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 a mutual benefits for the City, the MSCP program, wildlife agencies and researchers. These include:

- 1. Coordination with City staff to discuss projects, potential locations, guidelines for access, and oversight responsibility.
- 2. Application to do research should occur through a letter sent to City 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.
- 2. Applicants must agree to provide the data or the results of the research to City 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.
- 3. 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 City or MSCP management entity.
- 4. 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.

1.6 PROTECTION OF RESOURCES

1.6.1 Interim Protection

The City of San Diego currently provides protection to sensitive biological resources through policies and regulations. The Open Space and Conservation Elements of the General Plan and community plans identify, in varying level of detail, important areas to be protected for open space, including for biological purposes.

The City has the following existing regulations which provide protection to sensitive environmental resources: the Resource Protection Ordinance (RPO) and Guidelines; the Sensitive Coastal Resource Overlay Zone (SCR); and the Hillside Review (HR) Ordinance and Guidelines. RPO is designed to protect sensitive biological resources and hillsides through limitation of encroachment into these lands to a maximum of 20 percent of the parcel, plus 15 percent in certain limited circumstances (provision of major public facilities). Development is directed to the least sensitive portions of the site with the remainder of the property left in open space. For the most part, premature clearing and grubbing of habitat is restricted except as exempted under RPO.

Additionally, the City implements the California Environmental Quality Act and Guidelines through the Environmental Quality Ordinance, and requires protection of significant biological resources as mitigation for project impacts.

The City has revised, updated and consolidated existing environmental regulations into new draft Environmentally Sensitive Lands (ESL) regulations. One goal was to create regulations that can better serve as implementing tools for the City's MHPA. Specifically in the September 1995 draft of the ESL:

- RPO, SCR and HR have been combined to be applied citywide.
- Development on private lands in the MHPA will be limited to 25 percent of the parcel, with the remainder left in open space.
- Several open space zones have been created for use in implementing the MHPA and other open space, including OC (open space-conservation); OF (open space-floodplain); and OR (open space-residential). The OR-1-2 Zone would be applied to parcels within the City's MHPA, and would contain the 25 percent development area regulations.

1.6.2 Permanent Protection

The long-term biological integrity of the MHPA will be ensured as follows:

- 1. Lands set aside in the MHPA as mitigation for development occurring outside the MHPA and lands acquired for the MHPA with public funds will be protected with open space easements or, at the landowners option, dedicated in fee to the City, or other governmental or non-profit agency which will take over management responsibilities and liability.
- 2. Public lands (federal, state and local) committed to the MHPA will be protected with open space easements, dedications, zoning, general plan designations or other protective measures to ensure that such lands are managed and preserved consistent with the MSCP and this Subarea Plan.

3. Private development within the MHPA will be regulated through the Environmentally Sensitive Lands (ESL) permit process and any CEQA review required to allow development to occur on the premises. Development will be directed toward the least biologically sensitive portion of the site by the Environmentally Sensitive Lands ordinance. The permit implementing the Environmentally Sensitive Lands regulations will be recorded with the county recorder and will run with the land. The indirect impacts of the development will be addressed in the ESL permit to ensure protection of the sensitive resources remaining on the premises outside of the development area.

1.6.3 Mitigation Plan

Mitigation for sensitive biological resources involves "compensating" for impacts through off-site acquisition, on-site preservation, habitat restoration, or in limited cases, monetary compensation. The mitigation plan for any proposed project must include provisions for protection or preservation and management (including responsibility) of the mitigation areas. Mitigation is one method by which lands within the MHPA are proposed to be acquired.

For impacts occurring outside of the MHPA, compensating mitigation may be required for significant impacts to sensitive habitats. This mitigation would be based on the habitat type, and the location of the mitigation site, as set forth in the City's biology guidelines. Mitigation occurring within the MHPA would generally occur at a lower ratio due to the critical nature and high biological value of the preserve. Any areas proposed as mitigation areas outside of the MHPA would be required to demonstrate that the area can retain long-term viability, and is part of a large, connected open space system.

For impacts occurring within the MHPA necessary to achieve the allowable 25 percent development area of the proposed underlying OR-1-2 zone, no mitigation would be required for impacts to sensitive upland resources. The remaining 75 percent area outside of the allowable development area would be left undeveloped. If the property owner elects not to dedicate the undeveloped area in fee to the City, a covenant of easement must be recorded against the property which incorporates any conditions applying to the undeveloped area, including limitation on uses and provisions for long-term management. Active habitat management may not occur if the landowner retains fee title, though grading and clearing can be prohibited.

For those projects within the City that received approval prior to the effective date of the City's Subarea Plan and implementing agreement, and are considered vested under California law, or have been determined by the City and wildlife agencies to have appropriately satisfied mitigation requirements, no additional mitigation will be sought except to the extent required by the federal and state Endangered Species Acts for currently listed species.

1.6.4 Conservation Estimates

Lands within the City of San Diego MHPA are proposed to be conserved by one of the following five methods: 1) conservation of existing public lands; 2) land use restrictions of property within the MHPA through zoning regulations; 3) open space exactions directed toward building the MHPA imposed on new development outside the MHPA; 4) open space previously set aside on private lands for conservation as part of the development process; 5) public acquisition of private lands.

The City of San Diego's Subarea Plan proposes 90 percent conservation of 56,831 acres within the MHPA for a total of 52,012 acres. Public lands, including Cornerstone Lands, within the City's MHPA total 38,880 acres, of which 94 percent, or 36,697 acres, is expected to be preserved in perpetuity. The total public lands include 5,806 acres owned by federal and state government, and 33,074 owned by the City of San Diego and other local jurisdictions. Negotiated open space on private lands (100 percent conserved) in the City's MHPA totals 5,012 acres. Through future application of the Environmentally Sensitive Lands Ordinance and open space zone, approximately 7,903 acres could be conserved. Acquisition will be required in a number of areas that are critical to MHPA configuration and viability and where development as allowed under the resource regulations would impair or preclude it's function. Acquisition could be accomplished with either public funds or from mitigation requirements for private and/or public development impacts outside the MHPA. It is estimated that at a minimum, approximately 2,400 acres of private land would need to be acquired.

It is important to realize that the numbers included above are not additive, since the amount, timing and location of land conservation through regulation, mitigation and public acquisition is not known. The amount, timing and location of conservation by any one method will affect the same factors for the other methods.

For the majority of covered species, it is accepted that conserving habitat within the MHPA at the above conservation goals will not appreciably reduce the likelihood of the survival and recovery of these species in the wild. While this is true for species with wide geographic distributions, species with very limited geographic ranges (narrow endemic species) would require additional conservation measures to assure their long-term survival.

For wetlands, including vernal pools in naturally occurring complexes, and narrow endemic species, inside the MHPA, impacts will be avoided. Outside the MHPA, narrow endemic species will be protected through the following measures, as deemed appropriate: 1) avoidance; 2) management; 3) enhancement; and/or 4) transplantation to areas identified for preservation. Unavoidable impacts associated with reasonable use or essential public facilities would need to be minimized and mitigated. In addition, state and/or federal permits may be required for impacts to wetland habitat. The following is a list of narrow endemic species:

Narrow Endemic Species

Acanthomintha ilicifolia Agave shawii Ambrosia pumila Aphanisma blitoides Astragulus tener var titi Dudleya blochmaniae ssp. Brevifolia Dudleya variegata Hemizonia conjugens Navarretia fossalis Opuntia parryi var. serpentine Orcuttia california Pogogyne abramsii Pogogyne nudiuscula San Diego thornmint Shaw's agave San Diego ambrosia Aphanisma Coastal dunes milk vetch Short-leaved dudleya Variegated dudleya Otay tarplant Prostrate navarretia Snake cholla California Orutt grass San Diego mesa mint Otay Mesa mint

1.6.5 Take Estimates

Habitat loss or "take" within the MHPA will be avoided or minimized to a maximum of 25 percent on parcels within the MHPA. Take of habitat for covered species outside of the MHPA will not be restricted by the City's MSCP Subarea Plan except as necessary for narrow endemic species. **Table 2** reflects an estimate of habitat take inside and outside the MHPA. This estimate of take assumes that wetland impacts inside and outside the MHPA will be avoided or mitigated under federal and state regulations to achieve a "no-net-loss of function and value." This estimate of loss represents a worst-case analysis; actual loss outside the MHPA may be lower due to avoidance of habitat impacts on steep slopes.

1.7 MSCP IMPLEMENTATION FUNDING

The MSCP plan contains estimates for the costs of habitat acquisition, maintenance and monitoring, based on Subarea Plans submitted by the local jurisdictions. Based on new information from the jurisdictions, the targeted number of acres which will need to be acquired is estimated to be 27,000 acres. The regional (local) share of habitat acquisition will be one-half of approximately 13,500 acres. As described above, the City of San Diego's total acquisition need is estimated to be 2,400 acres, with approximately 1,000 acres of that expected to be provided from project mitigation.

The MSCP plan will also contain a long-term strategy in the form of several options for funding the needed acquisition, maintenance and monitoring. Local funding sources, including a parcel tax/benefit assessment, community facilities district/ "Mello-Roos," general obligation bonds - Ad Valorem tax and a sales tax, are analyzed in the final MSCP plan. Local funding sources will be voter approved. If public funding sources do not become available, the City will not increase private development contributions beyond what is committed to in the MSCP plan and implementing agreement.