

CHAPTER 1

INTRODUCTION

1.1 PURPOSE AND REQUIREMENT FOR THE INRMP

This Integrated Natural Resources Management Plan (INRMP) is intended to ensure that natural resource management at Marine Corps Base (MCB) Camp Pendleton and Marine Corps Air Station (MCAS) Camp Pendleton is implemented in a manner that provides sustained support for the military mission and, consistent with the use of Camp Pendleton to ensure the preparedness of the Armed Forces, provides for: the conservation and rehabilitation of natural resources on Camp Pendleton; the sustainable multipurpose use of those resources; and, subject to safety requirements and military security, public access to facilitate that use. To ensure frequent and continued use of land for military training, now and in the future, natural resource utilization must be (1) sustainable, (2) in accordance with laws and regulations, and (3) optimally integrated with existing Base plans and mission requirements, as mandated by both Department of Defense (DoD) and Headquarters, U.S. Marine Corps (HQMC) guidance. This INRMP is intended to integrate natural resource conservation and management efforts in support of land use and military mission requirements and responsibilities at MCB and MCAS Camp Pendleton (hereafter referred to collectively as Camp Pendleton, or the Base, unless otherwise specified).

This INRMP reflects Camp Pendleton's approach to natural resources management and stewardship and summarizes baseline information and agreements through which compliance with regulatory and planning processes, such as those required by the Sikes Act Improvement Act (SAIA), National Environmental Policy Act (NEPA), Endangered Species Act (ESA), and the Clean Water Act (CWA) is accomplished. This INRMP also fulfills other responsibilities with regard to Department of Defense Instructions (DoDI) and Directives (DoDD), as well as Department of Navy (DoN) and Marine Corps policies for natural resource planning, conservation, management, and rehabilitation in support of the Base's military training mission.

Camp Pendleton's INRMP provides technical guidance to persons planning and/or preparing installation approvals, management actions, orders, instructions, guidelines, Standard Operating Procedures, and other plans, for integrating natural resource management efforts into the Base's planning and decision making processes. It is not intended, however, for use by military personnel operating in the field. Field operations and activities are directed to adhere to guidelines, plans, orders, or other approvals that have been developed using this INRMP and have already had environmental compliance review and, where applicable, regulatory approvals and/or permitting (e.g., Base Order [BO] P3500.1_, *Base Range and Training Regulations*). This INRMP does not dictate land use decisions, but rather provides important information to support sound land use and natural resource management decisions.

National Historic Preservation Act requirements are not addressed in this INRMP. Cultural resource management issues (archaeological and historical) are addressed separately within Camp Pendleton's *Integrated Cultural Resource Management Plan* (ICRMP).

1.1.1 Regulatory Requirements and Legal Authority

The development and publication of this INRMP meets the requirements established by the SAIA and the implementing directives of the DoD, the Secretary of the Navy, and the Commandant of the Marine Corps (CMC). The Sikes Act (Public Law 86-797, 16 U.S.C. 670a *et seq.*), as it existed prior to the SAIA, authorized the Department of Defense and its component services to enter into partnerships with the Department of the Interior (DOI) (United States Fish and Wildlife Service [USFWS]), state fish and wildlife agencies, and private entities. These partnerships were to result in cooperative agreements or plans that were “mutually agreed upon” by the military agency and other partners. Though these cooperative plans *allowed* for the development of natural resources programs on military installations, they were *not* mandatory under the Sikes Act. The SAIA now makes the development and implementation of INRMPs mandatory, to provide for sound management of natural resources on military lands.

The SAIA requires the Secretaries of the military departments to prepare and implement INRMPs for each military installation unless exempted due to the absence of significant natural resources. Each INRMP shall include all elements of natural resources management applicable to the installation, including compliance with the terms and conditions of relevant Biological Opinions.

Development and implementation of this INRMP will fulfill the statutory requirements under the Sikes Act Improvement Act, Public Law 105-85, Div. B Title XXIX, November 18, 1997, 111 Stat. 2017-2019, 2020-2033. Though several other laws (e.g., Endangered Species Act, Clean Water Act, etc.) require military installations to protect sensitive biological resources, the SAIA is viewed as an “umbrella” law with regard to management of natural resources on military lands. Thus, this INRMP helps ensure that Camp Pendleton complies with other federal and state laws, most notably laws associated with environmental documentation, endangered species, water quality, and management of wildlife, in general.

1.1.2 Guidance and Required Elements

The SAIA, Marine Corps Order (MCO) P5090.2A (Environmental Compliance and Protection Manual, HQMC 1998), and the *Handbook for Preparing Integrated Natural Resources Management Plans for Marine Corps Installations* (HQMC 2000) were used to guide the preparation of this INRMP. As defined by the SAIA, natural resource management programs on military lands should be consistent with the use of those lands to ensure the preparedness of the Armed Forces and should provide for: (1) the conservation and rehabilitation of natural resources; (2) the sustainable multipurpose use of the resources, which include hunting, fishing, trapping, and nonconsumptive uses; and (3) public access to

military installations to facilitate the use of these resources, subject to safety requirements and military security.

The SAIA further states that, “Consistent with the use of military installations to ensure the preparedness of the Armed Forces, each [INRMP]... shall, to the extent appropriate and applicable, provide for:

- Fish and wildlife management, land management, forest management, and fish- and wildlife-oriented recreation;
- Fish and wildlife habitat enhancement or modifications;
- Wetland protection, enhancement, and restoration, where necessary for support of fish, wildlife, or plants;
- Integration of, and consistency among, the various activities conducted under the plan;
- Establishment of specific natural resource management goals and objectives and time frames for proposed action;
- Sustainable use by the public of natural resources to the extent that the use is not inconsistent with the needs of fish and wildlife resources;
- Public access to the military installation that is necessary or appropriate subject to the requirements necessary to ensure safety and military security;
- Enforcement of applicable natural resource laws (including regulations);
- No net loss in the capability of military installation lands to support the military mission of the installation; and
- Such other activities as the secretary of the military department determines appropriate.”

Implementation of this INRMP will be achieved through the accomplishment of Priority Planned Actions identified in Chapters 4 and 5. Priority Planned Actions are those actions that Camp Pendleton commits to implementing within the duration of this plan that will help ensure achievement of Camp Pendleton’s natural resource management goals and objectives as well as SAIA requirements. Other Planned Actions are also presented in Chapters 4 and 5 of this INRMP and will be implemented as funding and resources permit. Other Planned Actions represent desired, but not essential, actions that will further support the military mission, enhance integrated natural resource management and support stewardship of resources entrusted to the Marine Corps. To ensure no net loss in the capability of Camp Pendleton’s lands to fulfill military operational requirements, implementation of all planned actions will be conducted in an adaptive manner, adjusting management priorities and methodologies to accommodate changing natural resource and mission requirements. The DoD and Camp Pendleton’s military and civilian management and land users recognize that degradation of the land marginalizes its usefulness for realistic training, thereby degrading combat readiness now and for the future.

1.1.3 Natural Resource Management Drivers

Camp Pendleton, like all military installations, has needs or drivers that must be satisfied for the installation's mission to continue without disruption. Common with other federal agencies are legal or regulatory drivers, such as the federal ESA and CWA that require compliance to ensure continuance of the military mission. Unique to Camp Pendleton are a myriad of installation specific drivers that are defined by the Base's mission, land uses to support the mission, geographic location, and natural resources affected by the mission. Identification of the *primary* drivers at Camp Pendleton provided the basis for establishment of natural resource management goals and objectives and the goals of this INRMP.

As the Marine Corps' premiere training facility on the West Coast, the overarching natural resource management driver is to ensure usable land, airspace, and sea space remain available for the continuance of training. Such assurance requires beach access for amphibious landings; open space and a variety of vegetation types for personnel and wheeled and tracked vehicle maneuvers; firing ranges and dedicated impact areas for the receipt of ordnance; airspace which can accommodate hazardous live fire training, close terrain flying, take-offs and landings, heavy lift operations, etc.; and flexibility to alter resource utilization to accommodate changing mission objectives.

A number of Camp Pendleton's *primary* natural resource management drivers to ensure long term sustainability of the Base's military mission include the need to:

- Maintain sufficient undeveloped lands and varied vegetation for training as well as sensitive species;
- Monitor mission encroachment, both internally and externally;
- Manage all real property assets, real estate agreements, and military and nonmilitary activities, to ensure all land use activities are compatible with the mission and the needs of sensitive natural resources;
- Minimize wildfire frequency on Camp Pendleton to ensure human safety, protect property (on and off Base), and minimize land degradation and/or habitat type conversions;
- Prevent, where feasible, degradation of the land and associated sensitive resources to ensure realistic training and military readiness;
- Ensure compliance with the federal ESA, and other applicable federal natural resource regulations such as the CWA, Rivers and Harbors Act of 1899, and Migratory Bird Treaty Act, through avoidance and minimization of impacts to sensitive species and their habitats on Base; and
- Maintain a level of involvement in regional ecosystem initiatives to monitor and track the sustainability of natural resources of regional significance, relative to the Base's natural resource assets, to ensure Camp Pendleton does not become an "ecological island" and the last bastion of many endangered and threatened species.

Appendix B provides a detailed list of applicable regulatory and natural resource management drivers.

1.2 INRMP DEVELOPMENT, COORDINATION, EVALUATION, AND UPDATES

A core working group within the Environmental Security office, consisting of professional planners, natural resource specialists, and biologists, took the lead effort in coordinating development of Camp Pendleton's INRMP. This working group obtained focused input and guidance from individuals representing critical interests of Camp Pendleton and has ensured this INRMP reflects involvement of a cross section of land users and land managers at Camp Pendleton. A list of the Base's internal stakeholders involved in developing, reviewing, revising, and/or approving Camp Pendleton's INRMP is provided in Appendix C.

Camp Pendleton recognizes that natural resource management is a dynamic process and that the INRMP will need to be evaluated and revised frequently. Upon completion of the initial plan (October 2001), semiannual reviews and updates will be conducted by the Natural Resource Department to (1) accommodate changes in the military mission and natural resource management objectives, (2) incorporate lessons learned from Base projects, regional activities, or scientific studies, (3) incorporate agreements with regulatory agencies, and (4) ensure the continued usefulness of this plan. The Planning Branch within the Natural Resources Department of the Assistant Chief of Staff, Environmental Security is the Camp Pendleton lead for conducting the semiannual reviews and the INRMP liaison with the wildlife agencies.

During these semiannual reviews, natural resource management goals and objectives, Priority Planned Actions, and Other Planned Actions will be reviewed with the appropriate managers to document progress, identify additional actions required or desired, and revise implementation schedules and priorities. As part of these reviews the USFWS and California Department of Fish and Game (CDFG) will be involved in the evaluation of processes, results, and implementation of established milestones and timelines for specific projects and programs and a review of ecosystem, species, and habitat goals established in conservation management plans. New projects, data, understanding of natural processes and species, and lessons learned from completed and ongoing projects and practices will be incorporated as appropriate during these INRMP reviews.

The INRMP will be reviewed as part of every other semiannual review, to assess the effectiveness of integration. Findings from these reviews will be presented as part of an Environmental Impact Review Board meeting to update senior Base leaders of the status and effectiveness of the plan. During these reviews, the effectiveness of the INRMP in preventing "net loss in the capability of military lands to support the military mission" shall be evaluated.

Periodically, but in no case greater than every five years, the INRMP will be reissued as required by the Sikes Act. The continuous involvement of the USFWS, CDFG, and the public (through ongoing availability of this INRMP on the Base's web site) is anticipated to allow the reissuing of the INRMP on a more frequent basis.

The formal Headquarters, Marine Corps Environmental Compliance Evaluation (ECE) Program will also assess the implementation of the INRMP. The ECE requires an onsite evaluation every three years by an independent team established by Headquarters Marine Corps, an annual review and validation of a Plan of Action and Milestones (POA&M) that follows up formally on any deficiencies identified during the Headquarters Marine Corps ECE, and an annual Self-Audit Program.

The effectiveness of Camp Pendleton's natural resource management program and INRMP will be determined through periodic measuring and monitoring of species populations, habitat quantity and quality, and habitat values. These values will then be compared against established goals and commitments. Initially, threatened and endangered species goals (established in consultation with the USFWS) in the Camp Pendleton Estuarine and Beach Ecosystem Conservation Plan (Appendix D), Riparian Ecosystem Conservation Plan (Appendix E), and, when finalized, Listed Upland Species Management Program (Appendix F) will be used to determine effectiveness. As Camp Pendleton further refines its ecosystem based management approach, additional measures of success may be added.

1.2.1 Public Comment

The SAIA mandates, "each military department shall provide an opportunity for the submission of public comments on [the INRMP and on] changes to cooperative plans..." Previously, preparation of management plans did not require public involvement. Through amendments to the Sikes Act, members of the public, advocacy groups, and interested citizens have been afforded an opportunity to review and comment on the INRMP during its preparation. The public comment period on the initial INRMP was from 18 May 2001 to 2 July 2001. Copies of the INRMP were placed in libraries in San Clemente, Oceanside, and Fallbrook and it was available on the Camp Pendleton web site. Notifications of the availability of the INRMP and the public review and comment period were made by letter, mailed to over 65 individuals and organizations, and by published notices in the Orange County Register, North County Times, and the San Diego Union-Tribune. Appendix G documents public comments received on the Draft INRMP during that period and Camp Pendleton's response to those comments. Comments received after the deadline have been/will be considered during reviews and updates to the INRMP.

Camp Pendleton's Final INRMP will be posted and maintained on the Camp Pendleton web site for public review and comment. Changes will be posted to the web site as they are developed and identified for ease of review by interested parties. The web site will provide interested members of the public information on how and where to submit their comments. No specific deadlines are anticipated to be established so members of the public will have the opportunity to submit comments at any time. Comments received will be reviewed at the semiannual review following their receipt.

1.2.2 Resource Agency Coordination

Section 2904 of the SAIA states that the INRMP shall reflect the “mutual agreement” of the USFWS, the state fish and wildlife agency, and the DoD “concerning conservation, protection, and management of fish and wildlife resources.” The requirement for mutual agreement is further clarified by the distinction that “nothing in this title enlarges or diminishes the responsibility and authority of any State for the protection and management of fish and resident wildlife.”

The mutual agreement process with the U.S. Fish and Wildlife Service and the California Department of Fish and Game consisted of a series of “planning/coordination sessions” and document review meetings. Included in discussions were the requirements of the SAIA; guidance and requirements of the USFWS; comments, ideas, and recommendations on structure and format of the document; and regional conservation programs. This revision reflects the coordination process to date.

The Carlsbad Office of the USFWS was contacted in early April 2001 to arrange for discussions and review of the Camp Pendleton INRMP. No meetings or discussions were held until after the Draft Final INRMP was provided to them on 3 May 2001. Meetings and discussions were held on 8 May, 19 June, 3 July (joint meeting with CDFG), 19 July (joint meeting with CDFG), 7 August (joint meeting with CDFG), 16 August and 4 September (joint meeting with CDFG). California/Nevada Operations Office/Region I Sikes Act review guidance and requirements were published 31 July 2001 and provided to Camp Pendleton at the 16 August meeting. This guidance expanded upon USFWS requirements for environmental contaminants and migratory bird considerations in INRMPs.

The South Coast Regional Office of the CDFG was contacted in late January 2001 to arrange for discussions and review of the Camp Pendleton INRMP. The Draft Final INRMP was provided to the CDFG on 8 May 2001 with a short informal meeting. Meetings and discussions were held on 30 March, 6 June, 26 June, 3 July (joint meeting with USFWS), 19 July (joint meeting with USFWS), 7 August (joint meeting with USFWS), and 4 September (joint meeting with USFWS).

Involvement with the U.S. Fish and Wildlife Service and the California Department of Fish and Game is expected to continue indefinitely as the “planning/coordination sessions” will be ongoing. These agencies will participate, to the extent practicable based on staffing availability, in the semiannual review process by providing comments, recommendations, and input on the status of regional processes, surveys, and species.

1.2.3 ESA Section 7 Consultation

This INRMP reiterates the Base’s compliance with the Endangered Species Act (1973, as amended), as established through Biological Opinions issued by the USFWS for Camp Pendleton over the last several years, including the *Biological Opinion (1-6-95-F-02) for Programmatic Activities and Conservation Plans in Riparian and Estuarine/Beach Ecosystems on Marine Corps Base, Camp Pendleton* (the “Riparian BO,” USFWS 1995a)

and the pending Programmatic Uplands Endangered Species Management Plan (expected during Calendar Year 2002).

Many of the activities and actions proposed to be conducted as part of this INRMP are required as terms and conditions of existing Biological Opinions and, therefore, do not require Section 7 consultation. All other activities and actions have been and will continue to be evaluated for consistency with existing Biological Opinions or will be addressed in the pending Uplands consultation. Actions outside of the scope of existing Biological Opinions or the pending Uplands consultation will undergo separate Section 7 consultation on a project-by-project basis to determine if there are any adverse effects to listed species.

1.3 MILITARY NATURAL RESOURCES STEWARDSHIP

1.3.1 History of Military Natural Resources Management

The 25 million acres of public land managed by the DoD includes national assets of unique ecological value and biological diversity. Since 1823, military forces have been called upon to oversee or manage public lands and natural resources, including lands set aside as national parks (Leslie et al. 1996). Over the past four decades, the military has strengthened its commitment to natural resources management through adoption of both the philosophy and principles of ecosystem management, as described below.

Passage of the Conservation Programs on Military Reservations Act (Sikes Act) in 1960 (Public Law 86-797) provided the legal basis for wildlife conservation and public access for recreation on military land. The Sikes Act also authorized the collection of fees and the development of cooperative plans by the military, U.S. Fish and Wildlife Service, and state fish and game agencies. During this period, however, policies encouraged consumptive uses of natural resources, such as agricultural leasing mainly for grazing (Leslie et al. 1996). Revenues generated from grazing and other programs such as forestry and hunting and fishing programs became the major source of funding for natural resources management programs on DoD installations.

Growing public interest in natural resources, and a general shift in public policy toward "multiple use" of public lands and management for "sustained yield," brought increasing pressure on natural resources management in the 1970s and 1980s (Leslie et al. 1996). In addition, a host of environmental protection statutes (e.g., National Environmental Policy Act, the Endangered Species Act, Clean Water Act, Clean Air Act, etc.) added new requirements for DoD and other Federal land managers. The introduction of new environmental cleanup and hazardous waste control requirements, (e.g., Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA] and Resource Conservation and Recovery Act [RCRA]) gave rise to DoD's multibillion dollar hazardous waste management and Installation Restoration programs.

During this time, little institutional (DoD) incentive developed to increase either staffing or funding for natural and cultural resources programs (Leslie et al. 1996). As natural resources management programs continued to pursue multiple and consumptive use management

strategies (e.g., row crop agriculture, grazing, timber, hunting and fishing, etc.) and as training lands became increasingly degraded, the need for natural resources management and ecological protection became apparent (Leslie et al. 1996). In response, DoD established a natural resources management program office and many installations shifted natural resources managers into newly created environmental offices. This development strengthened environmental research and management activities.

At the close of the 1980s, DoD Directive 4700.4 (Natural Resources Management Program) was issued, calling for development of Integrated Natural Resources Management Plans on military installations. These plans, which were intended to help balance competing interests, began to set the stage for a new approach to resource management on military installations.

1.3.2 Emergence of Ecosystem Management Philosophy

Throughout the 1990s, the military began to take stock of its natural resources management responsibilities and considered new approaches for improving program effectiveness. Initiation of strategic planning sessions resulted in new policy directives and instructions, funding priorities, strategic partnerships, resource inventories, and a transition to integrated planning. Military departments first completed audits of current programs and made commitments to complete biological resource inventories. Training for natural resources managers also improved. (Leslie et al. 1996)

To ensure support of the military mission while managing natural resources, it was recognized that land management needed to be integrated with operational and training objectives. Geographic Information System technology greatly facilitated analyses of land condition and training requirements and became a useful and widespread tool. By this time, the military had also begun reaching out to others in the government and the private sectors to provide additional expertise and to help develop solutions to common problems. The U.S. Fish and Wildlife Service, state fish and game agencies, U.S. Forest Service, and The Nature Conservancy were among the many organizations invited to serve as partners in developing new strategies for natural resources management on military lands. (Leslie et al. 1996)

The emergence of a new philosophy and ethic was realized in 1994, when the DoD published its “Ecosystem Management Policy Directive.” This policy stated that military installations will use ecosystem management to: (1) restore and maintain ecological associations that are of local and regional importance and compatible with existing geophysical components (e.g., soil, water); (2) restore and maintain biological diversity; (3) restore and maintain ecological processes, structures, and functions; (4) adapt to changing conditions; (5) manage for viable populations, and (6) maintain ecologically appropriate perspectives of time and space. (Leslie et al. 1996)

In 1995, the Department of Defense, including as many as 60 military trainers/operators and natural resources managers, along with The Nature Conservancy, federal and state land management agencies, several private sector interest groups, and The Keystone Center engaged in a major national dialogue (The Keystone Center 1996) to develop policy

guidance for enhancing and protecting DoD lands in a way that is integrated with the military mission. The dialogue (often referred to as the Keystone Dialogue) revealed strong support by the DoD for biodiversity conservation on military lands and affirmed that conservation of DoD's exceptional natural heritage is important to the military lands for the following principal reasons (The Keystone Center 1996):

- Biodiversity conservation is essential to sustaining the natural landscapes required for the training and testing necessary to *maintain military readiness*. Managing for biodiversity can help ensure that lands and waters are maintained in a "healthy condition" and thereby facilitate greater flexibility in land use for military operations.
- Biodiversity conservation is a central component of ecosystem management, which has been embraced as DoD's natural resources management strategy. Given DoD's significant investment in conserving and protecting the environment, this strategy promises the greatest return on investment -- *it is simply the right thing to do and the smart way of doing business*.
- Biodiversity conservation can *expedite the compliance process and help avoid conflicts*. Proactive management for biodiversity can provide greater certainty in mitigation for environmental impact assessment processes under the National Environmental Policy Act as well as consultation processes under the Endangered Species Act. On a number of installations, conservation efforts have helped avoid the designation of critical habitat by showing that the military's conservation plans provide adequate protection for habitat or have provided greater flexibility in training activities while meeting habitat protection requirements.
- Citizens demand that federal land managers demonstrate responsible stewardship of public lands. The practice of biodiversity conservation fosters good will within the communities surrounding military installations, which in turn *engenders public support for the military mission*. A strong commitment to stewardship also tends to strengthen institutional relationships among government agencies that would have some involvement in the resolution of resource management or environmental protection issues.
- Biodiversity conservation is essential to ensuring the integrity of the natural environments that are home to our nation's soldiers, sailors, airmen, and Marines. By helping to maintain aesthetically pleasing surroundings and expanding opportunities for outdoor recreation, managing for biodiversity can *improve the quality of life of our nation's military personnel and their families*.

This new, emerging philosophical shift and subsequent policy emphasis (see below) also gained support through increases in budgets for conservation programs during the past decade. In 1990, Congress recognized a need to enhance stewardship efforts and created the Legacy Resource Management (Legacy) Program. The Defense Appropriations Act of fiscal year 1991 directed DoD to allocate an additional \$10 million for natural and cultural

resources management. This amount increased to \$25 million in fiscal year 1992, and \$50 million annually in 1993, 1994, and 1995. Although the Legacy program has since been scaled back, DoD and headquarters offices of the Military Departments are expected to sustain funding for high priority conservation programs. (Leslie et al. 1996)

1.3.3 DoD Policy and Programs

In its implementation of ecosystem management as a tool for conserving natural resources on military lands, the DoD established the following principles (U.S. DoD 1994):

- Ecosystem management is the basis for future management of DoD lands and waters. It will blend multiple-use needs and provide a consistent framework for managing DoD installations, ensuring the integrity of ecosystems.
- Ecosystem management is a goal-driven approach to environmental management at a scale compatible with natural processes, recognizes social and economic viability within functioning ecosystems, and is realized through effective partnerships among private and government agencies.
- Ecosystem management is a process that considers the environment as a complex system functioning as a whole, not as a collection of parts, and recognizes that people and their social and economic needs are integral parts of the whole.

The goal of ecosystem management, as established by DoD, is to ensure that military lands support present and future training and testing requirement while preserving, improving, and enhancing ecosystem integrity. Over the long term, this approach will maintain and improve the sustainability and biological diversity of terrestrial and aquatic ecosystems while supporting sustainable economies, human use, and the environment required for realistic training operations (U.S. DoD 1996).

The DoDI 4715.3 (Environmental Conservation Program) established the following principles and guidelines:

- Maintain and improve the sustainability and native biological diversity of ecosystems.
- Administer with consideration for ecological units and timeframes. Ecosystem management requires consideration of the effects of installation programs and actions at spatial and temporal ecological scales that are relevant to natural processes.
- Support sustainable human activities. People and their social, economic, and national security needs are an integral part of ecological systems, and management of ecosystems depends upon sensitivity to these issues.

- Develop a vision of ecosystem health. Existing social, and economic conditions should be factored into the vision.
- Develop priorities and reconcile conflicts.
- Develop coordinated approaches to work toward ecosystem health. Since ecosystems rarely coincide with ownership and political boundaries, cooperation across ownership is an important component of ecosystem management.
- Rely on best science and available data.
- Use benchmarks to monitor and evaluate outcomes.
- Use adaptive management. Ecosystems are recognized as open, changing, and complex systems. Management should be flexible to accommodate the evolution of scientific understanding of ecosystems.
- Implement through installation plans and programs. An ecosystem's desirable range of future conditions should be achieved through linkages with other stakeholders.

The DoD ecosystem management guidelines mirror the principles set forth within California's Coordinated Regional Strategy To Conserve Biological Diversity, a 1991 Memorandum of Understanding (MOU). The DoD continues to shift its focus to provide for the protection of individual species through management of ecosystems. This approach requires land managers to form partnerships for information exchange, pool resources for conducting mitigation and studying natural resources, and collaborate to develop a shared vision for ecosystems.

1.3.4 Camp Pendleton's Ecosystem Management Philosophy

Camp Pendleton's overall approach to managing natural resources reflects the principles of ecosystem management, consistent with DoD and Marine Corps policy. Camp Pendleton's natural resource management approach seeks to balance the twin goals of maximizing land use for military readiness and maintaining native habitats. The overriding focus of Camp Pendleton's natural resource management is to develop, promote, and refine a comprehensive, ecosystem based management program for resource conservation. Such an ecosystem based approach is intended to facilitate maximum support of the Base's military training mission and infrastructure, while simultaneously promoting both the sustainability of native species and habitat diversity and compliance with applicable laws and regulations.

With 18 federally listed threatened or endangered species known to exist on or use the Base and numerous additional sensitive plant and animal species, Camp Pendleton recognizes the need for an ecosystem approach to natural resource management, as traditional species-by-species (and project-by-project) management is inefficient and impedes mission accomplishment. An ecosystem approach is more efficient and balances the needs of all

ecosystem components (including mission, biological, economic, and human elements), provides comprehensive compliance with the Endangered Species Act, and integrates both DoD and DoI guidelines. Camp Pendleton's strategy for natural resource conservation and management includes habitat enhancement (e.g., exotics control, erosion control) and the avoidance and minimization of adverse impacts through implementation of programmatic instructions (published rules and guidelines for land users on Base).

Essential to ecosystem management is knowledge of the abundance, diversity, and status of resources both on and off Camp Pendleton. Development and maintenance of such inventories is aided by the use of Geographic Information System (GIS), Global Positioning System (GPS), and remote sensing technology, combined with periodic monitoring and surveys. The routine collection of data and the application of state-of-the-art technology maximizes the quality and quantity of information available to land managers, enabling adaptive management through the evaluation of potential impacts, biological trends, efficacy of management initiatives and identification of data gaps. Updated information and "lessons learned" may then be incorporated into management protocols and programmatic instructions for users of the Base. This ability to evaluate land use compatibility and to adaptively manage resource utilization minimizes the dedication of Camp Pendleton lands for single species conservation, while maximizing land area available for training.

Camp Pendleton's ecosystem management is intended to complement and support local and regional conservation efforts to conserve multiple habitats and species. Throughout the year, Camp Pendleton personnel meet with Marines, civilians, and community groups to discuss the Base's resources and conservation programs in an effort to promote ecosystem management principles. These meetings facilitate exchanges of approach and data sharing and support increased conservation awareness throughout the region and specifically with adjacent landowners. It is the Base's intent to proactively manage activities, infrastructure development, and natural resources in a manner that both complements regional plans and initiatives and is consistent with the need to ensure training flexibility. Camp Pendleton supports its natural resources being a link in the region's "matrix of biodiversity" and not an "island of biodiversity."

Camp Pendleton, along with other jurisdictions, including the County of San Diego (as part of the MSCP), and seven cities developing the MHCP, form the core of remaining open space in coastal southern California. While Camp Pendleton and the Marine Corps support regional conservation planning and management efforts, conservation of natural resources, particularly sensitive biological resources, at Camp Pendleton is being planned separately from other regional planning efforts out of the need to maintain *operational flexibility* and to avoid the creation of preserves on DoD lands that have been specifically set aside for military training. The Marine Corps believes that most military activities are, and will continue to be, generally compatible with the conservation of biological resources.

In considering participation in regional ecosystem conservation initiatives for resolving land use conflicts, the Marine Corps considers the following principles (Brabham 1995):

- The overriding mission of DoD is the protection of the national security of the United States, and military activities on departmental lands are vital to fulfillment of that mission.
- Military lands cannot be used for the mitigation of impacts of non-department actions occurring off the installation that affect the environment.
- Military lands cannot be set aside as perpetual environmental preserves.
- While conservation is, and shall be, practiced on our installations, we maintain the flexibility to adapt our defense mission to political and technological developments.
- The DoD's first priority shall be to integrate the management of natural and cultural resources with the military mission within the ecosystem supporting the installation.
- Such agreements, and their projects, will not detract from the DoD national security mission, now or in the future.

Camp Pendleton continues its efforts to practice responsible stewardship of its lands and natural resources, while maintaining an interest in regional conservation and management planning. Camp Pendleton is mindful of the regional conservation planning process that is ongoing, and has expressed concern to local agencies and jurisdictions about the effect regional development continues to have on natural habitats, not only off-Base, but on Base as well. The Base wants to ensure that its training lands are viewed primarily in terms of their intended land use, that of military training, and that natural resource management efforts are designed to be in support of that military mission. To that end, Camp Pendleton is working to ensure that its land use planning efforts, and those of the region, are complementary, and together meet the region's species and habitat needs so that Camp Pendleton's open spaces can continue to be used in support of the Base's mission.

1.4 INRMP AND NATURAL RESOURCE MANAGEMENT GOALS

Goals are general expressions of desired future conditions that represent the long-range aim of management (Leslie et al. 1996). Natural resource management goals have been established at various levels of command and are incorporated into the programs at Camp Pendleton. Goals that are specific to natural resource management, public access, and recreation programs are presented with the descriptions of those programs in Chapters 4 and 5.

1.4.1 Marine Corps Natural Resource Goals

Marine Corps natural resources management goals are as follows (HQMC 1998):

- *Preserve the Marine Corps mission access to air, land, and sea resources;*

- *Strengthen national security by strengthening conservation aspects of environmental security; and*
- *Preserve the opportunity for a high quality of life for present and future generations of Americans.*

1.4.2 Camp Pendleton Natural Resource Management Goals

Identification of natural resources management goals was necessary to develop a natural resources management course of action. These goals determine management regimes and help set priorities. They are the standards by which the practicality and desirability of management actions are measured. Natural resource management goals fall within three broad categories (HQMC 2000): (1) goals that support mission requirements, (2) goals that ensure compliance with natural resources management and protection laws, and (3) goals for participation in regional ecosystem initiatives.

Natural resource management goals specifically adopted by Camp Pendleton are as follows:

- Manage Camp Pendleton's natural resources in a manner that accommodates ongoing and evolving military mission requirements, and conserves and protects those resources in accordance with compliance requirements and stewardship principles.
- Encourage regional plans and incentives that address conservation of native biodiversity, ecosystem sustainability, and watershed management issues to help ensure and protect the long term viability of both Camp Pendleton's military mission and its natural resources.
- Provide for multiple land uses that are compatible with the conservation of natural resources and training requirements.

1.4.3 INRMP Goals

The purpose of the Integrated Natural Resources Management Plan is to document and assist, as required, in the development, integration, and coordination of natural resource management on Camp Pendleton. Goals established for the INRMP are as follows:

- Provide baseline information and conditions that supports daily decision making and compliance with regulatory and planning processes, such as those required by NEPA, ESA, and CWA.
- Identify, document, and facilitate the organizational capacity, support, and linkages necessary for successful implementation and administration of the INRMP and management of Camp Pendleton's natural resources.

- Integrate the various natural resources management programs on Base to reduce overlap and redundancy and help Camp Pendleton manage natural resources more effectively so as to ensure that Camp Pendleton lands remain available and in good condition to support the military mission.
- Show the interrelationships between current and proposed individual components of natural resources management (e.g., vegetation, wetland, fish and wildlife, hunting and fishing), mission requirements, and other land use activities.
- Establish specific natural resource program management goals, objectives, and actions that will be implemented during the duration of the plan and time frames for proposed actions.
- Identify lower priority projects that may be done if required resources become available.
- Establish a process for the periodic review, update, and reporting of program goals, objectives, and projects within the INRMP.

1.5 NATURAL RESOURCE MANAGEMENT STRUCTURE

To ensure Camp Pendleton's military mission and environmental conservation and management programs are compatible and mutually supportive, multiple Base organizations have a role in managing, and supporting, Camp Pendleton's natural resource management programs. The hierarchy and relationship among the Base organizations involved in natural resources stewardship is presented in Figure 1-1. A description of the role and function of each organization is presented in Appendix H.

The Assistant Chief of Staff, Environmental Security (AC/S ES) provides the lead and overall coordination of environmental compliance and natural resource management on MCB Camp Pendleton. This includes planning for, and coordinating the accomplishment of, established goals, objectives, and planned actions to support the military and stewardship missions. Technical guidance is routinely provided by the AC/S ES regarding soil and wetland conservation; vegetation, fish and wildlife, and listed species management; outdoor recreation; cultural resources protection; and GIS data management. The AC/S ES also provides technical environmental advice on both military and nonmilitary NEPA documents, facility planning and military construction (MILCON projects), maintenance activities, military operations, and other proposed actions that may affect natural and cultural resources. Information on the plants and wildlife present on MCB Camp Pendleton is gathered, maintained, and disseminated by the AC/S ES. Site specific data developed as part of projects and actions conducted by tenants or other Base organizations or staff sections are reviewed for technical accuracy and incorporated with other data in support of that project, ongoing conservation programs, and future activities. The AC/S ES serves as the lead for planning and resolving natural resource compliance issues such as wetland and endangered species regulatory requirements and serves as MCB Camp Pendleton's primary point of contact in dealing with regulatory agencies responsible for enforcement of

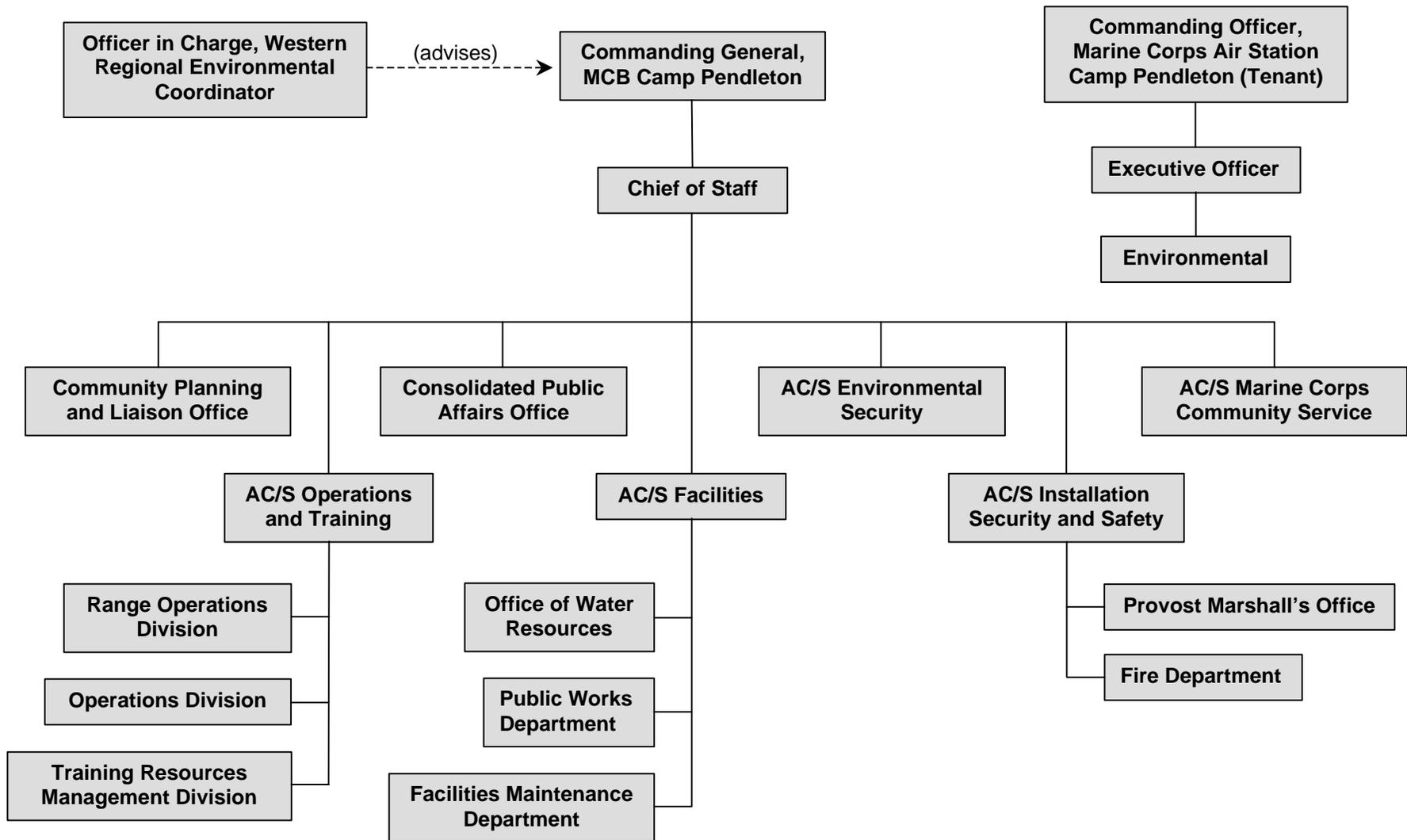


FIGURE 1-1. Organizational Chart for MCB and MCAS Camp Pendleton. (Note: not all offices are represented; only those with a direct or indirect role in natural resources management, integration, and/or enforcement are illustrated.)

[This Page Intentionally Left Blank.]

environmental regulations including endangered species and Clean Water Act Section 404/401 requirements. The hierarchy and relationship among the departments, divisions, and branches under the AC/S ES is presented in Figure 1-2 (a description of each is presented in Appendix H).

Aboard the Air Station, the MCAS Environmental Officer provides policy development, program oversight, data management, and regulatory liaison for natural and cultural resources. Although the Air Station and Marine Corps Base are separate commands, staff regularly collaborates to ensure that management and planning efforts are coordinated between the installations.

1.6 RELATIONSHIP OF THE INRMP TO EXISTING PLANS AND ORDERS

The INRMP is not intended to replace existing Base Orders, policy, range and training operations guidance, or military management plans. Rather, the purpose of the INRMP is to document and assist, as required, in the development, integration, and coordination of natural resource management programs with other Base plans and programs. Where natural resource programs are currently not documented through formal planning efforts, the INRMP may serve as the means to formally establish such programs. Moreover, this INRMP is intended to facilitate the integration of existing natural resource management actions (plans and programs) with the primary military mission of Camp Pendleton: military training and support.

1.7 NATURAL RESOURCE MANAGEMENT PROGRAM AND PROJECT FUNDING

Camp Pendleton will seek appropriate funding for its natural resources management program and will set priorities based on the amount of funds actually received. The Priority Planned Actions within this INRMP are those actions that Camp Pendleton commits to implementing by the end of the calendar year noted after the action. Actions identified as Ongoing, are carried out each year or as required. From a funding perspective, Priority Planned Actions that require funding can generally be compared to Class 1 or Class 2 budget projects. (Class 1 projects are those that must be done because the Base is out of compliance and therefore must be funded in the current fiscal year to correct the noncompliance situation or to remain in compliance in the current fiscal year. Class 2 projects are those that should be funded in order to remain in compliance within the deadlines given for compliance.) Other Planned Actions are identified for implementation as funding and resources permit and can generally be compared to Class 3 projects (those that are not explicitly required by law but support natural resource management goals and objectives).

Budget development and INRMP implementation are both continuing and interrelated processes. Natural resource funding requests should support the INRMP planned actions and vice versa. While not all natural resource related expenditures are identified within the INRMP (e.g., staff, supplies, overhead funding), all planned actions within the INRMP *that*

require funding should be incorporated into budget planning documentation (e.g., Program Objectives Memorandum and biannual budgets). As budgets are reevaluated and funding allocations change, so must INRMP planned actions, prioritizations, and implementation years be adjusted, reevaluated and possibly reprioritized. The tracking and monitoring of progress toward INRMP goals and objectives and the adaptive management of resources will require revisions/reprioritizations of INRMP planned actions and corresponding budget requests.

Costs associated with the execution of Priority Planned Actions and Other Planned Actions required identification at the earliest practicable stage of a proposed action. The Base organization responsible for implementation of the action is responsible for budgeting for and funding the action.

1.8 ORGANIZATION OF THE INRMP

Chapter 1 presents background and introductory information. Described within this chapter are legal requirements, mandates, and authority to prepare the INRMP; DoD's and Camp Pendleton's philosophy on ecosystem management; and organizational roles and responsibilities for natural resource management; program funding approach; and review and update process for the ongoing INRMP process.

Chapter 2 describes the location and mission of Camp Pendleton, existing and historic land uses, both military and nonmilitary, and land uses and conservation programs within the region surrounding the Base. Also presented within this chapter are the affects that regional issues have on Camp Pendleton.

Chapter 3 provides Camp Pendleton's natural resource baseline information, describing the physical, biological, and regulatory setting in which the Base currently operates.

Chapters 4 and 5 provide an historic account of natural resource management at Camp Pendleton, current and planned program descriptions, goals and objectives, planned actions, and timelines, and the integration and enforcement mechanisms in place for natural resources management, public access, and natural resource related recreation.

Throughout the INRMP, program goals, objectives, and planned actions are identified that have been established to help achieve Camp Pendleton's natural resource management goals and fulfill needs established by drivers. Projects and planned actions are separated into Priority Planned Actions and Other Planned Actions. Priority Planned Actions are those projects and actions that Camp Pendleton has committed to accomplishing and/or are required by laws, regulations, or other agreement. The commitment of funding for Priority Planned Actions are driven by regulations or agreements and is not a commitment of Camp Pendleton to obligate funds prior to Congressional authorization. Other Planned Actions are those projects and actions that Camp Pendleton desires to accomplish, but due to restrictions and limitations on fiscal and personnel resources cannot commit to undertaking at this time. During semiannual reviews, Other Planned Actions will be reviewed to see if sufficient resources are available to allow them to be conducted.

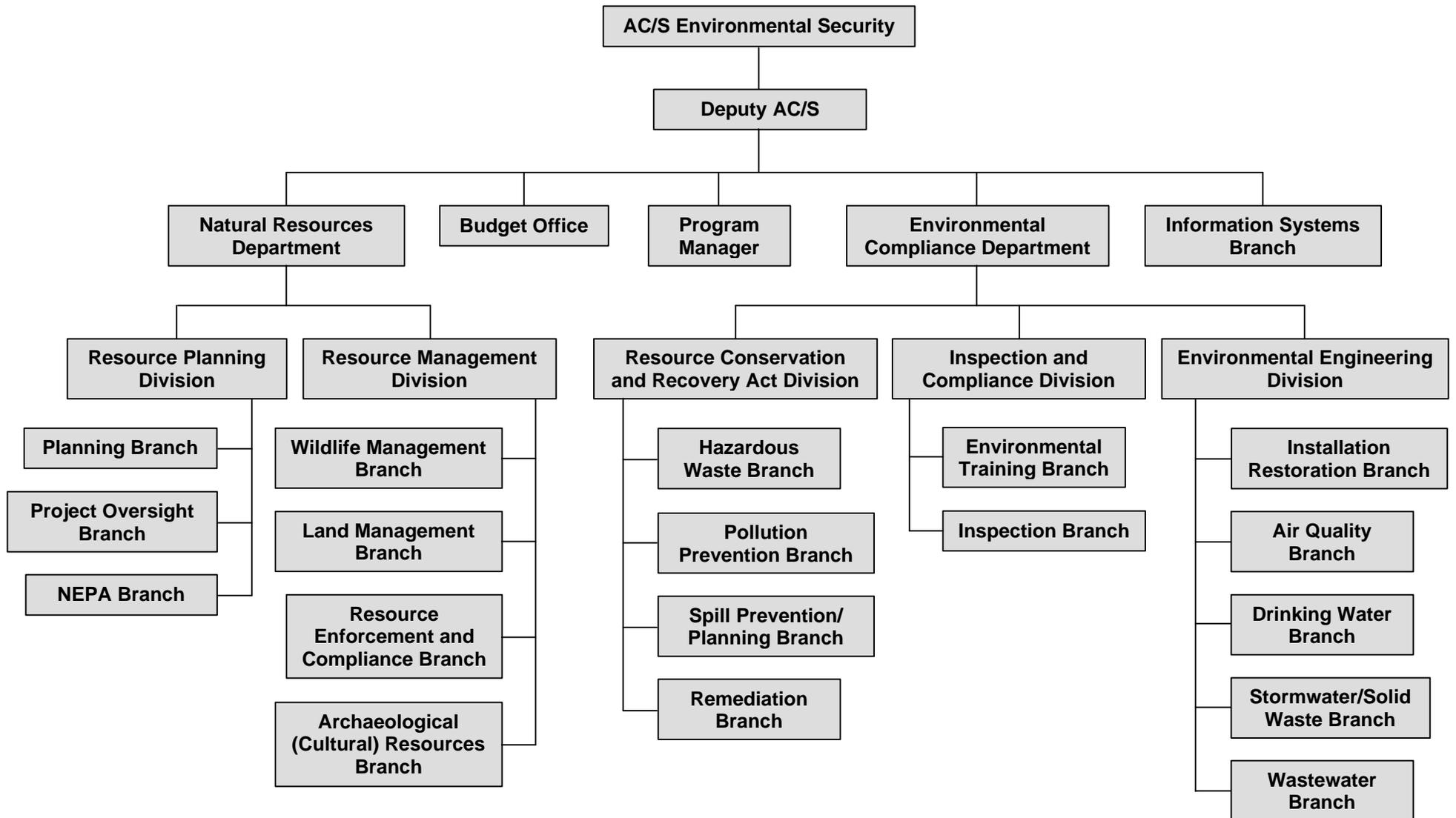


FIGURE 1-2. Organizational Chart for AC/S Environmental Security, MCB Camp Pendleton.

[This Page Intentionally Left Blank.]