

5.0 MANAGEMENT AREAS AND LAND USE COMPATIBILITY

The MCAS Miramar strategy for conservation and management is to (1) limit activities, minimize development, and mitigate actions in areas supporting high densities of vernal pool habitat, threatened or endangered species, and other wetlands and (2) manage activities and development in areas of low densities, or no regulated resources, with site-specific measures and programmatic instructions. MCAS Miramar has developed Management Areas (MAs) to highlight the area's supporting differing regulated resources. As an example of the usefulness of MAs to reflect natural resources values, MCAS Miramar analyzed various sites for a military family housing project (KEA Environmental, Inc. 2000) using MAs as part of the basis for analyses.

This INRMP does not dictate land use decisions but rather provides important resource information to support sound land use decisions and natural resource management. The MA designations reflect Station priorities for conservation when future land uses are contemplated. While the Station's overall strategy is to minimize developments and limit activities in areas supporting high densities of endangered species and wetlands, this may not always be possible given competing demands or operational needs.

MAs also serve as a basis for planning natural resource management actions. Regardless of sensitivity, all of MCAS Miramar's undeveloped areas are subject to natural resource management, conservation, and best management practices. This includes lands occupied by tenants, leases, easements, and similar occupancy or use of Station property. As a result, all undeveloped areas of MCAS Miramar will continue to provide for wildlife movement and dispersal.

5.1 Management Area Designations

MAs were identified primarily to support the conservation and management of Special Status Species, wetlands, and other areas identified by the HEM as warranting special attention. These designations reflect MCAS Miramar's general management strategy and are intended to be interpreted by program managers and technical experts for application to specific issues.

Many MA boundaries follow existing landmarks, such as roads, fuelbreaks, fence lines, and ridgelines, to facilitate identification in the field. Generally, there was a tradeoff between the use of existing landmarks as MA boundaries and the inclusion of all similar resources within the area. The decision of whether to change from following landmarks as borders was subjective but was based on using landmarks while minimizing the inclusion of other resource levels within a MA. In some cases, where high value resources did not exist, boundaries were set off from developments to acknowledge and support their use. Similarly, there was a tradeoff between the inclusion of areas with differing management requirements that are isolated and those easily grouped and included in a MA.

The proximity of high value resources (*e.g.*, vernal pool habitat) on the Main Station and South/West Miramar to developed areas made the design of a MA with a low edge-to-area ratio impractical in those sectors. However, due to the generally undeveloped nature of East Miramar, there was an opportunity to design the MAs in a less confined manner using existing landmarks (*e.g.*, roads, fuelbreaks, ridge lines), thereby improving field identification of boundaries. In most cases, using field landmarks also increased the area encompassed within the MA, thereby increasing the area receiving a higher level of conservation and reducing the edge-to-area ratio. MAs specifically delineated for Special Status Species were drawn relatively tightly around those resources (*e.g.*, California gnatcatcher habitat), reflecting the need for special management and

attention to these areas in consideration of the special regulatory compliance requirements for Special Status Species and their habitats.

The entire MCAS Miramar land area has been placed into MAs (Figure 5.1). For planning purposes, MAs are organized by levels based on differing resource conservation requirements and management concerns⁹. Table 5.1 provides vernal pool habitat and Special Status Species information for each MA.

5.1.1 Level I Management Areas

Level I MAs (2,638 acres) support nearly all vernal pool habitat basins and watersheds and some closely associated coastal California gnatcatcher territories (Table 5.1). These areas receive the highest conservation priority. Proactive measures to prevent damage to vernal pool habitat are being taken in many of these areas. Special conservation requirements necessary to maintain the integrity of vernal pool habitat on the Station are highlighted by this MA designation for incorporation into Station Orders and the National Environmental Policy Act planning process.



Measures include posting signs and fencing, identifying potential impacts from activities by lessees and right-of-way holders, developing procedures to respond to and fix accidental impacts on vernal pool habitat and Special Status Species; and developing education programs to create and maintain awareness of the values of vernal pool habitat. These proactive measures are taken to avoid accidental impacts in Level I MAs. Inventory of vernal pool habitat basins and watersheds will continue to be maintained and updated to support proactive planning and impact avoidance. Details of these management and conservation initiatives are provided in Chapter 7.

5.1.2 Level II Management Areas

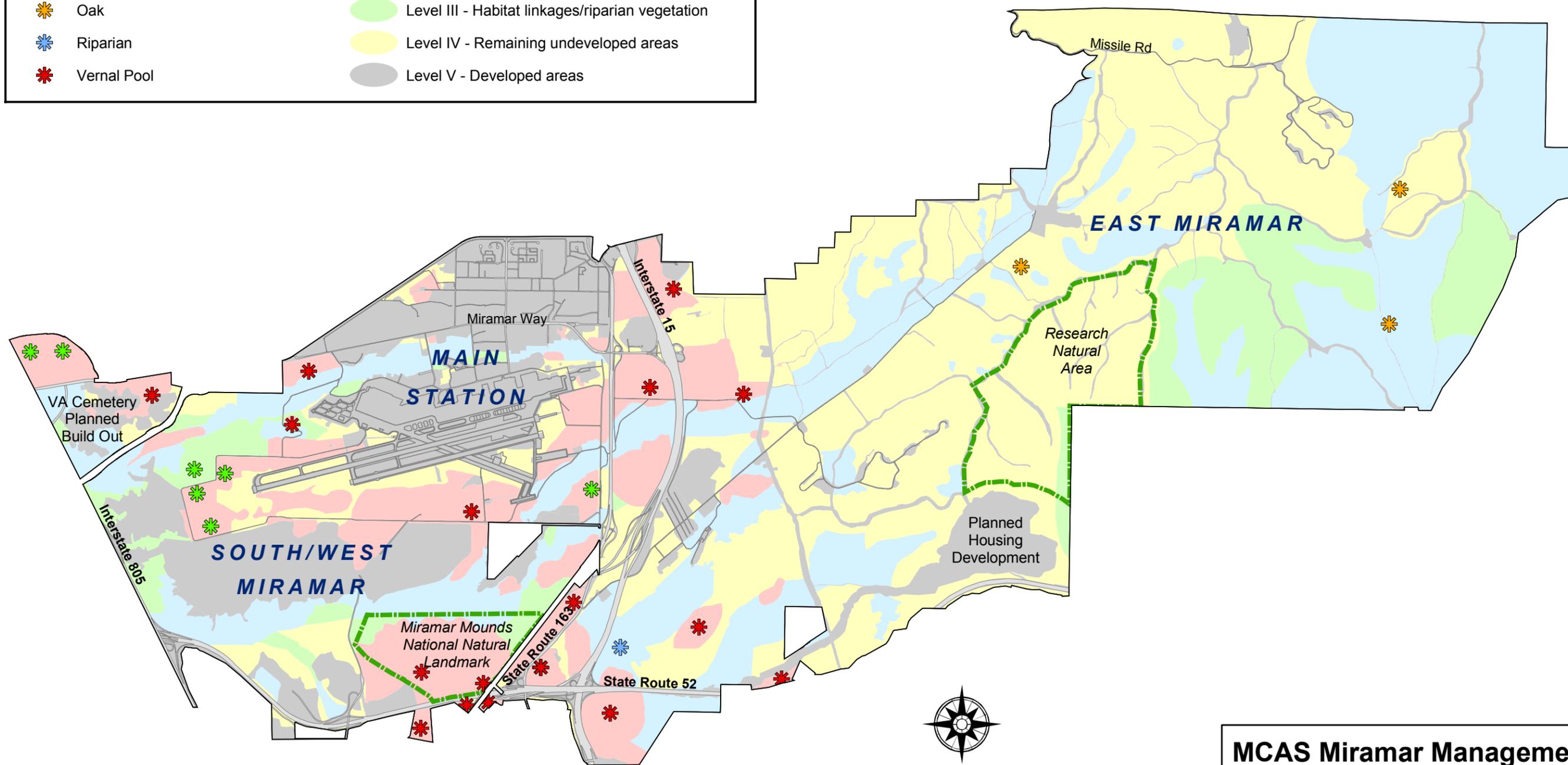
Conservation needs in Level II MAs (5,824 acres) focus on non-vernal pool, federally listed species (Table 5.1). Other regulated resources, such as isolated vernal pool habitat basins, within the MA also will be conserved with additional site-specific measures, as needed. Conservation goals for Level II MAs are to maintain and, where feasible, enhance populations of California gnatcatchers, least Bell's vireos, willow monardella, Del Mar manzanita, and other natural resources while maintaining maximum compatible use for operational requirements. Management considerations include avoiding or minimizing the effect of planned actions on endangered species and wetlands, thereby also minimizing associated activity approval delays and mitigation to meet regulatory requirements.

Such considerations include avoidance of adverse effects on California gnatcatcher or least Bell's vireo reproductive success by limiting activities within the MAs during the California gnatcatcher breeding season (15 February through 31 August), which includes the least Bell's vireo breeding season. Guidance for off-road

⁹ Management Areas and their associated planning considerations were incorporated into the MCAS Miramar Master Plan (Southwest Division, Naval Facilities Engineering Command, in preparation) for use of land areas throughout the Station.



Special Natural Area	Management Area
Mitigation Site (see Section 6.2.1)	Level I - Vernal pools and associated watersheds
Coastal Sage Scrub	Level II - Non v.p. threatened/endangered species
Oak	Level III - Habitat linkages/riparian vegetation
Riparian	Level IV - Remaining undeveloped areas
Vernal Pool	Level V - Developed areas



MCAS Miramar Management Area Designations

Figure 5.1

This map is for planning purposes only. Some data may be incomplete, inaccurately positioned, and/or generalized.

Table 5.1. Vernal Pool Habitat and Special Status Species of Concern by Management Area

Vernal Pool Habitat/Threatened and Endangered Species [^]	Management Area Level						
	I	II	III	IV	V ¹	2011 Totals ⁴	2006 Totals
Vernal Pool Basins: number	4,664	111	3	22	25	4,825	2,859
Percent of total	96.7	2.3	0.1	0.5	0.5		
Vernal Pool Basins: acres	90.5	2.6	0.0	1.2	0.4	95	44
Percent of total	95.6	3.0	0.0	1.4	0.5		
Other Seasonally Pondered Features ¹ Basins: number	1,852	409	19	201	225	2,706	4,217
Percent of total	68.4	15.1	0.7	7.4	8.3		
Other Seasonally Pondered Features ¹ Basins: acres	31.4	10.1	1.0	4.0	5.9	52	113
Percent of total	59.9	16.9	1.7	6.7	9.8		
Vernal Pool Habitat Watersheds: acres	940.9	30.7	4.4	53.9	39.1	1,069	1,508
Percent of total	88.0	2.9	0.4	5.0	3.7		
San Diego Button-celery: # basins	1,786	6	2	0	1	1,795	1,008
Percent of total ²	99.5	0.3	0.1	0.0	0.1		
San Diego Button-celery: basin acres	52.4	0.7	0.2	0.0	0.0	53	21
Percent of total ²	98.3	1.3	0.4	0.0	0.0		
Spreading Navarretia: # basins	6	0	0	0	0	6	7
Percent of total ²	100.0	0.0	0.0	0.0	0.0		
Spreading Navarretia: basin acres	2.8	0	0	0	0	3	2
Percent of total ²	100.0	0.0	0.0	0.0	0.0		
Spreading Navarretia: acres of Essential Habitat ³	61.2	0.8	4.6	0.7	1.4	69	NA ⁵
Percent of total ²	89.1	1.2	6.7	1.0	2.0		
San Diego Mesa Mint: # basins	1,104	4	0	3	1	1,112	883
Percent of total ²	99.2	0.4	0.0	0.3	0.1		
San Diego Mesa Mint: basin acres	38.3	0.1	0	0.1	0.0	39	19
Percent of total ²	99.5	0.25	0.0	0.25	0.0		
California Orcutt Grass: # basins	2	0	0	0	0	2	1
Percent of total ²	100.0	0.0	0.0	0.0	0.0		
California Orcutt Grass: basin acres	5.7	0	0	0	0	6	<1
Percent of total ²	100.0	0.0	0.0	0.0	0.0		
San Diego Fairy Shrimp: # basins	3,775	141	10	38	87	4,051	1,303
Percent of total	93.2	3.5	0.2	0.9	2.1		
San Diego Fairy Shrimp: basin acres	98.5	6.7	0.9	3.0	4.4	114	33
Percent of total	86.8	5.9	0.8	2.6	3.9		

Vernal Pool Habitat/Threatened and Endangered Species [^]	Management Area Level						
	I	II	III	IV	V ¹	2011 Totals ⁴	2006 Totals
San Diego Fairy Shrimp: acres Essential Habitat ³	1,837.7	160.4	73.0	113.3	194.4	2,379	2,377
Percent of total	77.3	6.7	3.1	4.8	8.2		
Riverside Fairy Shrimp: # basins	2	0	0	0	0	2	1
Percent of total	100.0	0.0	0.0	0.0	0.0		
Riverside Fairy Shrimp: basin acres	1.3	0	0	0	0	1	1
Percent of total	100.0	0.0	0.0	0.0	0.0		
Riverside Fairy Shrimp: acres of Essential Habitat ³	78.0	0.2	0.0	12.6	4.5	95	95
Percent of total	81.8	0.2	0.0	13.2	4.7		
Willow Monardella: # sites	1	398	0	0	2	401	401
Percent of total	0.2	99.3	0.0	0.0	0.5		
Willow Monardella: acres of Essential Habitat ³	97.1	1,473.3	23.6	97.3	147.2	1,842	1,844
Percent of total	5.3	80.0	1.3	5.3	8.0		
Del Mar Manzanita: # sites	0	2,294	3	6	38	2341	326
Percent of total	0.0	98.0	0.1	0.3	1.6		
Coastal California Gnatcatcher: # breeding pair locations since 1998 (1998-2001, 2004, 2007, 2009)	47	404	0	18	7	476	326
Percent of total	9.9	84.9	0.0	3.8	1.5		
Coastal California Gnatcatcher: # breeding pair locations from post 2003 Cedar Fire	20	134	0	3	5	162	22
Percent of total	12.3	82.7	0.0	1.9	3.1		
Coastal California Gnatcatcher: acres of Essential Habitat ³	141.25	4,099.13	174.66	669.08	485.02	5,569	5,569
Percent of total	2.54	73.60	3.14	12.01	8.71		
Least Bell's Vireo (territory): # locations (2008)	00	2	3	00	00	5	4
Percent of total	0.0	40.0	60.0	0.0	0.0		

[^] Plant species presence/absence data from spring/summer 2010 not included

¹ MCAS uses the term "Other Seasonally Pondered Features" to refer to basins mapped as a type other than a Pool (*e.g.*, Puddle, Road Rut, Ditch, Excavation); see Section 4.3.4, *Vernal Pool Habitat at MCAS Miramar*).

² Comprehensive surveys for these species have not been completed for the entire Station.

³ Essential Habitat includes areas not designated as Critical Habitat due to the conservation benefit provided to the species by this INRMP, in accordance with Section 4(a)(3) of the ESA. Some portions of Essential Habitat identified by the USFWS may occur in MAs that do not target conservation of the species and its habitat due to less precise mapping used by the USFWS for Essential Habitat designation than used by MCAS Miramar for resource mapping. Some locations of Essential Habitat overlay developed areas (*i.e.*, Management Areas V).

⁴ Improved accuracy of recent survey mapping and associated GIS calculations have resulted in slightly different acre calculations as compared to 2006 for some species' habitat (*e.g.*, vernal pools and other seasonally ponded features, willow monardella, California gnatcatcher).

⁵ USFWS changed area in 2010, so comparisons with 2006 are not valid.

activities, including foot traffic, includes minimizing such activities near endangered plants during their active growth stage to avoid habitat damage and crushing of plants and allowing vehicle operation only on roads and fuelbreaks.

Accidental or unintentional damage is reduced by implementing site-specific measures, such as fencing where an isolated vernal pool habitat may be threatened. Mitigation directed at habitat enhancement or compensation for impacts to California Gnatcatcher, willow monardella, and Del Mar manzanita will be targeted for implementation in Level I and II MAs prior to implementation in Level III, IV, or V MAs.



West Sycamore Canyon (mostly Management Area II)

Natural Resources Division

5.1.3 Level III Management Areas

Level III MAs (1,785 acres) support riparian vegetation, wildlife movement corridors, and habitat linkages not contained within Level I and II MAs. While all undeveloped areas on MCAS Miramar function as important habitat linkages, Level III MAs support areas also identified as local or regional wildlife corridors (Section 4.5, *Habitat Linkages and Wildlife Corridors*). Outside of wetlands, these areas can support vehicle traffic on roads, fuelbreaks, and developed sites, as well as off-road foot traffic without adversely affecting the area's natural resource values.

Wetlands encompassed by these MAs include vernal marshes, fresh water marshes, and portions of some riparian vegetation types. As is the case with vernal pool habitat, management and use of these areas gives careful consideration of the CWA, ESA, and the national policy (Executive Order 11990, *Protection of Wetlands*) to permit no overall net loss of wetlands. MCAS Miramar has completed a planning level delineation of wetlands and CWA jurisdictional Waters of the U.S. in all major watersheds of the Station. Additionally, more precise mapping of the Main Station and Flightline Areas was completed in 2008 (Lichvar and Dixon 2008).

5.1.4 Level IV Management Areas

Remaining undeveloped areas not in Levels I, II, or III MAs have been delineated as Level IV MAs. Level IV MAs (7,532 acres) do not support substantial high value/regulated natural resources, such as vernal pool habitat basins and watersheds or California gnatcatcher habitat (Table 5.1). High value natural resources within Level IV MAs are very isolated and will be managed and conserved with site-specific management and conservation measures, as needed. When planning future actions in Level IV MAs, potential impacts on wildlife movement will be considered.

Level IV MAs can support foot and vehicle traffic for a wide variety of MCAS Miramar operational requirements with minimal overall impact on the Station's special natural resources. While these areas have not been highlighted as requiring special consideration, this does not imply that they will be developed in the future. New required developments would be considered for placement in Level V MAs first.

5.1.5 Level V Management Areas

Level V MAs (5,259 acres) are associated with developed land-uses; they support few unaltered natural landscapes and therefore almost no high value natural resources (*e.g.*, fuelbreaks, maintained dirt access roads and lots, paved surfaces, constructed facilities and ranges, buildings). These areas will be considered first for placement of new facilities or other new land uses that would be likely to impact regulated resources. Management objectives for these Level V MAs include working to accomplish grounds maintenance and landscaping operations consistent with natural resource goals and objectives. The Station discourages the use of invasive plants, such as those listed by the California Invasive Plant Council and California Native Plant Society, for landscaping; conducts flightline mowing practices consistent with the Bird and Animal Air Strike Hazard (BAASH) program and endangered species management; and keep pesticide use to a minimum. The proximity of many developed areas, such as the future military family housing site, to high value and sensitive natural resources highlights the importance of these measures. High value natural resources within Level V MAs are very isolated and will be managed and conserved with site-specific management and conservation measures, as needed. Natural resource-related management objectives for these developed areas are detailed in Chapter 7.

5.1.6 Other Management Area Design Considerations

In the Biological Opinion (1-6-95-F-33) for the Realignment of NAS Miramar to MCAS Miramar (USFWS 1996a), the USFWS provided specific considerations that were included in the development of the 2000 and 2005 INRMPs (MCAS Miramar INRMP 2000; MCAS Miramar INRMP 2006) and this updated INRMP. MCAS Miramar must maintain undeveloped open space in its accident potential zones, ground training areas, and safety arcs to meet military operational requirements (Figure 2.1), which results in retaining large, interconnected blocks of unfragmented habitat that support a wide range of species.

Another consideration is the need to retain full viability of each core California gnatcatcher population, which is accomplished through the design of the Level II MA that supports California gnatcatcher territories. Linkages between Level II MAs are maintained largely through the conservation of Level III MAs as well as undeveloped areas within Level IV MAs. Level I, II, and III MAs delineate various levels and types of management attention needed to conserve Special Status Species, vernal pool habitat, habitat linkages, and other important resources. They do not represent intentions for disregarding natural resources in Level IV and V MAs.

On the Main Station and South/West sectors of MCAS Miramar, Level I, II, and III MAs are relatively discrete and reflect the distribution of vernal pool habitat watersheds, California gnatcatcher locations, riparian/wetland areas, and east-west wildlife corridors associated with Rose and San Clemente canyons. These areas are interspersed and in close proximity to developed areas. The configuration of MAs in eastern Miramar highlights the need for conservation of California gnatcatcher habitat, sites occupied by the endangered willow monardella, and riparian wetlands with consideration for maintenance of tracts of undeveloped lands to provide for wildlife habitat connectivity. Easternmost MCAS Miramar serves as an important regional linkage to adjacent open areas. These larger MAs in the eastern portion of the Station reflect both differing land use history (*e.g.*, training areas versus concentrations of facilities) and the distribution of the resources.

5.2 Land Use Compatibility

The Station follows NEPA procedures in evaluating environmental impacts, alternatives, and mitigation measures expected to result from each action to ensure land use compatibility of actions at MCAS Miramar with conservation of natural resources. Part of this process is to ensure compliance with all applicable environmental and natural resources regulations.

The Environmental Management Department involves appropriate regulatory agencies in planning processes to obtain federal permits and concurrences. MCAS Miramar accomplishes its legal requirements (for permits, consultations, and authorizations) under the ESA, CWA, and NEPA, and other laws and regulations, while considering compatibility between military readiness needs and conservation (see Chapter 6, *Project and Mitigation Planning* for more information regarding MCAS Miramar's legal requirements for compliance as well as planning time lines for regulatory compliance).

Approval of actions is provided programmatically with appropriate conditions, where possible, for incorporation into other Station Orders, instructions, guidelines, standard operating procedures, plans, projects, and maintenance actions. MCAS Miramar Station Order P3500.2 with its environmental protection section is one such example. Information provided in this chapter, and other portions of this INRMP, is for technical guidance to persons planning and/or preparing such Station approvals. This INRMP does not dictate land use decisions but rather provides important resource information to support sound land use decisions and natural resource management.

5.2.1 General Compatibility Considerations Relative to Management Areas

MAs reflect the degree to which the natural resources are regulated, and therefore limit planning options. Regulatory constraints on land uses relative to MAs are hierarchical in nature. The greatest priority for habitat conservation is for vernal pool habitat and associated watersheds (Level I) with the priority decreasing with each MA level (*e.g.*, Level V has the lowest priority for habitat conservation). MA levels are used by those proposing actions at MCAS Miramar to become aware of regulatory requirements and potential use limitations early in the planning process. Reconfiguration of an MA would be considered if changes in protective status of a species occurs (*e.g.*, new listings) or land use requirements change.

Land-use within **Level I MAs** takes into consideration the integrity of vernal pool habitat since the vast majority of vernal pool habitat is supported by these areas. For many uses, potential impacts will be eliminated, or greatly reduced, by specific conditions.

Avoiding adverse impacts on the survival, reproduction, or habitat of non-vernal pool special status species in a significant way, is the primary consideration in **Level II MAs**. Frequency, duration, and intensity of the use are important factors to consider.

Use of **Level III MAs** takes into account the importance of conserving connections of larger habitat blocks, conserving riparian areas, and the presence of wetlands associated with the riparian vegetation. Avoidance of habitat fragmentation is an important consideration at the Main Station and South/West Miramar sectors.

Level IV MAs support some sensitive and protected resources, but they do not support extensive areas of regulated resources contained within Level I, II, and III MAs. As a result, Level IV MAs have fewer limitations on uses since areas with greater regulatory constraints would have been avoided early in the planning process. While impacts on high value patches of habitat are still avoided to the extent possible, Level IV MAs are given first consideration for siting new uses outside of developed areas, consistent with the Draft MCAS Miramar Master Plan (Southwest Division, Naval Facilities Engineering Command, in preparation). Any new uses remain subject to all general requirements for use as well as other applicable regulations.

Level V MAs, given that they are mostly developed, are considered first for placement of needed development. Many developed areas at MCAS Miramar occur adjacent to sensitive natural resource areas, which are taken into consideration when planning and conducting activities. Further, some isolated, high value natural resources (*e.g.*, vernal pool habitat, California gnatcatcher habitat) occur within Level V MAs, which also require appropriate management and conservation considerations.

5.2.2 General Requirements for All Areas

Many actions at MCAS Miramar require prior consultation with, and approval by, the Environmental Management Department or other cognizant department. The Environmental Management Department determines the type and level of regulatory agency coordination and permitting that is required. Refer to project planning guidance in Chapter 6 for more detailed information. These general requirements reflect MCAS Miramar's strategy to take site-specific measures to provide special protection to isolated sensitive resources regardless of MA designation. General requirements for all areas include, but are not limited to, the following.

- Actions with the potential to affect the environment require NEPA compliance as required by MCO P5090.2A (Chapter 12), Station Order 5090.2, *Standard Operating Procedures for National Environmental Policy Act (NEPA) Compliance*, and Chapter 11, *National Environmental Policy Act (NEPA) Compliance* in Station Order 5090.4, *Environmental Compliance Program Standard Operating Procedures (ECPSOP)*.
- Actions with the potential to affect natural resources require compliance as required by Chapter 10, *Natural Resources Management* in Station Order 5090.4, *Environmental Compliance Program Standard Operating Procedures (ECPSOP)*. Particularly important are actions that may affect federally-listed plant or animal species, wetlands, riparian areas, general soil and vegetation sustainability, and other rare and protected species.
- When planning to locate new facilities or concentrated military operations in or adjacent to MAs supporting large concentrations of threatened and endangered species habitat or wetlands (Levels I, II, and III MAs), effects of such actions on those resources must be evaluated. This is particularly important when considering actions in smaller areas rated as Level I and II MAs.
- Public Works Division site approval is required for all facilities-related activities, including, but not limited to, development, reconstruction, repairs, utilities, leases, and easements. Military operations require approval from Stations Operations (S-3) in accordance with existing Training Orders. Holders of existing licenses, leases, and easements are not required to obtain Public Works site approval to exercise rights granted under existing documents. For ground operations and training, the Training Area Management Office must be contacted. Military operations are usually compatible if they do not affect species protected under the ESA, wetlands, or cultural resources.
- Unless it is an emergency, no animals may be killed without prior approval from the Environmental Management Department coordinated with the Natural Resources Division staff. Activities that may affect birds, their nests, and/or eggs may require a Migratory Bird Treaty Act permit from the USFWS, which needs to be coordinated through the Environmental Management Department.
- Actions that result in the possible introduction of hazardous material and actions to clean up accidental spills into a non-contained area must be approved by the Environmental Management Department. Any action that involves the use of hazardous substances in areas not designed for containment of these substances must be coordinated through the Environmental Management Department.
- Guidance on posted environmental protection signs and fencing must be followed.
- Actions that will dredge, fill, or damage a wetland (including vernal pool habitat) may require prior CWA permitting from the U.S. Army Corps of Engineers and Regional Water Quality Control Board, pursuant to sections 401 and 404 of the CWA. Permitting actions and/or consultation with regulatory agencies are coordinated through the Environmental Management Department.
- Actions that may affect a threatened or endangered species require prior consultation with, and the approval of USFWS pursuant to Section 7 of the ESA. Consultation with regulatory agencies is coordinated through the Environmental Management Department.
- Consideration should be given to effects of proposed actions on wildlife movement corridors, especially those in the western portion of the Station, which are already highly constrained (see Chapter 4).

- Consideration of the preservation requirements of the National Historic Preservation Act must be addressed with the California Office of Historic Preservation through the Environmental Management Department.

5.2.3 Actions Programmatically Compatible with Natural Resource Conservation

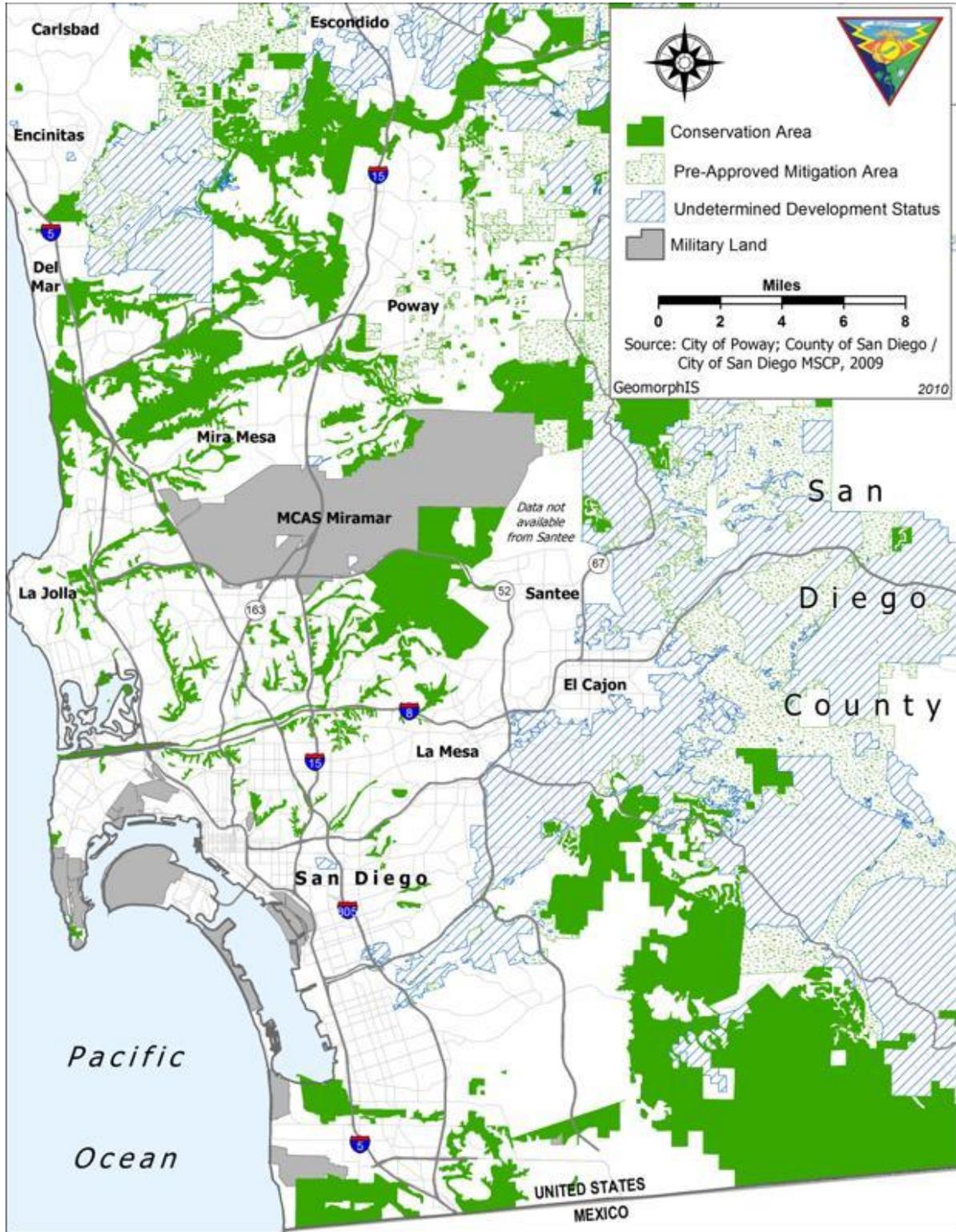
The following activities are considered programmatically compatible with natural resource conservation and do not require MCAS Miramar, Environmental Management Department, Natural Resource Division review. However, other Station approvals, such as from the Ground Training Office, and NEPA compliance, may be required. Reviews are used to ensure that the general requirements for all areas (Section 5.2.2, *General Requirements for All Areas*) are met prior to conducting the following activities:

- operation and use of developed facilities where no new natural resource damage occurs;
- foot and vehicle traffic on existing roads, fuelbreaks, and developed sites;
- off-road foot traffic in Level II MAs between 1 September and 14 February; and in Level III, IV, and V MAs all year;
- minor ground disturbance in Level IV and V MAs, when wetlands are not involved (*e.g.*, fighting holes);
- the use of blanks and smoke (smoke grenades only) in Level IV and V MAs all year and Level II and III MAs between 1 September and 14 February; where smoke is used, it will be only authorized in previously cleared areas, such as roads, fuelbreaks, or other developed sites with approval from the MCAS Miramar Fire Department;
- aircraft operations at more than 300 feet above ground level and take-offs and landings at designated sites (includes use of and transit to and from Confined Area Landing, Mountainous Area Landing, and Heavy Lift sites);
- aircraft operations below 300 feet above ground level in Level IV and V MAs year-round and in Level I, II, and III MAs between 1 September and 14 February;
- undeveloped site landings in Level IV and V MAs year-round;
- maintenance activities where disturbance and activities occur entirely on developed or heavily disturbed sites except where vernal pool habitat occupied by endangered species is involved;
- maintenance activities in Level IV and V MAs, when wetlands are not involved and appropriate recontouring and seeding is done with seeding mixtures approved by Environmental Management Department, Natural Resources Division;
- pesticide (including herbicides, rodenticides, miticides, and fungicides) application in Level V MAs and all developed facilities and maintained landscaping;
- activities exercising existing rights granted by licenses, leases, and easements, because such activities would have applicable conservation provisions included as a part of the existing real estate documents when originally issued, subsequent modifications, or applicable regulatory permitting requirements; and
- additional compatible actions as identified in future revisions of this INRMP.

5.3 MCAS Miramar’s Regional Conservation Contribution

Miramar is located within a regional Multi-Habitat Planning Area (MHPA), more specifically The City of San Diego’s Multiple Species Conservation Program (MSCP), whose approach to conservation is to establish permanent MSCP preserves within the MHPA (Figure 5.3). Portions of the MSCP planning area outside of the MHPA are open to development because they have not been identified for preservation. MCAS Miramar is not bound by the MHPA or MSCP, but the Station contributes to their conservation goals through the INRMP.

Figure 5.3. Multi-habitat Planning Area for the Multiple Species Conservation Program Study Area



The entire Station is managed to support military readiness requirements. However, regional conservation values are also important considerations. MCAS Miramar recognizes the value of all natural resources, both locally and regionally, on the Station. Through maintaining open space for military operations, MCAS Miramar maintains important wildlife corridors and habitat linkages (Section 4.5, *Wildlife Linkages and Wildlife Corridors*); populations of rare, threatened, and endangered species (Section 4.6, *Federal Special Status Species* and Section 4.7, *Other Species of Regional Concern*); and other natural resources (Chapter 4.0, *Biological Resources*, in general). These military land-use considerations, coupled with MCAS Miramar's management and conservation measures (Chapter 7, *Natural Resources Management*), result in the Station continuing to make a significant contribution to the conservation of the region's natural resources.

MCAS Miramar's commitment to conserve high value natural resources is reflected in vernal pool and special status species of concern habitat within Level I, II, and III MAs (Table 5.1). The delineation of MAs is intended to focus conservation and management efforts. The distribution of vegetation and landcover types relative to MAs is reported in Table 5.3. This table clearly indicates the value, in terms of acreage, of the Station's open space and associated vegetation/landcover types. This table also shows a comparison of vegetation and landcover types for MAs delineated in this INRMP using updated vegetation mapping (this project) to totals from the 2006 INRMP (MCAS Miramar INRMP 2006) that used previous vegetation mapping of O'Leary *et al.* (2002). Vegetation mapping updates were not possible until recently due to the time required for vegetation regrowth following the 2003 Cedar Fire.

As Figure 5.3, combined with Table 5.3, shows, MCAS Miramar with its relatively naturally functioning ecosystems, plays a very important role in maintaining such ecosystems within the region affected by the MHPA and its MSCP.

Table 5.3. Vegetation and Landcover Types by Management Area

Vegetation/Landcover Type	Management Area Level (acres)					2006 Totals	2011 Totals
	I	II	III	IV	V		
Open Water	0.0	8.7	2.2	1.8	0.1	18.7	12.8
Natural Flood Channel/Streambed	1.4	14.3	2.0	0.6	0.1	18.4	18.4
Vernal Marsh	22.2	36.9	2.6	24.4	3.2	90.2	89.3
Fresh Water Marsh	0.5	21.0	5.6	4.1	0.4	31.5	31.6
Southern Arroyo Willow Riparian Forest	1.9	10.6	14.4	2.2	0.0	28.9	29.1
Southern Willow Scrub	0.3	10.6	0.3	0.4	2.6	14.2	14.2
Southern Coast Live Oak Riparian Forest	0.0	38.4	10.2	0.3	0.2	49.6	49.1
Sycamore Woodland Riparian	0.0	75.9	6.2	0.0	0.1	82.3	82.2
Coast Live Oak Woodlands	2.4	4.3	0.2	0.0	0.4	7.3	7.3
Mulefat Scrub	0.0	14.5	0.0	0.1	0.3	14.9	14.9
Coastal Sage Scrub	322.2	1,958.5	383.4	1022.7	83.9	3,851.6	3,770.7
Coastal Sage Scrub-Chaparral	48.0	283.3	51.3	332.9	13.5	762.7	729.0
Chamise Chaparral	875.3	1,291.4	491.2	2609.8	77.3	5,552.8	5,345.0
Scrub Oak Chaparral	18.0	81.7	68.6	374.9	1.1	607.4	544.3
Mixed Chaparral	54.0	1,049.1	241.8	1,720.6	43.6	3,232	3,109.1

Vegetation/Landcover Type	Management Area Level (acres)					2006 Totals	2011 Totals
	I	II	III	IV	V		
Ceanothus Chaparral	0.0	140.9	18.1	88.1	2.3	249.3	249.4
Native Grassland	12.4	0.5	4.4	6.0	0.4	22.4	23.7
Native/Non-Native Grassland	116.1	38.1	60.0	189.5	11.1	442.6	414.8
Non-Native Grassland	602.7	273.4	174.1	284.7	131.7	1,583.5	1,466.6
Disturbed Land	484.9	404.6	228.7	711.8	424.9	2,270.2	2,254.9
Eucalyptus Woodland	1.0	11.2	1.1	29.2	5.4	49.2	47.9
Developed Planned	0.1	0.8	0.0	12.1	389.4	NA	402.4
Developed	73.7	58.6	19.2	116.6	4,065.8	4,081.2	4,333.9
Totals	2,637.1	5,827.3	1,785.6	7,532.8	5,257.8	23,060.9	23,040.6

A comparison of coastal sage scrub conservation on the Station with preservation goals of the MSCP provides a good example of the Station’s commitment to regional conservation. Level I, II, and III MAs on the Station require special management and conservation attention when making land-use decisions. Collectively, these MAs encompass 69 percent of coastal sage scrub on the Station. While these areas are not dedicated to preservation, regulatory and land use constraints will prevent any substantial loss of habitat value from these areas.

This compares well with coastal sage scrub conservation of the MSCP Multi-Habitat Planning Area (Figure 5.3), which plans to preserve 62 percent of this vegetation type occurring within the Planning Area. Further, because MCAS Miramar has no specific plans to develop the remaining 31 percent of the vegetation type occurring in other MAs, a portion of this will be conserved due to operational requirements for open space and safety considerations. MCAS Miramar’s natural resource management, as outlined in this INRMP, will ensure that Station lands continue to support regional conservation efforts. MCAS Miramar recognizes that degradation of the land degrades its use for realistic training, and thereby degrades readiness.



Coastal Sage Scrub

Natural Resources Division

An important difference between the MSCP and an INRMP is that participants in the MSCP process receive authorization from the USFWS to incidentally take species protected under the ESA in exchange for dedicating land to preservation. There has been no commitment by these agencies to extend such authorizations to MCAS Miramar through implementation of this INRMP. Additionally, no “safe harbors” agreements are being provided by the INRMP. As detailed in Chapter 6, MCAS Miramar is required to obtain incidental take permits for future proposed actions that may affect species protected under the ESA.

Also, the goals of the two processes are fundamentally different. The primary goal of the INRMP is to support military readiness requirements while the MSCP seeks well-planned development. Military lands cannot be set aside as permanent environmental preserves due to DoD requirements to maintain the flexibility to adapt the defense mission to political and technological developments (DoD Instruction 4715.3, para. F.1.i(4)). Even though MCAS Miramar is precluded from establishing permanent environmental preserves, the Station makes a significant contribution to conservation of regionally important natural resources.

In terms of MCAS Miramar’s relation to regional planning, it must also be recognized that the Station cannot be used for mitigating impacts of actions occurring off of MCAS Miramar that affect natural resources (DoD Instruction 4715.3, para. F.1.i(3)), such as those occurring within portions of the MSCP planning area. Defense policy precludes installations from accepting an unequal or disproportionate burden for conservation of these species unless *it is required by legal authority or it has been expressly determined that it is in the DoD’s best interest* (DoD Instruction 4715.3, para. D.2.d). According to Marine Corps Installations West Draft Order 5090.1 (3a(1)(e)(iii)), “(a) MCIWEST [Marine Corps Installations West] installation and range lands shall not be used to mitigate for 3d party (non-DoD) actions. (b) Use of MCIWEST lands for mitigation by other Services or any exception to this policy requires approval by the Commanding General, MCIWEST.”

Shearer *et al.* (2005) developed potential future scenarios to evaluate ecological interrelationships associated with human population growth of 500,000 and 1,000,000 in watershed regions between Marine Corps Base, Camp Pendleton and MCAS Miramar. The potential habitat modeled for all of the 10 regionally rare, threatened, or endangered species studied predicts that Marine Corps and Navy installations of the study area would assume an equivalent or larger percentage of the total potential habitat. The study highlights that habitat conservation beyond boundaries of existing large federal, state, and local lands, and particularly Department of Defense lands, is very important for the conservation of regional biodiversity. Further, it illustrates how off-base land use change can impact on-base natural resource conservation management and suggests that environmental concerns may bring additional or stricter regulations that may limit the use of military installations needed to maintain military readiness.

California’s Wildlife Action Plan (Bunn *et al.* 2007) identifies species and habitats of greatest conservation need, major stressors affecting native wildlife and habitats, and actions needed to conserve wildlife within the South Coast Region, where MCAS Miramar is located. Action C for that region uses Camp Pendleton’s contribution to the regional network of conservation lands and specifically identifies the need to similarly protect habitats on lands adjacent to MCAS Miramar.

The Wildlife Action Plan specifically notes that MCAS Miramar and adjacent lands provide habitat for wildlife species at risk, have sensitive plant species and vernal pools, and serve as wildlife corridors for the region. Conserving adjacent lands to the Station will benefit biodiversity in the region. As described in INRMP Section 6.2.3.2, *Encroachment Partnering*, the Wildlife Action Plan recommends protection of land adjacent to MCAS Miramar. Such protection would both support the goals of the Action Plan and buffer MCAS Miramar from development that may not be compatible with the Station’s military mission. Action Plan implementation would also provide suitable mitigation opportunities beyond installation boundaries. Similarly,

implementation of this INRMP would minimize some stressors to wildlife and its habitats identified in the Wildlife Action Plan.

Stressors affecting wildlife and habitats identified within the Wildlife Action Plan for the South Coast Region are: 1) growth and development, 2) water management conflicts and degradation of aquatic ecosystems, 3) invasive species, 4) altered fire regimes, and 5) recreational pressures. MCAS Miramar has these stressors to one degree or another. Chapter 7 of this INRMP specifically identifies inhouse management actions, ongoing projects, must fund projects, and other planned projects that contribute to the minimization of these stressors. Implementation of California's Wildlife Action Plan and this IRNMP are mutually beneficial to California wildlife and habitats.