habitat value and periodically monitored. Currently, several areas are already being managed following these methods, including:

- The Forrestal Nature Preserve (163 acres)
- Mitigation land dedicated by the Ocean Trails project; and
- Mitigation land conserved by Vesting Tentative Map No. 46628 (Oceanfront Estates 69 acres are being actively managed, including 30 acres of revegetated CSS)

Permanent endowments or funding commitments have been established for all three areas.

New private developments will be required to provide funds to manage in perpetuity any habitat restoration required as a condition of approval for the project as mitigation for development impacts. Alternatively, they may establish endowments for habitat management by a conservation organization approved by the City. Public funds will not be used to manage private mitigation areas.

Funding will be required to manage and monitor existing City-owned habitat lands that will be permanently conserved (including the Barkentine property [98 acres], Upper Point Vicente property [65 acres], and the Abalone Cove property [69 acres]) and potential acquisition areas (787 acres under Alternatives A, 165 acres under Alternative B, or 684 acres under Alternative C). Cost of habitat

management and biological monitoring varies according to habitat type, condition, and specific tasks needed to maintain biological value. Generally, tasks include trash removal, control of invasive species, installation and maintenance of fences, signs, and trails, and monitoring of biological resources. Center for Natural Lands Management (CNLM), a non-profit organization engaged in management of numerous habitat and open space preserves in California, developed a spreadsheet program (called Property Analysis Record, or PAR, and licensed to users) to estimate costs of habitat management. URS and PVPLC conducted a PAR analysis for the proposed Reserve (Alternative C; 1,504 acres), which indicated that the cost to manage the system would total $312,000 per year, with a first year, start-up cost of $313,000 (see Appendix C). These cost estimates also include removal of non-native vegetation on 5 acres, revegetation of another 5 acres, and weed control in 20 other selected locations, conducted annually.

Annual and one-time costs to manage the Reserve under Alternatives A and B were estimated based on the PAR analysis for Alternative C. Estimated annual costs range from $246,000 for Alternative B to $322,000 for Alternative A; estimated first year start-up costs are $244,000 and $320,000 for these two alternatives.

4.3.1.3 Habitat Restoration and Maintenance

This Subarea Plan proposes an annual program of habitat restoration and maintenance at a sustainable level (see Section 6). The program includes removal of non-native vegetation on 5 acres of land and revegetation of another 5 acres, to be conducted annually. The cost for weed removal and restoration work is estimated to be $95,700 plus a first year start-up cost of $116,400. Both annual and start-up costs of habitat restoration and maintenance are included in the management cost estimates discussed above.

4.3.2 Funding Sources

The following funding sources will be used to implement this Subarea Plan.

4.3.2.1 Habitat Acquisition

Using funds generated in Los Angeles County (principally Measure A), the City has previously expended $11.8 million for the purchase of the Forrestal and Barkentine properties. Additionally, the City will dedicate 224.2 acres of City-owned land for exclusive habitat use. If an equivalent area were purchased from private owners for habitat or open space use, the corresponding cost would exceed $8.7 million (using the average of high and low estimates of land cost for open space).

For habitat lands to be acquired under Alternatives A and C, the candidate sources of funds listed in Table 4-2 would be pursued.

Table 4-2
Candidate Sources of Land Acquisition Funding

USFWS "Section 6" funds	$2 Million
Proposition 50, Coastal Watershed and Wetland Protection portion for Los Angeles and Ventura Counties	$17 Million
Los Angeles County	$1 Million
City of Rancho Palos Verdes	$1 Million
Private funding (PVPLC)	$6 Million
Total	**$27 Million**

4.3.2.2 Reserve Management

In implementing this Subarea Plan, the City will enter into a contract with the PVPLC to manage and monitor all of the conserved land in the Reserve and additional lands that are subsequently acquired. PVPLC will also undertake the annual program of non-native vegetation removal and CSS habitat restoration. The existing agreement between the City and PVPLC for management of Forrestal Nature Preserve will serve as a model for the reserve management program.

In lieu of an endowment for the management program, the City will commit $100,000 per year (to be adjusted annually for inflation) and certain in-kind services to fulfill its obligations for management and maintenance. The PVPLC will commit $50,000 per year (to be adjusted annually for inflation), certain in-kind services, and volunteer time to fulfill its obligations for management and maintenance.

4.3.2.3 Summary of Habitat Management Funding

Funding commitments for habitat restoration and reserve management and monitoring will be provided annually as listed in Table 4-3 (all numbers to be adjusted annually for inflation).

Table 4-3
Funding Commitments for
Habitat Restoration and Reserve Management

City	$100,000	Cash
City	$ 91,000	In-kind services
City	$ 15,000	Private lands endowments
PVPLV	$ 50,000	Cash
PVPLC	$ 25,000	In-kind services
PVPLC	$ 50,000	Volunteer time
Total	**$331,000**	

The City and PVPLC will actively pursue additional public and private funding sources to undertake restoration projects in areas under their management responsibility. In-kind services from the City will include public safety, trash collection, fuel modification, staff time (Planning, Public Works, etc.) and maintenance as agreed to among the parties. In kind services from the PVPLC will consist of staff time, use of equipment, etc. Private lands requirements will include obligations of projects such as Oceanfront Estates to maintain habitat at the project's expense or using income from an established endowment. PVPLC has demonstrated the ability to generate significant amounts of volunteer support. For the first four months of 2003, the total volunteer hours donated (including non-stewardship activities such as special events and education) was 3,902 hours, as shown on the chart below. At $15 per hour, which is the lowest hourly rate used in the PAR analysis, this effort is valued at $52,534. These numbers demonstrate that the volunteer component of the stewardship proposal is sustainable at a $50,000 annual level. PVPLC will maintain records of volunteer time, and will include this data in the annual report to the Wildlife Agencies.

Table 4-4
Volunteer Hours for Pvplc Projects for 2003 (January to May)

Date	White Point	Chandler	Lunada Canyon	Forrestal	DFSP	Office	Youth Education	Adult Education	Events	George F	Total
January-03	113	133.25	387.5	12	12	23	16	25	13	64	798.75
February-03	229		32	15	27	17	48	22	27	64	481
March-03	593.5			13.5	48	21	130	26	23	80	935
April-03	429		8	15	13	12	63	30	33	64	667
May-03	441	93	110	10	17	33	34	29	182	72	1021
Total 2003 YTD	**1805.5**	**226.25**	**537.5**	**65.5**	**117**	**106**	**291**	**132**	**278**	**344**	**3,902.75**

SECTION 5 LOCAL PLAN REVIEW AND APPROVAL PROCESS

5.1 CITY IMPLEMENTATION PROCESS

Any proposed development of land in the Reserve would first require consistency with the appropriate provisions of the Municipal Code. Subsequent entitlements will not be provided without compliance with applicable provisions of the General Plan, Zoning Ordinance, Grading Ordinance, Subdivision Map Act, and other applicable provision of the Municipal Code. Upon approval of this Subarea Plan, the City will use its land-use authority to implement the provisions of this Subarea Plan. Regulatory actions shall include interim and permanent ordinances consistent with this Subarea Plan.

5.2 INTERIM PROTECTION

5.2.1 Existing Provisions of the Municipal Code

Natural Overlay Control District. Interim protection of habitat lands inside the Reserve is assured through the mandatory implementation of the Natural Overlay Control District (OC-1) (Municipal Code Section 17.40.040 et seq.) which is established to "maintain and enhance land and water areas necessary for the survival of valuable land and marine-based wildlife and vegetation…"

Minor modifications to this ordinance will be required to be consistent with this Subarea Plan. This ordinance, for example, establishes Performance Criteria (Section 17.40.040 C.1. - C.5.) prohibiting:

- Disturbance of more than 10 percent of the total land area of a parcel – excluding the main structure and access;
- Affecting any water body;
- Affecting natural watercourses carrying over 100 cubic feet of water;
- Affecting riparian buffers of 50 feet on natural watercourses carrying over 100 cubic feet of water;
- The clearing, and/or thinning of more than 20 percent of a parcel's area (fuel management zones excluded);
- The use of herbicides to control or kill vegetation;
- The removal of vegetation within a designated wildlife habitat area.

5.3 PROPOSED MODIFICATIONS TO THE MUNICIPAL CODE

Natural Overlay Control District. The City shall amend the Natural Overlay Control District (Municipal Code Section 17.40.040 *et seq.*) to ensure that before the issuance of any clearing or grubbing permits that all proposed actions conform to the provisions of this Subarea Plan.

Grading Ordinance. The City shall amend the Grading Ordinance (Municipal Code Section 15.04.010 *et seq*.) to ensure that before the issuance of any clearing or grubbing permits that all proposed actions conform to the provisions of this Subarea Plan.

Fire Code. At no time would Subarea Plan provisions take precedence over the concerns of public health, safety, and welfare as determined by the L.A. County Fire Department in consultation with the Wildlife Agencies. The City will consult with the L.A. County Fire Department to ensure that proposed fuel modification zone widths adjacent to the Reserve are adequate to meet fire department requirements. All fuel modification areas shall be mapped in the GIS database. The City's Fire Code would be amended to reflect this.

Site Plan Review Process. The City shall amend the Site Plan Review Process (Municipal Code Section 17.70.020 *et seq*.) to ensure that the provisions of this Subarea Plan are incorporated in to the Site Plan Review evaluation process.

Zoning Map. The City's Zoning Map, which is established by the Zoning Code, would be amended to incorporate the boundaries of the Reserve and to reflect any changes to Overlay Control Districts.

Subdivision Ordinance. The City would amend its Subdivision Ordinance to ensure any future proposed subdivisions conform to this Subarea Plan.

Coastal Permits. The City shall amend the Coastal Permit Process (Municipal Code Section 17.70.020 *et seq*.) to ensure that the provisions of this Subarea Plan are incorporated into the evaluation process before the issuance of any coastal permits.

City CEQA Guidelines. The City shall ensure that all development identified in Sections 17.02.020 and 17.02.05 *et seq*.) shall be subject to enhanced California Environmental Quality Act. (CEQA) (Ord. 361 Section5, 2000) review to comply with applicable provisions of this Subarea Plan.

General Plan Amendment. The City shall amend relevant sections of the Rancho Palos Verdes General Plan to:

- Identify all Reserve lands and their attendant land-use restrictions; and
- Incorporate this Subarea Plan as part of the General Plan.

5.4 PERMANENT HABITAT PROTECTION

Permanent protection of conserved land shall be provided through recordation of conservation easements in priority to other encumbrances upon the fee title or dedication of the fee title itself, as appropriate and consistent with the needs of the landowners conveying the property to the Reserve. Both public and private landowners may wish to retain compatible uses of the property while complying with Reserve management guidelines. Compatible uses are accommodated with the grant of easement. The long-term biological integrity of the Reserve will be ensured as follows:

- All lands set aside in the Reserve as mitigation for development occurring outside the Reserve, and lands acquired for the Reserve with public funds, will be protected by conservation

easements. Any lands within the Reserve, dedicated in fee to the City, will also be protected by an open-space easement for conservation purposes. All conservation easements established under this Subarea Plan shall be held by the PVPLC or another entity acceptable to the City and the Wildlife Agencies.

- Local public lands committed to the Reserve will be protected with conservation easements, to be held by the PVPLC or another entity acceptable to the City and the Wildlife Agencies.

5.5 MITIGATION REQUIREMENTS

Upon approval of this Subarea Plan and Implementation Agreement, impacts to all habitats associated with City projects and private projects as agreed to by the City will be mitigated through the dedication of the City-owned lands to the Reserve (see Table 3-3). The Habitat Manager's oversight of the Reserve will also serve to mitigate project impacts. Private projects shall mitigate unavoidable impacts through the contribution of open space to the Reserve or by providing funds to the Habitat Manager to implement habitat restoration within the Reserve. Impacts deemed consistent with but not specified in this Subarea Plan shall be mitigated by the project proponent through monetary contributions to the habitat restoration program in the Reserve, at a funding level sufficient to provide a 3:1 ratio of conserved or revegetated acreage to affected acreage for CSS, wetlands, or native grassland. A 0.5:1 ratio for non-native grassland would be required. Within the Coastal Zone, permissible impacts and mitigation to Environmentally Sensitive Habitat Areas (ESHA) will be consistent with the most current LCP.

5.5.1 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 city for unavoidable impacts to wetlands, thereby achieving no overall net loss of wetlands.

As part of the CEQA review, development projects that support 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 a 3:1 mitigation ratio for impacts to vegetated wetlands (e.g., riparian scrub). Unvegetated waters of the U.S./State would be mitigated at a 1:1 ratio. The Wetlands mitigation ratio provides a standard, 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. Within the Coastal Zone, permissible wetland impacts and mitigation ratios shall be consistent with the most current LCP.

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. 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.

The wetlands mitigation program will be included in the project's MMRP that 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 Tentative Maps (TMs). In addition, 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 wetlands (e.g. grading permit).

5.5.2 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 1602 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. Within the Coastal Zone, the most current LCP shall define permissible impacts and mitigation for wetlands and ESHA habitats (Appendix F).

5.6 SUBAREA PLAN BOUNDARY AND AMENDMENT PROCESS

Adjustments to the Reserve may be made without the need to amend the Subarea Plan in cases where the Reserve boundary results in an area of equivalent or higher biological value or where additional acreage is added to the Reserve. The determination of the biological value of a proposed boundary change will be made by the City in accordance with this Subarea Plan, with the concurrence of the Wildlife Agencies.

If the determination is the adjustment will result in the same or higher biological value of the Reserve, no further action by the jurisdictions or Wildlife Agencies shall be required. The Wildlife Agencies shall be notified of any additions to the Reserve and the provisions for habitat maintenance of lands added. Any adjustments to the Reserve boundary will be disclosed in the associated environmental document (as part of the project description) prepared for the specific project. An evaluation of the proposed boundary adjustment to the Reserve will be provided in the biological technical report and summarized in the land-use section of the environmental document. Minor and major amendments to the Reserve are discussed below.

5.6.1 Process for Exchanges and Minor Modifications to Reserve Boundaries

Adjustments to the Reserve may be made without the need to amend this Subarea Plan in cases where the revised Reserve boundary results in a Reserve of equivalent or higher biological value or where additional acreage is added to the Reserve. These actions are known as “minor amendments.”

The City, in accordance with the Subarea Plan, will make the determination of the biological value of a proposed boundary change, with the concurrence of the Wildlife Agencies. If the City’s consulting biologist determines the adjustment will result in the same or higher biological value of the Reserve, no further action by the jurisdictions or Wildlife Agencies shall be required. The Wildlife Agencies shall be notified of any additions to the Reserve and the provisions for habitat maintenance of lands added.

Any adjustments to the Reserve boundary will be disclosed in the environmental document (project description) if prepared for a specific project. An evaluation of the proposed boundary adjustment will be provided in the biological technical report and summarized in the land-use section of the environmental document. Any approvals by the City under this section shall be based on a review by a qualified biologist under contract by the City.

If lands designated as Reserve are annexed into the city of Rancho Palos Verdes, these lands shall be incorporated into the Subarea Plan and shall be considered covered under the City’s Implementing Agreement.

5.6.2 Process for Major Changes to Subarea Plan

Requests for major amendments to this Subarea Plan's take authorizations would be processed by the Wildlife Agencies consistent with applicable laws and regulations (including the National Environmental Policy Act and the California Environmental Quality Act) in effect at the time of the original Subarea Plan approval. Areas requiring major amendments include those subject to current or anticipated conservation agreements with the Wildlife Agencies, should these agreements fail to materialize.

5.7 IMPLEMENTING AGREEMENT

The Implementing Agreement (IA) is the binding contract between the City and the Wildlife Agencies. In addition, due to their role in the reserve acquisition and management programs, PVPLC will also be a co-signer to the IA. It identifies responsibilities to implement this Subarea Plan, binds the parties to their respective obligations, and specifies remedies should any party fail to perform its obligations.

5.7.1 Assurances in the Implementing Agreement

Additional assurances in the model Implementing Agreement are described below:

- **Local Land Use.** The Wildlife Agencies will issue to the City a 50-year authorization to take species covered by this Subarea Plan. Additionally, this Subarea Plan will eliminate most USFWS and CDFG involvement in project-specific review and approval. Impacts to wetlands must continue to be regulated through the Clean Water Act, Fish and Game Code Section 1600 et seq. and local regulations, although coverage for endangered species through this Subarea Plan should facilitate any consultation required between the USFWS and ACOE.
- **New Development.** Third-party beneficiaries undertaking land development will be allowed to take covered species and habitats incidental to project construction, operation, and maintenance based on the approvals extended to the project through the local project permitting process as long as those land developments conform to the provisions of this Subarea Plan.
- **Covered Species.** The City will receive take authorizations for a list of covered species found adequately conserved by the Subarea Plan. Take will be issued for Covered Species in one of two categories: 1) Covered Species not listed and 2) Covered Species subject to Incidental Take (i.e., listed). When an unlisted species becomes listed, it will continue to receive take coverage under this Subarea Plan, only under the latter category. The list includes species listed as threatened or endangered, as well as other species not currently listed under either the FESA or CESA as long as they are adequately covered by this Subarea Plan.
- **Critical Habitat.** If in the future, an FESA Critical Habitat Designation is made for a covered species, that determination will not have the effect of causing additional land, mitigation, restrictions, or compensation to be required of the City if this Subarea Plan is being implemented in compliance with the take authorization conditions for that species.
- **Future Listings of Covered and Uncovered Species.** This Subarea Plan incorporates policies describing how the covered species list may be expanded to include new species once actions in other jurisdictions, or in Rancho Palos Verdes, ensure the species' long-term conservation.

5.7.2 Changed Circumstances and Unforeseen Circumstances

Pursuant to the "No Surprises" rule, if the USFWS makes a finding of "Unforeseen Circumstances," the USFWS will not require 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 this Subarea Plan and the IA with respect to covered activities without consent of the City.

"Unforeseen Circumstances" (defined in 50 CFR 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 during the conservation plan's negotiation and development and that result in a substantial and adverse change in the status of the covered species. Pursuant to the "No Surprises" rule at 50 CFR Section 17.22(b)(5)(iii)(C), the USFWS must demonstrate that unforeseen circumstances exist using the best scientific and commercial data available. The findings must be clearly documented and based on 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 affected covered species.
- The percentage of the range of affected covered species that has been affected adversely by covered activities under this Subarea Plan.
- The percentage of the range of affected covered species that has been conserved by this Subarea Plan.
- The ecological significance of the portion of the range of affected covered species affected by this Subarea Plan.
- The level of knowledge about affected covered species and the degree of specificity of the conservation program under this Subarea Plan.
- Whether failure to adopt additional conservation measures would appreciably reduce the likelihood of survival and recovery of affected covered species in the wild.

"Changed Circumstances" is 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 10 years following an initial fire and damaging up to 30 acres of Reserve coastal sage scrub (CSS) habitat.
2. Flood events occurring within the Reserve at greater than 50-year levels and up to and including 100-year levels, as classified by the Federal Emergency Management Agency and determined by the Rancho Palos Verdes Department of Public Works.
3. A major landslide event damaging up to 30 acres of Reserve CSS habitat.

4. Climatic drought up to three years in length, as declared by the State Department of Water Resources and/or local water agency.
5. An increase of invasive species within the Reserve to the extent that, as determined by the City Habitat Manager in consultation with the wildlife agencies, such increase is of sufficient magnitude to significantly, adversely affect any covered species.
6. Listing of a non-covered species.

5.8 CITY IMPLEMENTATION ACTIONS AND PROCESS

The City will enter into the previously described Implementing Agreement with the Wildlife Agencies following an action of the city council adopting this Subarea Plan and authorizing the agreement. The duration of the agreement will be 50 years, and the agreement will be renewable if required. The Implementing Agreement will ensure that this Subarea Plan will be continuously implemented over the next 50 years, and that the State and Federal take authorizations will be in effect for the same time interval. Key assurances for all parties described in this Subarea Plan will be incorporated in the Implementing Agreement in full.

For its part, the City will guarantee implementation of this Subarea Plan through interim and permanent regulatory measures, including codes, ordinances, and policies contained in the General Plan, and the other City policy documents described herein. The City affirms that within 2 years of the signing of an Implementing Agreement with the Wildlife Agencies, it will develop and schedule action on a comprehensive General Plan amendment that will codify any new or modified City policies required to implement this Subarea Plan. By mutual agreement, the parties may extend this period for one additional year. This action will ensure consistent implementation of this Subarea Plan through City policy, private and public project review and approval, and guidelines for operations and management of public lands. Regardless of this period, the City will provide interim protection to habitat lands addressed in the take authorizations through the process described herein.

5.8.1 City Regulatory Actions

Upon signing of this Subarea Plan Implementing Agreement, the City will use its land-use regulatory authority to fully implement the provisions of this plan. Regulatory implementation shall consist of the following actions:

1. **General Plan Update.** The City will amend the relevant elements of the General Plan to incorporate this Subarea Plan by reference. If necessary or applicable, existing goals, objectives or policies contained in the relevant General Plan elements may be amended to aid in implementing this Subarea Plan.
2. **Update Municipal Code of Ordinances.** If necessary or applicable, the Municipal Code will be amended by reference to require lands addressed by this Subarea Plan to comply with the conservation standards contained in this Subarea Plan.
3. **Update Zoning Ordinance.** If necessary or applicable, additional text will be added to the Zoning Ordinance or a new Article will be drafted to describe the effective boundaries and intent of this Subarea Plan.

4. **Review and Modify Relevant Regulations**. To ensure the approval of private and public development projects is consistent with this Subarea Plan relevant regulations will be reviewed and modified, as needed. Current ordinances will be strengthened regarding enforcement and penalties for illegal grading, clearing, and other operations within habitat or other sensitive resource areas.
5. **Amend the Local Coastal Plan to incorporate the NCCP program and allow for a CCC consistency review**. Prior to this LCP amendment, the current LCP will take precedence over any conflicting policies with this Subarea Plan for lands within the Coastal Zone. This LCP amendment should be submitted to the CCC after the PUMP and HMP are developed.
6. **Comply with Implementing Agreement.** The City will comply with all terms and conditions of this Subarea Plan Implementing Agreement.

5.8.2 City Interim Resource Protection

The goal of interim protection is to prevent important habitat areas or species from being lost to clearing, conversion, or development in the period between signing of the Implementing Agreement and City action to adopt the General Plan update. Existing City regulations and ordinances, as well as project-specific plans described in this Subarea Plan, will provide both interim and permanent protection. No proposed project requiring discretionary approval within the city will be approved by the City without a determination of conformance to this Subarea Plan once an implementing agreement is signed. No grading will be done within the city without a determination of conformance to this Subarea Plan by the City Manager or his designee. No vegetation clearing, grubbing, or grading of vacant lands, or conversion of non-agricultural lands to active agriculture shall be done without a determination of conformance to this Subarea Plan by the Director of Planning, Building and Code Enforcement or his designee.

5.8.3 Development Review and Approval Process

Establishment of the regulatory framework described herein will enable the City to fully implement the conservation policies of this Subarea Plan through the normal project review and approval process.

5.8.3.1 Wildlife Agency Consultation

The agencies will receive notification of a project through the CEQA notification process and may request a voluntary consultation within the normal public or CEQA review period. Likewise, the City is free to request Agency involvement in a project where consultation would help address key issues or help to streamline the process. All projects processed by the City will document their consistency with this Subarea Plan during appropriate CEQA review.

The issuance of take authorizations will be documented by the City by maintaining a list of all approvals under this Subarea Plan, which is attached or appended to this Subarea Plan and updated annually. The list will describe the project, the amount of acres taken or conserved by the project, and the physical location of the tentative map or other record or project approval produced by the City. All issuance of project approvals over the course of a year will be documented and discussed at the required annual meeting described herein. The primary exception to this general procedure would be if a project required an amendment to this Subarea Plan as described herein.

5.8.3.2 Annual Implementation Coordination Meetings

An annual meeting will be held between the City, PVPLC, and the Wildlife Agencies to review and coordinate Subarea Plan implementation, as documented by the annual Habitat Tracking Report. It is the responsibility of the City to schedule this meeting within 60 days of each anniversary of execution of the Implementing Agreement or as otherwise agreed to by the City and Wildlife Agencies. To meet the stipulations of the Implementing Agreement, this Subarea Plan must be implemented in a way that issuance of authorizations for taking of species and habitats is roughly proportional with implementation of the conservation strategy in this Subarea Plan. The annual accounting of habitat acreage within the subarea will include land conserved and habitat taken during the reporting period. Progress toward achieving conservation requirements will be reviewed, and habitat management issues will be discussed, along with a review of project approvals issued by the City over the course of the year. If the Wildlife Agencies determine that this Subarea Plan is not being implemented as required, the Wildlife Agencies, PVPLC, and the City will take the actions specified in the implementing agreement to remedy the situation. These actions may include additional management activities, modification of the project compliance process, or redirection of acquisition funds, as long as they are consistent with the provisions of the implementing agreement.

5.9 SUBAREA PLAN AMENDMENTS

Certain events may require amending this Subarea Plan as described below. Although Subarea Plan amendments are not anticipated regularly, amendments may be necessary to accommodate major changes in conservation levels or reserve design, or large annexations of land. Consultation with the Wildlife Agencies is required for a plan amendment, and these agencies must be notified as soon as the local jurisdiction confirms that a plan amendment is warranted.

CEQA and NEPA documentation must be prepared for any project that triggers the amendment process. The documents must address project impacts, as well as impacts on Subarea Plan implementation and any effects on take authorizations held by the City.

Examples of amendments to this Subarea Plan include the following:

- Removal of lands from conservation, or reconfiguration of project plans resulting in a decrease of the amount or quality of habitat conserved that could not be addressed by a boundary adjustment.
- A large annexation of land that requires take authorizations for development, and is not covered by an existing NCCP Subarea Plan; or a major variation in design or implementation from an existing NCCP plan.
- Land excluded from a Subarea Plan at the time of approval, and therefore not covered by take authorizations, but is later planned for development conservation purposes.

5.9.1 Additions to the Reserve

Additions to the approved Reserve may be made without a plan amendment by providing the Wildlife Agencies with:

- A letter from the City agreeing to the addition and specifying the status of the property (i.e., City parkland, HOA property, etc.).
- An accurate map of the area to be added showing the total acreage and current vegetation coverage.
- A letter from the Habitat Manager agreeing to the acquisition and stating that the additional acres can be maintained in a manner consistent with the surrounding area with the funds available for Reserve management.

5.9.2 Boundary Adjustments and Equivalency

Adjustments to the approved Subarea Plan Reserve boundaries may be desirable under some circumstances that do not require plan amendment, and will be based on a like or equivalent exchange concept. For example:

- New biological information is obtained through site-specific studies;
- Unforeseen engineering design opportunities or constraints are identified during the siting or design of projects that require modification of the Reserve boundary;
- A landowner may request that a portion of or all of his property be included within the Reserve boundary.

Adjustments to Reserve boundaries can be made without the need to amend the Rancho Palos Verdes Subarea Plan if the adjustment will result in the same or higher biological value to the Reserve. The determination of biological value of the proposed change is made by the local jurisdiction and must have the written concurrence of the Wildlife Agencies. The comparison of biological value will be based on the following biological factors:

- Effects on conserved habitats (the exchange maintains or improves the amount, configuration, or quality of conserved habitats);
- Effects on covered species (the exchange maintains or increases the conservation of covered species);
- Effects on habitat linkages and function of Reserves (the exchange results in similar or improved habitat connectivity, wildlife movement corridor function, management efficiency and/or protection of biological resources);
- Effects on ecotones or other conditions affecting species diversity (the exchange maintains topographic and structural diversity and habitat interfaces or the Reserve); and/or
- Effects to species of concern not on the covered species list (the exchange does not significantly increase the likelihood that an uncovered species will meet the criteria for listing under either the Federal or State ESAs).

Most adjustments to the boundaries will be in areas immediately adjacent to identified Reserves. Any agreed upon modification of Reserve boundaries should be reported to the entity responsible for regional

reserve system accounting, and to adjacent jurisdictions if the modification might affect their portion of the Reserve.

If Sections 7 or 10(a) FESA consultations are undertaken between a property owner and the USFWS outside the structure of this Subarea Plan, the result of these consultations should be documented by the USFWS and furnished to the City. The City will record the information using the same process described herein, but would not be a cause for amendment

5.9.3 Annexations

Future annexations of land to the city must be addressed by the requirements of this Subarea Plan. These include interim protection of resources and conformance to this Subarea Plan project review and approval process if development is proposed in the annexed area. The status of County NCCP Plan(s) in annexed areas prescribes the City's actions. The City will implement this Subarea Plan in the case of annexations as follows:

- If no approved county or other Subarea Plan exists for the area being annexed, the City must assure that any development project design is consistent with the overall conservation directives and reserve design strategy of the Rancho Palos Verdes Subarea Plan.
- If an approved County or other Subarea Plan exists for the area being annexed, the approved County Subarea Plan applies, and may be modified through the boundary adjustment process described herein.
- This same approach will apply to de-annexation or annexation of lands from another incorporated city.

The City will apply the following guidelines to annexations whether a county or other Subarea Plan exists or not.

- For small annexations of less than 20 acres, where no take authorization for development is required or where little habitat is present, the City will meet Subarea Plan requirements by directing that overall conservation and project design guidelines be addressed in any project plan proposed to the City for approval. No consultation with the Wildlife Agencies is required for this process, and notification will occur through the process described herein.
- In the case of annexations of land greater than 20 acres, or that require take authorizations for development, the City will work cooperatively with the County of Los Angeles or other entity to assure consistency between the Rancho Palos Verdes Subarea Plan, or other applicable conservation standards. The Wildlife Agencies must be consulted in case of an annexation larger than 20 acres. If any existing county or other Subarea Plan will not be modified, or is modified in a way consistent with the Boundary Adjustment process, the resulting project design will be appended to the Rancho Palos Verdes Subarea Plan and no plan amendment is required. If a major variation from a county or other Subarea Plan is proposed, this Subarea Plan must be amended following the procedures herein, including CEQA and NEPA requirements. The City and County, or other responsible jurisdiction, may agree on which agency will issue the take authorizations, but the City will be

responsible for assuring that any project level conservation plan is implemented following annexation to the city.

5.9.4 Process for Adding Species to Covered Species List

If a species not on the covered species list is proposed for listing pursuant to the Federal or State ESA, the Wildlife Agencies will determine whether additional conservation measures, beyond those prescribed by the Subarea Plan, are necessary to adequately protect the species. If no such measures are necessary, the species will be added to the covered species list using the Federal and State take authorization amendment process if requested by the City.

If the Subarea Plan conservation measures will not adequately protect the species, the Wildlife Agencies will work with the participants to identify and jointly implement the steps necessary for coverage. These may include the following measures:

- Management practices and enhancement opportunities within the Reserve, provided these measures do not adversely affect any covered species; and
- Habitat acquisition through the reallocation of Federal, State, and regional funds identified for Rancho Palos Verdes Subarea Plan implementation, provided such reallocation does not adversely affect any covered species.

If these options are not adequate to meet the species' conservation requirements, the Wildlife Agencies will determine the additional measures necessary to add the species to the covered species list. Preference will be given to conservation means that do not require additional mitigation or dedication of land. If conservation measures necessary to add the species to the covered species list are identified when or after the species is proposed for listing, the City (or other parties holding permits issued by the City through this Subarea Plan) will not be required to approve or implement these conservation measures until such time as the species is listed.

5.10 PERMANENT RESOURCE PROTECTION

5.10.1 Local Resolutions

As has been described, the City will update, consolidate, and codify the environmental regulations contained in this Subarea Plan into the General Plan, as appropriate. Additionally, the City implements CEQA through the development review and approval process, which requires protection of significant biological resources and mitigation for project impacts. Findings of consistency with the Subarea Plan will be required for all projects requesting issuance of take authorizations.

5.11 COORDINATION WITH OTHER NCCP SUBAREA PLANS

No other jurisdiction within the Los Angeles Subregion is currently participating in the NCCP program. Should new NCCP Subarea Planning programs be initiated, the City would coordinate with those jurisdictions, as necessary.

SECTION 6 RESERVE MANAGEMENT

As an urban Reserve plan for wildlife and plants, the Rancho Palos Verdes Subarea Plan will enhance the city's quality of life and provide the city with recreational and educational opportunities while conserving the city's unique biodiversity and maintaining populations of sensitive resources. To succeed in these goals, this Subarea Plan will require management practices and some land-use restrictions on conserved lands that give special consideration to the interface between developed lands and open space. Adaptive management measures and compatible adjacent land uses will minimize impacts to individuals or populations of covered species from development abutting the Reserve. A process for monitoring habitats and species in the Reserve will help to improve the effectiveness of resource management. The following sections establish general guidelines for compatible land uses and development within and adjacent to the Reserve and provide a framework for consistent and coordinated management and monitoring of the Reserve.

Existing legal land uses adjacent to the Reserve may continue, and existing ownerships will be maintained until lands are obtained by public entities through purchase, dedication, or donation. On private lands that become part of the Reserve, public access will be allowed only on properties where access has been granted by the owner through an appropriate easement or on property that has been voluntarily dedicated in fee title to a public agency or nonprofit organization. All new public facilities will be reviewed for consistency with this Subarea Plan regarding public safety and to minimize management concerns and biological impacts.

6.1 HABITAT MANAGER

The City has selected the Palos Verdes Peninsula Land Conservancy (PVPLC) as the designated Habitat Manager for the Reserve. Some conserved habitat areas addressed by this Subarea Plan are currently managed by other organizations contracted by the private landowners (e.g., Ocean Trails and Oceanfront Estates mitigation lands). Management of these private lands would be transferred to the PVPLC once the monitoring requirements of the Wildlife Agencies have been met. The PVPLC will work with the City to ensure that habitat on these lands is adequately maintained.

6.2 FRAMEWORK MANAGEMENT GUIDELINES

6.2.1 Development of Public Use Master Plan

Within two years of the signing of the Implementing Agreement, a Public Use Master Plan (PUMP) shall be developed jointly by the City and the PVPLC to address issues such as public access, trailhead locations, parking, trail use, fencing, signage, lighting (if any), fire and brush management, minimizing impacts to adjacent neighborhoods, public involvement in advisory capacities, and other issues that may arise. This section provides management guidelines and measures for the development of the PUMP, to reduce habitat impacts of land uses within and adjacent to the Reserve. The PUMP for the site would be created based on extensive public input and would have to be approved by City Council and the Wildlife Agencies. Prior to the final approval of the PUMP by the Wildlife Agencies, all lawful uses and activities that are occurring in the Reserve at the time of approval of this Subarea Plan by the City Council shall be

deemed acceptable and allowed to continue unless otherwise restricted or prohibited by the Final approved PUMP.

6.2.2 Development Adjacent to the Reserve

6.2.2.1 Management Issues

No new development activities will be allowed in the Reserve, except for the public and private infrastructure projects identified in this Subarea Plan, geological testing in support of compatible land uses, landslide monitoring, and any emergency actions associated with landslide abatement and remediation activities. Development adjacent to the Reserve, however, may indirectly affect the Reserve. These indirect impacts will be addressed through the existing project review process and CEQA documentation, as required. In reviewing a proposed development project adjacent to the Reserve, site design issues that need to be addressed are avoidance or minimization of impacts to biological resources and retention of native habitats. Potential impacts to biological resources from existing and new development adjacent to the Reserve will be considered in the design process. These include the locations of access and staging areas, fire and brush management zones, potential for introduction of nonnative species, increased night-lighting, increased stormwater and urban runoff, increased noise level and public access to habitats supporting covered species.

6.2.2.2 Project Design Review and Best Management Practices

The following guidelines are designed to protect biological resources in the Reserve during construction of new development directly abutting the Reserve:

1. Review grading plans of development directly adjacent to the Reserve boundary (including access routes, staging areas, etc.) to ensure the plans are consistent with this Subarea Plan, educate contractors about the biological sensitivities associated with the area, and monitor construction to ensure compliance with project-specific mitigation measures.
2. All construction site vegetation clearing will be conducted during the non-breeding season (September 1 to February 15) to avoid destruction of active bird nests. If vegetation clearing must be conducted during the bird breeding season, a nest survey must be conducted and a 15 meter (50 feet) exclusion zone is placed around all active nests (i.e., active nests with eggs or chicks) until the nest becomes inactive
3. Use existing access roads outside the Reserve wherever practicable. Clearly mark all access routes outside existing roads or construction areas. Develop an emergency access plan for the utility companies with facilities within the Reserve.
4. When stockpiling topsoil, it should be placed in areas to be affected by project development.
5. Locate construction staging areas at least 15 meters (50 feet) away from the Reserve boundary and natural drainages. Designate no-fueling zones a minimum distance of 15 meters (50 feet) from all drainages and away from the Reserve boundary.
6. Schedule construction directly adjacent to the Reserve to minimize potential indirect impacts to biological resources in the Reserve. Construction adjacent to drainages should occur during periods of

minimum flow (i.e., summer through the first significant rain of fall) to avoid excessive sedimentation and erosion and to avoid impacts to drainage-dependent species. Construction adjacent to habitats occupied by breeding sensitive wildlife species should be scheduled to avoid the breeding season (February 15-August 31) if practicable.

7. Minimize construction noise impacts during the bird breeding season (February 15-August 31) by precluding noise levels greater than 65 dB hourly L_{eq} at the edge of habitat occupied by noise-sensitive covered bird species where existing noise conditions are less than this noise threshold. Conduct pre-construction surveys of potentially affected conserved habitat between mid-January and mid-March. If no noise-sensitive breeding bird species are detected within 15 meters (50 feet) of the construction activity by this date, construction can proceed.
8. Locate new roads, trails, and utility corridors in areas that minimize habitat fragmentation and edge effects.
9. Place temporary construction fencing at the planned limits of disturbance adjacent to the Reserve. Add silt fencing to these fences to minimize excessive sedimentation into drainages.
10. Encourage undergrounding of utilities and use of trenchless technology, where feasible. Minimize the width of construction corridors and easements, and where possible, use less impactive construction practices such as jacking pipelines under drainages.
11. Revegetate cut/fill slopes not subject to fuel modification and adjacent to conserved habitat with appropriate native species.
12. Require approved restoration plans and construction monitoring for all construction projects within and adjacent to the Reserve.
13. Evaluate the practicality of noise barriers for short sections of road that may chronically affect breeding wildlife.
14. Avoid sidecasting of materials during road and utility construction and maintenance.

6.2.3 Fire and Brush Management

Fire management can focus on two potentially different objectives: achievement of biological resources goals and hazard reduction for humans and their property. Biological resource goals recognize that fire is a natural process in ecosystems. Coastal sage scrub depends on a regular cycle of burning to maintain a balance of species, create vegetation mosaics that favor increased animal species diversity, provide habitat for species characteristic of early post-fire landscapes, and control exotic plant species invasion. Fire and brush management can also affect restoration of disturbed habitats and site hydrology, which will directly affect habitat value for wildlife. Fire management for hazard reduction for humans and their property focuses on reducing fuel loads in areas where fire may threaten human safety or property, suppressing fires once they have started, and providing access for fire suppression equipment and personnel.

6.2.3.1 Management Recommendations

Fire and brush management will be prioritized for human safety, but will also consider biological resources, where appropriate. Therefore, fire and brush management practices in the Reserve need to

consider habitats and targets species, proximity to developed areas, and type of development. Standard fire protection measures include vegetation management and fuel reduction by prescribed burning, disking, chaining, vegetation clearing, and removal. Fire management through prescribed burns will not be feasible in Rancho Palos Verdes because of the relatively small size of the Reserve, its proximity to development, and the type of habitat that occurs within the Reserve. The biological effects of alternative methods of fuel reduction should be weighed against their effectiveness in reducing fuel loads and fire frequency. For example, disking creates opportunities for invasive weeds to gain a foothold in the Reserve, but is extremely effective in reducing the fuel load. With both biological resources and human safety considerations in mind, the following management guidelines should be implemented for vegetation within the Reserve.

1. Maintain a 15-meter (50-foot) brush management zone around all houses, buildings, or other structures. Ornamental landscapes individually planted, spaced, and maintained in such a manner that do not form a means of transmitting fire from native growth to structure can be included as part of the 15-meter (50-foot) brush management zone. In certain situations, a 100-foot brush management zone may be needed for fire protection (e.g., structures above steep slopes). Landscape species must be either native species or non-invasive non-native species. Consistency with the City's fire code is required. "State fire code requires 30 feet minimum of cleared non-burnable zone and up to 100 feet or more under Fire Marshal's orders. The City shall consult with the Fire Marshall to ensure all fuel modification zones adjacent to the Reserve are adequate.
2. Brush management will occur outside the Reserve for all new projects. If new brush management zones need to be established within the Reserve, a qualified biologist shall survey the area before clearing activities to identify sensitive resources within the zone. If a sensitive resource is present, the biologist shall make recommendations to minimize impacts to the resource.
3. Maintain brush management zones primarily for human safety, using mechanical fuel control measures such as mowing, chopping, crushing, chaining, removal, and herbicide. In general, chopping and crushing are the recommended methods based on biological and fuel reduction values and safety concerns.
4. If recommended by the project biologist, remove debris and trimmings produced by the removal process from the site or, if left, convert them into mulch by a chipping machine and evenly disperse them to a maximum depth of 6 inches.
5. Where possible, existing brush management zones shall be located within the owners' property or lots owned and maintained by associations representing common ownership (e.g., homeowners' associations). Brush management zones for new development shall be incorporated in the development impact boundaries so they will not encroach into the Reserve.
6. The maintenance of brush management zones is the responsibility of the property owner or associations representing common ownership benefiting from the brush management. Brush management should be encouraged annually so that large fuel accumulations do not necessitate brush management during the bird-breeding season. To the maximum extent practical, brush management should be conducted outside the bird-breeding season, which typically occurs between February 15 to August 31.

7. If brush management zones extend off site, recorded documents shall be prepared that clearly state the responsibilities and rights of the parties involved relative to the establishment and maintenance of the brush management zones.

6.2.4 Fencing, Signs, and Lighting

Fencing plays an important role in the use of the landscape by humans, domestic animals, and wildlife. Fencing can control human access, particularly off-highway vehicles, and can prevent road kills of terrestrial wildlife. Fencing, however, also can restrict normal wildlife movement and access to food and water, and guide wildlife onto roads.

Signs educate, provide direction, and promote the sensitive use and enjoyment of natural areas, but they can also inadvertently invite vandalism and other destructive behavior. Signs that explain the rules of the Reserve (e.g., hiking, bicycle riding and horseback riding) are most effective at public entrance points. Signs for educational nature trails and on roads near wildlife corridors (to reduce road kills) also should be posted at appropriate locations.

Artificial lighting adversely affects the habitat value of the Reserve, particularly for nocturnal species. Therefore, lighting should not be permitted in the Reserve except where essential for roadways, facility use, and safety. Along Reserve edges, major highway lighting should be limited to low pressure sodium sources directed away from Reserves.

6.2.4.1 Management Recommendations

Fencing

1. Dismantle existing fencing inside the Reserve, except where needed to:
    - Protect particularly sensitive species or habitats. For example, perimeter fencing could be used in habitat linkage areas where Reserve widths are narrower and there is greater exposure to adverse edge effects.
    - Direct human access away from sensitive resource areas. Efforts to limit human access should involve the use of natural vegetation, topography, signs, and limited fencing.
    - Protect from natural hazards or other public safety needs.
2. Design and locate new fences within the Reserve so they do not impede wildlife movement.

Signs

1. Provide educational brochures, interpretive kiosks, and signs to educate the public about the resources and goals of the Subarea Plan and Reserve.
2. Establish signs for access control and education at the periphery of the Reserve that are accessible to individuals. Post signs to prohibit firearms and unleashed pets.
3. Install signs for educational nature trails.

4. Limit the use and/or language of signs that might attract attention to sensitive species, because such designation may invite disturbance of their habitat.
5. Install temporary signs to indicate habitat restoration or erosion-control areas.
6. Install barriers and informational signs to discourage shortcuts between established trails.
7. Establish road signs near wildlife corridors to help reduce road kills.
8. Consider signs denoting reduced speed limits along roads that have relatively high incidence of road killed wildlife.
9. Include, where appropriate, contact information for law enforcement, and management staff.

Lighting

1. Eliminate lighting in or adjacent to the Reserve except where essential for roadway, facility use, safety, and security purposes.
2. Use low-pressure sodium illumination sources. Do not use low voltage outdoor or trail lighting, spot lights, or bug lights. Shield light sources adjacent to the Reserve so that the lighting is focused downward and away from habitat areas.
3. Avoid excessive lighting in developments adjacent to the Reserve through appropriate placement and shielding of light sources.

6.2.5 Recreational Activities

Public access is appropriate in selected areas of the Reserve to allow entry for passive recreational purposes and to promote understanding and appreciation of natural resources. Excessive or uncontrolled access, however, can result in habitat degradation through trampling and erosion (e.g., along trails) and disruption of breeding and other critical wildlife functions at certain times of the year. Passive recreational activities (e.g., horse riding, hiking, bicycling, and bird watching) are anticipated within the Reserve and are generally compatible with conservation goals. In general, passive activities pose a significant threat to biological resources when the level of recreational use becomes too intense or occurs in areas with sensitive resources.

Because of the relatively small size and fragmented nature of the Rancho Palos Verdes Reserve network, active recreational uses that require new development, such as paved access roads, service facilities, maintenance buildings, and exotic landscaping, are not appropriate land uses within the Reserve and shall not be sited within the Reserve boundaries. Adverse impacts of motorized off-road vehicle use include reductions in air quality because of automotive exhaust and creation of dust, soil erosion and sedimentation into local waters, noise, and habitat degradation. Disturbance from off-road vehicles can also disrupt breeding activities. For these reasons, off-road vehicle use, except for medical emergency or law enforcement activities, is not compatible with conservation goals.

6.2.5.1 Management Recommendations

Recreational use of the Reserve should be consistent with the protection and enhancement of biological resources. Existing recreational facilities should be managed to promote the maintenance of habitat value surrounding these facilities. Anticipated active recreation projects should be accommodated outside the Reserve on land not required to meet covered species' habitat needs. The following actions should be taken as a part of the development of the PUMP:

1. Determine appropriate levels of passive recreational activities within the Reserve, depending on the resources to be protected, season, and successional stage of the adjacent habitat.
2. Develop a Reserve Trails Plan consistent with the Rancho Palos Verdes Conceptual Trails Plan (as amended), in such a way that new trail construction avoids direct access to sensitive resource areas and major biological features (e.g., 7.6-meter [25-foot] setback to coastal bluffs).
3. Develop a plan for five passive overlook areas with benches, picnic tables, tie rails, portable toilets, and trash cans, to be located near preserve boundaries where no existing habitat would be disturbed.
4. Locate overlooks and staging areas for trailheads adjacent to existing roads and away from sensitive resource areas.
5. Restrict existing active uses, such as the archery range or paragliding activities to areas where impacts to habitat can be minimized.
6. Use "fire-safe" locally native plants in landscaping along Reserve edges. Prohibit the use of invasive exotics, and adopt an exotic plant control plan.
7. Require lighting use restrictions consistent with existing City lighting guidelines within 46 meters (150 feet) of the Reserve boundary. Direct lighting in adjacent areas away from the Reserve.
8. Minimize adverse effects of passive recreation, such as trampling vegetation and erosion.
9. Provide litter control measures, such as closed garbage cans and recycling bins, at access points within the Reserve.
10. Prepare and maintain trail surfaces to minimize erosion. Do not use materials for trails that would be a source of seed of invasive exotic species. Prohibit use of eucalyptus chips that could suppress native plant growth adjacent to trails.
11. Limit equestrian use to specified trails where impacts to habitat can be minimized. If trails become degraded because of heavy use, rotate or limit use during certain seasons to minimize further degradation.
12. Locate corrals, arenas, stables, and other associated equestrian facilities outside the Reserve. Any corrals and/or stables located within this Subarea Plan area must evaluate the potential for supporting cowbirds. If cowbirds are present, a cowbird trapping program should be implemented.
13. Ensure that public access to the Reserve is consistent with the protection and enhancement of biological resources. Monitor existing access areas to ensure that they do not degrade or inhibit biological values, and prioritize future access areas for protection of biological resources.
14. Seasonally restrict access to certain trails if deemed necessary to prevent disturbance of breeding activities of covered species.

15. Close trails designated as unnecessary in the Public Use Master Plan (PUMP) to minimize biological impacts. For example, use fencing or signage to prevent the use or creation of unauthorized trails and protect sensitive plant species adjacent to established trails on bluff slopes in the area between Point Vicente and Long Point, and from the west edge of Portuguese Bend south to the city limits. Abandon and revegetate steep eroding trails.
16. Locate new trails away from sensitive resources or restrict their use.
17. Construct barriers or signage at viewpoints or prominent features to prevent access to sensitive coastal bluff areas. This measure would be appropriate at viewpoints or prominent features along established trails in the area between Point Vicente and Long Point, and from the west edge of Portuguese Bend south to the Rancho Palos Verdes city limits.
18. Construct trails for shoreline access to prevent extensive trampling and compaction. Close and revegetate all other unauthorized and unnecessary trails.
19. Install water-bars on steep trails to minimize erosion and sedimentation.
20. Provide a 30-foot upland buffer along major drainages for new trails sited adjacent to drainages.
21. Establish a trail inspection and maintenance program to monitor trail conditions, and detect vandalism and habitat degradation.

6.3 HABITAT MANAGEMENT AND MONITORING

6.3.1 Reserve Habitat Management Plan

The Habitat Manager (PVPLC) shall develop a Reserve Habitat Management Plan (RHMP) for the Reserve. The RHMP may consist of numerous subsidiary plans and reports and shall be reviewed and approved by the City and Wildlife Agencies. The RHMP will have the following components and reporting requirements:

6.3.1.1 Initial Plans (may be combined or issued separately)

- *Initial Management and Monitoring Report*. Plant, gnatcatcher and blue butterfly surveys and data analysis.
- *Predator Control Plan.* Based on the surveys, this plan will make provision for control of cowbirds, feral cats, and other predators; it will be revised every three years or if additional controls are needed.
- *Habitat Restoration Plan*. To encourage long-range planning, this plan will have a planning horizon of five years and will be revised every three years.
- *Targeted Exotic Plant Removal Plan*. Based on a survey of all of the lands in the preserve, this plan will designate 5 acres or 20 small sites where invasive plants will be removed during the year ahead; this weed control will be done every year.

6.3.1.2 Annual Plans

- *Targeted Exotic Plant Removal Plan*.

6.3.1.3 Annual Reports (may be combined or issued separately)

- *Monitoring Report on Habitat Restoration Areas*. Using standard monitoring protocol as detailed in the Habitat Restoration Plan.
- *Report on Targeted Exotic Plant Removal Efforts*.
- *Report on Covered Species Monitoring*. Years without Comprehensive Report.
- *Habitat Tracking*. Produced jointly by the City and PVPLC.

6.3.1.4 Reports Every Three Years

- *Comprehensive Management and Monitoring Report*. Surveys and data analysis regarding habitat, covered plants, gnatcatchers, cactus wren, and butterflies.
- *Updated Predator Control Plan*.
- *Updated Habitat Restoration Plan*.

6.3.2 Management, Restoration and Reporting for the Reserve

6.3.2.1 Initial Management and Monitoring

This section outlines the necessary monitoring tasks, including methodologies, data collection and analysis. Refer to Section 6.6 for additional research that may be implemented as funds and/or researchers become available.

6.3.2.1.1 Plant Species Monitoring

Five target plant species occur within the Rancho Palos Verdes city limits. These include aphanisma, South Coast saltscale, bright green dudleya, Santa Catalina Island desert-thorn and Catalina crossosoma. The first three species occur in southern bluff scrub, whereas the latter species occurs in CSS. An additional three sensitive species have not been observed in the Rancho Palos Verdes city limits, but may occur on the Palos Verdes Peninsula: Peirson's morning-glory (*Calystegia peirsonii*), southern tarplant (*Centromadia parryi* ssp. *australis*), and Lyon's pentachaeta (*Pentachaeta lyonii*). The following discussion of plant species monitoring focuses only on target plant species currently known from the study area. If additional target species not currently known in the study area are included to the City's covered species list, monitoring efforts may be expanded to include these species.

Population Parameters

Long-term monitoring will focus on population parameters that indicate whether a population is expanding, stable, or declining, such as population size, population density, and population structure (e.g.,

age classes). Parameters to be measured may vary from species to species according to species life history (see below). Two additional parameters, survivorship and fitness (e.g., significant decreases in fruit or seed set), are acknowledged as important in identifying causes of population decline but will not be included in the Rancho Palos Verdes field monitoring program. Parameters included in this program are discussed below.

- **Population Size.** It is well recognized that small populations are at an increased risk for extirpation through both short-term catastrophic events and long-term genetic events that threaten population viability (Allendorf 1983; Gilpin and Soulé 1986; Messick 1986; Falk and Holsinger 1991; Ellstrand and Elam 1993). Although it would be desirable to determine minimum viable population sizes for the plant species of concern and manage populations accordingly, this task is beyond the scope of this monitoring program. All covered species included in the field effort (aphanisma, South Coast saltscale, bright green dudleya, Santa Catalina Island desert-thorn, and Catalina crossosoma) will be monitored to determine trends in population size. Population size data will be correlated with environmental and ecological data, to the degree feasible, to determine possible causes for declining trends. Depending on the cause, significant declines in population size over time may warrant remedial measures (including but not limited to reintroduction) to reverse the declining trend.
- **Population Density.** Populations too widely dispersed face the same risks as small populations, but are particularly susceptible to adverse genetic effects associated with lowered outcrossing rates. Population density data will be correlated with environmental and ecological data, to the degree feasible, to determine possible causes for declining trends. Depending on the cause, significant declines in population density over time may warrant remedial measures to reverse the declining trend. Density monitoring is not warranted for species or populations that consist of one or only a few individuals (e.g., Catalina crossosoma, some populations of aphanisma). Furthermore, density monitoring may not be feasible for some species or populations located on steep cliffs (e.g., aphanisma, South Coast saltscale, bright green dudleya).
- **Population Structure.** For some species (e.g., Santa Catalina Island desert-thorn and Catalina crossosoma), the presence of flowering plants does not provide an adequate indication of the state of the population or its potential for persistence (Oostermeijer et al. 1992). For example, a high percentage of flowering may be observed in a relatively old, even-aged stand of plants. By its very structure, however, this population may be more susceptible to extirpation than a population with a lower percentage of flowering but a variety of age classes. Population structure, as measured by the presence of various age classes, can provide an additional indication of the overall vigor and long-term "potential" of a population. The presence of individuals representing more than one stage of a life cycle (e.g., seedlings, juveniles, flowering and non-flowering adults) is representative of a "dynamic" population. Conversely, populations characterized by minimal or no seedling recruitment are typically considered "stable," even if there is a high degree of adult flowering or non-flowering individuals. Although stable populations may persist for long periods, they have a greater probability of becoming extinct over time because of their lack of recruitment. Additionally, stable populations may experience declining trends in population size, even if the rate of mortality is relatively low, simply because individuals that die are not replaced (Oostermeijer et al. 1992).

The presence of age classes within a population will be monitored for herbaceous perennials (e.g., bright green dudleya) or shrubs (Santa Catalina Island desert-thorn, Catalina crossosoma) that are on the covered species list and located in accessible locations. For example, it is uncertain whether age class monitoring will be possible for bright green dudleya because of its generally inaccessible location on bluffs. The presence of vegetative reproduction (e.g., clones, stem or corm offshoots) will be considered evidence of a dynamic population.

Methodology

Field monitoring will focus on detecting both immediate threats to population viability and long-term trends that indicate population decline. Immediate threats may include habitat loss or degradation (e.g., vehicles, trampling, plant collecting, illegal trash disposal and erosion) and will be measured through visual assessments. Natural events that temporarily affect plant populations (e.g., fire) will be recorded but typically will not be considered detrimental to the long-term survival of a population. Population declines may be more difficult to assess because many species experience natural fluctuations in population size over time. Efforts will be made to correlate apparent changes in population status with environmental or ecological factors.

During the initial monitoring effort, a reconnaissance survey will be conducted for all populations included in the field-monitoring program. The purpose of this survey will be to refine existing information and establish baseline conditions. Specific objectives of this survey will be to define population limits, estimate population sizes, and map populations onto base maps. The reconnaissance survey is expected to be a one-time effort, and can be eliminated if recent and sufficiently detailed baseline information is available. Field monitoring will include a qualitative assessment of disturbance factors that may threaten the population. These factors will be recorded on the appropriate data sheets and monitored over time to determine their effect on the target population. Where adverse effects are obvious, however, remedial measures may be implemented immediately.

Most of the existing populations of covered plant species are currently small enough (< 1,000 individuals) that direct counts can be made to determine both population size and density, and all populations can be monitored. Bright green dudleya - occurs in larger populations and it is not feasible to establish transects to census this species because of the inaccessibility of occupied sites (e.g., cliff faces). In this case, population size and/or density will be assessed by direct counts in sample plots or estimates using binoculars from vantage points or by photodocumentation, as discussed below.

Photodocumentation

Permanent photodocumentation points may be established for all monitored plant species plots but will be particularly valuable for species for which direct monitoring of individual plants is impossible because of accessibility problems and for which individuals may be reasonably counted or assessed from photographs (e.g., bright green dudleya). Photodocumentation points will be established at least three vantage points adjacent to the subject population(s). Color film will be used and photographs will be taken at the same time of year to minimize discrepancies resulting from phenology. Additionally, cameras should maintain the same orientation and focal length from year to year. Photographs should be taken during each monitoring period.

Climatic Data

Climatic information (e.g., precipitation and temperature) should be collected/recorded from the nearest weather station monthly. This information will be used to correlate climatic conditions with species presence and population size in any given year, for both plant and animal target species. The established weather stations are on the Peninsula, Torrance, and Long Beach.

Timing

Monitoring of covered plant species should be conducted at the most phenologically appropriate time for each species, depending on the type of monitoring being conducted. The phenological condition of each species should be verified before initiating the monitoring effort. Target dates for monitoring are between April and May for aphanisma, between May and July for South Coast saltscale, between April and June for bright green dudleya, June for Santa Catalina Island desert-thorn, and between February and May for Catalina crossosoma.

Monitoring Frequency

Monitoring frequency for covered plant species will vary according to species' habit (e.g., annual versus perennial). Other considerations in monitoring frequency may include population trends noted over time and budget and personnel available for monitoring. It is recommended that annuals and herbaceous perennials be monitored during the spring season after the Peninsula experiences an annual rainy season that exceeds 75-90 percent of the long-term average annual precipitation. This will allow for an unbiased assessment of the population status under comparable weather conditions between monitoring years. Longer-lived shrubs should typically be monitored once every three years.

For those that need more frequent monitoring, reports will be included in the yearly Targeted Exotic Removal Report. Evidence of dramatic change in the populations of covered plant species will be reported to the Wildlife Agencies and recommendations will be developed to address the concerns.

Data Collection

It is critical to the success of the monitoring program that a central data collection system and a central repository for data are established and accessible to all personnel involved in the monitoring program, including the Wildlife Agencies. A statewide monitoring database structure is currently being developed by CDFG and others to allow for NCCP and other monitoring data to be stored consistently. This database is expected to be finalized and operational in 2004. Data collected should be stored in such a way that it can be easily incorporated into this database. Standardizing data collection is essential to meeting monitoring objectives and streamlining the data collection, analysis, and reporting efforts. Protocols and/or refinements can be made as the program evolves and as monitoring priorities shift; however, any changes should be well documented and accessible to all persons involved in monitoring.

Monitoring documentation should include the following: hard copy or electronic data collection field forms, data reduction forms, and final summary forms (Clarke 1986). Establishing these forms in advance of the field effort will ensure that all aspects of the monitoring effort are examined, and will focus the

effort on the stated objective(s). Additionally, maps should be provided (as needed) that depict individual site disturbances and other indicators/evidence of change.

Data collection forms will be used to record quantitative data at each point location and assess general conditions within the monitoring site. Data reduction forms will be used in the office following the data collection effort to summarize sampling site data and perform initial data analyses (e.g., means, variances, standard deviations, etc.). A final summary form will be used to provide an evaluation of each monitored population. Final summary forms are designed to condense quantitative data into summary statistics that reveal the overall patterns being monitored. These forms will provide information used in the monitoring reports.

Data Analysis

Data analysis will be performed as part of the Comprehensive Report every three years. Population parameters measured to indicate whether a population is expanding, stable, or declining include population size, plant density, and population structure (e.g., expressed as age class frequency) as appropriate given the size of local populations.

After multiple years of data are collected, a test for time series analysis may be used to identify significant trends. The major task of a time series analysis is to describe the nature of the variation of a variable at different points in time so that its future values can be predicted (Kachigan 1986). A time series analysis is also used to determine whether a long-term trend is significant or just part of an extended cyclic process of population change.

Reporting

The main product of the covered plant species monitoring will include a report (with accompanying maps and photographs) that indicates the status of species at each monitoring location. The first-year monitoring effort will provide the "baseline" for subsequent monitoring years. The report will provide a concise summary of any proposed actions, their purpose and priority, schedule for implementation, maintenance frequency, labor and materials, and cost estimate for implementing any proposed actions. In addition to the written report, digital biological monitoring data will be made available to the Wildlife Agencies for incorporation into the statewide monitoring database. Refer to Section 6.4.2 for additional information on the reporting program.

6.3.2.1.2 Animal Species Monitoring

Monitoring of focal wildlife populations is prioritized toward species that are considered indicators of ecosystem function and species whose population status is of concern to the USFWS and CDFG. The three focal species selected for monitoring are: California gnatcatcher, coastal cactus wren, and El Segundo Blue Butterfly. If Palos Verdes Blue Butterfly is reintroduced into the Reserve, this species would be added to the monitoring program. Because of their small population size, concentrated distributions in this planning area, and isolation from other populations, these three species may be particularly vulnerable to local extirpation.

Methodology

The goal of population monitoring is to implement a monitoring program sufficient to detect significant long-term declines in population levels of focal species within the reserve system. A complete survey of all potential habitat within the Reserve populations of California gnatcatcher and cactus wren in Rancho Palos Verdes is proposed to be done every three years, per standard survey protocols. It is assumed that gnatcatcher and cactus wren surveys will be done concurrently. It is further assumed that monitoring of gnatcatchers and cactus wrens will facilitate a general qualitative assessment of CSS habitat quality throughout the Reserve. A standard protocol for surveying California gnatcatchers and coastal cactus wrens has been developed and should be used by the monitoring program to develop comparable trends. This survey protocol is detailed below.

- **Survey Frequency.** Gnatcatchers/wrens are difficult to detect and can easily be missed with just one site visit. At a minimum, a given area within a habitat patch will be surveyed twice with at least a seven-day interval between site visits during January through mid-March. A third site visit to the habitat patch will focus on relatively large areas of the patch (i.e., >20 acres) that lack any gnatcatcher/wren sightings after two site visits. Maximum survey efforts for each 100-acre habitat patch will be approximately 18 cumulative field hours.
- **Time of Day.** Surveys will begin within one hour after sunrise and end by noon. Surveys will begin later in the morning when ambient morning temperatures are less than 40°F.
- **Areal Coverage of Survey.** The calling rate of California gnatcatchers is highly variable (Preston et al. 1998). Relatively slow, methodical transects through presumptive gnatcatcher habitat are required to maximize the potential for detecting gnatcatchers/wrens. Rate of coverage will be 100 acres per person per six hours of survey effort. Surveys are most effective when pairs of biologists survey an area together to distinguish between pairs and minimize double counting of the same pair/individual.
- **Survey Weather Conditions.** Gnatcatchers/wrens may be more difficult to detect under windy (> 10 mph) and/or cold (< 40°F) conditions. Very hot conditions (> 95°F) also seem to depress activity. Surveys should not be conducted under these extreme weather conditions.
- **Taped Vocalizations.** Taped vocalizations will be used on all surveys because there may be extensive inter-observer variation in pishing. Volume of tape players should be similar to that of a quiet mew call or contact note produced by a California gnatcatcher/cactus wren. Excessive volume can either draw in or scare off birds from their normal territory and thus influence the estimate of population size. Use of the tape should be infrequent in both time and space. Allow sufficient time for the birds to respond (e.g., 5 to 10 minutes) before playing the tape again. Do not induce detected birds to follow the taped call, thereby minimizing potential double counting.
- **Survey Routes.** Survey routes through the habitat patch will be systematic so that the area is completely covered. Survey routes will be varied relative to time of day between visits. A zigzag pattern that starts from the center of the habitat patch and moves toward the periphery of the patch is highly recommended. Distinct topographical features (e.g., ridge lines or major trails) often form the boundaries between gnatcatcher territories. Note the location of territorial behavior if observed.

- **Detailed Recording of Sighting Information.** Gnatcatcher/cactus wren sightings will be recorded on a standard field data form (Appendix C), as well as on a standard field topographic map of the plot. Attribute and location data should be stored digitally in such a way that it can be easily incorporated into the statewide monitoring database currently being developed by CDFG and others. Information to be recorded for each sighting will include, at a minimum, the following:
  - Date and start/stop time of sighting.
  - Sex and age of individual(s).
  - Are any of the birds detected color-banded? -- record the color code.
  - Habitat type, dominant plant species, and vegetative condition (i.e., extent of disturbance).
  - Is the sighting a single bird, a pair, or a family group?
  - Is there any evidence of breeding activity (e.g., nesting behavior)?
  - Are there any other sensitive CSS species near the sighting?

Occupied and potential habitat for El Segundo Blue Butterfly within the Reserve shall be surveyed annually during the flight period of this species (February-March). Numbers of adults detected and condition of the larval habitat will be assessed and reported annually.

Data Analysis

As much as is practical, trend analysis methods will be used for data analysis of wildlife species. The statistical analysis of time-series data for trends has received extensive attention (e.g., Ralph and Scott 1981; Verner 1985; Sauer and Droege 1990; Gerrodette 1987, 1993). Once a sufficient time-series of population data is developed, long-term trend analyses can be conducted. The number of years of data necessary to reliably identify a long-term population decline depends on the variability of the data. In the short-term, the number of occupied sites, site turnover rate, and change in total population size between years will be indicative of at least short-term variation in local population levels that can be related to weather and site conditions (e.g., cold weather-induced population decline). If a negative population trend is detected, a more intensive investigation of the potential causes of the population decline (e.g., cowbird parasitism) should be initiated.

Reporting

A monitoring report documenting the results of the year's survey efforts will be prepared within three months of the completion of fieldwork. This report will identify any management actions (e.g., more detailed investigations) required to clarify or resolve problems identified by the monitoring program. Refer to Section 6.4.2 for additional information on the reporting program.

6.3.2.2 Predator Control Plan

The Predator Control Plan will be written based on the results of the first Management and Monitoring Report. It will recommend specific actions to be taken to reduce predation within the Reserve for the

following three years. It will be revised every three years based on the comprehensive survey to be done every three years.

Native species are often at a disadvantage after exotic species or nonnative predators are introduced, so special management measures may be needed to control these invading species. Nonnative plant and animal species have few natural predators or other ecological controls on their population sizes, and they thrive under conditions created by humans. These species may aggressively out-compete native species or otherwise harm sensitive species. When top predators are absent, intermediate predators can multiply and increase predation on native wildlife species and their nests. Feral and domestic animals, particularly cats, also prey on small native wildlife species. Stables may provide resources for increased populations of parasitic cowbirds, which adversely affect native songbird breeding populations.

A Predator Control Program shall be developed based on the results of the initial surveys. This program shall address the need to control feral and domestic animals, cowbirds, and large exotic predatorsIt shall be updated every three years after new surveys are performed.

Feral and Domestic Animal Control

These measures shall be considered for inclusion in the Predator Control Program for the Reserve.

1. Document evidence of feral or domestic animal use in the Reserve.
2. Establish an education program for homeowners regarding responsible pet ownership. The program should encourage 1) keeping pets indoors, especially at night; 2) having pets neutered or spayed to reduce unwanted reproduction and long-range wanderings; 3) belling of cats to reduce their effectiveness as predators; 4) keeping dogs on leashes when walking them on trails in Reserves; 5) discouraging release of unwanted pets into the wild; and 6) prohibiting the feeding of feral animals.
3. Fence selected segments of the Reserve boundary adjacent to housing to keep pets out of particularly sensitive areas.
4. Establish a feral animal removal program, as necessary. This program shall consist of trapping and removal at regular intervals throughout the year.

Cowbird Trapping Program

1. Document and monitor the extent of cowbird parasitism on target bird species nesting in the Reserve.
2. Establish a cowbird trapping program to increase nesting success of target species adversely affected by cowbird parasitism, as necessary.

Native Predator Control

1. Monitor population levels of selected predators (e.g., coyote, grey fox).
2. Institute an educational program to explain the role and necessity of large native predators within the ecosystem and the need to protect them from disturbance.

3. Initiate a program to control mesopredators (red fox, gray fox, skunks, raccoon, and opossum), if key native predator species are extirpated from the Reserve and studies indicate that these specific mesopredators are adversely affecting sensitive native wildlife.

Refer to Section 6.4.2 for additional information on the reporting program.

6.3.2.3 Habitat Restoration Plan

Restoration is the process of re-establishing or enhancing historical biological functions and values to degraded habitats. Restoration within the Reserve will consist of actively establishing native habitat in areas currently nonnative habitat or disturbed lands, based on a five-year Restoration Plan to be developed by the PVPLC in consultation with the City and the Wildlife Agencies. The five-year habitat restoration plan will be updated every three years to incorporate changes in priorities, conditions or unique situations while maintaining long-range planning perspective.

Active restoration of nonnative habitats and disturbed lands will require removal of existing non-native vegetation, seeding with native species, and monitoring the restoration effort until it is determined a success. As available funding permits, the habitat restoration program will focus on the creation of habitat for target species with the objective of increasing the overall habitat carrying capacity for the target species populations. Key habitats for restoration are CSS, cactus scrub, and Palos Verdes blue butterfly habitat. Figure 6-1 depicts potential restoration areas in the Reserve, ranks them according to priority for restoration to enhance the reserve design, and further classifies these areas according to suitable restoration habitat type.

6.3.2.4 Management Recommendations

Restoration is necessary to increase the quantity and quality of native habitat in the Reserve. This will improve the viability of the Reserve to provide additional habitat for target species. Habitat-specific restoration should occur only on sites assessed as suitable for that habitat type and should be implemented according to Priority l, with initial restoration efforts occurring on high priority sites (Figure 6-1). Once the site and size of the restoration effort is determined, a project-specific restoration program should be prepared according to the following guidelines.

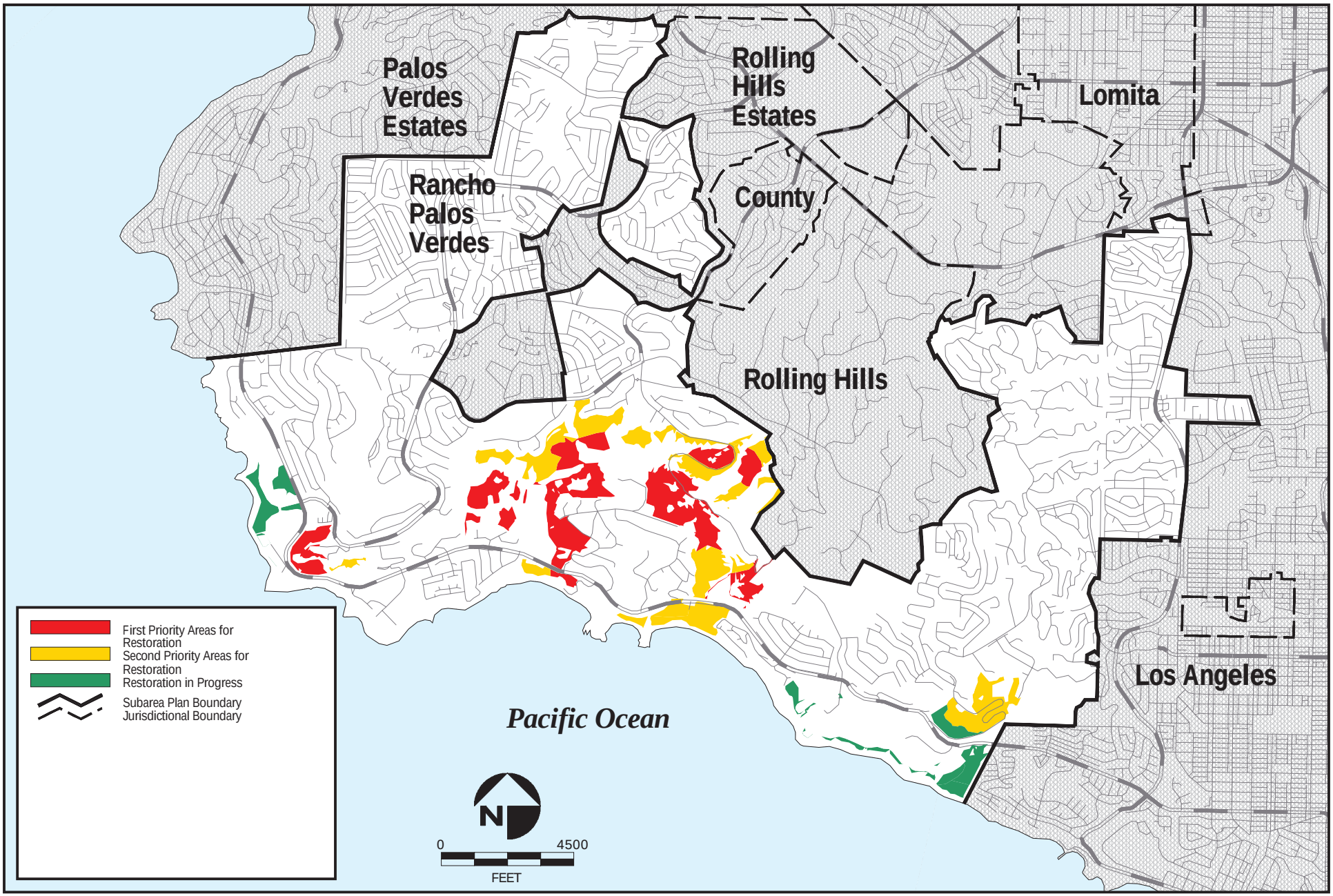
Develop a Detailed Habitat Restoration and Management Plan

The PVPLC will develop a five-year Habitat Restoration Plan. This plan shall:

1. Prepare one 5-acre (or greater) area each year by removing exotics; and
2. Revegetate that same 5-acre area (or greater) with native species in the subsequent year.

This plan will be reviewed and approved by the City and the Wildlife Agencies. PVPLC shall review this plan every three years after reviewing at least one year of comprehensive monitoring reports. The plan will address restoration design, installation procedures, maintenance and monitoring program, and success criteria.

Every effort will be made to obtain funding for additional restoration within the Reserve. Additional work will be included in the yearly habitat restoration plan, with site-specific monitoring requirements for each area. In situations where supplemental sites are added to those included in the Restoration Plan, a site-specific Habitat Restoration Plan will be developed with monitoring requirements appropriate to the situation.



FIGURE

6-1

URS TAIC

Priority Habitat Restortion Areas within the Reserve

/gis/projects/mios/rpv/plots/figures/sap_figs.aml

06/22/04

Restoration Design

The following will be included in the restoration design criteria:

1. Specified plant and seed palettes that will be used in the restoration effort. Tables 6-1 through 6-3 are recommended seed lists for use in the Reserve. These should be modified by the restoration biologist to make them more site-specific and correspond to site-specific restoration goals.
2. The types of erosion control that will be used and how they will be applied shall be outlined in the detailed restoration plan. Erosion-control measures can include, but are not limited to, straw wattles, blown straw, crimped straw, and/or erosion-control matting. No erosion control devices shall be used that contain seed from non-native plants.
3. Incorporation of local plant species of concern into the restoration program wherever possible and appropriate to the site conditions. Plan ahead when adding a sensitive species to the restoration plan to be able to obtain enough seed to have a viable restoration effort (Section 6.2.7).
4. No irrigation systems shall be installed within the City's Landslide Moratorium Area or the City's coastal setback zone unless such installation is approved by the City's geotechnical consultants. The following will be included in the preparation criteria:
    - Weed control should begin in the winter before installation of the restoration plan.
    - The restoration site should be sprayed with herbicide as needed during the winter and spring months.
    - After the weeds have been controlled, the site should be raked to remove above ground biomass, and remain fallow until the appropriate time to begin revegetation.
    - A restoration ecologist shall oversee any use of herbicide to control weeds, following the recommendations of a licensed Pest Control Advisor and shall be applied by a Qualified Applicator.
    - Prepare the site by restoring it to existing grade, fixing any erosion that may have occurred, and scarifying any compacted areas.
    - Apply erosion control measures where applicable.

Maintenance Program

1. Maintain the restoration site for five years following installation.
2. Perform maintenance on an as-needed basis, as recommended by the restoration biologist.
3. Perform the following maintenance activities to facilitate restoration success: weed control, erosion control, soil fertility management, and access control.

Table 6-1
Rancho Palos Verdes
Coastal Sage Scrub Seed Mix

Scientific Name	Common Name	Pound per Acre	%Pure Live Seed
Artemisia californica	California sagebrush	5.0	7.5
Astragalus trichopodus var. *lonchus*	Ocean locoweed	2.0	-
Encelia californica	California sunflower	2.0	24
Eriogonum cinereum	Ashy-leaf buckwheat	2.0	-
Eriogonum fasciculatum	California buckwheat	5.0	6.5
Eriophyllum confertiflorum	Golden-yarrow	2.0	18
Lotus scoparius	Deerweed	2.0	54
Lupinus succulentus	Arroyo lupine	2.0	83
Malosma laurina	Laurel sumac	1.0	-
Nassella lepida	Foothill needle-grass	2.0	36
Nassella pulchra	Purple needle-grass	2.0	42
Salvia leucophylla	Purple sage	2.0	49
Salvia mellifrea	Black sage	3.0	35
Total		**30.0**	

Table 6-2
Rancho Palos Verdes
Coastal Cactus Scrub Seed Mix

Scientific Name	Common Name	Pounds per Acre	%Pure Live Seed
Seeds			
Artemisia californica	California sagebrush	4.0	7.5
Encelia californica	California sunflower	2.0	24
Eriogonum cinereum	Ashy-leaf buckwheat	2.0	-
Eriogonum fasciculatum	California buckwheat	5.0	6.5
Eriophyllum confertiflorum	Golden-yarrow	2.0	18
Isomeris arborea	Bladderpod	2.0	58.5
Lupinus succulentus	Arroyo lupine	2.0	83
Nassella lepida	Foothill needle-grass	2.0	36
Total		**21.0**	
Cuttings		Plants per Acre	
Opuntia littoralis	Coast prickly pear	200	
Opuntia prolifera	Coast cholla	160	
Opuntia oricola	Prickly pear	75	
Total		**435**[1]	

[1] 3 m (10 ft) on center

Table 6-3
Rancho Palos Verdes
Butterfly Habitat Seed Mix

Scientific Name	Common Name	Pounds per Acre	%Pure Live Seed
Artemisia californica	California sagebrush	4.0	7.5
Astragalus trichopodus var. *lonchus*	Ocean locoweed	4.0	-
Eriogonum fasciculatum	California buckwheat	4.0	6.5
Eriophyllum confertiflorum	Golden-yarrow	2.0	18
Guiterrezia californica	California matchweed	3.0	2
Lotus scoparius	Deerweed	2.0	54
Lupinus succulentus	Arroyo lupine	2.0	83
Mirabilis californica	Wishbone bush	2.0	-
Nassella lepida	Foothill needle-grass	2.0	36
Nassella pulchra	Purple needle-grass	2.0	42
Total		**23.0**	

4. Remove or control invasive exotic species. Weed control will require constant diligence by the maintenance personnel. Invasive exotic species, such as pepper trees (*Schinus* spp.), gum tree (*Eucalyptus* spp.), castor bean (*Ricinus communis*), tree tobacco (*Nicotiana glauca*), and fennel (*Foeniculum vulgare*), will be removed wherever they occur within the restoration area. Annual weeds such as mustard (*Brassica* spp.), wild radish (*Raphanus sativus*), and annual grasses may also need to be controlled. The restoration biologist will determine what annual weeds need to be controlled to ensure restoration success.
5. Control erosion as necessary. Potential erosion-control measures include haybales, sandbags, silt fencing, and/or erosion-control matting. The restoration biologist will identify the need for erosion control during regular site visits.
6. Control access to restoration sites. Access to restoration sites should be on existing dirt roads. All vehicles should remain outside the restoration areas. If offroad vehicle or human activities become a problem in the restoration area, the restoration biologist will recommend the installation of fencing.

6.3.2.5 Targeted Exotic Plant Removal Plan

Each year, the PVPLC shall perform a survey of all properties included in the Reserve to identify locations where exotic species are prevalent. A letter plan will be developed selecting 5 acres or 20 small sites for removal each year. This weed control activity is in addition to the 5 acres being restored by the habitat restoration program (Section 6.3.2.3). The Targeted Exotic Plant Removal Plan will:

1. Prioritize areas for exotic species control based on aggressiveness of invasive species and degree of threat to the native vegetation. (Refer to Appendix D for a list of exotic plant species that could

threaten native habitats in Rancho Palos Verdes). Eradicate species based on biological desirability and feasibility of successful implementation.

2. Use an integrated pest management approach (i.e., use the least biologically intrusive control methods), at the most appropriate period of the growth cycle to achieve the desired goals.
3. Consider both mechanical and chemical methods of control. Only herbicides compatible with biological goals should be used. Only licensed pest control advisers are permitted to make specific pest control recommendations.
4. Properly dispose of all exotic plant materials removed from Reserve lands (e.g., in offsite facilities).

At the end of the year, a letter report will be prepared showing the locations of targeted exotic removal, with before and after photographs of the work done.

In the years without a Comprehensive Survey, the locations of the covered plant species will be visited and photographed by the surveyor during the course of the exotic removal effort. A brief summary of the condition of the four varieties of plants with identified locations will be included in the report, along with photographs. Several typical locations for bright green dudleya will also be included in the annual report. Any significant changes to the populations of these plants will be called to the attention of the Wildlife Agencies immediately.

6.4 REPORTING ON THE STATUS OF THE RESERVE

The Habitat Manager will submit a Comprehensive Report and Plan Report to the City and the Wildlife Agencies every three years that summarizes management and monitoring activities, describes management priorities for the next three-year period, reports on population monitoring and restoration activities, and evaluates funding and the ability to meet the resource management goals and objectives. This report shall include a summary of the financial requirements of plan maintenance, including reports on volunteer hours donated. Other reports shall be submitted as described above.

6.4.1 Biological Monitoring Program

The Subarea Plan is a comprehensive habitat-planning program that addresses multiple species habitat needs and the conservation of natural communities in Rancho Palos Verdes. In addition to identifying Reserves and compatible land uses within and adjacent to the Reserve, this Subarea Plan also seeks to maintain biological values of Reserves over time by reducing human-related impacts to target species and their habitats. Biological monitoring will allow the City and the Wildlife Agencies to evaluate whether the reserve system is meeting conservation goals for covered plant and animal species and their habitats, identify threats to covered species and habitats, and help prioritize management needs. Monitoring activities will be tracked through a formal reporting program that will assess the need for remedial or adaptive management and provide research recommendations.

6.4.1.1 Responsibilities and Coordination of Efforts

Implementation of the biological monitoring program is the responsibility of the PVPLC, with the assistance of the City and the USFWS and CDFG. A critical factor in the success of the biological

monitoring program will be coordination of monitoring efforts to ensure spatial and temporal consistency in data collection and analysis, and to allow compilation of data from different sources into comprehensive monitoring reports every three years. A centralized data storage repository will be established at the PVPLC office, and will be structured in such a way that data can be easily incorporated into the statewide monitoring database currently being developed by CDFG and others. Data will be made accessible to biological monitors, researchers and reviewers (including the Wildlife Agencies), facilitating the coordination of monitoring programs with other NCCP subregions.

6.4.1.2 Biological Monitoring Objectives

Biological monitoring focuses on detecting changes in habitat quality and population trends in habitats and plant and animal species considered covered by the Subarea Plan. The successful maintenance of these resources will be measured against specific habitat acreages and/or species populations, as documented in the final Subarea Plan and implementing agreements. PVPLC, Rancho Palos Verdes and the Wildlife Agencies will have detailed maps providing locations of habitats and covered species populations included in the Reserve and/or targeted for conservation.

Specific biological monitoring objectives include the following:

- Document the protection of habitats and covered species in the annual Habitat Tracking Report and Covered Species Report as specified in this Subarea Plan and implementing agreement. This will be accomplished by tracking permanent habitat losses and take of covered species.
- Document changes in the presence of conserved populations of covered species. This will be accomplished through monitoring covered species within conserved habitat.
- Describe new biological data collected, such as new species sightings, information on wildlife movements and frequency of road-killed wildlife, as such information is available. Although not the focus of the monitoring program, collection of new biological data will occur during covered species monitoring. This information will be disseminated through the annual reporting program.
- Evaluate effects of land-use changes in and adjacent to the Reserve. Evaluations will occur on both a landscape level (tracking permanent habitat losses) and a local level (covered species population monitoring). Results of this evaluation will be presented in periodic reports and correcting actions implemented through the remediation and adaptive management program.
- Evaluate management activities and enforcement difficulties. An assessment of the effectiveness of specific management and enforcement activities will occur through the habitat and covered species-monitoring component of this program. It should be noted that ongoing efforts of the habitat manager would also assess these activities. Management and enforcement issues will be discussed in the reporting program, along with remediation or adaptive management strategies, as necessary.
- Evaluate funding needs and the ability to accomplish resource management goals. An assessment of funding needs and management goals will be provided every three years in the Comprehensive Management and Monitoring Report. Accomplishment of management goals will be measured against specific habitat and species conservation targets set forth in this Subarea Plan and implementing agreements.

Because of budgetary limitations, the highest priority monitoring tasks will be those 1) that provide direct evidence of human-induced changes in key biological resources and 2) for which corrective or remedial management actions are possible. Refer to Section 6.5 for remediation and adaptive management in cases where negative or declining trends are identified.

6.4.1.3 Limitations of Monitoring Program

The intensity and scale of any monitoring program is ultimately limited by the priorities and resources (funding and staff) made available and considered sufficient to accomplish the stated goals of the program. Because the proposed Reserve is small in scale in comparison to those being designed in other NCCP subregions, monitoring of covered species and qualitative assessments of habitat quality throughout the entire Reserve (rather than a sampling design that monitors representative sites and focal species within the Reserve) was deemed a practical approach to follow. Limitations of the proposed monitoring program include the following:

- Focal species monitored are assumed to act as indicators of Reserve function and as surrogates for other species not monitored.
- The ability to detect adverse human-caused changes or downward trends in population size may require time-series data of relatively long duration.
- Qualitative measures of habitat characterization are less precise/accurate than detailed (and time-consuming) quantitative measures.

6.4.2 Restoration Site Monitoring Program

6.4.2.1 Site Monitoring

Monitor the restoration work underway in the Reserve. Each site will be monitored for seven years, with reports prepared in years 1 through 3, 5, and 7. Monitoring should document restoration progress and provide direction and maintenance recommendations. Monitoring will include both horticultural and botanical components.

- Conduct horticultural monitoring to determine plant composition, plant health, performance of maintenance personnel, and recommended maintenance activities.
- Conduct botanical monitoring to quantitatively measure the progress of the restoration effort by measuring plant cover, plant composition, and weed cover. Botanical monitoring should follow the California Native Plant Society field sampling protocol (CNPS 1995).
- Take photographs of the restoration site viewing the site from different locations. Photographs should be taken at the same locations each year.

6.4.2.2 Success Criteria

Measure success of site-specific restoration programs using the following criteria:

- Soil at the site is stable and shows no significant erosion.

- Non-native plant cover is less than 10 percent with less than 10 percent cover of invasive perennial species.
- Native plant cover after three years in the CSS community should be greater than 40 percent with at least 30 percent cover from perennial species.
- Native plant cover after three years in the cactus scrub community should be greater than 30 percent with at least 20 percent cover from perennial species and 5 percent cover from cactus species.
- Native plant cover after three years in PV blue butterfly habitat should be greater than 30 percent, but not more than 60 percent. Bare ground should comprise at least 40 percent cover. Perennial species should be maintained at between 10 and 20 percent cover. Ocean locoweed (*Astragalus trichopodus* var. *lonchus*) or deerweed (*Lotus scoparius*) should constitute at least 10 percent cover. Some replacement of ocean locoweed by deerweed is acceptable, particularly in the northern portions of the Reserve.

6.4.3 Covered Species Monitoring

Preservation of rare plant and animal populations in protected areas is the initial step in achieving long-term conservation. Monitoring efforts are needed to ensure that human-related activities do not present immediate threats to conserved populations nor threaten the ability of a population to persist over time. The covered species monitoring program will identify (1) short-term threats to species persistence; and (2) longer-term trends that may suggest declining populations. In either case, active management may be required. The covered species monitoring effort will achieve Subarea Plan objectives of documenting the protection of covered species and changes in conserved populations of covered species, collecting new biological data, evaluating the impacts of land uses in and adjacent to the Reserve, and evaluating management activities and enforcement difficulties in the Reserve.

6.4.4 Habitat Tracking and Reporting

The annual accounting of the acreage, type, and location of habitat and species conserved, restored, and destroyed by permitted land uses and other activities will be the responsibility of the City and PVPLC. Records will be maintained in ledger and GIS format using the HabiTrak application (or similar methodology) which is currently being used in other NCCP subregions. This accounting process will be used to ensure that habitat conservation proceeds in rough proportion with habitat losses to development. This information will be provided by the City to the PVPLC, which will submit it along with other yearly reports to the Wildlife Agencies. The information will contribute to the annual public report demonstrating compliance with the terms and conditions of this Subarea Plan Implementing Agreement, and take authorization. Annual public workshops will also be held jointly by the City and PVPLC within 30 days of the anniversary of the approval of the Implementing Agreement to inform interested citizens on the progress of the implementation of the Master Plan, and the Reserve assembly, restoration, and management.

The loss of habitat will be accounted for when the project accrues the benefits of the take authorization. For conserved lands, the conservation of habitat and species locations will be accounted for when habitat is permanently conserved (e.g., date of recordation of title transfer, recordation of a conservation

easement, or execution/recordation of any other instrument that confers third-party beneficiary status to the project/property). The accounting information for conserved acres also will identify the protection mechanism, owner and agency or person responsible for conservation and management, and other related information.

6.4.5 Reporting Program

The reporting program will be the primary vehicle for (1) providing monitoring results and (2) identifying habitats or species that require specific management activities. A comprehensive monitoring report will be prepared every three years and will include both a synthesis of all data collected in the preceding three years and an analysis of overall trends in biological resources. Where monitoring indicates that biological resources are imminently threatened and in need of immediate attention, interim letter reports may be used to document problems and notify the appropriate personnel in a more timely fashion. All monitoring reports will be reviewed by the City, USFWS and CDFG. The reporting efforts will achieve Subarea Plan objectives of describing new biological data, providing results of impact evaluations, evaluating management activities and enforcement difficulties, and evaluating funding needs and the ability to accomplish resource management goals. Specifically, the 3-year comprehensive monitoring report will:

- Summarize results of monitoring efforts.
- Identify management needs and provide specific management recommendations for the coming three-year period.
- Evaluate monitoring priorities for the coming three-year period and detail any proposed shifts in monitoring priorities.
- Evaluate funding needs for the coming three-year monitoring period.

Reporting

All biological monitoring data will be quantitatively analyzed and presented in Covered Species Monitoring Report every year, with a comprehensive report submitted every three years, along with recommendations (including remedial measures, as necessary) for the next year's program. In addition to the report, all biological monitoring data will be made available digitally to the Wildlife Agencies for incorporation into the statewide monitoring database currently being developed by CDFG and others.

6.5 REMEDIATION AND ADAPTIVE MANAGEMENT

The comprehensive Management and Monitoring Report issued every three years will provide specific management recommendations to reverse declining trends in habitat or species' populations. Although it is difficult to anticipate the types of remediation that will be required before monitoring, potential actions may include the following:

- Fencing, signage, or redirecting trails to protect habitat or species populations from trampling or other adverse, direct impacts.

- Removal of invasive exotic plant species to protect native habitats, plant populations, and wildlife values.
- Removal or control of nonnative animal species (e.g., cowbirds, feral cats) to protect native animal populations.
- Erosion-control measures to protect key habitats or populations of covered species.
- Habitat enhancement to provide pollinator habitat, breeding areas for covered wildlife species, or structural diversity for covered wildlife species.
- Habitat restoration to reverse the effects of habitat disturbance and/or improve habitat quality for covered species where natural regeneration processes are expected to be unacceptably slow or delayed.
- Vegetation management techniques (e.g., mechanized methods of fuel reduction) to revitalize senescent stands of habitat or promote germination of fire-adapted covered plant species (note: prescribed burns likely will be prohibited within the Reserve).
- Plant population enhancements where conserved population numbers become so low, because of human- or environmentally induced factors, as to threaten the continued viability of the population, and where suitable habitat and other factors necessary for survival still exist.
- Plant population reintroductions in areas where species populations have been extirpated.

Adaptive management may include re-prioritizing monitoring efforts, as indicated by monitoring results and the resultant degree of management required for a given resource. For example, if a specific population proves stable over a period (e.g., 10 to 20 years), the frequency of monitoring may be reduced, particularly if a species' habitat and physical site characteristics remain unchanged and another species or populations requires more intensive monitoring because of declining trends. The remediation and adaptive management program will achieve the objectives of providing correcting actions where 1) resources are threatened by land uses in and adjacent to the Reserve, 2) current management activities are not adequate or effective, or 3) enforcement difficulties are identified.

6.6 COVERED SPECIES REINTRODUCTION

This section deals with the reintroduction of covered species, rather than reintroduction of a suite of more common species that comprise a specific community or of local species of concern. In this context, reintroduction refers to putting the species back into a known historical site or habitat within its historic range. Reintroduction is generally used to enhance the overall species population viability.

The following concerns should be addressed before initiating a reintroduction effort: 1) does the reintroduction effort benefit the species or population; 2) does the reintroduction site afford long-term stability; 3) are there higher competing values (e.g., economic or land-use issues that could threaten the long-term success of the effort); and 4) does the reintroduction effort provide the opportunity for natural evolutionary processes to continue (Morse 1993, 1996). Reintroduction of any federally or State listed threatened or endangered species will be done in coordination with the Wildlife Agencies.

6.6.1 Management Recommendations

The decision to reintroduce a species depends on numerous species- and site-specific factors, and any reintroduction effort will require detailed planning and monitoring, as well as available funding for planning and implementation. Current information on target species in Rancho Palos Verdes may be insufficient to determine whether reintroduction efforts are warranted. Guidelines on determining the appropriateness of reintroduction, as well as reintroduction methodologies, are provided below in case covered species monitoring (Section 6.4.1) indicates that such efforts are warranted.

Reintroduction efforts are appropriate if the species or proposed reintroduction site displays all or most of the following characteristics:

- High priority species (e.g., listed as Federal- or State-endangered).
- Such release will further the conservation of the species.
- Species biology is known or is being researched (some research may be conducted as part of the reintroduction effort).
- The site is within the historic range of the species.
- The site is ecologically appropriate.
- Suitable donor populations/propagule sources exist.
- The site is in the Reserve and threats to its establishment and long-term viability have been minimized.

Rancho Palos Verdes is within the historic range of all target species. Monitoring of selected target species is expected to determine population trends that will indicate whether extant populations are stable or declining. If declining trends are observed and reintroduction is determined appropriate, potential reintroduction sites will be assessed for suitability in terms of ecological conditions and site protection status.

- Reintroduction may not be feasible for all species under consideration, based on biological, physical, logistical, or evolutionary factors. Although a general assessment of these factors is presented below, a more complete assessment should be made before committing resources to a reintroduction effort (Fiedler 1993; Fiedler and Laven 1996). Determine the type of rarity (e.g., is the species a local endemic, relict, new species or hybrid, or rare because of loss of habitat from development).
  - Extant populations of aphanisma and South Coast saltscale occur primarily on bluffs where they may be subjected to limited trampling but are otherwise relatively protected from impacts associated with development. It is unknown whether population numbers documented to date for these species reflect inherently small population sizes, population fluctuations because of climatic variability, or declining populations because of direct or indirect human-induced impacts. If monitoring indicates continued declines in population size that cannot be correlated with climatic variability and that do not respond positively to protective measures recommended elsewhere in this Subarea Plan, reintroduction may be appropriate for these species.

- Bright green dudleya also occurs primarily on bluffs and, in some locations, is subject to similar impacts as aphanisma and South Coast saltscale. The dudleya, however, occurs in higher numbers than either of the other two species. Reintroduction would likely be appropriate for bright green dudleya only if monitoring indicates declining population numbers that do not respond positively to protective measures recommended elsewhere in this document.
- There is some question as to whether the Santa Catalina Island desert-thorn plants on Rancho Palos Verdes are wild plants or introduced cultivars. If determined to be wild plants, they represent one of the few (if not only) extant stands of this species in existence, and would likely be a candidate for reintroduction based on rarity. If determined to be cultivars, reintroduction would not be appropriate.
- There is a small population of Catalina crossosoma mapped in Rancho Palos Verdes that may represent the only mainland occurrences of this species. These individuals occur in relatively intact CSS. Reintroduction would probably not be warranted, particularly if extant population were adequately protected. Expansion of the existing population to increase long-term viability may be appropriate.
- The Palos Verdes Blue Butterfly appears to meet most of the above criteria (Lipman et al. 1999). Once sufficient butterfly habitat is restored, a reintroduction program should be attempted by the Wildlife Agencies.

- Evaluate biological, physical, logistical, and evolutionary factors. Key criteria include existing site conditions; presence or potential for appropriate pollinators and seed dispersal agents; possible genetic contaminants (hybrids or cultivars); soils; topography; slope; aspect; elevation; drainage; hydrologic regime; light environment; site protection status and degree of protection; access for monitoring and research; site location [e.g., known versus potential habitat]; and evolutionary potential.
- As funding permits, conduct studies to determine the feasibility of reintroduction, as necessary (e.g., propagation studies, propagule viability studies).

6.6.2 Use an Experimental Approach

Any attempted reintroductions should be treated as experimental (White 1993, 1996; Guerrant 1993, 1996; Pavlik 1993b, 1996). Following this approach, it should be recognized that the reintroduction may be successful because of the knowledge obtained during the process, even if not all goals and objectives are met. Any reintroduction program should institute an experimental design to test propagation methodologies, measure ecological or other life history parameters, and validate appropriate establishment and management techniques. The design and data collection should allow for appropriate quantitative analyses of results with spatially appropriate replication of plots.

6.6.3 Develop a Detailed Reintroduction Plan

The goal of any reintroduction effort shall be to establish self-sustaining population(s) of the species of concern. Species-specific reintroduction plans shall:

- Specify design criteria, including a scientifically valid experimental design.
- Indicate the appropriate time of year for reintroduction, based on species phenology.
- Indicate reintroduction methods, including any specialized equipment that may be needed.
- Specify type and source of source material, and provide a schedule for procuring source materials in a timely fashion (see below).
- Outline preliminary evaluation criteria (see below).
- Specify the process for implementing remedial measures.

The plan shall also specify project management and implementation responsibilities. It is assumed that the Reserve manager shall prepare or oversee development of the reintroduction plan, and the City and PVPLC shall be responsible for implementation of the plan provided additional funding is available.

1. Develop formal construction documents (as needed) that address the specific responsibilities and authorities of applicable personnel (the landowner, contractors, monitors, etc.). Specifications shall include all pertinent conditions, coordination requirements, schedules, warranty periods, protected areas, and restricted activities.
2. Specify propagule procurement procedures a year in advance of actual planting. Integrate genetic conservation considerations (Center for Plant Conservation 1991; Brown and Briggs 1991) into procurement specifications. Collect seeds, cuttings or other propagules from locally growing natural sources. For example, if a population is being destroyed by development, the entire population may be collected for reintroduction purposes. Conversely, if propagules are to be collected from an extant conserved population with greater than 400 individuals, a maximum of 5 percent of the population should be sampled in a given year.
3. Annual plants (e.g., aphanisma, South Coast saltscale) should be reintroduced only through seed, whereas corm-forming species (e.g., bright green dudleya) may be additionally (or alternatively) reintroduced through installation of plants grown from seed or cuttings under nursery conditions. Shrubs (e.g., Santa Catalina Island desert-thorn, Catalina crossosoma) may be additionally (or alternatively) reintroduced through cuttings or installation of plants grown from seed under nursery conditions. Where seed availability is limited and alternative methods of reintroduction are unavailable, a seed increase program may be warranted to ensure that enough seed is available for the reintroduction to have a reasonable chance of success. In such cases, the potential genetic consequences of artificial propagation must be weighed against the threat of extinction or local extirpation.
4. Delineate site protection measures both during installation and afterward during the establishment period. Protection may include the use of fences, flagging, signs, patrols, and other barriers. Site protection may require management of offsite resources and contaminants, drainage, exotic plant species, vandalism, and trash.
5. Establish maintenance standards to ensure reintroduction success. Intensive maintenance at least once a month during the first two years after planting is often required and may include weed control, debris removal, reseeding, pest control, and site protection.

6.6.4 Include Reintroduction Sites in a Population Monitoring Program

- Monitor reintroduction sites. Monitoring should include both biological and horticultural components. Biological monitoring will require collection of field data to assess whether project goals are being met. At a minimum, biological monitoring should consist of direct measures of population size, percent cover, vigor, and yearly fluctuations in these variables, particularly as they relate to climatic conditions. Other potential factors to be assessed include natural colonization and increases or decreases in species distribution, reproductive success, habitat quality, herbivory, survivorship, and soil moisture content, among others. Monitoring should be conducted yearly, as needed, and will occur in spring or summer for most species.
- In accordance with guidelines issued by the California Botanical Society (1998), reintroduction-monitoring efforts should be conducted for at least seven years. Horticultural monitoring will consist primarily of weed control and site protection. It may also include recommendations for supplemental fertilization, irrigation, and pruning, where appropriate. Weed control should focus largely on removal of exotic plants or noxious weeds and/or control of areas in which the weed cover is so high as to inhibit germination of the target species. Site protection includes implementing measures to ensure that the reintroduction site is undisturbed by mechanical, vehicular, or other human-related impacts. In some cases, temporary or permanent fencing may be required to protect the reintroduction area.
- Establish offsite-monitoring procedures, to the degree feasible. The offsite populations should be close enough to the reintroduction site that they are subject to the same climatic conditions as those found onsite. Monitoring offsite populations allows consideration of factors (e.g., temperature, precipitation, and disease) that contribute to fluctuations in population size, particularly for annual and herbaceous perennial plants. These data will allow a realistic assessment of success criteria yearly.

6.6.5 Establish Success Criteria

Specify performance standards or success criteria by which the reintroduction will be judged. Because few sensitive species have been grown commercially or received widespread (if any) use in reintroduction programs, it may not be practical to pre-establish performance standards or success criteria. Therefore, it is recommended that an assessment of the success of each species be determined yearly, using available propagation data, climatic data, and monitoring data from offsite populations (i.e., reference sites). Design biological monitoring of the reintroduction site to supply data to evaluate these standards. Develop remedial measures in advance of project implementation to provide a means of response should performance standards not be met.

6.6.6 Reporting

All biological monitoring data will be quantitatively analyzed and presented in a report every year, with a comprehensive report submitted every three years, along with recommendations (including remedial measures, as necessary) for the next year's program.

6.7 RESEARCH RECOMMENDATIONS

The following is a summary of recommendations for future studies that would advance our knowledge and improve our ability to manage covered species and their habitats. Some of these studies may be conducted as part of future Reserve management and monitoring efforts, whereas others may be the focus of longer-term university or agency research projects. These research recommendations are not included in the monitoring plan budget. The research recommendations provided below can be grouped into several generalized categories, including basic inventories, habitat and life history studies, population biology and genetic studies, habitat restoration and/or population reestablishment studies, and management studies. These recommendations are consistent with the research agenda recommended by the Scientific Review Panel for the State's NCCP program. Additional recommendations may be generated based on results of the monitoring program and/or findings of the studies recommended below.

6.7.1 Inventories

Conduct surveys to better determine the distribution and/or extent of certain covered species (e.g., southern tarplant, Peirson's morning-glory, and Lyon's pentachaeta).

6.7.2 Habitat and Life History Studies

Determine the ecological requirements and life histories of covered plant species. This information would complement the long-term status monitoring of key covered plant species, and would provide the practical information necessary to enhance or establish populations. Specific studies might focus on the following:

- Microhabitat requirements.
- Reproductive, pollination, and dispersal strategies.
- Seed and pollen viability studies.
- Germination requirements.
- Seedbank ecology.
- Seedling mortality studies.

6.7.3 Population Biology and Genetic Studies

- On a species-specific basis, determine 1) the minimum size for viable self-sustaining plant populations, 2) the effective size (generally larger than the minimum size) for viable self-sustaining plant populations, and 3) the minimum and optimum densities of stable plant populations (Messick 1986).
- Monitor a representative sample of individuals of focal target animal species (California gnatcatcher, coastal cactus wren, Palos Verdes blue butterfly) to refine the variance estimate in demographic parameters and dispersal capability.

- Conduct genetic studies of populations of coastal cactus wren and California gnatcatcher to assess relative levels of genetic variation and possible inbreeding depression. Determine the need for supplementation of genetic stock with individuals from coastal Orange County.
- Conduct inter- and intra-populational genetic analyses of representative populations of covered plant species.

6.7.4 Habitat Restoration and/or Population Enhancement/Reintroduction Studies

- Using results of studies above, conduct and monitor small-scale habitat restoration studies within the Reserve.
- Conduct reintroduction studies for the Palos Verdes blue butterfly.
- Using results of the studies above and species' distribution and risk status, identify candidates for population enhancement or reintroduction studies. Conduct and monitor transplantation or reintroduction studies.
- Establish and maintain seedbanks in conjunction with recognized institutions for certain covered plant species as a possible source of research and enhancement/reintroduction material.

6.7.5 Management Studies

Conduct and monitor small-scale experiments that use alternative methods (e.g., mechanical chopping) to simulate the effects of burns on species or habitats. These experiments would be most appropriate for species that germinate in response to increased light (or decreased canopy cover), rather than species that germinate in response to heat or specific chemicals in the charate.

SECTION 7 LITERATURE CITED

Allendorf, F.W., 1983. Isolation, gene flow, and genetic differentiation among populations. Pages 51-65 in Genetics and conservation: a reference for managing wild animal and plant populations, Schonewald-Cox, C.M., S.M. Chambers, B. MacBryde, and W.L. Thomas, editors. Menlo Park, CA: Benjamin/Cummings.

Arnold, R.A., 1990. Ecology and conservation of two endangered southern California butterflies. Pages 36-47 in P.J. Bryant and J. Remington (eds.). Memoirs of the Natural History Foundation of Orange County (CA), Vol. 3.

1987. Decline of the endangered Palos Verdes blue butterfly in California. Biological Conservation 40:203-217.

1984. Palos Verdes blue butterfly recovery plan. Prepared for U.S. Fish and Wildlife Service. January. 46 pp.

1986. Distribution, life history, and status of three California lepidoptera proposed as endangered or threatened species. Prepared for California Department of Fish and Game. March. 39 pp.

Atwood, J.L., 1993. California gnatcatchers and coastal sage scrub: the biological basis for endangered species listing. Pages 149-170 in J.E. Keeley (ed.). Proceedings of the symposium on the interface between ecology and land development in California. Southern California Academy of Sciences, Los Angeles, CA.

Atwood J.L., M.R. Fugagli, J.C. Luttrell, and N.C. Nicolai, 1994. California gnatcatchers, cactus wrens, and conservation of coastal sage scrub on the Palos Verdes Peninsula: progress report no. 1 (1993). Unpublished technical report, Manomet Observatory for Conservation Sciences, Manomet, MA. 52 pp. plus appendices.

Atwood, J.L., J.C. Luttrell, T.J. Overbey, et al., 1995. California gnatcatchers, cactus wrens, and conservation of coastal sage scrub on the Palos Verdes Peninsula: Progress Report No. 2 (1994). Prepared by Manomet Center for Conservation Sciences. May. 32 pp.

Atwood, J.L., D.R. Bontrager, M. Fugagli, et al., 1998. Population dynamics, dispersal, and demography of California gnatcatchers and cactus wrens in coastal southern California (1997 progress report). Prepared by Manomet Center for Conservation Sciences and U.C. Irvine. January. 41 pp. plus 5 appendices.

Bartolome, J.W., M.C. Stroud, and H.F. Heady, 1980. Influence of natural mulch on forage production on differing California annual range sites. Journal of Range Management 33:4-8.

Beatty, S.W. and D.L. Licari, 1992. Invasion of fennel (*Foeniculum vulgare*) into shrub communities on Santa Cruz Island, California. Madroño 39(1):54-66.

Bentley, J.R. and M.W. Talbot, 1948. Annual-plant vegetation of the California foothills as related to range management. Ecology 29:72-79.

Bon Terra Consulting, 1997. Pacific pocket mouse and Palos Verdes blue butterfly focused survey report of Tentative Tract No. 46628, City of Rancho Palos Verdes, California. Prepared for: Capital Pacific Holdings, Inc., June.

Brattstrom, B.H., 1997. Status of the subspecies of the coast horned lizard, *Phrynosoma coronatum*. J. Herpetology 31:434-437.

Brown, A.H.D. and J.D. Briggs, 1991. Sampling strategies for genetic variation in ex situ collections of endangered plant species. Pages 99-122 in Genetics and conservation of rare plants, Falk, D.A. and K.E. Holsinger, editors. New York, NY: Oxford University Press.

Brylski, P., 1993. A focused survey for the Pacific pocket mouse (*Perognathus longimembris pacificus*) on the Dana Point Headlands, Orange County, California. Prepared by the Planning Center for EDAW, Inc.

California Botanical Society, 1998. Resolution by the California Botanical Society on transplantation. Madroño 45(1):92.

California Exotic Pest Plant Council, 1999. The California Exotic Pest Plant Council's list of exotic pest plants of greatest ecological concern in California - August 1996 revision.

California Native Plant Society, 2001a. Inventory of rare and endangered plant of California. Sixth Ed. Sacramento. 388 pp.

2001b. 1995. Field sampling protocol: plant communities of California. Pages 416-426 in A manual of California vegetation, Sawyer, J.O. and T. Keeler-Wolf, editors.

Center for Plant Conservation, 1991. Genetic sampling guidelines for conservation collections of endangered plants (appendix). Pages 225-238 in Genetics and conservation of rare plants, Falk, D.A. and K.E. Holsinger, editors. New York, NY: Oxford University Press.

Clarke, R. (ed.), 1986. The handbook of ecological monitoring. Oxford, England: Clarendon Press.

Dudek and Associates, 1994. Pacific pocket mouse assessment for the Ocean Trails project site, Rancho Palos Verdes, Los Angeles County, California. Prepared for Palos Verdes Land Holdings Company. September.

Ellstrand, N.C. and D.R. Elam, 1993. Population genetic consequences of small population size: implications for plant conservation. Annual Review of Ecological Systematics 24:217-242.

ERC Environmental and Energy Services Co. (Ogden), 1990. Phase I report: Amber Ridge California gnatcatcher study. Prepared for Weingarten, Siegel, Fletcher Group, Inc., April. 30 pp.

Evans, R.A. and J.A. Young, 1989. Characterization and analysis of abiotic factors and their influences on vegetation. Pages 13-28 *in* Grassland structure and function: California annual grassland, Huenneke, L.F. and H.A. Mooney, editors. Boston, MA: Kluwer Academic Publishers.

Ewing, A.L. and J.W. Menke, 1983. Reproductive potential of *Bromus mollis* and *Avena barbata* under drought conditions. Madroño 30(3):159-167.

Falk, D., 1993. Introduction. Symposium on restoring diversity: is re-introduction an option for endangered plants? Center for Plant Conservation, Missouri Botanical Garden. April 20.

Falk, D.A., and K.E. Holsinger (eds.), 1991. Genetics and conservation of rare plants. New York, NY: Oxford University Press. 283 pp.

Fiedler, P., 1993. Site selection criteria for rare plant reintroduction. Symposium on restoring diversity: is re-introduction an option for endangered plants? Center for Plant Conservation, Missouri Botanical Garden. April 20.

Fiedler, P.L. and R.D. Laven, 1996. Selecting reintroduction sites. Pages 157-170 in Restoring diversity: strategies for reintroduction of endangered plants, Falk, D.A., C.I. Millar, and M. Olwell, editors. Washington, DC: Island Press.

Gerrodette, T., 1993. Program TRENDS: user's guide. Southwest Fisheries Science Center, La Jolla, CA. 14 pp.

1987. A power analysis for detecting trends. Ecology 68:1,364-1,372.

Gilpin, M.E. and M.E. Soulé, 1986. Minimum viable populations: processes of species extinctions. Pages 19-34 in Soulé, M.E., editor. Conservation biology: the science of scarcity and diversity. Sunderland, MS: Sinauer Associates.

Guerrant, E.O., Jr., 1996. Designing populations: demographic, genetic, and horticultural dimensions. Pages 171-208 in Restoring diversity: strategies for reintroduction of endangered plants, Falk, D.A., C.I. Millar, and M. Olwell, editors. Washington, DC: Island Press.

Guerrant, E.O., 1993. Factors to consider in the design of re-introduced species populations. Symposium on restoring diversity: is re-introduction an option for endangered plants? Center for Plant Conservation, Missouri Botanical Garden. April 20.

Heady, H.F., 1995. Valley grassland. Pages 491-514 *in* Terrestrial vegetation of California, Barbour, M.G. and J. Major, editors. California Native Plant Society, special publication no. 9. 1,020 pp.

1956. Changes in a California annual plant community induced by manipulation of natural mulch. Ecology 37:798-812.

Hickman, J.C., 1993. The Jepson manual: higher plants of California. University of California Press, Berkeley, California. 1,400 pp.

Holland, R.F., 1986. Preliminary descriptions of the terrestrial natural communities of California. Unpublished report. State of California, The Resources Agency, Department of Fish and Game, Natural Heritage Division, Sacramento, CA. 156 pp.

Holland, V.L. and D.J. Keil, 1990. California vegetation, fourth edition, Biological Sciences Department California Polytechnic State University, San Luis Obispo, CA. 318 pp.

Impact Sciences, Inc., 1990. California gnatcatchers at the Subunit 1 Rancho Palos Verdes site.

Jennings M.R. and M.P. Hayes, 1994. Amphibian and retile species of special concern in California. Final report. Contract 8023. Prepared for California Department of Fish and Game, Inland Fisheries Division, Sacramento, CA.

Junak, S., T. Ayers, R. Scott, et al., 1995. A flora of Santa Cruz Island. Santa Barbara, CA: Santa Barbara Botanic Garden. 397 pp.

Kachigan, S.K., 1986. Statistical analysis. New York, NY: Radius Press. 589 pp.

Lipman, A, T.R. Longcore, R. Mattoni, et al., 1999. Habitat evaluation and reintroduction planning for the endangered Palos Verdes Blue butterfly. Technical report prepared for CDFG. June. 44 pp.

Magney, D.L., 1992. Descriptions of three new southern California vegetation types: southern cactus scrub, southern coastal needlegrass grassland, and scalebroom scrub. Crossosoma 18:1-9.

Marquez and Associates, 1995. Alta Mira Canyon Drainage Control Project focused survey for the Pacific pocket mouse (*Perognathus longimembris pacificus*). October.

Mattoni, R., 1992. Rediscovery of the endangered Palos Verdes blue butterfly, *Glaucopsyche lygdamus palosverdesensis* Perkins and Emmel (Lycaenidae). Journal of Research on the Lepidoptera 31:180-194.

Mattoni, R., G. Pratt, J. George, et al., 1997. El Segundo blue butterfly (*Euphilotes battoides allyni*) draft recovery plan. Prepared for the USFWS.

Messick, T.C., 1986. Research needs for rare plant conservation in California. Pages 99-108 in Conservation and management of rare and endangered plants, Elias, T.S., editor. Proceedings from a conference of the California Native Plant Society, Sacramento, California.

Morse, L.E., 1996. Plant rarity and endangerment in North America. Pages 7-22 in Restoring diversity: strategies for reintroduction of endangered plants, Falk, D.A., C.I. Millar, and M. Olwell, editors. Washington, DC: Island Press.

1993. The role of re-introduction and population restoration in North American rare plant conservation. Symposium on restoring diversity: is re-introduction an option for endangered plants? Center for Plant Conservation, Missouri Botanical Garden. April 20.

Ogden Environmental and Energy Services (Ogden), 1999. Palos Verdes Peninsula Subarea NCCP Program Phase I Summary Report. January. Prepared for the City of Rancho Palos Verdes. 56 pp.

1992a. Ecology of the California Gnatcatcher at Rancho San Diego. Prepared for: Home Capital Corporation. December. 56 pp.

1992b. Population viability analysis of the coastal cactus wren within the MSCP study area. Prepared for the City of San Diego. 19 pp.

Oostermeijer, J.G.B., J.C.M. Den Nijs, L.E.L. Raijmann, et al., 1992. Population biology and management of the marsh gentian (*Gentiana pneumonanthe* L.), a rare species in The Netherlands. Botanical Journal of the Linnean Society 108:117-130.

Pavlik, B.M., 1996. Defining and measuring success. Pages 127-156 in Restoring diversity: strategies for reintroduction of endangered plants, Falk, D.A., C.I. Millar, and M. Olwell, editors. Washington, DC: Island Press.

1993a. *Amsinckia grandiflora*. Symposium on restoring diversity: is re-introduction an option for endangered plants? Center for Plant Conservation, Missouri Botanical Garden. April 21.

1993b. How can success be measured? Symposium on restoring diversity: is re-introduction an option for endangered plants? Center for Plant Conservation, Missouri Botanical Garden. April 20.

Pavlik, B.M. and E.K. Espeland, 1998. Demography of natural and reintroduced populations of *Acanthomintha duttonii*, an endangered serpentinite annual in northern California. Madroño 45(1):31-39.

Perkins, E.M. and J.F. Emmel, 1977. New subspecies of *Glaucopsyche lygdamus* from California (Lepidoptera: Lycaenidae). Proceedings of the Entomological Society of Washington 79:468-471.

Preston, K.L., P.J. Mock, M.A. Grishaver, et al., 1998. California gnatcatcher territorial behavior. Western Birds 29:242-257.

Ralph, C.J. and J.M. Scott (eds.), 1981. Estimating numbers of terrestrial birds. Studies in Avian Biology no. 6. 630 pp.

Raven, P., 1993. Opening remarks. Symposium on restoring diversity: is re-introduction an option for endangered plants? Center for Plant Conservation, Missouri Botanical Garden. April 20.

Rea, A.M. and K.L. Weaver, 1990. The taxonomy, distribution, and status of the San Diego Cactus Wren. Western Birds 21:81-126.

RECON, 1987. Home range, nest site, and territory parameters of the black-tailed gnatcatcher population on the Rancho Santa Fe Highlands study area. September.

Reiser, C.H., 1994. Rare plants of San Diego County. Imperial Beach, CA: Aquafir Press. 180 pp.

Sauer, J.R. and S. Droege (eds.), 1990. Survey designs and statistical methods for the estimation of avian population trends. U.S. Fish and Wildlife Service biological report 90(1). 166 pp.

San Diego Herpetological Society, 1980. Survey and status of endangered and threatened species of reptiles natively occurring in San Diego County. Prepared for Fish and Wildlife Committee, San Diego Department of Agriculture, 33 pp.

Sawyer, J.O. and T. Keeler-Wolf, 1995. A manual of California vegetation. Sacramento, CA: California Native Plant Society. 471 pp.

Stebbins, 1985. A field guide to western reptiles and amphibians. Second edition. Houghton Mifflin Co., Boston. 336 pp.

Talbot, M.W., H.H. Biswell, and A.L. Hormay, 1939. Fluctuations in the annual vegetation of California. Ecology 20:394-402.

U.S. Fish and Wildlife Service, 1996. Reinitiation of formal consultation on implementation of the Special Rule for the coastal California gnatcatcher (1-6-93-FW-37R1). California State Supervisor, Sacramento. October 18, 1996.

1994. Endangered and threatened wildlife and plants; emergency rule to list the Pacific pocket mouse as endangered. Federal Register 59(23):5306-5310.

Verner, J., 1985. Assessment of counting techniques. Current Ornithology 2:247-302.

White, K.L., 1967. Native bunchgrass (*Stipa pulchra*) on Hastings Reservation, California. Ecology 48:949-955.

White, P.S., 1996. Spatial and biological scales in reintroduction. Pages 49-86 in Restoring diversity: strategies for reintroduction of endangered plants, Falk, D.A., C.I. Millar, and M. Olwell, editors. Washington, DC: Island Press.

1993. Response to need: when is re-introduction appropriate. Symposium on restoring diversity: is re-introduction an option for endangered plants? Center for Plant Conservation, Missouri Botanical Garden. April 20.

SECTION 8 DOCUMENT PREPARERS

City of Rancho Palos Verdes
Joel Rojas, Planning Director

Palos Verdes Peninsula Land Conservancy
Barbara Dye, Executive Director

URS Corporation
Patrick J. Mock, Ph.D., Project Manager, Senior Biologist
Liza Boquiren, Staff Analyst
Beth Famigletti, Staff Analyst
Diane Douglas, Ph.D., Technical Editor
Danielle Stearns, CEQA/NEPA Task Leader
David Acuff, Consultant Planner

Onaka Planning & Economics
Jun Onaka, Ph.D., Financial Planning

Technology Associates International Corporation
Debra Turner, M.S., GIS Task Leader

California Department of Fish and Game
Bill Tippets, Supervisor, South Coast Region
Warren Wong, Biologist

U.S. Fish and Wildlife Service
Kerri Davis, Biologist
Ken Cory, Assistant Field Supervisor
Jim Bartel, Field Supervisor

Assurances: Mutual agreements and covenants contained in the Implementation Agreement that bind the parties to specified actions and provide each party with benefits. The benefits include, for example, authorization for incidental take of species in accordance with this Subarea Plan, and conservation of species resulting from actions to implement this plan.

Authorizations: Permits for incidental take of species in accordance with this Subarea Plan.

Conserve: To keep from loss, decay or depletion; maintain, protect. Conservation and preservation are similar terms and are used in much the same way Preservation connotes the act of securing the land and its values, whereas conservation generally is more broad and includes activities such as management of the land and its resources.

Conservation: As defined in the Federal ESA, the use of all methods and procedures that are necessary to bring any endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary (ESA, Section 3[3]). In this plan, the term "conservation" also applies to all actions related to providing a viable habitat reserve system in the City.

Corridor: A defined tract of land, usually linear, through which a species must travel to reach habitat suitable for reproduction and other life-sustaining needs.

Covered species: A species for which take authorization would be provided because long-term viability was determined adequately maintained under a particular reserve design. The Federal action addressed in this document is the issuance of incidental take permits from all species on the covered species list whether they currently are listed or are to be listed in the future.

Ecologically Sensitive Habitat Area (ESHA): Coastal Act term used to define areas within the Coastal Zone that is precluded from impact except for lands uses specifically specified by the local coastal plan.

Endangered Species: Any plant or animal in danger of extinction in all or a significant part of its range.

Endangered Species Act: Federal Act of 1973, as amended 16 USC Sections 1531-1543; and California Act of 1984, as amended, California Fish and Game Code, Sections 2050-2098.

Habitat: The combination of environmental conditions of a specific place occupied by a species.

Harass: A form of incidental take under the Federal ESA; defined in Federal regulations as an intentional or negligent act or omission that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns that include, but are not limited to, breeding, feeding or sheltering (50 CFR 17.3).

Harm: A form of incidental take under the Federal ESA; defined in Federal regulations as an act that actually kills or injures wildlife. Such acts may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering (50 CFR 17.3).

Implementing Agreement: A binding legal agreement between the City of Rancho Palos Verdes, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game providing assurances to

all three parties and providing authorization to the City for incidental take of species in accordance with this plan.

Incidental Take: The taking of a federally listed wildlife species, if such taking is incidental to and not the purpose of carrying out otherwise lawful activities. (Also see "Take.")

Linkage (Habitat): A component of the reserve system established under this Subarea Plan, consisting of conserved habitat that provides connectivity between Cores and to natural communities within the region with opportunities for breeding where generational movement is required.

Major Amendment Areas: Private property containing sensitive species and/or native vegetation that could be included in the City's Subarea Plan at a later date solely upon request of the private property owner.

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

Mesopredators: Middle-sized (meso=middle) meat eaters such as gray fox, raccoon, skunk, and opossum.

Metapopulation: A network of semi-isolated breeding populations of a species that have some level of regular or intermittent migration and gene flow among them. (See also Population).

Mitigation: Measures undertaken to diminish or compensate for the negative impacts of a project or activity on the environment.

Population: A group of individuals of a given species that inhabits a relatively well defined geographic area and has the opportunity to interbreed freely.

Reserve: An area set apart for the protection of wildlife and natural resources. Reserve and preserve are similar terms and are often used interchangeably. A Reserve reflects an action taken in an urbanizing area, whereas reserve reflects setting aside land in undeveloped areas.

Project(s): Any activity that has biological impacts and is undertaken by the City or involves the issuance of a lease, permit, license, certificate, or other entitlement by the City.

Public Lands: Properties owned by the City of Rancho Palos Verdes or another governmental agency or special purpose district that are being addressed in this plan. Note: Some properties owned by governmental agencies are not included in the Plan at this time. These properties are noted on maps as "not a part."

Rare: A species (plant or animal) existing in such small numbers throughout all or a significant portion of its range that it may become endangered or threatened (as defined by CESA or FESA) if its environment worsens.

Section 7: A section of the Federal ESA that provides for a consultation between a Federal agency (often the U.S. Army Corps of Engineers) and the U. S. Fish and Wildlife Service to ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat or such species. In the case where a Section 7 consultation occurs between the USFWS and the ACOE, the ACOE assumes the lead and the USFWS assumes an advisory role.

Species: Any distinct population of organisms (plant or animal) that interbreed when mature.

Take: As defined in the Federal ESA, to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect a listed species, or attempt to do so. Under the California ESA, take of a listed or candidate species means "to hunt, pursue, capture, or kill or attempt the same." (See also Incidental Take.)

Threatened Species: Any species or subspecies likely to become endangered.

APPENDIX B
SPECIES-SPECIFIC CONSERVATION ANALYSES AND CONDITIONS FOR COVERAGE

Aphanisma

Aphanisma blitoides
USFWS: Federal Species of Concern (former Category 2 candidate)
CDFG: None
CNPS:

Covered Species	Existing	Conserved	Percent Conserved	Expected Take	Percent Conserved Potential Habitat
Aphanisma blitoides	26	26	100.0	0	96.3

Conservation Goals
The preserve shall be managed to ensure species survival by conserving major populations and the required habitat of Aphanisma.

Conservation Strategy
Conserve and manage along with the amount and configuration of suitable habitat to contribute to species recovery (including occupied habitat and unoccupied habitat that may support a persistent seed bank). Implement species-specific management actions as necessary to enhance or protect habitat quality and increase population size. These may include prohibiting adverse activities within preserve areas, enhancing declining populations and restoring damaged habitat, and establishing a seed bank for this species.

Coverage Determination and Permit Conditions

Coverage Determination: **Covered** 100% Conservation of known locations

Rationale. Levels of conservation expected under the Subarea plans meet the conservation goals for this species. Although the amount of potentially suitable habitat that will be conserved for this species in the preserve is adequate (100%), habitat in the study area occurs in narrow strands along the coast where it will likely be subject to edge effects.

Conditions. Not applicable

Background

Distribution, Abundance, and Trends. Historically, Aphanisma occurred from Ventura County southward to Baja California, Mexico, and on most of the Channel Islands. It is now apparently extirpated in much of the northern portion of its range and is facing steep declines in all other mainland locations as well (CNPS 2001). Aphanisma is a small annual herb that occurs on sandy soils near the coast in coastal bluff scrub and coastal sage scrub (CNPS 2001). It occurs at elevations from 3-60 m (10-200 ft) and is found from Santa Barbara County to northern Baja California, Mexico and on all the Channel Islands except San Miguel (Junak et al. 1995). This fleshy species blooms from April to May. Aphanisma is in steep decline on the mainland and declining on the islands as well (CNPS 2001).

Mainland populations are declining due to recreational use of beaches and development along the coast (Reiser 1994). Aphanisma was located in RPV in the coastal bluff scrub from Portuguese Point along the coast to the RPV/San Pedro City limit. Extant populations of Aphanisma occur primarily on bluffs where they may be subjected to limited trampling but are otherwise relatively protected from impacts associated with development. It is not known whether population numbers documented to date for these species reflect inherently small population sizes, population fluctuations due to climatic variability, or declining populations due to direct or indirect human-induced impacts. If monitoring indicates continued declines in population size that cannot be correlated with climatic variability and that do not respond positively to protective measures recommended elsewhere in this plan, then reintroduction may be appropriate for these species.

Threats and Limiting Factors. Threats to this species include urbanization, recreational development, and foot traffic (CNPS 2001)

Special Considerations. Aphanisma is an annual plant that may experience yearly fluctuations in population size. This species is presumably wind-pollinated (McArthur and Sanderson 1984) and seeds are presumably self-dispersed. The level of survey effort for this species in the study area is unknown.

Conservation Analysis

Conservation and Take Levels: 100% Conservation.

Preserve Configuration Issues. Within the Subarea Plan most of this acreage occurs as relatively small stands of habitat that may not allow for population fluctuations and would likely be subject to edge effects.

Effects on Population Viability and Species Recovery. It is not certain if protection and conservation through implementation of the Subarea Plan would necessarily enhance population viability or further species recovery. Preserved habitat may not be sufficiently large to support viable populations of this species or to buffer populations from adverse edge effects.

South Coast Saltscale
Atriplex pacifica

USFWS: Federal Species of Concern (former Category 2 candidate)
CDFG: None
CNPS: List 1B, 3-2-2

Covered Species	Existing Point Locations	Point Locations Conserved	Percent Point Locations Conserved	Expected Take	Percent Conserved Potential Habitat
Atriplex pacifica	8	8	100.0	0	96.3

Conservation Goals
The preserve shall be managed to conserve the required habitat of South Coast Saltscale.

Conservation Strategy
Conserve and manage along with an amount and configuration of suitable habitat to contribute to species recovery (including unoccupied habitat that may support a persistent seed bank). Implement species-specific management actions as necessary to enhance or protect habitat quality and increase population size. These may include prohibiting adverse activities within preserve areas, enhancing declining populations and restoring damaged habitat, and establishing a seed bank for this species.

Coverage Determination and Permit Conditions

Coverage Determination: **Covered** 100% Conservation of known locations

Rationale. Levels of conservation expected under the Subarea plans meets the conservation goals for this species. Atriplex is currently known from Portuguese Point and from Halfway Point to Shoreline Park in the study area. Although the amount of potentially suitable habitat that will be conserved for this species in the Subarea Plan is adequate (100%), the populations occur in small, disjunct stands along the coast where it will likely be subject to edge effects. The habitat within the Reserve will be actively managed to minimize edge effects and the long-term habitat restoration program provides the opportunity to expand the population size and distribution of this species to increase the local population viability.

Conditions. Not applicable

Background

Distribution, Abundance, and Trends. South Coast saltscale occurs in coastal bluff scrub, coastal sage scrub, and alkali playas (CNPS 2001). This small, wiry, prostrate annual herb grows in openings between shrubs in xeric often mildly disturbed locales. This species occurs from Ventura County to Sonora and Baja California, Mexico and on San Clemente, Anacapa, Santa Catalina, Santa Cruz, San Nicholas, and Santa Rosa islands (Reiser 1994). South Coast saltscale is severely declining throughout

its coastal range on the mainland (Reiser 1994). In Rancho Palos Verdes, this species has been detected on Portuguese Point and along the coast between Halfway Point and Shoreline Park.

Extant populations of South Coast saltscale occur primarily on bluffs where they may be subjected to limited trampling but are otherwise relatively protected from impacts associated with development. It is not known whether population numbers documented to date for these species reflect inherently small population sizes, population fluctuations due to climatic variability, or declining populations due to direct or indirect human-induced impacts. If monitoring indicates continued declines in population size that cannot be correlated with climatic variability and that do not respond positively to protective measures recommended elsewhere in this plan, then reintroduction may be appropriate for these species.

Threats and Limiting Factors. Threats to this species include urbanization, recreational development, and foot traffic (Skinner and Pavlik 1994).

Special Considerations. Aphanisma is an annual plant that may experience yearly fluctuations in population size. This species is presumably wind-pollinated? (McArthur and Sanderson 1984) and seeds are presumably self-dispersed. The level of survey effort for this species in the study area is unknown.

Conservation Analysis

Conservation and Take Levels. 100% Conserved

Preserve Configuration Issues. Within the Subarea Plan most of this acreage occurs as relatively small stands of habitat that may not allow for population fluctuations and would likely be subject to edge effects.

Effects on Population Viability and Species Recovery. It is not certain if protection and conservation through implementation of the Subarea Plan would necessarily enhance population viability or further species recovery. Preserved habitat may not be sufficiently large to support viable populations of this species or to buffer populations from adverse edge effects. However, habitat within the Reserve will be actively managed to minimize edge effects and the long-term habitat restoration program provides the opportunity to expand the population size and distribution of this species to increase the local population viability.

Peirson's Morning-glory
Calystegia peirsonii

USFWS: None
CDFG: None
CNPS: List 4, 1-2-3

Covered Species	Existing Point Locations	Point Locations Conserved	Percent Point Locations Conserved	Expected Take	Percent Conserved Potential Habitat
Calystegia peirsonii	0	0	0	0	96.3

Conservation Goals
The preserve shall be managed to ensure species survival by conserving major populations and the required habitat of Peirson's Morning-glory.

Conservation Strategy
Conserve and manage along with the amount and configuration of suitable habitat to contribute to species recovery (including occupied habitat and unoccupied habitat that may support a persistent seed bank). Implement species-specific management actions as necessary to enhance or protect habitat quality and increase population size. These may include prohibiting adverse activities within preserve areas, enhancing declining populations and restoring damaged habitat, and establishing a seed bank for this species.

Coverage Determination and Permit Conditions

Coverage Determination: **Covered** 96.3% of Potential Habitat

Rationale. No populations of Peirson's Morning-glory are known to occur within the Subarea Planning Area, but 96.3 percent of potentially suitable habitat will be conserved. The long-term habitat restoration program provides the opportunity to expand the distribution of this species to increase the regional population viability.

Conditions. Not applicable

Background

Peirson's morning-glory is found in chaparral, coastal sage scrub, chenopod scrub, and woodlands (CNPS 2001). It is a perennial herb from a rhizome, and blooms from May to June. The elevation range of this species is 30-1,500 m (100-5,000 ft; CNPS 2001). Peirson's morning-glory was previously known only from Antelope Valley in the San Gabriel Mountains of Los Angeles County (Hickman 1993); however, recent studies indicate that this species frequently intergrades with other *Calystegia* species (CNPS 2001). This species has not been observed within the Rancho Palos Verdes City limits.

Threats and Limiting Factors. Threats to this species include urbanization, recreational development, and foot traffic (CNPS 2001).

Special Considerations. Peirson's morning-glory is an annual plant that may experience yearly fluctuations in population size. This species is presumably wind-pollinated (McArthur and Sanderson 1984) and seeds are presumably self-dispersed. The level of survey effort for this species in the study area is unknown.

Conservation Analysis

Conservation and Take Levels: 96.3% Conservation of suitable habitat.

Preserve Configuration Issues. Within the Subarea Plan most of this acreage occurs as relatively small stands of habitat that may not allow for population fluctuations and would likely be subject to edge effects.

Effects on Population Viability and Species Recovery. It is not certain if protection and conservation through implementation of the Subarea Plan would necessarily enhance population viability or further species recovery. Preserved habitat may not be sufficiently large to support viable populations of this species or to buffer populations from adverse edge effects. The long-term habitat restoration program provides the opportunity to expand the distribution of this species to increase the regional population viability.

Catalina Crossosoma

Crossosoma californicum
USFWS: No status
CDFG: No status
CNPS: List 1B: R-E-D Code 1-2-2

Covered Species	Existing	Conserved	Percent Conserved	Expected Take	Percent Conserved Potential Habitat
Crossosoma californicum	3	3	100	0	96.3

Conservation Goals
The preserve shall be managed to ensure species survival by conserving major populations and the required habitat of Crossosoma. Note: The species is recovering well on San Clemente Island.

Conservation Strategy
Conserve and manage along with the amount and configuration of suitable habitat to contribute to species recovery (including occupied habitat and unoccupied habitat that may support a persistent seed bank). Implement species-specific management actions as necessary to enhance or protect habitat quality and increase population size. These may include prohibiting adverse activities within preserve areas, enhancing declining populations and restoring damaged habitat, and establishing a seed bank for this species.

Coverage Determination and Permit Conditions

Coverage Determination: **Covered** 100% Conservation of known locations, 96.3% of suitable habitat.

Rationale. Levels of conservation expected under the Subarea plans meet the conservation goals for this species. Although the amount of potentially suitable habitat that will be conserved for this species in the preserve is adequate (100%), habitat in the study area will likely be subject to edge effects that would be minimized through active habitat management and restoration program.

Conditions. Not applicable

Background

Distribution, Abundance, and Trends.
Catalina crossosoma is a deciduous shrub that can reach 5 m (16 ft) in height. This shrub is usually found on dry, rocky slopes and canyons in coastal sage scrub below 500 m (1600 ft) elevation (Skinner and Pavlik 1994; Hickman 1993). It is known from Palos Verdes Peninsula, San Clemente Island, Santa Catalina Island and Guadelupe Island, Mexico (Hickman 1993). Catalina crossosoma was detected in three locations in the RPV city limits: north of Pirate Drive, and on the ridgeline and in the canyon west of Gando Drive, south of Crest Road. Less than 1000 individuals have been detected in the planning area.

Threats and Limiting Factors. Threats to this species include urbanization, recreational development, and foot traffic (CNPS 2001)

Special Considerations. Preserved habitat may not be sufficiently large to support viable populations of this species or to buffer populations from adverse edge effects. Active management to increase the population size through seed collection and cuttings will be necessary to improve the local viability of this species. Steep slopes of adjacent private lands may support individuals of this species.

Conservation Analysis

Conservation and Take Levels: 100% Conservation.

Preserve Configuration Issues. Within the Subarea Plan most of this acreage occurs as relatively small stands of habitat that may not allow for population fluctuations and would likely be subject to edge effects. The largest patches of potential habitat are being conserved and the restoration program will increase the amount of potential habitat for this species to be introduced into.

Effects on Population Viability and Species Recovery. It is not certain if protection and conservation through implementation of the Subarea Plan would necessarily enhance population viability or further species recovery. Preserved habitat may not be sufficiently large to support viable populations of this species or to buffer populations from adverse edge effects. Active management to increase the population size through seed collection and cuttings will be necessary to improve the local viability of this species. The long-term habitat restoration program provides the opportunity to expand the distribution of this species to increase the regional population viability.

Bright Green Dudleya
Dudleya virens

Covered Species	Existing Point Locations	Point Locations Conserved	Percent Point Locations Conserved	Expected Take	Percent Conserved Potential Habitat
Dudleya virens	35	35	100	0	96.3

USFWS: No status
CDFG: No status
CNPS: List 1B, 2-2-2

Conservation Goals
Maintain the potential for Bright Green Dudleya to occur in the plan area by conserving suitable habitat to allow for population expansion or natural recolonization.

Conservation Strategy
Conserve and manage all major populations and locations along with an amount and configuration of suitable habitat to contribute to species recovery (including occupied habitat and adjacent habitat that supports pollinators). Implement species-specific management actions as necessary to enhance or protect habitat quality. These may include prohibiting adverse activities within preserve areas and enhancing declining populations (if present) and restoring damaged habitat.

Coverage Determination and Permit Conditions

Coverage Determination. **Covered** 100% of known locations conserved

Rationale. Current levels of conservation expected under the Subarea Plan meet the conservation goals for this species. 100% of the population will be conserved. Within Rancho Palos Verdes, bright green dudleya occurs along the coastal bluffs from Point Vicente east to the Rancho Palos Verdes/San Pedro City limit. The habitat within the Reserve will be actively managed to minimize edge effects and the long-term habitat restoration program provides the opportunity to expand the population size and distribution of this species to increase the local population viability.

Special Conditions. Not applicable.

Background

Distribution, Abundance, and Trends. Bright green dudleya is a succulent perennial with a basal rosette of leaves from a caudex (i.e., a short woody stem at or below the ground; Hickman 1993). This species occurs on steep slopes in chaparral, coastal bluff scrub, and coastal sage scrub habitats below 400 m (1300 ft) (CNPS 2001; Hickman 1993). It is known from Los Angeles County, San Clemente, San Nicholas, and Santa Catalina islands, and Guadelupe Island, Mexico (Hickman 1993). Within Rancho Palos Verdes, bright green dudleya occurs along the coastal bluffs from Point Vicente east to the Rancho Palos Verdes/San Pedro City limit.

Threats and Limiting Factors. Threats to this species include development and past livestock grazing.

Special Considerations. Bright green dudleya is an herbaceous perennial plant. It is insect-pollinated (e.g., bees, bee flies, Wyatt 1983) and seeds are presumably self-dispersed.

Conservation Analysis

Conservation and Take Levels. 100% of the known population will be conserved in the Subarea Plan.

Preserve Configuration Issues. The proposed preserve design will conserve an estimated 100% of known locations and 96.3% of suitable habitat for this species inside the Subarea. Most of this occupied occurs as narrow strands of habitat the study area.

Effects on Population Viability and Species Recovery. Implementation of the Subarea Plan would protect populations of this species, if present in the study area. It is not certain, however, if protection and conservation alone would necessarily enhance population viability. The Subarea Plan preserve design conserves about 96.3% of potentially suitable habitat, which is scattered throughout the study area. Preserved populations would be subject to edge effects and, possibly, inbreeding depression. In addition, preserved habitat may or may not be sufficiently large to support appropriate pollinators. The habitat within the Reserve will be actively managed to minimize edge effects and the long-term habitat restoration program provides the opportunity to expand the population size and distribution of this species to increase the local population viability.

Special Considerations. Bright green dudleya apparently requires insects for pollination. In addition, it may be susceptible to surface disturbances (e.g., vehicular traffic, trampling by hikers and horses).

Adaptive Management Program

Not applicable.

Woolly Seablite
Suaeda taxifolia

Covered Species	Existing Point Locations	Point Locations Conserved	Percent Point Locations Conserved	Expected Take	Percent Conserved Potential Habitat
Suaeda taxifolia	N/A	N/A	N/A	N/A	99.3

USFWS: No status
CDFG: No status
CNPS: List 4, 1-2-1

Conservation Goals
Maintain the potential for woolly seablite to occur in the plan area by conserving suitable habitat to allow for population expansion or natural recolonization.

Conservation Strategy
Conserve and manage all major populations and locations along with an amount and configuration of suitable habitat to contribute to species recovery (including occupied habitat and adjacent habitat that supports pollinators). Implement species-specific management actions as necessary to enhance or protect habitat quality. These may include prohibiting adverse activities within preserve areas and enhancing declining populations (if present) and restoring damaged habitat.

Coverage Determination and Permit Conditions

Coverage Determination. **Covered** 99.3% of suitable and occupied habitat conserved.

Rationale. Current levels of conservation expected under the Subarea Plan meet the conservation goals for this species. Nearly the entire population within the plan area will be conserved. Within Rancho Palos Verdes, woolly seablite occurs along the coastal bluffs throughout the plan area. The habitat within the Reserve will be actively managed to minimize edge effects and the long-term habitat restoration program provides the opportunity to expand the population size and distribution of this species to increase the local population viability.

Special Conditions. Not applicable.

Background

Distribution, Abundance, and Trends. Woolly seablite is a herbaceous perennial usually restricted to coastal salt marsh; it rarely grows in peripheral scrublands adjacent to salt marshes or as isolated plants along beaches (Reiser 1994). This species occurs along the coast from Santa Barbara County to Baja California, Mexico and on Santa Barbara, San Clemente, Santa Cruz, Santa Catalina, San Nicholas, and Santa Rosa Islands and on Guadalupe Island, Mexico (CNPS 2001). In Rancho Palos Verdes, woolly seablite occurs as isolated plants along the peninsula shoreline from Torrance Beach to San Pedro.

Threats and Limiting Factors. Threats to this species include development and landslides along coastal bluffs.

Special Considerations. Not applicable.

Conservation Analysis

Conservation and Take Levels. 99.3% of the suitable habitat will be conserved in the Subarea Plan. Potential take possible during landside abatement activities.

Preserve Configuration Issues. The proposed preserve design will conserve 99.3% of suitable habitat for this species inside the Subarea. Most of this occupied areas occurs as narrow strands of habitat the study area.

Effects on Population Viability and Species Recovery. Implementation of the Subarea Plan would protect populations of this species, if present in the study area. It is not certain, however, if protection and conservation alone would necessarily enhance population viability. The Subarea Plan preserve design conserves about 99.3% of potentially suitable habitat, which is scattered along the study area's shoreline. Preserved populations would be subject to edge effects. The habitat within the Reserve will be actively managed to minimize edge effects and the long-term habitat restoration program provides the opportunity to expand the population size and distribution of this species to increase the local population viability.

Special Considerations. Not applicable.

Adaptive Management Program

Not applicable.

Santa Catalina Island Desert-thorn

Lycium brevipes var. hassei
USFWS: No status
CDFG: No status
CNPS: List 1B, 3-3-3

Covered Species	Existing Point Locations	Point Locations Conserved	Percent Point Locations Conserved	Expected Take	Percent Conserved Potential Habitat
Lycium brevipes var. hassei	3	3	100.0	0	99.3%

Conservation Goals
Maintain the potential for Santa Catalina Island Desert-thorn to occur in the plan area by conserving suitable habitat to allow for population expansion or natural recolonization.

Conservation Strategy
Conserve and manage all major populations and locations along with an amount and configuration of suitable habitat to contribute to species recovery (including occupied habitat and adjacent habitat that supports pollinators). Implement species-specific management actions as necessary to enhance or protect habitat quality. These may include prohibiting adverse activities within preserve areas and enhancing declining populations (if present) and restoring damaged habitat.

Coverage Determination and Permit Conditions
Coverage Determination. **Covered:** 100% of known locations conserved

Rationale. Current levels of conservation expected under the Subarea Plan meet the conservation goals for this species. 100% of the population will be conserved. Within Rancho Palos Verdes it is found on coastal bluff slopes in coastal bluff scrub and coastal sage scrub habitats at elevations below 300 m (1,000 ft); CNPS 2001; Hickman 1993). The habitat within the Reserve will be actively managed to minimize edge effects and the long-term habitat restoration program provides the opportunity to expand the population size and distribution of this species to increase the local population viability.

Conditions. Not applicable.

Background

Distribution, Abundance, and Trends. Santa Catalina Island desert-thorn is a deciduous shrub that can reach 4 m (13 ft) in height (Hickman 1993). It is found on coastal bluff slopes in coastal bluff scrub and coastal sage scrub habitats at elevations below 300 m (1,000 ft; CNPS 2001; Hickman 1993). This species was rediscovered on the Palos Verdes Peninsula in 1976. Historical localities include San Clemente and Santa Catalina islands. Within Rancho Palos Verdes, Santa Catalina Island desert-thorn occurs on Portuguese Point

Threats and Limiting Factors. Threats to this species include development and recreational foot traffic.

Special Considerations. Santa Catalina Island desert-thorn is a deciduous shrub. It is insect-pollinated (e.g., bees, bee flies, Wyatt 1983) and seeds are presumably self-dispersed.

Conservation Analysis

Conservation and Take Levels. 100% of the known population will be conserved in the Subarea Plan.

Preserve Configuration Issues. The proposed preserve design will conserve an estimated 100% of potentially suitable habitat for this species inside the Subarea Plan. Most of this acreage occurs on coastal bluff slopes in coastal bluff scrub and coastal sage scrub habitats at elevations below 300 m.

Effects on Population Viability and Species Recovery. Implementation of the Subarea Plan would protect populations of this species. It is not certain, however, if protection and conservation alone would necessarily enhance population viability. The Subarea Plan preserve design conserves 100% habitat. Preserved populations would be subject to edge effects and, possibly, inbreeding depression. In addition, preserved habitat may or may not be sufficiently large to support appropriate pollinators. The habitat within the Reserve will be actively managed to minimize edge effects and the long-term habitat restoration program provides the opportunity to expand the population size and distribution of this species to increase the local population viability.

Special Considerations. Santa Catalina Island Desert-thorn apparently requires insects for pollination. In addition, it may be susceptible to surface disturbances (e.g., trampling). Therefore, effective conservation of Santa Catalina Island desert-thorn must include protection from trampling or other soil surface disturbance.

Adaptive Management Program

Not applicable.

Pentachaeta lyonii

Lyon's Pentachaeta
USFWS: Endangered
CDFG: Endangered
CNPS: List 1B: Rare, Threatened, or endangered in California.
R-E-D Code 3-3-3

Covered Species	Existing	Conserved	Percent Conserved	Expected Take	Percent Conserved Potential Habitat
Lyon's Pentachaeta	0	0	0	0	96.3

Conservation Goals
Though this species does not occur in RPV, the preserve shall be managed to ensure habitat suitability for this species is maintained and enhanced by conserving and restoring the required habitat of Lyon's Pentachaeta.

Conservation Strategy
Conserve and manage the amount and configuration of suitable habitat required to contribute to species recovery.

Coverage Determination and Permit Conditions

Coverage Determination: **Covered** 96.3% Conservation of suitable habitat

Rationale. Levels of conservation expected under the Subarea plans meet the conservation goals for this species. Although the amount of potentially suitable habitat that will be conserved for this species in the preserve is adequate (96.3%), habitat in the study area will likely be subject to edge effects that would be minimized through active habitat management and restoration program. If deemed appropriate, active management to establish a local population through seed collection and cuttings will be necessary.

Conditions. Not applicable

Background

Distribution, Abundance, and Trends.
Lyon's pentachaeta is an annual herb that blooms from March to August (Skinner and Pavlik 1994). It occurs in openings in chaparral and valley and foothill grasslands near the coast at elevations below 150 m (500 ft) (Skinner and Pavlik 1994; Hickman 1993). This species is known from Los Angeles and Ventura counties and Santa Catalina Island. Currently, less than 20 populations are known to occur (Skinner and Pavlik 1994). Lyon's pentachaeta has not been reported within the RPV city limits.

Threats and Limiting Factors. Threatened by development, fire regimes, and recreational activities. (CNPS 2001)

Special Considerations. Preserved habitat may not be sufficiently large to support viable populations of this species or to buffer populations from adverse edge effects. The largest patches of potential habitat are being conserved and the restoration program will increase the amount of potential habitat for this species to be introduced into.

Conservation Analysis

Conservation and Take Levels: 96.3 % Conservation of suitable habitat.

Preserve Configuration Issues. Within the Subarea Plan most of the suitable acreage occurs as relatively small stands of habitat that may not allow for population fluctuations and would likely be subject to edge effects.

Effects on Population Viability and Species Recovery. It is not certain if protection and conservation through implementation of the Subarea Plan would necessarily enhance population viability or further species recovery. Preserved habitat may not be sufficiently large to support viable populations of this species or to buffer populations from adverse edge effects.

Palos Verdes Blue Butterfly
Glaucopsyche lygdamus palosverdesensis

Covered Species	Historical Point Locations	Point Locations Conserved	Percent Point Locations Conserved	Expected Take	Percent Conserved Potential Habitat
Glaucopsyche lygdamus palosverdesensis	18	17	94.4	1	96.3

USFWS: Endangered
CDFG: No status

Conservation Goals
Ensure persistence of habitat that would support recolonization of this species in the plan area. Contribute to regional population viability and species recovery. Allow for natural recolonization or reintroduction into unoccupied or restored habitat.

Conservation Strategy
Include within the preserve system large areas of coastal scrub habitat where larval host plants are plentiful. Facilitate coordination of local, state, and federal conservation and management actions for this species.

Coverage Determination and Permit Conditions

Coverage Determination. **Covered:** 94% of historical point locations conserved. No occupied habitat is currently extant in RPV; 94.0% of historical host plant locations are conserved.

Rationale. 96.3% of suitable habitat potentially used by the species (coastal sage scrub) would be conserved. Palos Verdes Blue is restricted to three locations on the PV Peninsula outside of RPV. The long-term habitat restoration program provides the opportunity to expand the population size and distribution of this species to increase the regional population viability.

Conditions. None

Background

Distribution, Abundance, and Trends. The Palos Verdes blue butterfly (PVB) is a rare subspecies of butterfly (Perkins and Emmel 1977; Arnold 1987). The PVB is restricted to open coastal sage scrub habitats that support either ocean milk vetch (*Astragalus trichopodus* var. *lonchus)* or deerweed (*Lotus scoparius*), which are this species' larval food plants (Mattoni 1992). Currently PVB are known to be extant only at the Naval Fuel Depot in San Pedro (between Western Avenue and Gaffey Street, south of Palos Verdes Drive North; Mattoni 1992), Malaga Dunes, and was recently introduce at the Chandler Preserve. Historical occurrences of PVB within RPV include locations near "The Switchback" area of Palos Verdes Drive East, locations within the landslide moratorium area (Edward's Canyon in Area 4, Portuguese Canyon, Forrestal [Klondike] Canyon), Agua Amarga, and the open space area west of Hesse Park (Arnold 1987; Mattoni 1992). Habitat for PVB is typified by open coastal sage scrub and ecotone areas between sage scrub and grasslands. The milk vetch is the primary larval host plant present in RPV. Deerweed does not generally occur within RPV and is mostly restricted to the northeast slope of the

Peninsula. Milk vetch is an early successional or disturbance associated species; thus, this species will decline if there is an extended period of time without disturbance (e.g., mechanical disturbance, fire). Habitat loss and fragmentation associated with agriculture and residential development, fire suppression (e.g., fuel modification activities), severe weather conditions, and over-collecting by butterfly enthusiasts have contributed to the current endangered status of this species (Arnold 1987; Mattoni 1992). Federal Designated Critical Habitat includes "The Switchback" area of Palos Verdes Drive East, Agua Amarga Canyon, and potential habitat adjacent to Hesse Park (USFWS 1980, Federal Register Vol. 45, No. 129, pp. 44942)

Special Considerations. Optimal PV Blue habitat is an early successional stage habitat that must be managed at a three-year interval in order to maintain habitat suitable for continuous butterfly occupation.

Conservation Analysis

Conservation and Take Levels. The level of conservation of the coastal scrub ecological communities may benefit this species. No currently occupied habitat occurs in RPV.

Effects on Population Viability and Species Recovery. The long-term habitat restoration program provides the opportunity to expand the population size and distribution of this species to increase the regional population viability

Special Considerations: Optimal PV Blue habitat is an early successional stage habitat that must be managed at a three-year interval in order to maintain habitat suitable for continuous butterfly occupation.

Adaptive Management Program

Not applicable.

El Segundo Blue Butterfly
Euphilotes battoides allyni

USFWS: Endangered
CDFG: None

Covered Species	Existing Point Locations	Point Locations Conserved	Percent Point Locations Conserved	Expected Take	Percent Conserved Potential Habitat
Euphilotes battoides allyni	1	1	100	0	100

Conservation Goals
Allow for natural recolonization or reintroduction into unoccupied or restored habitat.

Conservation Strategy
Include within the open space preserve system large areas of remnant coastal dune habitats where larval host plant exists. Implement species-specific management actions, as necessary to increase habitat quality and population size. Facilitate coordination of local, state, and federal conservation and management actions for this species.

Coverage Determination and Permit Conditions

Coverage Determination. **Covered**, 100% Conservation of suitable habitat conserved.

Rationale. One population was discovered in 2000 in coastal bluff scrub at the York Long Point site. Occupied area and all potentially suitable habitat is included in the Reserve.

Conditions. The Reserve Manager shall evaluate potential opportunities to expand this species habitat.

Background
Distribution, Abundance, and Trends. The El Segundo Blue (ESB) is a rare subspecies of butterfly (subfamily Polyomattinae) restricted to remnant coastal dune habitats at four locations: Ballona Wetlands south of Marina del Rey, LAX Airport Dunes, Chevron El Segundo Preserve and adjacent habitat in El Segundo, and Torrance Beach/Malaga Cove (Mattoni et al. 1997). The coast buckwheat (*Eriogonum parvifolium*) is the larval food plant of this subspecies. The historical distribution of ESB included dune habitats in Redondo Beach and Manhattan Beach. A recovery plan for ESB has been prepared with the Malaga Cove population as the most southern management unit (Torrance Recovery Unit) of the recovery plan. The Malaga Cove population is small, between 10 and 30 individuals utilizing between 50 and 100 individuals of *E. parvifolium* (R. Arnold, pers. comm.). There is no dune habitat within the jurisdiction of RPV, but coast buckwheat is known to occur within the coastal bluff scrub habitat between Point Vicente and Abalone Cove. Dr. Richard Arnold conducted a butterfly survey in the summer of 1998 with negative results for ESB in this area of RPV. Subsequent biological surveys in 2000 for proposed development of the York Long Point site detected a population of ESB in coastal bluff scrub habitat.

Threats and Limiting Factors. The decline of the butterfly populations is attributed to loss of habitat from urban development and loss of host plants.

Special Considerations. Distribution limited by larval host plant.

Conservation Analysis

Conservation and Take Levels. 100% of the population discovered in 2000 is conserved. No take is anticipated. A recovery plan for ESB has been prepared in neighboring areas that may serve as a model for the RPV population.

Effects on Population Viability and Species Recovery. There is no dune habitat within the jurisdiction of RPV, but coast buckwheat is known to occur within the coastal bluff scrub habitat between Point Vicente and Abalone Cove. A population of ESB occurs in that coastal bluff scrub habitat. The Subarea Plan preserve and policies will maintain consistency with other recovery planning and management goals for species. The Subarea plan will increase regional coordination and funding for monitoring and management, which may improve current management of butterfly habitat and species stability.

Special Considerations. Distribution limited by larval host plant.

Adaptive Management Program
None.

Coastal California Gnatcatcher

Polioptila californica californica

USFWS: Threatened
CDFG: Species of Special Concern

Covered Species	Existing Point Locations	Point Locations Conserved	Percent Point Locations Conserved	Expected Take	Percent Conserved Potential Habitat
Polioptila californica californica	88	88	100.0	0	96.3

Conservation Goals

Ensure species persistence within the plan area and contribute to local metapopulation viability and species recovery by ensuring genetic and demographic connectivity within the plan area.

Conservation Strategy

Conserve and manage sufficient breeding habitat in relatively large, contiguous patches, and sufficient habitat linkages and dispersal stepping stones between breeding areas to ensure species persistence within the plan area and to maintain genetic and demographic connectivity. Restore degraded and disturbed areas to gnatcatcher habitat where necessary to increase size of breeding populations and functionality of linkages.

Coverage Determination and Permit Conditions

Coverage Determination. **Covered:** 100% of point locations conserved; 96.3% of CSS habitats conserved.

Rationale. The Subarea Plan will adequately conserve this species through conservation of occupied habitat and restoration of disturbed habitats that will increase the regional habitat carrying capacity and population viability. Potential cowbird nest parasitism will be managed.

Background

Distribution, Abundance, and Trends. The coastal California gnatcatcher is restricted to the coastal slopes of southern California, from Los Angeles County south to El Rosario, Baja California, Mexico. It is closely associated with coastal sage scrub vegetation, particularly Diegan coastal sage scrub occurring on gentle slopes within the maritime and coastal climate zones.

The California gnatcatcher population in the U.S. is estimated to exceed 3,400 pairs in the United States (USFWS 1996). The Palos Verdes Peninsula supports a remnant population of 26 to 56 pairs that is considered isolated from the remainder of the U.S. population (Atwood et al. 1998). The center point locations of gnatcatcher territories within the GIS database include cumulative data gathered during the Manomet Center 5-year study. The primary cause of this species' decline is the cumulative loss of coastal sage scrub vegetation to urban and agricultural development (Atwood 1993). This species' habitat is being formally protected and managed through the NCCP program, ESA Section 10 HCP processes and ESA Section 7 agency consultations on federal lands. Federal Designated Critical

Habitat for the gnatcatcher includes suitable habitats throughout the Palos Verdes Peninsula. This species is probably extirpated from much of Ventura and San Bernardino counties and is declining proportionately with the continued loss of coastal sage scrub habitat in the four remaining southern California counties located within the coastal plain. The territory size requirements of the gnatcatcher vary with habitat quality and distance from the coast. Documented home ranges have varied from 1 to 7 acres on the Peninsula (Impact Sciences 1990, Atwood et al. 1995). Over a 5-year period, gnatcatcher productivity and survival have varied on the Peninsula. Annual reproduction has varied from 2.3 to 3.9 fledglings per pair. Annual adult survival has varied from 23 to 70 percent; juvenile over-winter survival varied from 20 to 43 percent. Studies of the species' habitat preferences on the Peninsula and elsewhere indicate that California sagebrush (*Artemisia californica*) and flat-topped buckwheat (*Eriogonum fasciculatum*) are the primary plants used by gnatcatchers when foraging for insects (Atwood et al. 1995, Impact Sciences 1990, RECON 1987, ERCE 1990, Ogden 1992a). Breeding gnatcatchers on the Peninsula are noticeably absent from most sage scrub dominated by lemonade berry (*Rhus integrifolia*).

Regional Population Estimates and Trends. Atwood (1990, 1992b) estimated that approximately 1,811 to 2,291 pairs of coastal California gnatcatchers remained in southern California. Based on later information, the USFWS (1993) estimated that about 2,562 pairs of coastal California gnatcatchers remained in the United States. Approximately 2,800 pairs of *P. c. californica* are estimated to occur in the Mexican portion of the subspecies' range (J. Newman personal communication 1992). U.S. population is likely to exceed 5,000 pairs during years with favorable weather conditions.

Subarea Plan Population Estimate. The gnatcatcher population within the Subarea Plan study area is estimated at 26 to 56 pairs. The Subarea Plan database (1995) currently includes 88 point locality records detected over 5 years. The current Subarea Plan database represents a reasonably complete and unbiased overview of species distribution in the study area.

Threats and Limiting Factors. The decline of the California gnatcatcher populations is attributed to loss of habitat from urban and agricultural development. Susceptible to cowbird nest parasitism.

Special Considerations: Breeding sites limited by slope gradient (prefer <40% slopes for nest sites) and CSS species composition (avoids Rhus-dominated CSS).

Conservation Analysis

Conservation and Take Levels. 100% of point locations conserved; 95.5% of CSS habitats conserved. Long-term habitat restoration program will increase local habitat carrying capacity. All habitat linkages between larger patches of conserved habitat are included in the Reserve. Monitoring and management of cowbird parasitism will occur.

Effects on Population Viability and Species Recovery: Long-term habitat restoration program will increase local habitat carrying capacity. Monitoring and management of cowbird parasitism will occur. Local population size will increase proportional to amount of suitable habitat is restored during the permit period.

Special Considerations. Breeding sites limited by slope gradient (prefer <40% slopes for nest sites) and CSS species composition (avoids *Rhus*-dominated CSS).

Adaptive Management Program

In addition to conserving habitat, the Subarea Plan will manage and monitor conserved areas to help refine the management program so that management activities can be adjusted to maximize species viability in the study area and contribute to species recovery. Initiate cowbird trapping program if the nest parasitism rate exceeds 5%.

Coastal Cactus Wren

Campylorhynchus brunneicapillus

USFWS: Federal Species of Special Concern (former Category 2 Candidate)
CDFG: Species of Special Concern, NCCP Focal Species

Covered Species	Existing Point Locations	Point Locations Conserved	Percent Point Locations Conserved	Expected Take	Percent Conserved Potential Habitat
Campylorhynchus brunneicapillus	99	95	96.0	4	98.9

Conservation Goals

Ensure species persistence within the plan area. Maintain connectivity for dispersal between Subarea Plan populations.

Conservation Strategy

Conserve existing major populations and critical locations of coastal cactus wren and all coastal sage scrub habitat with patches of tall cactus. Create or enhance additional habitat to increase population size and extent. Facilitate coordination of local, state, and federal conservation and management actions for this species.

Coverage Determination and Permit Conditions

Coverage Determination. **Covered**: 96% of point locations conserved; 98.9% of suitable habitat conserved. All important habitat linkages conserved.

Rationale. The Subarea Plan is expected to adequately conserve this species by conserving at least 96% of current carrying capacity for cactus wren and by managing preserve areas consistent with species' needs. Long-term habitat restoration will increase habitat carrying capacity for this species.

Background

Distribution, Abundance, and Trends.

The coastal cactus wren occurs in the coastal plain counties of southern California, with the largest remaining contiguous populations in southern Orange County (Mock 1993). Coastal southern California populations of cactus wren are seriously endangered throughout the coastal plain from Ventura to the Mexican border (Rea and Weaver 1990). This species is common throughout the deserts of the Southwest.

Coastal populations breed in coastal sage scrub dominated by extensive stands of tall prickly pear or cholla cacti. Once widespread in coastal southern California, by 1990 cactus wrens had been reduced to fewer than 3,000 pairs scattered into colonies of widely varying size; many colonies are isolated by distance from other colonies (Mock 1993). The Palos Verdes Peninsula cactus wren population has been relatively stable at about 58 ± 5 pairs during the mid-1990s (Atwood et al. 1998). Reproduction averages above 3 fledglings per pair, and adult survivorship varies from 57 to 73 percent; juvenile over-winter survivorship varies from 9 to 36 percent. Home range size for Peninsula cactus wrens varies from 1 to 3 acres.

Threats and Limiting Factors. The coastal cactus wren is declining due to loss, degradation, and fragmentation of coastal sage scrub habitat containing cactus (Rea and Weaver 1990; Mock 1993). Unnaturally frequent fires eliminate cactus and have greatly reduced cactus wren populations. (Rea and Weaver 1990, Harper and Salata 1991, Bontrager et al. 1995).

Special Considerations. This species nests only in tall (≥3 feet) cactus patches. Unoccupied suitable habitat may be recolonized in future years; therefore, 98.9% of the suitable habitat within the Subarea Plan will be conserved. Frequent wildfires kill the cactus that this species depend upon, and it may take many decades for suitable habitat to recover naturally.

Conservation Analysis

Conservation and Take Levels. 96% of point locations conserved; 98.9% of suitable habitat conserved. All important habitat linkages conserved.

Effects on Population Viability and Species Recovery. Implementation of the Subarea Plan is expected to maintain and likely enhance population viability of the coastal cactus wren and therefore contribute to species recovery due to 96% conservation and long-term habitat restoration efforts.

Special Considerations. Active adaptive management and close monitoring is required to identify and respond to these potential impacts as quickly as possible. Their dispersal abilities should allow cactus wrens to colonize created habitat areas. It takes many decades for cactus to achieve the size and density required for optimal habitat condition, so wildfire that kills mature cactus can have long-term detrimental effects on local populations.

Adaptive Management Program

Monitoring results will help refine the management program so that management activities can be adjusted to maximize species viability in the study area and contribute to species recovery.

City of Rancho Palos Verdes
Finance Advisory Committee Agenda & Staff Reports

AGENDA

CITY OF RANCHO PALOS VERDES

REGULAR MEETING OF THE FINANCE ADVISORY COMMITTEE

June 22, 2004

CITY HALL

COMMUNITY ROOM

7:00 P.M. Call To Order

1. Roll Call.
2. Approval of Agenda.
3. Approval of Draft Minutes for the meeting conducted May 26, 2004. (McLean)
4. Proposed Natural Communities Conservation Plan (NCCP) And Proposed Purchase Of Approximately 700 Acres Of Open Space. (McLean)
5. Update – Infrastructure Renewal and Maintenance project - Update. (McLean)
6. Liaison reports. (Clark)
7. State Budget Update. (Gyves)
8. Public Comments.
9. Adjournment.

Charts for Staff Report A
Charts for Staff Report B
NCCP presentation prepared by Barbara Dye, Executive Director, Palos Verdes Peninsula Land Conservancy

TO: HONORABLE CHAIR AND MEMBERS OF THE FINANCE ADVISORY COMMITTEE

FROM: DENNIS McLEAN, DIRECTOR OF FINANCE AND INFORMATION TECHNOLOGY

DATE: JUNE 22, 2004

SUBJECT: PROPOSED NATURAL COMMUNITIES CONSERVATION PLAN AND PROPOSED PURCHASE OF APPROXIMATELY 700 ACRES OF OPEN SPACE

Staff Coordinator: Kathryn Downs, Accounting Manager

THE FOLLOWING IS A DRAFT OF THE PROPOSED REPORT TO THE CITY COUNCIL:

RECOMMENDATION BY THE FINANCE ADVISORY COMMITTEE

Pursuant to direction from the Open Space Acquisition Ad-Hoc Committee of the City Council, we have reviewed the financial information provided to us regarding the proposed NCCP, open space purchase and the establishment of a habitat preserve and have not noted anything problematic. Based on that review, we believe there may be savings to the City resulting from implementation of the NCCP that would mitigate additional costs. We recommend that the City Council move forward expeditiously with the completion of the NCCP and the related land acquisition.

BACKGROUND AND DISCUSSION

Direction From Open Space Acquisition Ad-Hoc Committee of the City Council

During its conference call on March 27, 2004, the Open Space Acquisition Ad-Hoc Committee of the City Council (Mayor Pro Tem Clark and Councilman Stern) agreed that it would be a good idea for Staff and the Executive Director of the Palos Verdes Peninsula Land Conservancy ("PVPLC") to brief the Finance Advisory Committee ("FAC") about the proposed purchase of approximately 700 acres of open space (see the areas shaded in red and brown on the map on Page 1) and the City's Natural Communities Conservation Plan ("NCCP"). In the event the purchase is completed, the open space land would be transferred to a habitat preserve ("Preserve") established by the NCCP Subarea Plan. The City would own the land and the PVPLC would hold the conservation easements and have the responsibility for managing the Preserve.

Presentation to Finance Advisory Committee, April 28, 2004

At the meeting of the FAC on April 28, 2004, Barbara Dye, Executive Director of the PVPLC, presented an overview about the NCCP, the proposed purchase of approximately 700 acres of open space and the establishment of a Preserve.

Subsequent to Ms. Dye's presentation, the Director of Finance & IT presented a verbal overview of the staff report describing what the City has paid to date, as well as expected future costs, for the development of the NCCP and the estimated cost and funding sources for the proposed open space purchase.

The Director stated that he and the Director of Planning, Building & Code Enforcement expected to present estimated operating and maintenance cost information about the Preserve at the next meeting of the FAC. After the Director's presentation, it was the consensus of the FAC members to defer questions until the next meeting of the FAC.

Presentation to Finance Advisory Committee, May 26, 2004

At the meeting of the FAC on May 26, 2004, The Director of Finance & Information Technology and the Director of Planning, Building and Code Enforcement presented a staff report that provided details of the following topics:

- The process necessary to complete the NCCP, open space purchase and establishment of the Preserve;
- Estimates regarding on-going operating and maintenance costs, including the City's share, in the event of the implementation of the NCCP, purchase of the proposed open space and establishment of the Preserve; and
- Estimates of additional costs and benefits to the City in the event of the implementation of the NCCP, purchase of the proposed open space and establishment of the Preserve.

Barbara Dye, Executive Director of the PVPLC, attended the meeting and answered questions asked by the FAC.

Costs Expended To Date, As Well As The Future Costs Expected Leading to the Proposed Purchase and NCCP

The City paid its open space lobbyist $15,000 during FY02-03 and expects to pay an additional $60,000 during FY03-04 for lobbyist services associated with securing state Proposition 50 grant funds (described later in this report). The FY04-05 budget includes $30,000 for additional lobbyist services. Additionally, a necessary second appraisal of the open space was recently performed at a cost of about $17,000.

The City received a federal NCCP grant of $275,000 during FY97-98 and FY99-00 to match ($1 for $1) the City's cost for developing the NCCP. The Director of Planning, Building & Safety and Code Enforcement expects that the balance of the grant funds will be completely expended during FY04-05, including about $25,000 of interest earned on the $275,000 grant. Most all of the monies have been paid to or appropriated for consultants who have assisted staff with the development of the NCCP Subarea Plan and the draft environmental impact report ("DEIR") documents. The grant monies were also expended for the development of aerial photographs of the proposed open space. All of the City's costs associated with the development of the NCCP and proposed purchase of open space (described herein) have been budgeted and paid for within the General fund. A summary titled "Costs Expended To Date, As Well As The Future Costs Expected Leading to the Proposed Purchase and NCCP" (Table 1) follows:

Table 1

Summary of Costs Expended To Date, As Well As The Future Costs Expected Leading to

the Proposed Purchase and NCCP	
	Amount Paid &/or Budgeted
Lobbyist services through FY03-04	$75,000
Lobbyist services budgeted for FY04-05	$30,000
Second appraisal	$17,000
City's share of expenditures for NCCP, including consulting services and aerial photographs, matched by $275,000 federal grant plus about $25,000 of interest	$300,000
Total Estimated Costs Expended To Date, As Well As The Future Costs Expected Leading to the Proposed Purchase and NCCP	**$422,000**

Note: All of the City's costs associated with the development of the NCCP and proposed purchase of open space (described herein) have been budgeted and paid for within the General fund

Proposed Purchase of Approximately 700 Acres of Open Space

The City, the PVPLC, Los Angeles County, and the Wildlife Agencies (the "Resource Agencies") have been collaborating towards the proposed purchase of 684.5 acres of privately owned lands considered regionally important for habitat preservation. In the event the purchase is completed, the open space land would be transferred to the Preserve established by the NCCP Subarea Plan. The City would own the land and the PVPLC would hold the conservation easements and have the responsibility for managing the Preserve.

Purchase agreements between the City and the two private landowners expired several years ago, but new agreements are close to being finalized and the property owners continue to express a willingness to sell their land. The City and the PVPLC continue to pursue the financing necessary to complete the purchase of the open space by the City. A schedule titled "Proposed Sources For Financing The Proposed Purchase" (Table 2) follows:

Table 2

Sources for Financing Proposed Purchase	**(Millions)**
USFWS "Section 6" funds	$ 2.0
Proposition 50	$ 17.0
Los Angeles County	$ 1.0
City of Rancho Palos Verdes	$ 1.0
Private funding (PVPLC)	$ 6.0
Total Sources for Financing Proposed Purchase	**$ 27.0**

It should be noted that the Resource Agencies have approved the list of funds as shown in Table 2 above, as well as the NCCP Subarea Plan. However, none of the grant sources described above are fully committed by the respective agency at this time, and a material shortfall of the financing sources would require a re-assessment of the proposed purchase by all entities involved.

USFWS Section 6 (Cooperative Endangered Species) funds were appropriated by the federal government to support multi-species regional conservation plans such as the NCCP Subarea Plan. The current administration and Congress have continued to appropriate funds for this purpose because of the bipartisan support for this type of regional planning. Proposition 50 authorized the issuance of $3.44 billion of bonds to be deposited in the Water Security, Clean Drinking Water, Coastal and Beach Protection Fund of 2002 created by the state ballot initiative in 2002. The fund contains approximately

$50 million to be spent for land acquisition in coastal areas of Los Angeles County.

$1 million is budgeted in FY03-04 for the City's participation towards the proposed purchase. Based on a staff report prepared by the Director of Public Works, dated March 4, 2003, the City Council adopted a revised spending plan for the $1 million budgeted, including the appropriation of $538,878, $332,500 and $128,622 from Proposition 12, Proposition 40 and Measure A funds, respectively, for the proposed open space purchase. No General fund monies are budgeted for the proposed land purchase. The 2004 Five Year Financial Model includes the use of these funds for the proposed open space purchase.

Summary Of Estimated Costs, Tax Increment Revenue Reduction And Potential Savings Associated With Implementation Of The Proposed NCCP, Purchase Of The Proposed Open Space And Establishment Of A Habitat Preserve

Estimated Costs – Management of the Preserve

The Draft Subarea Plan for the NCCP outlines the expected economic and operational responsibilities for both the City and the PVPLC. Staff expects that a pending revision of the Draft Subarea Plan will be presented to the City Council on August 17, 2004 concurrently with this report. As outlined in the Draft Subarea Plan, the City's commitment to fund habitat maintenance costs of the proposed Preserve includes an annual cash payment of $100,000 to the PVPLC for management of the Preserve (adjusted annually for inflation), as well as in-kind costs described below.

The Center for Natural Lands Management (CNLM), a non-profit organization engaged in management of numerous habitat and open space preserves in California, developed a procedure to estimate costs of habitat management. This procedure, called a Property Analysis Record (PAR), has been prepared and revised by the City's NCCP consultant, URS Corp. Based upon the PAR estimates (see Attachment A), the City's first year in-kind costs have been estimated to be $90,355. In-kind costs would include brush management, public safety and sanitation control. Staff has identified $58,836 of the in-kind costs already being paid for by the City (e.g. public safety). Therefore, the net incremental increase of first year in-kind costs is estimated to be $31,519 (see Attachment A). The net incremental increase of subsequent years' in-kind costs is estimated to be $32,118 (see Attachment A).

The PAR includes an estimated cost of Public Safety of $51,173 annually for the Preserve, based upon a standard rate of $33.80/per acre. Staff is not aware of any expectation for additional services to be provided by the Los Angeles County Sheriff's Department in the event the open space purchase is consummated. An increase of surveillance and enforcement responsibilities in the open space area of the City occurred when the number of Core Deputies was increased from 2 to 3 during FY99-00. The annual cost of a Core Deputy is approximately $112,000.

Estimated Costs - Assessment District Fees

The property owners in two separate landslide areas of the City formed the Abalone Cove Landslide Assessment District (ACLAD) and the Klondike Canyon Geologic Hazard Abatement District (Klondike AD) to perform landslide abatement projects and maintenance (e.g. installation and subsequent repair of de-watering wells) within the boundaries of their respective districts. Five of the nine open space parcels under consideration for purchase are within the boundaries of the two Districts. The assessments for the five open space parcels total $25,126 for FY04-05. The City would assume responsibility for these assessments in the event the proposed open space purchase is consummated.

Summary of Estimated Additional Annual Costs:

Table 3

Summary Of Estimated Additional Annual Costs	
Cash payment to PVPLC for operation and maintenance of the Preserve	$ 100,000

Additional in-kind costs paid by the City for operation and maintenance of the Preserve	$ 31,519
ACLAD assessment payments assumed	$ 22,789
Klondike AD assessment payments assumed	$ 2,337
Total Estimated Additional Annual Costs	**$ 156,645**

Note: None of the Staff's presentations of estimated costs or potential savings have been adjusted for inflation.

The estimated annual cash payment of $100,000 (plus annual adjustment for inflation) to PVPLC for Preserve operation and maintenance was included in the 2004 Five Year Financial Model submitted to the City Council on May 4, 2004. The other estimated additional annual costs to maintain the Preserve, totaling $56,645, included in the staff report to the FAC on May 26, 2004 (as well as Table 3 above) and subsequent to the preparation of the 2004 Model, were not included in the 2004 Model.

Tax Increment Revenue Reduction

Seven of the nine parcels for the proposed open space purchase exist within the project area boundaries of the City's Redevelopment Agency (RDA). The expected tax increment revenue for the open space parcels is $30,708 during FY03-04. Of this amount, $24,566 will be recorded as revenue within the RDA Debt Service fund and $6,142 will be deposited into the RDA Housing Set-Aside fund. General fund property tax revenue for the remaining two parcels is expected to be $1,227 during FY03-04.

The FY04-05 budgeted for the Debt Service fund includes tax increment revenue of $478,600. In the event the proposed open pace purchase is consummated, tax increment revenue available to pay outstanding debt would decrease by about $25,000 annually. Therefore, in the event the proposed open space is purchased during FY04-05, it appears as though there would still be a sufficient amount of tax increment revenue available in excess of the scheduled bond indebtedness payments to satisfy the scheduled 1997 RDA Bond payments during FY04-05, and all years thereafter. Although the amount of the scheduled bond payment increases during the term of the 1997 RDA bonds, tax increment revenue will still exceed the scheduled bond payments by more than $100,000 annually, even if the open space parcels are purchased.

Table 4

Summary Of Annual Tax Increment Revenue Reduction Based Upon FY03-04	
Reduction of RDA tax increment to Debt Service fund (rounded to $25,000 in report above)	$ 24,566
Reduction of RDA tax increment to RDA Housing Set-Aside fund	$ 6,142
Estimated Annual Tax Increment Revenue Reduction Based Upon FY03-04	**$ 30,708**

Note: None of the Staff's presentations of estimated costs or potential savings have been adjusted for inflation.

On December 2, 2003, Staff presented a staff report to the City Council regarding various matters about the RDA, including its projection of future tax increment revenues. The projection indicated that upon the complete payment and satisfaction of the 1997 RDA Bonds (scheduled in FY27-28), about $7.7 Million of future tax increment revenue would be available to repay loans made by the RDA to the General fund of the City prior to FY34-35, the year the RDA is expected to terminate. In the event the

proposed open space purchase is consummated, about $6.9 Million of future tax increment would be available to repay loans made by the RDA to the General fund of the City prior to FY34-35. The reduction of about $800,000 would be a result of the tax increment reductions from the open space parcels purchased.

Potential Savings of Federal and State Habitat Costs

One of the motivations behind the City's decision to enter into an agreement in 1996 with the resource agencies to prepare an NCCP, was the desire to reduce the cost and time delays experienced by the City in carrying out public infrastructure improvements and landslide abatement activities. Because of the existence of federally protected Coastal Sage Scrub (CSS) habitat in and around the landslide, the coastal bluffs and most canyon areas, Public Works projects in these areas are required to prepare biological studies and assess the biological impacts of the proposed project before the project can proceed. If it is determined that a City project will result in impacts to sensitive habitat (state or federally protected habitat), a state and/or federal permit must be obtained and the project's habitat impacts mitigated by the City.

As a result, the City's NCCP has been written in manner to provide the required mitigation for past City projects that have impacted CSS since1996 and future City projects that are anticipated to impact CSS. The pending revision of the Draft NCCP Subarea Plan identifies 21 such City projects that will be covered by the plan. The 21 City projects identified in the NCCP result in impacts to 33.7 acres of CSS and 94.30 acres of grassland habitat. The mitigation for 33.7 acres of CSS loss is the provision of 95.5 (approximately a 3:1 ratio) acres of habitat and the mitigation for the 94.30 acres of grassland habitat would be the provision of 47.15 acres of habitat (approximately a 0.5:1 ratio). The mitigation for these past and future losses is being provided by the dedication of 298.8 acres of City-owned land into the Reserve and 5.6 acres of re-vegetation (2.1 acres which already has been completed).

Typically, mitigation for the loss of habitat is provided by the re-vegetation of new habitat, which is then actively managed for a 5-year period. According to the City's NCCP consultant, this typically costs $25,000-35,000 per acre over the 5-year period. For comparison purposes, the CSS re-vegetation for the Ocean Trails project is costing approximately $33,000/acre/5-years and the recently completed CSS re-vegetation for the City's San Ramon landslide stabilization project is costing approximately $80,000/acre/5-years. As a result of the mitigation that the NCCP is providing for City projects, the typical re-vegetation that would have been required for these past and future projects is not necessary. This will provide a substantial cost savings to the City. Using the consultant's most conservative estimate of $25,000/acre/5-years, and applying it to the number of acres required for mitigation of CSS and grassland vegetation, not having to perform this re-vegetation equates to a potential savings of $3,566,250 to the City ($25,000 x 142.65 acres (95.50 acres of CSS + 47.15 acres of grassland). A table that shows the breakdown of these savings is provided as Attachment B.

It should also be noted that in addition to the costs of planting new habitat and managing it for 5 years (weeding, etc), there are costs associated with the preparation of a re-vegetation plan and the monitoring of the work by biologist over the 5-year period. These costs vary by project. For example, for a 10-acre re-vegetation project these costs would typically total about $75,000. For the recently completed San Ramon project, which involved 1.5 acres of re-vegetation, the costs are expected to be $100,000. Using an estimate of $75,000 per project, the costs for the 21 City projects would be approximately $1,575,000 (see Attachment B). This represents an additional potential cost savings to the City.

Table 5

Summary Of Potential Savings of Federal and State Habitat Costs	
Habitat mitigation	$ 3,566,250
Habitat monitoring	$ 1,575,000

Total Potential Savings of Federal and State Habitat Costs	$ 5,141,250

Note: None of the Staff's presentations of estimated costs or potential savings have been adjusted for inflation.

Although none of the proposed projects presented in Attachment B (and summarized in Table 5 above) are currently included in the Capital Improvement Plan (CIP) fund budget for FY03-04 or the 2004 Five Year Financial Model, Staff believes that several projects (i.e. storm drain projects), will be completed during the next 2-10 years. Due to the uncertainty of the completion of future CIP projects, as well as their timing, the presentation of the **annual** potential savings to the City has not been prepared.

Additional Observations That The FAC Requested To Be Included In The Report To The City Council

After Staff's oral presentation on May 26, 2004, the FAC discussed the costs and benefits of the proposed NCCP and Preserve. The members of the FAC made the following observations and asked that they be included in a report to the City Council:

- Generally, the City's costs associated with providing services to developed land are greater than costs associated with undeveloped land. Therefore, the amount of additional costs associated with any development of any portion of the open space may be more than the additional incremental costs associated with the Preserve.

- As noted in the April 28, 2004 staff report to the FAC, none of the grant sources are fully committed by the respective agencies at this time, and a material shortfall of financing sources would require a reassessment of the proposed purchase by all entities involved.
- Future grants (e.g. Measure A Park Maintenance monies) might be available to pay a portion of operating and maintenance costs of the Preserve.

END OF PROPOSED REPORT TO THE CITY COUNCIL

Revision of Recommendation Subsequent To The May 26, 2004 FAC Meeting

During the May 26, 2004 FAC meeting, the FAC approved the recommendation to the City Council as follows:

"Pursuant to direction from the City Council subcommittee, we have reviewed the financial information provided to us regarding the NCCP and have not noted anything problematic. Based on that review, we believe there will be savings to the City resulting from implementation of the NCCP. We recommend that the City Council move forward expeditiously with the completion of the NCCP and the related land acquisition."

Subsequent to the May 26, 2004 FAC meeting, the FAC Chair and Staff agreed that it seemed appropriate to further clarify the FAC's draft recommendation to the City Council. FAC members were notified via email that the matter would be placed on the June meeting agenda. Staff offers the following revised recommendation (already included in the Proposed Report to City Council), for the FAC's consideration. Revised text is underlined below:

"Pursuant to direction from the Open Space Acquisition Ad-Hoc Committee of the City Council, we have reviewed the financial information provided to us regarding the proposed NCCP, open space purchase and the establishment of a habitat preserve and have not noted anything problematic. Based on that review, we believe there may be savings to the City resulting from implementation of the NCCP that would mitigate additional costs. We recommend that the City Council move forward expeditiously with the completion of the NCCP and the related land acquisition."

Recommendation to the FAC

1. Discuss and revise the Proposed Report to the City Council, including the proposed revision of the FAC's recommendation to the City Council; and
2. Approve the draft report to City Council (as revised by the FAC) for presentation to the City Council in conjunction with the NCCP staff report that will be presented by the Director of Planning, Building & Code Enforcement on August 17, 2004, or a subsequent meeting thereafter.

Respectfully submitted,

Dennis McLean

Director of Finance and Information Technology

Attachment A

Year 1	City In-Kind Identified Costs	City's Existing Costs	Net Increase to City for In-Kind Costs
Non-organic Debris Removal	$ 4,000	$ -	$ 4,000
Brush Management	7,500	-	7,500
Brush Hog Tractor Mower	2,200	-	2,200
Public Safety (per acre basis)	51,173	51,173	-
Community Outreach	1,280	1,280	-
Sanitation Control	6,000	2,633	3,367
Toilets, Portable	7,500	1,500	6,000
Other	1,000	-	1,000
GIS/CAD Data Management	800	-	800
Fire Management Plan	250	250	-
Monitoring Reports	900	900	-
Office Operations Administration	720	720	-
Miscellaneous Supplies	200	-	200
GPS (Rover & Base Unit)	400	-	400
Produce Contracts	180	180	-
Miscellaneous Operations	200	200	-
Subtotal	84,303	58,836	25,467
10% of 6% Contingency	1,513	-	1,513
10% of 18% Administration	4,539	-	4,539
Totals	**$ 90,355**	**$ 58,836**	**$ 31,519**

Subsequent Years	City In-Kind Identified Costs	City's Existing Costs	Net Increase to City for In-Kind Costs
Non-organic Debris Removal	$ 4,800	$ -	$ 4,800
Brush Management	7,500	-	7,500
Brush Hog Tractor Mower	2,200	-	2,200
Public Safety (per acre basis)	51,173	51,173	-
Community Outreach	1,280	1,280	-
Sanitation Control	6,000	2,633	3,367
Toilets, Portable	7,500	1,500	6,000
Other	1,000	-	1,000
GIS/CAD Data Management	800	-	800
Aerial Photo Flight	133	-	133
Fire Management Plan	250	250	-
Monitoring Reports	1,125	1,125	-
Office Operations Administration	1,440	1,440	-
Miscellaneous Supplies	200	-	200
GPS (Rover & Base Unit)	80	-	80
Produce Contracts	180	180	-
Miscellaneous Operations	200	200	-
Subtotal	85,861	59,781	26,080
10% of 6% Contingency	1,509	-	1,509
10% of 18% Administration	4,528	-	4,528
Totals	**$ 91,899**	**$ 59,781**	**$ 32,118**

Attachment A

Year 1	**City In-Kind Identified Costs**	**City's Existing Costs**	**Net Increase to City for In-Kind Costs**
Non-organic Debris Removal	$ 4,000	$ -	$ 4,000
Brush Management	7,500	-	7,500
Brush Hog Tractor Mower	2,200	-	2,200
Public Safety (per acre basis)	51,173	51,173	-
Community Outreach	1,280	1,280	-
Sanitation Control	6,000	2,633	3,367
Toilets, Portable	7,500	1,500	6,000
Other	1,000	-	1,000
GIS/CAD Data Management	800	-	800
Fire Management Plan	250	250	-
Monitoring Reports	900	900	-
Office Operations Administration	720	720	-
Miscellaneous Supplies	200	-	200
GPS (Rover & Base Unit)	400	-	400
Produce Contracts	180	180	-
Miscellaneous Operations	200	200	-
Subtotal	84,303	58,836	25,467
10% of 6% Contingency	1,513	-	1,513
10% of 18% Administration	4,539	-	4,539
Totals	**$ 90,355**	**$ 58,836**	**$ 31,519**

Subsequent Years	**City In-Kind Identified Costs**	**City's Existing Costs**	**Net Increase to City for In-Kind Costs**
Non-organic Debris Removal	$ 4,800	$ -	$ 4,800
Brush Management	7,500	-	7,500
Brush Hog Tractor Mower	2,200	-	2,200
Public Safety (per acre basis)	51,173	51,173	-
Community Outreach	1,280	1,280	-
Sanitation Control	6,000	2,633	3,367
Toilets, Portable	7,500	1,500	6,000
Other	1,000	-	1,000
GIS/CAD Data Management	800	-	800
Aerial Photo Flight	133	-	133
Fire Management Plan	250	250	-
Monitoring Reports	1,125	1,125	-
Office Operations Administration	1,440	1,440	-
Miscellaneous Supplies	200	-	200
GPS (Rover & Base Unit)	80	-	80
Produce Contracts	180	180	-
Miscellaneous Operations	200	200	-
Subtotal	85,861	59,781	26,080
10% of 6% Contingency	1,509	-	1,509
10% of 18% Administration	4,528	-	4,528
Totals	**$ 91,899**	**$ 59,781**	**$ 32,118**

Habitat Mitigation Savings **Attachment B**

City Project	Project Status	Habitat Loss (acres) Coastal Sage Scrub	Habitat Loss (acres) Grassland	Offsite Mitigation Acreage Coastal Sage Scrub	Offsite Mitigation Acreage Grassland	Potential Savings Coastal Sage Scrub	Potential Savings Grassland
25th Street Road Repair (Phase 1)	Completed	0.10	N/A2	0.20	N/A2	$ 5,000	N/A2
25th Street Road Repair (Phase 2)	Completed	0.40	N/A2	0.80	N/A2	20,000	N/A2
Forrestal Property Trail Clearing	Completed	0.10	N/A2	0.30	N/A2	7,500	N/A2
McCarrell Canyon Outlet Improvement	Completed	0.20	N/A2	0.60	N/A2	15,000	N/A2
Portuguese Canyon Drainage Project	Completed	0.50	N/A2	1.50	N/A2	37,500	N/A2
PVDS Emergency Washout Project	Completed	0.40	N/A2	1.20	N/A2	30,000	N/A2
PVDS Roadway Rehabilitation	Completed	0.20	N/A2	0.60	N/A2	15,000	N/A2
Sacred Cove Geologic Investigation	Completed	0.10	N/A2	0.30	N/A2	7,500	N/A2
San Ramon Canyon Repair	Completed	1.00	N/A2	1.00	N/A2	25,000	N/A2
Tarapaca Sewer Line Relocation	Completed	0.50	N/A2	1.50	N/A2	37,500	N/A2
Subtotals for Completed Projects		3.50	0.00	8.00	0.00	200,000	-
Abalone Cove Beach Public Access & Amenities	Proposed	0.20	1.00	0.00	0.50	-	12,500
Active Recreation Area For Accessing Reserve Trail System	Proposed	1.00	13.60	3.00	6.80	75,000	170,000
Altamira Canyon Drainage Project	Proposed	2.50	3.00	5.00	1.50	125,000	37,500
Dewatering Wells (10							

Wells) Within The Landslide Area	Proposed	2.50	2.50	7.50	1.25	187,500	31,250	
Additional Recreational Facilities at Lower Point Vicente	Proposed	1.00	11.20	3.00	5.60	75,000	140,000	
Lower San Ramon Canyon Grading	Proposed	2.00	6.00	6.00	3.00	150,000	75,000	
Misc Drainage Improvement Projects	Proposed	4.00	12.00	12.00	6.00	300,000	150,000	
Misc. Damaged Drain Repair Within The Landslide Area	Proposed	5.00	15.00	15.00	7.50	375,000	187,500	
Misc. Fissure Filling Within The Landslide Area	Proposed	3.00	3.00	9.00	1.50	225,000	37,500	
PVDE Drainage Improvement Projects (17 Projects)	Proposed	4.00	12.00	12.00	6.00	300,000	150,000	
RPV Conceptual Trails Plan Implementation	Proposed	5.00	15.00	15.00	7.50	375,000	187,500	
Subtotals for Proposed Projects		30.20	94.30	87.50	47.15	2,187,500	1,178,750	
Totals for All City Projects		**33.70**	**94.30**	**95.50**	**47.15**	**$ 2,387,500**	**$1,178,750**	**Attachment B**

City of Rancho Palos Verdes
Finance Advisory Committee Agenda & Staff Reports

AGENDA
CITY OF RANCHO PALOS VERDES
ADJOURNED REGULAR MEETING OF THE FINANCE ADVISORY COMMITTEE

May 26, 2004
CITY HALL
COMMUNITY ROOM

7:00 P.M. Call To Order

1. Roll Call.
2. Approval of Agenda.
3. Approval of Draft Minutes for the meeting conducted April 28, 2004. (McLean)
4. Proposed Natural Communities Conservation Plan (NCCP) And Proposed Purchase Of Approximately 700 Acres Of Open Space. (Rojas/McLean/Downs/Dye)
5. Revenue derived from franchising rights of City owned facilities and other assets - Update. (McLean)
6. Update – Infrastructure Renewal and Maintenance project - Update. (McLean)
7. Liaison reports. (Clark)
8. State Budget Update. (McLean)
9. Public Comments.
10. Adjournment.

TO: HONORABLE CHAIR AND MEMBERS OF THE FINANCE ADVISORY COMMITTEE

FROM: DENNIS McLEAN, DIRECTOR OF FINANCE AND INFORMATION TECHNOLOGY

JOEL ROJAS, DIRECTOR OF PLANNING, BUILDING SAFETY AND CODE ENFORCEMENT

DATE: MAY 26, 2004

SUBJECT: PROPOSED NATURAL COMMUNITIES CONSERVATION PLAN AND PROPOSED PURCHASE OF APPROXIMATELY 700 ACRES OF OPEN SPACE

Staff Coordinator: Kathryn Downs, Accounting Manager

RECOMMENDATION

1. To receive and file this report; or
2. Direct Staff to provide answers to any remaining significant questions about the proposed City's Natural Communities Conservation Plan and proposed open space purchase at a subsequent meeting of the Finance Advisory Committee; and/or
3. Direct Staff to report any noteworthy finding, if any, or the lack of any noteworthy findings, about the City's proposed Natural Communities Conservation Plan and proposed open space purchase to the City Council via a staff report.

BACKGROUND AND DISCUSSION

Presentation to Finance Advisory Committee, April 28, 2004

Finance and IT Staff has attached a copy of its staff report to the Finance Advisory Committee (FAC), dated April 28, 2004, titled "Proposed Natural Communities Conservation Plan And Proposed Purchase Of Approximately 700 Acres Of Open Space". At the meeting of the FAC on April 28, 2004, Barbara Dye, Executive Director of the Palos Verdes Peninsula Land Conservancy (PVPLC), presented an overview about the proposed Natural Communities Conservation Plan (NCCP), the proposed purchase of approximately 700 acres of open space and the proposed habitat reserve.

Subsequent to Ms. Dye's presentation, Staff presented a verbal overview about the City's cost to date for the development of the NCCP and the proposed open space purchase. Staff stated that it expected to present estimated operating and maintenance cost information about the proposed reserve at the next meeting of the FAC. After Staff's presentation, it was the consensus of the FAC members to defer its questions until the next meeting of the FAC.

The Process Necessary to Complete the NCCP, Open Space Purchase and Establish the Habitat Reserve

The NCCP is essentially a citywide Habitat Conservation Plan that must be approved by the California Department of Fish and Game and the U.S. Fish and Wildlife Service (the Resource Agencies). The City's NCCP proposes to create a habitat reserve (Reserve) through acquisition and dedications, and then actively manage the reserve by performing limited amounts of enhancement and re-vegetation. In exchange for a approving the City's NCCP, the Resource Agencies would issue the City a permit, giving the City the authority to ensure that all future uses and activities in the Reserve are consistent with the NCCP. To make this happen, the following 3 documents need to be prepared by the City and approved by the Resource Agencies: 1) the NCCP Subarea Plan; 2) The Implementing Agreement; and 3) The NCCP EIR/EIS.

The Subarea Plan describes the Reserve, how it will be assembled and how the Reserve will be managed. A draft was made available to the public in June 2003 and Staff expects an updated Draft will be released in mid-June 2004. The Implementing Agreement is the legal document that is entered into by

the City and the Resource Agencies and explains the legal obligations of both parties. The PVP Land Conservancy will also be a party to this agreement. This document is currently being prepared. The EIR is required by State law to analyze the environmental impacts of implementing the NCCP. A Draft EIR has been publicly circulated and a Final EIR is currently being prepared. It is expected that all three documents will be available to the public in mid-June and presented to the City Council for conceptual approval on July 6, 2004.

If and when the three NCCP documents are approved by the City Council, the documents will be forwarded to the U.S. Fish and Wildlife Service so that the NCCP can go through the federal review process. According to the Wildlife Service, the federal review would typically take 9 months to complete. Once the federal process is completed and a federal permit issued to the City, the City's NCCP will be in effect and the habitat management can begin. The proposed land acquisition, which is an integral component of the NCCP, can occur at any time. However, Staff has been notified by State officials that the State share for the acquisition would likely not be approved until the State is satisfied that the City's NCCP is sufficiently complete or making substantial progress. Staff believes that obtaining City Council conceptual approval of the three NCCP documents and forwarding them to the Resource Agencies would meet that criteria.

On-Going Operating and Maintenance Costs of the City In the Event of the Implementation of the Proposed NCCP, Purchase of the Proposed Open Space and Establishment of a Habitat Reserve

The Draft Subarea Plan for the NCCP outlines the expected economic and operational responsibilities for both the City and the PVPLC. Staff expects that a pending revision of the Draft Subarea Plan will be presented to the City Council on July 6, 2004, including the following economic commitments to maintain habitat within the Reserve as follows:

	City	PVPLC
Cash payment for operating and maintenance of the Reserve	$100,000	
In-kind services provided by City staff and contractors	$90,000	
Cash payment for operating and maintenance of the Reserve		$50,000
Services to be provided by volunteer staff of PVPLC		$75,000
Totals	**$190,000**	**$125,000**

Property Analysis Record (PAR)

Notwithstanding the City and PVPLC's commitments for funding habitat maintenance costs of the proposed reserve, a PAR has been prepared and revised by the City's NCCP consultant, URS Corp. An excerpt from the Draft NCCP Subarea Plan serves to offer some background about the PAR:

"...Cost of habitat management and biological monitoring varies according to habitat type, condition, and specific tasks needed to maintain biological value. Generally, tasks include trash removal, control of invasive species, installation and maintenance of fences, signs, and trails, and monitoring of biological resources. Center for Natural Lands Management (CNLM), a non-profit organization engaged in management of numerous habitat and open space preserves in California, developed a procedure (called Property Analysis Record, or PAR, and licensed to users) to estimate costs of habitat management."

A copy of the proposed PAR, revised subsequent to the April 28, 2004 meeting of the FAC, accompanies this staff report as Attachment A. In addition to various minor cost revisions, the revised PAR (compared with the PAR included in the June 2003 Draft Subarea Plan) clarifies the expectation that "Start-Up/One-Time" costs are included in total Year 1 costs. The City will not experience both Start-up/One Time Costs and additional on-going costs during Year 1.

It's important to understand that the PAR has been prepared using standard unit costs established by the CNLM. Accordingly, the PAR does not consider whether or not the City is already paying for existing costs that would continue to be incurred after the same open space land is transferred to the proposed Reserve. The revised PAR represents that the City's Year 1 in-kind costs will be $90,355. Of this amount, staff has identified $58,836 of costs already being paid for by the City. Only the estimated increase to the City's in-kind costs totaling $31,519 would have to be included in the operating budget of the General fund of the City.

Year 1	City In-Kind Identified Costs	City's Existing Costs	Net Increase to City for In-Kind Costs
Non-organic Debris Removal	$ 4,000	$ -	$ 4,000
Brush Management	7,500	-	7,500
Brush Hog Tractor Mower	2,200	-	2,200
Public Safety (per acre basis)	51,173	51,173	-
Community Outreach	1,280	1,280	-
Sanitation Control	6,000	2,633	3,367
Toilets, Portable	7,500	1,500	6,000
Other	1,000	-	1,000
GIS/CAD Data Management	800	-	800
Fire Management Plan	250	250	-
Monitoring Reports	900	900	-
Office Operations Administration	720	720	-
Miscellaneous Supplies	200	-	200
GPS (Rover & Base Unit)	400	-	400
Produce Contracts	180	180	-
Miscellaneous Operations	200	200	-
Subtotal	84,303	58,836	25,467
10% of 6% Contingency	1,513	-	1,513
10% of 18% Administration	4,539	-	4,539
Totals	**$ 90,355**	**$ 58,836**	**$ 31,519**

For example, the PAR includes an estimated cost of Public Safety for the Reserve of $51,173 annually, based upon a standard rate of $33.80/per acre. Staff is not aware of any expectation for any additional services to be provided by the Los Angeles County Sheriff's Department in the event the open space purchase is consummated. An increase of surveillance and enforcement responsibilities in the open

space area of the City were included when the number of Core Deputies was increased from 2 to 3 during FY99-00. The annual cost of a Core Deputy is approximately $112,000.

Additional existing in-kind costs primarily include staff time to participate in community outreach, prepare reports, and provide sanitation maintenance. Based upon discussion among Staff, no additional costs are expected for staff time associated with community outreach and report preparation. The PAR estimates that subsequent years in-kind costs to the City would be $91,899. Similarly, staff has identified $59,781 of costs already being paid by the City. Therefore, the estimated increase to the City's subsequent years in-kind costs within the General fund would be $32,118.

Subsequent Years	**City In-Kind Identified Costs**	**City's Existing Costs**	**Net Increase to City for In-Kind Costs**
Non-organic Debris Removal	$ 4,800	$ -	$ 4,800
Brush Management	7,500	-	7,500
Brush Hog Tractor Mower	2,200	-	2,200
Public Safety (per acre basis)	51,173	51,173	-
Community Outreach	1,280	1,280	-
Sanitation Control	6,000	2,633	3,367
Toilets, Portable	7,500	1,500	6,000
Other	1,000	-	1,000
GIS/CAD Data Management	800	-	800
Aerial Photo Flight	133	-	133
Fire Management Plan	250	250	-
Monitoring Reports	1,125	1,125	-
Office Operations Administration	1,440	1,440	-
Miscellaneous Supplies	200	-	200
GPS (Rover & Base Unit)	80	-	80
Produce Contracts	180	180	-
Miscellaneous Operations	200	200	-
Subtotal	85,861	59,781	26,080
10% of 6% Contingency	1,509	-	1,509
10% of 18% Administration	4,528	-	4,528
Totals	**$ 91,899**	**$ 59,781**	**$ 32,118**

Additional Costs and Benefits in the Event the Implementation of the Proposed NCCP, Purchase of the Proposed Open Space and Establishment of a Habitat Reserve

ACLAD and Klondike Canyon Assessment District Fees

The property owners in two separate landslide areas of the City formed the Abalone Cove Landslide

Assessment District (ACLAD) and the Klondike Canyon Geologic Hazard Abatement District (Klondike AD) to perform landslide abatement projects (e.g. installation of de-watering wells) and landslide abatement maintenance (e.g. repairing de-watering wells) within the boundaries of their respective districts. Five of the open space parcels that are under consideration for purchase are within the boundaries of the two Districts.

The total FY04-05 assessment for the open space parcels is $22,789 for ACLAD and $2,337 for Klondike AD, totaling $25,126. The City would assume responsibility for these assessments in the event the proposed open space purchase is consummated. Although the Portuguese Bend fund of the RDA currently pays the assessments for the properties already owned by the City, the Improvement Authority derives its funding from the General fund of the City. Based upon an inquiry made with the Director of Public Works, Staff is not aware of any expectations of any future material increases or decreases of the assessment fees as a result of changes in the operating and maintenance costs, or future capital improvements in both ACLAD and Klondike AD.

Property Tax Revenues

Based upon Staff's inquiry with the Los Angeles County Controller's Office, the assessed valuation of the open space parcels for FY03-04 is $5,506,657. Seven of the nine parcels for the proposed open space purchase exist within the project area boundaries of the City's Redevelopment Agency (the "RDA"). The tax increment revenue expected from the open space parcels during FY03-04 is $30,708. Of this amount, $24,566 will be recorded as revenue within the RDA Debt Service fund and $6,142 will be deposited into the RDA Housing Set-Aside fund.

Parcel Number	Parcel Location	Reduction of Annual Property Tax City's General fund	Reduction of Annual Tax Increment RDA Debt Service	Reduction of Annual Tax Increment RDA Housing Set-Aside
7572-001-001	RDA	$ 38	$ 2,292	$ 573
7572-001-002	RDA	367	1,651	413
7572-001-003	RDA	204	914	228
7572-001-004	RDA	354	1,587	397
7572-001-007	RDA	159	3,802	950
7572-002-022	RDA	0	8	2
7581-023-031	RDA	29	14,312	3,578
7572-001-006	City	4	-	-
7581-023-029	City	72	-	-
Total Estimated Losses		**$ 1,227**	**$ 24,566**	**$ 6,142**

In accordance with the 1997 bond restructuring between the County of Los Angeles and the City of Rancho Palos Verdes, the tax increment attributable to the RDA Debt Service fund is entirely intercepted by the County to pay the 1997 RDA Bond Indebtedness issued by the RDA for the benefit of the County. The budget for FY04-05 includes the expectation that the RDA Debt Service fund tax increment revenue will be slightly less than $480,000, net of the 20% deposit to the RDA Housing Set-Aside fund. The scheduled 1997 RDA bond principle and interest for FY04-05 is $277,625. In the event the proposed open pace purchase is consummated during FY04-05, tax increment revenue to pay outstanding debt would decrease by about $25,000. Therefore, in the event the proposed open space is purchased during FY04-05, it appears as though there would still be a sufficient amount of tax increment revenue in excess of the scheduled bond indebtedness payments to satisfy the scheduled 1997 RDA Bond payments during FY04-05, and all years thereafter.

On December 2, 2003, Staff presented a staff report to the City Council regarding various matters about the RDA, including its projection of future tax increment revenues. The projection indicated that upon the complete payment and satisfaction of the 1997 RDA Bonds (scheduled in FY27-28), about $7.7 Million of future tax increment revenue would be available to repay loans made by the RDA to the General fund of the City prior to FY34-35, the year the RDA is expected to terminate. In the event the proposed open space purchase is consummated, about $6.9 Million of future tax increment would be available to repay loans made by the RDA to the General fund of the City prior to FY34-35. The reduction of about $800,000 would be a result of the tax increment reductions from the open space parcels purchased.

Reduction of the Cost of Federal and State Habitat Permit Costs

One of the driving forces behind the City's decision to enter into an agreement in 1996 with the Resource Agencies to prepare an NCCP, was the cost and time delays experienced by the City in carrying out public infrastructure improvements and landslide abatement activities. Because of the existence of federally protected Coastal Sage Scrub (CSS) habitat in and around the landslide, the coastal bluffs and most canyon areas, public works projects in these areas are required to prepare biological studies and assess the biological impacts of the proposed project before the project can proceed. If it is determined that a City project will result in impacts to sensitive habitat (state or federally protected habitat), a State and/or federal permit must be obtained and the project's habitat impacts mitigated by the City.

As a result, the City's NCCP has been written in manner to provide the required mitigation for past City projects that have impacted CSS since1996 and future City projects that are anticipated to impact CSS. The pending revision of the Draft NCCP Subarea Plan identifies 21 such City projects that will be covered by the plan. The 21 City projects identified in the NCCP result in impacts to 33.7 acres of CSS and 94.30 acres of grassland habitat. The mitigation for 33.7 acres of CSS loss is the provision of 95.5 (approximately a 3:1 ratio) acres of habitat and the mitigation for the 94.30 acres of grassland habitat would be the provision of 47.15 acres of habitat (approximately a 0.5:1 ratio). The mitigation for these past and future losses is being provided by the dedication of 298.8 acres of City-owned land into the Reserve and 5.6 acres of re-vegetation (2.1 acres which already has been completed).

Typically, mitigation for the loss of habitat is provided by the re-vegetation of new habitat, which is then actively managed for a 5-year period. According to the City's NCCP consultant, this typically costs $25,000-35,000 per acre per 5-year period. For comparison purposes, the CSS re-vegetation for the Ocean Trails project is costing approximately $33,000/acre/5-years and the recently completed CSS re-vegetation for the City's San Ramon landslide stabilization project is costing approximately $80,000/acre/5-years. As a result of the mitigation that the NCCP is providing for City projects, the typical re-vegetation that would have been required for these past and future projects is not necessary. This is a substantial cost savings to the City. Using the consultant's most conservative estimate of $25,000/acre/5-years, and applying it to the cost of CSS and grassland vegetation, not having to perform this re-vegetation equates to a potential savings of $3,566,250 to the City ($25,000 x 142.65 acres (95.50 acres of CSS + 47.15 acres of grassland). A table that shows the breakdown of these savings is provided as Attachment B.

It should also be noted that in addition to the costs of planting new habitat and managing it for 5 years (weeding, etc), there are associated costs that involve the preparation of a re-vegetation plan and the monitoring of the work by biologist over the 5-year period. These costs vary by project. For example, for a 10-acre re-vegetation project these costs would typically total around $75,000. For the recently completed San Ramon project, which involved 1.5 acres of re-vegetation, the costs are expected to be $100,000. Using an estimate of $75,000 per project, the costs for the 21 City projects would be approximately $1,575,000. This represents an additional potential cost savings to the City.

Although none of the proposed projects presented in Attachment B are currently included in the Capital Improvement Plan (CIP) fund budget for FY03-04, Staff believes that several projects (i.e. drainage projects), will be completed during the next 2-10 years. Due to the uncertainty of future CIP projects, as well as their timing, the presentation of the annual potential savings to the City has not been prepared.

FISCAL IMPACT

Summary of City Costs and Benefits

The proposed annual cash payment of $100,000 by the City from the General fund (see A below) has been included in the 2004 Five Year Financial Model of the City. The increase of the In-kind costs (see B below) and assessments assumed (see C and D above) totaling $56,645 annually, have not been included in the 2004 Model. The reduction of property tax revenue to the General fund of the City (see E below) is immaterial.

The reduction of tax increment to the Debt Service fund of the City in the amount of $24,566 annually (see F below) would have no impact on the payment of the 1997 RDA Bonds. Nor would it impact current expenditures of the City. Based upon Staff's calculations, it could reduce the amount of loan repayments from the RDA to the City by about $800,000 over many years prior to FY34-35.

The reduction of tax increment to the RDA Housing Set-Aside fund of the City in the amount of $6,142 annually (see G below) would have no significant impact of the City's low and moderate income housing plan.

Using the consultant's most conservative estimate of $25,000/acre/5-years, and applying it to the cost of CSS and grassland vegetation, not having to perform this re-vegetation equates to a potential savings of $3,566,250 (see H below) to the City ($25,000 x 142.65 acres (95.50 acres of CSS + 47.15 acres of grassland). Using an estimate of $75,000 per project, the costs for the 21 City projects would be approximately $1,575,000 (see I below). This represents an additional potential cost savings to the City. A summary of estimated costs and benefits to the City follows:

	Annually	One-Time
A - Cash payment for operating and maintenance of the Reserve	$ (100,000)	
B - Increase of in-kind costs	(31,519)	
C - ACLAD assessment assumed	(22,789)	
D - Klondike District assessment assumed	(2,337)	
E - Reduction of property tax revenue to General fund	(1,227)	
F - Reduction of RDA tax increment to Debt Service fund	(24,566)	
G - Reduction of RDA tax increment to RDA Housing Set-Aside fund	(6,142)	
H - Habitat mitigation savings		$3,566,250
I - Habitat monitoring savings		1,575,000
Total Estimated City Costs and Benefits	**$ (188,580)**	**$5,141,250**

Note: None of the Staff's presentations of costs have been adjusted for inflation.

Draft Report Of Findings Regarding The Proposed City's Natural Communities Conservation Plan And Proposed Open Space Purchase

The FAC may wish to direct Staff to report any noteworthy finding, if any, or the lack of any noteworthy findings, about the proposed City's Natural Communities Conservation Plan and proposed open space purchase to the City Council via a staff report. If the FAC elects to direct Staff to provide a written staff report to the City Council, perhaps it could contain a statement as follows:

Staff has briefed the FAC regarding the proposed City's Natural Communities Conservation Plan and proposed open space purchase. Except for XXXX, nothing else that is noteworthy came to the attention of the FAC during the briefing about the proposed City's Natural Communities Conservation Plan and proposed open space purchase.

Respectfully submitted,
Joel Rojas
Director of Planning, Building Safety and Code Enforcement

Dennis McLean
Director of Finance and Information Technology

Attachment A
Attachment B

NCCP PRESERVE PAR ANALYSIS - INITIAL COSTS

Attachment A

	Specifications	10.5	number	cost/unit	total	PVPLC	City
SITE CONSTRUCTION/MAINT				$ -		$ -	$ -
Salvage Plant Materials		hours	40	$ 15	$ 600	$ 600	
Salvage /stockpile Topsoil		hours	40	$ 15	$ 600	$ 600	
Fence, Protective Plastic	high visibility	feet	2000	$ 1.25	$ 2,500	$ 2,500	
Fence - Installed	chain link for plant yard	feet	200	$ 20	$ 4,000	$ 4,000	
Subtotal				**$ -**	**$ 7,700**	**$ 7,700**	**$ -**
						$ -	
BIOTIC SURVEYS	Baseline Reports monitoring					$ -	
Landscape Ecologist	PVPLC staff	hours	300	$ 25	$ 7,500	$ 7,500	
Plant Ecologist	Restoration Ecologist	hours	330	$ 50	$ 16,500	$ 16,500	
Wildlife Biologist	outside expert	hours	200	$ 65	$ 13,000	$ 13,000	
Entomologist	outside expert	hours	80	$ 75	$ 6,000	$ 6,000	
Science Director	PVPLC staff	hours	50	$ 40	$ 2,000	$ 2,000	
Monitor Climate	local resource	hours	16	$ 25	$ 400	$ 400	
Subtotal					**$ 45,400**	**$ 45,400**	**$ -**
						$ -	
HABITAT RESTORATION	5 & 5 Restoration					$ -	
Site Analysis	field survey & report	hours	16.0	$ 50	$ 800	$ 800	
Restoration Plan	plan/report	hours	200.0	$ 50	$ 10,000	$ 10,000	
Organic Debris Removal	5 acres clearing	acre	5.0	$ 600	$ 3,000	$ 3,000	
Non-organic Debris Removal	dumpsters	fee	10.0	$ 400	$ 4,000		$ 4,000
Soil Amendments	misc	yard	5.0	$ 50	$ 250	$ 250	
Straw	for erosion control	bale	50.0	$ 10	$ 500	$ 500	
Seed Collection	native seed	hours	160.0	$ 25	$ 4,000	$ 4,000	
Exotic Plant Control	hand removal	hours	200.0	$ 15	$ 3,000	$ 3,000	
Exotic Plant Control	herbicide	gallon	10.0	$ 100	$ 1,000	$ 1,000	
Exotic Plant Control	backpack spraying	hours	50.0	$ 25	$ 1,250	$ 1,250	
Other	misc. supplies	item	1.0	$ 1,000	$ 1,000	$ 1,000	
Subtotal					**$ 28,800**	**$ 24,800**	**$ 4,000**
						$ -	
HABITAT MAINTENANCE	Targeted Exotic Removal &					$ -	
Erosion Control	slope stabilization	hours	10.0	$ 15	$ 150	$ 150	
Straw	erosion control	bale	10.0	$ 10	$ 100	$ 100	
Exotic Plant Control	hand removal	hours	1000.0	$ 15	$ 15,000	$ 15,000	
Exotic Plant Control	herbicide	gallon	20.0	$ 75	$ 1,500	$ 1,500	
Exotic Plant Control	weed whip	hours	80.0	$ 15	$ 1,200	$ 1,200	
Exotic Animal Control	cowbird trapping	hours	250.0	$ 25	$ 6,250	$ 6,250	

NCCP PRESERVE PAR ANALYSIS - INITIAL COSTS

Attachment A

	Specifications	10.5	number	cost/unit	total	PVPLC	City
Feral Animal Control	traps	item	3.0	$ 200	$ 600	$ 600	
Feral Animal Control	checking traps	hours	40.0	$ 15	$ 600	$ 600	
Brush Management	fuel modification zones	hours	500.0	$ 15	$ 7,500	$ -	$ 7,500
Brush Hog Tractor Mower	hire mower	week	2.0	$ 1,100	$ 2,200	$ -	$ 2,200
Other	misc supplies	item	1.0	$ 2,500	$ 2,500	$ 2,500	
Subtotal					**$ 37,600**	**$ 27,900**	**$ 9,700**
						$ -	
PUBLIC SERVICES						$ -	
Access Control	public safety	acre	1514.0	$ 34	$ 51,173	$ -	$ 51,173
Patrolling	patrol	hours	240.0	$ 15	$ 3,600	$ 3,600	
Trail	maintenance	hours	100.0	$ 15	$ 1,500	$ 1,500	
Sign	boundary	item	30.0	$ 50	$ 1,500	$ 1,500	
Sign, Metal	informational	item	40.0	$ 50	$ 2,000	$ 2,000	
Sign, Metal	trail markers	item	200.0	$ 20	$ 4,000	$ 4,000	
Sign	interpretive	item	4.0	$ 2,000	$ 8,000	$ 8,000	
Volunteer Coordinator	meetings	hours	200.0	$ 25	$ 5,000	$ 5,000	
Docent Training	meetings	hours	40.0	$ 25	$ 1,000	$ 1,000	
Interpretive Literature	labor	hours	20.0	$ 25	$ 500	$ 500	
Interpretive Literature	copy	page	2000.0	$ 0.10	$ 200	$ 200	
Community Outreach	meetings	hours	80.0	$ 40	$ 3,200	$ 1,920	$ 1,280
Other	misc. supplies	item	1.0	$ 1,000	$ 1,000	$ 1,000	
Subtotal					**$ 82,673**	**$ 30,220**	**$ 52,453**
						$ -	
GENERAL MAINTENANCE						$ -	
Sanitation Control	collection & disposal	hours	400.0	$ 15	$ 6,000	$ -	$ 6,000
Toilets, Portable	yearly rental	rental	5.0	$ 1,500	$ 7,500	$ -	$ 7,500
Other	misc. maintenance	misc.	1.0	$ 1,000	$ 1,000	$ -	$ 1,000
Subtotal					**$ 14,500**	**$ -**	**$ 14,500**
						$ -	
REPORTING	Report production					$ -	
Database Management	data imput	hours	80.0	$ 50	$ 4,000	$ 4,000	
GIS/CAD Management	data management	hours	40.0	$ 50	$ 2,000	$ 1,200	$ 800
Photodocmentation	field survey	hours	80.0	$ 25	$ 2,000	$ 2,000	
Agency Report	annual report	hours	50.0	$ 45	$ 2,250	$ 2,250	
Fire Management Plan	report	hours	20.0	$ 25	$ 500	$ 250	$ 250
Monitoring Reports	monitoring documentation	hours	120.0	$ 45	$ 5,400	$ 4,500	$ 900
Report Production	labor	hours	12.0	$ 25	$ 300	$ 300	

NCCP PRESERVE PAR ANALYSIS - INITIAL COSTS

Attachment A

	Specifications	10.5	number	cost/unit	total	PVPLC	City
Subtotal					**$ 16,450**	**$ 14,500**	**$ 1,950**
						$ -	
OFFICE MAINTENANCE						$ -	
Administrative	operations	hours	40.0	$ 45	$ 1,800	$ 1,080	$ 720
Telephone Charges, Annual	phone charges	person	0.5	$ 1,200	$ 600	$ 600	
Office Supplies, Year	stationery	person	1.0	$ 100	$ 100	$ 100	
Office Supplies, Year	supplies	person	1.0	$ 200	$ 200	$ 200	
Copier	copier	item	0.5	$ 400	$ 200	$ 200	
Fax Machine	fax	item	0.5	$ 400	$ 200	$ 200	
Deskjet Printer	printer	item	1.0	$ 400	$ 400	$ 400	
Other	misc supplies	item	1.0	$ 1,000	$ 1,000	$ 800	$ 200
Subtotal					**$ 4,500**	**$ 3,580**	**$ 920**
						$ -	
FIELD EQUIPMENT						$ -	
GPS, Rover & Base Unit	gps w. mapping capability	item	2.0	$ 400	$ 800	$ 400	$ 400
Vehicle	mileage	mile	12000.0	$ 0.38	$ 4,560	$ 4,560	
Vehicle Insurance	insurance	year	0.5	$ 3,500	$ 1,750	$ 1,750	
Camera 35mm lens	digital	item	1.0	$ 350	$ 350	$ 350	
Chemical Sprayer	backpack sprayer	item	1.0	$ 200	$ 200	$ 200	
Other	misc. supplies	item	1.0	$ 2,500	$ 2,500	$ 2,500	
Subtotal				**$ -**	**$ 10,160**	**$ 9,760**	**$ 400**
						$ -	
OPERATIONS						$ -	
Audit	CPA audit	item	0.5	$ 5,000	$ 2,500	$ 2,500	
Contracts	produce contracts	hours	30.0	$ 30	$ 900	$ 720	$ 180
Other	misc items	item	1.0	$ 1,000	$ 1,000	$ 800	$ 200
Subtotal					$ 4,400	$ 4,020	$ 380
SUBTOTAL					**$ 252,183**	**$ 167,880**	**$ 84,303**
						$ -	
CONTINGENCY & ADMINISTRATION						$ -	
Contingency	6% of total			$ -	$ 15,131	$ 13,618	$ 1,513
Administration	18% of total			$ -	$ 45,393	$ 40,854	$ 4,539
Subtotal				**$ -**	**$ 60,524**	**$ 54,472**	**$ 6,052**
						$ -	
TOTAL				**$ -**	**$ 312,707**	**$ 222,352**	**$ 90,356**

NCCP PRESERVE PAR ANALYSIS FOR ONGOING EXPENSES

Attachment A

	Specifications	unit	number	cost/unit	interval	total	PVPLC	City
SITE CONSTRUCTION/MAINT							$ -	$ -
Salvage Plant Materials		hours	40.0	$ 15.00	1	$ 600	$ 600	
Salvage /stockpile Topsoil		hours	40.0	$ 15.00	1	$ 600	$ 600	
Fence, Protective Plastic	high visibility	feet	2000.0	$ 1.25	5	$ 500	$ 500	
Fence - Installed	chain link for plant yard	feet	200.0	$ 20.00	30	$ 133	$ 133	
Subtotal						**$ 1,833**	**$ 1,833**	**$ -**
							$ -	
BIOTIC SURVEYS	Monitoring for Reports						$ -	
Landscape Ecologist	PVPLC staff	hours	300.0	$ 25	1	$ 7,500	$ 7,500	
Plant Ecologist	Restoration Ecologist	hours	330.0	$ 50	3	$ 5,500	$ 5,500	
Wildlife Biologist	outside expert	hours	200.0	$ 65	3	$ 4,333	$ 4,333	
Entomologist	outside expert	hours	80.0	$ 75	3	$ 2,000	$ 2,000	
Science Director	PVPLC staff	hours	40.0	$ 50	1	$ 2,000	$ 2,000	
Monitor Climate	local resource	hours	16.0	$ 25	1	$ 400	$ 400	
Subtotal						**$ 21,733**	**$ 21,733**	**$ -**
							$ -	
HABITAT RESTORATION	5 & 5 Restoration					$ -	$ -	
Site Analysis	field survey & report	hous	16.0	$ 50	1	$ 800	$ 800	
Restoration Plan	plan/report	hours	200.0	$ 50	3	$ 3,333	$ 3,333	
Organic Debris Removal	5 acres clearing	acre	5.0	$ 600	1	$ 3,000	$ 3,000	
Non-organic Debris Removal	dumpsters	fee	12.0	$ 400	1	$ 4,800		$ 4,800
Soil Amendments	misc	yard	5.0	$ 50	1	$ 250	$ 250	
Straw	for erosion control	bale	50.0	$ 10	1	$ 500	$ 500	
Seed Collection	native seed	hours	160.0	$ 25	1	$ 4,000	$ 4,000	
Plant Procurement	native plants	4" pot	9000.0	$ 2	1	$ 18,000	$ 18,000	
Revegetation	flag plant locations	hours	24.0	$ 25	1	$ 600	$ 600	
Revegetation	plant installation	hours	600.0	$ 15	1	$ 9,000	$ 9,000	
Plant Protection Device	collar & screen	item	4000.0	$ 3	3	$ 3,333	$ 3,333	
Irrigation System	DriWater	item	8000.0	$ 2	1	$ 16,000	$ 16,000	
Exotic Plant Control	hand removal	hours	200.0	$ 15	1	$ 3,000	$ 3,000	
Exotic Plant Control	herbicide	gallon	10.0	$ 100	1	$ 1,000	$ 1,000	
Exotic Plant Control	backpack spraying	hours	50.0	$ 25	1	$ 1,250	$ 1,250	
Other	misc. supplies	item	1.0	$ 1,000	1	$ 1,000	$ 1,000	
Subtotal						**$ 69,867**	**$ 65,067**	**$ 4,800**
HABITAT MAINTENANCE	Targeted Exotic Removal & Predator Control							
Erosion Control	slope stabilization	hours	10.0	$ 15.00	1	$ 150	$ 150	
Straw	erosion control	bale	10.0	$ 10.00	1	$ 100	$ 100	
Exotic Plant Control	hand removal	hours	1000.0	$ 15.00	1	$ 15,000	$ 15,000	
Exotic Plant Control	herbicide	gallon	20.0	$ 75.00	1	$ 1,500	$ 1,500	

NCCP PRESERVE PAR ANALYSIS FOR ONGOING EXPENSES

Attachment A

	Specifications	unit	number	cost/unit	interval	total	PVPLC	City
Exotic Plant Control	weed whip	hours	80.0	$ 15.00	1	$ 1,200	$ 1,200	
Exotic Animal Control	cowbird trapping	hours	250.0	$ 25.00	1	$ 6,250	$ 6,250	
Feral Animal Control	traps	item	3.0	$ 200.00	5	$ 120	$ 120	
Feral Animal Control	checking traps	hous	40.0	$ 15.00	1	$ 600	$ 600	
Brush Management	fuel modification zones	hours	500.0	$ 15.00	1	$ 7,500	$ -	$ 7,500
Brush Hog Tractor Mower	mowing	week	2.0	$ 1,100.00	1	$ 2,200	$ -	$ 2,200
Other	misc supplies	item	1.0	$ 2,500.00	1	$ 2,500	$ 2,500	
Subtotal						**$ 37,120**	**$ 27,420**	**$ 9,700**
							$ -	
PUBLIC SERVICES							$ -	
Access Control	public safety	acre	1514.0	$ 33.80	1	$ 51,173		$ 51,173
Patrolling	patrol	hours	240.0	$ 15.00	1	$ 3,600	$ 3,600	
Trail	maintenance	hours	100.0	$ 15.00	1	$ 1,500	$ 1,500	
Sign	boundary	item	30.0	$ 50.00	10	$ 150	$ 150	
Sign, Metal	metal	item	40.0	$ 50.00	10	$ 200	$ 200	
Sign, Metal	trail markers	item	200.0	$ 20.00	10	$ 400	$ 400	
Sign	interpretive	item	4.0	$ 2,000.00	20	$ 400	$ 400	
Volunteer Coordinator	meetings	hours	200.0	$ 25.00	1	$ 5,000	$ 5,000	
Docent Training	meetings	hours	40.0	$ 25.00	1	$ 1,000	$ 1,000	
Interpretive Literature	labor	hours	20.0	$ 45.00	1	$ 900	$ 900	
Interpretive Literature	copy	page	2000.0	$ 0.10	1	$ 200	$ 200	
Community Outreach	meetings	hours	80.0	$ 40.00	1	$ 3,200	$ 1,920	$ 1,280
Other	misc. supplies	item	1.0	$ 1,000.00	1	$ 1,000	$ 1,000	
Subtotal						**$ 68,723**	**$ 16,270**	**$ 52,453**
GENERAL MAINTENANCE								
Sanitation Control	collection & disposal	hours	400.0	$ 15.00	1	$ 6,000	$ -	$ 6,000
Toilets, Portable	yearly rental	item	5.0	$ 1,500.00	1	$ 7,500	$ -	$ 7,500
Other	misc. maintenance	misc.	1.0	$ 1,000.00	1	$ 1,000	$ -	$ 1,000
Subtotal						**$ 14,500**	**$ -**	**$ 14,500**
							$ -	
REPORTING	Report production						$ -	
Database Management	data imput	hours	80.0	$ 50.00	1	$ 4,000	$ 4,000	
GIS/CAD Management	data management	hours	40.0	$ 50.00	1	$ 2,000	$ 1,200	$ 800
Photodocumentation	field survey	hours	80.0	$ 25.00	1	$ 2,000	$ 2,000	
Aerial photos	flight	item	1.0	$ 1,000.00	3	$ 333	$ 200	$ 133
Agency Report	annual report	hours	50.0	$ 45.00	1	$ 2,250	$ 2,250	
Fire Management Plan	report	hours	20.0	$ 25.00	1	$ 500	$ 250	$ 250
Monitoring Reports	monitoring documentation	hours	120.0	$ 45.00	1	$ 5,400	$ 4,275	$ 1,125
Report Production	labor	hours	12.0	$ 25.00	1	$ 300	$ 300	

NCCP PRESERVE PAR ANALYSIS FOR ONGOING EXPENSES

Attachment A

	Specifications	unit	number	cost/unit	interval	total	PVPLC	City
Subtotal						**$ 16,783**	**$ 14,475**	**$ 2,308**
OFFICE MAINTENANCE								
Administrative	operations	hours	80.0	$ 45.00	1	$ 3,600	$ 2,160	$ 1,440
Telephone Charges, Annual	phone charges	person	0.5	$ 1,200.00	1	$ 600	$ 600	
Office Supplies, Year	stationery	person	1.0	$ 100.00	1	$ 100	$ 100	
Office Supplies, Year	supplies	person	1.0	$ 200.00	1	$ 200	$ 200	
Copier	copier	item	0.5	$ 400.00	8	$ 25	$ 25	
Fax Machine	fax	item	0.5	$ 400.00	5	$ 40	$ 40	
Deskjet Printer	printer	item	1.0	$ 400.00	6	$ 67	$ 67	
Other	misc supplies	item	1.0	$ 1,000.00	1	$ 1,000	$ 800	$ 200
Subtotal						$ 5,632	$ 3,992	$ 1,640
FIELD EQUIPMENT								
GPS, Rover & Base Unit	gps w. mapping capability	item	2.0	$ 400.00	5	$ 160	$ 80	$ 80
Vehicle	pickup truck	item	0.5	$ 16,000.00	5	$ 1,600	$ 1,600	
Vehicle	mileage	mile	12000.0	$ 0.38	1	$ 4,560	$ 4,560	
Vehicle Insurance	insurance	year	0.5	$ 3,500.00	1	$ 1,750	$ 1,750	
Camera 35mm lens	digital	item	1.0	$ 350.00	5	$ 70	$ 70	
Chemical Sprayer	backpack sprayer	item	1.0	$ 200.00	5	$ 40	$ 40	
Other	misc. supplies	item	1.0	$ 2,500.00	1	$ 2,500	$ 2,500	
Subtotal						**$ 10,680**	**$ 10,600**	**$ 80**
OPERATIONS								
Audit	CPA audit	item	0.5	$ 5,000.00	1	$ 2,500	$ 2,500	
Contracts	produce contracts	hours	30.0	$ 30.00	1	$ 900	$ 720	$ 180
Endowment	process endowment	hours	10.0	$ 30.00	1	$ 300	$ 300	
Other	misc items	item	1.0	$ 1,000.00	1	$ 1,000	$ 800	$ 200
Subtotal						**$ 4,700**	**$ 4,320**	**$ 380**
SUBTOTAL						$ 251,572	$ 165,710	$ 85,862
CONTINGENCY & ADMINISTRATION								
Contingency	6% of total					$ 15,094	$ 13,585	$ 1,509
Administration	18% of total					$ 45,283	$ 40,755	$ 4,528
Subtotal						**$ 60,377**	**$ 54,339**	**$ 6,038**
							$ -	
TOTAL						**$ 311,949**	**$ 220,049**	**$ 91,899**

Habitat Mitigation Savings

Attachment B

City Project	Project Status	Habitat Loss (acres) Coastal Sage Scrub	Grassland	Offsite Mitigation Acreage Coastal Sage Scrub	Grassland	Potential Savings Coastal Sage Scrub	Grassland
25th Street Road Repair (Phase 1)	Completed	0.10	N/A2	0.20	N/A2	$ 5,000	N/A2
25th Street Road Repair (Phase 2)	Completed	0.40	N/A2	0.80	N/A2	20,000	N/A2
Forrestal Property Trail Clearing	Completed	0.10	N/A2	0.30	N/A2	7,500	N/A2
McCarrell Canyon Outlet Improvement	Completed	0.20	N/A2	0.60	N/A2	15,000	N/A2
Portuguese Canyon Drainage Project	Completed	0.50	N/A2	1.50	N/A2	37,500	N/A2
PVDS Emergency Washout Project	Completed	0.40	N/A2	1.20	N/A2	30,000	N/A2
PVDS Roadway Rehabilitation	Completed	0.20	N/A2	0.60	N/A2	15,000	N/A2
Sacred Cove Geologic Investigation	Completed	0.10	N/A2	0.30	N/A2	7,500	N/A2
San Ramon Canyon Repair	Completed	1.00	N/A2	1.00	N/A2	25,000	N/A2
Tarapaca Sewer Line Relocation	Completed	0.50	N/A2	1.50	N/A2	37,500	N/A2
Subtotals for Completed Projects		3.50	0.00	8.00	0.00	200,000	-
Abalone Cove Beach Public Access & Amenities	Proposed	0.20	1.00	0.00	0.50	-	12,500
Active Recreation Area For Accessing Reserve Trail System	Proposed	1.00	13.60	3.00	6.80	75,000	170,000
Altamira Canyon Drainage Project	Proposed	2.50	3.00	5.00	1.50	125,000	37,500
Dewatering Wells (10 Wells) Within The Landslide Area	Proposed	2.50	2.50	7.50	1.25	187,500	31,250
Additional Recreational Facilities at Lower Point Vicente	Proposed	1.00	11.20	3.00	5.60	75,000	140,000
Lower San Ramon Canyon Grading	Proposed	2.00	6.00	6.00	3.00	150,000	75,000
Misc Drainage Improvement Projects	Proposed	4.00	12.00	12.00	6.00	300,000	150,000
Misc. Damaged Drain Repair Within The Landslide Area	Proposed	5.00	15.00	15.00	7.50	375,000	187,500
Misc. Fissure Filling Within The Landslide Area	Proposed	3.00	3.00	9.00	1.50	225,000	37,500
PVDE Drainage Improvement Projects (17 Projects)	Proposed	4.00	12.00	12.00	6.00	300,000	150,000
RPV Conceptual Trails Plan Implementation	Proposed	5.00	15.00	15.00	7.50	375,000	187,500
Subtotals for Proposed Projects		30.20	94.30	87.50	47.15	2,187,500	1,178,750
Totals for All City Projects		**33.70**	**94.30**	**95.50**	**47.15**	**$ 2,387,500**	**$ 1,178,750**

Estimated Management Costs

Estimated costs of habitat restoration and management for Alternative C was obtained from a "Property Analysis Record" (or PAR, a program by Center for Natural Lands Management) prepared by URS and Palos Verdes Peninsula Land Conservancy (PVPLC). Endowment necessary to fund annual costs in perpetuity was also estimated by the PAR analysis, using net interest revenue of 5 percent. Restoration and management costs for the other alternatives were estimated from those of Alternative C, adjusted in proportion to the total acres of conserved land.

Estimated Land Values for Open Space Acquistion

To estimate the probable market value of acquisition areas, prices of 2,406 acres of open space and habitat land sales in Los Angeles and Orange Counties from 1995 to 2000 were reviewed (Table C-1). These are generally lands without subdivision maps, where important biological resources and frequently physical constraints are present. Average price, adjusted for inflation and weighted by land area, was $23,600 per acre, or $0.54 per square foot.

Figure C-1 is a plot of average land price per square foot, where the transactions (after adjustment to 2001 dollars) were arranged in order of ascending price, and the vertical axis indicates the cumulative percent of land sold at or below a given price. For example, of the 2,406 acres reviewed, approximately one-half by area were sold for $0.48 per square foot or less. For this analysis and considering the high market value of housing, it is assumed that acquisition of land in the City of Rancho Palos Verdes for open space or habitat use would range between $0.75 to $1.05 per square foot, or approximately $32,700 to $45,700 per acre. Approximately 80 to 90 percent of open space land sales shown in Table C-1 and Figure C-1 occurred at prices equal to or less than these amounts.

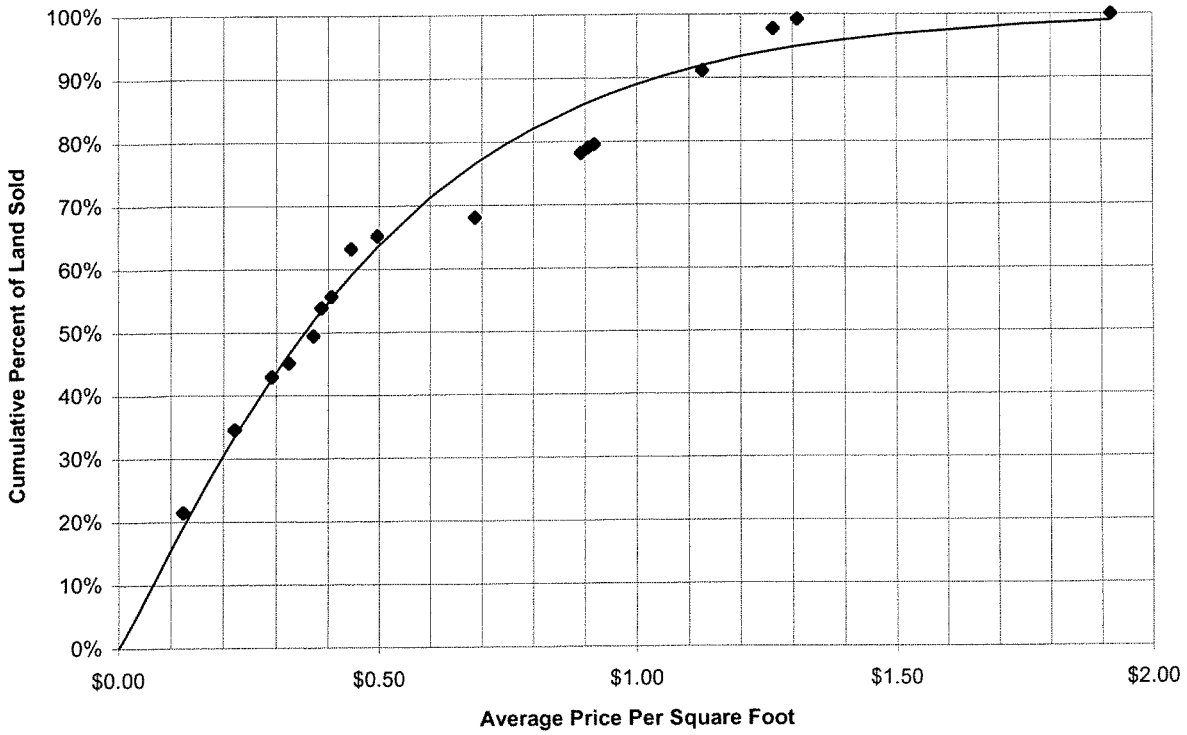
Table C-1
COMPARABLE SALES OF HABITAT AND OPEN SPACE LAND
IN LOS ANGELES AND ORANGE COUNTIES, 1995 - 2000

Recording Date	Property / Owner	Location	Zip Code	Land Area (Ac.)	Sales Price	Price as of Record Date		Inflated to 2001 Price [1]	
						Per Acre	Per Sq.Ft.	Per Acre	Per Sq.Ft.
03/04/97	OH, RS1 Zone; hazard; City of Rancho Palos Verdes	Rancho Palos Verdes	90275	160.0	$7,700,000	$48,110	$1.10	$55,032	$1.26
01/12/95	A25-A11 Zone; park land	LA Co., nr. Malibu	90265	182.6	$3,000,000	$16,428	$0.38	$19,435	$0.45
08/21/97	Open space; Mountain Restoration Trust	Malibu	90265	278.1	$12,000,000	$43,147	$0.99	$49,089	$1.13
07/15/98	A11 Zone; Malibu Canyon L.P.	Calabasas	91302	315.0	$2,755,000	$8,746	$0.20	$9,667	$0.22
09/23/98	A11 Zone; State of California	Malibu	90265	242.5	$8,600,000	$35,460	$0.81	$38,899	$0.89
10/26/99	A11 Zone; Charles E. Fitzgerald	Malibu	90265	52.3	$700,000	$13,382	$0.31	$14,165	$0.33
06/06/97	R1 Zone; City of Sierra Madre	Sierra Madre	91024	12.1	$425,000	$35,037	$0.80	$40,030	$0.92
04/25/96	HR Zone; rolling, steep; City of Whittier	Whittier	90601	18.8	$1,350,000	$71,732	$1.65	$83,666	$1.92
05/24/96	OS; habitat preserve; Puente Hills Landfill [2]	La Habra Heights	90631	517.9	$2,402,716	$4,640	$0.11	$5,415	$0.12
02/13/97	OS W; habitat area; State of California	Whittier	90601	201.7	$2,250,000	$11,157	$0.26	$12,739	$0.29
10/21/97	A1 Zone; level; Puente Hills Landfill [2]	LA Co., nr. Whittier	90601	107.0	$1,600,000	$14,953	$0.34	$16,891	$0.39
04/01/98	HR Zone; rolling, steep; City of Whittier	Whittier	90601	102.8	$1,500,000	$14,596	$0.34	$16,227	$0.37
10/14/98	A21 Zone; Puente Hills Landfill [2]	La Habra Heights	91745	20.8	$750,000	$36,075	$0.83	$39,506	$0.91
06/18/98	AG Zone	San Juan Capistrano	92675	34.4	$1,770,000	$51,453	$1.18	$57,070	$1.31
11/10/99	Resid. Zone	Silverado	92676	48.9	$1,000,000	$20,458	$0.47	$21,643	$0.50
12/15/99	R2 Zone; Signal Landmark	Huntington Beach	92649	43.2	$725,000	$16,802	$0.39	$17,745	$0.41
04/11/00	PC Zone	Lake Forest	92630	67.9	$1,959,000	$28,870	$0.66	$29,957	$0.69
	Total / Weighted average			2,406.0		$20,984	$0.48	$23,599	$0.54

Source: Los Angeles County Office of the Assessor.

1. Prices inflated to April 2001 using the housing component of US BLS Consumer Price Index for Los Angeles-Riverside-Orange County, CA.
2. Puente Hills Landfill Native Habitat Preservation Authority.

Figure C-1
Distribution of Prices of Habitat and Open Space Land Sold in Los Angeles and Orange Counties, 1995-2000



The CalEPPC List:
Exotic Pest Plants of Greatest Ecological Concern in California
October, 1999

The CalEPPC list is based on information submitted by our members and by land managers, botanists and researchers throughout the state, and on published sources. The list highlights non-native plants that are serious problems **in wildlands** (natural areas that support native ecosystems, including national, state and local parks, ecological reserves, wildlife areas, national forests, BLM lands, etc.).

List categories include:

List A: Most Invasive Wildland Pest Plants; documented as aggressive invaders that displace natives and disrupt natural habitats. Includes two sub-lists; List A-1: Widespread pests that are invasive in more than 3 Jepson regions (see page 3), and List A-2: Regional pests invasive in 3 or fewer Jepson regions.

List B: Wildland Pest Plants of Lesser Invasiveness; invasive pest plants that spread less rapidly and cause a lesser degree of habitat disruption; may be widespread or regional.

Red Alert: Pest plants with potential to spread explosively; infestations currently small or localized. If found, alert CalEPPC, County Agricultural Commissioner or California Department of Food and Agriculture.

Need More Information: Plants for which current information does not adequately describe nature of threat to wildlands, distribution or invasiveness. Further information is requested from knowledgeable observers.

Annual Grasses: New in this edition; a preliminary list of annual grasses, abundant and widespread in California, that pose significant threats to wildlands. Information is requested to support further definition of this category in next List edition.

Considered But Not Listed: Plants that, after review of status, do not appear to pose a significant threat to wildlands.

Plants that fall into the following categories are not included in the List:

- Plants found mainly or solely in disturbed areas, such as roadsides and agricultural fields.
- Plants that are established only sparingly, with minimal impact on natural habitats.

1999 List Review Committee:

Dr. Lars W.J. Anderson, Research Leader
U.S. Dept.of Agriculture-ARS
Aquatic Weed Research Lab.

Dr. Joe DiTomaso, Extension Weed Ecologist
Weed Science Program
Department of Vegetable Crops
University of California, Davis

Dr. G. Fred Hrusa, Senior Plant Systematist
Plant Pest Diagnostics Center
California Department of Food & Agriculture

Dr. Marcel Rejmánek, Professor of Plant Ecology
Section of Evolution and Ecology
University of California, Davis

CalEPPC List Committee:

Ann Howald, Instructor
Santa Rosa Junior College

Dr. John Randall, Invasive Weed Specialist
The Nature Conservancy

Jake Sigg, President
California Native Plant Society

Ellie Wagner, Botanist
California Dept. of Transportation

Peter Warner, Restoration Coordinator
Golden Gate National Parks Association

The CalEPPC list is updated regularly. Please use the form provided to send comments, suggestions or new information to: **Peter Warner, 555 Magnolia Avenue, Petaluma, CA, 94952-2080**, or via email at **peterjwarner@earthlink.net**

Thanks to all those who submitted comments for the 1999 list.

The California Exotic Pest Plant Council

List A-1: Most Invasive Wildland Pest Plants; Widespread

Latin Name[1]	Common Name	Habitats of Concern and Other Comments	Distribution[2]
Ammophila arenaria	European beach grass	Coastal dunes	SCo,CCo,NCo
Arundo donax	giant reed, arundo	Riparian areas	cSNF,CCo,SCo,SnGb,D,GV
Bromus tectorum	cheat grass, downy brome	Sagebrush, pinyon-juniper, other desert communities; increases fire frequency	GB,D
Carpobrotus edulis	iceplant, sea fig	Many coastal communities, esp. dunes	SCo,CCo,NCo,SnFrB
Centaurea solstitialis[C]	yellow starthistle	Grasslands	CA-FP (uncommon in SoCal)
Cortaderia jubata	Andean pampas grass, jubatagrass	Horticultural; many coastal habitats, esp. disturbed or exposed sites incl. logged areas	NCo,NCoRO,SnFrB, CCo,WTR,SCo
Cortaderia selloana	pampas grass	Horticultural; coastal dunes, coastal scrub, Monterey pine forest, riparian, grasslands; wetlands in ScV; also on serpentine	SnFrB,SCo,CCo,ScV
Cynara cardunculus[B]	artichoke thistle	Coastal grasslands	CA-FP, esp. CCo,SCo
Cytisus scoparius[C]	Scotch broom	Horticultural; coastal scrub, oak woodlands, Sierra foothills	NW,CaRF,SNF,GV, SCo,CW
Eucalyptus globulus	Tasmanian blue gum	Riparian areas, grasslands, moist slopes	NCoRO,GV,SnFrB, CCo,SCoRO,SCo,nChI
Foeniculum vulgare	wild fennel	Grasslands; esp. SoCal, Channel Is.; the cultivated garden herb is not invasive	CA-FP
Genista monspessulana[C]	French broom	Horticultural; coastal scrub, oak woodlands, grasslands	NCoRO,NCoRI,SnFrB, CCo,SCoRO,sChI,WTR,PR
Lepidium latifolium[B]	perennial pepperweed, tall whitetop	Coastal, inland marshes, riparian areas, wetlands, grasslands; potential to invade montane wetlands	CA (except KR,D)
Myriophyllum spicatum	Eurasian watermilfoil	Horticultural; lakes, ponds, streams, aquaculture	SnFrB,SnJV,SNH(?); prob. CA
Pennisetum setaceum	fountain grass	Horticultural; grasslands, dunes, desert canyons; roadsides	Deltaic GV,CCo,SCo, SnFrB
Rubus discolor	Himalayan blackberry	Riparian areas, marshes, oak woodlands	CA-FP
Senecio mikanioides (=*Delairea odorata*)	Cape ivy, German ivy	Coastal, riparian areas, also SoCal (south side San Gabriel Mtns.)	SCo,CCo,NCo,SnFrB,SW
Taeniatherum caput-medusae[C]	medusa-head	Grasslands, particularly alkaline and poorly drained areas	NCoR,CaR,SNF,GV,SCo
Tamarix chinensis, T. gallica, T. parviflora & T. ramosissima	tamarisk, salt cedar	Desert washes, riparian areas, seeps and springs	SCo,D,SnFrB,GV,sNCoR, sSNF,Teh,SCoRI,SNE, WTR
Ulex europaeus[B]	gorse	North, central coastal scrub, grasslands	NCo,NCoRO,CaRF, n&cSNF,SnFrB,CCo

[1]Noxious Weed Ratings

F: Federal Noxious Weed, as designated by the USDA; targeted for federally-funded prevention, eradication or containment efforts.

A: CA Dept. of Food & Agriculture, on "A" list of Noxious Weeds; agency policies call for eradication, containment or entry refusal.

B: CA Dept. of Food & Agriculture, on "B" list of Noxious Weeds; includes species that are more widespread, and therefore more difficult to contain; agency allows county Agricultural Commissioners to decide if local eradication or containment is warranted.

C: CA Dept. of Food & Agriculture, on "C" list of Noxious Weeds; includes weeds that are so widespread that the agency does not endorse state or county-funded eradication or containment efforts except in nurseries or seed lots.

Q: CA Dept. of Food & Agriculture's designation for temporary "A" rating pending determination of a permanent rating.

For most species nomenclature follows *The Jepson Manual: Higher Plants of California* (Hickman, J., Ed., 1993).

Exotic Pest Plants of Greatest Ecological Concern in California

List A-2: Most Invasive Wildland Pest Plants; Regional

Latin Name[1]	Common Name	Habitats of Concern and Other Comments	Distribution[2]
Ailanthus altissima	tree of heaven	Riparian areas, grasslands, oak woodlands, esp. GV, SCo	CA-FP
Atriplex semibaccata	Australian saltbush	SoCal, coastal grasslands, scrub, "high marsh" of coastal salt marshes	CA (except CaR,c&sSN)
Brassica tournefortii	Moroccan or African mustard	Washes, alkaline flats, disturbed areas in Sonoran Desert	SW,D
Bromus madritensis ssp. *rubens*	red brome	Widespread; contributing to SoCal scrub, desert scrub type conversions; increases fire frequency	CA
Cardaria draba[B]	white-top, hoary cress	Riparian areas, marshes of central coast; also ag. lands, disturbed areas	Problem only in CCo
Conicosia pugioniformis	narrow-leaved iceplant, roundleaf iceplant	Coastal dunes, sandy soils near coast; best documented in San Luis Obispo and Santa Barbara cos.	CCo
Cotoneaster pannosus, C. lacteus	cotoneaster	Horticultural; many coastal communities; esp. North Coast, Big Sur; related species also invasive	CCo,SnFrB,NW
Cytisus striatus	striated broom	Often confused with C. scoparius; coastal scrub, grassland	SnFrB,CCo,SCo,PR
Egeria densa	Brazilian waterweed	Streams, ponds, sloughs, lakes; Sacramento-San Joaquin Delta	n&sSNF,SnJV,SnFrB, SnJt,SNE
Ehrharta calycina	veldt grass	Sandy soils, esp. dunes; rapidly spreading on central coast	CCo,SCoRO,WTR
Eichhornia crassipes	water hyacinth	Horticultural; established in natural waterways, esp. troublesome in Sacramento-San Joaquin Delta	GV,SnFrB,SCo,PR
Elaeagnus angustifolia	Russian olive	Horticultural; interior riparian areas	SnJV,SnFrB,SNE,DMoj
Euphorbia esula[A]	leafy spurge	Rangelands in far no. CA, also reported from Los Angeles Co.	eKR,NCo,CaR,MP,SCo
Ficus carica	edible fig	Horticultural; Central Valley, foothill, South Coast and Channel Is. riparian woodlands	nSNF,GV,SnFrB,SCo
Lupinus arboreus	bush lupine	Native to SCo, CCo; invasive only in North Coast dunes	SCo,CCo,NCo
Mentha pulegium	pennyroyal	Santa Rosa Plain (Sonoma Co.) and Central Valley vernal pools; wetlands elsewhere	NW,GV,CW,SCo
Myoporum laetum	myoporum	Horticultural; coastal riparian areas in SCo	SCo,CCo
Saponaria officinalis	bouncing bet	Horticultural; meadows, riparian habitat in SNE, esp. Mono Basin	NW,CaRH,nSNF,SnFrB, SCoRO,SCo,PR,MP,SNE, GV
Spartina alterniflora	Atlantic or smooth cordgrass	S.F. Bay salt marshes; populations in Humboldt Bay believed extirpated	CCo(shores of S.F. Bay)

[2]Distribution by geographic subdivisions per the Jepson Manual

CA=California
CA-FP=California Floristic Province
CaR=Cascade Ranges
CaRF=Cascade Range Foothills
CCo=Central Coast
ChI=Channel Islands
CW=Central Western CA
D=Deserts
DMoj=Mojave Desert
DSon=Sonoran Desert
GB=Great Basin
GV=Great Valley
KR=Klamath Ranges
MP=Modoc Plateau
NCo=North Coast
NCoRI=Inner NCo Ranges
NCoRO=Outer NCo Ranges
NW=Northwestern CA
PR=Peninsular Ranges
SCo=South Coast
SCoRI=Inner SCo Ranges
SCoRO=Outer SCo Ranges
ScV=Sacramento Valley
SnJV=San Joaquin Valley
SN=Sierra Nevada
SNE=East of SN
SNF=SN Foothills
SNH=High SN
SnFrB=San Francisco Bay Area
SnGb=San Gabriel Mtns
SW=Southwestern CA
Teh=Tehachapi Mtns
WTR=Western Transverse Ranges

List B: Wildland Pest Plants of Lesser Invasiveness

Latin Name[1]	Common Name	Habitats of Concern and Other Comments	Distribution[2]
Ageratina adenophora[F]	eupatory	Horticultural; coastal canyons, coastal scrub, slopes, Marin to San Diego Co; San Gabriel Mtns.	CCo,SnFrB,SCo,SCoRO
Bassia hyssopifolia	bassia	Alkaline habitats	CA (except NW,SNH)
Bellardia trixago	bellardia	Grasslands, on serpentine, where a threat to rare natives	NCoRO,CCo,SnFrB
Brassica nigra	black mustard	Coastal communities, esp. fog-belt grasslands; disturbed areas	CA-FP
Cardaria chalepensis[B]	lens-podded white-top	Wetlands of Central Valley	CA
Carduus pycnocephalus[C]	Italian thistle	Grasslands, shrublands, oak woodlands	sNCo,sNCoR,SNF,CW, SCo,ScV
Centaurea calcitrapa[B]	purple starthistle	Grasslands	NW,sCaRF,SNF,GV,CW,SW
Centaurea melitensis	tocalote, Malta starthistle	Widespread; sometimes misidentified as C. solstitialis; perhaps a more serious invader than currently recognized	CA-FP,D
Cirsium arvense[B]	Canada thistle	Especially troublesome in riparian areas	CA-FP
Cirsium vulgare	bull thistle	Riparian areas, marshes, meadows	CA-FP,GB
Conium maculatum	poison hemlock	Mainly disturbed areas but may invade wildlands; known to poison wildlife; early expanding stage in many areas, esp. San Diego Co. riparian, oak understory	CA-FP
Crataegus monogyna	hawthorn	Horticultural; recent invader, colonizing healthy native forest around Crystal Springs reservoir on S.F. peninsula	SnFrB,CCo,NCo,NCoR
Ehrharta erecta	veldt grass	Wetlands, moist wildlands; common in urban areas; potential to spread rapidly in coastal, riparian, grassland habitats	SnFrB,CCo,SCo
Erechtites glomerata, E. minima	Australian fireweed	Coastal woodlands, scrub, NW forests, esp. redwoods	NCo,NCoRO,CCo,SnFrB, SCoRO
Festuca arundinacea	tall fescue	Horticultural (turf grass); coastal scrub, grasslands in NCo, CCo	CA-FP
Hedera helix	English ivy	Horticultural; invasive in coastal forests, riparian areas	CA-FP
Holcus lanatus	velvet grass	Coastal grasslands, wetlands in No. CA	CA exc. DSon
Hypericum perforatum[C]	Klamathweed, St. John's wort	Redwood forests, meadows, woodlands; invasion may occur due to lag in control by established biocontrol agents	NW,CaRH,n&cSN,ScV, CCo,SnFrB,PR
Ilex aquifolium	English holly	Horticultural; coastal forests, riparian areas	NCoRO,SnFrB,CCo
Iris pseudacorus	yellow water iris, yellow flag	Horticultural; riparian, wetland areas, esp. San Diego, Los Angeles cos.	SnFrB,CCo,sSnJV,SCo
Leucanthemum vulgare	ox-eye daisy	Horticultural; invades grassland, coastal scrub	KR,NCoRO,n&cSNH, SnFrB,WTR,PR
Mesembryanthemum crystallinum	crystalline iceplant	Coastal bluffs, dunes, scrub, grasslands; concentrates salt in soil	NCo,CCo,SCo,ChI
Myriophyllum aquaticum	parrot's feather	Horticultural; streams, lakes, ponds	NCo,CaRF,CW,SCo
Olea europaea	olive	Horticultural and agricultural; reported as invasive in riparian habitats in Santa Barbara, San Diego	NCoR,NCoRO,CCo, SnFrB,SCoRO,SCo
Phalaris aquatica	Harding grass	Coastal sites, esp. moist soils	NW,cSNF,CCo,SCo
Potamogeton crispus	curlyleaf pondweed	Scattered distribution in ponds, lakes, streams	NCoR,GV,CCo,SnFrB, SCo,ChI,SnGb,SnBr,DMoj
Ricinus communis	castor bean	SoCal coastal riparian habitats	GV,SCo,CCo
Robinia pseudoacacia	black locust	Horticultural; riparian areas, canyons; native to eastern U.S.	CA-FP,GB
Schinus molle	Peruvian pepper tree	Horticultural; invasive in riparian habitats in San Diego, Santa Cruz Is.	SNF,GV,CW,SW,Teh

List B: Continued

Latin Name[1]	Common Name	Habitats of Concern and Other Comments	Distribution[2]
Schinus terebinthifolius	Brazilian pepper	Horticultural; riparian areas	sSCo
Senecio jacobaea[B]	tansy ragwort	Grasslands; biocontrol agents established	NCo,wKR,s&wCaR, nSNF, nScV,SW
Spartium junceum	Spanish broom	Coastal scrub, grassland, wetlands, oak woodland, NW forests, esp. redwoods; also roadcuts	NCoRO,ScV,SnFrB, SCoRO,SCo,sChI,WTR
Verbascum thapsus	woolly or common mullein	SNE meadows, sagebrush, pinyon-juniper woodlands; shores of Boggs Lake (Lake Co.)	CA
Vinca major	periwinkle	Horticultural; riparian, oak woodland, other coastal habitats	NCoRO,SnFrB, CCo, sSCoRO,SCo

Red Alert: Species with potential to spread explosively; infestations currently restricted

Latin Name[1]	Common Name	Habitats of Concern and Other Comments	Distribution[2]
Alhagi pseudalhagi[A]	camel thorn	Noxious weed of arid areas; most infestations in California have been eradicated	GV,sSNE,D
Arctotheca calendula[A]	Capeweed	Seed-producing types are the problem; most are vegetative only	NCo,SnFrB,CCo
Centaurea maculosa[A]	spotted knapweed	Riparian, grassland, wet meadows, forest habitats; contact CA Food & Ag if new occurrences found	CaR,SN,nScV,nCW,MP, nSNE,sPR,NW
Crupina vulgaris[F,A]	bearded creeper, common crupina	Aggressively moving into wildlands, esp. grassland habitats	NCoR (Sonoma Co.),MP
Halogeton glomeratus[A]	halogeton	Noxious weed of Great Basin rangelands; report locations to CA Food & Ag; goal is exclusion from CA	GB
Helichrysum petiolare	licorice plant	North coastal scrub; one population on Mt. Tamalpais, w. Marin Co.	Not in Jepson
Hydrilla verticillata[F,A]	hydrilla	Noxious water weed; report locations to CA Food & Ag; eradication program in place; found in Clear Lake (Lake Co.) in 1994	NCoRI,n&cSNF,ScV,SCo,D
Lythrum salicaria[B]	purple loosestrife	Horticultural; noxious weed of wetlands, riparian areas	sNCo,NCoRO,nSNF,ScV, SnFrB,nwMP
Ononis alopecuroides[Q]	foxtail restharrow	Eradication efforts underway in San Luis Obispo Co.; to be looked for elsewhere in CA	CCo; not in Jepson
Retama monosperma	bridal broom	First noted at Fallbrook Naval Weapons Station, San Diego Co; could rival other invasive brooms	San Diego Co.; not in Jepson
Salvinia molesta[F]	giant waterfern	Ponds, lakes, reservoirs, canals	Napa, Sonoma cos., lower Colorado River; not in Jepson
Sapium sebiferum	Chinese tallow tree	Horticultural; riparian, wetland habitats, open areas and understory	ScV,SnFrB; not in Jepson
Sesbania punicea	scarlet wisteria tree	Horticultural; riparian areas; American River Parkway, Sacramento Co., Suisun Marsh, San Joaquin River Parkway	ScV,SnJV; not in Jepson
Spartina anglica	cord grass	Scattered in S.F. Bay	Not in Jepson
Spartina densiflora	dense-flowered cord grass	Scattered in S.F. Bay, Humboldt Bay salt marshes	CCo,NCo
Spartina patens	salt-meadow cord grass	One site in S.F. Bay, also Siuslaw Estuary, OR and Puget Sound, WA	CCo

Need More Information

Latin Name[1]	Common Name	Habitats of Concern and Other Comments	Distribution[2]
Acacia dealbata	silver wattle	Aggressive in natural areas?	SnFRB,SCoRO,SCoRI,CCo
Acacia decurrens	green wattle	Sometimes confused with A. dealbata; aggressive in natural areas?	Unknown
Acacia melanoxylon	blackwood acacia	Reported from S.F. Bay area, central coast, Santa Cruz Is.; spreads slowly; other areas?	SnFrB,SCoRO,SCo,CCo
Aeschynomene rudis[B]	rough jointvetch	Princeton area, Colusa Co.; pest of rice crops; potential threat to riparian, wetland habitats?	ScV
Agrostis avenacea	Pacific bentgrass	Invading vernal pools in San Diego area; attempts at manual eradication unsuccessful so far; problem in other areas?	sNCo,sNCoR,SNF, GV,CW,nSCo
Aptenia cordifolia	red apple	Habitats where invasive?	CCo,SCo,sChI
Asphodelus fistulosus	asphodel	Common in SCo highway rights-of-way, other disturbed sites; threats to wildlands?	sSnJV,SCo
Carduus acanthoides[A]	giant plumeless thistle	Threatens wildlands?	NCoRI,nSN,SnFrB, nSCoRO,MP
Cistus ladanifer	gum cistus	Horticultural; invades coastal sage scrub, chaparral; areas where problematic?	sCCo,SnGb
Cordyline australis	New Zealand cabbage	Infestation at Salt Point State Park; bird-dispersed; other problem areas?	Not in Jepson
Cotoneaster spp. (exc. C. pannosus, C. lacteus)	cotoneaster	Horticultural; bird-distributed; which species are problems in wildlands?	Unknown
Cupressus macrocarpa	Monterey cypress	Native only to Monterey Peninsula; planted and naturalized CCo, NCo; threat to wildlands?	CCo
Descurainia sophia	flixweed, tansy mustard	Entering Mojave wildlands through washes; threat to wildlands?	CA
Dimorphotheca sinuata	African daisy, Cape marigold	Horticultural; reported as invasive in w. Riverside Co., Ventura Co.; problem elsewhere?	SnJV,SCoRO,SCo,PR
Echium candicans, E. pininana	pride of Madeira, pride of Teneriffe	Horticultural; riparian, grassland, coastal scrub communities; spreads by seed	CCo,SnFrB,SCo,sNCo
Ehrharta longiflora	veldt grass	Reported from San Diego	Not in Jepson
Erica lusitanica	heath	Threat to wildlands?	NCo (Humboldt Co.)
Euphorbia lathyris	caper spurge, gopher plant	Invades coastal scrub, marshes, dunes; Sonoma, Marin cos.; threat to wildlands?	NCo,CCo,GV,SCo
Gazania linearis	gazania	Horticultural; invades grassland in S.F., coastal scrub?	CCo,SCo
Glyceria declinata		Although reported from Central Valley vernal pools, genetic research is needed to confirm identity; plants that have been called G. declinata key in Jepson to native G. occidentalis	Uncertain; not in Jepson
Hedera canariensis	Algerian ivy	Horticultural; invasive in riparian areas in SoCal?	Not in Jepson
Hirschfeldia incana	Mediterranean or short-pod mustard	Increasing in western, southern Mojave; threat to wildlands?	NCo,SNF,GV,CW,SCo, DMoj
Hypericum canariense	Canary Island hypericum	Reported in San Diego area, coastal sage scrub, grassland; threat to wildlands?	SCo
Hypochaeris radicata	rough cat's-ear	Widespread in coastal grasslands, wetlands; threat to wildlands?	NW,CaRF,nSNF,ScV, CW,SCo
Isatis tinctoria[B]	dyers' woad	Well-known invader in Utah; threat to wildlands?	KR,CaR,nSNH,MP
Ligustrum lucidum	glossy privet	Horticultural; spreading rapidly on Mendocino coast; problem in other areas?	NCo; not in Jepson
Limonium ramosissimum ssp. *provinciale*	sea lavender	Reported spreading in Carpinteria Salt Marsh; problem in other areas?	Not in Jepson

Need More Information: Continued

Latin Name[1]	Common Name	Habitats of Concern and Other Comments	Distribution[2]
Ludwigia uruguayensis (= *L. hexapetala*)	water primrose	Invasive in aquatic habitats; non-native status questioned?	NCo,sNCoRO,CCo, SnFrB,SCo
Malephora crocea	ice plant	Invades margins of wetlands, bluffs along SCo	CCo,SCo,sChI
Maytenus boaria	mayten	Horticultural; scattered in riparian forests, ScV; east SnFrB	ScV,SnFrB
Mesembryanthemum nodiflorum	slender-leaved iceplant	Abundant on Channel Islands; invades wetlands; habitats where problematic?	SnFrB,SCo,ChI
Nicotiana glauca	tree tobacco	Disturbed places; not very competitive with natives in coastal scrub, chaparral; spreading along Putah Creek (Yolo Co.); problems elsewhere?	NCoRI,c&sSNF, GV,CW,SW,D
Oxalis pes-caprae	Bermuda buttercup	Invades disturbed sites; invasive in undisturbed habitats?	NCo,NCoRO,CCo, SnFrB,SCoRO,SCo
Parentucellia viscosa		Threat to NCo (Humboldt Co.) dune swales?	NCo,NCoRO,CCo,SCo
Passiflora caerulea		Horticultural; reported from SoCal; threat to wildlands?	SCo; not in Jepson
Pennisetum clandestinum[F,C]	Kikuyu grass	Disturbed sites, roadsides; threat to wildlands?	NCo,CCo,SnFrB,SCo, Santa Cruz Is.
Phyla nodiflora	mat lippia	Most varieties in CA are native; taxonomy unclear; status of plants in vernal pools, wetlands?	NW(except KR,NCoRH), GV,CCo,SnFrB,SCo, PR,DSon
Pinus radiata cultivars	Monterey pine	Cultivars invading native Monterey, Cambria forests, where spread of pine pitch canker is a concern	CCo
Piptatherum miliaceum	smilo grass	Aggressive in SoCal creeks, canyons; threats to wildlands?	NCo,GV,CW,SCo
Pistacia chinensis	Chinese pistache	Horticultural; invades riparian areas and woodlands in ScV	ScV
Prunus cerasifera	cherry plum	Oak woodland, riparian areas; esp. Marin, Sonoma cos.; bird-distributed; problems elsewhere?	SnFrB,CCo
Pyracantha angustifolia	pyracantha	Horticultural; spreads from seed in S.F. Bay area; bird-distributed; problem elsewhere?	sNCoRO,CCo,SnFrB, SCo
Salsola soda	glasswort	Threat to salt marshes?	nCCo,SnFrB
Salsola tragus[C]	Russian thistle, tumbleweed	Abundant in dry open areas in w. Mojave Desert, Great Basin; not limited to disturbed sites; threats?	CA
Salvia aethiopis[B]	Mediterranean sage	Creates monocultures in E. Oregon grasslands; threat to CA wildlands?	MP
Stipa capensis		Distribution and threats?	Not in Jepson
Tamarix aphylla	athel	Spreading in Salton Sea area; threats to wildlands?	nSnJV,nSCo,D
Tanacetum vulgare	common tansy	Jepson reports as uncommon, escape from cultivation in urban areas; problem in wildlands?	NCo,NCoRO,CaRH, SCoRO
Verbena bonariensis, V. litoralis	tall vervain	Horticultural; invades riparian forests, wetlands; extensive along ScV riparian corridors; roadsides (Yuba Co.); elsewhere?	ScV,nSnJV,nSnFrB,CCo

Annual Grasses

Latin Name[1]	Common Name	Habitats of Concern and Other Comments	Distribution[2]
Aegilops triuncialis[B]	barbed goatgrass	Serpentine soils, grasslands	sNCoR,CaRF, n&cSNF, ScV,nCW
Avena barbata	slender wild oat	Lower elev. in SoCal; coastal slopes, coastal sage scrub, disturbed sites	CA-FP,MP,DMoj
Avena fatua	wild oat	Lower elev. in SoCal; coastal slopes, coastal sage scrub on deeper soil, disturbed sites	CA-FP,MP,DMoj
Brachypodium distachyon	false brome	Expanding in SoCal; common in Orange Co.	sNCoR,sCaRF, SNF,GV,CW,SCo,sChI
Bromus diandrus	ripgut brome	Coastal dunes, coastal sage scrub, grasslands	CA
Lolium multiflorum	Italian ryegrass	Wetland areas, esp. vernal pools in San Diego Co.; common in disturbed sites	CA-FP
Schismus arabicus	Mediterranean grass	Threat to Mojave and Colorado desert shrublands?	SnJV,CW,sChI,D
Schismus barbatus	Mediterranean grass	Threat to Mojave and Colorado desert shrublands?	SnJV,SW,D

Considered, but not listed

Latin Name[1]	Common Name	Habitats of Concern and Other Comments
Albizia lophantha	plume acacia	Not invasive
Anthoxanthum odoratum	sweet vernal grass	Disturbed sites on coast; Marin, Sonoma, Mendocino cos.
Carpobrotus chilensis	sea fig	Native status in question; not a threat to wildlands
Centranthus ruber	red valerian	Horticultural; roadcuts in Marin Co.; not a threat to wildlands
Convolvulus arvensis[C]	field bindweed	Disturbed sites; ag lands
Coprosma repens	mirror plant	No evidence of wildland threat
Crocosmia x crocosmiiflora		Generally in disturbed coastal, urban areas, roadsides
Digitalis purpurea	foxglove	Horticultural; scattered in prairies, meadows, disturbed sites; not a major wildland threat
Dipsacus sativus, D. fullonum	wild teasel, Fuller's teasel	Roadsides, disturbed sites
Fumaria officinalis, F. parviflora	fumitory	S.F. Bay area, Monterey Bay salt marshes, sandy disturbed sites
Medicago polymorpha	California bur clover	Grasslands, moist sites; mainly restricted to disturbed sites
Melilotus officinalis	yellow sweet clover	Restricted to disturbed sites in CA
Nerium oleander	oleander	Horticultural; not invasive, although reported from riparian areas in Central Valley, San Bernardino Mtns.
Picris echioides	bristly ox-tongue	Disturbed areas
Silybum marianum	milk thistle	Disturbed areas, especially overgrazed moist pasturelands; may interfere with restoration
Xanthium spinosum	spiny cocklebur	Identified as native in *The Jepson Manual* (Hickman, 1993) and *A California Flora* (Munz and Keck, 1968); restricted to disturbed areas
Zantedeschia aethiopica	calla lily	Horticultural; mainly a garden escape in wet coastal areas
Zoysia cultivars	Amazoy and others	Horticultural; no evidence of wildland threat

LOS ANGELES COUNTY REGIONAL PARK AND OPEN SPACE DISTRICT

RECEIVED
City of Rancho Palos Verdes

APR 26 2001

PUBLIC WORKS DEPARTMENT

April 23, 2001

Ms. Lauren Ramezani
Senior Administrative Analyst
Department of Public Works
City of Rancho Palos Verdes
30940 Hawthorne Blvd.
Rancho Palos Verdes, CA 90275

Dear Ms. Ramezani:

BARKENTINE PROPERTY OPEN SPACE ACQUISITION
SPECIFIED GRANT # 58H4-01-1284

Reimbursement
Enclosed is an executed Project Agreement for your agency's file. Before payment can be made into escrow for accusation costs, you must provide the District the following documentation:

- 1. Payment Request Form signed by the Director of Public Works.
- 2. Project Cost Form.
- 3. Compliance with California Environmental Quality Act (a CEQA notice of exemption form: filed, approved and stamped by the County Clerk's office) must be submitted,
- 4. Youth Employment Plan,
- 5. Preliminary Title Report,
- 6. Appraisal Report,
- 7. Copy of Offer or Purchase Agreement,
- 8. Escrow Instructions, (3 day interest bearing clause),
- 9. Statement of Just Compensation (if purchase price is lower than appraisal),
- 10. Letter of compliance with property accusation law (see attached),

Please refer to Page 21 of the Procedural Guide which contains further details for requesting reimbursement.

Administrative Offices • 433 South Vermont Avenue • Los Angeles • California 90020-1975 • (213) 738-2961

If you have any questions about reimbursement, this grant, or the Proposition A program, please contact me at (213) 738-3035. I look forward to working with you to ensure the successful completion of this important and worthwhile project.

Sincerely,

Kevin Crilley
Program Manager

Enclosure

c:\Award1284

Project Agreement

Los Angeles County Regional Park and Open Space District Grant

Specified Grant Program

(From Los Angeles County Proposition A, Safe Neighborhood Parks, Gang Prevention, Tree-Planting, Senior and Youth Recreation, Beaches and Wildlife Protection ("the 1992 Proposition"), which voters approved on November 3, 1992, and the Safe Neighborhood Parks of 1996 ("the 1996 Proposition"), which voters approved on November 5, 1996)

Grant No. 58H4-01-1284

The Grantee listed below ("Grantee") and the Los Angeles County Regional Park and Open Space District ("the District") do hereby enter into this Project Agreement ("this Agreement"), and under the terms and conditions of this Agreement, Grantee agrees to complete the project as described in the Description of Project and the District, acting through the Director of the County of Los Angeles Department of Parks and Recreation and pursuant to the Propositions, agrees to fund the project up to the total grant amount indicated.

Grantee: City of Rancho Palos Verdes

Project Name: Barkentine Property Open Space Acquisition

Grant Amount: Four million dollars ($4,000,000.00)

Awarded pursuant to Section(s) 3. c. 2. SS. of the 1996 Proposition.

Description of Project:
Acquisition of 98 acres of unimproved property located on the southern slope of the Palos Verdes Hills, between McCarrell's Canyon on the west and Barkentine Canyon on the east.

Project Performance Period: FROM: November 05, 1996 TO: December 31, 2001

Special Provisions

None.

General Provisions

A. Definitions

1. The term "Grantee" as used herein means the party described as Grantee on Page 1 of this Agreement.

2. The term "Application" as used herein means the individual application, and its required attachments, for the grant identified on Page 1 of this Agreement.

3. The term "Board of Supervisors" means the County of Los Angeles Board of Supervisors, acting in its capacity as the governing body of the District.

4. The term "District" as used herein means the Los Angeles County Regional Park and Open Space District. Unless otherwise specified, the Director of the County of Los Angeles Department of Parks and Recreation shall administer this contract on behalf of the District.

5. The term "Procedural Guide" as used herein means the Procedural Guide(s), and any subsequent amendments or changes thereto, issued by the District for grants awarded pursuant to the section(s) of the Propositions as described on Page 1 of this Agreement.

6. The term "Project" as used herein means the Project that is described on Page 1 of this Agreement.

7. The term "Propositions" as used herein means Los Angeles County Proposition A, Safe Neighborhood Parks, Gang Prevention, Tree-Planting, Senior and Youth Recreation, Beaches and Wildlife Protection, which voters approved on November 3,1992 and Safe Neighborhood Parks, which voters approved on November 5, 1996.

B. Project Execution

1. Subject to the availability of grant monies from the Propositions, the District hereby grants to the Grantee a sum of money (grant monies) not to exceed the amount stated on Page 1 in consideration of, and on the condition that the sum be expended in carrying out, the purposes set forth in the Description of Project on Page 1 and under the terms and conditions set forth in this Agreement, the Propositions (see Attachment A) and the attached Application (see Attachment B).

   Grantee agrees to furnish any additional funds that may be necessary to complete the Project. Grantee agrees to budget and appropriate annually, in each fiscal year until completion of the Project, an amount equal to the total estimated cost of the Project less the grant amount stated on Page 1 of this Agreement.

2. The term of this Agreement is from the date of execution by both parties through June 30, 2019.

3. Grantee agrees to complete the Project in accordance with the time of Project performance as set forth on Page 1, and under the terms and conditions of this Agreement and the Procedural Guide. The time of Project performance may be extended upon mutual agreement, in writing, of the Grantee and District.

4. Grantee shall comply as lead agency with the California Environmental Quality Act, Public Resources Code, Section 21000, et. seq. Prior to submitting requests for reimbursement of actual construction or acquisition costs, Grantee agrees to file with the District a copy of the Environmental Impact Report or Negative Declaration along with a response from the State Clearinghouse, if required; and a copy of the Notice of Determination filed with, and stamped by, the County Clerk, or a copy of the Notice of Exemption filed with, and stamped by, the County Clerk if the Project is categorically exempt.

5. Grantee agrees that, prior to incurring actual development and/or acquisition costs, it will submit all requested development and/or acquisition documents to the District for prior review and approval.

6. Grantee shall use monies allocated in this Agreement, to the maximum extent practical, to employ youth from the community in which the Project is being carried out. Grantee is encouraged, and has authority to use said monies, to provide funding through agreements with community conservation corps, the California Conservation Corps and other community organizations, particularly when youth can be employed to work on restoration or rehabilitation projects being carried on in their own communities. Such agreements shall be entered into solely for the accomplishment of the Project described on Page 1 of this Agreement.

   Therefore, prior to requesting reimbursement for actual construction, development or acquisition costs, Grantee must submit a report to the District describing its efforts to employ youth in the community. The report shall contain, at a minimum, the number and approximate age of youth to be employed at each stage of the Project , a description of the work the youth will perform, the process by which the youth shall be employed, the amount the youth will be paid and, the name of any organizations or agencies that will supply youth to be employed on the Project, as well as a description of Grantee's efforts to employ youth in every stage of the Project.

   Grantee must comply fully with all State and Federal laws regarding the employment of youth on the Project.

   Notwithstanding the above, the District reserves the right to establish goals for the employment of youth if, in the District's opinion, it is necessary to do so in order to accomplish the purposes of the Propositions.

7. Grantee agrees to file with the District copies of any contracts or agreements executed for work on the Project. Grantee further agrees that it will make a good faith effort to recruit and promote minority-owned and women-owned businesses to participate in the process for the

award of any contracts or agreements executed for work on the Project.

Therefore, when filing with the District a copy of any contract or agreement for work on the Project, said copy will be accompanied, at a minimum, by a description of the process used for identifying minority and women contractors or vendors; a list of firms from which the Grantee solicited or received offers; and comparative statistics regarding the minority and women participation and percentage of minority and women ownership of each contractor and subcontractor working on the Project. In addition, said copy will be accompanied by a statement affirming that, on final analysis and consideration of award, contractor or vendor was selected without regard to race, color, creed or gender, unless City, State or Federal laws and/or regulations or court decisions require otherwise, in which case the Grantee will state the applicable reason. Grantee further agrees to retain on file, and to make available to the District on request, statistical information regarding the minority and women participation and percentage of minority and women ownership in each firm participating in the bidding process.

8. Grantee agrees to secure completion of the development work in accordance with the approved development plans and specifications or force account schedule.

9. Grantee agrees to permit the District to make periodic site visits to determine if development work is in accordance with the approved plans and specifications, or force account schedule, including a final inspection upon Project completion.

10. Any modification or alteration in the Project, as set forth in the Application on file with the District, must be submitted, in writing, to the District for prior approval. No modification shall be effective until and unless the modification is executed by both Grantee and the District.

11. If the Project includes acquisition of real property, Grantee agrees to comply with Chapter 16 (commencing with Section 7260) of Division 7 of Title 1 of the Government Code and any applicable federal, state, or local laws or ordinances. Documentation of such compliance will be made available for review upon the District's request.

12. If the Project includes acquisition of real property, Grantee agrees to furnish the District preliminary title reports respecting such real property or such other evidence of title that the District determines to be sufficient. Grantee agrees in negotiated purchases to correct, prior to or at the close of escrow, any defects of title that in the opinion of the District might interfere with the operation of the Project. In condemnation actions, such title defects must be eliminated by the final judgment.

13. If the Project includes landscaping, Grantee shall use drip irrigation systems and shall use drought-resistant or xerophytic trees, plants, lawn or sod, unless Grantee can show, to the District's satisfaction, that it is infeasible to do so.

C. Project Costs

The grant money provided under this program may be disbursed as follows:

1. If the Project includes acquisition of real property, the District may disburse to Grantee the grant monies as follows, but not to exceed, in any event, the District grant amount set forth on Page 1 of this Agreement:

   a. When acquisition is by negotiated purchase, the District may disburse the amount of the District-approved purchase price together with District-approved costs of acquisition. The District-approved purchase price shall not exceed the value contained in a valid appraisal report, unless the District agrees, in advance, to the higher price.

   b. When acquisition is allowed pursuant to the Propositions through eminent domain proceedings, the District may disburse the amount of the total award, as provided for in the final order of condemnation, together with District-approved costs of acquisition. Grantee shall bear all costs and make all advances associated with obtaining an order of immediate possession in an eminent domain proceeding.

   c. In the event Grantee abandons such eminent domain proceedings, Grantee agrees that it shall bear all costs in connection therewith and that no grant monies shall be disbursed for such costs.

2. If the Project includes development, after the completion of the Project or any phase or unit thereof, the District will disburse funds to Grantee only after the District has reviewed and approved all requested development documents and has received from Grantee a statement of incurred costs. The District may disburse funds in the amount of District-approved incurred costs shown on such statement, but not to exceed the District grant amount set forth on Page 1 of this Agreement, or any remaining portion of the grant amount.

   The statements to be submitted by Grantee shall set forth in detail the incurred costs of work performed on development of the Project and whether performance was by construction contract or by force account. Statements shall not be submitted more frequently than once a month, unless the District requests otherwise.

   The District must approve modifications of the development plans and specifications and/or force account schedule prior to any deviation from the District-approved plans and specifications, and/or force account schedule, unless previously authorized by the District.

3. The District may retain up to ten (10) percent of the grant amount pending project completion and verification that the Grantee has satisfied all terms and conditions of this Agreement. Within three (3) months of Project completion, Grantee must submit final project documents. The District will not make final payment, including but not limited to the ten percent retention, until it has received all closing documents from the Grantee and has made a final Project inspection. At the District's discretion, the District also may perform an audit of Grantee's Project expenditures before final payment is made. Nothing in this section precludes the District from performing an audit of Project expenditures at a later date in accordance with Section I of this Agreement.

D. Project Administration

1. Grantee agrees to promptly submit any reports that the District may request. In any event, Grantee shall provide to the District a report showing total final Project expenditures.

2. Grantee agrees that property and facilities acquired or developed pursuant to this Agreement shall be available for inspection upon the District's request.

3. Grantee agrees to use any monies disbursed by the District under the terms of this Agreement solely for the Project herein described.

4. Grantee agrees that any gross income earned from non-recreational uses of a Project shall be used for recreation development, additional acquisition, operation or maintenance at the Project site, unless the District approves otherwise in writing.

   Grantee also agrees that any gross income that accrues to a grant-assisted development Project during and/or as part of the construction, from sources other than the intended recreational uses, also shall be used for further development of that particular Project.

5. Grantee agrees to submit for prior District review and approval any and all existing or proposed operating agreements, leases, concession agreements, management contracts or similar arrangements with non-governmental entities, and any existing or proposed amendments or modifications thereto, as they relate to the project or the project site for a period of twenty (20) years from the date of this Agreement. Grantee further agrees not to enter into any contract, agreement, lease or similar arrangement, or to agree to any amendment or modification to an existing contract, agreement, lease or similar arrangement, that, in the District's opinion, violates federal regulations restricting the use of funds from tax-exempt bonds.

6. Grantee agrees that, upon entering into any contract for the construction, maintenance, operation or similar activity related to the Project, Grantee will require said contractor to carry adequate insurance required by the District and naming the District as an additional insured. In addition, said insurance must require that Grantee and the District be given thirty (30) days advance written notice of any modification or cancellation of said insurance. Grantee agrees to submit proof of such insurance to the District for its prior approval.

7. Grantee and District will conform to the requirements of Government Code Section 6250, et seq. in making all documents relating to this Agreement, the grant obtained and all other related matters available for public review during regular business hours. In the case that the Project involves acquisition of property, however, both the District and Grantee may withhold from public review any and all documents exempted under Section 6254, subsection (h), prior to completion of said acquisition.

   In the event that the District is required to defend an action on a Public Records Act request for any of the contents of an Grantee's submission under the terms and conditions of the Agreement, Grantee agrees to defend and indemnify the District from all costs and expenses, including attorneys' fees, in any action or liability arising under the Public Records Act.

8. In order to maintain the exclusion from gross income for federal income tax purposes of the interest on any bonds, notes or other evidences of indebtedness issued for the purpose of providing the grant monies made available in this Agreement, Grantee covenants to comply with each applicable requirement of Section 103 and Sections 141 through 150, inclusive, of the Internal Revenue Code of 1986, as amended. In furtherance of the foregoing covenant, Grantee hereby agrees that it will not, without the prior written consent of the District, (a) permit the use of any portion of the Project by any private person or entity, other than on such terms as may apply to the public generally; or (b) enter into any contract for the management or operation of the Project or any portion thereof, except with a governmental agency or a nonprofit corporation that is exempt from federal income taxation pursuant to Section 501(c)(3) of the Internal Revenue Code.

9. If Grantee sells or otherwise disposes of property acquired or developed with grant monies provided under this Agreement, Grantee shall reimburse the District in an amount equal to the greater of 1) the amount of grant monies provided under this Agreement; 2) the fair market value of the real property; or 3) the proceeds from the portion of the property acquired, developed, improved, rehabilitated or restored with grant monies.

   If the property sold or otherwise disposed of is less than the entire interest in the property originally acquired, developed, improved, rehabilitated or restored with the grant monies, then Grantee shall reimburse the District an amount equal to the greater of: 1) an amount equal to the proceeds; or 2) the fair market value.

10. With the written consent of the District, the Grantee may transfer property acquired, developed, improved, rehabilitated or restored with funds granted under this Agreement to another public agency; to a nonprofit organization authorized to acquire, develop, improve or restore real property for park, wildlife, recreation, open space, or gang prevention and intervention purposes; or to the National Park Service, provided that any proposed successor agrees to assume the obligations imposed under the Propositions and to accept assignment of this Agreement. Under these conditions, the Grantee shall not be required to reimburse the District as described in Section D, Paragraph 9 of this Agreement.

E. Project Termination

1. Grantee may unilaterally rescind this Agreement at any time prior to the commencement of the Project. After Project commencement, this Agreement may be rescinded, modified or amended by mutual agreement in writing.

2. Failure by the Grantee to comply with the terms of this Agreement, or any other agreement established pursuant to the Propositions, may be cause for suspension of all obligations of the District hereunder.

3. Failure of the Grantee to comply with the terms of this Agreement shall not be cause for the suspension of all obligations of the District hereunder if, in the judgment of the District, such failure was beyond the reasonable control of the Grantee. In such case, any amount required

to settle, at minimum cost, any irrevocable obligations properly incurred shall be eligible for reimbursement under this Agreement.

4. The Grantee's full compliance with the terms of this Agreement will have significant benefits to the District, and to the property and quality of life therein, through the preservation and protection of beach, wildlife, park, recreation and natural lands of the District, provision of safer recreation areas for all residents, prevention of gangs, development and improvement of recreation facilities for senior citizens, the planting of trees, construction of trails, and/or restoration of rivers and streams. Because such benefits exceed, to an immeasurable and unascertainable extent, the amount of grant monies that the District furnishes under the provisions of this Agreement, the Grantee agrees that payment by the Grantee to the District of an amount equal to the amount of the grant monies disbursed under this Agreement by the District would be inadequate compensation to the District for any breach by the Grantee of this Agreement. The Grantee further agrees, therefore, that the appropriate remedy in the event of a breach by the Grantee of this Agreement shall be the specific performance of this Agreement, unless otherwise agreed to by the District. Nothing in this Section shall limit in any way the District's legal or equitable remedies under this Agreement.

5. Grantee and the District agree that, if the Project includes development, final payment may not be made until the Project conforms substantially with this Agreement and is a usable public facility.

6. Grantee and each County lobbyist or County lobbying firm, as defined in Los Angeles County Code Section 2.160.010, retained by Grantee, shall fully comply with the County Lobbyist Ordinance, Los Angeles County Code Chapter 2.160. Failure on the part of Grantee or any County lobbyist or County lobbying firm to fully comply with the County Lobbyist Ordinance shall constitute a material breach of this Agreement, upon which the District may terminate or suspend this Agreement.

F. Payment of Funds

1. Grantee may request reimbursement from the District for eligible expenses, which the Grantee has properly incurred and paid, no more frequently than every thirty (30) days. Grantee shall submit reimbursement requests on District-provided Payment Request Forms, including the applicable attachments.

   All Payment Request Forms should be sent to:

   The Regional Park and Open Space District
   c/o The Department of Parks and Recreation
   433 South Vermont Avenue, Fourth Floor
   Los Angeles, California 90020

2. Grantee should submit its payment request prior to the fifteenth day of the month to receive reimbursement within four to six weeks. The District may hold Payment Request Forms received after the fifteenth of the month until the next month, which may result in

reimbursements being delayed.

3. The District may withhold a portion of the amount of reimbursement if, in the opinion of the District, an expenditure is not eligible under the terms and conditions of this Agreement, the Propositions, the Application or the Procedural Guide. In such cases the District shall notify the Grantee of the amount of expenditures declared ineligible and the reason(s) for the ineligibility. Grantee, within thirty (30) days of notification, may dispute the District's decision, in writing, to the District and provide records and/or documentation to support its claim. The District shall review the information and/or documentation provided and will notify Grantee of its final determination. If Grantee fails to dispute the findings, in writing, within the thirty day period, then the Grantee shall have waived its right to dispute the findings.

G. Hold Harmless and Indemnification

1. Grantee shall indemnify, defend and hold the District harmless from and against any and all liability to any third party for or from loss, damage or injury to persons or property in any manner arising out of, or incident to, the performance of this Agreement or the planning, arranging, implementing, sponsoring or conducting of the Project or any other operation, maintenance or activity by the Grantee.

2. The District shall have no liability for any debts, liabilities, deficits or cost overruns of the Grantee.

3. Grantee and District agree that the liability of the District hereunder shall be limited to the payment of the grant monies pursuant to the terms and conditions of this Agreement and the Procedural Guide. Any contracts entered into, or other obligations or liabilities incurred by, the Grantee in connection with the Project or otherwise relating to this Agreement shall be the sole responsibility of the Grantee, and the District shall have no obligation or liability whatsoever thereunder or with respect thereto.

H. Independent Grantee

This Agreement is by and between the Los Angeles County Regional Park and Open Space District and Grantee and is not intended, and shall not be construed, to create the relationship of agent, servant, employee, partnership, joint venture or association between the District and Grantee.

I. Financial Records

1. Grantee agrees to maintain satisfactory financial accounts, documents and records for the Project and to make them available to the District for auditing at reasonable times. Grantee also agrees to retain such financial accounts, documents and records for five (5) years following Project termination or completion.

Grantee and the District agree that during regular office hours, each of the parties hereto and their duly authorized representatives shall have the right to inspect and make copies of

any books, records or reports of the other party pertaining to this Agreement or matters related thereto. Grantee agrees to maintain, and make available for District inspection, accurate records of all its costs, disbursements and receipts with respect to its activities under this Agreement.

2. Grantee agrees to use an accounting system that complies with generally accepted accounting principles.

3. At any time during the term of this Agreement or at any time within five years after the expiration or prior termination of this Agreement, authorized representatives of the District may conduct an audit of Grantee for the purpose of verifying appropriateness and validity of expenditures that Grantee has submitted to the District for reimbursement under the terms of this Agreement. If said audit reveals expenditures that cannot be verified or that were paid in violation of the terms of this Agreement, the Propositions or the Procedural Guide, the District may, at its discretion, reduce the grant amount by an amount equal to these expenditures.

   Grantee, within thirty (30) days of notification that an audit has resulted in the exception of expenditures, may dispute the audit findings in writing to the District and provide the District with records and/or documentation to support the expenditure claims. The District shall review this documentation and make a final determination as to the validity of the expenditures.

   If Grantee has received all grant monies prior to the audit, or if remaining grant monies are insufficient, and if said audit reveals expenditures that cannot be verified or that were paid in violation of the terms of this Agreement, the Propositions or the Procedural Guide, Grantee shall pay the District an amount equal to these expenditures within sixty (60) days after receiving written notification of the expenditures disallowed and the reason for the disallowance.

   Notwithstanding Government Code Section 907, in the event that Grantee fails to repay the District in full for the amount of excepted expenditures, the District may offset an amount equal to the excepted expenditures from any monies that may be due to Grantee under the terms and conditions of the Propositions. Through the execution of this Agreement, Grantee waives its rights under Government Code Section 907.

J. Use of Facilities

1. Grantee agrees to use the property acquired or developed with grant monies under this Agreement only for the purpose for which it requested District grant monies and will not permit any other use of the area, except as allowed by specific act of the Board of Supervisors as governing body of the District and under the terms and conditions of the Propositions.

2. Grantee agrees to maintain and operate in perpetuity the property acquired, developed, rehabilitated or restored with grant monies, subject to the provisions of the Propositions. With the District's approval, the Grantee, or its successors in interest in the property, may transfer the responsibility to maintain and operate the property in accordance with the Propositions.

3. Grantee agrees to provide for reasonable public access to lands acquired in fee with grant monies, including the provision of parking and public restrooms, except where that access may interfere with resource protection.

K. Nondiscrimination

1. The Grantee shall not discriminate against any person on the basis of race, color, sex, sexual orientation, age, religious belief, national origin, marital status, physical or mental handicap, medical condition, or place of residence in the use of any property or facility acquired or developed pursuant to this Agreement.

2. All facilities shall be open to members of the public generally, except as noted under the special provisions of the Project Agreement.

L. Incorporation by Reference

The Application and its required attachments, and any subsequent change or addition approved by the District, is hereby incorporated in this Agreement as though set forth in full. The Procedural Guide, and any subsequent changes or additions thereto, and the Propositions also are hereby incorporated in this Agreement as though set forth in full.

In the case of conflict, the District shall resolve the conflict with the precedence of documents as follows: the Propositions, this Agreement and the Procedural Guide (earlier named documents taking precedence over later named documents).

M. Severability

If any provision of this Agreement, or the application thereof, is held invalid, that invalidity shall not affect other provisions or applications of the Agreement that can be given effect without the invalid provision or application, and to this end the provisions of this Agreement are severable.

No provision of this Agreement, or the application thereof, is waived by the failure of the District to enforce said provision or application thereof.

//
//
//
//
//
//
//
//
//
//
//
//

IN WITNESS WHEREOF, Grantee and District have caused this Agreement to be executed by their duly authorized representatives as of the latter day, month and year written below.

GRANTEE:

By: _____
Signature of Authorized Representative

Title: City Manager

Date: 3/22/01

LOS ANGELES COUNTY REGIONAL
PARK & OPEN SPACE DISTRICT:

By: _____
Director, Parks and Recreation

Date: 4/17/01

Approved as to Form:
LLOYD W. PELLMAN
County Counsel

By: _____
Principal Deputy

Grant No. 58H4-01-1284

COPY

RANCHO PALOS VERDES
PUBLIC WORKS DEPARTMENT

March 5, 2001

Mr. Kevin Crilley
Program Manager
LA County Regional Park & Open Space Dist.
433 S. Vermont Avenue
LA, CA 90020-1975

SUBJECT: GRANT APPLICATION FOR ACQUISITION OF OPEN SPACE

Dear Mr. Crilley:

The City of Rancho Palos Verdes is submitting a grant application for the acquisition of open space, Barkentine Property, in the vacinity of the Portuguese Bend area. This application is requesting the utilization of $4,000,000 of the City's 1996 Proposition A, Specified Project allocation.

Attached please find these items:

- Completed Grant Application Form (Exhibit A) including a copy of the purchase agreement
- An authorizing resolution from RPV approving the submittal of the grant application to the County (Resolution 2001-21)
- Project Location
- Acquisition Map
- Cost Estimate (Exhibit C)
- Acquisition Schedule (Exhibit D)
- Project Time Table

Various other forms such as the Youth Employment Plan, Leases/Operating Agreements, Required Comments/Permits and Site Plan are not included, because they are not applicable for this acquisition only application.

If you have any questions regarding this grant application, please contact me at (310) 544-5245.

Sincerely,

Lauren Ramezani
Sr. Administrative Analyst

Attachments: As Noted

Cc: Dean Allison, Director of Public Works
Carolynn Petru, Assistant City Manager
Dennis McLean, Director of Finance
File: 601-Measure A (C & D-Barkentine Property)

W:\LAUREN\GRANT\MEASUR-A\Aquisition\applicationforbarkentine.doc

EXHIBIT A

County of Los Angeles
Regional Park and Open Space District

Grant Application Form

This form and required attachments must be submitted for each project.

Project Name:	*For District Use Only*
Barkentine Property	Grant Number: _____ - _____ - _____
	Program Manager:

Project Applicant: *(Name of agency and mailing address)*	Proposition Section(s): 3.c.2.SS
City of Rancho Palos Verdes 30940 Hawthorne Blvd. Rancho Palos Verdes, CA 90275	Grant Amount Requested: $ 4,000,000
	Total Project Cost: $ 4,000,000
	Source(s) of other funds:
	Project Address: Rancho Palos Verdes

Grant Applicant's Representative Authorized in Resolution:

Dean Allison	Dir. of Public Works	(310) 544 - 5252
Name	Title	Phone

Person with day-to-day responsibility for project (if different from authorized representative):

Lauren Ramezani	Sr. Admin. Analyst	(310) 544 - 5245
Name	Title	Phone

Brief Description of Project:

Approximately 98 acres of unimproved property located on the southern slope of the Palos Verdes Hills, between McCarrell's Canyon on the west and Barkentine Canyon on the east. The property also abuts two residential neighborhoods, the Sea Crest tract (Ocean Terrace Dr.) on the north and Upper Abalone Cove (Tarragon Rd. and Barkentine Rd) to the south.

Project Performance End Date: 11/30/2001 (purchase completion)

For **Development** Projects - Land Tenure:

Project is _____ acres.

____ Acres owned by Applicant (fee simple)
____ Acres available under a ____ year lease
____ Acres - Other *(please explain)*

For **Acquisition** Projects:

Project is 98.306 acres.

X Acquired in fee simple by Applicant
____ Acquired in other than fee simple *(please explain)*

I certify that the information contained in this project application form, including the required attachments, is accurate and that I have read and understand the important information and assurances on the reverse side of this form.

Signature of Applicant's Representative as shown in resolution.

2/21/01
Date

revised 1/00

PURCHASE AGREEMENT AND ESCROW INSTRUCTIONS

THIS PURCHASE AGREEMENT AND ESCROW INSTRUCTIONS ("Agreement") is made as of February __, 2001 (the "Effective Date"), by and between PALOS VERDES PORTUGUESE BEND, LLC, a California limited liability company ("Seller"), and THE CITY OF RANCHO PALOS VERDES ("Buyer"), as follows:

1. Purchase and Sale. Upon all the terms and conditions contained herein, Buyer hereby agrees to purchase from Seller and Seller agrees to sell to Buyer that certain real property (the "Land") described on Exhibit A attached hereto and incorporated herein by this reference and consisting of 98.306 acres.

2. Opening of Escrow. Concurrently with the execution of this Agreement, Seller and Buyer shall open an escrow (the "Escrow") with First American Title Insurance Company at 520 N. Central Avenue, Glendale, California 91203, Attn: Cindy Young (the "Escrow Holder") by delivering a fully executed copy of this Agreement to Escrow Holder. Escrow Holder will execute copies of this Agreement and return fully executed copies hereof to Buyer and Seller when Escrow has opened. Escrow shall be deemed open upon Escrow Holder's execution hereof. In addition, the parties agree to be bound by the standard escrow General Provisions attached hereto as Exhibit B and incorporated herein by this reference. In the event of any discrepancy between this Agreement and such General Provisions, the provisions of this Agreement shall prevail.

3. Closing of Escrow. The closing (the "Closing") of the purchase and sale of the Land shall take place through Escrow ten (10) business days after request by Buyer that the Closing occur, provided that in no event shall the Closing occur later than August 20, 2001 (the "Closing Date").

4. Purchase Price. Provided the Closing occurs on or before the earlier to occur of one hundred twenty (120) days after the Effective Date or June 19, 2001 (such earlier date being hereinafter referred to as the "Interest Accrual Date"), the purchase price for the Land (the "Purchase Price") shall be Three Million Eight Hundred Thirty-Three Thousand Nine Hundred Thirty-Four and 00/100 Dollars ($3,833,934.00). If the Closing does not occur on or before the Interest Accrual Date, then the Purchase Price shall be increased by an amount equal to ten percent (10%) per annum, computed on a daily basis based upon a year of three hundred sixty-five (365) days, commencing as of the first day after the Interest Accrual Date and continuing to and including the Closing. The Purchase Price shall be payable as follows:

(a) Deposit. Concurrently with the execution of this Agreement, Buyer shall deposit into Escrow cash in the amount of Ten Thousand and 00/100 Dollars ($10,000.00).

(b) Cash at Closing. The remainder of the Purchase Price shall be deposited into Escrow, in cash or by wire transfer of immediately available federal funds, by Buyer at or prior to Closing.

5. Costs and Prorations.

(a) Escrow and Title Fees. Buyer and Seller shall each pay one-half (1/2) of the Escrow fees. Seller shall bear the cost of (i) all documentary transfer taxes, (ii) the premium which would be required for an ALTA Standard Coverage Owner's Policy of Title Insurance with regional exceptions if issued by the Title Company (as defined below) insuring Buyer in the amount of the Purchase Price and (iii) the cost of recording the Grant Deed (as defined below). Buyer shall bear the cost of any increased premium attributable to endorsements and the delivery of an extended coverage, ALTA Owner's Policy of Title Insurance and any survey costs in connection therewith. All other costs or expenses not otherwise provided for in this Agreement shall be apportioned or allocated between Buyer and Seller in the manner customary in Los Angeles County, California.

(b) Taxes and Assessments. All current real property taxes and all payments on general and special bonds and assessments on the Land shall be prorated through Escrow between Buyer and Seller as of Closing based upon the latest available tax information, using the customary escrow procedures.

6. Title.

(a) Preliminary Report. Within fifteen (15) business days after opening of the Escrow, Escrow Holder shall provide to Buyer a Preliminary Title Report (the Preliminary Report") for the Land issued by First American Title Insurance Company (the "Title Company"), including all schedules and exhibits thereto and together with the true and correct copies of all instruments giving rise to any exceptions to title to the Land. Buyer shall have sixty (60) days following the delivery of the Preliminary Report (the "Title Inspection Period") to review the Preliminary Report and otherwise examine the status of title to the Land. Buyer shall notify Seller in writing (the "Title Notice") prior to the expiration of the Title Inspection Period which exceptions to title, if any, will not be accepted by Buyer. If Buyer fails to notify Seller in writing of any exceptions to title by the expiration of the Title Inspection Period, then Buyer shall be deemed to have approved the condition of title to the Property, except as provided in Section 6(b) below. If Buyer notifies Seller in writing that Buyer objects to any exceptions to title, then Seller shall have five (5) days after receipt of the Title Notice to notify Buyer in writing (i) that Seller will remove such objectionable exceptions from title on or before the Closing; or (ii) that Seller elects not to cause such exceptions to be removed. If Seller fails to notify Buyer in writing of its election within said five (5) day period, then Seller shall be deemed to have elected not to cause such exceptions to be removed. The procurement by Seller of a commitment for the issuance of the Title Policy (as defined in Section 8(b) hereof) or an endorsement thereto satisfactory to Buyer and insuring Buyer against any title exception which was disapproved pursuant to this Section 6(a) shall be deemed a cure by Seller of such disapproval. If Seller gives Buyer notice under clause (ii) above (or is deemed to have made an election under clause (ii) above), then Buyer shall have five (5) days within which to notify Seller in writing that Buyer will waive Buyer's objections to such exceptions, or that Buyer will terminate this Agreement. If Buyer fails to notify Seller in writing of its election within said five (5) day period, then Buyer shall be deemed to have elected to terminate this Agreement. If this Agreement is terminated pursuant to the foregoing provisions of this paragraph, then neither party shall have any further

rights or obligations hereunder (except for any indemnity obligations of either party pursuant to the other provisions of this Agreement and except as set forth in Section 12 below), the entire deposit pursuant to Section 4(a) and any accrued interest thereon shall be returned to Buyer and each party shall bear its own costs incurred hereunder.

(b) Pre-Closing "Gap" Title Defects. Buyer may, at or prior to Closing, notify Seller in writing (the "Gap Notice") of any objections to title (i) raised by the Title Company between the expiration of the Title Inspection Period and the Closing and (ii) not disclosed by the Title Company or otherwise known to Buyer prior to the expiration of the Title Inspection Period. Buyer must notify Seller of such objection to title within ten (10) days of being made aware of the existence of such exception. If Buyer sends a Gap Notice to Seller, then Buyer and Seller shall have the same rights and obligations with respect to such notice as apply to a Title Notice under Section 6(a) hereof.

7. Property Studies. Buyer shall have until 5:00 p.m. local time on the Interest Accrual Date (the "Due Diligence Period") to enter upon the Land, at reasonable times after the giving of at least forty-eight (48) hours' notice to Seller, for the purpose of conducting such tests and studies as Buyer may deem necessary and desirable, and to undertake such other investigations and studies as Buyer may deem necessary and desirable, all at Buyer's sole cost, including, but not limited to obtaining and reviewing a Phase I Environmental Report and investigating sources of financing for the purchase under this Agreement. Immediately after performing such tests and studies, Buyer shall restore the Land to the same condition as prior to performing such tests and studies, including, without limitation, recompaction or removal of any disrupted soil or material as Seller may reasonably direct. Notwithstanding anything to the contrary contained herein, Buyer shall not conduct any drilling on the Land or otherwise disturb any soil on the Land without Seller's prior written consent, which consent will not be unreasonably denied or delayed. If Buyer determines that Buyer is unwilling to consummate the purchase of the Land, whether based on dissatisfaction with the results of any such tests or studies or for any other reason or for no reason, and Buyer gives written notice to Seller and to Escrow Holder of its determination prior to the expiration of the Due Diligence Period, then this Agreement shall automatically terminate concurrently with the giving of such notice to Seller. Buyer's failure to give such notice of determination in writing prior to the expiration of the Due Diligence Period shall be deemed to constitute Buyer's election to proceed with the purchase. Buyer hereby indemnifies, defends and holds Seller harmless from any and all losses, damages, costs, liabilities and expenses, including, without limitation, reasonable attorneys' fees (and those fees incurred upon any appeals) and court costs incurred or suffered by Seller, whether directly or proximately, by the act or omission of Buyer or Buyer's representatives during their inspections of the Land. If this Agreement is terminated pursuant to the foregoing provisions of this paragraph, then neither party shall have any further rights or obligations hereunder (except for any indemnity obligations of either party pursuant to this paragraph or the other provisions of this Agreement and except as set forth in Section 12 below), the entire deposit pursuant to Section 4(a) and any accrued interest thereon shall be returned to Buyer and each party shall bear its own costs incurred hereunder.

8. Documents at Closing.

(a) Transfer and Possession. Seller shall deliver through Escrow an executed and recordable Grant Deed in the form attached hereto and incorporated herein as Exhibit C (the "Grant Deed") sufficient to convey good title to Buyer. When all required funds and instruments have been deposited into Escrow by the appropriate parties and when all other conditions to Closing have been fulfilled, Escrow Holder shall record the Grant Deed. Seller shall deliver possession of the Land to Buyer concurrently with the Closing. Buyer shall not be entitled to possession of the Land until the Grant Deed has been so recorded.

(b) Title. Seller shall cause the Title Company to be prepared or committed to deliver to Buyer an ALTA Standard Coverage Owner's Policy of Title Insurance dated as of Closing. If Buyer requires an extended coverage ALTA Owner's Policy of Title Insurance or endorsements, Buyer shall notify Escrow Holder of such requirement and deliver to Escrow Holder, at Buyer's sole cost and expense and in a timely manner so as to not delay the Closing, an ALTA survey adequate for the issuance of such ALTA extended coverage policy. The title policy shall insure Buyer in an amount equal to the Purchase Price, and show title vested in Buyer subject only to:

(i) The usual printed Title Company exceptions;

(ii) All other exceptions approved by Buyer pursuant to Section 6 of this Agreement (whether by failure to object or by waiver of Buyer's objection); and

(iii) All other exceptions approved in writing by Buyer.

Pending Closing, Buyer shall not, without the prior written consent of Seller, which consent may be withheld in Seller's sole discretion, record this Agreement or a short form or memorandum hereof, or take any other action which would materially and adversely affect the marketability of Seller's title to the Land.

9. Assignment. Seller may assign its rights and interests under this Agreement without Buyer's consent. Buyer shall not assign its rights or interests hereunder without Seller's prior written consent, which consent may be withheld by Seller in its sole discretion. Any attempted assignment made in violation of this Section shall be null and void.

10. Time of Essence . Time is of the essence of every provision of this Agreement in which time is an element. Failure by one party to perform any obligation within the time and on the terms and conditions required hereunder shall discharge the other party's duties and obligations to perform hereunder upon written notice or demand from the other party. However, if Escrow is not in a condition to close by the agreed Closing Date, Escrow Holder shall continue to comply with the instructions contained herein until a written demand has been made by a party entitled to do so for the cancellation of Escrow, as described below. Escrow Holder shall notify the other party of any such demand, and shall immediately cancel Escrow without any further instructions from any party.

11. Liquidated Damages. IF ESCROW DOES NOT CLOSE DUE TO BUYER'S HAVING COMMITTED ANY BREACH OF THIS AGREEMENT, THEN SELLER SHALL RETAIN ALL SUMS THEN HELD BY ESCROW HOLDER OR SELLER PURSUANT TO THE TERMS OF THIS AGREEMENT, TOGETHER WITH INTEREST EARNED THEREON, AS LIQUIDATED DAMAGES, WHICH AMOUNT IS THE BEST ESTIMATE BY THE PARTIES OF THE DAMAGES SELLER WOULD SUFFER FROM SUCH BREACH, IT BEING AGREED THAT IT IS EXTREMELY DIFFICULT, IF NOT IMPOSSIBLE AND IMPRACTICABLE, TO FIX THE EXACT AMOUNT OF DAMAGE WHICH WOULD BE INCURRED BY SELLER AS A RESULT OF SUCH DEFAULT BY BUYER. THEREUPON ESCROW SHALL BE CANCELLED AS PROVIDED ABOVE, ALL INSTRUMENTS SHALL BE RETURNED TO THE RESPECTIVE PARTIES WHO DEPOSITED SAME, THE PARTIES SHALL COMPLY WITH SECTION 12 BELOW AND BUYER SHALL PAY ALL TITLE AND ESCROW CANCELLATION CHARGES. IN ADDITION, IF ALL OR ANY PORTION OF SUCH SUMS HAVE BEEN DEPOSITED INTO ESCROW BY EITHER BUYER OR SELLER, ESCROW HOLDER IS HEREBY IRREVOCABLY INSTRUCTED BY BUYER AND SELLER TO DISBURSE TO SELLER ALL SUCH SUMS UPON DEMAND OF SELLER ALONE AS LIQUIDATED DAMAGES FOR BUYER'S BREACH, PURSUANT TO CALIFORNIA CIVIL CODE SECTIONS 1671 ET. SEQ.

ML
Buyer's Initials

Seller's Initials

12. Further Documents and Acts. Each of the parties hereto agrees to cooperate in good faith with each other, and to execute and deliver such further documents and perform such other acts as may be reasonably necessary or appropriate to consummate and carry into effect the transactions contemplated under this Agreement. If this Agreement is terminated for any reason, Buyer shall return to Seller any studies, reports or other documents previously supplied to Buyer by Seller, and shall deliver to Seller without charge any and all such documents which Buyer shall have obtained with respect to the Land at any time prior to such termination.

13. Representations, Warranties and Covenants of Buyer.

(a) Sole Reliance. Prior to the Closing, Buyer shall conduct all inspections, investigations and analyses with respect to the Land as Buyer deems appropriate. Except as expressly set forth herein, Buyer shall rely solely upon its own inspection, investigation and analyses of the Land in purchasing the Land and shall not rely in any way upon any representations, statements, agreements, warranties, studies, reports, descriptions, guidelines or other information or material furnished by Seller or its representatives, whether oral or written, express or implied, of any nature whatsoever regarding any of the foregoing matters.

(b) As Is, Where Is. Except as expressly set forth herein, Buyer represents and warrants that it is acquiring the Land "AS IS, WHERE IS" without representation by Seller, and that no patent or latent condition affecting the Land in any way, whether or not known or discoverable or hereafter discovered, shall affect Buyer's obligations contained in this

Agreement, nor shall any such condition give rise to any right of damages, rescission or otherwise against Seller.

(c) Defaults. Buyer represents and warrants that the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby will not result in any breach of the terms of, conditions of, or constitute a default under, any instrument or obligation by which Buyer is bound, or violate any order, writ, injunction or decree of any court in any litigation to which Buyer is a party.

(d) Survival. All the representations, warranties, covenants, agreements and indemnities of Buyer set forth herein and elsewhere in this Agreement shall be true upon the execution of this Agreement, and shall be deemed to be repeated at and as of Closing and shall survive Closing. Additionally, all indemnities by Buyer of Seller set forth in this Agreement shall survive the termination of this Agreement.

14. Representations, Warranties and Covenants of Seller.

(a) Defaults. Seller represents and warrants that the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby will not result in any breach of the terms of, conditions of, or constitute a default under, any instrument or obligation by which Seller is bound, or violate any order, writ, injunction or decree of any court in any litigation to which Seller is a party.

(b) Survival. All the representations, warranties, covenants, agreements and indemnities of Seller set forth herein and elsewhere in this Agreement shall be true upon the execution of this Agreement, and shall be deemed to be repeated at and as of Closing and shall survive Closing. Additionally, all indemnities by Seller of Buyer set forth in this Agreement shall survive the termination of this Agreement.

15. Broker's Commission. Seller represents and warrants to Buyer and Buyer represents and warrants to Seller that no broker or finder has been engaged by Seller or Buyer, respectively, in connection with any of the transactions contemplated by this Agreement, and that no broker or finder is in any way connected with any of such transactions. In the event of any claim for broker's or finder's fees or commissions in connection with the negotiation, execution or consummation of this Agreement or the transactions contemplated hereby, Buyer shall indemnify, save harmless and defend Seller from and against such claim if it shall be based upon any statement or representation or agreement made by Buyer, and Seller shall indemnify, save harmless and defend Buyer from and against such claim if it shall be based upon any statement, representation or agreement made by Seller.

16. Waiver, Consent and Remedies. Each provision of this Agreement to be performed by either party shall be deemed both a covenant and a condition and shall be a material consideration for the other party's performance hereunder, and any breach thereof by either party shall be deemed a material default hereunder. Either party may specifically and expressly waive in writing any portion of this Agreement or any breach thereof, but no such waiver shall constitute a further or continuing waiver of any preceding or succeeding breach of

the same or any other provision. A waiving party may at any time thereafter require further compliance by the other party with any breach or provision so waived. The consent by one party to any act by the other for which such consent was required shall not be deemed to imply consent or waiver of the necessity of obtaining such consent for the same or any similar acts in the future. No waiver or consent shall be implied from silence or any failure of a party to act, except as otherwise specified in this Agreement. All rights, remedies, undertakings, obligations, options, covenants, conditions and agreements contained in this Agreement shall be cumulative and no one of them shall be exclusive of any other. Except as otherwise specified herein, either party may pursue any one or more of its rights, options or remedies hereunder or may seek damages in the event of the other party's breach hereunder, or may pursue any other remedy at law or equity, whether or not stated in this Agreement.

17. Attorneys' Fees. In the event of any action or proceeding instituted between Seller, Buyer and/or Escrow Holder in connection with this Agreement, then as between Buyer and Seller the prevailing party shall be entitled to recover from the losing party all of its costs and expenses, including, without limitation, court costs, all costs of appeals and reasonable attorneys' fees.

18. Notices. Any notice, request, demand, consent, approval or other communication required or permitted hereunder or by law shall be validly given or made only if in writing and delivered in person to an officer or duly authorized representative of the other party or deposited in the United States mail, duly certified or registered (return receipt requested), postage prepaid, and addressed to the party for whom intended, as follows:

If to Seller:
Palos Verdes Portuguese Bend, LLC
25200 La Paz Road, Suite 210
Laguna Hills, CA 92653
Attn: Mike Walker
Telephone: (949) 586-4400
Facsimile: (949) 586-3305

If to Buyer:
The City of Rancho Palos Verdes
30940 Hawthorne Boulevard
Rancho Palos Verdes, CA 90275
Attn: Les Evans, City Manager
Telephone: (310) 377-0360
Facsimile: (310) 377-9868

If to Escrow Holder:
First American Title Insurance Company
520 N. Central Avenue
Glendale, CA 91203
Attn: Cindy Young
Phone: (818) 242-5800 Ext. 5108
Facsimile: (818) 240-5994

Any party may from time to time, by written notice to the other, designate a different address which shall be substituted for that specified above. If any notice or other document is sent by mail as aforesaid, the same shall be deemed fully delivered and received forty-eight (48) hours after mailing as provided above.

19. Gender and Number. In this Agreement (unless the context requires otherwise), the masculine, feminine and neuter genders and the singular and the plural shall be deemed to include one another, as appropriate.

20. Entire Agreement. This Agreement and its exhibits constitute the entire agreement between the parties hereto pertaining to the subject matter hereof, and the final, complete and exclusive expression of the terms and conditions thereof. All prior agreements, representations, negotiations and understandings of the parties hereto, oral or written, express or implied, are hereby superseded and merged herein.

21. Captions. The captions used herein are for convenience only and are not a part of this Agreement and do not in any way limit or amplify the terms and provisions hereof.

22. Governing Law. This Agreement and the exhibits attached hereto have been negotiated and executed in the State of California and shall be governed by and construed under the laws of the State of California.

23. Invalidity of Provision. If any provision of this Agreement as applied to either party or to any circumstance shall be adjudged by a court of competent jurisdiction to be void or unenforceable for any reason, the same shall in no way affect (to the maximum extent permissible by law) any other provision of this Agreement, the application of any such provision under circumstances different from those adjudicated by the court, or the validity or enforceability of this Agreement as a whole.

24. Amendments. No addition to or modification of any provision contained in this Agreement shall be effective unless fully set forth in writing by both Buyer and Seller.

25. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute but one and the same instrument.

26. Binding Agreement. Subject to the restrictions on assignment set forth herein, this Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective heirs, executors, administrators, successors and assigns.

27. Construction. The parties acknowledge that each party and its counsel have reviewed and approved this Agreement and that the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Agreement or any amendments or exhibits hereto.

28. Funding Contingency. Buyer intends to obtain the cash in order to consummate the purchase of the Land from the County of Los Angeles, California, through

proceeds available as a result of open space funds from Proposition A. Buyer covenants to use its best efforts in order to obtain the necessary funds as soon as reasonably possible after the Effective Date. If, despite using such best efforts, Buyer is unable to secure such funds prior to the Closing Date, then this Agreement shall automatically terminate, neither party shall have any further rights or obligations hereunder (except for any indemnity obligations of either party pursuant to the other provisions of this Agreement and except as set forth in Section 12 above), the entire deposit pursuant to Section 4(a) and any accrued interest thereon shall be returned to Buyer and each party shall bear its own costs incurred hereunder.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written and such date shall be deemed the date of this Agreement.

SELLER:

PALOS VERDES PORTUGUESE BEND, LLC, a California limited liability company

By: HON MANAGEMENT G, LLC, a California limited liability company, member

By: HON PROPERTY INVESTMENTS, INC., a California corporation, Manager

By: _____

Its: _____

BUYER:

THE CITY OF RANCHO PALOS VERDES

By: _____

Its: _____

By: _____

Its: _____

Escrow Holder hereby certifies that Escrow opened as of the ____ day of February, 2001 as Escrow Number _____.

FIRST AMERICAN TITLE INSURANCE COMPANY

By: _____

Its: _____

LIST OF EXHIBITS

EXHIBIT A	LAND
EXHIBIT B	ESCROW INSTRUCTIONS
EXHIBIT C	GRANT DEED

EXHIBIT C TO PURCHASE AGREEMENT AND ESCROW INSTRUCTIONS

RECORDING REQUESTED BY:

WHEN RECORDED, MAIL THIS DEED AND, UNLESS OTHERWISE SHOWN BELOW, MAIL TAX STATEMENTS TO:

Attention:

(Space Above Line for Recorder's Use Only)

Parcel No. _____

GRANT DEED

THE UNDERSIGNED GRANTOR DECLARES:

DOCUMENTARY TRANSFER TAX IS $0 - EXEMPT UNDER R&T CODE SECTION 11922

_____ Computed on full value of property conveyed;

_____ Computed on full value less the value of liens or encumbrances thereon remaining at time of sale.

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, PALOS VERDES PORTUGUESE BEND, LLC, a California limited liability company ("Grantor"), hereby GRANTS to THE CITY OF RANCHO PALOS VERDES ("Grantee"), the following described real property (the "Property") in the County of Los Angeles, State of California:

See Exhibit 1 attached hereto.

MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE; IF NO PARTY SO SHOWN, MAIL AS DIRECTED ABOVE.

Name	**Street Address**	**City and State**

SUBJECT TO:

1. Current real property taxes and all unpaid general and special bonds or assessments.

2. All covenants, conditions, restrictions, reservations, rights, rights-of-way and easements of record.

IN WITNESS WHEREOF, the undersigned has executed this document as of the day and year indicated.

Dated: _____

PALOS VERDES PORTUGUESE BEND, LLC,
a California limited liability company

By: HON MANAGEMENT G, LLC,
a California limited liability company,
member

By: HON PROPERTY INVESTMENTS,
INC., a California corporation,
Manager

By:_____
Its:_____

STATE OF CALIFORNIA)
) ss.
COUNTY OF _____)

On _____ before me, _____,
a notary public in and for said State, personally appeared _____
and _____, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature _____ (Seal)

COPY

RANCHO PALOS VERDES

MEMORANDUM

TO: HONORABLE MAYOR AND MEMBERS OF THE CITY COUNCIL

FROM: DIRECTOR OF PUBLIC WORKS

DATE: FEBRUARY 20, 2001

SUBJECT: GRANT APPLICATION FOR ACQUISITION OF OPEN SPACE

STAFF COORDINATOR: LAUREN RAMEZANI, SR. ADMINISTRATIVE ANALYST

RECOMMENDATION

Adopt Resolution 2001-___ authorizing the application for grant funds from the County of Los Angeles Regional Park and Open Space District for 1996 Specified Grant funds in the amount of $4,000,000 for the acquisition of critical natural lands and wildlife habitat in the vicinity of the Portuguese Bend for preservation as open space.

BACKGROUND

The Safe Neighborhood Parks Proposition of 1992 provides $540 million Countywide for park and open space improvement projects. In November 5, 1996, voters of Los Angeles County approved the 1996 Proposition A funds. The 1996 Proposition added $319 million in project funds and increases emphasis on youth employment. In 1992 voters also approved an assessment district for maintenance and servicing funds for cities to offset increased maintenance costs resulting from Proposition-funded projects.

The Los Angeles County Regional Park and Open Space District administers Proposition A funds. The City of Rancho Palos Verdes has received approval and funding for the following projects:

- Point Vicente Interpretive Center Expansion (PVIC)
- Lower Hesse Park Development
- Abalone Cove Beach Improvement
- Acquisition of Open Space at Forrestal Drive

In 1996, the County had also set aside funds for a fifth project, acquisition of Open Space at Portuguese Bend.

DISCUSSION

The property proposed for acquisition by the City is known locally as Parcel 4 or the Barkentine property and is currently owned by the Palos Verdes Land Holdings Company, a California limited partnership. The unimproved property approximately 98 acres in size and is located on the southern slope of the Palos Verdes Hills, between McCarrell's Canyon on the west and Barkentine Canyon on the east. The property also abuts two residential neighborhoods, the Sea Crest tract (Ocean Terrace Drive) on the north and Upper Abalone Cove (Tarragon Road and Barkentine Road) to the south.

Staff and the City Attorney have met with the property owner and have made a tentative offer. These are some of the relevant deal points:

- The County has set-aside $4,000,000 for RPV's open space land acquisition.
- The agreed purchase price is $39,000 an acre, which will cost the City $3,833,934.
- The owner has required the City to place a $10,000 deposit.
- For 90 days the purchase price of the property will remain at $39,000 per acre, with the price increasing at an annual rate of 10% (simple interest) thereafter.
- Costs such as title reports, legal fees, escrow fees, appraisals and surveys are all eligible grant costs, but such costs are limited to 25% of the grant amount. These costs will not exceed the grant's remaining balance of $217,327. If the City completes the purchase within the first 90 days, no General Funds or other funds will be required for this acquisition.

Typically, the City is required to assure that at-risk youths (ARY) are employed as a condition for the Proposition A funds it receives. The City adopted a Youth Employment Plan in July 1998. However, acquisition of open space is an exception to the rule and the City is not required to employ At Risk Youth as a condition of receipt of these funds.

FISCAL IMPACT

If approved, the recommended action will provide the City funds for the acquisition of open space utilizing previously set-aside Measure A funds in the amount of $4,000,000.

Respectfully Submitted,

Dean E. Allison, Director of Public Works

Reviewed by:

Les Evans, City Manager

Attachment: Resolution 2001-___ for Grant Application

\\Mastadon\City Manager\CAROLYNN\REPORTS\20010220__barkentine_grant_acquisition.doc

RESOLUTION NO. 2001-21

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF RANCHO PALOS VERDES APPROVING THE APPLICATION FOR GRANT FUNDS FROM THE COUNTY OF LOS ANGELES REGIONAL PARK AND OPEN SPACE DISTRICT SPECIFIED PROJECTS GRANT PROGRAM FOR THE ACQUISITION OF LAND IN THE VICINITY OF THE PORTUGUESE BEND FOR PRESERVATION AS OPEN SPACE

WHEREAS, the people of the County of Los Angeles on November 5, 1996, enacted Los Angeles County Proposition A, Safe Neighborhood Parks, Gang Prevention, Tree-Planting, Senior and Youth Recreation, Beaches and Wildlife Protection (the Proposition), which provides funds to the County of Los Angeles and other public agencies in the County for the purposes of acquiring and/or developing facilities for public recreational facilities and open space; and

WHEREAS, the Proposition also created the County of Los Angeles Regional Park and Open Space District (the District) to administer said funds; and

WHEREAS, the District has set forth the necessary procedures governing local agency applications for grant funds under the Proposition; and

WHEREAS, the District's procedures require the City as the Applicant to certify, by resolution, the approval of the application before submission of said application to the District; and

WHEREAS, the Project is an important park, recreation and open space project for the City of Rancho Palos Verdes; and

WHEREAS, said application contains assurances that the City must comply with; and

WHEREAS, the City will enter into an Agreement with the District for the acquisition of critical natural lands and wildlife habitat in the vicinity of Portuguese Bend for preservation as open space;

NOW, THEREFORE, BE IT RESOLVED THAT THE CITY COUNCIL OF THE CITY OF RANCHO PALOS VERDES:

1. Approves the filing of an application with the County of Los Angeles Regional Park and Open Space District for funds under Section 3.c.2.SS of the Proposition for the above Project; and

2. Certifies that the City understands the assurances and certification in the application form; and

3. Certifies that said City has, or will have, sufficient funds to operate and maintain the Project in perpetuity; and

4. Appoints the Director of Public Works, to conduct all negotiations, and to execute and submit all documents including, but not limited to applications, agreements, amendments, payment requests and so forth, which may be necessary for the completion of the aforementioned Project.

PASSED, APPROVED, AND ADOPTED ON THE 20TH DAY OF FEBRUARY 2001.

/S/ MARILYN LYON
MAYOR

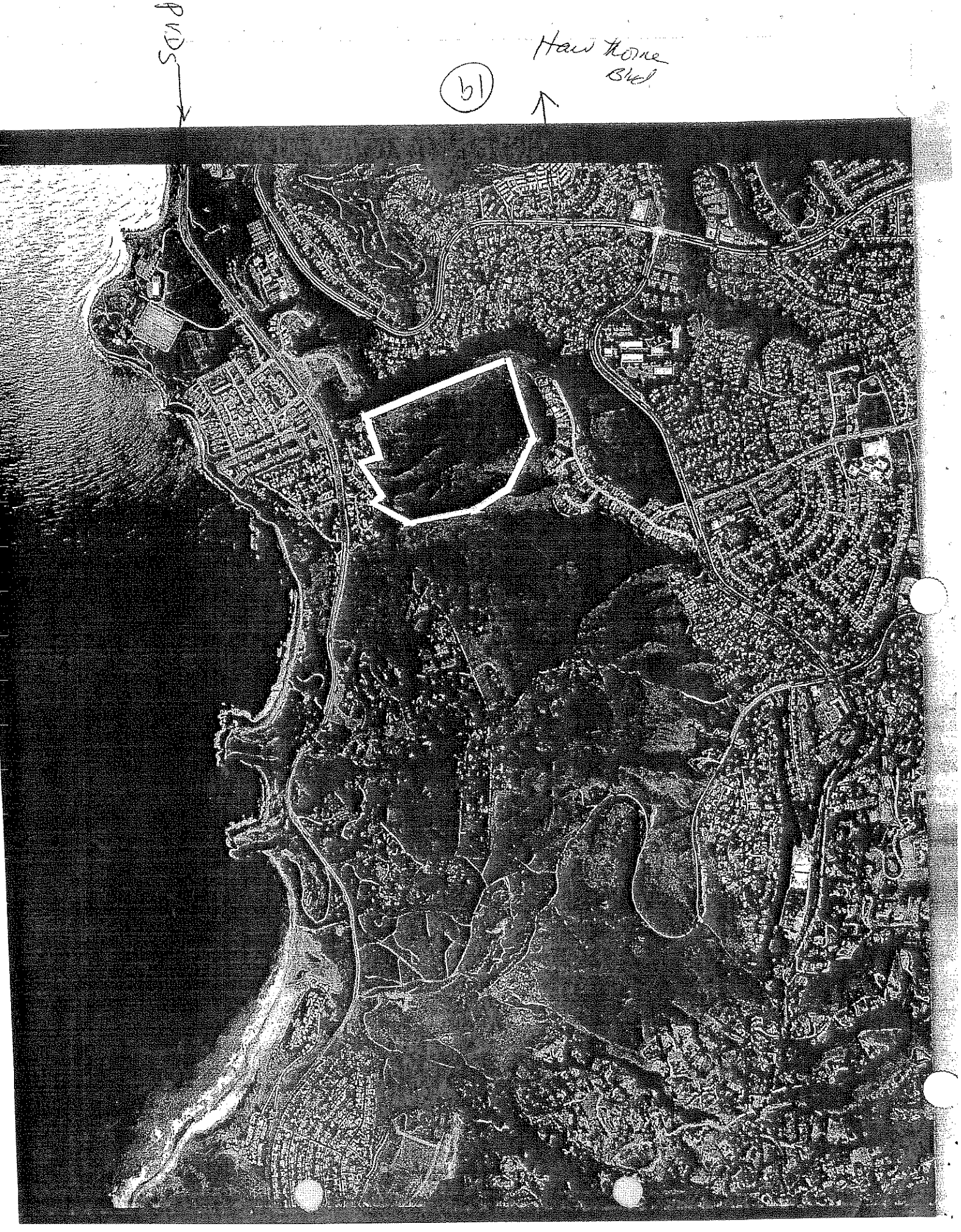
ATTEST:

/S/ JO PURCELL
CITY CLERK

State of California)
County of Los Angeles)ss
City of Rancho Palos Verdes

I, JO PURCELL, City Clerk of the City of Rancho Palos Verdes, hereby certify that the above Resolution No. 2001-21 was duly and regularly passed and adopted by the said City Council at a regular meeting thereof held on February 20, 2001.

Julie Draco
Deputy CITY CLERK


Pass
(61)
Hawthorne Blvd

COST ESTIMATE

Project: Barkentine Property
Applicant: City of Rancho Palos Verdes

PROJECT COSTS

I. Acquisition/Construction/Development (Minimum 75% of grant)

	Grant	Other	Total
o Acquisition	$3,833,934		$3,833,934
Total Acquisition Cost	**$3,833,934**	**$0**	**$3,833,934**

II. Administration (Maximum 25% of grant)

	Grant	Other	Total
o Engineering/surveying/Environmental Documentation	$131,066		$131,066
o Legal fees	$5,000		$5,000
o Escrow, title, closing costs	$30,000		$30,000
Total Administration Cost	**$166,066**	**$0**	**$166,066**
		TOTAL PROJECT COST	**$4,000,000**

FUNDING SOURCES

o Grant Request	$4,000,000		
o Other		$0	
TOTAL FUNDING SOURCES			**$4,000,000**

EXHIBIT D

Sample Acquisition Schedule

Parcel Information *(Fill out completely for each parcel to be acquired.)*:

(A) Assessor's ID#	(B) Condemnation or Negotiated	(C) Parcel Size (in Acres)	(D) Est. Date of Acquisition	(E) Est. Value of Land	(F) Est. Value of Improvements	(G) Relocation Costs	(E) + (F) + (G) Total Estimated Cost
7573-003-017	Negotiated	94.119	4/30/01	$ 3,670,641	$ 0	$ 0	$ 3,670,641
7581-023-021	Negotiated	4.187	4/30/01	$ 163,293	$ 0	$ 0	$ 163,293
- -				$	$	$	$
- -				$	$	$	$
- -				$	$	$	$
- -				$	$	$	$
- -				$	$	$	$
- -				$	$	$	$

Total Acres to be Acquired: 98.306

Anticipated Costs of Administering Relocation Program: $ 0

Total Costs $3,833,934

revised 1/00

PROJECT TIME TABLE

Open Escrow/Due Diligence	120 days	March-May 2001
Close Escrow/ complete purchase*	60 days	June/July 2001
Complete administrative documentation/ Reimbursement request processing	60 days	August/September 2001
Unanticipated difficulties/problems	60 days	October- November 2001

* If no unanticipated problems arise, the project completion is September 30, 2001. Two additional months (October and November 2001) have been added to the project time table in order to allow time to deal with any unanticipated and unforeseen events that might cause a delay in either closing escrow or finalizing the reimbursement request. Therefore, the project completion date indicated in the application form is November 30, 2001.

California Coastal Commission

PROCEDURAL GUIDANCE FOR THE REVIEW OF WETLAND PROJECTS IN CALIFORNIA'S COASTAL ZONE

CHAPTER THREE

PROTECTION AND MANAGEMENT OF WETLANDS IN THE CALIFORNIA COASTAL ZONE: A REVIEW OF RELEVANT AGENCIES AND PROCESSES

I. Introduction:

Numerous processes, policies, and regulations issued from all levels of government have dramatically influenced the amount and quality of wetlands in California since the early 1800's. Early on, much of the interest in wetlands focused on their "reclamation" for agriculture. More recently, however, interest has focused on the preservation and restoration of wetlands in California, resulting in protection oriented policies and regulations. Currently, a complex network of government agencies is responsible for enforcing the many rules and regulations pertaining to wetland management and protection. Although a few statutes and directives are specific to wetlands, most of the regulatory influence over wetlands occurs indirectly through management or regulation of water quality and quantity, fish and wildlife, endangered species habitat, water navigation, floodplain control, public trust, coastal resources, and environmental land use regulations (Dennis and Marcus, 1984). However, even with the myriad of regulatory measures, wetland resources throughout the State do not receive equal protection. Moreover, implementation within and among government agencies is inconsistent. In short, California is currently lacking a fully implemented comprehensive policy for the management and protection of its wetlands.

More recent activities, however, should improve the current situation. Specifically, the Wilson administration (State) and the Clinton administration (federal) released wetland policy statements in August 1993, which are designed to provide a consistent policy framework for the management and protection of wetlands. These policy statements detail a series of action items and initiatives designed to achieve three principal goals: 1)

ensure no net loss of wetlands; 2) reduce procedural complexity; and 3) develop private and public partnerships to encourage wetland conservation and protection. Implemetation of these policy statements is underway.

This chapter presents a review of the relevant agencies, processes, and policies affecting California's wetlands. Topics covered include: 1) definition and classification of wetlands; 2) agencies and regulations relating to wetlands; and 3) existing management practices. The focus is on wetlands occurring in the coastal zone. This chapter is not intended to present an exhaustive review, but rather to give the reader a basic level of understanding and a sense of the current regulatory procedures. The subjects covered here are complex. The reader is encouraged to consult the referenced literature for additional information.

II. Definition and classification of wetlands:

The lack of a single definition for a wetland is one of the more problematic issues affecting wise stewardship of this resource. The use of different definitions by regulatory and resource agencies has lead to unequal protection of California's wetland resources and inconsistencies in evaluating the existence and management of wetlands. All of the regulatory processes related to wetland protection and development apply only after the existence of a wetland is established. Thus, the criteria and processes used to define a wetland are central to determining which regulations apply and to what extent they are applied.

The word wetland is a relatively new term used to describe a particular landscape known throughout the world by a variety of names (e.g., swamp, bog, fen, mud flat, mire, and marsh). In fact, many of the terms used to define a wetland were developed as a way to describe the more obvious characteristics that exist within this landscape. Fundamentally, a wetland is land that remains wet long enough to result in the alteration of key physical, chemical, and biological elements relative to the surrounding landscape. However, the complex nature of wetlands requires a more elaborate definition, one which accounts for their variable nature and their subtle, but important, features.

A. Definition and Classification by Federal Agencies:

Several definitions for a wetland are applied by numerous State and federal resource and regulatory agencies, and this combined with the complex nature of wetlands has resulted in public confusion and frustration. The United States Army Corps of Engineers (ACOE), the Environmental Protection Agency (EPA), and the United States Fish and Wildlife Service (FWS) have developed the two definitions most commonly used by federal, State, and local agencies. The ACOE and EPA definition for a wetland (hereafter referred to as the ACOE definition) is probably used most often throughout the United States because of the ACOE's direct permit authority over development in wetlands and deepwater areas, and because the definition has been upheld in several courts of law.

The ACOE definition is often referred to as a "three parameter definition" because three key parameters: hydrology, soil, and vegetation must all occur and meet the defined characteristics in order for a location to be classified a wetland. The ACOE definition (Environmental Laboratory, 1987) reads as follows:

> *The following definition, diagnostic environmental characteristics, and technical approach comprise a guideline for the identification and delineation of wetlands.*
>
> *a. Definition: The ACOE (Federal Register, Section 328.3(b), 1991) and the EPA (Federal Register, Section 230.4(t), 1991) jointly define wetlands as: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.*
>
> *b. Diagnostic environmental characteristics: Wetlands have the following general diagnostic environmental characteristics:*
>
> 1. *Vegetation: The prevalent vegetation consists of macrophytes that are typically adapted to areas having hydrologic and soil conditions described in (a) above. Hydrophytic species, due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions.*
> 2. *Soil: Soils are present and have been classified as hydric, or they possess characteristics that are associated with reducing soil conditions.*
> 3. *Hydrology: The area is inundated either permanently, or periodically at mean water depths < 6.6 ft. (~ 2 m), or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation. The period of inundation or soil saturation varies according to the hydrologic/soil moisture regime and occurs in both tidal and non-tidal situations*
>
> *c. Technical approach for the identification and delineation of wetlands: Except in certain situations defined in this manual, evidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland determination.*

Figure 4 presents a cross-sectional diagram of the areas and habitats under ACOE jurisdiction, and under which this definition applies.

FIGURE 4. Scope of Corps Regulatory Jurisdiction

Like the ACOE definition, the FWS definition (Cowardin, et al., 1979) of a wetland incorporates the three key parameters of hydrophytic vegetation, hydric soils, and hydrology:

> *Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly[16] hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.*

In addition to the above definition, the FWS has developed an elaborate classification system for wetlands and deepwater habits, which was primarily created to facilitate a national inventory of wetlands (Cowardin, et al., 1979). Cowardin and his associates (1979) acknowledged the difficulty, if not impossibility, of arriving at a "single, correct, indisputable, ecologically sound definition" because of the diversity of wetland types, and because "the demarcation between wetland and dry land lay along a continuum". The FWS classification system is hierarchical, progressing from broad system descriptors to very specific modifiers for water regime, water chemistry, and soils (Cowardin, et al., 1979). Wetlands within each system share similar physical, chemical, and biological characteristics. The systems consist of the coastal wetlands which include marine and estuarine wetlands, and the interior wetlands which include riverine, lacustrine, and palustrine wetlands (Figure 5 illustrates these systems diagrammatically).

FIGURE 5. Diagram Illustrating Major Wetland Systems

Although the FWS classification system is complex, it does provide an objective method for identifying virtually any wetland landscape. Relative to the ACOE definition, the FWS definition is generally regarded as being more inclusive in the classification and subsequent delineation of a wetland. This is because the FWS classification system defines a wetland by the presence of the proper hydrology **and either** the presence of hydric soils **or** hydrophytic vegetation, except in nonsoil areas, such as rocky intertidal areas, where only the presence of proper hydrology is required[17].

Another federal wetland definition is found in the Food Security Act of 1985. This definition is important because it applies to agricultural lands:

> *The term "wetland", except when such term is part of the term "converted wetland", means land that has a predominance of hydric soils and that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions.*

The Soil Conservation Service currently assists farmers in making wetland determinations on agricultural lands. Under the "Swampbuster Provisions" of the Food Security Act (as amended in 1990), the presence of wetlands can affect the amount of federal benefits farmers receive through the federal farm benefits program. The Swampbuster Provisions allow for farm benefits to be withheld from any person who: 1) plants an agricultural commodity on a converted wetland that was converted by drainage, dredging, leveling, or any other means after December 23, 1985; or 2) converts a wetland for the purpose of or to make agricultural commodity production possible after November 28, 1990.

A recently released wetlands policy statement from the Clinton Administration charges the Soil Conservation Service with the responsibility of serving as lead agency for identifying wetlands on agricultural lands under both the Clean Water Act and the Food Security Act (Office on Environmental Policy, 1993).

All of the federal definitions use some combination of three principal attributes (i.e., hydrology, hydric soils, and hydrophytic vegetation) to determine the presence and define the boundaries of a wetland. Although a discussion of why these attributes were chosen is beyond the scope of this document, it is clear that their nation-wide use offers several advantages: 1) Each attribute is clearly defined, and the definitions are very similar if not identical among agencies; 2) the presence of each attribute, with few exceptions, is readily determined with a high degree of precision; and 3) each attribute represents a key wetland characteristic.

While it has been known for some time that several (and somewhat conflicting) wetland definitions exist at the federal level, only recently have steps been taken to address this problem. In 1993, the Clinton Administration commissioned the National Academy of Science to lead the development of a single wetland definition that will be used by all relevant federal agencies to identify wetland areas. This work will be completed in September, 1994, and should result in a more cohesive approach to wetlands regulation at the federal level.

B. Definition and Classification by California State Agencies:

In addition to the definition and classification procedures developed by federal agencies, some California resource and regulatory agencies have developed their own wetland definition and classification procedures. Although these State agency procedures are generally based on the FWS definition and classification procedure described above, they do differ in specific details.

In the California coastal zone , the California Coastal Commission (CCC), with the assistance of the Department of Fish and Game (DFG) is responsible for determining the presence of wetlands subject to regulation under the California Coastal Act. As the primary wetland consultant to the CCC, the DFG essentially relies on the FWS wetland definition and classification system, with some minor changes in classification terminology, as the methodology for wetland determinations (Radovich, 1993). However,

one important difference in the DFG delineation process compared to the FWS process, is that the DFG only requires the presence of **one** attribute (e.g., hydrology, hydric soils, or hydrophytic vegetation) for an area to qualify as a wetland (Environmental Services Division, 1987).

In contrast to the detailed definition and classification system adopted by the DFG, Section 30121 of the California Coastal Act (1976), the statute governing the CCC, has an exceptionally broad definition for a wetland:

> *Wetland means lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, or fens*.

However, the CCC Administrative Regulations (Section 13577 (b)) provides a more explicit definition:

> *Wetlands are lands where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent or drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substance in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deepwater habitats.*

As discussed in chapter one, the CCC with assistance from the DFG, is responsible for determining the presence and size of a wetland subject to regulation under the Coastal Act. Although the exact procedure has varied somewhat in the past, the DFG wetland definition and classification system is the delineation methodology generally followed by the CCC.

This discussion demonstrates that defining, delineating, and classifying wetlands are not simple matters, requiring an understanding of both wetland science and current regulatory definitions. Recently, wetland policy statements were released by both the Clinton administration and the Wilson administration, which may offer some help in this regard. Both statements identify the development of a single wetland definition as a high priority. Such a definition would need to encompass all types of wetlands and meet the needs of all relevant agencies. However, a single, clear definition for a wetland could aid in the sound management and protection of this resource, since many decisions regarding this resource are based on the definition used.

III. Agencies and Regulations Relating to Wetlands:

Numerous federal, State, and local agencies administer and enforce a myriad of federal, State, and local regulations that pertain to the development and alteration of wetlands in the California coastal zone. Although intended to provide clear and complete oversight and protection of wetlands, the sheer number and complexity of these regulations often have the opposite result. In this section some of the more important laws and regulations affecting the development and alteration of coastal wetlands are described.[18]

A. Federal Regulatory Programs and Agencies:

Two statutes at the federal level provide the primary regulatory authority over wetlands in the United States: 1) The Clean Water Act (Section 404 (b)) regulates disposal of dredge and fill materials in waters of the United States, including all streams to their headwaters, lakes over 10 acres, and contiguous wetlands, including those above the ordinary high water mark in non-tidal waters and mean high tide in tidal waters; and 2) the River and Harbors Act of 1899 (Section 10) regulates the diking, filling, and placement of structures in navigable waterways. The ACOE is responsible for the enforcement of rules and regulations pertaining to both of these sections.

The original intent of the River and Harbors Act was protection of waterway navigability. In 1968, however, the ACOE established a more expansive review process, "public interest review", which included assessment of local and regional interests such as land use, economics, flood control, fish and wildlife, ecology, pollution, as well as traditional navigability (Dennis and Marcus, 1984). The availability of alternatives, permanence of impacts, and cumulative effects were adopted as additional review criteria in 1974 (Dennis and Marcus, 1984). Thus, the ACOE Section 10 review process incorporates numerous criteria applicable to the regulation of wetlands occurring in navigable waterways.

Under Section 404(b) regulations, all saline, brackish, and freshwater wetlands adjacent to (and in some circumstances, isolated from) navigable waters are subject to ACOE jurisdiction. The Section 404 regulatory program has a complex judicial and administrative history, in which wetlands have become the regulatory focus of "waters of the United States". Additionally, as part of the Section 404 permit program, the EPA and the ACOE have developed guidelines (specifically 404(b)(1) guidelines) that specify disposal sites for dredged or fill material. The purpose of these guidelines is to control discharges of dredged or fill material into U.S. waters in order to restore and maintain the chemical, physical, and biological integrity of the waters. These guidelines set the criteria against which permit applications are measured.

Unfortunately, the intent and administration of the Section 404 program in interpreted in fundamentally different ways by various federal agencies. For example, the ACOE views its primary regulatory function as protecting water quality, whereas the FWS, who comments on many Section 404 permit actions, regards protecting the integrity of wetlands and their habitats as the primary function of Section 404 (Dennis and Marcus, 1984).

It is important to note that not all activities in wetlands are regulated under Section 404. For example, excavation, clearing, leveling, draining, and vegetation removal are all unregulated activities. Additionally, the ACOE's general permit system exempts the deposition of fill material in a wide variety of riparian habitats and small ((1 acre) wetlands. This is particularly troublesome in California, where the seasonally dry nature of many streams and ponds precludes ACOE jurisdiction of many riparian corridors and small freshwater wetlands.

Although the River and Harbors Act and the Clean Water Act empower the ACOE with primary responsibility for the federal regulation of development and alterations in wetlands, other federal agencies are also involved. The EPA, FWS, Soil Conservation Service, and the National Marine Fisheries Service (NMFS) can review applications for ACOE Section 404 permits and provide comments and recommendations to the ACOE. In fact, under the Fish and Wildlife Coordination Act, the ACOE is required to consult with the FWS and the NMFS and give full consideration to their recommendations in evaluating permit decisions. Additionally, under certain circumstances the EPA, FWS, and NMFS can elevate an ACOE district engineer's permit decision to the Assistant Secretary for review and reconsideration[19]. However, only the EPA has the authority (albeit, rarely used) to veto an ACOE permit decision.

Notable exceptions to this division of agency responsibility occur when threatened or endangered species are present, or when an activity is subject to the requirements of the National Environmental Policy Act. In these situations a multitude of agencies with direct regulatory authority may become involved. The lead and participating agencies will vary depending on the specific circumstances.

B. Federal–State Interaction[20]:

Pursuant to regulations adopted by the Office of Ocean and Coastal Resource Management (OCRM) under the Federal Coastal Zone Management Act (CZMA), applicants for ACOE Section 404 and Section 10 permits must include in their application a certification of consistency with the California Coastal Management Program[21]. This certification, and accompanying data and analysis, must also be submitted to the California Coastal Commission (CCC) for review and concurrence. The ACOE may not issue their permit until the CCC reviews and concurs with the applicant's consistency certification. This requirement is in addition to any other requirements the CCC has for coastal development permit applications.

Pursuant to the Fish and Wildlife Coordination Act, the ACOE must also give full consideration to comments submitted by the DFG. As the principal State resources trust agency, the DFG is obligated to comment on ACOE permit decisions in order to ensure protection of the State's natural resources. In this capacity, the DFG has drawn on the policy direction of the California Coastal Act, the California Endangered Species Act, the California Environmental Quality Act, and other relevant State laws. The DFG also consistently relies on the policy direction of California's Wetlands Conservation Policy

(1993), which calls for no net loss of wetlands and a long-term net gain in the quantity, quality, and permanence of wetland acreage and values.

C. State Regulatory Programs and Agencies:

Numerous State agencies regulate, manage, or otherwise control natural resources within California through a wide variety of general and specific laws and directives, which are carried out by resource departments, commissions, and boards (Dennis and Marcus, 1984). Analyses completed in the early 1980's reviewed the effectiveness of 59 California State statutes in protecting wetlands and other water related lands, and concluded the State has limited direct authority over wetlands except in three geographic areas: the coastal zone, San Francisco Bay, and Suisun Marsh (Jones, 1981; Shute and Mihaly, 1982). Thus, although the coast is relatively well protected, inland California is not.

The California Environmental Quality Act (CEQA) sets the State's basic charter for environmental protection. Among other policies, CEQA aims to minimize or eliminate the environmental impacts from development projects. Specific wetland areas are listed as having regional or statewide significance (e.g., Suisun Marsh, Sacramento–San Joaquin Delta, and wild and scenic rivers), and the resource in general (wetlands and riparian lands) is defined as significant habitat.

The Keene–Nejedly California Wetlands Preservation Act (1976) is the only State legislation besides the Coastal Act to define wetlands (Dennis and Marcus, 1984). The act states there "is a need for an affirmative and sustained public policy and program directed at their [wetlands] preservation, restoration, and enhancement, in order that such wetlands shall continue in perpetuity". The act provided for acquisition of ten important wetlands, using funds from several sources, and was intended to support preparation of a statewide wetlands plan. However, acquisition funds were not allocated in 1976 (Dennis and Marcus, 1984).

The California Wild and Scenic rivers Act (1972) provides for the preservation of certain rivers, which possess extraordinary scenic, recreational, fishery, or wildlife values. Designated rivers are preserved in their free-flowing state, together with their immediate environments. All of the rivers currently included under this act occur in the northern half of California. Preservation under this act provides additional protection to the riparian areas adjacent to the rivers.

The Resources Agency functions as an umbrella agency for the State's resource departments, conservation boards, and commissions. The agency sets major resource policy for the State and oversees programs of member departments such as the DFG. With respect to wetlands, the Resources Agency is just beginning to implement Governor Wilson's Statewide wetlands policy. This policy defines the State's goals and objectives with regard to the preservation of remaining wetlands and set priorities and guidelines for restoration.

The State Regional Water Quality Control Boards are a regulatory body within the newly formed California Environmental Protection Agency. The regional boards' primary role is to enforce the federal Clean Water Act, and in doing so, assert regulatory authority over development activities affecting the water quality of navigable water and wetlands. Under Section 401(a)(1) of the Clean Water Act:

> *Any applicant for a Federal license or permit to conduct any activity...which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State...that any such discharge will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of this Act.*

In turn, California Code of Regulations Section 3831(k) defines the State certification required under Section 401 as:

> *'Water Quality Certification' means a certification that there is a reasonable assurance that an activity which may result in a discharge to navigable waters of the United States will not violate water quality standards, where the activity requires a federal license or permit*.

Water quality standards are specified in federal regulation (40 CFR 131.6 et seq.) to include: 1) a State's numeric and narrative water quality criteria (objectives); 2) designated beneficial uses; and 3) anti-degradation policy. The anti-degradation policy requires, in part, the maintenance and protection of existing instream water uses including the level of water quality necessary to protect the existing uses. Through the Clean Water Act Section 404(b)(1) guidelines, the United States EPA interprets the anti-degradation policy to be satisfied with regards to fills in wetlands if the discharge did not result in "significant degradation" to the aquatic ecosystems.

In practice, the regional boards have applied their authority over water quality standards to all waters of the State, including wetlands. Discharge to wetlands and riparian wetlands may violate water quality objectives (e.g., turbidity, temperature, or salinity); impair beneficial uses (e.g., groundwater recharge, recreation, wildlife habitat, fish migration, and shellfish harvesting); and conflict with the anti-degradation policy.

The California Department of Fish and Game has Statewide resource responsibilities and authority that directly and indirectly influence projects and activities in coastal zone wetlands. In addition to being responsible for the maintenance and protection of California's fish and wildlife, the DFG has authorities under California's Public Resources Code, and the federal Fish and Wildlife Coordination Act to regulate or comment on activities in wetland and riparian areas. The DFG also assumes primary responsibility for implementation of the California State Endangered Species Act, and the Streambed Alteration Agreement (Fish and Game Code Sections 1601–1603). This agreement is one of the State's few direct legal instruments for the protection of streams, rivers, and lakes. Additionally, as mentioned previously, the DFG is a primary consultant to the CCC regarding the affects of coastal development on wetlands and other natural

resources. The DFG also comments directly to the ACOE concerning fish and wildlife aspects of Section 10 and Section 404 permits. DFG's official position regarding the protection of wetlands is that development projects should not result in a net loss of either wetland acreage or wetland habitat value (DFG, 1987).

The California State Coastal Conservancy (SCC) is another State agency actively involved in the protection and enhancement of coastal wetlands, although the agency has no regulatory function. The SCC was created by the legislature in 1976 to protect, restore, and enhance California's coastal resources. A primary purpose of the SCC is to resolve coastal land use conflicts not amenable to regulatory solutions, in order to protect coastal resources and expedite environmentally sound development. The SCC functions to address these conflicts with solutions unavailable to other State agencies because of their regulatory responsibilities, or because of limitations in funding, jurisdiction, or function.

The SCC accomplishes its purpose through various programs, including:

- Provision of technical assistance and guidance to nonprofit organizations
- Purchase and restoration of wetlands, sand dunes, and other important natural lands
- Revitalization of the State's urban waterfronts
- Preservation of prime agricultural lands
- Funding construction of beach access ways and trails, and retiring antiquated subdivisions within the coastal zone and San Francisco Bay

During the last 16 years, the SCC has given over $40 million to 77 nonprofit organizations to acquire and restore key wetland, open space and agricultural lands along the coast. In addition, about one-third of all SCC funds ($60 million) have gone to fund resource enhancement projects. With these fund, the SCC, in partnership with local governments and nonprofit organizations, has completed 91 resource enhancement plans, 60 wetland enhancement projects (at least one in every coastal county), and protected 24,000 acres of wildlife habitat, most of which are wetlands.

The California Coastal Commission is charged with the regulation of development in California's coastal zone as stipulated in the California Coastal Act. Sections 30230, 30231, 30233, 30236, and 30240 of the Coastal Act are directly applicable to the preservation and protection of wetlands and other environmentally sensitive areas[22].

Development[23] or alteration of California's coastal wetlands is primarily regulated by Section 30233(a) of the Coastal Act, which states:

> *The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible[24] less environmentally damaging alternative, and where feasible mitigation*

measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland. The size of the wetland area used for boating facilities, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, shall not exceed 25 percent of the degraded wetland.

(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake or outfall lines.

(6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(7) Restoration purposes.

(8) Nature study, aquaculture, or similar resource dependent activities.

Among other things, Section 30233(a) lists the types of development for which diking, filling, or dredging may be permitted in open coastal waters, wetlands, estuaries, and lakes occurring in the coastal zone. This section also stipulates the criteria under which development is permitted (i.e., least environmentally damaging alternative and existence of feasible mitigation measures). Although permits under this section of the Coastal Act can have numerous outcomes, a review of the CCC permits relating to Section 30233 shows several clear trends (Table 2). Of the 106 permits processed Statewide between 1973 and 1986, 71 (67%) were for the deposition of fill material, 58 permits (55%) were for dredging activity, and 5 permits (5%) were for diking. (Some permits included both dredge and fill activities.) Eighty-three (78%) of the 106 permits were for new

development or maintenance of existing development, while 26 (25%) were for restoration projects. Forty-nine (46%) permits included mitigation requirements. Ninety-eight (92%) of the permits were approved.

Table 2. SUMMARY OF CALIFORNIA COASTAL COMMISSION PERMIT ACTIVITY RELATING TO SECTION 30233, 1973–1986[25]

Year	Total Number of Permits	Number of Permits for Dredging	Number of Permits for Diking	Number of Permits for Fill	Number of Permits Approved	Number of Permits Denied	Number of Devel. or Maint. Proj.	Number of Restoration Projects	Number Requiring Mitigation
1973	2	0	0	2 (100%)	1 (50%)[26]	1 (50%)	2 (100%)	0	0
1974	3	2 (66%)	0	1 (33%)	3 (100%)	0	3 (100%)	0	0
1975	2	0	0	2 (100%)	2 (100%)	0	2 (100%)	0	1 (50%)
1976	4	3 (75%)	1 (25%)	1 (25%)	3 (75%)	1 (25%)	4 (100%)	0	0
1977	5	2 (40%)	0	5 (100%)	5 (100%)	0	4 (80%)	1 (20%)	1 (20%)
1978	7	1 (14%)	0	6 (86%)	5 (71%)	2 (29%)	7 (100%)	0	5 (71%)
1979	8	6 (75%)	0	5 (63%)	8 (100%)	0	6 (75%)	3 (38%)	1 (13%)
1980	10	5 (50%)	0	7 (70%)	10 (100%)	0	8(80%)	4 (40%)	8 (80%)
1981	7	6 (86%)	0	2 (29%)	6 (86%)	1 (14%)	4 (57%)	3(29%)	1 (14%)
1982	18	7 (39%)	1 (6%)	12 (67%)	17 (94%)	1 (6%)	15 (83%)	3 (17%)	10 (56%)
1983	18	12 (67%)	2 (11%)	14 (78%)	16 (89%)	2 (11%)	12 (67%)	6 (33%)	6 (33%)
1984	11	8 (73%)	1 (9%)	7 (64%)	11 (100%)	0	8 (73%)	3 (27%)	7 (64%)
1985	5	2 (40%)	0	3 (60%)	5 (100%)	0	3 (60%)	2 (40%)	3 (60%)
1986	6	4 (66%)	0	4 (66%)	6 (100%)	0	5 (83%)	1 (17%)	6 (100%)
1973–1986	**106**	**58 (55%)**	**5 (5%)**	**71 (67%)**	**98 (92%)**	**8 (8%)**	**83 (78%)**	**26 (25%)**	**49 (46%)**

Mitigating for wetland losses is frequently required in conjunction with coastal development permits granted under Section 30233. Most commonly, these projects involve compensatory mitigation. Both in-kind mitigation and out-of-kind mitigation are used. Coastal Act Section 30607.1 contains some of the most explicit language regarding mitigation for wetland development projects, and states in part:

> *Where any dike and fill development is permitted in wetlands in conformity with Section 30233 or other applicable policies set forth in this division, mitigation measures shall include, at a minimum, either acquisition of equivalent areas of equal or greater biological productivity or opening up equivalent areas to tidal action; provided, however, that if no appropriate restoration site is available, an in-lieu fee sufficient to provide an area of equivalent productive value or surface areas shall be dedicated to an appropriate public agency or the replacement site shall be purchased before the dike or fill development may proceed...*

One interpretation suggests Section 30607.1 sanctions acquisition of an existing wetland as acceptable mitigation for an allowable wetland development project. However, such an approach would lead to a net loss of wetland area. In practice, the CCC has interpreted the phrase "at a minimum" to require inclusion of a restoration component in any acquisition plan in order to avoid the net loss of wetland area.

The CCC works with the applicant to develop specific mitigation requirements with the help of DFG, Coastal Conservancy, FWS, EPA, NMFS, and ACOE staff. Determining the amount and type of mitigation required is a contentious and complex matter often confounded by both a lack of applicable technical information and the regulatory process. Although numerous mitigation projects have been approved by the CCC, there is little information describing the success of these projects. This is a serious and chronic problem attributable to a lack of specific performance standards necessary to gauge the success of mitigation projects, and a lack of technical information and/or resources needed to evaluate these projects.

Probably one of the more contentious issues under Section 30233 is the stringent review of projects proposed in "degraded wetlands" (Section 30233(a.3)). With respect to historic wetland losses along the southern California coast, one intent of the Coastal Act is to halt the loss of wetlands and, where feasible, restore the resource (Dennis and Marcus, 1984). The main points of contention usually focus on the wetland delineation and the determination of what constitutes "degraded condition".

Section 30411 establishes the DFG as the lead agency charged with the study and identification of degraded wetlands, and provides general guidelines for classifying a wetland as degraded. However, the ecological complexity of wetlands and the lack of a single definition limits the degree of certainty with which these determinations can be made. The DFG has described its process for determining if a wetland is in fact degraded (for example see, DFG, 1981). In essence, the DFG makes this determination through an examination of the subject area to determine if the system has been adversely impacted

by previous alterations, resulting in a degraded condition when compared to remaining unaltered areas or historic information. In addition, Coastal Act Section 30411(b) states that any such study of a wetland shall include consideration of all of the following:

(1)Amount and elevation of filled areas.

(2)Number and location of dikes and other artificial impediments to tidal action and freshwater flow and the ease of removing them to allow tidal action to resume.

(3)Degree of topographic alterations to the wetland and associated areas.

(4)Water quality.

(5)Substrate quality.

(6)Degree of encroachment from adjacent urban land uses.

(7)Comparison of historical environmental conditions with current conditions, including changes in both the physical and biological environment.

(8)Consideration of current altered wetland conditions and their current contribution to coastal wetland wildlife resources with relation to potential restoration measures.

(9)Chemical cycling capabilities of the wetland including water quality enhancement, nutrient accumulation, nutrient recycling, etc.

As part of this identification process, the extent of any wetland on the site must be identified with precision (CCC, 1981).

Section 30233(c) of the Coastal Act further limits development and alteration of wetlands throughout the coastal zone, stating:

> *In addition to the other provisions of this Section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19[27] coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.*
>
> *For the purposes of this section, "commercial fishing facilities in Bodega Bay" means that not less than 80 percent of all boating facilities proposed to be developed or improved, where such improvement would create*

additional berths in Bodega Bay, shall be designed and used for commercial fishing activities.

Numerous coastal wetlands (e.g., riparian areas) are considered environmentally sensitive habitat areas because they provide critical habitat to threatened or endangered species, or because of their uniqueness relative to the surrounding landscape. Thus, Section 30240 provides additional regulatory oversight of wetlands in certain situations. Section 30240 states:

a)Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

b)Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat recreation areas.

Ports and port-related develop also have the potential of affecting coastal wetlands[28]. Development within those portions of Ports Hueneme, Long Beach, Los Angeles, and San Diego Unified Port District lying within the coastal zone is generally governed by the provisions contained in Chapter 8 of the Coastal Act. However, wetlands and estuaries that have been identified on the CCC's Port Jurisdiction Maps (adopted by the Commission on April 6, 1977 pursuant to Section 30710) are not governed by the provisions of Chapter 8, but instead are subject to Chapter 3 policies of the Coastal Act (Coastal Act Section 30700).

Chapter 8 provisions apply to all "water areas" (a termed used only in this chapter) regardless of whether such area is considered wetland, estuary, or open coastal water. The diking, filling, or dredging of any water area within the defined areas of these ports is limited by Section 30705, 30706, and 30708 of the Coastal Act. The diking, filling or dredging of any wetland or estuary occurring in any port, harbor district or authority not named in Chapter 8 (e.g., Humbolt Bay Harbor, Recreation and Conservation Districts, or Moss Landing Harbor District) is subject to Chapter 3 provisions of the Coastal Act.

Section 30236 of the Coastal Act regulates development in aquatic regions such as rivers and streams. These sections address specific types of development such as channel alteration, dams, and flood control projects, which could impact riparian areas or tidal marshlands.

Finally, the CCC has adopted the *Statewide Interpretive Guidelines for Wetlands and Other Wet Environmentally Sensitive Habitat Areas* (CCC, 1981; Appendix A). These guidelines were developed to assist the CCC, local government, and the public in the application of the Coastal Act and certification of local coastal plans. These guidelines contain technical definitions for wetlands and riparian areas, discuss conditions for

permitting development in these areas, and provide information pertaining to the maintenance and restoration of wetlands.

D. Local Government Regulatory Programs and Agencies:

The California Coastal Act is designed to delegate local governments with much of the CCC's authority over control of coastal development. Section 30004(a) of the Coastal Act states:

> *To achieve maximum responsiveness to local conditions, accountability, and public accessibility, it is necessary to rely heavily on local government and local land use planning procedures and enforcement.*

To meet the objectives of Section 30004(a), the Coastal Act directs each of the 73 cities and counties lying wholly or partly within the coastal zone to prepare a Local Coastal Plan (LCP) for CCC review and certification[29]. With a certified LCP, each local government assumes authority for permitting certain types of development in specified areas of the coastal zone. It is important to note, however, that even after LCP certification, the CCC continues to have a major role in regulating wetland development. Specifically, Coastal Act Section 30519(b) states in part:

> *Subdivision (a)* [that is, delegation of development review authority to a local government] *shall not apply to any development proposed or undertaken on any tidelands, submerged lands, or on public trust lands, whether filled or unfilled, lying within the coastal zone,...*

Thus, the CCC retains regulatory authority over virtually all of the wetlands in the coastal zone either through its original jurisdiction, or through the appeal process[30].

LCP's provide for the regulation of wetland development in one of two principal ways: 1) through the adoption of Coastal Act Section 30233 (with or without some modification); or 2) by identifying wetlands as environmentally sensitive areas and then adopting Coastal Act Section 30240 (with or without some modification). Of the 67 LCP's with policies regulating development in wetlands, 37 (55 percent) use Section 30233 and 27 (40 percent) use Section 30240. The remaining three LCP's (5 percent) regulate wetland development through the creation of new policies.

The way in which LCP's regulate wetland development is somewhat influenced by the distribution of wetlands throughout the California coastal zone. Wetlands are relatively more numerous and diverse in the northern half of the State (North Coast and Central Coast regions, Figure 6); thus, the overall approach to wetland regulation is somewhat more dependent on development activity. LCP's from these regions contain policies that generally regulate development in wetlands and are applied as wetland development projects occur. In contrast, wetlands are relatively scarce in the southern half of the State (South Central Coast, South Coast, and San Diego Coast, Figure 6), and so each one is

considered vitally important. Thus, many of the LCP's specifically identify the wetlands within the respective jurisdiction and contain specific regulations for development.

FIGURE 6. Local Coastal Program LCP Certification Status.

Some general trends in the type of wetlands regulated also exist among the LCP's. All of the LCP's contain some discussion of wetlands ranging from a single statement that wetlands do not occur within the jurisdiction, to an elaborate discussion of the types and characteristics of the wetlands found within the jurisdiction. Overall, riparian areas were most often included as a specific type of wetland, with 41 (61%) of the 67 LCP's identifying this habitat as a type of wetland. Additionally, it was not uncommon for the LCP's to identify specific areas (mainly river and stream corridors) as riparian areas.

Of the 80 LCP's effectively certified Statewide, only 13 (16%) have no policies explicitly limiting development in wetlands. In all cases, this is because wetlands were known not to occur, or have not been identified within the jurisdictional boundaries. Of these 13 LCP's, two occur in the north coast region, one occurs in the central coast region, two occur in the south central coast region, seven occur in the south coast region, and one occurs in the San Diego coast region (Figure 6).

IV. Existing Management Practices:

A. Management of Federal Lands in California:

Approximately 45% of California's land (46.5 million acres) is managed by federal agencies (Dennis and Marcus, 1984). The majority of these lands are managed by the Forest Service (46%, 21. 4 million acres) and the Bureau of Land Management (37%, 17.2 million acres), but the defense departments also manage substantial acreage, many containing small but significant wetlands. In addition, the National Park Service manages park lands, and the FWS maintains National Wildlife Refuges. Both of these lands can contain substantial wetland areas.

The federal government's management and control of California's wetlands is substantial, given the significant amount of land under federal ownership. Federal lands are used for the extraction and production of minerals, oil, gas, and timber, and for grazing, industrial activities, living quarters, military training, water storage, parks, and wilderness areas. Various statutes, orders, and regulations such as President Bush's Wetlands Protection Executive Order (E.O. 11990), the National Environmental Policy Act, the Federal Land and Management Act, and the Forest Management Act give some assurance that sensitive resources, such as wetlands, occurring on federal lands will receive appropriate protection. However, the federal land management agencies can exercise considerable discretion in their management practices, since the statutes and other rules provide little specific guidance (Dennis and Marcus, 1984). Outside scrutiny by private interest groups, local government, and State resource agencies provide another check of federal activities.

B. Management of State Owned Lands in California:

Approximately two percent (1.95 million acres) of California's land is in State ownership (Fay, et al., 1990). Nearly 66 percent of the State owned lands are administered by the California Department of Parks (Fay, et al., 1990), but other State agencies such as the Department of Fish and Game, the Department of Forestry, the Coastal Conservancy, and State universities and colleges hold title to lands with substantial wetlands. Overall, the State's land holdings are significantly smaller than those of the federal government, but the vast majority of the State lands are owned by agencies focusing on conservation and preservation. The California Environmental Quality Act governs the State's development activities on its lands. Additionally, State owned lands in the coastal zone are subject to regulation under the Coastal Act.

The State of California also owns nearly 4 million acres of sovereign lands. These lands underlie the State's navigable and tidal waterways and include the beds of: 1) hundreds of tidal and non-tidal rivers, streams, and sloughs; 2) nearly 100 non-tidal navigable lakes; 3) the tidal navigable bays and lagoons; and 4) intertidal and subtidal lands adjacent to the entire coast and offshore islands of the State from the mean high tide line to three miles offshore. Thus, many of these State-owned sovereign lands are adjacent to or include wetland areas. Depending on their location, sovereign lands are managed by the California State Lands Commission and other State and local agencies as public trust resources.

C. Management of Individual Wetlands:

Numerous individual wetlands within California are managed by various public agencies as a way to ensure their preservation. Such "managed wetlands" often include both modified and unmodified areas, and range in size from tens to thousands of acres. Two examples of such wetlands in the California coastal zone are the National Estuarine Research Reserves of Elkhorn Slough and the Tijuana River Estuary.

The overall goal of these management activities is to preserve, restore, and enhance one or more of the functions and values attributable to wetlands. Such functions and values include retention of flood waters, detoxification of receiving waters, recreation, research, and provision of critical habitat. Typically, a management plan[31] serves to guide the direction and implementation of the activities essential for obtaining the overall goal.

D. Wetland Management Goals and Concerns:

The primary goal of resource and regulatory agencies is to preserve the remaining wetland acreage (i.e., maintain a 'no net loss policy'). A secondary, but equally important goal is to restore lost and disturbed wetland landscapes. Thus, in addition to the preservation and protection of existing coastal wetlands, resource and regulatory agencies must strive to increase total wetland acreage through restoration, and improve the chemical, physical, and biological quality of degraded wetlands.

Although these goals are easily stated, they are not easily achieved. The high population densities in the California coastal zone, particularly along the south coast and San

Francisco Bay, continue to exert pressure for further urban and industrial development in wetland areas. Meanwhile agricultural activities (historically the leading cause of wetland loss in California) continue with limited regulation. Changes in permitting procedures have also yielded results counter to the no net loss policy. For example, ACOE Nationwide Permit Number 26 (NWP 26) authorizes the discharge of dredge or fill material into headwaters and isolated waters of the United States in certain situations. Projects seeking authorization under NWP 26 receive considerably less scrutiny and evaluation through the associated ACOE process. An analysis of ACOE permits granted in California between 1987 and 1992 found that 775 projects were authorized under NWP 26, resulting in a loss of at least 725 acres of wetlands in the northern two-thirds of the State (Long, et al., 1992). Clearly, NWP 26 permitting is having a negative impact on wetlands in California.

Thus, the inevitable conflicts between preservation goals for environmental resources and development activities present a major challenge to resource and regulatory agencies. Other important considerations include the multitude of agencies involved in wetlands regulation and the conflicting and confusing definitions and classification procedures. These process concerns combined with the paucity of substantive technical information are critical management concerns.

V. Summary:

The regulations, policies, and processes guiding the management and protection of California's coastal wetlands are numerous, and complex. Although specific regulations controlling development in wetlands exist at all levels of government, there is evidence to suggest the goal of no-net-loss of wetlands has not been achieved. The ability to protect existing wetlands is also hampered by inconsistencies among regulatory agencies and gaps in existing regulations. The lack of a single, clear, and broadly instituted definition for a wetland is a major inconsistency among regulatory agencies, which can act to compound regulatory problems. Meanwhile, certain types of wetlands, such as riparian areas and seasonal wetlands, do not receive equal protection at all levels of government because of differences in adopted definitions, agency imposed limitations of adopted definitions, and jurisdictional limitations. Additionally, several activities resulting in the loss of wetlands such as draining, vegetation removal, and agriculture are not regulated to the same degree as dredging, filling, and diking.

Of the wetland development projects that are permitted, many involve some form of mitigation. Although mitigation can be a viable alternative, establishment of the specific requirements is generally on a case-by-case basis and often involves a complex and time intensive process. This approach is incompatible with attempts by regulatory agencies to implement consistent mitigation policies and requirements.

In many cases the level of protection a wetland receives is a function of both ownership and land use. Although much of California is held in public (i.e., federal, State, or local government) ownership, many wetlands of significant size are under private ownership. The level of wetland protection can be lower on private lands, although public ownership

does not necessarily guarantee appropriate protection. Meanwhile, land use patterns can have direct and indirect affects on wetlands: urban and agricultural development in a wetland are obvious direct affects, while development outside the wetland but within the same watershed can indirectly affect wetlands through alteration of physical and chemical processes. On a larger scale, regional, Statewide, and (in the case of Canada) international land use patterns can affect coastal wetlands through, for example, changes in air quality, hydrology, and the abundance of birds and fish.

It is clear that the management and protection of wetland resources involves numerous complex issues. Although we have come a long way in our knowledge and protection of California's coastal wetland resources, much work still remains.

Endnotes

[16]Normally, a particular vegetation type (e.g., hydrophytic vegetation) is considered to predominate when it makes up at least 50% of the vegetative cover on an areal basis.

[17]A common misconception is that the FWS definition requires only one of the three requisite attributes (i.e., proper hydrology, hydrophytic vegetation, or hydric soils) be present in order for any location to qualify as a wetland. This was never the Agency's intention. For a specific discussion of this topic, the reader is referred to Tiner, R.W. Jr. 1989. *A clarification of the U.S. Fish and Wildlife Service's wetland definition*. National Wetlands Newsletter. 11(3)6–8.

[18]This section is not a complete review of all laws and regulations pertaining to wetlands. For more information the reader is encouraged to review the following references: 1) Muir, T.A., C. Rhodes, and J.G. Gosselink. 1990. *Federal statutes and programs relating to cumulative impacts in wetlands*. Pages 223–236 in J.G. Gosselink, L.C. Lee, and T.A. Muir [Eds.]. *Ecological Processes and Cumulative Impacts: Illustrated by Bottomland Hardwood Wetland Ecosystems.* Lewis Publishers, Inc., Chelsea, MI.; and 2) Dennis, N.B. and M.L. Marcus. 1984. *Status and trends of California wetlands.* Final report prepared for the California Assembly, Resources Subcommittee.

[19]For a more detailed discussion of the elevation process see Davis, M.L. and R.C. Gardner. 1993. *Recognizing the Corps' commitment*. National Wetlands Newsletter. 15(2)9–10.

[20]Information in this section is from the Statewide Interpretive Guidelines (CCC, 1981).

[21]The consistency certification process must still be completed, even if the ACOE undertakes the work (e.g., maintenance dredging, or channel modification) .

[22]Section 30107.5 of the Coastal Act defines an environmentally sensitive area as "any area in which plant or animal life or their habitats are either rare or especially valuable

because of their special nature or role in an ecosystem, and which could be easily disturbed or degraded by human activities and developments".

[23]According to Section 30106 of the Coastal Act " 'Development' means, on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto: construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg–Nejedly Forest Practice Act of 1973 (commencing with Section 4511)."

[24]Feasible is defined in Section 30108 of the Coastal Act to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors".

[25]Based on information contained in: CCC 1988. Draft Wetlands Task Force Report, Appendix C.

[26]Percentages are calculated as the proportion of the total number of permits occurring in a specific category.

[27]See the Statewide Interpretive Guidelines (CCC, 1981) For a complete list of these 19 wetlands.

[28]Information relating to ports and port activities is taken from Section IV(E) of the Statewide Interpretive Guidelines (CCC, 1981).

[29]The Coastal Act allows local governments, with CCC approval, to divide their coastal zone into geographic segments, and to prepare a separate LCP for each segment. For this reason, there are currently 126 LCP segments, instead of 73 (the actual number of coastal zone cities and counties). To date, 80 total LCP segments (64 percent) have been effectively certified and the relevant local governments are now issuing coastal development permits.

[30]With regard to projects affecting wetlands, Coastal Act Section 30603(a)(2) limits the appeal of an action taken by a local government on a coastal development permit application to "developments... that are located within 100 feet of any wetland, estuary, or stream..."

[31]Management plans vary greatly in both format and content; however, a useful guide for the development of wetland management plans has been produced by the Lane Council of Governments (1992). *Hints on Preparing a Comprehensive Wetland Management Plan*. Pages 21-29 in The Association of State Wetland Managers. *Background Report Symposium Wetlands and Watershed (Water Resources) Management*. May 10-12, 1993. Sparks, Nevada.

- Return to Table of Contents
- Return to Chapter 2: An Overview of Mitigation Processes and Procedures
- Go to Chapter 4: Priority Wetland Resource Concerns: A Review of Relevant Technical Information
- Go to Literature Cited
- Go to Glossary
- Return to California Coastal Commission Publications Page
- Return to California Coastal Commission Home Page
