SECTION 7
PRESERVE MANAGEMENT

As a comprehensive plan to conserve viable populations of wildlife and plants within a largely urbanized area, the City's SAP will enhance the City's quality of life and provide the City with recreational and educational opportunities, while conserving unique resources and contributing to regional biodiversity. However, the City's Preserve will require intensive management to meet its biological goals and qualify for take permits under the State NCCP ACT and Federal ESA. The urban nature of the Preserve and the high degree of habitat fragmentation and associated edge effects will require diligent management and monitoring to ensure that conserved habitats continue to support viable populations of covered species. The City's Plan also relies to a large degree on habitat restoration and enhancement to meet its biological goals. This section provides general and area-specific guidelines for Preserve management and monitoring of the City's Preserve. The City's Open Space Management Plan (OSMP) will address the implementation of the topics summarized below. The management and monitoring program for the City's Preserve, as summarized here and described in detail in the OSMP, is intended to meet and comply with the requirements of MHCP Volumes II and III.

7.1 MANAGEMENT RESPONSIBILITIES

It will be the City's responsibility to maintain and manage lands within the Preserve in a manner consistent with this SAP (e.g., in perpetuity); however, the City may pass on the funding and management/monitoring duties to another entity. Existing legal uses within and adjacent to the Preserve may continue, and existing ownerships will be maintained unless lands are otherwise acquired by public entities through purchase, dedication, or donation. All new public facilities will be reviewed for consistency with this SAP to maximize public safety and minimize management concerns and biological impacts. As new lands, regardless of their size, are added to the Preserve as mitigation for approved projects, they will be required to (1) be protected by a conservation easement or have the fee title transferred to a conservation entity, and (2) be managed and monitored, with adequate funding, to MHCP standards (as specified in MHCP Volumes II and III). A detailed discussion of management responsibility on specific lands is provided in the OSMP. Figure 7-1 illustrates planned management responsibilities within the Preserve

7.1.1. Responsibilities on Public Lands

The City will designate a Preserve Steward who will be the primary point of contact and the coordinator for overseeing all Preserve management and monitoring issues within the City. The Preserve Steward will serve as the liaison between City departments, private landowners, Wildlife Agencies, other public agencies, and the general public. The Preserve Steward will be a contracted consultant or City staff person responsible for:

- Taking a leadership role in oversight and coordination of City-wide Preserve management, monitoring, and reporting;
- Frequent communication with the Preserve Managers, the City, and the Wildlife Agencies;
- Providing science-based technical guidance and direction to Preserve Managers for survey design, data collection, and analysis; and
- Supporting the City on compliance monitoring (review of predevelopment plans and post-construction conformance review) by training and updating City planning staff regarding development standards and guidelines required for development adjacent to the Preserve.

Preserve Managers will be assigned to a specific area or areas of the Preserve and will be responsible for on the ground management and monitoring of their specific area(s). They will update and implement the OSMP, develop and implement site-specific management measures (area-specific directives), promote public education and involvement in the Preserve, and be responsible for Preserve habitat tracking and reporting. The Preserve Managers will provide annual reports to the City summarizing management activities, describing management priorities, reporting on restoration activities, and evaluating funding adequacy relative to resource management goals, which will be compiled and submitted by the City to the Wildlife Agencies on a yearly basis. Every 3 years the Preserve Steward will submit a report to the City and Wildlife Agencies that provides a broader view of the Preserve to identify trends and priorities (see below), including plans for the next three-year period. The City's Preserve Steward and Managers will work with Preserve Managers in the other MHCP jurisdictions and the Wildlife Agencies to coordinate management and help reduce costs through sharing of resources (see the OSMP for a detailed discussion of management and monitoring implementation).

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Figure 7-1. 11x17. Page 2 of 2.

The City and the Preserve Steward will be responsible (either directly or through agreements with other agencies or organizations, such as land conservancies) for the management and biological monitoring of the following public lands:

- Lands owned or under conservation easements to the City for habitat conservation, including lands obtained as mitigation (where those lands have been dedicated in fee title or conservation easement).

- Lands within the City that are acquired through the regional NCCP funding program or otherwise acquired for conservation purposes.

7.1.2 Responsibilities on Private Lands

Private lands conserved through avoidance in compliance with the City's regulations shall be either protected with a conservation easement and managed in perpetuity and/or transferred in fee title to a government or nonprofit agency if the landowner voluntarily dedicates the land. Open space areas associated with existing residential developments and governed by homeowners' associations (HOA) will continue to be maintained according to the existing HOA guidelines. If these existing management guidelines do not meet the Preserve management standards, these HOA lands will not be considered part of the Preserve. HOA open space areas may receive active biological monitoring and management pursuant to this SAP if there is funding for management activities and if there are no legal impediments. New open space conserved after the SAP is adopted will be managed and monitored according to the specifications of this SAP and the MHCP by qualified land management entities and be protected by conservation easements.

Public access on private lands will be allowed only where the owner grants such access through an appropriate easement or voluntarily dedicates the land in fee title to a public agency or nonprofit organization. Consequently, active habitat management may not occur if the landowner retains fee title, though grading and clearing will continue to be regulated by the City. If land is used as mitigation for public or private project impacts, or if private land is purchased with public funds or voluntarily dedicated in fee title, habitat management will be required on that land consistent with this SAP and the OSMP.

Private landowners within the Preserve who are not third-party participants of the City's take permits will have no additional obligations as a result of the SAP for management or

biological monitoring of their lands. Private landowners who are third-party participants will be responsible for habitat management of Preserve lands they choose to retain in private ownership to the extent required by this SAP, the MHCP, and implementing regulations and as specified as conditions of development permits. However, no additional fees will be charged to landowners for biological monitoring.

7.2 FRAMEWORK PRESERVE MANAGEMENT GUIDELINES

Section 6 of the MHCP document prescribes general guidelines for management of MHCP preserve lands, which are hereby incorporated by reference into this SAP. The general guidelines discuss issues and recommendations concerning (1) compatible and incompatible land uses in and adjacent to the Preserve, (2) Preserve management actions (e.g., fire management, erosion control, habitat restoration, and species reintroductions), and (3) biological monitoring and research in the Preserve. Subarea plans are to elaborate on these generic guidelines, based on the specific biological resource, land use, and policy issues in each subarea. This document therefore tailors the general MHCP preserve management guidelines and recommendations to the specific conditions in the City. First, this section (7.2) provides general requirements that apply to the City's entire Preserve, with particular emphasis on those issues of greatest importance. Section 7.3 then presents area-specific guidelines, where appropriate, based on the preserve planning zones and site-specific conditions that need to be addressed by Preserve management and monitoring.

7.2.1 Prohibited and Allowed Land Uses Within Preserve Areas

The following land uses are <u>prohibited</u> within all Preserve areas (see Section 5.1 for definitions of Preserve areas):

- All forms of development involving construction of buildings, parking lots, or other structures that remove native habitat, including all residential, commercial, industrial, or institutional development;

- Agricultural uses that require conversion of natural habitats, including all row crops, orchards, improved pastures, nurseries, greenhouses and feedlots;

- Active recreation, including ball fields, golf courses, improved park facilities, off-road vehicle use, or any other recreational activity that requires conversion of native habitats (e.g., clearing, grubbing, or planting of non-native vegetation or turf grasses), facility construction (e.g., equestrian facilities, buildings, or paved pathways) or that is otherwise destructive of natural vegetation or wildlife habitat values;

- Mineral extraction, including all sand and gravel mining activities;

- Landfills;

- Itinerant worker camps;

- Roads or other transportation facilities, with exceptions for necessary utility access roads or trails specifically allowed by this SAP;

- Flood control projects requiring extensive channelization, riprapping, concrete embankments, or other structures that remove habitat value or encourage colonization by non-native species (e.g., black rats),

- Brush control or fuel management for fire safety or other reasons, except for existing firebreaks that must be maintained for safety reasons within 100 feet of existing buildings. New development adjacent to Preserve areas must accommodate fuel breaks or other vegetation management actions outside of the Preserve boundary.

Written concurrence from the City and Wildlife Agencies through an amendment process will be required for implementation of any of these prohibited land uses within Preserve areas.

The following land uses are conditionally allowed upon Wildlife Agency approval within Preserve areas, provided that they can be demonstrated to have minimal impacts on resource values within the Preserve:

- Limited livestock grazing in areas that are mapped as grassland or agriculture, so long as biological resources that may be adversely affected by grazing (e.g.,

riparian vegetation, coastal sage scrub, some narrow endemic plant species) are adequately protected by fencing. Grazing may be used as a prescriptive habitat management tool, if warranted in a particular Preserve area (e.g., to improve habitat for Stephens' kangaroo rat in annual grasslands). However, grazing shall be prohibited in all wetland habitats, coastal sage scrub, and oak woodlands. Any grazing in the Preserve must be approved by the Wildlife Agencies.

- Passive recreation that does not require conversion of natural habitats or facility construction. Passive recreation includes such activities as hiking, bird watching, or fishing. Creation and maintenance of trails for hiking, biking, or horse-back riding is conditionally allowed in some Preserve areas, provided that they are sited to avoid sensitive resources and meet all other goals and guidelines of this SAP.

- Utility projects, including construction, replacement, or maintenance of electrical transmission lines, gas pipelines, water lines, sewer lines, or other linear facilities which require temporary impacts to natural habitats, provided that habitats are restored to pre-impact or better condition following the impact.

- Flood control or siltation basins that will continue to support natural vegetation and some habitat value after construction. The City's three planned Loma Alta/Garrison Creek Flood control detention basins, as mapped on Figure 2-7, are specifically allowed by this SAP. Additionally, implementation of the ACOE San Luis Rey Flood Control Habitat Management Plan would be considered a conditionally allowable land use in this portion of the Preserve. The San Luis Rey River Flood Control Project has already been analyzed pursuant to CEQA and must also adhere to the mitigation requirements stipulated in the Federal Section 7 Biological Opinion and the State's 2081 incidental take permit.

- Maintenance of existing firebreaks or fuel management zones adjacent to existing buildings. This includes clearance of native vegetation in order to achieve required clearance adjacent to existing structures. Any clearing in the Preserve for fuel modification purposes for existing structures must be mitigated in accordance with Table 5-2 of this document. As stated previously, all new development must incorporate the required fuel modification zone into the development footprint; the fuel modification zone cannot impact the Preserve.

Implementation of these conditionally allowed land uses within Preserve areas will require mitigation and written concurrence from the City and Wildlife Agencies through the amendment process.

7.2.2 Fire Management

Private landowners and homeowners associations will have responsibility for brush management on lands they manage, while the City will have brush management responsibility for its public lands. All new firebreaks and fuel management zones will be sited outside the Preserve and will be considered part of the project's impacts; therefore, compensatory mitigation will be required. All brushing and clearing will be performed during the months of October through February to avoid disturbance during the breeding season of sensitive bird species (March through September).

7.2.3 Habitat Restoration

Where restoration is used to improve Preserve function or mitigate project impacts, a restoration plan must first be developed consistent with the guidelines in the MHCP (Section 6). In the City, habitat restoration will primarily (but not exclusively) involve wetland vegetation communities or coastal sage scrub communities. Restoration plans will adhere to the following guidelines unless additional information suggests biologically superior alternatives.

Wetland Restoration

Creation of wetland vegetation communities will be required as mitigation for wetland impacts (such as flood control projects), in keeping with the no net loss policy for wetland vegetation communities. Wetland restoration is not a major component of the overall conservation strategy or a condition of coverage for any of the covered species in the City's SAP. Therefore, no specific areas for wetland restoration have been identified within the Preserve. The no net loss policy for wetland vegetation, however, requires the creation of wetland vegetation communities as mitigation for all wetland impacts. The no net loss policy and other wetland mitigation standards that apply to the wetland vegetation communities in the City are described in Section 5.2.4. Within the City, wetland habitats include riparian scrub, woodland, and forest communities as well as freshwater and saltwater marsh, estuarine, open water, and flood channel. In the event

that wetland vegetation is impacted during the implementation of a project (e.g., flood control projects), a habitat and site-specific restoration plan shall be developed in accordance with the guidelines established in Section 6 of MHCP Volume I and Appendix C of MHCP Volume II.

Coastal Sage Scrub Restoration

Creation or enhancement of coastal sage scrub vegetation will primarily occur on disturbed lands (e.g., areas formerly disked, cleared, or graded), former agricultural lands, or annual (nonnative) grasslands within the WCPZ, on upland buffers adjacent to riparian habitats, or on conservation bank lands. Restoration of at least 145 acres of functional coastal sage scrub within the WCPZ is required per conditions of coverage for the gnatcatcher. Such restoration may be accomplished as mitigation for project impacts (see Section 5.3) or via contributions from regional funding sources. Coastal sage scrub restoration is also required in upland buffers adjacent to riparian vegetation when agricultural lands are converted to nonagricultural land uses, or when development or other discretionary actions are proposed on lands supporting riparian vegetation.

The primary goal of coastal sage scrub restoration shall be to restore degraded habitats to functional sage scrub communities capable of supporting breeding gnatcatcher pairs. This is particularly critical for restoration projects within the WCPZ. In some locations, more modest goals may include improving foraging or dispersal habitat for coastal sage scrub birds. The site-specific goals and appropriate standards must be clearly defined in a Preserve area's restoration plan. Where the goal is to create gnatcatcher breeding habitat, the standards shall be designed based on (1) the composition and structure of naturally occurring gnatcatcher breeding habitat in the vicinity of the restoration project, or (2) vegetation composition and structure that is consistent with known gnatcatcher breeding habitat, and that is reasonably expected to persist on the site under natural conditions based on the site's location, soils, slope, aspect, and other physical and ecological properties.

Depending on existing site conditions and restoration goals, restoration to achieve the standards may range from high-intensity restoration to low-intensity enhancement, as defined below:

- **High-intensity Restoration.** This includes site clearing and grubbing, rough and finish grading, irrigation system installation, container planting, seeding, and at least 5 years of regular maintenance and monitoring to ensure achievement of restoration standards.

- **Low-intensity Restoration.** This includes site clearing and grubbing, rough and finish grading, seeding, and at least 3 years of maintenance and monitoring. In some cases longer maintenance and monitoring may be required.

- **Low-intensity Enhancement.** This only applies where restoration goals are more modest, such as improving wintering foraging habitat or dispersal habitat for gnatcatchers on areas not expected to support breeding gnatcatchers (e.g., in narrow, linear strips or on steep slopes). In such limited cases, enhancement may consist of hydroseeding with sage scrub species, with little or no site preparation or maintenance.

Prior to preparing a restoration plan for an area, the area must be surveyed to determine if any covered or other sensitive species exist in the area. The restoration plan must consider such species and avoid adverse impacts to them to the degree feasible. For example, extant populations of sensitive plant species in annual grasslands to be converted to sage scrub should be avoided during site clearing, grubbing, and grading.

Table 7-1 presents a plant palette appropriate for use in coastal sage scrub restoration projects in the City. Not all plants included in Table 7-1 need be used on each project. Rather, the palette should be tailored, based on the specific goals and ecological setting of each restoration project. In general, restoration designed to create or enhance gnatcatcher breeding habitat should emphasize *Artemisia californica* and *Eriogonum fasciculatum* in the palette.

Table 7-1

PLANT PALETTE FOR COASTAL SAGE SCRUB RESTORATION

Common Name	Scientific Name
California sagebrush	*Artemisia californica*
Coyote brush	*Baccharis pilularis*
California sunflower	*Encelia californica*
California buckwheat	*Eriogonum fasciculatum*
Golden-yarrow	*Eriophyllum confertiflorum*
California poppy	*Eschscholzia californica*
Cudweed	*Gnaphalium californicum*
Tidy-tips	*Layia platyglossa*
Deerweed	*Lotus scoparius*
Miniature lupine	*Lupinus bicolor*
Arroyo lupine	*Lupinus succulentus*
Laurel sumac[1]	*Malosma laurina*
Purple needlegrass	*Nassella pulchra*
Plantain	*Plantago insularis*
Lemonadeberry[1]	*Rhus integrifolia*
White sage	*Salvia apiana*
Black sage	*Salvia mellifera*

[1] If the restoration goal is to create breeding habitat for the gnatcatcher, then these species should comprise only a small percentage of the vegetative cover.

Restoration Plan Contents and Success Criteria

The applicant shall submit wetland and/or upland creation/restoration/enhancement plans to the Wildlife Agencies for approval 30 days prior to initiating project impacts. The final plans shall include the following information and conditions:

1. All final specifications and topographic-based grading, planting and irrigation plans, including 0.5-foot contours and typical cross-sections for wetland restoration sites and 10-foot contours for upland restoration sites. All wetland mitigation areas shall be graded to the same elevation as adjacent existing Corps

jurisdictional wetlands areas, and/or to within 1-ft of the groundwater table, and shall be left in a rough grade state with micro topographic relief (including channels for wetlands) that mimics natural topography. Topsoil and plant materials salvaged from the impacted areas (including live herbaceous, shrub and tree species) shall be transplanted to, and/or used as a seed/cutting source for, the riparian/wetland creation and enhancement areas to the maximum extent practicable. All upland habitat creation/restoration/enhancement sites shall be prepared for planting by decompacting the topsoil in a way that mimics natural upland habitat topsoil to the maximum extent practicable while maintaining slope stability. Topsoil and plant materials salvaged from the upland habitat areas to be impacted shall be transplanted to, and/or used as a seed/cutting source for, the upland habitat restoration/creation areas to the maximum extent practicable. All plantings shall be installed in a way that mimics natural plant distribution, and not in rows;

2. Planting palettes (plant species, size and number/acre) and seed mix (plant species and pounds pure live seed/acre). The plant palettes proposed in the restoration plans shall include native species specifically associated with the vegetation community(s). Unless otherwise approved by the Wildlife Agencies, only locally native species (no cultivars) obtained from as close to the project area as possible shall be used. The source and proof of local nativeness of all plant material and seed shall be provided;

3. Container plant survival shall be 80 percent of the initial plantings for the first 3-5 years, depending on the length of the restoration plan. At the first and second anniversary of plant installation, all dead plants shall be replaced unless their function has been replaced by natural recruitment;

4. A final implementation schedule that indicates when all habitat impacts, as well as creation/restoration/enhancement grading, planting and irrigation shall begin and end. Necessary site preparation and planting shall be completed during the concurrent or next planting season (i.e., late fall to early spring). Any temporal loss of habitat caused by delays in habitat creation/restoration/enhancement shall be offset through like-habitat creation/restoration/enhancement at a 0.5:1 ratio for every 6 months of delay (i.e., 1:1 for 12 months delay, 1.5:1 for 18 months delay, etc.). In the event that the project applicant is wholly or partly prevented from

performing obligations under the final plans (causing temporal losses due to delays) because of unforeseeable circumstances or causes beyond the reasonable control, and without the fault or negligence of the project applicant, including but not limited to natural disasters (e.g., earthquakes etc.), labor disputes, sudden actions of the elements (e.g., further landslide activity), or actions by Federal or State agencies, or other governments, the project applicant shall be excused by such unforeseeable cause(s);

5. Three to five years of success criteria for habitat creation/restoration/ enhancement areas including: separate percent cover criteria for herbaceous understory, shrub midstory, and tree overstory, and a total percent absolute cover of 40 – 65 percent for all three layers at the end of three to five years (depending on vegetation community and the duration of the restoration plan); evidence of natural recruitment of multiple species for all vegetation communities; absence of Cal-IPC's "Invasive Plant Inventory" species, and no more than 10 percent coverage for other exotic/weed species;

6. A minimum three to five years of maintenance and monitoring of creation/restoration/enhancement areas (depending on the duration of the restoration plan), unless success criteria are met earlier and all artificial water supply has been off for at least two years. Monitoring shall include protocol surveys for threatened and endangered species;

7. A qualitative and quantitative vegetation monitoring plan with a map of proposed sampling locations. Photo points shall be used for qualitative monitoring and stratified-random sampling shall be used for all quantitative monitoring;

8. Contingency measures in the event of creation/restoration/enhancement failure;

9. Annual mitigation maintenance and monitoring reports shall be submitted to the Wildlife Agencies no later than December 1 of each year;

10. If maintenance of a creation/restoration/enhancement area potentially occupied by threatened or endangered species is necessary during between March 15 and September 15, a biologist permitted by the Service will survey for these species within the creation/restoration/enhancement area, access paths to it, and other

areas susceptible to disturbances by creation/restoration/enhancement site maintenance. Surveys will consist of three visits separated by two weeks starting April 1 of each maintenance/monitoring year. Restoration work will be allowed to continue on the site during the survey period. However, if these species are found during any of the visits, the applicant will notify and coordinate with the Wildlife Agencies to identify measures to avoid and/or minimize effects to these species (e.g., nests and an appropriate buffer will be flagged by the biologist and avoided by the maintenance work); and

11. If restoring riparian habitat or wetlands, a wetland delineation shall be done to confirm that Corps jurisdictional wetlands have been successfully created/restored prior to final approval of creation/restoration sites.

7.2.4 Recreation and Public Access

Passive recreational activities (e.g., hiking, bird watching) are anticipated within public portions of the City's Preserve. Active recreational activities such as picnicking, horseback riding, and mountain biking are appropriate only in designated areas away from sensitive resource locations. Active recreational uses requiring new development (e.g., access roads, parking lots, service facilities, maintenance buildings, landscaping) are not allowed inside Preserve areas, unless specifically exempted by this SAP.

Off-road vehicle use is prohibited in the Preserve. Adverse impacts from off-road vehicle use include reduction in air quality due to automotive exhaust; creation of dust; soil compaction, erosion, and sedimentation into local waters; noise; crushing of vegetation; and habitat degradation. Disturbance from off-road vehicles can also disrupt breeding activities.

The City's Preserve will be managed consistent with the Recreation and Public Access management and monitoring standards and guidelines established by Section 6.3.8 of MHCP Volume I and the OSMP. Management measures to be implemented over time will be dictated by the results of the required monitoring. In addition, the following general management measures are required to avoid and minimize any adverse effects of recreation and public access:

1. Locate trails, view overlooks, and staging areas in the least sensitive areas of the Preserve. Locate trails along the edges of urban land uses adjacent to the Preserve or the seam between land uses (e.g., agriculture/habitat) and follow existing dirt roads as much as possible rather than entering habitat or wildlife movement areas. Minimize trail use between two different vegetation communities (ecotones) due to the typically heightened resource sensitivity in those locations.

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

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

4. Impose penalties for littering and dumping. Fines should be sufficient to prevent recurrence and should also cover reimbursement of costs for removal and disposal of debris, restoration of the area (if needed), and payment for enforcement staff time.

5. Keep wildlife corridor undercrossings free of debris, trash, homeless encampments, and all other obstructions to wildlife movement.

6. Implement public education and enforcement activities as described in Section 7.2.8 of this SAP and the OSMP to inform the public of the appropriate uses in the Preserve.

7.2.5 Predator and Exotic Species Control

Invasive nonnative plant species, such as *Arundo donax*, can aggressively outcompete native species. Feral and domestic animals, particularly cats, prey on small native wildlife species. Agricultural areas, livestock holding areas, and golf courses provide resources for increased populations of parasitic cowbirds, which adversely affect native songbird populations. Litter and food waste from migrant worker camps and picnickers can contribute to an increase in Argentinean ant populations, which have severe, adverse effects on the native biota (e.g., they may eliminate native ants required as food by San Diego horned lizards). Argentine ants may invade preserves where urban runoff or landscape irrigation increases soil moisture. They may also become established through container plantings within or adjacent to the Preserve.

The City's Preserve will be managed consistent with the Exotic Species management and monitoring guidelines and standards established by MHCP Volume III and the OSMP. Management measures to be implemented over time will be dictated by the results of the required monitoring. In addition, the following management measures are required to control adverse effects of exotic or other pest species:

1. Establish an educational program for home owners regarding responsible pet ownership. The program should encourage (a) keeping pets indoors, especially at night; (b) having pets neutered or spayed to reduce unwanted reproduction and long-range wanderings; (c) belling of cats to reduce their effectiveness as predators; (d) discouraging release of unwanted pets into the wild; and (e) keeping dogs on leashes when walking them on trails in Preserve areas.

2. Fence areas between selected areas of the Preserve and adjacent housing to keep pets, particularly cats, out of sensitive areas. Fencing should be designed that does not allow animals to jump over, dig below, or pass through the fence itself.

3. Establish a feral animal removal program. Feral animals include non-native species that were once domesticated but have reverted to the wild. Typically these species would include feral cats (*Felis domesticus*) and feral dogs (*Canis familiaris*).

4. Document and monitor the extent of cowbird parasitism on target species nests in the Preserve. If necessary, establish a cowbird trapping program to increase nesting success of target species affected by cowbird parasitism.

5. Prioritize areas for exotic species control based on aggressiveness of invasive species and degree of threat to the native vegetation or wildlife. Refer to Table 5-5 for a partial list of exotic plant species that could threaten native habitats.

6. Direct runoff from adjacent land uses away from the Preserve.

7. Inspect container plants for Argentine ants prior to using in landscaping within and adjacent to the Preserve.

7.2.6 Hydrology and Flood Control

Changes in natural hydrology due to urbanization and flood control projects have many adverse effects on water quality and natural habitats and species in wetland communities. The following management actions are required, in addition to those in Section 6 of the MHCP:

1. Perform standard maintenance, such as clearing and dredging of existing flood channels, during the months of late-September through February to avoid disturbance during the breeding season of riparian birds (generally March through mid-September).

2. Contain runoff from new development (including active parks and golf courses) on the development site using detention basins or other suitable measures and prevent runoff of contaminated waters (e.g., petrochemicals or fertilizers) into Preserve areas.

7.2.7 Species Reintroduction and Translocation

Species translocations or reintroductions are sometimes used as tools to help recover endangered species or as last-resort efforts to save individuals or populations from destruction. *Translocation* (or *transplantation* for plants) involves moving animals (or plants) from a donor (source) population to a receiver site that may or may not currently

support the species. It is sometimes used to remove (salvage) a population from an area to be developed and introduce it into a suitable Preserve area where it can be managed and monitored. In general, *in situ* conservation is better for a species, and salvage translocation should be a mitigation measure of last resort. Translocation is not considered a means of avoidance of impacts when determining compliance with the narrow endemic species conservation standards.

Reintroduction involves translocation to a receiver site from which the species has previously been extirpated (as opposed to translocations used to bolster an existing population or to establish populations outside the species' original range). Species reintroduction must always be treated as experimental, generally as part of a comprehensive, well-planned species recovery program. Where reintroduction is appropriately used as a tool for species recovery, it should be allowed within Preserve areas where the population can be effectively managed and monitored.

The following guidelines and policies apply within the City:

1. *Salvage Translocations (Transplantations).* Wherever feasible, design development or other projects to allow onsite conservation and use translocation (transplantation) only where no better alternative exists to mitigate impacts to the species. Prior to translocation, develop a translocation plan that identifies appropriate receiver site(s) for the population(s). Receiver sites must be well inside Preserve boundaries; ecologically suitable; and as similar to the donor site as possible, considering soils, slopes, aspects, microclimate, and other biologically appropriate measures. Translocated populations must be monitored for a minimum of 5 generations of the species.

2. *Reintroductions*. At the request of the USFWS and where such actions would further the recovery of covered species, allow reintroductions of extirpated species into the Preserve area. For example, implementing the species recovery plan for the Pacific pocket mouse may require experimental reintroduction of the species into the MHCP area to achieve demographic and genetic goals. The City will not oppose reintroductions that are proposed in Preserve areas as long as take for the species is allowed outside of designated species reintroduction areas and as long as Preserve management for the reintroduced population does not increase overall costs of the management program to the City.

7.2.8 Public Education and Enforcement

Public education and involvement are critical components to ensure successful management of the Preserve. If the public is properly informed of the biological values, goals, and activity restrictions within the Preserve, it is more likely that management goals and guidelines will be respected and followed. The Preserve Steward and Preserve Managers will coordinate to determine the most effective methods and materials for educating the public, including the following:

1. Hold annual public meetings to present Preserve goals, guidelines, restrictions, and compatible uses. The meetings will include maps of Preserve areas and photographs and materials of sensitive and protected resources. Meetings will be led by the Preserve Steward along with other involved individuals, including Preserve Managers, biologists, and representatives from the Wildlife Agencies. Meetings will provide a friendly atmosphere for questions and answers and discussions of potential management conflicts.

2. Establish a web page that provides information on the Preserve, indicates how the Preserve Steward may be contacted, and gives locations for obtaining additional information on Preserve goals and guidelines.

3. Provide signs, displays, and pamphlets that explain Preserve management goals and guidelines and include contact information for the City and/or Preserve Steward. At each of the primary Preserve areas, educational materials will be available that review general management goals and guidelines along with specific information that is relevant to that particular Preserve area.

4. Provide tours and classes led by qualified personnel within different Preserve areas that highlight important biological resources and Preserve management goals.

5. Develop a volunteer program that addresses a variety of education and management issues including, but not limited to, preparation of educational materials, trail repair, erosion control, invasive species removal, native habitat and plant restoration, trash removal, biological monitoring, and management patrols.

6. Enforce, prevent, and remove illegal intrusions into the Preserve, and enforce land use restrictions and recreational activities.

The primary messages that will be conveyed to the general public and residents near the Preserve include:

- Stay on designated trails while hiking, mountain biking, or horseback riding.
- Keep pets on a leash in designated areas.
- Dispose of trash properly.
- Do not introduce/release exotic plants or animals.
- Keep lights and noise below levels that could disturb wildlife species.
- Do not pick or trample native vegetation.
- Practice proper fire safety.
- Report to the proper management personnel any potential problems or Preserve violations.
- Do not feed animals.
- Follow Preserve regulations that were conditions of residential development.
- Do not enter the Preserve if public access has not been provided.
- Do not allow runoff from hoses or other sources to enter the Preserve or cause erosion.
- Do not use excess pesticides or fertilizers near the Preserve. If pesticides or fertilizers are used, follow all product label instructions and State and Federal laws.
- Do not dump toxic materials such as paint or petroleum products adjacent to or within the Preserve.
- Do not alter the native landscape buffer zone that may be established between the residence and Preserve. Do not add invasive nonnative species to the residence landscaping that may escape into the Preserve.

7.2.9 Adaptive Management

The adaptive management approach requires experimentally adjusting management activities to reflect changes in the populations or conditions being managed. This requires periodic updating of the information on which management decisions rely. The Preserve Steward will monitor populations of some covered species on a regular basis to determine

their status and trends and to determine whether remedial actions are necessary. MHCP Volumes II and III established monitoring requirements at species, community, and ecosystem levels designed to provide the data necessary to manage the Preserve system both proactively and reactively. The City's Preserve will be managed in accordance with the established MHCP requirements.

In addition, the NCCP process and conservation guidelines require periodic surveys of covered species populations and their habitats. These surveys will supplement existing project-specific monitoring activities. The City will participate in the subregional monitoring plan developed as part of the MHCP process. This monitoring effort is expected to be implemented and funded jointly by the Wildlife Agencies and regional or subregional funding source and will be coordinated with other NCCP monitoring efforts.

An adaptive management program will provide correcting actions where resources are threatened by land uses in and adjacent to the Preserve, current management activities are not adequate or effective, or enforcement difficulties are identified. The following are examples of some potential actions:

1. Fence, erect signs, or redirect trails to protect habitat or species populations from trampling or other adverse, direct impacts.

2. Remove invasive exotic plant species to protect native habitats, plant populations, and wildlife values. Refer to Table 5-5 for a partial list of exotic plant species that could threaten native habitats.

3. Remove or control nonnative animal species (e.g., cowbirds, feral cats) to protect native animal populations.

4. Control erosion to protect key habitats or populations of covered species.

5. Enhance habitats to provide pollinator habitat, breeding areas for covered wildlife species, or structural diversity for covered wildlife species.

6. Restore habitat to reverse the effects of habitat disturbance or improve habitat quality for covered species where natural regeneration processes are expected to be unacceptably slow or delayed.

7. Use prescribed burns (or alternative, mechanized methods) to revitalize senescent stands of habitat or promote germination of fire-adapted covered plant species (prescribed burns likely will be limited in urbanized portions of the Preserve).

8. Enhance plant populations where Preserve population numbers become so low, due to 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.

9. Reintroduce plant populations into areas where populations have been inadvertently extirpated, or into historical but unoccupied habitat where overall number of populations is less than five (this may include San Diego thorn-mint and Encinitas baccharis).

10. Reconfigure Preserve boundaries to include more or different habitat if a species is declining.

11. Reprioritize management and monitoring efforts.

7.3 AREA-SPECIFIC MANAGEMENT GUIDELINES

The management guidelines presented in Section 7.2 are applicable to the overall City Preserve, although certain guidelines and goals will be more important to particular land areas because of the resources they support and their existing or planned land uses. This section therefore discusses some specific management goals and guidelines for specific areas of the City. The Preserve Steward in conjunction with the Preserve Manager(s) will prepare and implement area-specific directives to meet these goals and guidelines as lands are added to the Preserve. The Preserve Steward will also update these goals, guidelines, and directives as additional information becomes available. Private lands incorporated into the Preserve will be required to be managed and monitored, with adequate funding, to MHCP standards according to area-specific management directives or plans.

7.3.1 San Luis Rey River

The City will take over management responsibility for the majority of the River from the ACOE upon approval of the San Luis Rey River Flood Habitat Management Plan. The following requirements shall be incorporated into future management plans:

1. Continue monitoring of riparian bird species (least Bell's vireo and southwest willow flycatcher).

2. Monitor cowbird parasitism, and continue or institute cowbird trapping along the River if the nest parasitism rate rises above 10 percent for any target species or as dictated by monitoring and adaptive management.

3. Aggressively remove invasive nonnative plant species (e.g., *Arundo donax*).

4. Monitor and, if possible, control populations of exotic predatory fishes and bullfrogs.

5. Encourage restoration of native plants (e.g., coastal sage scrub vegetation) along levees and dikes, where feasible.

7.3.2 Oceanside Harbor

The City manages this area for commercial and recreational uses, including periodic dredging of the harbor and San Luis Rey River mouth. The area is managed to protect sensitive resources per the LCP and San Luis Rey River Specific Plan. The following additional requirement to existing management policies shall be followed, to the degree feasible:

1. Avoid dredging or other maintenance activities within any areas found to be occupied by California least terns or western snowy plovers during the breeding season (April 1 through September 15).

7.3.3 Buena Vista Lagoon

The CDFG manages the lagoon as an ecological reserve and is currently preparing a management plan. The following recommendations should be incorporated into the plan:

1. Investigate and, if possible, institute methods for returning natural tidal flows to the lagoon.

2. Monitor and, if possible, control populations of exotic predatory fishes and bullfrogs.

7.3.4 Existing Conservation Banks

Obligatory maintenance and monitoring actions shall be continued in conservation banks (e.g., Whelan Ranch Conservation Bank, Pilgrim Creek Conservation Bank) according to existing bank agreements.

7.4 HABITAT TRACKING, REPORTING, AND MONITORING

The City will be responsible for the annual accounting of the acreage, type, and location of habitat conserved and destroyed by permitted land uses and other activities. Records will be maintained in ledger and digital map (GIS) format. This accounting process will be used to ensure that habitat conservation proceeds in rough proportion with habitat losses to development. This information will be submitted to the Wildlife Agencies as part of an annual public report to demonstrate compliance with the terms and conditions of the SAP, implementing agreement, and take permit. An annual public workshop will also be held in the City to brief interested citizens on the progress of Preserve assembly.

The loss of habitat will be accounted for when the project accrues the benefits of the take permit. For conserved lands, the conservation of habitat 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 participant status to the project or property). The accounting information for conserved acres will also identify the protection mechanism, owner, and agency or person responsible for conservation and management, and other related information.

The City's OSMP will provide a more detailed discussion of the implementation process. As part of plan implementation, the City's Preserve Steward will submit annual and 3-year reports to the Wildlife Agencies that summarize management activities, describe management priorities, report restoration activities, and evaluate funding and the ability to meet resource management goals. As outlined in the implementing agreement and OSMP, the City is required to submit an annual report that summarizes the gains and losses of habitat, incidental take of covered species, management and monitoring activities, and key management concerns. Every third year, the City will be required to summarize the previous three years relative to status and trends of covered species and habitats, MHCP goals, and City-wide effectiveness of SAP implementation.

The City will commit to participating in the MHCP regional monitoring and reporting program. The City will implement their own subarea monitoring and reporting program and then share and coordinate their information with the subregional monitoring entity to help determine whether the subregional plan is meeting its overall Preserve goals.

The following monitoring and research priorities are required to occur within the City as part of the regional biological monitoring program:

- **Gnatcatcher Stepping-stone Corridor**. The importance of maintaining and enhancing breeding habitat stepping-stones for the gnatcatcher through the central portion of the City is a key provision of this SAP. Monitoring will include efforts to verify the functionality of this stepping-stone corridor and the effectiveness of habitat management efforts in the WCPZ. Recommended studies include a banding study of gnatcatchers across the central portion of the City to determine breeding success and dispersal on and between the stepping-stone patches, and to identify adaptive management actions to improve breeding success and facilitate dispersal. Edge effects and associated mortality of nesting and dispersing gnatcatchers are expected to be high in this zone, due to the high degree of habitat fragmentation. Monitoring should strive to identify mortality sources (e.g., nonnative predators) and methods for controlling them.

- **San Diego Ambrosia**. The critical population of San Diego ambrosia located south of Mission Boulevard in the eastern portion of the City will be monitored for changes in population size and for effects of management actions. The population could be used to conduct demographic and ecological research on San

Diego ambrosia and to identify management requirements for this species. Specific studies might focus on reproductive strategies (e.g., the importance of sexual versus asexual reproduction in maintaining or increasing population size), seed and pollen viability, germination requirements, seedling establishment, seed dispersal strategies, and management techniques for maintaining viable populations.

- **Thread-leaved Brodiaea**. The critical population of this species located in the canyon south of Guajome Park and west of Darwin Drive should be monitored for changes in population size and the effects of adjacent development. Additionally, research and monitoring goals should focus on determining the success of the translocation techniques employed as mitigation for the adjacent development project.

- **Blochman's Dudleya**. The critical population of this species in the western portion of the City will be monitored for changes in population size and effects of management actions. The population could be used to conduct demographic and ecological research on Blochman's dudleya and to identify management requirements for this species. Specific studies might focus on reproductive and pollination biology, seed and pollen viability, germination requirements, specific habitat requirements, and management techniques for maintaining viable populations.

- **Sticky Dudleya.** The critical population of this species near the mouth of the San Luis Rey River should be monitored for changes in population size and effects of management actions. The population could be used to conduct demographic and ecological research on sticky dudleya and to identify management requirements for this species. Specific studies might focus on reproductive and pollination biology, seed and pollen viability, and management techniques for maintaining viable populations.

- **Arroyo Toad.** Although this species is not currently known to exist in the City, it may be found in the future due to downstream movements from populations in the Fallbrook area. Periodic monitoring along upper reaches of the San Luis Rey River is recommended to determine whether the species is present and to recommend appropriate management actions, if found.

- **Southwestern Pond Turtle.** The critical population associated with Buena Vista Lagoon should be monitored for changes in population abundance and for identifying management actions required to maintain the population.

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