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.

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 (BMPs). 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 as integrated with the operational mission of the Station. 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 MA boundaries have been reviewed and updated to reflect current Station operations, facilities, missions, and resource management needs.

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 concerns[8]. 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 (2,683 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. Areas planned and used for compensatory vernal pool wetland habitat mitigation are included as a Level I MA because of the regulatory obligations for assuring long-term conservation. 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 (Section 7.2).

5.1.2 Level II Management Areas

Conservation needs in Level II MAs (5,898 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, willowy monardella, Del Mar manzanita, and other natural resources while maintaining maximum compatible use for operational requirements. Surveys for Hermes copper and Quino checkerspot butterflies are in progress (2018-2019). Many Pre-Cedar fire historic Hermes copper butterfly occupied areas occur within Level II MAs; however, as new information from current surveys is finalized, the relationship of currently occupied locations to Level II MAs cannot be fully accounted for. 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.

[8]2011 Management Areas and their associated planning considerations were incorporated into the MCAS Miramar Master Plan (Southwest Division, Naval Facilities Engineering Command) for use of land areas throughout the Station.

Figure 5.1. MCAS Miramar Management Area Designations

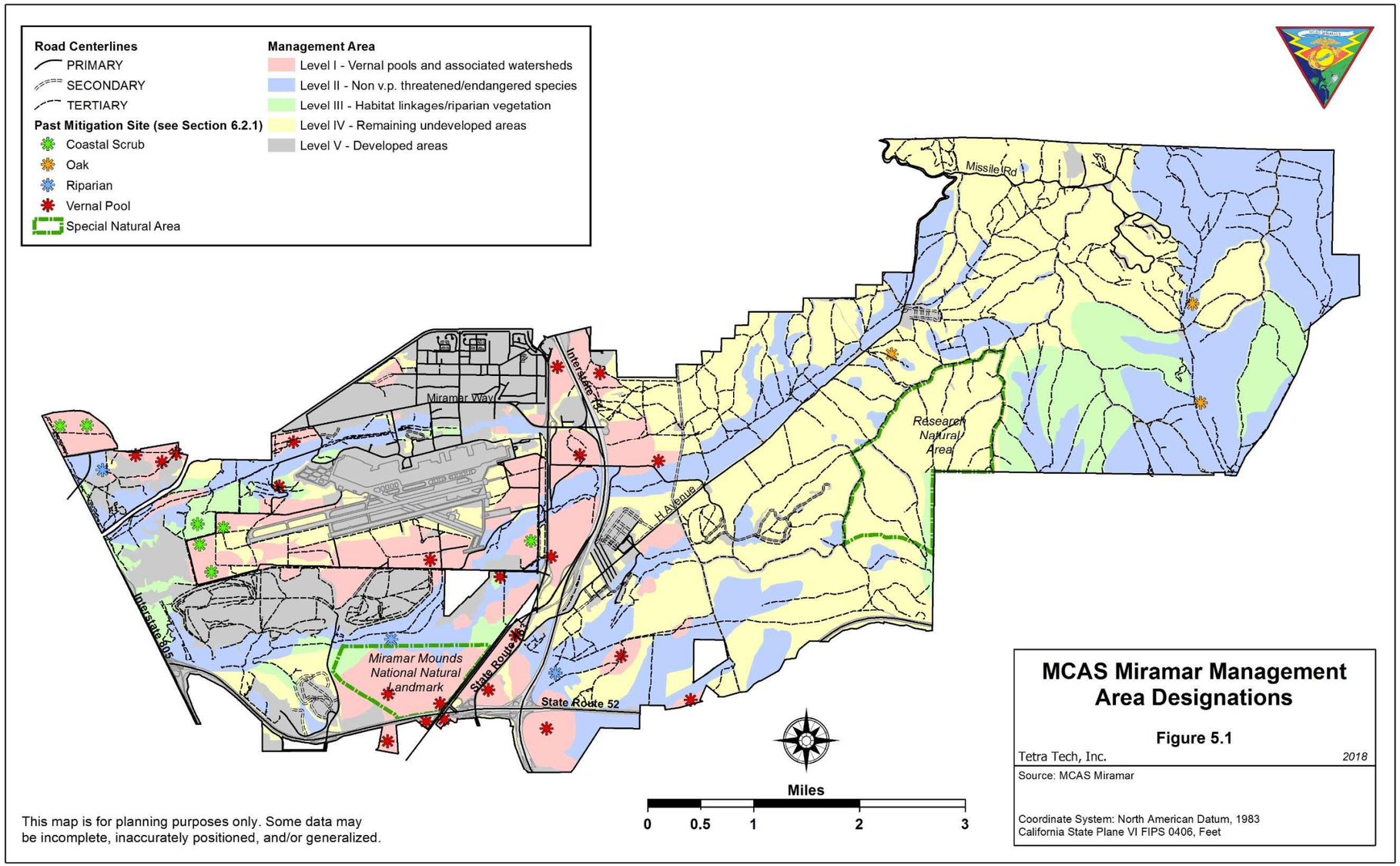

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Table 5.1. Vernal Pool Habitat and Special Status Species of Concern by Management Area

Vernal Pool Habitat/Threatened and Endangered Species	Management Area Level						
	I	II	III	IV	V	2016 Totals	2011 Totals
Vernal Pool Basins: number	4714	123	27	39	44	4,947	4,825
Percent of total	95.3	2.5	0.5	0.8	0.9		
Vernal Pool Basins: acres	90.2	2.8	0.3	1.5	0.7	96	95
Percent of total	94.4	2.9	0.3	1.6	0.8		
Other Seasonally Ponded Features[1] Basins: number	1,877	394	17	240	233	2,761	2,706
Percent of total	68.0	14.3	0.6	8.7	8.4		
Other Seasonally Ponded Features[1] Basins: acres	30.8	9.3	1.0	4.6	5.9	52	52
Percent of total	59.7	18.0	1.9	9.0	11.5		
Vernal Pool Habitat Watersheds: acres	918.6	45.3	9.9	50.9	33.9	1,059[2]	1,069
Percent of total	86.8	4.3	0.9	4.8	3.2		
San Diego Button-celery[3, 9]: # basins	1,824	6	2	9	4	1,845	1,795
Percent of total	98.9	0.3	0.1	0.5	0.2		
San Diego Button-celery: basin acres	51.5	0.2	0.2	0.5	0.2	53	53
Percent of total	97.9	0.4	0.4	1.0	0.4		
Spreading Navarretia[9]: # basins	6	0	0	0	0	6	6
Percent of total	100.0	0.0	0.0	0.0	0.0		
Spreading Navarretia: basin acres	2.5	0	0	0	0	3	3
Percent of total	100.0	0.0	0.0	0.0	0.0		
Spreading Navarretia: acres of Essential Habitat[4]	69	0	0	0	0	69	69
Percent of total	100.0	0.0	0.0	0.0	0.0		
San Diego Mesa Mint[5, 9]: # basins	1,153	6	0	3	3	1,165	1,112
Percent of total	99.0	0.5	0.0	0.3	0.3		
San Diego Mesa Mint: basin acres	38.5	0.2	0.0	0.1	0.2	39	39
Percent of total	98.7	0.5	0.0	0.3	0.5		
California Orcutt Grass[9]: # basins	4	0	0	0	0	4	2
Percent of total	100.0	0.0	0.0	0.0	0.0		
California Orcutt Grass: basin acres	5.5	0	0	0	0	6	6
Percent of total	100.0	0.0	0.0	0.0	0.0		
San Diego Fairy Shrimp[6, 9]: # basins	3,790	146	9	54	73	4,072	4,051
Percent of total	93.1	3.6	0.2	1.3	1.8		
San Diego Fairy Shrimp: basin acres	98.4	6.4	0.9	3.8	4.9	114	114
Percent of total	86.0	5.6	0.8	3.3	4.3		

Vernal Pool Habitat/Threatened and Endangered Species	Management Area Level						
	I	II	III	IV	V	2016 Totals	2011 Totals
San Diego Fairy Shrimp: acres Essential Habitat[4]	1,862.5	148.6	48.2	108.1	187.9	2,355[2]	2,379
Percent of total	79.1	6.3	2.0	4.6	8.0		
Riverside Fairy Shrimp[9]: # basins	2	0	0	0	0	2	2
Percent of total	100.0	0.0	0.0	0.0	0.0		
Riverside Fairy Shrimp: basin acres	2	0	0	0	0	2	1
Percent of total	100.0	0.0	0.0	0.0	0.0		
Riverside Fairy Shrimp: acres of Essential Habitat[4]	79.6	0.2	0	11.0	4.5	95	95
Percent of total	83.5	0.2	0.0	11.6	4.7		
Willowy Monardella[7]: # clumps	0	1,137	0	0	0	1,137	401
Percent of total	0.0	100	0.0	0.0	0.0		
Willowy Monardella: acres of Essential Habitat[4]	97.7	1,464.2	20.1	112.7	146.6	1,841	1,842
Percent of total	5.3	79.5	1.1	6.1	8.0		
Del Mar Manzanita: # individuals	0	2,706	0	14	4	2,724	2,341
Percent of total	0.0	99.3	0.0	0.5	0.2		
Coastal California Gnatcatcher: # breeding pair locations pre- and post-Cedar Fire[8]	67	552	0	44	17	680	471
Percent of total	9.9	81.2	0	6.5	2.5		
Coastal California Gnatcatcher: # breeding pair locations from post 2003 Cedar Fire[8]	21	157	1	15	11	205	120
Percent of total	10.2	76.6	0.5	7.3	5.4		
Coastal California Gnatcatcher: acres of Essential Habitat[4]	143.7	4,059.9	185.8	714.4	465.3	5,569	5,569
Percent of total	2.6	72.9	3.3	12.8	8.4		
Least Bell's Vireo (territory): # locations (2008, 2014)	0	37	0	0	0	37	5
Percent of total	0.0	100	0.0	0.0	0.0		
Hermes Copper Butterfly: acres of Pre-Cedar fire occupied habitat	0	118.7	0	165.3	4.4	N/A	288.4[10]
Percent of total	0.0	41.2	0.0	57.3	1.5		
Quino Checkerspot Butterfly	All Quino checkerspot butterfly locations have been found along maintained fuelbreaks on ridge tops; however, some adjacent lands fall within Level II and III Management Areas. Surveys are ongoing in 2018-2019.						

Vernal Pool Habitat/Threatened and Endangered Species	Management Area Level						
	I	II	III	IV	V	2016 Totals	2011 Totals

[1] MCAS uses the term "Other Seasonally Ponded 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] A previous GIS error was fixed (double counting GIS entries that were beyond the Station boundary or similar). This number does not represent a decrease from 2011.
[3] Several basins with San Diego button celery are not designated within one of the pool groups in Table 4.3.4, however, they are included in this table. As a result, the total number of basins for this species shown here is different than what is shown in Table 4.3.4.
[4] 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 Area V).
[5] Several basins with San Diego mesa mint are not designated within one of the pool groups in Table 4.3.4, however, they are included in this table. In addition, 1 of the basins within Table 4.3.4 is off-base and therefore not in a Management Area or in this table. As a result, the total number of basins for this species shown here is different than what is in Table 4.3.4.
[6] Several basins with San Diego fairy shrimp are not designated within one of the pool groups in Table 4.3.4, however, they are included in this table. In addition, several of the basins shown within Table 4.3.4 are off-base and therefore not in a Management Area or in this table. As a result, the total number of basins for this species shown here is different than what is in Table 4.3.4.
[7] A new mapping technique was utilized in 2015 for mapping willowy monardella, which is the reason for the difference between 2011 and 2015 data. The population of willowy monardella is declining, the increase shown in this table is due to the change in mapping methods.
[8] 2011 Totals are reported from the 2013 California gnatcatcher survey report (Tierra Data 2014); 2015 Management Area Totals are from the GIS.
[9] In order to determine which Management Area each basin was in for San Diego button celery, spreading navarretia, San Diego mesa mint, California Orcutt grass, San Diego fairy shrimp, and Riverside fairy shrimp, the centroid of the basin was used. This method was applied to avoid counting the same basin within more than one Management Area. For example, 1 of the San Diego mesa mint basins has a small amount of area within Management Area III. But, this overall basin is already counted within Management Area I. So, the table shows all basins within Management Area I, however, there is a small amount of area within Management Area III.
[10] This is the total acres of Pre-Cedar fire occupied habitat (1996-2000). Surveys are being performed during the 2018 flight season to determine the current occupied habitat on MCAS Miramar.

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 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. Similar measures to limit activities that may affect endangered butterflies will be

West Sycamore Canyon (mostly Management Area II)
Natural Resources Division

undertaken in the interim until we better understand the species distribution from current surveys, the potential for impacts from operational activities, and ESA consultations have been completed. Interim measures at sites known to be occupied by listed butterflies include limiting activities during the flight seasons and minimizing off-road activities, including foot traffic, to avoid habitat damage to host plants and crushing eggs and larval stages. Use and maintenance of established roads and firing ranges will remain unchanged.

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, Hermes copper butterfly, Quino checkerspot butterfly, willowy 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.

5.1.3 Level III Management Areas

Level III MAs (1,740 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 (7,859 acres) do not support substantial high value/regulated natural resources, such as vernal pool habitat basins or occupied 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 (4,858 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/Animal Air Strike Hazard (BASH) program and endangered species management; and keep pesticide use to a minimum. The proximity of many developed areas, 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 past INRMPs (MCAS Miramar 2000, 2006, 2011a) 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 the 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 I and 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 endangered plants (willowy monardella, Del Mar manzanita) 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, including Mission Trails Regional Park and Goodan Ranch-Sycamore Canyon Open Space Preserves. 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 3500.2A (Range and Training Area Regulations) 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. Accordingly, revision of the MA's was done for this INRMP update.

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, 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. Avoiding 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 Station 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 and other cognizant departments. 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 with MCO 5090.2 (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 with MCO 5090.2 (Chapter 11) and 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. 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.
- The Training Area Management Office of Station Operations (S-3) manages military ground operations and training in coordination with the Environmental Management Department. Military operations are usually considered compatible if they do not affect species protected under the ESA, wetlands, or cultural resources. Activities that are unique, unusual, or inconsistent with environmental protection measures of the Station Range and Training Area Regulations (Station Order 3500.2A) are reviewed and evaluated.
- 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 Training Area Management Office, Public Works site approval, 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, approved trails, 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), except where specifically marked out in the field;
- the use of blanks, smoke (smoke grenades only), and simulated IEDs/artillery explosions, with approval from the MCAS Miramar Fire Department, 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;
- 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 in accordance with product labels and use guidelines;
- routine invasive plant and weed control throughout the Station, managed by the Natural Resource Division;
- 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 (the Natural Resources Division regularly shares resource information with these tenants); 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 that have not been identified for preservation are open to development because they have been mitigated by conservation inside the MHPA. This is a different conservation approach to that taken by MCAS Miramar. The Station is not a signatory to the MSCP or within any part of the MHPA, but the Station contributes to their conservation goals through the INRMP.

The entire Station is managed to support military readiness requirements. However, regional conservation values are also important considerations. MCAS Miramar recognizes the value of conserving 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 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 5.2. This table clearly indicates the value, in terms of acreage, of the Station's open space and associated vegetation/landcover types.

As Figure 5.3, combined with Table 5.2, 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.

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

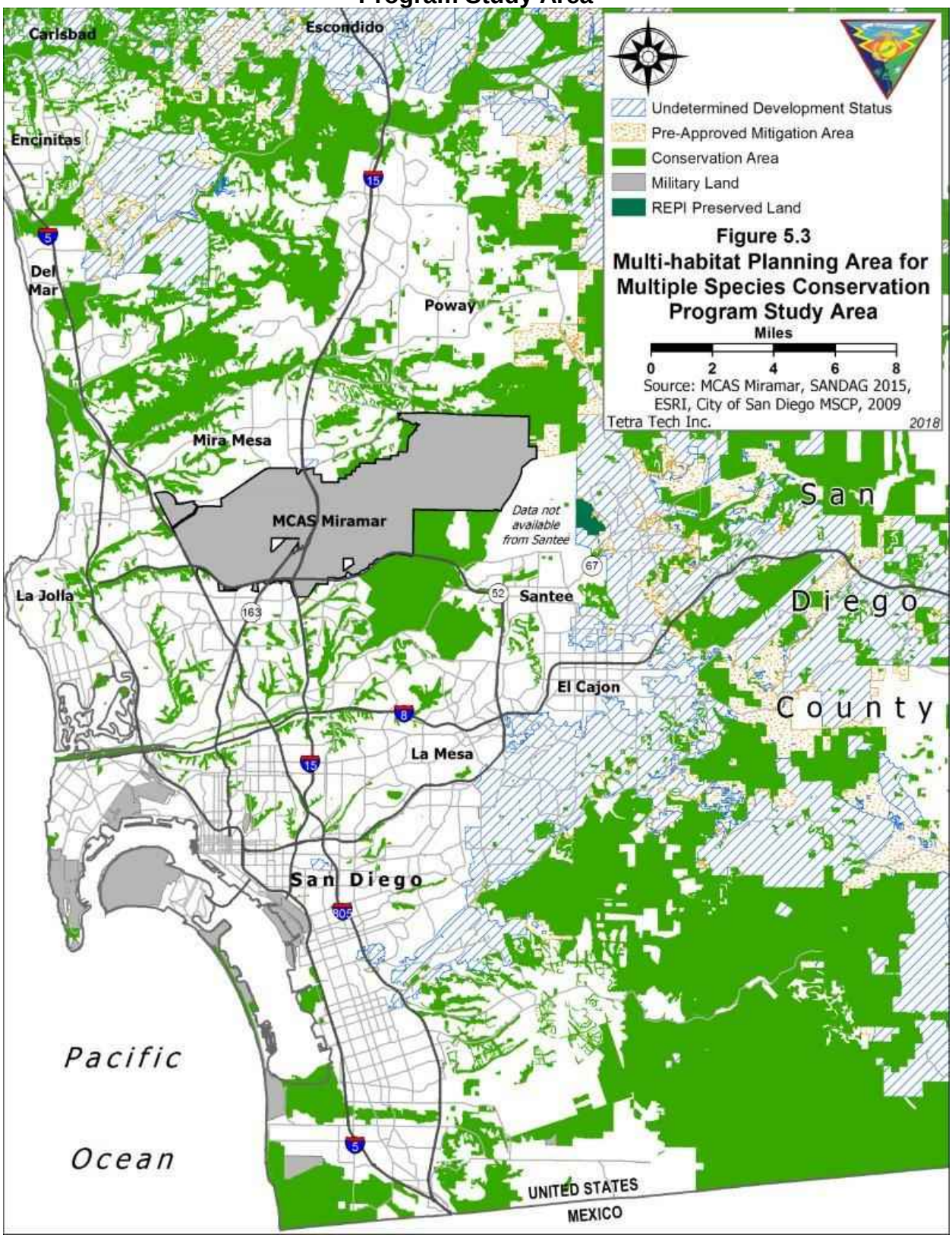

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Table 5.2. Vegetation and Landcover Types by Management Area

Vegetation/Landcover Type	Management Area Level (acres)					2016 Totals
	I	II	III	IV	V	
Buckwheat Scrub	473.3	1,180.4	204.9	490.1	95.4	2,444.1
Sage and Sagebrush	80.8	765.8	162.1	858.7	48.6	1,916.0
Other Upland Scrub	204.3	600.0	397.8	659.3	119.0	1,980.5
Ceanothus Chaparral	9.9	782.3	183.3	1,847.2	42.7	2,865.5
Chamise Chaparral	925.8	1,661.4	473.6	2,800.7	257.4	6,118.9
Scrub Oak Chaparral	61.5	194.0	87.6	317.1	21.9	682.1
Other Chaparral	1.9	80.3	33.5	89.3	1.7	206.9
Grassland	757.7	215.3	77.2	325.4	100.5	1,476.0
Riparian Scrub	0.0	26.3	0.1	0.0	1.4	27.9
Riparian Woodland	2.1	194.8	41.4	9.1	4.5	251.9
Freshwater Marsh	2.0	17.9	3.4	3.0	0.0	26.4
Non-Native Tree	6.5	16.8	1.8	23.6	3.0	51.7
Disturbed	24.8	24.9	10.2	28.1	15.7	103.7
Developed	132.7	137.6	63.4	407.4	4,146.1	4,887.2
Grand Total	**2,683.3**	**5,897.9**	**1,740.4**	**7,859.0**	**4,858.1**	**23,038.7**

A comparison of sage and sagebrush 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 53 percent of sage and sagebrush scrub on the Station. While these areas are not dedicated to preservation, regulatory and land use constraints, such as threatened and endangered species conservation, will prevent any substantial loss of habitat value from these areas.

This compares closely with conservation of the MSCP Multi-Habitat Planning Area (Figure 5.3), which plans to preserve 62 percent of similar vegetation types occurring within the Planning Area. Further, because MCAS Miramar has no specific plans to develop the remaining 47 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.

The 409-acre Lakeside Downs REPI acquisition project relieves restrictions to on-installation military operational land-use by conserving threatened coastal California gnatcatcher habitat beyond the Station boundary with in-perpetuity management. The property has high quality and regionally rare coastal scrub habitat and is occupied by the federally threatened coastal California gnatcatcher and a federal candidate for listing, the Hermes copper butterfly. The Lakeside Downs property has supported up to 13 breeding territories of coastal California gnatcatcher. Conservation of this property significantly contributed to the regional California gnatcatcher metapopulation and subregional MSCP preserve design and function.

Sage and Sagebrush 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 this agency 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 to conserve biodiversity in the MSCP Area and achieve certainty of conservation in the land development process for both private and public sector projects. MCAS Miramar 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. Accordingly, MCAS Miramar may participate in off-station conservation banks and recovery credit systems, and off-site mitigation may provide a preferred alternative to meet species protection and recovery to meet future mission requirements (DoD Instruction 4715.03 Enclosure 3, para. 1.f(3)&(4)). Habitat enhancement or restoration may also be an acceptable means for mitigating mission impacts to listed species (DoD Instruction 4715.03 Enclosure 3, para. 1.f(4)); however, due to the need to provide for long-term conservation of habitat mitigation sites, on-station mitigation shall only be done where operationally compatible and essential to supporting the mission. 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 that do not support the mission of MCAS Miramar (DoD Instruction 4715.03, Enclosure 3, para. 1.f(4)), such as those occurring within portions of the MSCP planning area. MCAS Miramar will not accept an unequal or disproportionate burden for conservation of species unless .... *it is required by legal authority or it has been expressly determined that it is in the DoD's best interest.*

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-installation land use change can impact on-installation 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. Actions to preserve off-installation habitat for sensitive species can benefit the Station by reducing this on-station conservation pressure.

California's Wildlife Action Plan (CDFW 2015) identifies species and habitats of greatest conservation need, major stressors affecting native wildlife and habitats, and actions needed to conserve wildlife throughout California, including within the South Coast Province, where MCAS Miramar is located. One of the main Conservation Strategies used in the Wildlife Action Plan is the use of land acquisition, easements, and leases as a method to conserve these species and habitats.

Stressors affecting wildlife and habitats identified within the Wildlife Action Plan for the South Coast Province are: 1) housing and urban areas, 2) invasive species, 3) recreational activities, 4) annual and perennial non-timber crops, and 5) climate change. MCAS Miramar has these stressors to one degree or another. Chapter 7 of this INRMP specifically identifies actions and projects that contribute to the minimization of these stressors. Implementation of California's Wildlife Action Plan and this INRMP are mutually beneficial to California wildlife and habitats.

Following the Wildlife Action Plan, land acquisition by MCAS Miramar would 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. Such protection would both support the goals of the Wildlife Action Plan and buffer MCAS Miramar from development that may not be compatible with the Station's military mission. Wildlife Action Plan implementation would identify suitable mitigation opportunities beyond installation boundaries. Implementation of this INRMP would minimize some stressors to wildlife and its habitats identified in the Wildlife Action Plan. Encroachment partnering through initiatives such as the DoD REPI program (see Section 6.2.4) offers an excellent opportunity to meet the goals of both the Wildlife Action Plan and this INRMP.

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