

APPENDIX E. MCAS MIRAMAR INRMP IMPLEMENTATION ACTION AND PROJECT SUMMARY

INRMP actions and projects are summarized by general topics (*e.g.*, Special Status Species Management, Vernal Pool Habitat Management, Fish and Wildlife Management). Within each of these general topics are specific objectives followed by individual actions and projects in four categories (if needed): In-house Management Actions, Ongoing Projects, Must Fund Projects, and Other Planned Projects.

These actions and projects are identified in chapters 7 and 9. Must fund and other planned projects are detailed in Appendix F in standardized format.

The below list of **general topics** with their **objectives** and actions and projects is presented in the order they appear in this INRMP. General Topic (in **bold**) follows the section number; objective(s) appear in **bold/italics**. In-house Management Actions, Projects in Progress, Must Fund Projects, and Other Planned Projects are individually identified following each objective.

Section	General Topics/Objectives/Actions and Projects	Year Funding Requested				
		Ongoing/ Indefinitely /Annually/ As Needed	11	12	13	14
7.3.1	General Vegetation Management and Soil Conservation					
	<i>1. Develop and implement a program for natural land and habitat restoration and rehabilitation.</i>					
	<i>In-house Management Action</i>					
	Provide specifications for reseeding/revegetation of sites disturbed by Station activities.	x				
	<i>Project in Progress</i>					
	Soil Erosion Control and Revegetation in East Miramar	x				
	<i>Must Fund Projects</i>					
	Invasive Species Control (MI55353)	x				
	Minor Projects/Damage Repair (MI25555)	x				
	<i>Other Planned Projects</i>					
	Vegetation Mapping (MI85555)			x		
	Restore Eroded Areas (MI0600002)				x	
	<i>2. Continue the LTEM program of vegetation and soil conditions on MCAS Miramar.</i>					
	<i>Other Planned Project</i>					
	Long-term Ecosystem Monitoring (MI95556)					x
<i>3. Maintain watershed productivity, quality, and functioning through an effective non-point source pollution control program (soil erosion control and maintenance of vegetative cover). Emphasize seasonal distribution of water availability, minimization of flooding, reduced sedimentation, and maintenance of wetland quality performing planned actions in other compatible management areas.</i>						
<i>In-house Management Actions</i>						
Identify potential effects of actions in floodplains early in the NEPA planning process.	x					

Section	General Topics/Objectives/Actions and Projects	Year Funding Requested				
		Ongoing/ Indefinitely /Annually/ As Needed	11	12	13	14
	Monitor stormwater discharge outfalls, annually (Environmental Engineering Division action).	x				
	Maintain functionality of oil/water separators.	x				
	<i>Projects in Progress</i>					
	Soil erosion control projects at the Ordnance Complex (Environmental Engineering Division lead).	x				
	Soil erosion control project at the Fish Pond outfall (Environmental Engineering Division lead).	x				
7.3.2	Wildland Fire Management					
	<i>1. Support a Wildland Fire Management Program to protect high value human and natural resource areas from catastrophic wildfire while conserving resources and military operational flexibility.</i>					
	<i>In-house Management Action</i>					
	Provide technical, natural resource-based support to the Fire Department for wildland fire management planning.	x				
	<i>Project in Progress</i>					
	Revegetate a severely eroded portion of fire access road R-15 (jointly with Public Works Division and Fire Department).	x				
	<i>2. Track and monitor effects of fires and fuel modifications to support hazardous fuel reduction actions in strategic areas of MCAS Miramar and enhance/maintain native plant diversity and improve wildlife habitat.</i>					
	<i>In-house Management Action</i>					
Maintain an up-to-date GIS database of past fires and other fuel management activities.	x					
7.3.3	Grounds Maintenance and Landscaping					
	<i>Ensure that grounds maintenance and landscaping operations are consistent with natural resource goals and objectives.</i>					
	<i>In-house Management Actions</i>					
	Provide technical support for invasive landscape plant control.	x				
	Provide technical support for the flightline mowing program.	x				
	Provide technical support for weed/exotic plant control on the airfields to Public Works, Facilities Maintenance.	x				
	<i>Project in Progress</i>					
Develop native plant/water conservation garden for Building 6022 for education.		x	x			
7.4	Special Status Species Management					
	<i>1. Proactively maintain up-to-date presence/absence, distribution, and habitat data for all Special Status Species to support project and activity planning, management, and implementation on MCAS Miramar.</i>					
	<i>In-house Management Actions</i>					
Maintain lists of species of regional concern to monitor status and address in NEPA reviews.	x					

Section	General Topics/Objectives/Actions and Projects	Year Funding Requested					
		Ongoing/ Indefinitely /Annually/ As Needed	11	12	13	14	15
	Use various media to create and maintain awareness of Station personnel of the sensitivity, values, and obligations regarding the conservation of Special Status Species and their habitat. This may include presentations, briefs, newspaper articles, special messages, and an information brochure.	x					
	Complete GIS database update with recent data that accurately mapped and sampled pools.	x					
	If needed (based on USFWS decision that listing is warranted), program a project to survey for the Hermes copper butterfly and its habitat during 2011-2015.	x					
	<i>Projects in Progress</i>						
	Vernal Pool Resources/Endangered Species Surveys (100 basins to be mapped and approximately 1,400 basins to be sampled).		x	x	x	x	
	Willowy Monardella Census and Monitoring for Del Mar Manzanita.	x					
	Endangered Willow Monardella Habitat Enhancement Project.		x				
	Endangered Least Bell's Vireo/Willow Flycatcher Surveys .		x				
	Endangered Quino Checkerspot Butterfly Survey.		x	x			
	<i>Must Fund Projects</i>						
	Presence/Absence California Gnatcatcher Surveys (MI37405)			x			X
	Endangered Least Bell's Vireo/Willow Flycatcher Surveys (MI97016)				x		
	Non-Vernal Pool Endangered Plant Monitoring (MI0500005)		x		x		
	<i>Other Planned Projects</i>						
	Endangered Fairy Shrimp Genetics Study (MI14AG01).					x	
	Endangered California Orcutt's Grass/Spreading Navarretia Habitat Study (MI115AG01).						X
	2. Proactively manage Special Status Species habitat.						
	<i>In-house Management Actions</i>						
	Identify, map, and selectively field mark/fence sites supporting endangered species likely to be affected by Station operations.	x					
	Produce sensitive resource GIS maps for Station staff to reference (updated every 6 months).	x					
	Identify and take appropriate action on opportunities for off-Station conservation easement mitigation.	x					
	<i>Other Planned Project</i>						
	Conservation Buffer/Mitigation Planning Study (MI1100001).		x				
	3. Monitor to ensure ESA Section 7 compliance, as set forth in existing biological opinions, for projects implemented or actions taken.						
	<i>In-house Management Action</i>						

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		Ongoing/ Indefinitely /Annually/ As Needed	11	12	13	14	15
	Monitor internal MCAS Miramar compliance commitments.	x					
7.5.1	Vernal Pool Habitat Management						
	<i>1. Take proactive action to prevent damage to vernal pool habitat.</i>						
	<i>In-house Management Actions</i>						
	Continue resource conservation and protection awareness efforts that focus on vernal pool conservation.	x					
	Produce GIS maps of sensitive resources that show vernal pool habitat and associated watersheds for distribution to Station planners (updated about every 6 months).	x					
	Field mark/fence vernal pool habitats or groups with a reasonably high likelihood for accidental damage by Marine Corps activities.	x					
	Work continuously with project and activity planners to avoid or minimize impacts to vernal pool habitat early in the planning process using the conservation approach identified in Chapter 5 as an initial planning tool to avoid areas containing a high density of vernal pool habitat (Level I MAs).	x					
	Develop and implement a long-term ecosystem monitoring program for vernal pools.	x					
	<i>Projects in Progress</i>						
	Vernal pool interpretive kiosk and demonstration vernal pool.		x				
	Complete vernal pool burn study data analysis.		x				
	<i>Must Fund Project</i>						
	Vernal Pool Management (MI82949)	x					
	<i>2. Develop and maintain high-quality and up-to-date GIS mapping of vernal pool habitat and its watersheds that supports proactive planning and impact avoidance.</i>						
	<i>In-house Management Actions</i>						
	Maintain an up-to-date GIS database by incorporating new field survey data.	x					
	Continue mapping and sampling vernal pool resources as workload permits.	x					
	<i>3. Implement a program for vernal pool habitat restoration and re-establishment to maintain no net loss of vernal pool habitat basin resources.</i>						
	<i>In-house Management Action</i>						
	Develop vernal pool enhancement/restoration protocols to expedite Section 7 consultation and Biological Opinion issuance.		x				
	<i>Project in Progress</i>						
	Restore 2,800 square feet of basin in the HH1+ Vernal Pool Group.		x	x	x	x	
7.5.2	General Wetland Management, including Mitigation						
	<i>Identify and manage wetlands on MCAS to maintain no net loss of wetland values.</i>						

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		Ongoing/ Indefinitely /Annually/ As Needed	11	12	13	14	15
	<i>In-house Management Action</i>						
	Ensure compliance with existing and future Section 404 Clean Water Act permitting requirements.	x					
	<i>Other Planned Project</i>						
	Wetland/Streambed Mitigation Siting Survey (MI1100001).		x				
7.6.1	General Wildlife Management						
	<i>Maintain healthy wildlife populations as a component of the ecosystem.</i>						
	<i>In-house Management Action</i>						
	Review NEPA documentation to address wildlife conservation issues.	x					
	<i>Other Planned Project</i>						
	Burrowing Owl Population Survey (MI14NR001)					x	
	Long-term Ecosystem Monitoring, Faunal Component (MI95556)						x
7.6.2	Migratory Bird Management						
	<i>Manage migratory bird conservation compliance requirements to minimize conflicts with military mission requirements.</i>						
	<i>In-house Management Actions</i>						
	Ensure that migratory bird conservation, as required by Executive Order and DoD policy, is addressed in NEPA documentation.	x					
	Maintain the MCAS Miramar Special Purpose Migratory Bird Permit for non-readiness activities in good standing.	x					
7.6.3	Wildlife Damage Management (Including Bird and Animal Air Strike Hazard)						
	<i>Reduce the potential for wildlife damage, including animal collisions with aircraft.</i>						
	<i>In-house Management Actions</i>						
	Provide technical biological assistance for the Station BASH program.	x					
	Provide technical assistance and coordination for the flightline mowing program.	x					
	Support coordination with the Miramar Landfill bird abatement program, as needed.	x					
	Assess reports of wildlife damage and health/safety concerns.	x					
	Assist with and advise measures for damage control/prevention and living with wildlife.	x					
7.6.4	Integrated Pest Management						
	<i>Comply with the federal Insecticide, Fungicide, and Rodenticide Act and minimize the use of pesticides.</i>						
	<i>In-house Management Action</i>						
	Provide natural resource based technical support for the MCAS Miramar Integrated Pest Management Plan.	x					
7.7	Natural Resources-related Outdoor Recreation Management						

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		Ongoing/ Indefinitely /Annually/ As Needed	11	12	13	14	15
	<i>Provide outdoor recreation opportunities for MCAS Miramar personnel and the general public within constraints of the military mission and capability of the resources.</i>						
	<i>In-house Management Actions</i>						
	Provide technical assistance with fishery management at the Miramar Fish Pond.	x					
	Maintain a CDFG Aquaculture Permit for the Miramar Fish Pond.	x					
	Prepare natural resource information and briefings, as requested.	x					
	Provide a limited number of field trips to interested parties, as staff time permits.	x					
7.8	Cultural Resources Considerations						
	<i>Implement this INRMP in a manner consistent with the protection of cultural resources at MCAS Miramar.</i>						
	<i>In-house Management Action</i>						
	Ensure appropriate review of natural resource management projects by Cultural Resource Manager to ensure that adverse effects to archeological sites are avoided.	x					
7.9	INRMP Planning						
	<i>Review and update this INRMP at least every five years or when major changes are made to the natural resources program; coordinate this update with the USFWS and CDFG.</i>						
	<i>In-house Management Action</i>						
	Monitor and annually review implementation of this INRMP, as required by Marine Corps policy; report implementation progress; and record revisions necessary for the next INRMP update.	x					
	<i>Must Fund Project</i>						
	Prepare INRMP/Environmental Assessment (MI40225)					x	
9.2.1	INRMP Implementation Professional Staffing						
	<i>Provide professional, well trained staffing and appropriate supplies and equipment for the MCAS Miramar natural resources program to effectively implement this INRMP.</i>						
	<i>Must Fund Projects</i>						
	Manpower (Labor) (MI37405)	x					
	Natural Resources Training/Travel (MI69690)	x					
	Natural Resources Supplies (MI72633)	x					
9.2.2	Project Support, including Geospatial Information System						

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	<i>Provide project support needed to implement this INRMP. Maintain Station natural resources GIS data, ensuring all information is current and up-to-date; ensure that all GIS information is available to biologists, planners, contractors, and others in a quick and timely manner; and maintain an operational GPS unit to quickly and accurately map natural resources.</i>						
	<i>In-house Actions</i>						
	Ensure accurate and usable GIS deliverables from contracts.	x					
	Manage and merge data from surveys and studies to support GIS users.	x					
	Ensure equipment (GPS, printers, and plotters) are ready to use.	x					
	Update database information for all GIS layers.	x					
	<i>Must Fund Project</i>						
	Natural Resources Project Support from NAVFAC SW (MI10300009).	x					
	<i>Other Planned Project</i>						
	GIS/GPS Equipment-Replace GPS Unit (MI22202), initiate in 2014.					x	
9.4.2	Agricultural Funds						
	<i>Implement the Agriculture Outlease program.</i>						
	<i>Must Fund Project</i>						
	Agricultural Outlease Management (MI99006).	x					
	<i>In-house Management Actions</i>						
	Re-evaluate and update the terms of the Agriculture Outlease and award a new lease, in coordination with MCAS Miramar and NAVFAC real estate entities (current lease expires in January 2012).			x			
	Ensure that all new leases, easements, and similar occupancy or use agreements of Station property do not preclude the execution of natural resource management activities by the USMC.	x					