I. INTRODUCTION

The County of San Diego's Multiple Species Conservation Program (MSCP) Subarea Plan, a regional plan that ensures the long-term survival of sensitive plant and animal species and protects the native vegetation, and its associated Implementing Agreement (IA) establish the conditions under which the County will receive from the U.S. Fish and Wildlife Service and California Department of Fish and Game certain long-term Take Authorizations. The purpose of the plan is to benefit the County, public and private land owners and other land development project proponents within its Subarea boundaries. The IA is an acknowledgment that the MSCP satisfies conditions established in the Section 4(d) Special Rule for the coastal California gnatcatcher that will allow the taking of certain Covered Species incidental to land development and other lawful land uses which are authorized by the County.

Pursuant to Section 6.3.1 of the Multiple Species Conservation Program (MSCP), and Section 10.10, Preserve Management Program, of the Implementing Agreement (IA), the County of San Diego is required to submit within six months to the USFWS and CDFG for review, a draft framework management plan for that portion of the MSCP Preserve which is within the Subarea. The signature date for the IA was March 17, 1998. The six-month time frame was from March 17, 1998 to September 17, 1998. Final approval was due nine months from the effective date (December 17, 1998).

The Implementing Agreement (IA) for the MSCP is a contract between the County and Wildlife Agencies. The IA is the basis for the granting of a Section 10(a) Permit by the U.S. Fish and Wildlife Service and a Take Authorization under the Natural Communities Conservation Program Act by the California Department of Fish and Game. The IA establishes the assurances and obligations of the parties in implementing the MSCP and the Federal and State permits.

In addition, pursuant to the IA, Section 14.7, Coordination of Preserve Management, the County in coordination with the U.S. Fish and Wildlife Service, Refuge System, has established the Habitat Management Technical Committee (HMTC). The HMTC is comprised of preserve management personnel from the state, federal, local jurisdictions, and water utility companies. The HMTC addresses technical issues of preserve management as identified in Section 5.8.3 of the MSCP Plan. The County of San Diego has been proposed to act as the repository for all data regarding preserved land. In this capacity the County will coordinate with the wildlife agencies to identify new monitoring methods and techniques including adaptive management.

II. BACKGROUND

The County has been involved in the preparation of regional open space programs, including the MSCP, for a number of years. The MSCP was initiated by the City of San Diego and is a habitat conservation plan prepared according to the requirements of State and Federal law. The Plan's provisions call for protection of large contiguous areas of habitat to benefit endangered species qualifying the Plan as a Habitat Conservation Plan under Section 10(a) of the Endangered Species

Act. The Plan provides the basis for an application for an Incidental Take Authorization for covered species, without the need for a separate Federal permit for the 85 species covered by the Plan. The State of California would also grant the County authorization to take covered species (under the California Endangered Species Act) through the Natural Communities Conservation Program Act (NCCP).

The City of San Diego was the lead agency (pursuant to the requirements of the California Environmental Quality Act) for the Environmental Impact Report for the MSCP. The City of San Diego and U.S. Fish and Wildlife Service were co-leads on the preparation of the Environmental Impact Statement required by the National Environmental Policy Act. The County, in approving the MSCP, is a responsible agency under the California Environmental Quality Act. The County prepared an addendum to the Environmental Impact Report/Environmental Impact Statement, to reflect minor amendments to the County Subarea Plan, Biological Mitigation Ordinance, and Grading and Clearing Ordinance, which was approved by the Board of Supervisors on October 22, 1997.

The overall framework for the MSCP includes the basic biological analysis and guidance for the protection of the 85 species covered by the Plan. It outlines the standards for the identification and assemblage of the 171,920-acre preserve necessary to protect the covered species. It establishes implementation principles including recommendations for sharing responsibility for implementing the Plan between the Wildlife Agencies, local government, and property owners. Therefore, this plan was purposely prepared to be as consistent as possible with the City of San Diego's Framework Management Plan.

The total MSCP study area encompasses 12 jurisdictions and consists of 582,243 acres, of which 43% (252,132 acres) is in unincorporated areas under the jurisdiction of the County of San Diego.

The Subarea Plan defines the County's participation in the MSCP. The County of San Diego Subarea Plan encompasses three segments; Lake Hodges, South County, and Metro-Lakeside-Jamul. It establishes conservation goals and criteria for land development in the Subarea.

The Plan requires the use of specific "Adaptive Management Techniques" directed at the conservation and recovery of individual species. "Adaptive Management Techniques" refers to modifying management actions when monitoring the resources indicates that changes are needed. Such actions may include such measures as assuring fires do not occur too frequently in areas where species are sensitive to fire occurrences. The Plan also provides for biological monitoring and preparation of an annual report, which reviews the Plan's effectiveness. Based upon this review and biological monitoring effort, adjustments in the management and priorities for purchase of land can be made as necessary.

Under the MSCP Plan, the preserve is being assembled through conservation of lands already in public ownership, public acquisition of private lands from willing sellers, and private development contributions through development regulations and mitigation of impacts. Upon completion, the total MSCP preserve is anticipated to contain at least 171,920 acres. For the entire MSCP Plan (including County lands as well as lands in the other participating cities), it is anticipated that 63,170 acres will be conserved through the development process, including mitigation for impacts to biological resources outside of the preserve. Preserve management activities will include, but not be limited to, such recovery actions as enhancement, restoration, avoidance, non-native predator control, invasive

plant control, etc.

The MSCP Plan preserve system, including the County's portion of the system, will be managed by a diverse array of agencies, private foundations, and landowners. Management will be based on criteria established by this Framework Management Plan, and incorporated into Area-Specific Management Directives, under guidance the Habitat Management Technical Committee.

Area-Specific Management Directives will be developed using generally accepted practices and procedures for management of biological preserves, and will comply with the establishment processes outlined in this Framework Management Plan. Area-Specific Management Directives will be developed and implemented to address species and habitat management needs in a phased manner for logical and discrete areas, once conserved as part of the MSCP preserve, including species-specific management required in Table 3-5 or as condition of take authorization.

This diversity of preserve management will strengthen the adaptive management programs because of the variety of experience and viewpoints brought to preserve management. Communication between preserve managers will be the key to developing improved management techniques and discontinuing management practices that degrade the long-term viability of the preserve system.

The Implementing Agreement requires the County to ensure that there is adequate management of preserve lands. It also requires that Table 3-5 of the County of San Diego MSCP Subarea Plan be followed. As cited above, management of the biological resources may need to include "Adaptive Management Techniques", which may be species-specific and consist of conservation measures which go beyond fencing and fuel management and are directed toward assisting a declining species to regain viability. The County will be responsible for the County-owned lands committed to the preserve. Preserved private lands that have been required as mitigation, either dedicated to the County or managed by other entities, must have the financial resources to assure long-term stewardship, e.g., fencing, litter removal, etc. The County, through the MSCP, is responsible for meeting the conditions of coverage as well as also being responsible for biological monitoring requirements of the plan. The approved biological monitoring protocol requirements are cited in the "MSCP Biological Monitoring Program" document prepared by Ogden Environmental, dated 1996. It may be necessary to periodically revise the biological monitoring protocol as new scientific information becomes available. Any revisions in the protocol will be subject to approval by the resource agencies and agreed to by the participating local jurisdictions. It is anticipated that the funding for these activities will be the responsibility of Federal, State and local agencies, excluding private property owners.

The framework management plan incorporates a requirement for the subsequent preparation and implementation of "Area-Specific Management Directives". These directives will only pertain to areas outside approved management plans (i.e., Habitat Management Plan for the Bernardo Lakes Project), County owned or managed lands, or projects where a habitat management plan is a condition of project approval. These directives are specific management actions, which are appropriate for the habitats and species found in a local area. The Directives will also take into account the particular circumstances of that given area.

The Implementing Agreement for the County Subarea Plan includes the requirement for an annual review by the Wildlife Agencies and a public workshop. County and resource agency Staff will address issues associated with the Land Development review process as part of the annual report and workshop.

If development occurs in areas designated as wetlands, Section 401 and Section 404 of the Clean Water Act under the Regional Water Quality Control Board and the Army Corps of Engineers and Section 1600 of the State of California Fish and Game Code permits will be required by the responsible agencies.

III. COUNTY OF SAN DIEGO SUBAREA PLAN

The County Subarea is located mostly in the eastern part of the MSCP study area (Figure 1). At the time that the Subarea Plan was approved, about 73% (approximately 184,000 acres) of the County Subarea provided habitat for native plants and wildlife. The remaining 27% (approximately 68,000) of the Subarea Plan is disturbed, developed, or agricultural land that is considered to have little or no habitat value. Almost 63,000 acres, approximately 62% of the total anticipated conservation level of approximately 101,268 acres, are already committed to conservation within the County Subarea.

The County Subarea Plan Objectives related to preserve design include, but are not limited to:

- Acknowledge the no-net-loss-of-wetlands standard to satisfy state and federal wetland goals, policies, and standards;
- Include measures to maximize the habitat structural diversity of conserved habitat areas, including conservation of unique habitats and habitat features (e.g., soil types, rock outcrops, drainage's, representative native plant species);
- Provide for the conservation of spatially representative (e.g., coastal versus interior) examples of extensive patches of coastal sage scrub and other habitat types that were ranked as having high and very high biological value by the MSCP habitat evaluation model;
- Create significant blocks of habitat to reduce edge effects and maximize the ratio of surface area to the perimeter of conserved habitats;
- Provide incentives for development in the least sensitive habitat areas;
- Provide for the conservation of key regional populations of the covered species, and representation of sensitive habitats and their geographic sub-associations in biologically functioning units; and
- Conserve large interconnected blocks of habitat that contribute to the preservation of wide-ranging species such as mule deer, golden eagle, and predators as appropriate.

A. Preserve Management

The requirements of Table 3-5 of the County's MSCP Plan will be incorporated into the Area Specific Management Directives, which will also include measures for fire management. As funding is allocated, the County, in coordination with the wildlife resource agencies, will initiate a baseline survey to prioritize the Table 3-5 areas where species may be under imminent or direct threat of extinction. Actions to prioritize these species will be addressed in this Framework Management Plan. The biological survey locations for monitoring were recommended in the MSCP Biological Monitoring Plan prepared by Ogden Environmental dated 1996, and will be reviewed, utilized as a guide, and modified as necessary for biological purposes. This Framework Management Plan requires the subsequent preparation and implementation of area-specific management directives, which will be prepared in a phased manner for logical discrete areas of land within the Subarea as those lands are committed to permanent preservation. Said plans will be initiated within six months

after the land has been title deeded for conservation purposes, and will incorporate and implement the General Management Directives of this Framework Management Plan (starting on page 10 of this document) as appropriate and shall be subject to County and resource agency approval. The criteria for the creation of these plans are described below. Conditions to perform adaptive management will not be placed on private projects unless a specific agreement has been reached between the property owner and the public agencies. A matrix of duties/check list to be performed will be prepared for each site-specific area. Appendix 1 is a sample that could be used for the Lakeside Archipelago, which was determined in the Biological Monitoring Plan for the Multiple Species Conservation Program as a "Regional Habitat Linkage Monitoring Location-L12 ". Included are the text and data forms for corridor monitoring from Appendix C, Biological Monitoring Plan for the Multiple Species Conservation Program.

The following activities are precluded on land that is dedicated as an open space easement to the County: grading, excavation, placement of soil, sand, rock, gravel or other material, clearing of vegetation, construction, erection or placement of any building or structure, vehicular activities, trash dumping or use for any purpose other than as open space, or planting of vegetation materials. In addition, fuel management activities on preserve lands are considered to be precluded, unless said activities are a part of an approved site specific plan or prescribed wildfire management program for the preserve. Baseline surveys will be conducted and these data will be used to create the Area-Specific Management Directives pursuant to Table 3-5. The Area-Specific Management Directives will direct appropriate levels of fuel manangement activities.

The exceptions to these prohibitions generally include the following:

1. Activities required to be conducted pursuant to a revegetation, habitat management, habitat restoration, recovery program for a covered species or landscaping plan approved by the Director of Planning and Land Use.
2. Vegetation removal or application of chemicals for vector control purposes where expressly required by written order of the Department of Health Services of the County of San Diego, in a location and manner approved in writing by the Director of Planning and Land Use of the County of San Diego, pursuant to the County of San Diego MSCP Subarea Plan Section 1.9.
3. Existing uses and Recreational Activities identified in approved plans.
4. Policing by local, State and Federal law enforcement agencies and fire protection agencies as necessary.
5. Approved scientific research and biological uses.
6. Necessary infrastructure consistent with the requirements of the Subarea Plan.
7. Existing unpaved equestrian and hiking trails in accordance or pursuant to an approved management plan or map.
8. Nonmotorized bicycle use on specific trails in accordance or pursuant to an approved management plan or map.
9. Fire clearing as allowed under an approved site-specific plan or fire management plan.

B. Existing Uses

As described above, any uses other than those specified will be prohibited. Until all of the areas of open space have been dedicated through processing of maps, there may be a continuation of existing uses within areas shown as preserve.

Existing uses may be allowed to continue, including any annual clearing, maintenance and replacement of existing facilities, roads and structures. However, there may be no expansion of such uses or the clearing of additional areas unless appropriate local, State and Federal permits have first been obtained.

C. Conservation/Development Areas

The maps associated with the Lake Hodges and South County Segments delineate where habitat will be conserved and where development will occur. The Wildlife Agencies have agreed to the conservation and development areas; accordingly, projects approved by the County consistent with these two Segments of the Subarea Plan will not require additional approvals from the Wildlife Agencies and therefore are not covered by this Framework Management Plan. Wetlands impacts throughout the County Subarea will continue to be subject to Federal 404 Clean Water Act and Fish and Game Code Section 1600 provisions, as appropriate.

The Subarea Plan includes separate "Segments" for the Lake Hodges, South County, and Metro-Lakeside-Jamul areas.

Two of the Plan Segments, the Lake Hodges Segment and the South County Segment, include "hard line" preserve systems. "Hard line" preserves are those areas specifically delineated on a map. These areas include land that is either publicly owned or land that has been the subject of negotiated agreements with the property owners. The "hard lines" depict areas that will be included in the Multiple Species Conservation Program preserve and they also show the areas where development is allowed without further biological mitigation.

Although anticipated conservation levels by species and habitat type have been developed for the Metro-Lakeside-Jamul Segment, no preserve boundaries have been designated, except for the Helix Company properties.

1. Lake Hodges Segment (Figure 2)

The segment is based on development plans that have been approved by the Board of Supervisors or are in process (4S Ranch). For the Lake Hodges segment, these include the Rancho Cielo, 4S Ranch, Santa Fe Valley, and Madura properties. Those property owners whose land is shown as "hard lines" are in agreement with that designation. The Lake Hodges segment also shows certain lands owned by the City of San Diego, which are covered in the City of San Diego Framework Management Plan. Future management plans prepared for these developments shall consider and incorporate as appropriate the general directives of this plan and the approved Habitat Management Plan(s) identified in the Santa Fe Valley SPA, dated February 1998.

The County of San Diego is acquiring parcels of land for habitat preservation in the Lusardi Creek area of the Lake Hodges Segment. A management plan shall be prepared for the County-owned land in fiscal year 2000-2001. The management plan shall consider and incorporate the general directives of this plan, and specific management practices pursuant to Table 3-5.

2. *South County Segment* (Figure 3)

The South County segment plan includes the Otay Ranch, Hidden Valley Estates, Las Montañas (recently purchased by the Trust for Public Land), Loma del Sol, and the Pointe San Diego properties. Future management plans prepared for these developments shall consider and incorporate as appropriate the directives of this plan. For any project not required to develop their own habitat management plan, the general guidelines of this Framework Management Plan, and specific management practices pursuant to Table 3-5, will be made a condition of project approval.

3. *Metro-Lakeside-Jamul Segment*

The Metro-Lakeside-Jamul segment consists of the remaining land in the unincorporated portion of the Multiple Species Conservation Program Plan. With the exception of five separate parcels owned by the Helix Companies, the preserve areas in this portion are not shown as specifically mapped "hard line" areas.

Instead, the Metro-Lakeside-Jamul segment includes goals and criteria on the number of acres of different habitat types, which must be ultimately included in a preserve in order for the covered species in the Plan to be adequately protected. The preserve will be assembled in this area through Federal, State and local agency acquisition and through the directed mitigation of discretionary project impacts.

There are several large properties in the Metro-Lakeside-Jamul Segment that will contribute to the assemblage of the preserve. The Boys and Girls Club, Crestridge Conservation Bank and Open Space, and Singing Hills Mitigation Banks have been or are in the process of being established. In addition, the Wildlife Agencies have acquired portions of the Daley Ranch in Jamul, and the Back Country Land Trust has acquired land in the Wright's Field area of Alpine for preserve purposes. Since the adoption of the MSCP Subarea Plan several large properties in the Metro-Lakeside-Jamul Segment have been acquired and will contribute to the MSCP Preserve.

Any management plans required to be prepared for these identified open space areas or future development projects should incorporate the general directives of this plan, and specific management practices pursuant to Table 3-5.

The County of San Diego is acquiring parcels of land for habitat preservation in the Lakeside Archipelago area of the Metro-Lakeside-Jamul segment. A management plan shall be prepared for the County-owned land in fiscal year 2000-2001. The management plan shall incorporate the general directives of this plan, and specific management practices pursuant to Table 3-5.

4. Private Lands Included in the Preserve

Through the course of land exaction as the result of development, privately-owned lands will become part of the regional preserve system. These lands may consist of portions of parcels that collectively contribute to a block of habitat or they may consist of large separate parcels of land. Unless the County has made special agreements with a project applicant for the applicant to participate in the cost of management and monitoring, the County has committed to the management and monitoring of privately held lands. However, the process for management and the level of management will depend on the property in question. Specific considerations will include the size of the property and the habitats on the site.

In the event that the applicant maintains its own open space and its Habitat Manager fails in the performance of the Habitat Management Plan conditions, the applicant will default habitat management responsibilities and funding to the County. It is the County's intent to approach this issue of default through the appropriate channels, e.g., the inclusion of appropriate provisions in the Memoranda of Understanding, Agreements, or conditions for default related to the open space.

Private projects requiring less than10 acres of open space

Management plans may not be required and/or incorporated into larger plans for projects that involve the dedication of 10 acres or less of open space for the protection of biological resources within the MSCP. The project applicant will hold fee title and will be required to carry out the stewardship responsibilities which may include fencing, signage installation, gating, fuel breaks, trash removal and limiting trespass. If there is a specific need for the application of management techniques or the preparation of a management plan on a small area of open space (i.e. for narrow endemics or unique critical populations of specific species), the County will perform that management and prepare that plan.

If it is necessary and agreeable to the County Department of Parks and Recreation, the project applicant may transfer title of said open space to the County. The County shall then bear the responsibility of stewardship management of the open space or transfer title to the California Department of Fish and Game or U.S. Fish and Wildlife Service as appropriate and as mutually agreed upon, or other qualified entity.

Private projects requiring more than 10 acres of open space

The ownership and management process involved for projects that include the dedication of 10 acres or more of open space for the protection of biological resources within the MSCP, shall conform to the following:

1. The project applicant will hold fee title to the open space and be responsible for stewardship activities. The County will be responsible for specific management and monitoring activities as appropriate.

2. If it is necessary or appropriate, and agreeable to the County Department of Parks and Recreation, the project applicant may transfer title of said open space to the County. The County may transfer title to the California Department of Fish and Game or U.S. Fish and Wildlife Service as appropriate and as mutually agreed upon, or other qualified entity.

3. Management for open space land that is greater than 10 acres in size shall be covered and be consistent with this framework management plan. Any given project may need to establish standards which when placed as a condition of project approval will fulfill the requirements of Table 3-5. Compliance to project conditions will be the responsibility of the County. If there is a specific need for the application of management techniques or the preparation of a management plan (i.e. for narrow endemics or unique critical populations of specific species), the County will assist in the preparation of that portion of the plan, or if mutually agreed upon, perform the monitoring and management, pursuant to this Framework Management Plan.

4. When areas of open space preserve have been assembled together to form a preserve of greater than 300 acres that is a reasonable management unit, typically 300 acres in size, an area specific management directive will be prepared for that site that addresses the resources that exist in the area and fulfills the requirements of Table 3-5. Management for open space land shall be consistent with this framework management plan. It is intended that that the open space areas for projects under 10 acres will be included to compile the 300-acre preserve areas.

Basic Elements of Individual Management Plans on Preserve Land

Basic Elements of the plans would include the following:

Public access control	Removal of invasive species
Fire management	Predator control
Fencing and gates	Restoration needs
Access road maintenance	Vehicle and facility expense
Trail maintenance	Ranger patrol
Signage and lighting	Visitor/interpretive services
Trash and litter removal	Volunteer services
Hydrological management	Poaching control
Species monitoring	Habitat Restoration
Vector control and herbicide use	Species Mgmt Conditions (Table 3-5)
Point Source drain water	Non-point source urban runoff
Biological surveys	Noise

Compatibility

Regional habitat planning requires a regional and subregional approach. Habitat

management plans for a given area should incorporate as much as is feasible from other plans in the area in order to maintain compatibility between the management plans. Particular attention should be made toward management of lands that are within the Wildlife Agency's Pre-approved Mitigation Areas.

Sensitive Species Management Requirements for Species Observed or expected in the Santa Fe Valley Specific Plan Area

In order to conform to the proposed Multiple Species Conservation Program (MSCP) Plan, the management plans must incorporate the requirements of Table 3-5 of the revised volume I for that plan. The requirements and measures needed to implement the requirements for individual species in that table must be included in the management plans for preserve areas in which these sensitive species have been found. Monitoring should be addressed in the habitat management plans. However, monitoring is not proposed to be the responsibility of the property owner. Specific management requirements for sensitive species identified in Table 3-5 shall be incorporated into the plans and will be the responsibility of the either the County or Habitat Manager, as identified in the Habitat Management Plan. Area specific management directives shall be generated that carry out the requirements of Table 3-5. These Habitat Management Plans shall be the Area-Specific Management Directives for these areas, which does not include 4S Ranch.

Cooperation/Coordination

Management for adjacent properties should be coordinated in order to carry out activities in the most efficient manner. This includes attempts at the removal of exotic and pest species of plants and animals such as cowbirds, Tamarisk or Fennel. Section 6.3.1 of volume I of the MSCP plan August 1998, outlines the preparation of a preserve management plan.

IV. FRAMEWORK MANAGEMENT PLAN

A. Management Goals and Objectives

The overall MSCP goal is to maintain and enhance biological diversity in the region and conserve viable populations of endangered, threatened, and key sensitive species and their habitats, thereby preventing local extirpation and ultimate extinction. This is intended to minimize the need for future listings, while enabling economic growth in the region. Where land is preserved as part of the MSCP Preserve through acquisition, regulation, mitigation or other means, management is necessary to ensure that the biological values are maintained over time and remain viable.

The County will be responsible for and will continue the management and maintenance of its existing public lands (including those with conservation easement), consistent with approved mitigation, monitoring, reporting and consistent with the MSCP plan. The County will also manage and maintain lands obtained as mitigation where those lands have been dedicated to the County in fee title or easement, and land acquired with regional funds within the County's MSCP Preserve

boundaries. Likewise, the Federal and State agencies will manage, maintain and monitor their present land holdings, as well as those they acquire on behalf of the MSCP, consistent with the MSCP plan. Lands in the MSCP Preserve that are set aside as open space through the development process but are not dedicated in fee to the County, or other acceptable entity, will be managed by the landowner consistent with approved Mitigation, Monitoring and Reporting Programs or Permit conditions. Private owners of land within the MSCP Preserve, who are not third party beneficiaries, will have no additional obligations for the management or maintenance of their land.

In order to assure that the goal of the MSCP Preserve is attained and fulfilled, management objectives for the County of San Diego MSCP Preserve are as follows:

1. To ensure the long-term viability and sustainability of native ecosystem function and natural processes throughout the MSCP Preserve.
2. To protect the existing and restored biological resources from intense or activities causing disturbance or incompatible within and adjacent to the MSCP Preserve while accommodating compatible public recreational uses.
3. To enhance and restore, where feasible, the full range of native plant associations in strategic locations and functional wildlife connections to adjoining habitat in order to provide viable wildlife and sensitive species habitat.
4. To facilitate monitoring of selected target species, habitats, and linkages in order to ensure long-term persistence of viable populations of priority plant and animal species and to ensure functional habitats and linkages.
5. To provide for flexible management of the MSCP Preserve that can adapt to changing circumstances to achieve the above objectives.

This section lists general management guidelines relevant to the entire County MSCP Preserve system, followed by specific guidelines and recommendations for each planned segment of the MSCP Preserve, including the aforementioned segments of the Lake Hodges, Metro-Lakeside-Jamul, and South County segments, Urban Areas, and the San Pasqual Valley. Cornerstone Lands are the responsibility of the City of San Diego. Each segment is unique in terms of its existing conditions, MSCP Preserve configuration, public or private ownership of land, the existence and location of sensitive species, and management needs.

Based on the above management objectives, the recommended management directives that follow have been identified in order of priority. It is recognized that many of these directives cannot be implemented on approval of this Framework Management Plan, but will instead occur over the life of the Plan. The ability to implement and the timing of many of the management directives will be directly related to the availability of funding in any fiscal year and on the biological priority. In addition, some of the management directives may be implemented as part of mitigation requirements for development projects both within and adjacent to the MSCP Preserve. Some of the tasks are also expected to be implemented as research efforts by the scientific and academic community at large.

The management directives are organized by priority into the following two categories. The priorities are intended to assist in the decisions on where to spend limited funds and direct mitigation efforts:

Priority 1: Directives that protect the resources in the MSCP Preserve, including management actions that are necessary to ensure that the Covered Species are adequately protected.

Priority 2: Directives other than those required for covered species status and other long-term items that may be implemented during the life of the plan as funding becomes available.

It is expected that modifications will be needed over time, based on realities encountered in the field as the MSCP Preserve is assembled. Monitoring of selected target species and other sensitive or constrained areas within the MSCP Preserve will occur pursuant with the Monitoring Plan. The Monitoring Plan will inform MSCP Preserve managers and staff of the general trends of wildlife use and species preservation, as well as indicate areas where special management focus is needed. Cooperation between the field managers, MSCP Habitat Management Technical Committee, and the wildlife agencies, is expected to occur to review and discuss existing and new management issues and to respond with practical, case-sensitive solutions. These solutions will be documented, and this management plan should be revised as needed to reflect new information.

An integral part of the management component is the land use consideration that takes into account compatible land uses, ordinances and guidelines related to the development of land uses within and adjacent to the MSCP Preserve. These ordinances, policies and guidelines should be incorporated into projects during the land development review process. It should be noted that some of the management directives listed in the following sections may already be included as conditions of approved projects within or adjacent to the MSCP Preserve and are therefore considered part of this Subarea Plan.

Coordination of public information and education will be provided through the Habitat Management Technical Committee. These tasks will include the preparation and distribution of brochures, maps and associated educational materials.

B. General Management Directives

The following general management directives apply to all areas of the County of San Diego's MSCP Subarea Plan.

1. Restoration

Restoration or revegetation undertaken in the MSCP Preserve shall be performed in a manner acceptable to the County and consistent with MSCP. Where covered species status identifies the need for reintroduction and/or increasing the population, the covered species will be included in restoration/revegetation plans, as appropriate. Restoration or revegetation proposals will be carried out pursuant to a plan that includes elements addressing financial responsibility including site preparation, planting specifications, maintenance, monitoring and success criteria, and remediation and contingency measures. Wetland restoration/revegetation projects are subject to permit authorization by federal and state agencies.

2. Public Access, Trails, and Recreation

Appropriate recreational activities shall be accommodated in concurrence with the goals of the MSCP and County Subarea Plans.

a. Public access and passive recreation are permitted uses within specified areas of the

preserve. Access points, new trails and facilities, and a public control plan will be included in the specific framework habitat management plans and the area-specific management directives.

b. Riding and hiking trails will be allowed within the preserves to allow passive recreational opportunities for the public. Passive recreation includes hiking, scientific research, bird watching, and under specified conditions and locations identified in approved projects and or management plans, mountain biking, horseback riding, sailing, sun bathing, fishing, and swimming. Equestrian, hiking, and bicycles may be allowed when in accordance with approved management plans and are consistent with the County of San Diego Subarea Plan. Other forms of public access and recreation may be determined to be consistent with the protection of the resources currently existing within the preserve. Access for hang gliding and hot air ballooning shall be limited to existing dirt roads now used for such purposes unless the roads are to be rehabilitated. Departure/take off areas for such activities are and shall remain located outside of the preserve. All recreational activities will be required to avoid impacts to narrow endemics or unique critical populations of specific species, unless the activities are in "take" authorized areas as identified or allowed under the MSCP.

Priority 1:

1. Identify and map narrow endemics and critical populations and all covered species populations in the preserve so that these areas can be avoided and monitored. Surveys should occur in the spring of the year or the appropriate season as determined by the protocols of the species being surveyed.
2. Provide sufficient signage to clearly identify public access to the MSCP Preserve. Barriers such as vegetation, rocks/boulders or fencing may be necessary to protect highly sensitive areas. Use appropriate type of barrier based on location, setting and use. For example, use chain link or cattle wire to direct wildlife movement, and natural rocks/boulders or split rail fencing to direct public access away from sensitive areas. Lands acquired through mitigation may preclude public access in order to satisfy mitigation requirements.
3. Locate trails, view overlooks, and staging areas in the least sensitive areas of the MSCP Preserve. Locate trails along the edges of urban land uses adjacent to the MSCP 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. Avoid locating trails between two different habitat types (ecotones) for longer than necessary due to the typically heightened resource sensitivity in those locations.
4. In general, avoid paving trails unless management and monitoring evidence shows they are necessary. Clearly demarcate and monitor trails for degradation and off-trail access and use. Provide trail repair/maintenance as needed. Undertake measures to counter the effects of trail erosion including the use of stone or wood cross-joints, edge plantings of native grasses, and mulching of the trail.
5. Minimize new trail construction widths to reduce impacts to critical resources. For the most part, do not locate trails wider than 4 feet in core areas or wildlife corridors. Exceptions are in County Parks where necessary to safely accommodate multiple uses or disabled access. Provide trail fences or other barriers at strategic locations when protection of sensitive resources is required.
6. Limit the extent and location of equestrian trails to the less sensitive areas of the MSCP

Preserve. Locate staging areas for equestrian uses at a sufficient distance (e.g. 300-500 feet) from areas with riparian and coastal sage scrub habitats to ensure that the biological values are not impaired.

7. Maintain equestrian trails on a regular basis to remove manure (and other pet feces) from the trails and preserve system in order to control cowbird invasion and predation. Design and maintain trails where possible to drain into a gravel bottom or vegetated (e.g. grass-lined) swale or basin to detain runoff and remove pollutants.
8. Off-road or cross-country vehicle activities are considered an incompatible use in the MSCP Preserve, except for law enforcement, preserve management, and/or emergency purposes. Restore previously disturbed areas to native habitat where possible or critical, or allow to regenerate. The Subarea Plan will not allow off-highway vehicle trails within designated preserve areas in the South County and Lake Hodges Segments. If an off-road vehicle trail is proposed for this area, the Subarea Plan must be amended to remove the trail right-of-way from the Preserve. The Wildlife Agencies must approve any such amendment as being consistent with the conservation goals of Multiple Species Conservation Program.
    a. Public off-highway recreational vehicle activity (trails, roads, parks, etc.) within MSCP preserve areas is incompatible with the goals of the MSCP. Lands preserved through the MSCP are conservation measures to mitigate and preserve habitat/species for effects and/or impacts to covered species resulting from development outside the preserve areas.
    b. Legal access across preserve lands to private in-holdings will not change as a result of implementation of the Subarea plan.
    c. OHV trails in the South County and Lake Hodges Segments of the County Subarea Plan will be located outside of proposed and dedicated preserve areas.
    d. OHV trails within Metro-Lakeside-Jamul, but outside of proposed or dedicated preserve areas, will be considered a project and will be subject to the provisions of the MSCP, County Subarea plan, and Biological Mitigation Ordinance.
    e. OHV activity on Bureau of Land Management lands will be managed in accordance with the BLM Resource Management Plan.

Use of off-highway vehicles that is necessary in order to engage in other allowed uses as specified in the County Subarea Plan or an approved Habitat Management Plan shall not be prohibited.

9. Limit recreational uses to passive uses such as bird-watching, photography and trail use. Locate developed picnic areas near MSCP Preserve edges or specific areas within the MSCP Preserve, in order to minimize littering, feeding of wildlife, and attracting or increasing populations of exotic or nuisance wildlife (opossums, raccoons, skunks). Where permitted restrain pets on leashes.
10. Remove homeless and itinerant worker camps in habitat areas as soon as found pursuant to existing enforcement procedures.
11. Hunting of discharge of firearms is an incompatible use in the MSCP Preserve, and therefore prohibited, except for law enforcement, MSCP Preserve management, emergency purposes or as allowed under an approved habitat management plan.
12. Poaching or collecting plant or animal species from the MSCP Preserve is prohibited. The County may authorize collecting upon approval for scientific research, revegetation or restoration purposes, or species recovery programs.

13. Comply with all applicable County ordinances and policies (i.e. leash laws).
14. Collection of archaeological or historical artifacts or fossils, or defacement or destruction of historic features, is prohibited except upon approval by the County.

3. Litter/Trash and Materials Storage

Priority 1:

1. Remove litter and trash on a regular basis. Post signage to prevent and report littering in trail and road access areas. Provide and maintain trashcans and bins at trail access points.
2. Impose penalties for littering and dumping. Fines should be sufficient to prevent recurrence and also cover reimbursement of costs to remove and dispose of debris, restore the area if needed, and to pay for enforcement staff time.
3. Prohibit permanent storage of materials (e.g. hazardous and toxic chemicals, equipment, etc.) within the MSCP Preserve and ensure appropriate storage per applicable regulations in any areas that may impact the MSCP Preserve, due to potential leakage.
4. Keep wildlife corridor undercrossings free of debris, trash, homeless encampments, and all other obstructions to wildlife movement.
5. Evaluate areas where dumping recurs for the need for barriers. Provide additional monitoring as needed (possibly by local and recreational groups on a "Neighborhood Watch" type program), and/or enforcement.

4. Adjacency Management Issues

Residential uses will be the most common use located adjacent to the MSCP Preserve, although roads, manufactured open space, recreational facilities, and industrial and commercial uses will occur in some areas.

The following uses can be compatible on land adjacent to the preserve.

Manufactured open space (e.g. parks, playing fields, vegetated slopes, green belts, etc.) roads, recreational facilities, water reservoirs, other public facilities and utilities, agricultural and grazing operations are deemed to be compatible when located immediately adjacent to the preserve. No additional buffers or transitional areas are required.

In addition, hiking, bird watching, horseback riding, camping, power boating, water skiing, fishing, pet exercising, hang gliding, hot air ballooning, scientific research, mountain biking, equestrian facilities, athletic fields, sailing, sun bathing, swimming, golf courses, hunting, brush management may be considered as compatible uses.

The establishment of the MSCP Preserve system does not include regulatory authority on properties adjacent to the preserve. However, the County will encourage adjacent property owners to follow guidelines when planning and implementing uses and activities when located immediately adjacent to the preserve. These guidelines are meant to ensure compatibility with the preserve as follows:

A. Where feasible, plant materials used to landscape manufactured open space, road cuts/fills and recreational facilities should consist of native species similar/compatible with the adjacent habitat in the preserve. If possible, those species should be based on plants with

genetic materials of the area. In addition, the planting of aggressive, non-native plant species identified in the County Urban/Wildlife Interface document will be discouraged through public outreach programs and bulletins.

B. Areas and structures subject to heavy human use (e.g. ball fields, parking lots, hardscapes/playing courts, equestrian centers, staging areas, etc.) shall, to the extent feasible, be located away from the edge of the preserve.

C. Lighting within 100 feet of the preserve edge shall be confined to areas necessary to ensure public safety, and shall be limited to low pressure sodium fixtures, shielded and directed away from the preserve where possible.

D. Fencing along the preserve boundary is desirable but not mandatory and may provide a barrier to fire, invasive species, and uncontrolled human access. Should a landowner or preserve manager decide to install fencing, the type, style and height must conform to existing regulations or those included in the applicable Specific Plan.

E. There shall be no requirements for buffers outside the preserve system. All open space requirements for the preserve system shall be incorporated into the preserve system.

F. Conduct an assessment of the need for cowbird trapping in each area of the MSCP Preserve where cattle, horses, or other animals are kept, as recommended by the habitat management technical committee in coordination with the wildlife agencies.

G. On a case by case basis some limited trapping of non-native predators may be necessary at strategic locations, and where determined feasible to protect ground and shrub-nesting birds, lizards, and other sensitive species from excessive predation. This management directive may be considered a Priority 1 if necessary to meet the conditions for species coverage. If implemented, the program would only be on a temporary basis and where a significant problem has been identified and therefore needed to maintain balance of wildlife in the MSCP Preserve. The program would be operated in a humane manner, providing adequate shade and water, and checking all traps twice daily. Provide signage at access points and noticing of adjacent residents to inform people that trapping occurs, and how to retrieve and contain their pets.

Priority 1:

1. Enforce, prevent and remove illegal intrusions into the MSCP Preserve(e.g. orchards, decks, etc.) on an annual basis, in addition to complaint basis.
2. Disseminate educational information to residents adjacent to MSCP Preserve to heighten environmental awareness, and inform residents of access, appropriate plantings, construction or disturbance within MSCP Preserve boundaries, pet intrusion, fire management, and other adjacency issues.
3. Install barriers (fencing, rocks/boulders, vegetation) and/or signage where necessary to direct public access to appropriate locations.
4. Invasive Exotics Control and Removal

Priority 1:

1. Do not introduce invasive non-native species into the MSCP Preserve. Provide information on invasive plants and animals harmful to the MSCP Preserve, and prevention methods, to visitors and adjacent residents. Encourage residents to voluntarily remove invasive exotics

from their landscaping.

2. Remove giant reed (Arundo), pampas grass, castor bean, artichoke thistle, and other exotic invasive species from creek and river systems, canyons and slopes, and elsewhere within the MSCP Preserve as funding or other assistance becomes available. If possible, it is recommended that removal begin upstream and/or upwind and move downstream/downwind to control re-invasion. Priorities for removal should be based on invasive species' biology (time of flowering, reproductive capacity, etc.), the immediate need of a specific area, and where removal could increase the habitat available for use by covered species such as the least Bell's vireo. Avoid removal activities during the reproductive seasons of sensitive species and avoid/ minimize impacts to sensitive species or native habitats. Monitor the areas and provide additional removal and apply herbicides if necessary. If herbicides are necessary, all safety and environmental regulations must be observed. The use of heavy equipment, and any other potentially harmful or impact-causing methodologies, to remove the plants may require some level of environmental or biological review, permitting requirements and/or supervision to ensure against impacts to sensitive species.

3. On a case-by-case basis, trapping of cowbirds and eradication of bullfrogs may be necessary at strategic locations, and where determined feasible to protect sensitive species from excessive predation. This management directive may be considered a Priority 1 if necessary to meet the conditions for species coverage.

Priority 2:

1. When funding permits, initiate a focused invasive species survey with regular follow-up monitoring to assess invasion or re-invasion by exotics, and to schedule removal. Utilize trained volunteers to monitor and remove exotic species as part of a neighborhood, community, school, or other organization's activities program (such as California Plant Society has done in the Sweetwater Regional Park). If done on a volunteer basis, prepare and provide information on methods and timing of removal to staff and the public if requested. For giant reed removal, the Riverside County multi-jurisdictional management effort and experience should be investigated and relevant techniques used. Similarly, tamarisk removal should use The Nature Conservancy's experience in the Southern California desert regions, while artichoke thistle removal should reference The Nature Conservancy's experience in Irvine. Other relevant knowledge and experience is available from the California Exotic Pest Plant Council.

2. If eucalyptus, exotic palms, or pepper trees die or are removed from the MSCP Preserve area, replace with appropriate native species. Ensure that these tree species do not spread into new areas, nor increase substantially in numbers over the years. Eventual replacement by native species is preferred.

5. Flood Control

Priority 1:

Perform standard maintenance, such as clearing and dredging of existing flood channels,

pursuant to 401and 404,Clean Water Act permit and 1601 Streambed Alteration Agreement conditions as required. Standard maintenance conditions should include that maintenance will occur during the non-breeding or nesting season of sensitive bird or wildlife species utilizing the riparian habitat. For the least Bell's vireo, the non-breeding season generally includes mid-September through mid-March.

Priority 2:

Review existing flood control channels within the MSCP Preserve periodically (every 5-10 years) to determine the need for their retention and maintenance, and to assess alternatives, such as restoration of natural rivers and floodplains.

6. Fire Prevention, Control and Management

The San Diego County Fire Chief's Urban/Wildland Interface Task Force has prepared Countywide brush management guidelines in concert with the Wildlife Agencies. A Memorandum of Understanding (MOU) among the Wildlife Agencies, California Department of Forestry and Fire Protection, and Fire Chiefs and Fire Districts was executed in February 1997 following completion of the Federal Endangered Species Act Section 7 consultation by the U.S. Fish and Wildlife Service. The MOU will provide the basis for ensuring fire control activities, fire prevention and fire for habitat management are integrated into preserve management plans. As determined by the local fire official, all project conditions will include a statement that all fuel modifications zones will occur within the project's development line, and not extend into preserve lands.

Fire management activities are permitted within the preserve when conducted according to a fire management plan approved by the wildlife agencies, County and appropriate fire district as part of area-specific management directives. Preparation of a stand-alone fire management plan is optional, at the desire of the MSCP preserve manager, jurisdiction, landowner or fire district.

Fire suppression districts, personnel and equipment shall use whatever tactics necessary to control and extinguish wildfires necessary to protect public safety as determined by the local fire official. Such activities are permitted within and adjacent to the preserve. No mitigation shall be required for any "take" of covered species that occurs during any fire fighting operation.

Background

Fire management in the County of San Diego primarily focuses on fuel or brush management in conjunction with the local Fire Districts. The typical mesa-canyon topography and fire-adapted native vegetation of the coastal region has led to the common condition of development occurring on mesa tops surrounded by canyon slopes of highly-flammable chaparral and other natural open space. The formation of an open space system to protect biological resources and preserve long-term viability introduces additional issues regarding fire management that need to be addressed in conjunction with public safety factors.

Major issues related to fire management in the MSCP Preserve include the following:

1. Fire hazard reduction methods, including brush management, for public safety purposes may impact sensitive species.

2. Fire hazard reduction may involve methods that increase other management concerns (e.g. exotic species invasion, erosion).
3. Fire management needs for particular fire-adapted species such as Del Mar manazanita and Shaw's agave need to be identified.
4. Within the MSCP, it is highly unlikely that problems would ever occur from the creation of senescent vegetation through excessive fire suppression. Vegetation and habitats are much more likely to be adversely affected by fires occurring too often. Therefore, fire suppression should be the primary tool for fire management. However, specific fire management plans may be created to create vegetation mosaics that reduce the ability of catastrophic fire when necessary. In those plans, sensitive species and sensitive habitats must be given highest priority so that fire management does not impact them.

Fuel Modification Zones

Residential, industrial, institutional and commercial uses will be generally separated from the preserve by a fuel modification zone, which varies in width depending on each project's circumstances. For properties controlled by public land trusts, they are responsible for maintaining a fuel modification zone where required. The intent of the fuel modification zone is to protect uses adjacent to the preserve from wildfires. It may further protect the resources within the preserve by absorbing some of the "edge effects" that might otherwise occur within the preserve. With implementation of the fuel modification zone, no other restrictions for fuel management on residential, industrial, institutional, commercial or other uses are required.

The following guidelines are intended to establish how the fuel modification zone will be managed.

A. Plant materials existing within the fuel modification zone may be thinned, mowed, pruned and/or removed as necessary.
B. Supplemental planting may be elected by the owner. Plant materials used shall be acceptable to the appropriate fire agency and non-invasive. This guideline also applies to any road cuts and/or graded disturbed areas within the fuel modification zone.
C. Ownership of the fuel modification zone may vary. In most cases, it may be by the adjacent lot owner or homeowners' association. Where appropriate, the zone may be incorporated into project open space and landscaping plans.
D. Responsibility for brush management will vary according to the specific requirements of the approved project. In most cases, it shall reside with the landowner or homeowners association, and may be enforced by the appropriate fire department or homeowners' association. For residential areas, the Codes, Covenants and Restrictions (CC&Rs) shall clearly define the responsibilities of the owner with respect to fuel modification including when and how such activities shall be carried out.
E. Fencing, lighting and signage are permitted in the fuel modification zone, at the discretion of the landowner.

    a. Lighting shall be confined to areas necessary to ensure public safety, and shall be limited to low pressure sodium fixtures, shielded and directed away from the preserve.
    b. Fencing is desirable but not mandatory and provides a barrier to invasive species, and

uncontrolled human access. Should a landowner decide to install fencing anywhere within the brush management zone, the type, style and height must conform to existing regulations.

7. Grazing Policy

Many areas of preserve land within the Subarea have been grazed for much of the past century. By participating in grazing policy issues, landowners adjacent to preserve areas may become partners in the land management within the MSCP Plan. Upon the completion of initial biological studies, prescribed grazing programs may be implemented that are deemed appropriate and a benefit to the resource.

Managed grazing may enhance the species diversity of native grassland communities, by reducing competitive dominance of exotic pest species. Grazing can also be a cost-effective means to control invasive pest plant species. Invasion by exotic weedy species is of great concern, especially in areas that undergo a sudden release from grazing pressure.

If the preserve area is occupied by Stephen's kangaroo rat , a grazing program may be necessary to maintain habitat quality for this endangered species. This species requires relatively open grassland and grazing can prevent exotic greases from becoming too dense.

Furthermore, grazing can reduce fuel loads, and can be an important component of a fire management program.

Grazing regimes need to be researched before any program is implemented, but prescribed grazing programs may lead to enhanced species composition for native grasslands.

8. Emergency, Safety and Police Services

The interface between current and future urban development and the preserve areas requires increased coordination between the preserve managers and agencies responsible for public safety and enforcement of immigration laws. The MSCP preserve system, including the County's portion of the system must accommodate access for emergency response, fire control and management, and enforcement of immigration laws. In the event that entry into the preserve by law enforcement agencies is needed in the routine performance of their duties, use of existing roads and trails should be encouraged. In emergencies where there is a direct threat to public safety, the law enforcement agency should contact the Habitat Manager whenever feasible. The construction of any new roads required by law enforcement agencies shall be subject to all applicable state and federal laws, and be subject to review under NEPA and CEQA.

Law enforcement and fire control agencies, the National Guard, the Immigration and Naturalization Service (INS), the Border Patrol and organizations and agencies that respond to natural disasters shall be permitted to perform their activities within any preserve system subject to all applicable requirements of state and federal law.

Enforcement of Immigration Laws

Each of the preserve management plans will include provisions for enforcement of immigration laws. The goals for dealing with immigration issues within preserves is to maintain or increase the ability of immigration enforcement officials to carry out their duties. All law enforcement agencies shall be allowed access to the preserve as necessary to enforce the law.

Emergency Response

Each of the preserve management plans includes provisions for response to emergencies, including floods, law enforcement and public health and safety. The goal for dealing with emergency response issues within preserves is to maintain or increase the ability of emergency response personnel to deal with emergencies. All medical, rescue and other emergency agencies are allowed access to the preserve to carry out operations necessary to the health, safety and welfare of the public.

Emergency Repairs to Infrastructure

In preserve areas managed by the County or the County's authorized representative, the County shall allow the agency to enter the preserve and complete necessary repairs consistent with normal practices and with state and federal take authorization in conformance with existing federal and state laws.

9. Monitoring Plan

The approved biological monitoring protocol requirements are cited in the "MSCP Biological Monitoring Program" document prepared by Ogden Environmental, dated 1996. It may be necessary to periodically revise the biological monitoring protocol as new scientific information becomes available. Any revisions in the protocol will be subject to approval by the resource agencies and agreed to by the participating local jurisdictions. The monitoring plan identifies basic monitoring requirements cited in Table 3-5 for the various native habitats, covered species, and corridors, and shall also include monitoring and reporting requirements, a remediation section and highlights research opportunities.

Biological monitoring will be the joint responsibility of the County and the wildlife agencies for all lands within the County's boundaries. Proper management of the MSCP Preserve will require ongoing and detailed analysis of the data collected through monitoring activities. To ensure uniformity in the gathering and treatment of this data, the wildlife agencies will assume primary responsibility for coordinating the monitoring programs, analyzing data, and providing information and technical assistance to the jurisdictions. No additional fees will be charged to landowners for biological monitoring.

10. Research Opportunities for the Academic and Professional Scientific and Biologic Activities

A. All scientific, research, monitoring and habitat restoration and enhancement activities are permitted within the preserve, subject to approval by the preserve manager/landowner and obtaining any necessary permits. All such activities shall be consistent with the area-specific management directives.

B. All or any of the above activities shall be carried out under a regional program implemented by the resource agencies, County of San Diego or preserve manager.
C. Prior to beginning any of the above research activities, prior approval of the property owner/preserve manager must be obtained.

The MSCP Preserve presents a rich array of research opportunities for the academic and professional communities, primarily in disciplines related to biology, ecology, and natural resources management, but also ranging to environmental design, sociology, and park use and administration. The County of San Diego encourages research within the MSCP Preserve in order to gain valuable information unavailable through other means. There are a multitude of unanswered questions posed by the development of a multiple species and habitat system where little literature or previous research exists on the majority of species inhabiting the region. In addition, research on vegetation associations and habitats, natural regeneration, restoration, fragmentation, edge effects, genetics, viability, predation, wildlife movement, wildlife use of culverts and other undercrossings, and much more, would be useful to provide information on the health and dynamics of an urbanized open space system as well as how to improve conditions. The MSCP Biological Monitoring Plan makes recommendations for further research to supplement the required monitoring program.

Some specific requirements for researchers are needed in order to obtain mutual benefits for the County, the MSCP program, wildlife agencies and researchers. These include:

1. Coordination with County staff to discuss projects, potential locations, guidelines for access, and oversight responsibility.
2. Application to do research should occur through a letter sent to County staff, with a copy to the MSCP habitat management technical committee. The application should describe the participants, the precise location where the work is to be done, the tasks and methodologies that would take place on preserve lands, the dates and approximate length of time for the research, and any known or expected disturbances. The letter will need to present proof of insurance or indemnify all participants in the research effort to work at their own risk.
3. Applicants must agree to provide the data or the results of the research to County staff, and to the wildlife agencies within a reasonable timeframe after the completion of the project. If working on a grant or similar funding arrangement, a letter from the grantor acknowledging and accepting this arrangement must be submitted.
4. If working in state or federally listed species habitat or wetlands, any necessary permits from the appropriate agencies must be obtained prior to commencement of research, with a copy provided to the County or MSCP management entity.
5. The researchers will be held responsible for any damage or disturbance to native plants, animals, hydrology, or any other aspect of the natural ecosystem, and will need to provide restoration or other reparation if necessary.

11. Cultural Resources

All preserve lands will be inventoried for cultural resources. Cultural resources include historic structures, features, and landscaping, as well as historic and prehistoric archaeological sites, features, and artifacts. Protection and preservation of cultural resources will comply with County of San

Diego ordinances (Title 4; Public Property, Division 1; Parks and Beaches, Article 2, Section 41.113), and applicable state and federal laws.

A. Inventories shall include a record search at the South Coastal Information Center, SDSU, and an on-foot field survey, as well as pertinent archival and historical research.
B. Specific management plans will be prepared to preserve and interpret cultural resources.
C. All management activities within the preserve, including but not limited to trail construction, placement of fencing and gates, and restoration of habitat will take into consideration potential impacts to cultural resources.
D. No removal or modification of cultural resources shall occur without written approval by the Director of Parks and Recreation.
E. Removal or disturbance of cultural resources shall not occur prior to completion of an approved mitigation program, such as data recovery or recordation. Preservation in place is the preferred mitigation measure.
F. Condition and status of cultural resources shall be noted as part of routine monitoring activities and remedial measures shall be taken if damage is noted.
G. Site location information will be confidential, and will be available only for qualified cultural resource staff and land managers. Site locations will not be shown on maps or divulged to the public.
H. Interpretive programs for Native American heritage, local and regional history, and prehistory will be developed for the preserve. These may include lectures, walks, kiosks, signs, brochures, and displays, but will not include excavations, collecting of artifacts, or disclosure of confidential site locations unless an interpretive plan is developed and approved by the Director of Parks and Recreation. The plan will include supervision by a qualified archaeologist approved by the Director of Parks and Recreation.
I. Any cultural materials collected from the preserves will be curated at a qualified curation facility.
J. Native American tribal councils will be contacted and consulted for input.