FINAL

INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN
FOR
NAVY OPERATIONAL SUPPORT CENTER SACRAMENTO
SACRAMENTO, CALIFORNIA

AUGUST 2014

Prepared For:

Navy Operational Support Center Sacramento
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Under Contract With:

Commander, Navy Region Southwest
&
Naval Facilities Engineering Command Southwest
San Diego, California 92132
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Integrated Natural Resources Management Plan
Navy Operational Support Center Sacramento
Sacramento, California

APPROVAL

This Integrated Natural Resource Management Plan (INRMP) fulfills the requirements of the Sikes Act (16 U.S.C. 670a et seq.) as amended, U.S. Department of Defense Instruction 4715.03 and Chief of Naval Operations Instruction 5090.1D. This INRMP was prepared and reviewed in coordination with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife in accordance with the 2006 Memorandum of Understanding for a Cooperative Integrated Natural Resource Management Program on Military Installations.

Endorsing Official - U.S. Department of the Navy, Region Southwest

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Concurred by: **Jennifer Norris**
Field Supervisor
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Concurred by: **Tina Bartlett** **Date**
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EXECUTIVE SUMMARY

The purpose of this Integrated Natural Resources Management Plan (INRMP) is to provide Naval Operational Support Center (NAVOPSPTCEN) Sacramento, California with a viable framework for management of natural resources on lands it owns or controls. Required by the Sikes Act (16 U.S. Code [USC] § 670 et seq., as amended) for the U.S. Department of Defense (DoD), the INRMP is a long-term planning document to help guide the installation commander's management of natural resources more effectively, while ensuring no net loss in the capability of military installation lands to support the military mission of the installation.

Designed to facilitate both stewardship and compliance with natural resource laws in the context of military mission requirements, this INRMP integrates natural resource components of existing NAVOPSPTCEN Sacramento plans, environmental documents, and the requirements of all applicable DoD, U.S. Department of the Navy (U.S. Navy), and installation regulations and guidelines. Specifically, this INRMP fulfills the requirements of the Sikes Act (as amended),Department of Defense Instruction (DoDI) 4715.03 18 March 2011, and Chief of Naval Operations Instruction (OPNAVINST) 5090.1D, the *Environmental and Natural Resources Program Manual*, which charges Navy installations, with land and water resources suitable for conservation and management, to prepare and implement a comprehensive INRMP.

NAVOPSPTCEN Sacramento is located in the City of Sacramento in Sacramento County, California. The site comprises approximately 20.1 acres of the former Sacramento Army Depot (SAAD), located approximately 7 miles southeast of downtown Sacramento. The mission of NAVOPSPTCEN Sacramento is to provide operational, training, and administrative support for the Navy Reserve mission and to provide mission-capable units and individuals to the Navy's active duty component throughout the full range of operations during peacetime and war. It is also the mission of NAVOPSPTCEN Sacramento to develop, mentor, instruct, and retain Sailors, especially those at the junior level. The ultimate success of NAVOPSPTCEN Sacramento will be measured by their capability to build and maintain an efficient and effective force that will provide any command, whether they are Joint or US Navy Forces, with a Sailor who is a ready asset (DoN 2012).

This INRMP is the first natural resources management document that has been developed for NAVOPSPTCEN Sacramento. Based on the Baseline Assessment and Natural Resources Inventory (BA/NRI) conducted on NAVOPSPTCEN Sacramento in 2011, it was determined that, due to the presence and/or potential presence of special status species and suitable habitat on site, an INRMP would be required for the installation per the Sikes Act and DoDI 4715.03. Per the Sikes Act, it has been prepared in cooperation with the U.S. Fish and Wildlife Service (USFWS) and appropriate state fish and wildlife agencies. In California, this agency is the California Department of Fish and Wildlife (CDFW), formerly the California Department of Fish and Game. Mutual agreement from these agencies is sought for the fish and wildlife component of the INRMP, and an annual review with the agencies to discuss U.S. Navy installation-wide natural resources is mandatory. Agency agreement is formalized on the signatory pages at the front of this INRMP.

The U.S. Navy and NAVOPSPTCEN Sacramento will implement recommendations in this INRMP within the framework of regulatory compliance, U.S. Navy mission obligations, anti-terrorism and force protection limitations, and funding constraints. All actions contemplated in this INRMP are subject to the availability of funds properly authorized and appropriated under federal law. Nothing in this INRMP is intended to be nor may be construed to be a violation of the Anti-Deficiency Act (31 USC 1341 et seq.).

The primary goal of this INRMP focuses on avoiding or minimizing impacts to the overall ecosystem and its sensitive resources; increasing interaction with federal, state, and local agencies; and ensuring compliance with environmental legislation, regulations, and guidelines. This goal will ensure the success of the military mission and the conservation of natural resources. The general philosophies and methodologies used throughout the NAVOPSPTCEN Sacramento natural resources management program are focused on conducting required military mission activities while maintaining ecosystem viability.

For NAVOPSPTCEN Sacramento, the overarching goal of the INRMP is as follows.

> **GOAL:** Provide stewardship to protect, manage, and enhance the natural resources of NAVOPSPTCEN Sacramento while fulfilling the military mission and providing support necessary for effective strategic planning and administration of this INRMP.

In order to achieve the above goal, several key objectives for natural resources management have been identified for NAVOPSPTCEN Sacramento. These include the following:

- Ensure no net loss in the capability of the land and natural resources at NAVOPSPTCEN Sacramento to support its current and future military mission;
- Ensure compliance with applicable laws and regulations as they pertain to natural and cultural resources;
- Maintain and enhance the level of biodiversity within the constraints of the military mission;
- Implement adaptive management techniques to provide flexible and responsive management strategies based on scientific data gathered from monitoring programs, literature, and resource experts;
- Protect the quality of wildlife habitat, where feasible; and
- Maintain sufficient professionally trained natural resources personnel to implement, manage, and monitor the management strategies of the INRMP.

These general objectives are supported by several resource-specific management measures for obtaining the desired outcomes, which are described in Section 3.0, *Natural Resources Management*.

In compliance with the National Environmental Policy Act (NEPA) (42 USC 4321-4370, as amended) process, Naval Facilities Engineering Command Southwest (NAVFAC Southwest) prepared an Environmental Assessment (EA) for implementation of this INRMP and all projects associated with it (INRMP Guidance for Navy Installations 2006, Section 6.1; See Appendix B.)

The ASN (I&E) Memo of August 12, 1998, DoN Policy Memo 98-06: *Review of INRMPs Under NEPA*, has determined that Sikes Act requirements for INRMP implementation necessitate the preparation of NEPA documentation prior to INRMP approval. NEPA was created to assess the reasonably foreseeable environmental impacts of proposed agency actions, including potential avoidance or minimization of such impacts, and to ensure that agency decision-makers are aware of such impacts before deciding whether or how to implement agency actions.

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ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
ADUSD	Assistant Deputy Undersecretary of Defense
AMSL	above mean sea level
BA/NRI	Baseline Assessment and Natural Resources Inventory
BASH	Bird/Animal Aircraft Strike Hazard
BCC	Birds of Conservation Concern
bcf	billion cubic feet
BMP	best management practice
BO	Biological Opinion
BRAC	Base Realignment and Closure Act
CAA	Clean Air Act
CATEX	categorical exclusion
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CEC	Commission for Environmental Cooperation
CEQ	Council on Environmental Quality
CESA	California Endangered Species Act
CESU	Cooperative Ecosystem Studies Units
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNIC	Commander of Navy Installations Command
CNO	Chief of Naval Operations
CNRSW	Commander, Navy Region Southwest
CO	Commanding Officer
CPUC	California Public Utilities Commission
CSQA	California Stormwater Quality Association
CWA	Clean Water Act
DoD	U.S. Department of Defense
DoDD	U.S. Department of Defense Directive
DoDI	U.S. Department of Defense Instruction
DoDM	U.S. Department of Defense Manual
DOGGR	Division of Oil, Gas and Geothermal Resources
DoI	U.S. Department of Interior
DUSD	Deputy Undersecretary of Defense
EA	Environmental Assessment
EMS	Environmental Management System
EO	Executive Order
EPA	U.S. Environmental Protection Agency

ACRONYMS AND ABBREVIATIONS (CONTINUED)

EPR	Environmental Program Requirement
ESA	Endangered Species Act
ESOH	Environment, Safety and Occupational Health
FWCA	Fish and Wildlife Coordination Act
GIS	Geographic Information System
GOV	Government Owned Vehicle
GP	General Plan
HUC	Hydrologic Unit Code
INRMP	Integrated Natural Resources Management Plan
IPM	Integrated Pest Management
IPMP	Integrated Pest Management Plan
km	kilometers
MBTA	Migratory Bird Treaty Act
Metrics	Natural Resources Metrics
MOU	Memorandum of Understanding
U.S. Navy	Department of the Navy (see DoN acronym above)
NAVFAC	Naval Facilities Engineering Command
NAVFAC Southwest	Naval Facilities Engineering Command Southwest
NDAA	National Defense Authorization Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NAVOPSPTCEN	Navy Operational Support Center
NR	Natural Resources
NWI	National Wetland Inventory
O&MN	Operations and Maintenance Navy
OHV	off-highway vehicle
OPNAVINST	Chief of Naval Operations Instruction
OSD	Office of the Secretary of Defense
OUSD	Office of the Undersecretary of Defense
PL	Public Law
PARC	Partners in Amphibian and Reptile Conservation
PIF	Partners in Flight
POV	Privately Owned Vehicle
PWD	Public Works Department
RCC	Regional Reserve Component Command
SAAD	Sacramento Army Depot
SDSFIE	Spatial Data Standards for Facilities, Infrastructure and Environment
SECNAV	Secretary of the Navy

ACRONYMS AND ABBREVIATIONS (CONTINUED)

SECNAVINST	Secretary of the Navy Instruction
SNGS	Sacramento Natural Gas Storage
SPD	Special Planning District
SSC	Species of Special Concern
T&E	Threatened and Endangered
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USMC	U.S. Marine Corps
WAP	Wildlife Action Plan
WL	Watch List
WRCC	Western Regional Climate Center

SECTION 1
OVERVIEW

1.1 Purpose and Scope

The purpose of an Integrated Natural Resources Management Plan (INRMP) generally is to help installation commanders manage natural resources so as to facilitate the conservation and rehabilitation of natural resources on military installations, consistent with execution of the various military missions of such installations. Designed to facilitate both stewardship and compliance with natural resource laws in the context of military mission requirements, this INRMP integrates natural resource components of existing Navy Operational Support Center (NAVOPSPTCEN) Sacramento, California plans, environmental documents, and the requirements of all applicable U.S. Department of Defense (DoD), U.S. Department of the Navy (U.S. Navy), Navy Region Southwest and installation regulations and guidelines.

This INRMP is the first natural resources management document that has been developed for NAVOPSPTCEN Sacramento. The purpose of this INRMP is to provide a viable and implementable framework for the management of natural resources at NAVOPSPTCEN Sacramento. Required by the Sikes Act (16 U.S. Code [USC] § 670 et seq., as amended) for DoD, an INRMP is the primary means by which natural resources compliance and stewardship priorities are set, and funding requirements are determined. Implementation of projects is subject to the availability of funding

In accordance with the Sikes Act, as amended the INRMP is intended to:

- Provide a framework for recognizing and balancing environmental stewardship with mission readiness.
- Guide the installation Commander in the management of natural resources to support the installation mission.
- Protect and enhance natural resources for multiple uses, sustainable yield, and biological integrity.
- Ensure that natural resources management measures and military operations on the installation are integrated and consistent with stewardship and legal requirements.

By direction of the Office of the Undersecretary of Defense (OUSD) memo of August 8, 1994, *Implementation of Ecosystem Management in the Department of Defense*, INRMPs are required to ensure that ecosystem management is the basis for all future management of DoD lands and waters. Based on an ecosystem approach, this INRMP takes a large geographic view to ensure the overriding purpose of protecting the properties and functions of natural ecosystems (DoD Instruction [DoDI] 4715.03 *Natural Resources Conservation Program*). Because ecosystem boundaries are rarely synonymous with property ownership, installations such as NAVOPSPTCEN Sacramento are encouraged to form cooperative partnerships with resource management agencies, as appropriate, and take part in public awareness initiatives to manage ecosystems more successfully. The

OUSD memorandum provides principles and guidelines for implementing ecosystem management on DoD lands. This includes participation in regional ecosystem initiatives.

The Sikes Act, as amended requires the military services to prepare INRMPs in cooperation with the U.S. Fish and Wildlife Service (USFWS) and appropriate state fish and wildlife agencies. In California, this agency is the California Department of Fish and Wildlife (CDFW; formerly the California Department of Fish and Game). An INRMP should be negotiated with the goal of achieving mutual agreement of the parties concerning the conservation, protection, and management of fish and wildlife resources. This INRMP has been prepared in accordance with the Sikes Act, as amended and in cooperation with the USFWS and the CDFW. Agency agreement is formalized on the signatory pages at the front of this INRMP.

The U.S. Navy and NAVOPSPTCEN Sacramento will implement recommendations in this INRMP within the framework of regulatory compliance, national U.S. Navy mission obligations, anti-terrorism and force protection limitations, and funding constraints. All actions contemplated in this INRMP are subject to the availability of funds properly authorized and appropriated under federal law. Nothing in this INRMP is intended to be nor may be construed to be a violation of the Anti-Deficiency Act (31 USC 1341 et seq.).

1.2 Authority

The Sikes Act directs the DoD to take the appropriate management actions necessary to protect and enhance the land and water resources on all installations under its control. DoDI 4715.03, *Natural Resources Conservation Program*, has been implemented to establish fundamental land management policies and procedures for all military lands to preserve the military mission while simultaneously protecting the natural resources. The Office of the Under Secretary of Defense (DUSD) provides guidance to DoD installations in implementing Sikes Act requirements in the form of memorandums (DoD 2002; DoD 2004; DoD 2005). The Office of the Chief of Naval Operations Instruction (OPNAVINST) 5090.1D, *Environmental Readiness Program Manual*, 18 July 2011, *Chapter 24 Natural 488 Resources Management* (U.S. Navy 2011a), further establishes program responsibilities and standards for complying with resource protection laws, regulations and Executive Orders (EOs) to conserve and manage natural resources on U.S. Navy installations in the U.S. and its territories and possessions (refer to Appendix A). The U.S. Navy Chief of Naval Operations (CNO) INRMP *Guidance for Navy Installations, How to Prepare, Implement, and Revise INRMPs, April 2006*, supplies guidelines 493 on the process and procedure for developing an INRMP. Naval Facilities Engineering Command (NAVFAC) also provides the *Natural Resources Management Procedure Manual* (NAVFAC P-73, Volume 2) that instructs how to develop an INRMP and its content. Additional federal legal requirements that are the primary drivers for natural resources management are listed in Appendix A (USC, Public Laws [PL], EOs, and Code of Federal Regulations [CFR]).

In compliance with the National Environmental Policy Act (NEPA) (42 USC 4321-4370, as amended) process, NAVOPSPTCEN Sacramento prepared an Environmental

Assessment (EA) for implementation of this INRMP and all projects associated with it (*INRMP Guidance for Navy Installations* 2006, Section 6.1; See Appendix B.) NEPA documentation was prepared in accordance with CNO guidance on conducting NEPA analysis of alternatives and methodologies for accomplishing the management objectives of the INRMP (DoN 2010).

1.3 Mission Sustainability and the INRMP "No Net Loss" Requirement

The military mission, derived from Title 10 of the USC, requires the U.S. Navy to "maintain, train and equip combat-ready naval forces capable of winning wars, deterring aggression and maintaining freedom of the seas." In keeping with the principal use of military installations to ensure the preparedness of the U.S. Armed forces, the Sikes Act mandates that NAVOPSPTCEN Sacramento must ensure mission sustainability and see that there is no net loss to the military mission due to implementation of this INRMP. The INRMP shall provide for no net loss of the capability of the installation's lands to support the military mission.

Sustainability is a relative condition of the ecosystem and the military mission that can be measured. Sustainability may be considered as having at least several measurable components in the context of this INRMP: military use facilitation, soil and water resource protection, ecological integrity, cultural resource protection, and base safety for current and future use. For this INRMP, an impact to mission accomplishment has occurred when any of the above are constrained or when one of these conditions occurs:

- Quality of military training is impacted by natural resource restrictions.
- Training qualification objectives to deploy are not accomplished without significant delay or conflict.
- Environmental issues hamper scheduled operations.
- Conflict resolution impacts training intensity or tempo and the target resource condition is impacted.

The link between the installation's military mission and land use must be maintained by identifying and partitioning the requirement of resource protection and the military missions of the landowner and its tenant users. Management of natural resources can support the military mission by avoiding unnecessary conflicts between mission requirements and legal mandates regarding natural resources, promoting positive public relations, and enhancing the quality of life for site personnel.

1.4 Responsibilities

1.4.1 Internal Stakeholders

The following is a list of internal stakeholders and their role in supporting the installation and the development, revision, and implementation of this INRMP. Policy leadership and liaison with non-U.S. Navy partners is provided by the Commander, Navy Region Southwest (CNRSW) N40, NAVFAC Southwest, and NAVOPSPTCEN Sacramento.

CNO - The CNO serves as the principal leader and overall U.S. Navy program manager for the development, revision, and implementation of this INRMP. The CNO provides policy, guidance and resources for the development, revision, and implementation of the INRMP and associated NEPA documentation. The CNO approves all INRMP projects prior to submittal to regulatory agencies for signature (DoN 2006).

The Commander of Navy Installations Command (CNIC) - The CNIC reviews the entire INRMP. Their role is to ensure that installations comply with DoD, U.S. Navy, and CNO policy on INRMPs and their associated NEPA documentation. They also ensure the programming of resources necessary to maintain and implement INRMPs, participate in the development and revision of INRMPs, and provide overall program management oversight for all natural resources program elements. CNIC reviews and endorses projects recommended for INRMP implementation prior to submittal for signature, and evaluates and validates Environmental Program Requirement (EPR)-web project proposals (DoN 2006).

Navy Region Southwest - Regional Commanders ensure that installations comply with DoD, U.S. Navy, and CNO policy on INRMPs and their associated NEPA documentation. They ensure that installations under their control undergo annual reviews and formal five-year evaluations. They ensure the programming of resources necessary to maintain and implement INRMPs, which involves the evaluation and validation of EPR-web based project proposals and the funding of installation natural resources management staff. U.S. Navy Region Southwest maintains close liaison with the INRMP signatory partners and other INRMP stakeholders. They provide endorsement of the INRMP through the Regional Commander signature (DoN 2006).

Public Affairs Office - The Public Affairs Office is involved in aspects of the environmental program at NAVOPSPTCEN Sacramento. This includes being informed of the public notice process required in various NEPA analysis processes.

Office of Counsel - The Office of the General Counsel, Commander Navy Region Southwest, provides legal services to NAVOPSPTCEN Sacramento on a variety of environmental matters. Particularly pertinent to natural resources management, is their review of NEPA documentation and legal interpretations involving compliance with natural resources laws as they pertain to base operations.

Regional Reserve Component Command (RCC) - The RCC Commanders ensure that installations comply with DoD, U.S. Navy, and CNO policy on INRMPs and their associated NEPA documentation. They ensure that installations under their control undergo annual reviews and formal five-year evaluations. They ensure the programming of resources necessary to maintain and implement INRMPs, which involves the evaluation and validation of EPR-web based project proposals and the funding of installation natural resources management staff. Navy Region Southwest maintains close liaison with the INRMP signatory partners (USFWS, NOAA, and CDFW) and other INRMP stakeholders. They provide endorsement of the INRMP through the Regional RCC Commander signature (DoN 2006).

NAVOPSPTCEN Commanding Officers - Navy Operational Support Center Commanding Officers (COs) ensure the preparation, completion, and implementation of INRMPs and associated NEPA documentation. Their role is to: act as stewards of natural resources under their jurisdiction and integrate natural resources requirements into the day-to-day decision-making process; ensure natural resources management and INRMPs comply with all natural resources related federal regulations, directives, instructions, and policies; involve appropriate tenant, operational, training, or R&D commands in the INRMP review process to ensure no net loss of military mission; designate a Natural Resources Manager/Coordinator responsible for the management efforts related to the preparation, revision, implementation, and funding for INRMPs, as well as coordination with subordinate commands and installations; involve appropriate U.S. Navy Judge Advocate General or Office of the General Counsel legal counsel to provide advice and counsel with respect to legal matters related to natural resources management and INRMPs; and endorse INRMPs via Commanding Officer signature.

NAVFAC Southwest, Public Works Department (PWD) - The NAVFAC Southwest, PWD, is responsible for the comprehensive oversight and planning of all land use issues relating to NAVOPSPTCEN Sacramento. Their role for this INRMP is to provide document review to confirm that this INRMP describes compatible land uses.

Business Line Team Leader (N45) - Natural resources business line team specialists (N45) provide technical support and contractual oversight in the development, revision and implementation of this INRMP. In addition, as there are no on-site Natural Resource Managers, NAVFAC Southwest is responsible for providing support for natural resources management at NAVOPSPTCEN Sacramento. NAVFAC Southwest personnel such as the NEPA and INRMP coordinators, have natural resources programming and/or technical support roles in developing this INRMP.

1.4.2 External Stakeholders

1.4.2.1 U.S. Fish and Wildlife Service and California Department of Fish and Wildlife

The Sikes Act requires the Secretary of the Navy to prepare INRMPs in cooperation with the USFWS and the state wildlife agency, in this case the CDFW. An INRMP reflects

mutual agreement of the parties concerning the conservation, protection, and management of fish and wildlife resources.

Mutual agreement should be the goal with respect to the entire INRMP. It is only required, however, with respect to fish and wildlife management elements. No element of the Sikes Act is intended to either enlarge or diminish the existing responsibility and authority of the wildlife agencies concerning natural resources management on military lands.

A Memorandum of Understanding (MOU), signed in January 2006, established a cooperative tripartite agreement between the DoD, the U.S. Department of the Interior (DoI), USFWS, and the state fish and wildlife agencies as represented by the International Association of Fish and Wildlife Agencies recognizing the partnerships necessary to prepare, review, and implement INRMPs on military installations. The tripartite agreement is presented in Appendix C.

This INRMP has been prepared in accordance with the Sikes Act and in cooperation with USFWS and CDFW. Implementation of this INRMP and any substantial changes in planned activities will be undertaken with the cooperation and agreement of USFWS and CDFW. It is a living document and will be updated to reflect improved management practices, changes in proposed actions within NAVOPSPTCEN Sacramento and agency comments or concerns about ongoing or proposed activities.

DoD policy requires installations to review INRMPs annually in cooperation with two primary parties (USFWS and CDFW). As a guide for addressing annual INRMP review, the U.S. Navy developed the Navy Natural Resources (NR) Metrics. Annual reviews (refer to Section 1.8 - *Review and Revisions Process*) facilitate adaptive management by providing an opportunity for the parties to review the goals and objectives of the INRMP, as well as establish a realistic schedule for undertaking proposed actions. As this INRMP is considered a long term document with no set expiration date, the annual review process allows a yearly opportunity for updating the plan when necessary.

1.5 Goals and Objectives

INRMPs have goals that are shaped by DoD guidelines and directives, pertinent laws and regulations, public needs, public values, ecological theory and practice, and management experience. This INRMP defines the standard for implementing management strategies through a hierarchical format. The planning terms used in this document such as “goal,” “objective,” and “action” cover a gradient of specificity and durability, ranging from a very broad, enduring goal to specific implementation or management strategies. Management strategies are developed and presented using this step-down approach, and according to the planning definitions in Table 1-1.

Table 1-1.
Planning Definitions Used In This Integrated Natural Resources Management Plan

Hierarchy	Definition
Goal	The goals set the course towards a successful plan. They define an end outcome or result rather than an activity or process. INRMP goals should endure for 20 years, as a guideline. Broad statement of intent, direction, and purpose. An enduring, visionary description of where you want to go, and an end outcome. A goal is not necessarily completely attainable. It does describe a desired outcome related to the mission, rather than an activity or a process.
Objective	Specific statement that describes a desired future end-state or successful outcome that supports an INRMP goal or U.S. Navy policy. Includes a metric for attaining the objective such as a standard, quantity, or timeframe.
Action	Specific step, practice, or method to get the job done, usually organized sequentially with timelines and duty assignments. To help achieve goals, actions are one-time or routinely repeated short-term action items. These go out of date quickly and should be updated annually.

1.5.1 Primary Goal

The primary goal of this INRMP focuses on avoiding or minimizing adverse effects from military activities to the overall ecosystem and its sensitive resources; increasing interaction with federal, state, and local agencies; and ensuring compliance with environmental legislation, regulations, and guidelines. This goal will ensure the success of the military mission and the conservation of natural resources. The general philosophies and methodologies used throughout the NAVOPSPTCEN Sacramento natural resources management program are focused on conducting required military mission activities while maintaining ecosystem viability.

For NAVOPSPTCEN Sacramento, the primary goal is as follows. Specific goals as related to each resources area are presented in Section 3.0:

> **GOAL:** Provide stewardship to protect, manage, and enhance the natural resources of NAVOPSPTCEN Sacramento while fulfilling the military mission and providing support necessary for effective strategic planning and administration of this INRMP.

1.5.2 Key Objectives

In order to achieve the above goal, several key objectives for natural resources management have been identified for NAVOPSPTCEN Sacramento. These include the following:

- Ensure no net loss in the capability of the land and natural resources at NAVOPSPTCEN Sacramento to support its current and future military mission;
- Ensure compliance with applicable laws and regulations as they pertain to natural and cultural resources;

- Maintain and enhance the level of biodiversity within the constraints of the military mission;
- Implement adaptive management techniques to provide flexible and responsive management strategies based on scientific data gathered from monitoring programs, literature, and resource experts;
- Protect the quality of wildlife habitat, where feasible; and
- Maintain sufficient professionally trained natural resources personnel to implement, manage, and monitor the management strategies of the INRMP.

These general objectives are supported by several resource-specific management measures for obtaining the desired outcomes, which are described in Section 3.0, *Natural Resources Management*. Resource-specific measures were developed to guide natural resources management for a period of five years.

1.6 Management Action

An integrated planning approach was used to develop the policies, guidelines, and projects for each natural resource area within the INRMP. Implementation of this management plan will support NAVOPSPTCEN Sacramento's military mission "to provide operational, training, and administrative support for the Navy Reserve mission and to provide mission-capable units and individuals to the U.S. Navy's active duty component throughout the full range of operations during peacetime and war", while maintaining, protecting, and enhancing the ecological integrity of the lands and the biological communities inhabiting them, thereby protecting NAVOPSPTCEN Sacramento ecosystems and their components. Plan expectations include the following:

- Provide guidance for future natural resources management and staff;
- Establish a framework for implementing natural resources programs and ecosystem management;
- Provide centralized information on the natural resources program;
- Identify environmental constraints so that military use can be synchronized with ecosystem sustainability;
- Identify mission-related impacts to natural resources and options for conflict resolution;
- Serve as a baseline of existing environmental conditions for future environmental planning and compliance projects;
- Assist installation in complying with environmental regulations; and
- Identify, prioritize and provide a timeline for long-term budget requirements.

The INRMP facilitates long-range, sustainable use of NAVOPSPTCEN Sacramento, emphasizing an ecosystem management approach to natural resources management consistent with DoD policies presented in Appendix A. Ecosystem management supports the use of natural resources on NAVOPSPTCEN Sacramento for both military and other

human-related values and purposes. The goal of ecosystem management is to protect the properties and functions of natural ecosystems. Ecosystems extend beyond installation boundaries, and management of NAVOPSPTCEN Sacramento natural resources will include development of partnerships with neighbors. NAVOPSPTCEN Sacramento mission activities are integrated and consistent with federal stewardship requirements and ensure the sustainability of quality lands to accomplish NAVOPSPTCEN Sacramento's military mission.

1.7 Stewardship and Compliance

1.7.1 Stewardship

Environmental stewardship is a key component for resource sustainability. The equilibrium between operational support requirements and a sustainable and healthy environment is called for in several instructions by making sure environmental considerations are part of the DoD decision-making processes (OPNAVINST 5090.1D as amended, DoDI 4715.03, and SECNAV 5090.6). The purpose of environmental stewardship is to responsibly manage resources for the benefit of present and future generations. Conducting fleet-required training operations, while at the same time meeting regulatory requirements and minimizing environmental impacts, is a goal that will ensure the sustainability of the NAVOPSPTCEN Sacramento. Meeting this goal will promote both operational and environmental sustainability.

DoDI 4715.03 *Environmental Conservation Program* (March 18, 2011) requires that U.S. Navy installations incorporate ecosystem management's "ten guiding principles" as the basis for land use planning and management. The ten principles of ecosystem management had first appeared in a 1994 DoD memorandum and were subsequently published as principles and guidelines in an enclosure to DoDI 4715.03. DoD principles and guidelines address key components of ecosystem management that are generally acceptable to academicians and practitioners alike, and they provide guidance pertinent to installation managers. DoDI 4715.03 also provides a DoD definition of ecosystem management as:

> "A goal-driven approach to managing natural and cultural resources that supports present and future mission requirements; preserves ecosystem integrity; is at a scale compatible with natural process; is cognizant of nature's time frames; recognizes social and economic viability within functioning ecosystems; is adaptable to complex changing requirements; and is realized through effective partnerships among private, local, state, tribal, and federal interests."

The 10 guiding principles of ecosystem management are as follows (DoDI 4715.03):

1. Maintain and Improve the Sustainability and Native Biodiversity of Ecosystems.
2. Administer with Consideration of Ecological Units and Timeframes.
3. Support Sustainable Human Activities.

4. Develop a Vision of Ecosystem Health.
5. Develop Priorities and Reconcile Conflicts.
6. Develop Coordinated Approaches to Work Toward Ecosystem Health:
    - Involve the military operational community early in the planning process.
    - Develop a detailed ecosystem management implementation strategy.
    - Meet regularly with regional stakeholders.
    - Incorporate ecosystem management goals into strategic, financial, and program planning and design budgets.
    - Seek to prevent undesirable duplication of effort.
7. Rely on the Best Science and Data Available.
8. Use Benchmarks to Monitor and Evaluate Outcomes.
9. Use Adaptive Management.
10. Implement Through Installation Plans and Programs.

Finally, the U.S. Navy directed (OPNAVINST 5090.1D, as amended) that ecosystem-based management shall include:

- A shift from single species to multiple species conservation
- Formation of partnerships necessary to consider and manage ecosystems that cross boundaries
- Use of the best available scientific information and adaptive management techniques

1.7.2 Compliance

This INRMP is the first natural resources management document that has been developed for NAVOPSPTCEN Sacramento. In 2009, none of the NAVOPSPTCEN locations within the NAVFAC Southwest footprint implemented an INRMP specific to their property or the operations conducted thereon. A Baseline Assessment and Natural Resources Inventory (BA/NRI) was completed for all locations to provide natural resources information and determine what (if any) of the NAVOPSPTCEN facilities warrant the development of an INRMP. Based on the BA/NRI conducted on NAVOPSPTCEN Sacramento in 2011, it was determined that, due to the presence and/or potential presence of special status species and suitable habitat on site, an INRMP would be required for the installation per the Sikes Act and DoDI 4715.03. The INRMP supports the NAVOPSPTCEN Sacramento military mission by ensuring compliance with federal and state laws, especially those associated with environmental documentation, wetlands, endangered species, water quality, and wildlife management. Appendix A presents a list of natural resources management legal drivers.

Preparation of this INRMP, as required by the Sikes Act, was accomplished in cooperation with the USFWS and the CDFW. This cooperation ensures the INRMP reflects mutual agreement of the USFWS and CDFW concerning the conservation, protection, and management of fish and wildlife resources at NAVOPSPTCEN Sacramento.

1.7.2.1 The Sikes Act

The Sikes Act was enacted into U.S. law on September 15, 1960 to promote effectual planning, development, maintenance, and coordination of wildlife, fish, and game conservation and rehabilitation in military installations. It provides for cooperation by the Department of the Interior, DoD and state wildlife agencies in planning, development and maintenance of fish and wildlife resources on military lands.

The Secretary of Defense is authorized to carry out a program for the conservation and rehabilitation of natural resources on military installations consistent with the mission of the installation. To facilitate the program, each military department shall prepare and implement an INRMP unless it is determined that the absence of significant natural resources on a particular installation makes preparation of an INRMP inappropriate or unnecessary. The program provides for:

- The conservation and rehabilitation of natural resources on military installations;
- Sustainable multipurpose use of the resources, which shall include hunting, fishing, trapping, and non-consumptive uses; and
- Public access subject to safety requirements and military security.

The Sikes Act has other provisions that relate to the implementation of this INRMP that include:

- Regular review of this INRMP and its effects, not less often than every 5 years.
- Priority for contracts involving implementation of this INRMP to state and federal agencies having responsibility for conservation of fish and wildlife.

1.7.2.2 National Environmental Policy Act of 1969 (42 USC 4321 et seq.)

NEPA was created to identify environmental concerns caused by human activities and to resolve them to the best degree possible, using public input and the best information available. NEPA is the basic national charter for the protection of the environment. It is a policy which primarily requires a clear evaluation of all federal decisions potentially affecting the human and natural environment. The NEPA statute (as amended, 42 USC 4321-4370) and the procedural Council on Environmental Quality (CEQ) regulations (CFR parts 1500-1508) combine to represent the requirements of NEPA.

To provide more specific implementation of the CEQ regulations, the DoD issued policy and procedures (32 CFR parts 188 & 214) for DoD components and also Directive 6050.1 (1979) on *Environmental Effects of DoD Actions in the U.S. A supplement by the DoN* (32 CFR part 775) followed, providing policy and assigning responsibilities to the U.S. Navy

and Marine Corps. It is these DoN procedures, which meet the NEPA requirement, that require every federal agency to adopt procedures to supplement the CEQ regulations (40 CFR 1507.3[b]). Following the DoN directive, the U.S. Navy issued its own specific policy for compliance with procedural requirements under OPNAVINST 5090.1D. The latter document tasks NAVOPSPTCEN Sacramento with ensuring that U.S. Navy actions (i.e., any action that spends federal money) are in accordance with the requirements of NEPA.

NEPA analysis and documentation for NAVOPSPTCEN Sacramento is performed by NAVFAC Southwest personnel. The NAVOPSPTCEN Sacramento policy strategy for NEPA planning is as follows:

- Conduct planning of mission activities having potential environmental effects by applying NEPA's requirements and policies to enhance the mission-related use and the stewardship of natural resources. Seek opportunities for streamlining environmental assessment procedures.
- Assess the environmental consequences of each proposed action that could affect the natural environment, and address the significant impact of each action through analysis, planning, mitigation, and prevention.
- Ensure that any proposed NAVOPSPTCEN Sacramento action that has the potential for physical impact on the human environment to undergo the NEPA process.
- Include new activities, substantive changes in continuing actions, specific actions, or adoption of programs.

The ASN (I&E) Memo of August 12, 1998, *DoN Policy Memo 98-06: Review of INRMPs under NEPA*, has determined that Sikes Act requirements for INRMP implementation necessitate the preparation of NEPA documentation prior to INRMP approval. In compliance with the NEPA process, an EA shall be prepared for the implementation of this INRMP.

1.8 Review and Revisions Process

The DoN uses an Environmental Management System (EMS) to integrate environmental considerations into day-to-day activities across all levels and functions of U.S. Navy enterprise. It is a formal management framework that provides a systematic way to review and improve operations, create awareness, and improve environmental performance. Systematic environmental management as an integral part of day-to-day decision making and long-term planning processes is an important step in supporting mission readiness and effective use of resources. The most significant resource for every organization is their senior leadership’s commitment and visibility in EMS implementation and sustainability. A robust EMS is essential to sustaining compliance, reducing pollution and minimizing risk to mission. The U.S. Navy EMS conforms to the International Organization for Standardization 14001:2004 *Environmental Management System* standard.

1.8.1 Review for Operation and Effect

Section 101(b)(2) of the Sikes Act specifically directs that the INRMPs be reviewed "as to operation and effect" by the primary parties "on a regular basis, but not less often than every five years", emphasizing that the review is intended to determine whether existing INRMPs are being implemented to meet the requirements of the Sikes Act (as amended) and contribute to the conservation and rehabilitation of natural resources on military installations. The Office of the Secretary of Defense (OSD) guidance (May 17, 2005) states that joint review should be reflected in a memorandum or letters between "the parties" at least every five years. Informal annual reviews are mandatory to facilitate adaptive management, during which INRMP goals, objectives, and "must fund" projects are reviewed, and a realistic schedule established to undertake proposed actions. This written documentation should be jointly executed or in some other way reflect the parties' mutual agreement and summarize the rationale for the conclusions the parties have reached.

Recent guidance on INRMP implementation interpreted that the five-year review would not necessarily constitute a revision, and that this would occur only if deemed necessary. The Annual Review process is broadly guided by the DoD 4715.03 and by OPNAVINST 5090.1D. The following policy memoranda clarified procedures for INRMP reviews and revisions:

- Deputy Undersecretary of Defense (DUSD) (I&E) Policy Memorandum 10 October 2002, which replaced a 1998 policy memorandum.
- Assistant Deputy Undersecretary of Defense (ADUSD) for Environment, Safety and Occupational Health (ESOH) Policy (01 November 2004 Memorandum).
- ADUSD for ESOH Policy (September 2005 Memorandum).

1.8.2 Annual Reviews and Coordination

DoD and DoN policy requires installations to review INRMPs annually in cooperation with the two primary parties to the INRMP (USFWS and the state fish and wildlife agency; CDFW in California) and NOAA when appropriate. Annual reviews facilitate adaptive management by providing an opportunity for the parties to review the goals and objectives of the plan, as well as establish a realistic schedule for undertaking proposed actions.

The most recent guidance on INRMP reviews is found in DoDI 4715.03. The Annual Review reports on the status of INRMP implementation toward meeting natural resources conservation program measures of merit to DUSD (I&E) at each Environmental Management Review and to Congress in the Defense Environmental Programs ARC. The report summarizes:

- Each installation's compliance with Sikes Act (as amended).
- Annual feedback received from the USFWS.
- Annual feedback received from the state fish and wildlife agency.

- Funding requirements per Fiscal Year needed to implement the INRMP: the amount required for recurring projects, and the amount required for non-recurring projects.

According to OPNAVINST 5090.1D, Annual Reviews must verify that:

- Current information on all conservation metrics is available.
- All required trained natural resources positions are filled or are in the process of being filled.

In accordance with the above guidance, NAVOPSPTCEN Sacramento will review the INRMP annually in cooperation with the USFWS and CDFW. On an annual basis, NAVOPSPTCEN Sacramento will invite the USFWS, CDFW, as well as other interested internal and external stakeholders to attend a meeting to review previous year INRMP implementation and discuss implementation of upcoming programs and projects. Invitations will be either by letter or email. Attendance is at the option of those invited, but at minimum the USFWS local field office and one representative of CDFW are expected to attend. The meeting will be documented with an agenda, meeting minutes and sign in roster of attendees.

U.S. Navy Natural Resources Metrics

The U.S. Navy NR Metrics were developed to support the annual Natural Resources Program reviews between the Navy and its Sikes Act partners (USFWS and state fish and wildlife agencies). The NR Metrics are used to determine how well the DoN is doing with respect to natural resources management and INRMP implementation across Navy/Marine Corps installations. There are seven (7) Focus Areas that comprise the NR Metrics to be evaluated during the annual review of the Natural Resources Program and associated INRMP. Each focus area has three to seven criteria that have been established by natural resources managers and are used to help determine the status of a given functional area within natural resources. The seven (7) focus areas are described as follows:

1. **Ecosystem Integrity**- Evaluate the current status, management effectiveness, and trends of the ecosystems at the installation to support and maintain a community of organisms that have a species composition, diversity, and functional organization comparable to those in the respective region. This Focus Area is intended to define the ecosystems that occur on the installation and assess the integrity of those ecosystems. Terrestrial ecosystems are defined by Nature Serve's "*Ecological Systems of the United States: A Working Classification of US Terrestrial Systems*" (2003).

2. **Listed Species and Critical Habitat**- Evaluate the extent to which federally listed species have been identified and the INRMP provides conservation benefits to these species and their habitats.

3. **Recreational Use and Access**- Evaluate the availability and adequacy of public recreational use opportunities, such as fishing and hunting, and access for

handicapped and disabled persons, given security and safety requirements for the installation.

4. **Sikes Act Cooperation (Partnership Effectiveness) -** Determine to what degree USFWS, state fish and wildlife agency, and when appropriate, NOAA Fisheries Service, partnerships are cooperative and result in effective INRMP development and review for operation and effect.

5. **Team Adequacy**- Asses the adequacy of the natural resources team (the natural resource management professional and installation support staff) in accomplishing INRMP goals and objectives at each installation.

6. **INRMP Implementation**- Evaluate the execution of actions taken to meet goals and objectives outlined in the INRMP.

7. **INRMP (Natural Resource Program) Support of the Installation Mission**- Evaluate the level to which existing natural resources requirements support the installation's ability to sustain the current operational mission, ensuring no net loss of mission capability.

The results of annual NR Metrics reviews are provided in the DEP ARC in accordance with the Sikes Act, as amended which requires the Secretary of Defense to report annually to Congress the status of each INRMP and the amounts expended by each military installation to implement its INRMP.

This INRMP addresses and supports the requirements of the focus areas addressed in the NR Metrics. A copy of the most recent Navy NR Metrics questions are presented in Appendix D. Appendix E presents the results of NR Metrics Annual Reviews.

1.9 Other Plan Integration and Preparing Prescriptions for Projects

Per DoD Manual (DoDM) 4715.03-M Enclosure (2): *Integrating Other Plans, Programs and Policies*, this INRMP has been prepared in coordination with other planning documents. Information from an INRMP is incorporated into other plans and other plans help identify management priorities and potential impacts to natural resources that are incorporated into the INRMP. This INRMP is integrated NAVOPSPTCEN Sacramento plans including the following:

Integrated Pest Management Plan, Naval and Marine Corps Reserve Centers Commander, Naval Surface Reserve Force West, June 2014. The Integrated Pest Management Plan (IPMP) details pest management activities at the 28 NAVOPSPTCEN, Naval Reserve Centers, and Naval Reserve Facilities (collectively referred to as "Reserve Centers" in the IPMP) located throughout the western states, Alaska and Hawaii under the Commander, Naval Surface Reserve Force West. The IPMP is intended to be an overall or "umbrella" IPMP to assist Reserve Centers that are not a tenant at a larger military installation.

SECTION 2
CURRENT INSTALLATION CONDITIONS AND USE

2.1 Location and Real Estate Summary

NAVOPSPTCEN Sacramento is located in the City of Sacramento in Sacramento County, California (Figure 2-1). The site comprises approximately 20.1 acres of the former Sacramento Army Depot (SAAD or Depot), located approximately 7 miles southeast of downtown Sacramento.

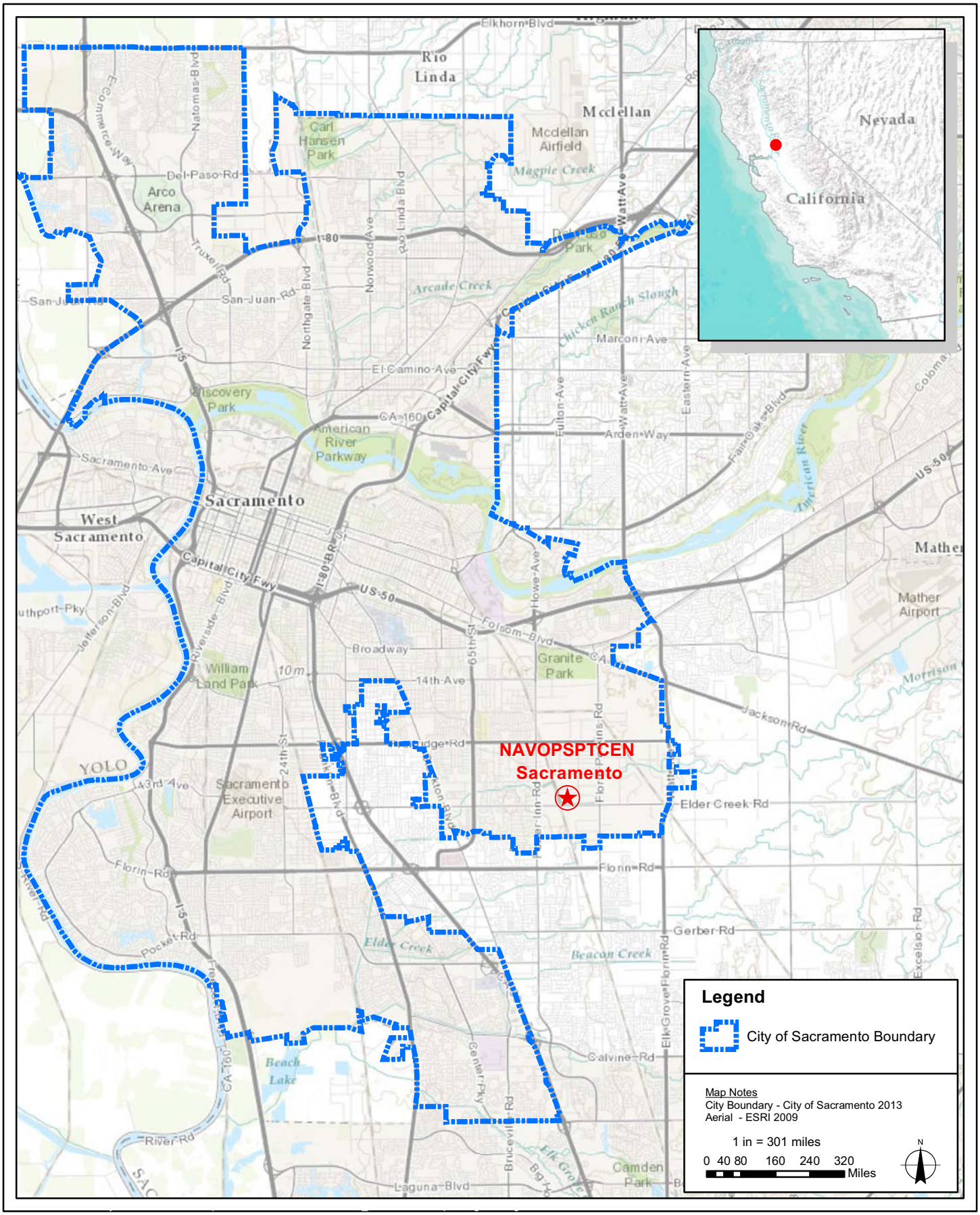
The installation is comprised of flat, mostly developed or paved land and has very little diversity in land use. Vegetation and open ground is limited to an approximately 4-acre grass field on the western portion of the site. This area is used for training activities and occasional overflow parking. There are no agricultural outlease areas on base.

2.2 Regional Land Use

Regional land use provides a context for understanding the circumstances under which the NAVOPSPTCEN Sacramento facility currently operates and a starting point for understanding its conservation role as a result of land development trends, regional socio-economics, land planning decisions made by agencies other than the DoD and regional conservation efforts. Understanding regional land uses and conservation efforts also provide a context for predicting future trends. Land use and conservation efforts (or lack thereof) in the region also affect the installation.

Besides NAVOPSPTCEN Sacramento, most of the former SAAD (previously 486.9 acres in size) is now owned by commercial firms and the City of Sacramento, with smaller parcels retained by the Army, the U.S. Navy/Marines, and the California National Guard. All properties in the former depot are zoned commercial/industrial or agricultural/open space (Figure 2-3).

Surrounding adjacent land use in all directions from NAVOPSPTCEN Sacramento is designated by the City of Sacramento Zoning Administration as light to heavy industrial zones M-1 to M-2 (City of Sacramento 2005). The area to the north of the property is also designated a Special Planning District (SPD) and subject to the SAAD SPD ordinance (Chapter 17.116 of the Sacramento City Code) specifically adopted for the area. Residential neighborhoods lie to the west of Power Inn Road, approximately 0.25 to 0.5 mile west of the site. (Figure 2-3). The Union Pacific Railroad (UPRR) corridor is located adjacent to the western boundary of the site.



General Vicinity Map
NAVOPSPTCEN
Sacramento, California

FIGURE
2-1

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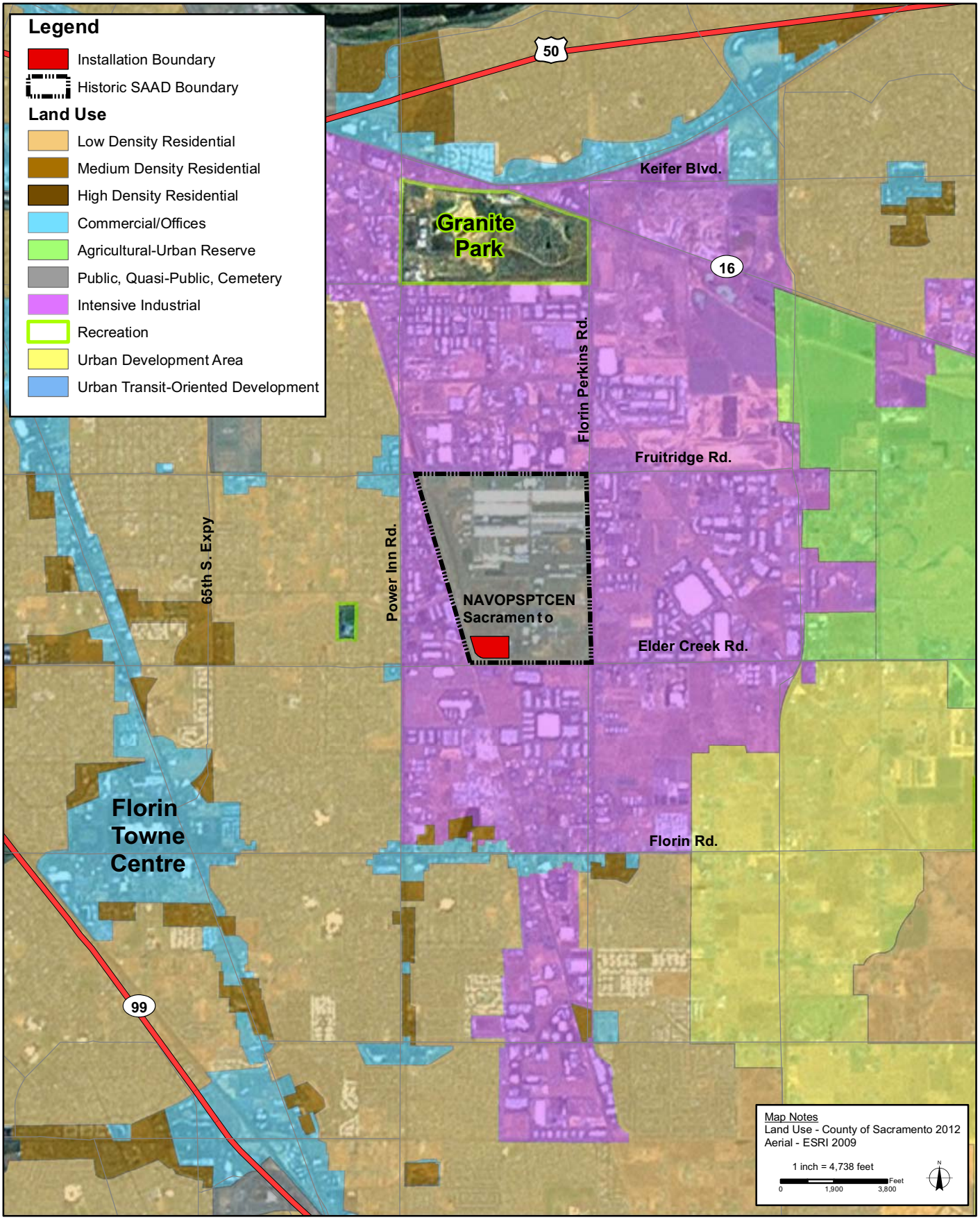
Site Map
NAVOPSPTCEN
Sacramento, California

FIGURE
2-2



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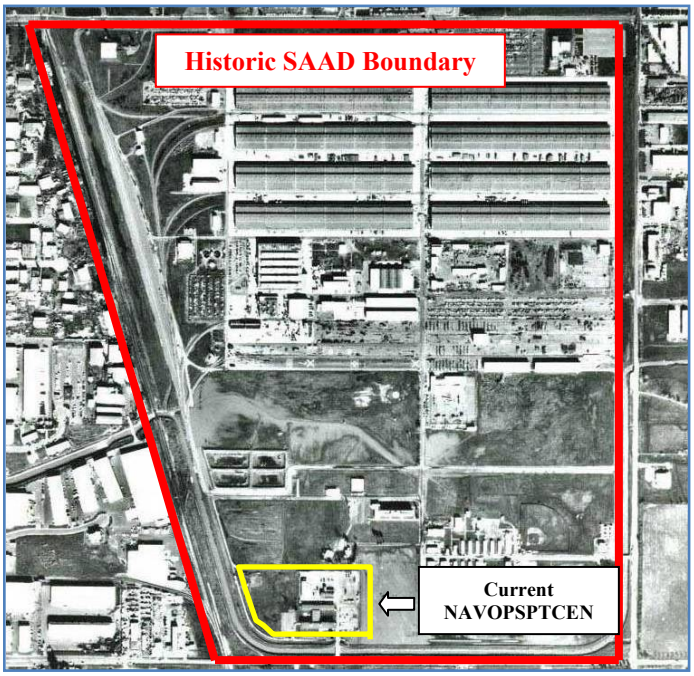
Regional Land Use Map
NAVOPSPTCEN
Sacramento, California

FIGURE
2-3

2.3 Historic Land Use

The NAVOPSPTCEN Sacramento site and the adjacent areas were developed in the 1940s as the SAAD. The site was the old California State Fairgrounds prior to establishing SAAD. The former depot consisted of approximately 486.9 acres of land and was bounded on the north by Fruitridge Road, on the east by Florin Perkins Road, on the south by Elder Creek Road (Figure 2-3), and on the west by the Southern Pacific Railroad tracks.

The SAAD was an electronics maintenance facility primarily responsible for equipment receipt, storage, issue, repair and disposal. Operations began during World War II and continued through Korea, Vietnam, Desert Storm, and lasted well into the 1990s. The SAAD was eventually closed as part of the Base Realignment and Closure (BRAC) process in 1995.



Aerial view of the SAAD, circa 1950.

The SAAD was an important part of the Sacramento community. Since its establishment in 1941, the Depot supported the nation by performing vital defense-related services and operations. It also supported the community by providing more than 3,000 jobs in the Sacramento area. On the day the Depot officially closed, the City of Sacramento leased approximately 370 acres of the total 485-acre depot to Packard Bell for its world headquarters, an important first step in the revitalization of the Sacramento community. While the BRAC Cleanup Team and the Restoration Advisory Board were working to clean up the SAAD and keep the community informed of ongoing restoration activities, the Sacramento Army Depot Economic Adjustment Reuse Commission diligently continued its efforts to secure reuse opportunities and maintain the jobs of the people employed at the Depot.

In the Fall of 1994 Packard Bell, the computer company whose plant in Northridge was damaged by an earthquake decided to relocate a 3,000 employee assembly plant and distribution center at the Depot. As of April, 1996, Packard Bell had 3,500 employees working at its Depot facility (down from 5,000 in August 1995). This was the only Packard Bell manufacturing plant in the U.S. In 2000, Packard Bell NEC, Inc. shut down all manufacturing operations by year's end and laid off 1,400 of its 1,550 workers at the former Sacramento Army Depot (Starbuck 2012).

Army operations conducted at the SAAD included electro-optics equipment repair, emergency manufacturing of parts, shelter repair, metal plating and treatment, and painting. In conjunction with these operations, the Army maintained unlined oxidation lagoons and burn pits, a battery disposal area, areas designated for mixing pesticides, and a firefighter training area. These services at SAAD required the use of hazardous materials, such as solvents, degreasers, acids, and even radioactive paints, in daily operations. Wastes from metal-plating operations, spray booth operations, and degreasing operations were discharged to unlined sewage lagoons, burned, or buried on site. These practices resulted in the contamination of some on-site soils at the former Oxidation Lagoons and Burn Pits and other areas, as well as the groundwater beneath the site. Soil contamination also was shown in drainage ditches leading to the Old Morrison Creek. The groundwater contamination at the site was found in both the shallow and intermediate water-bearing zones and has migrated off site. However, as per the Environmental Protection Agency (EPA), the actions taken for soil and groundwater at SAAD have eliminated the immediate threat of exposure to contamination and are protective of human health and the environment (DOA 2012; EPA 2012).

2.4 Military Mission

The mission of NAVOPSPTCEN Sacramento is to provide operational, training, and administrative support for the Navy Reserve mission and to provide mission-capable units and individuals to the U.S. Navy's active duty component throughout the full range of operations during peacetime and war. It is the mission of NAVOPSPTCEN Sacramento to develop, mentor, instruct, and retain Sailors, especially those at the junior level. The ultimate success of NAVOPSPTCEN Sacramento will be measured by their capability to build and maintain an efficient and effective force that will provide any command, whether they are Joint or U.S. Navy Forces, with a Sailor who is a ready asset (DoN 2012).

2.5 Operations and Infrastructure

The NAVOPSPTCEN acts as the operational headquarters of resident reserve units. U.S. Navy operations on the site include administration and physical fitness training of reservists. The facility also hosts tenant activities for the U.S. Marine Corps (USMC) which include administration, vehicle maintenance, small arms munitions storage, and reservist training. The facility currently accommodates 20 full-time command and administrative staff and up to 250 reservists during drill weekends. While primarily occupied by military personnel, NAVOPSPTCEN Sacramento also performs a recruitment function and serves certain family and retiree needs.

The site is developed to include a two-story building and two single-story buildings (Buildings 1 through 3) used by U.S. Navy and USMC for administration support staff, classrooms and training functions for Reserves personnel, storage, and maintenance functions. Outer areas include further storage and maintenance of mission critical vehicles and equipment, paved privately owned vehicle (POV) and government owned vehicle (GOV) parking areas, and the 4-acre grass field used for training and occasional parking (Figure 2-2).

NAVOPSPTCEN Sacramento is primarily surrounded by urban development that offers off-base support services. There are currently no housing facilities, food, religious, or social services. Recreation opportunities include a picnic and barbecue area along with a volleyball court and indoor gymnasium. Health services are limited to a small health clinic to mainly deal with medical incidences that may occur during training exercises. Security is provided through collateral duty of on-site duty personnel.

2.6 Constraints

The U.S. Navy defines constraints primarily as any action planned or executed that inhibits, curtails, or has the potential to impede the performance of U.S. Navy activities. Constraint challenges can include urban development; environmental constraints such as water quality or endangered species; population growth; competition for air, land, and sea space; competition for resources such as potable and irrigation water; and safety arcs and footprints.

Environmental constraints will dictate where and when certain types of activities can occur to ensure regulatory compliance and the long-term sustainability of natural resources on the installation. Such internal constraints can include the limiting activity due to the presence of U.S. Army Corps of Engineers (USACE) jurisdictional wetlands, special status species, or migratory birds. Currently, the only known constraints are potential jurisdictional seasonal wetlands and a drainage that occurs within the undeveloped portions of the installation. A map of NAVOPSPTCEN Sacramento constraint areas is presented in Appendix G.

The greatest external constraint at NAVOPSPTCEN Sacramento comes in the form of urban expansion from the surrounding urban neighborhoods and the possibility of future conflicting land use. Another external constraint is the presence of Morrison Creek running

along the outside of the southern and western boundary. Its presence prevents further development while requiring extra attention to avoid indirect environmental effects to this waterway.

2.7 Opportunities

Opportunities, in the context of this INRMP, are defined as areas of NAVOPSPTCEN Sacramento where there are little to no restrictions to the Mission. There are opportunities for improvements to current infrastructure, however neighboring land ownership and development surrounding NAVOPSPTCEN Sacramento provides little opportunities for growth outside existing boundaries. Opportunities also exist to educate transitory personnel of the natural resources found on the installation and measures taken by the U.S. Navy to provide stewardship to protect, manage, and enhance them. An educational program may allow participants to feel as though they are a part of the management and conservation directives and initiatives for the NAVOPSPTCEN and U.S. Navy at large.

2.8 Natural Environment

2.8.1 Climate

The region in which NAVOPSPTCEN Sacramento is located experiences Mediterranean climate conditions with hot, dry summers; mild, moist winters; and erratic annual rainfall totals. The "wet season" is generally October through April, though precipitation does occasionally fall as late as June or as early as September. The mean annual temperature is 61 degrees Fahrenheit (°F), with daily means ranging from 46 °F in December and January to 76 °F in July. Average daily high temperatures range from 55°F in December and January to 93°F in July and August. Daily low temperatures range from 41°F in winter to 61°F in summer (Western Regional Climate Center [WRCC] 2012). Winters are typically rainy, cool, and foggy. Spring is rainy early then gradually becoming dryer and warmer. Summers are hot, dry and sunny. Autumn is usually warm during early months, then cool and rainy.

2.8.2 Ecoregions

NAVOPSPTCEN Sacramento lies within the Central California Valley Ecoregion (Tier III – Ecological divisions on a regional scale), a sub-region of the larger Mediterranean California Ecoregion (Tier I – Ecological divisions on a continental scale). The Mediterranean California Ecoregion extends 1,300 kilometers (km) from Oregon in the north to Baja California Norte state in the south. It abuts the Pacific Ocean on the west and the Sierra Nevada and deserts to the east. It is distinguished by its warm and mild Mediterranean climate, its shrubland vegetation of chaparral mixed with areas of grassland and open oak woodlands, and its agriculturally productive valleys (Commission for Environmental Cooperation [CEC] 1997).

The smaller Central California Valley Ecoregion occurs in the central part of California. Differing from adjacent ecoregions that are hilly or mountainous, the terrain in this ecoregion consists of flat fluvial plains and terraces, with a few low or rolling hills. The

region was once characterized by extensive grasslands and prairies with various bunchgrasses, perennial and annual grasses, and forbs. However, much of the regions' natural vegetation has been greatly altered by agriculture and development. Currently, agriculture is extensive in this ecoregion, with nearly half of the surface area used as cropland; three-fourths of which is irrigated. Major crops produced in the region include rice, almonds, apricots, olives, grapes, cotton, citrus, and vegetables. Environmental concerns in the region include salinity due to evaporation of irrigation water, groundwater contamination from heavy use of agricultural chemicals, wildlife habitat loss, and urban sprawl. Large cities in the area include Redding, Chico, Davis, Sacramento, Stockton, Modesto, Merced, Fresno, and Bakersfield (Wilken 2011).

2.8.3 Topography and Geology

NAVOPSPTCEN Sacramento is located within the Sacramento Valley (Figure 2-4) which is formed by the Great Valley geocline; a large, elongated, northwest-trending asymmetric structural trough. It is bordered by the Coast Ranges to the west, the Klamath Mountains and Cascade Range to the north, and the Sierra Nevada Mountains to the east. The trough continues southward from the Sacramento-San Joaquin Delta Region, from which point it is called the San Joaquin Valley. Both the Sacramento and San Joaquin Valleys comprise the Great Valley geomorphic province of California (Hackel 1966).

The NAVOPSPTCEN Sacramento facility is located within the Great Valley. The Great Valley is an alluvial plain approximately 50 miles wide and 400 miles long in the central portion of California. Its northern part is the Sacramento Valley drained by the Sacramento River and its southern part is the San Joaquin Valley drained by the San Joaquin River. Regional elevations range from sea level to about 700 feet above mean sea level (amsl).

Topographic relief in the immediate vicinity of NAVOPSPTCEN Sacramento is relatively flat, ranging from about 35 feet amsl west of the facility to 45 feet amsl east of the facility. The facility itself is at approximately 37 feet amsl (Figure 2-4).

2.8.4 Seismicity

Tectonically, the region is characterized by low to moderate seismic activity when compared to other seismically active regions in California. No known active faults occur in or adjacent to the City of Sacramento. During the past 150 years, there has been no documented movement on faults mapped in Sacramento County. However, the region has experienced numerous instances of ground shaking originating from faults in the San Andreas Fault Zone, west of the county, and the Foothills Fault System, east of the county. The closest known potentially active fault mapped by the California Geological Survey is the Dunnigan Hills fault (possible Holocene activity, i.e., within the last 11,000 years), about 19 miles northwest of Sacramento (California Geological Survey 2002).

The closest branches of the seismically active San Andreas Fault System (Historic activity, i.e., within the last 200 years) are the Green Valley-Concord faults (45 miles southwest). The main trace of the San Andreas Fault is approximately 80 miles to the southwest (Figure 2-4). Other active faults within 100 miles of the City include the Hayward and

Regional Faults and Topography
NAVOPSPTCEN
Sacramento, California

FIGURE
2-4

Calaveras faults, approximately 66 miles to the southwest; the Healdsburg-Rogers Creek fault (56 miles west); the Bear Mountain fault (22 miles east); and the New Melones fault (40 miles east). The Stockton and Greenville faults are approximately 47 and 43 miles to the south. The Midland fault (22 miles west of Sacramento) and the Antioch (42 miles southwest) are considered pre-Quaternary (i.e., not active within the last 1.6 million years) (California Public Utilities Commission [CPUC] 2007).

2.8.5 Soil Resources

In the region, there are deep marine and non-marine sedimentary deposits of clays, sands, silts, and gravels. A wide variety of soil orders occur, including Alfisols, Aridisols, Entisols, Mollisols, and Vertisols. They have thermic, aridic, and xeric soil temperature regimes. Soils tend to be deep, well drained, and loamy or clayey (CEC 1997).

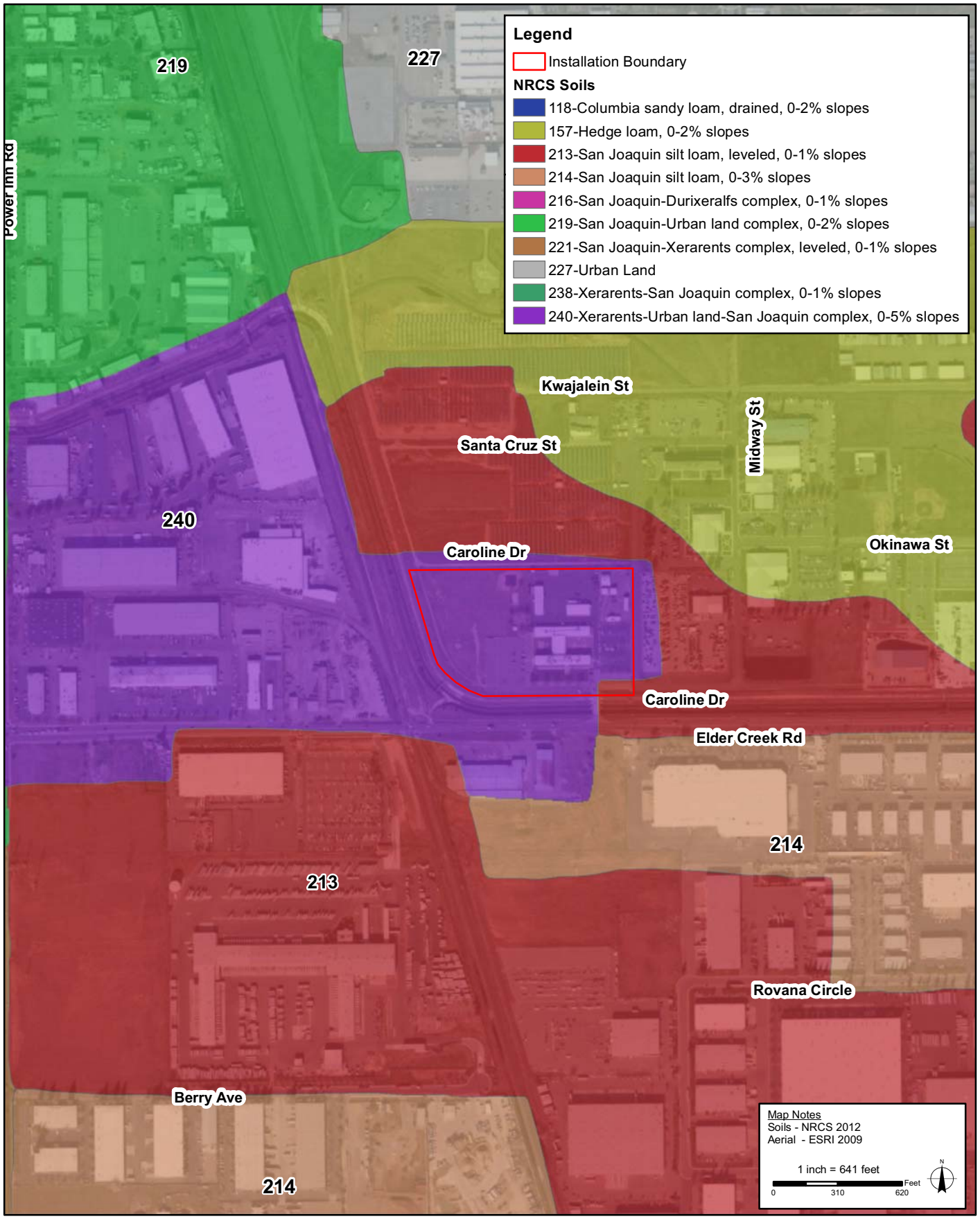
The NAVOPSPTCEN facility and the properties in the immediate vicinity overlie a thick sequence of alluvial sediments consisting of silt, sand, gravel, and hardpans. These sediments are laterally and vertically discontinuous. In general, the shallow site soils have moderate to very low permeability (U.S. Department of Agriculture [USDA] 1993).

The USDA's Soil Survey of Sacramento County, California (USDA 1993) indicates that the NAVOPSPTCEN Sacramento facility and the adjacent properties are underlain by primarily five soil series types. (Table 2-1; Figure 2-5). However, the soils directly underlying the NAVOPSPTCEN facility are comprised of two primary soil types: Xerarents-Urban land-San Joaquin complex (13.34 acres), which comprises the majority of the area, and San Joaquin silt loam (0.28 acres), in the southeastern boundary of the facility.

Table 2-1.
Soil Types present on or adjacent to NAVOPSPTCEN Sacramento

Code	Type
118	Columbia sandy loam, drained, 0-2% slopes
157	Hedge loam, 0-2% slopes
213	San Joaquin silt loam, leveled, 0-1% slopes
214	San Joaquin silt loam, 0-3% slopes
216	San Joaquin-Durixeralfs complex, 0-1% slopes
219	San Joaquin-Urban land complex, 0-2% slopes
221	San Joaquin-Xerarents complex, leveled, 0-1% slopes
227	Urban Land
238	Xerarents-San Joaquin complex, 0-1% slopes
240	Xerarents-Urban land-San Joaquin complex, 0-5% slopes
247	Water

Source: USDA 1993.



amec

Soils Map
NAVOPSPTCEN
Sacramento, California

FIGURE
2-5

Soil series found on or adjacent to NAVOPSPTCEN Sacramento are described below:

Columbia Series: The Columbia series consists of very deep, somewhat poorly drained soils on low flood plains, natural levees, and flood-plain splays. They formed in alluvium derived from mixed rock sources. Slope ranges from 0 to 5 percent. These soils are used for irrigated hay, small grain, and orchard and row crops. Vegetation consists of a fairly dense cover of oaks, cottonwoods, willows, vines, shrubs and grasses near stream channels, but more open away from the channels (USDA 1993).

Durixeralfs: Durixeralfs consist of moderately well drained and well drained soils in cut areas on low terraces. These soils were truncated when the landscape was leveled. They are shallow or moderately deep over a duripan. They formed in alluvium derived from mixed rock sources, dominantly granite. Slope ranges from 0 to 2 percent (USDA 1993).

Hedge Series: The Hedge series consists of moderately deep, moderately well-drained soils which are commonly found adjacent to canals, on floodplains, and on low stream terraces. They are formed in alluvium derived from granitic rocks. Permeability is moderately slow, available water capacity is low or moderate, and runoff is slow. Erosion hazard is slight (USDA 1993).

San Joaquin Series: The San Joaquin series consists of moderately well drained soils on low terraces. These soils are moderately deep over a duripan. They formed in alluvium derived from dominantly granitic rock sources. Slope ranges from 0 to 8 percent. Depth to the duripan ranges from 20 to 40 inches. The mean annual soil temperature varies from 60 degrees to 64 degrees F and the soil temperature is not below 47 degrees F at any time. The soil, at depths of about 7 to 24 inches or directly above the duripan, is dry in all parts from June to November and is moist in some or all parts the rest of the year. Clay increases by more than 15 percent absolute. These soils are used for irrigated cropland and livestock grazing; crops are small grains, irrigated pasture and rice; vineyards, fruit and nut crops (USDA 1993).

Xerarents: Xerarents consist of moderately deep to very deep, well drained, altered soils that commonly have a buried soil. These soils are in filled areas on hills, low terraces, and high terraces. They formed in fill material mixed by grading, excavation, and leveling activities. The fill material is derived from nearby soils of mixed, mixed but dominantly granitic, or granitic origin. In some areas the soils are underlain by consolidated sediments. Slope ranges from 0 to 15 percent (USDA 1993).

2.8.6 Mineral Resources

The Florin Gas Field is located beneath the NAVOPSPTCEN Sacramento site. The Florin Gas Field is an inactive natural gas reservoir approximately 4,000 feet beneath ground surface. Natural gas was extracted from the field up until 1987. Proctor and Gamble, Vendada National, TXO Production Corporation, and Union Oil Company drilled eight wells into the field, and five were successful. Total natural gas production from the gas field was approximately 8.3 billion cubic feet (bcf). All of the wells were appropriately capped and abandoned, in accordance with the Division of Oil, Gas and Geothermal Resources (DOGGR) when they were no longer productive. No wells, pipelines, or meters currently exist on or connect to the gas field (CPUC 2007).

Sacramento Natural Gas Storage (SNGS) has proposed to use the Florin Gas Field as an underground natural gas storage field. The project would involve drilling eight new wells to the field; however, none of the wells would be located on the NAVOPSPTCEN Sacramento site. Under the proposed action, a compressor station would be constructed approximately 1,500 feet north of the NAVOPSPTCEN Sacramento site. Additionally, a service pipeline would be constructed along the western boundary of the facility, adjacent to Morrison Creek (CPUC 2007).

Geologic, topographic, and historic mining maps reviewed for this area indicate no mining activity has occurred within or adjacent to the NAVOPSPTCEN Sacramento site. The City of Sacramento General Plan has designated the proposed project site MRZ-3, an area containing mineral deposits, the significance of which cannot be evaluated from available data.

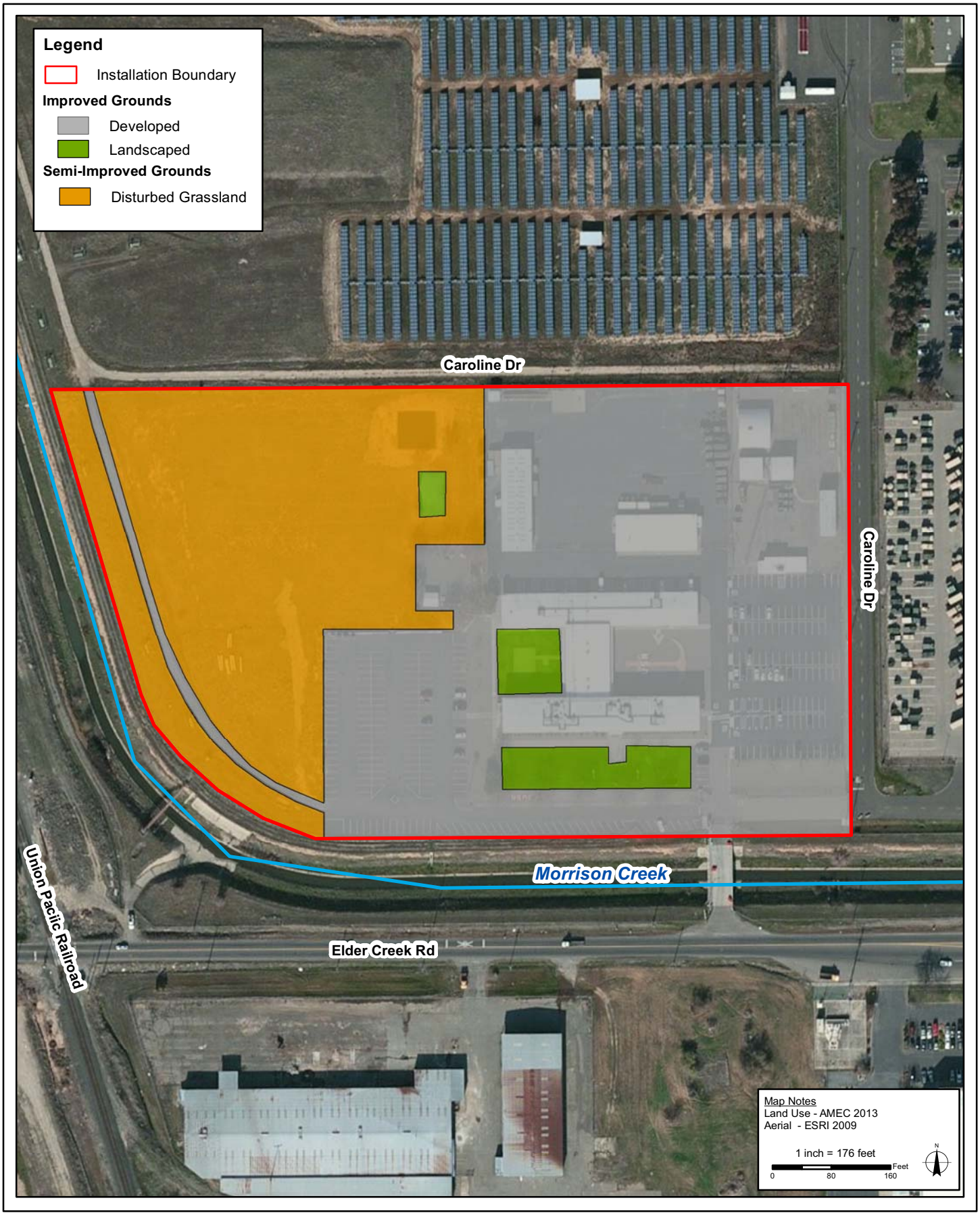
2.8.7 Landcover Types

NAVOPSPTCEN Sacramento landcover types include Improved and Semi-improved lands.

Table 2-2 presents the acreage of each land cover type within the installation, as well as a description of each. Figure 2-6 illustrates their respective locations within the installation.

Table 2-2.
Landcover Types

Landcover Type	Description	Acres
Improved Grounds	Developed areas with impervious surface or landscaping with intensive upkeep.	8.8
Semi-Improved Grounds	Areas with periodic maintenance for operations purposes.	5.0
	Total	**13.8**



Landcover Types
NAVOPSPTCEN
Sacramento, California

FIGURE
2-6

2.8.8 Hydrology and Watersheds

The City of Sacramento is located within the Lower Sacramento (Hydrologic Unit Code [HUC] 18020109) and the Lower American (HUC 18020111) Sub-Basins, both located within the larger Sacramento (HUC 1802) surface water basin in the California Region (U.S. Geological Survey [USGS] 2011). The NAVOPSPTCEN Sacramento facility is within the Upper Morrison Creek (HUC 180201630402) Subwatershed, a unit within the Lower Sacramento Sub-Basin. Hydrological features within the vicinity of NAVOPSPTCEN Sacramento are identified in Figure 2-7.

2.8.8.1 Regional Hydrologic Conditions

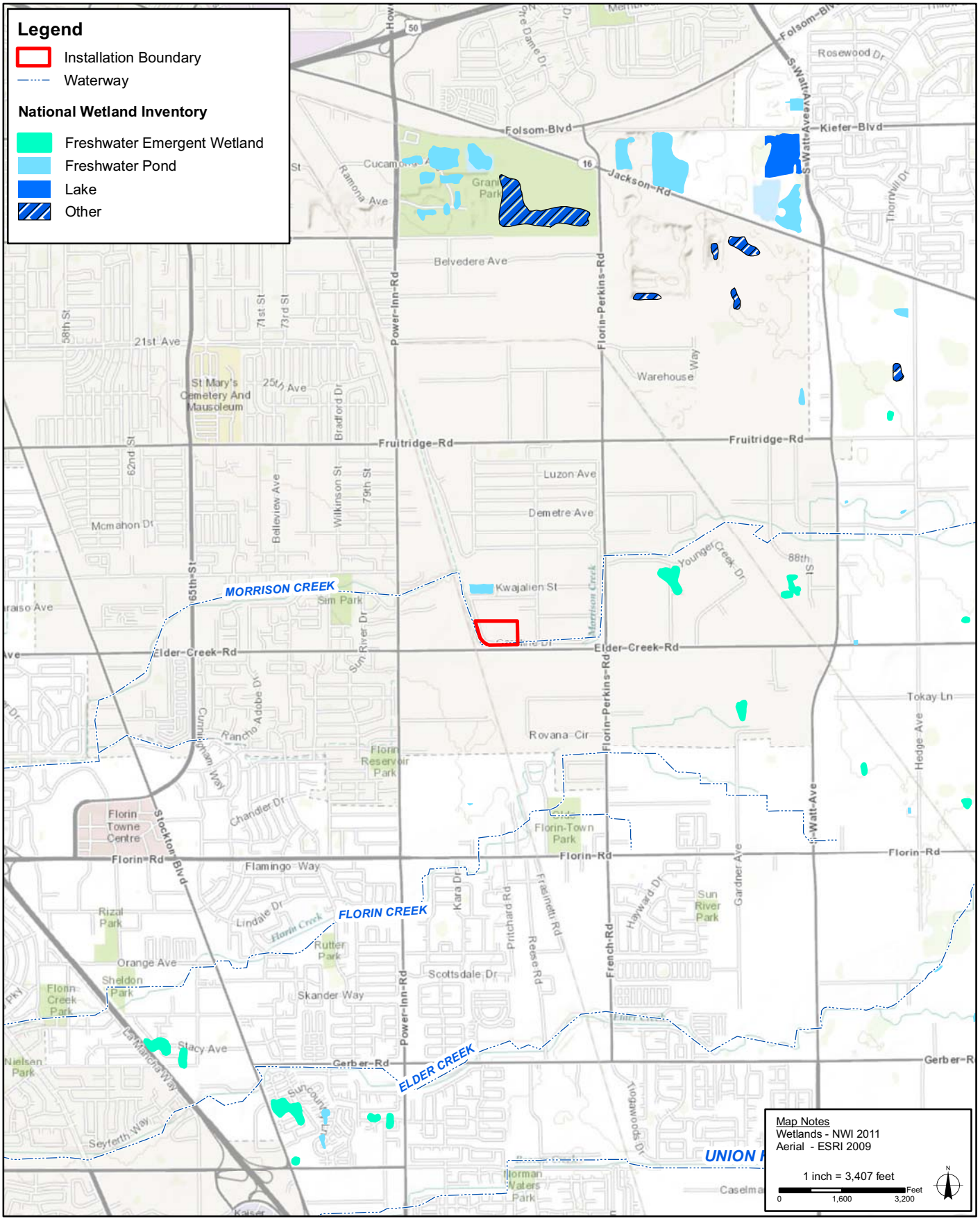
The Sacramento River Basin covers nearly 27,000 square miles. The Sacramento River is the largest river in California, with an average annual runoff of 22,000,000 acre-feet, nearly one third of the total runoff in the state. The length of the Sacramento River is 327 miles. The river is vital to the State's economy and is a major source of drinking water for residents of northern and southern California. The Sacramento River is a principal source of irrigation water for Sacramento and San Joaquin Valley farmers and fresh-water flow to the San Francisco Bay.

The Sacramento Valley is a major ground-water basin and can be considered a single-aquifer system. The storage capacity of the Sacramento Valley ground-water basin is about 114 million acre-feet at depths of 20 to 600 feet below land surface. Ground water provides about 22 percent of the water supply and is used extensively as a source of drinking and irrigation water, particularly in areas removed from surface-water supplies.

2.8.8.2 Site-Specific Hydrologic Conditions

There are no open water bodies, such as ponds, lakes or waterways on the NAVOPSPTCEN Sacramento site. However, Morrison Creek is an adjacent channelized waterway that runs to the south and west. It is cement-lined along the segment adjacent to the facility, and dry most of the year (Figure 2-7). The creek leaves the site to the west and then flows toward the southwest until it discharges into Beach Lake.

The water-bearing zones beneath NAVOPSPTCEN Sacramento are composed of a series of sand, silty sand, and sandy silt units. These units have been grouped into three general water-bearing zones that can be subdivided into two depositional regimes. The upper regime is heterogeneous and laterally and vertically discontinuous. This regime is composed of silt with interbedded fine grained arkosic sand lenses and appears to be unconfined to semi-confined. The lower regime is composed of apparently laterally continuous units comprising two distinct water-bearing zones and appears to be semi-confined to confined. These two zones are typically highly productive, consisting of fine to coarse grained, moderately graded sand interbedded with silt and clay. Depth to groundwater ranges from approximately 80 to 85 feet (CPUC 2007).



Regional Hydrology
NAVOPSPTCEN
Sacramento, California

FIGURE
2-7

2.8.8.3 Wetland Habitats

A protocol-level wetland delineation was completed within the installation in 2013 (ICF International [ICF] 2013). Results of these surveys identified 11 seasonal wetlands comprising 0.21 acre and 0.03 acre of "other waters" (drainage ditch) onsite (Figure 2-8). The seasonal wetlands contain hydrophytic vegetation and exhibit indicators for wetland hydrology and hydric soil. The drainage ditch appears to convey water during the winter and spring. Sources of water for the drainage ditch include surface runoff, direct precipitation, and runoff from the developed portions of the site. Appendix K presents the reporting associated with this survey in its entirety.

The wetlands and "other waters" at the site were interpreted to be within the scope of USACE jurisdiction under Section 404 of the Clean Water Act (CWA). The features have a significant nexus with the Sacramento River and would likely be subject to USACE jurisdiction under Section 404 of the CWA.

2.8.9 Flora and Vegetation Communities

NAVOPSPTCEN Sacramento flora is characterized by ornamental species associated with the facility and nonnative species associated with the open grassland habitat that occurs within the eastern portion of the installation. Appendix F presents a list of botanical species documented on NAVOPSPTCEN Sacramento.

Vegetation mapping activities were conducted on NAVOPSPTCEN Sacramento in 2013 (ICF 2013). Three natural communities—California annual grassland, ruderal grassland, and seasonal wetland—were observed on the site (Table 2-3). In addition, ornamental/landscaped areas, developed/paved areas, and a drainage ditch are also present on the site. The aforementioned community types are described below and are illustrated in Figure 2-8.

Table 2-3.
Vegetation Communities present on NAVOPSPTCEN Sacramento

Vegetation Type	Acres
California Annual Grassland	2.24
Developed	8.11
Drainage Ditch	0.04
Ornamental/landscaped	0.71
Ruderal Grassland	2.13
Seasonal Wetland	0.21
Total	**13.44**

amec

Vegetation Communities, Wetlands and Waters
NAVOPSPTCEN
Sacramento, California

FIGURE
2-8

California Annual Grassland

California annual grassland areas occur primarily along the western edge of the site, east of the Morrison Creek channel. Dominant species include wild oat (*Avena barbata*, *A. fatua*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordaeceus)*, and Italian ryegrass (*Festuca perenne)*. Associated nonnative forb species are a significant component of this community and dominate the landscape in places. These species include mustards (*Brassica* spp., *Hirschfeldia incana*), wild radish *(Raphanus sativus)*, filaree *(Erodium botrys),* and hairy cat's ear *(Hypochaeris radicata)*.

Ruderal Grassland

Ruderal grassland vegetation occurs in the north-central portion of the site, where the natural vegetation has been significantly degraded by past or current human activities (e.g., mowing and foot traffic) (Figure 2-8). Vegetation in this community type is highly variable but often includes a mix of nonnative annual grasses such as ripgut brome, soft chess, Bermuda grass (*Cynodon dactylon*), wild oat, Italian ryegrass, and weedy forbs such as bur clover (*Medicago polymorpha*), white clover (*Trifolium repens*), and filaree.

Seasonal Wetland

Seasonal wetlands are a broad class of wetlands characterized by seasonal inundation and annual, hydrophytic vegetation. Seasonal wetlands support a variety of both native and nonnative wetland plant species and may occur in a variety of landforms where there is seasonal saturation or inundation. Although sharing a similar hydrologic regime, seasonal wetlands are distinguished from vernal pool wetlands by their lack of distinctive floristic components (i.e., vernal pool indicator species) and by the absence of a distinctive claypan or hardpan soil.

At the site, seasonal wetlands are considered somewhat degraded based on nonnative plant community assemblages and land management modifications (e.g., mowing and grading). Species observed in this community include stalked popcorn flower (*Plagiobothrys stipitatus*), pygmy weed (*Crassula aquatica*), tidy tips (*Layia munzii*), Carter's buttercup (*Ranunculus bonariensis*)*,* and weak manna grass (*Glyceria declinata*).

Ornamental/Landscaped

Ornamental/landscaped areas in the site occur in a picnic area near the training field and areas next to the buildings. Large landscape trees and shrubs such as elm (*Ulmus* sp.), blue gum (*Eucalyptus globulus*), southern live oak (*Quercus virginiana*), and oleander (*Nerium oleander*) were typical of species observed in these areas. Groundcover in these areas was dominated by turf grass.

Developed Areas

Developed areas constitute approximately 50% of the site and include parking areas, buildings, roads, and barren areas where vegetation has been removed or is absent.

2.8.10 Fauna

The City of Sacramento, including areas immediately adjacent to the NAVOPSPTCEN Sacramento site, is heavily developed and disturbed. Due to the highly developed nature of the NAVOPSPTCEN Sacramento site, species present are those that can persist in or adjacent to human development. With the exception of forage and roosting opportunities for migrating birds, the site does not provide a migration corridor between any natural areas for terrestrial species.

2.8.10.1 Mammals

Mammals potentially occurring in the vicinity of the site include typical urban species such as raccoons (*Procyon lotor*), skunks (*Mephitis mephitis), opossum (Didelphis virginiana),* and coyotes (*Canis latrans). Due t*o the partially *rural location of the sit*e, other species *such as Califo*rnia vole (*Microtus californicus*), ground squir*rels (Spermophilus beecheyi*) black-tailed jackrabbit (*Lepus californicus*), and American badger (*Taxidea taxus*; CDFW – Species of Special Concern) may also be observed (AMEC 2009).

2.8.10.2 Birds

Although the quality of habitat on NAVOPSPTCEN Sacramento is low, the open grass area in the western portion of the site could provide valuable forage habitat for raptors and other avian species. In addition, the ornamental trees on-site have the potential to provide roosting, forage, or nesting habitat for a variety of bird species. Based on recent 2012/2013 general avian surveys conducted on NAVOPSPTCEN Sacramento, typical avian species on site include house finch (*Haemorhous mexicanus*), rock pigeon (*Columba livia*), mourning dove (*Zenaida macroura*), black phoebe (*Sayornis migricans*), and red-tailed hawk (*Buteo jamaicensis*) (USGS 2012). An inventory of avian species detected on NAVOPSPTCEN Sacramento is presented in Appendix I. The preliminary results of focused avian species surveys (USGS 2012) are presented in Appendix K.

2.8.10.3 Amphibians and Reptiles

The site is fully developed and offers limited habitat for amphibians and reptiles. Reptiles potentially occurring on the site are limited to species adapted to developed urban environments, such as small lizards and snakes. Potential habitat for the giant garter snake (*Thamnophis gigas*), a federally and state- listed threatened species, occurs in Morrison Creek; however, there are no records of the snake occurring in the vicinity of the site and Morrison Creek is not within the boundaries of the installation. Limited suitable habitat for amphibians exists due to a lack of water resources on the site. No amphibians or reptiles were observed during a site visit in November 2009 (AMEC 2009).

2.8.10.4 Fishes

The NAVOPSPTCEN Sacramento site offers no habitat for fish or other aquatic species. Morrison Creek is located offsite.

2.8.10.5 Invertebrates

There has not been a formal invertebrate survey on NAVOPSPTCEN Sacramento property; however due to the presence of vernal pool fairy shrimp (*Branchinecta lynchi)*, vernal pool tadpole shrimp *(Lepidurus packardi)*, and California linderiella (*Linderiella occidentalis*) adjacent to the site (California Natural Diversity Database [CNDDB] 2013), a protocol-level branchiopod survey was completed during the 2012/2013 wet season. No fairy shrimp were documented onsite as a result of this survey. An additional wet-season survey will be conducted during the 2013/2014 wet season as well in order to complete protocol requirements. Appendix K presents the detailed protocol level survey report from the 2012/2013 wet season survey (ICF 2013).

2.8.11 Invasive Species

Invasive and exotic species may include plants, insects, or animals. An invasive species is defined as "an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health." A non-native (or alien) species is defined as a "species including its seeds, eggs, spores, or other biological material capable of propagating that species that is not native to that ecosystem (EO 13112 *Invasive Species*)."

Because of their invasive capacity, many exotic species have the ability to spread rapidly through ecosystems since their natural predators are often not present. Such species often retard natural succession and reforestation and generally cause a reduction of biological diversity in natural ecosystems.

In accordance with OPNAVINST 6250.4C and OPNAVINST 5090.1D, Chapter 17, An IPMP has been prepared for the NAVOPSPTCEN Sacramento site (DoN 2014). All pest management programs at NAVOPSPTCEN Sacramento are conducted in accordance with the IPMP.

2.8.11.1 Invasive Plants and Noxious Weeds

Invasive plants as defined in EO 13112 are, "an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health". The Federal Noxious Weed Act requires Federal land managers to cooperate with State and Federal agencies to manage undesirable plants. It defines noxious weed as, "any living stage (including seeds and reproductive parts) of a parasitic or other plant of a kind which is of foreign origin, is new to or not widely prevalent in the U.S., and can directly or indirectly injure crops, other useful plants, livestock, poultry or other interests of agriculture, including irrigation, navigation, fish and wildlife resources, or the public health". It also mandates a program and a person be assigned to deal with unwanted plants, funding needs, cooperative agreements, and the use of integrated pest management systems. Navy Instruction, OPNAVINST 6250.4C, requires a comprehensive IPMP and discusses the need to control pest outbreaks which affect the military mission, damage property, or impact the welfare of people. All pesticide use must comply with applicable regulations to prevent pollution. In addition, DoD policy states that "noxious weeds and other

objectionable plant growth shall be controlled by mowing, use of EPA registered or approved herbicides, cultivation, or other appropriate means. Pesticide use should be minimized and used in accordance with DoD policy" (DoD 2011).

Although most of plants on NAVOPSPTCEN Sacramento are non-native, the majority are not considered invasive or noxious. However, yellow starthistle and perennial pepperweed were both documented in the grassland to the west of the facility (CPUC 2007). Both species are designated noxious weeds by the State of California (California Department of Food and Agriculture [CDFA] 2010).

2.8.11.2 Invasive Animals

Management of invasive animals is limited to managing pest species, using the IPM program. Specific management strategies for invasive animal species are described in IPMP (DoN 2014). Several groups of animals are considered pests and may conflict with the military mission on NAVOPSPTCEN Sacramento. Pest mammals include rabbits, skunk, raccoon, squirrels, coyotes, feral dogs, and feral cats.

2.8.12 Special-status Species

Special-status species include Threatened and Endangered (T&E) species that are listed by the federal government as threatened, endangered, proposed for listing as threatened and endangered, or are candidates for such listing. Also included in this category are Birds of Conservation Concern (BCC) and species protected by the Bald Eagle and Golden Eagle Protection Act of 1940 (16 U.S.C. 668-668d, 54 Stat. 250) as amended (Eagle Act) and Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-712; Ch. 128). The applicable federal classification system for special-status species is as follows:

- ***Endangered*** - Any species that is in danger of extinction throughout all or a significant portion of its range.
- ***Threatened*** - Any species that is likely to become an endangered species within foreseeable future through all or a significant portion of its range.
- ***Proposed*** - Any species that has been proposed for listing as threatened or endangered species.
- ***Birds of Conservation Concern*** - All Nongame birds, gamebirds without hunting seasons, subsistence-hunted nongame birds in Alaska; and Endangered Species Act candidate, proposed endangered or threatened, and recently delisted species.
- ***Candidate*** - Species for which there is sufficient information on biological vulnerability and threats to support proposals to list them as endangered or threatened.
    - ***Fully Protected*** - The classification of Fully Protected was the State's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Most of the species on these lists have subsequently been listed under the state and/or

federal endangered species acts; white-tailed kite, golden eagle, trumpeter swan, northern elephant seal and ring-tailed cat are the exceptions. Records of the white-tailed kite and the golden eagle are kept by the CDFW; no records of the trumpeter swan, northern elephant seal and ring-tailed cat are formally maintained.

- ***Species of Special Concern*** - Species formerly under consideration by the USFWS for status changes (includes Category 1, 2, and 3 taxa). As of 1996, the USFWS discontinued the use of this designations, however, encourage further study into their conservation status.

DoD policy states that T&E species and their habitats shall be protected and managed according to the Endangered Species Act (ESA) and implementing USFWS regulations and agreements.

Per the statutory requirements of the Sikes Act (as amended), and in coordination with the USFWS and CDFW, NAVOPSPTCEN Sacramento is to ensure proper consideration of T&E species as well as their associated federally designated critical habitat. Figure 2-9 presents special-status species that have been documented within a 2-mile radius of NAVOPSPTCEN Sacramento. No T&E species have been identified within NAVOPSPTCEN Sacramento.

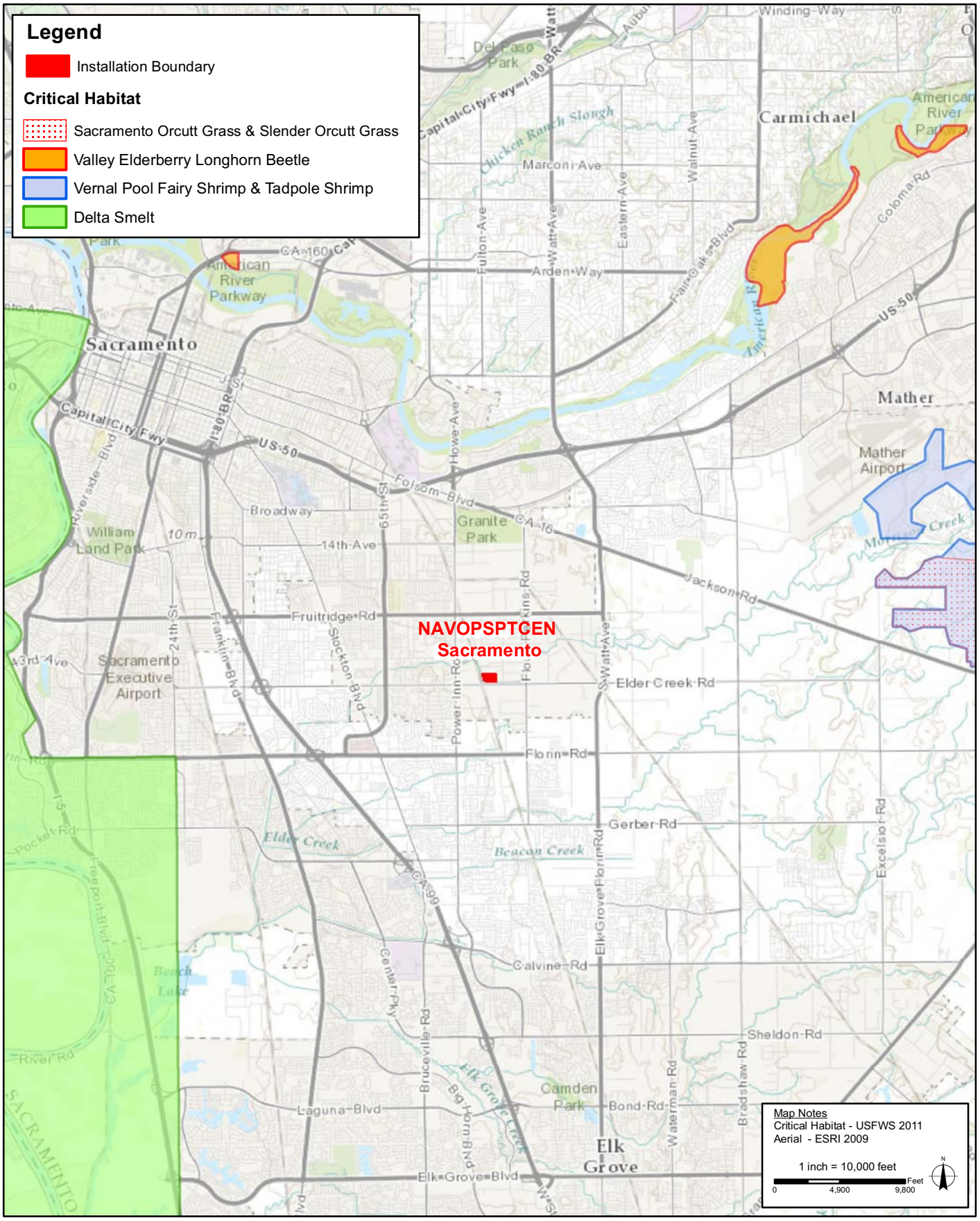
2.8.12.1 Critical Habitat

The ESA requires the federal government to designate "critical habitat" for any species it lists under the ESA. Critical habitat is defined as: (1) specific areas within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation. Under Section 7 of the ESA, all federal agencies must ensure that any actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species, or destroy or adversely modify its designated critical habitat. Federally designated critical habitat does not occur on or directly adjacent to NAVOPSPTCEN Sacramento lands (Figure 2-10).

The National Defense Authorization Act (NDAA) for FY 2004 (Public Law 108-136) modified section 4(a) (3) of the ESA to preclude the designation of critical habitat on DoD lands that are subject to an INRMP prepared in accordance with the Sikes Act, as amended. As such, all DoD installations with T&E and proposed T&E listed species, candidate species, or unoccupied habitat for a listed species where critical habitat may be designated, must structure the INRMP to avoid the designation of critical habitat. The INRMP may obviate the need for critical habitat if it specifically addresses the benefit provided to the listed species and the provisions made for the long-term conservation of the species. The USFWS uses a 3-point criteria in order to evaluate the adequacy of an INRMP to obviate the need for critical habitat listing within an installation:

Special-status Species
NAVOPSPTCEN
Sacramento, California

FIGURE
2-9



Critical Habitat Designation Map
NAVOPSPTCEN
Sacramento, California

FIGURE
2-10

1. The plan provides a conservation benefit to the species;
2. The plan provides certainty that the management plan will be implemented; and
3. The plan provides certainty that the conservation effort will be effective

2.8.12.2 Special-status Species with Potential to Occur

Although no T&E species have been documented on NAVOPSPTCEN Sacramento, suitable habitat occurs onsite for three special-status species: burrowing owl (*Athene cunicularia*), vernal pool fairy shrimp (*Branchinecta lynchi*), and vernal pool tadpole shrimp (*Lepidurus packardi*). A description of each is provided below.

Burrowing owl *(Athene cunicularia)*

Federal Status: Protected under the MBTA; USFWS BCC
State Status: California Species of Special Concern

The burrowing owl is a small, ground-dwelling owl found in open, dry grasslands, agricultural and range lands, as well as desert habitats with low-growing vegetation (Haug et al. 1993).

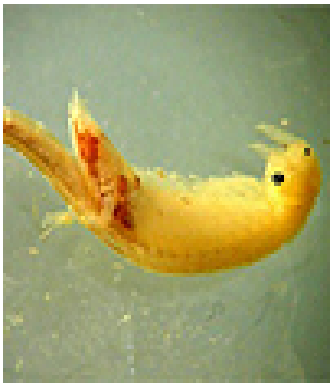
They are often associated with other burrowing animals such as ground squirrels and coyotes, and may make use of burrows abandoned by these species. Although burrowing owls are capable of excavating their own burrows in the absence of other burrowing species, it is uncommon (Karalus and Eckert 1987). The elimination of burrowing mammals through pest control programs and habitat loss has been identified as the primary factors responsible for the decline of burrowing owls (Klute et al. 2003)

Ground squirrel burrow (left) and culverts (right) present onsite that may be suitable nesting locations for burrowing owls.

Status on NAVOPSPTCEN Sacramento

Protocol-level surveys were completed in September 2013 and no burrowing owls were detected on NAVOPSPTCEN Sacramento. However, several potential natural and man-made burrows structures (i.e., ground squirrel burrows and culverts) have been identified onsite (AMEC 2010) as potential burrowing owl nesting habitat. Burrowing owls have also been documented within the vicinity of NAVOPSPTCEN Sacramento (Figure 2-8).

Vernal Pool Fairy Shrimp *(Branchinecta lynchi)*



Federal Status: Federally threatened
State Status: CNDDB Special Animal (CDFW 2011)

The vernal pool fairy shrimp is a small freshwater crustacean (0.12 to 1.5 inches long) that exists only in vernal pools or vernal pool-like habitats and does not occur in riverine, marine, or other permanent bodies of water. Vernal pools are generally small, shallow wetlands, located on a clay or hardpan layer, that fill with water during the winter and spring, then dry up until the next rainy season. When the temporary pools dry, vernal pool fairy shrimp offspring persist in suspended development as desiccation-resistant embryos (commonly called cysts) in the pool substrate until the return of winter rains and appropriate temperatures allow some of the cysts to hatch (USFWS 2002b).

Status on NAVOPSPTCEN Sacramento

Suitable habitat (clay soils and seasonally ponded depressions) for vernal pool fairy shrimp occurs within the open grassland habitats of the installation. One protocol level vernal pool branchiopod survey was conducted onsite during the 2012/2013 wet season. No federally listed vernal pool branchiopods or other special status species were observed in any of the pools that held water during this survey period. The USFWS protocol for determining absence requires that two wet season surveys be conducted within a 5-year period or that one wet season and one dry season survey be conducted consecutively. A second wet season survey is planned for the 2015/2016 wet season.

Vernal Pool Tadpole Shrimp (*Lepidurus packardi*)

Federal Status: Federally endangered
State Status: None

The vernal pool tadpole shrimp is a freshwater crustacean (up to 2 inches long) that can be found in ephemeral freshwater habitats, including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales, and other seasonal wetlands in California. Like vernal pool fairy shrimp, their offspring persist in cysts during the dry season until adequate rainfall and appropriate temperatures occur for hatching (USFWS 2002c).

Status on NAVOPSPTCEN Sacramento

Vernal pool tadpole shrimp have been documented adjacent to the installation (Figure 2-8) (CNDDB 2013). One protocol level vernal pool branchiopod survey was conducted onsite during the 2012/2013 wet season. No federally listed vernal pool branchiopods or other special status species were observed in any of the pools that held water during this survey period. The USFWS protocol for determining absence requires that two wet season surveys be conducted within a 5-year period or that one wet season and one dry season survey be conducted consecutively. A second wet season survey is planned for the 2015/2016 wet season.

2.8.12.3 Migratory Birds and Birds of Conservation Concern

Some of the species of birds that may use NAVOPSPTCEN Sacramento for foraging and breeding habitat are protected by federal law under the MBTA (16 USC § 703 et seq.) and EO 13186. The MBTA, enforced by the USFWS, makes it unlawful "by any means or manner, to pursue, hunt, take, capture [or] kill" any migratory bird except as permitted by regulation. The number of bird species covered by the MBTA is extensive, includes listed and non-listed species, and is listed at 50 CFR § 10.13. The regulatory definition of "migratory bird" is broad and includes any mutation or hybrid of a listed species and includes any part, egg, or nest of such bird (50 CFR §10.12.).

To provide guidance for conflicts arising between military readiness activities and the MBTA, the USFWS issued the final rule on, "Migratory Bird Permits: Take of Migratory Birds by the Armed Forces" (50 CFR Part 21 in FR 28 February 2007, pages 8931-8950), hereinafter referred to as the Migratory Bird Rule. The Migratory Bird Rule authorizes the military to "take" migratory birds during military readiness activities under the MBTA without a permit. However, if the military determines that the activity will have a "significant adverse effect" on a population of migratory birds, they must work with the USFWS to develop and implement conservation measures to minimize and/or mitigate the effects. Currently there are no anticipated takes of migratory birds that would fall under this exemption. Conservation measures under the Migratory Bird Rule require monitoring and record-keeping for years from the date the Armed Forces commence their conservation action. During INRMP reviews, the Armed Forces must report to the USFWS migratory bird conservation measures implemented and the effectiveness of the conservation measures in avoiding, minimizing, or mitigating take of migratory birds.

BCC designates migratory and non-migratory birds that "without additional conservation actions" are likely to become candidates for listing under the Endangered Species Act of 1973" (Fish and Wildlife Conservation Act amended 1988). Per the statutory requirements of the Sikes Act, in coordination with the USFWS and CDFW, NAVOPSPTCEN Sacramento is to ensure proper consideration of BCC and MBTA species.

Based on DoD policy, neotropical migratory bird programs shall be established in support of and consistent with the military mission. The DoD strategy is to focus on inventory, on-the-ground management practices, education, and long-term monitoring (DoD 2011; DoD 2014). Its Partnership in Flight program seeks to conserve and manage these birds and their

habitat on military installations. A list of all bird species observed on NAVOPSPTCEN Sacramento is provided in Appendix I with their associated BCC and MBTA rankings.

2.8.13 Sensitive Species of Regional Concern

Sensitive species of regional concern may include former candidates for federal listing as threatened or endangered, state endangered or threatened, species of special concern to the state of California, and species that are regionally rare or of limited distribution. Although protection of non-listed species is not mandatory on federal installations, management of these species contributes to the overall maintenance of their natural populations and reduces the likelihood that these species will be given additional legislative protection in the future. Managing for these species and their habitats by way of an ecosystem-based management process can also be beneficial to other species.

California Endangered Species Act (CESA): Sections 2050-2098 of the California Fish and Game Code (CFGC) prohibit the take of State-listed endangered and threatened species unless specifically authorized by the CDFW. CDFW administers CESA and authorizes take through permits or memorandums of understanding issued under Section 2081 of CFGC, or through a consistency determination issued under 2080.1. Section 2090 of CFGC requires state agencies to comply with threatened and endangered species protection and recovery and to promote conservation of these species. The state definition of take is to hunt, pursue, catch, capture, or kill a member of a listed species or attempt to do so.

***California Species of Special Concern (SSC*)**: California SSC is a designation conferred by the CDFW for animal species for which declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. Species on the CDFW Watch List (WL) are taxa that were previously SSCs but no longer merit SSC status or which do not meet SSC criteria but for which there is concern and a need for additional information to clarify status. SSC and WL are administrative designations, and although they carry no formal legal status, the intention is to achieve conservation and recovery of these animals before they meet CESA criteria for listing as threatened or endangered.

California Fully Protected Species**:** The classification of Fully Protected was the State's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Most of the species have subsequently been listed under the state and/or federal endangered species acts; white-tailed kite, golden eagle, trumpeter swan, northern elephant seal and ring-tailed cat are the exceptions. The CFGC sections dealing with Fully Protected species state that these species "....may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected" species, although take may be authorized for necessary scientific research.

2.8.13.1 Special-Status Plants

No special status plants have been documented within the vicinity of NAVOPSPTCEN Sacramento (Figure 2-8). The only special status plant species that has the potential to occur on the NAVOPSPTCEN site is Sanford's arrowhead (*Sagitaria sanfordii*) (Appendix J). However, no records of this species occur within the vicinity of NAVOPSPTCEN Sacramento (Figure 2-7).

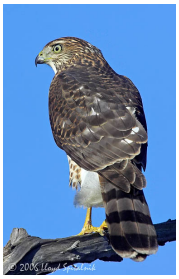
2.8.13.2 Sensitive Fauna

Four California sensitive species designations have been documented or have the potential to occur on or around NAVOPSPTCEN Sacramento. A description of each species and its listing status is provided below. Figure 2-8 presents the location of special status species known from the vicinity and a species list with additional status information is provided in Appendix J.

Mammals

American badger (*Taxidea taxus*) - Although not commonly found in developed urban settings, there is one documented siting of an American badger within a mile of the NAVOPSPTCEN Sacramento (Figure 2-8; CNDDB 2013). The American badger is designated a SSC by CDFW.

Birds



Cooper's hawk (*Accipiter cooperii*) – The Cooper's hawk is a designated WL species by CDFW and is protected under the MBTA as defined by the USFWS. This species was documented on NAVOPSPTCEN Sacramento property during 2012 bird surveys (USGS 2012).

Great Egret (*Ardea alba*) – The great egret is listed as a "Special Animal" by the CDFW (2011). No egret rookeries (nesting areas) have been documented in the vicinity of NAVOPSPTCEN Sacramento (CNDDB 2013). This species was observed foraging onsite during recent avian surveys (USGS 2012).

Invertebrates

California linderiella (*Linderiella occidentalis*) – California linderiella is species of fairy shrimp that is identified by the CNDDB as a "Special Animal" list (CDFW 2011). California linderiella is known to occur from the vicinity of NAVOPSPTCEN Sacramento (Figure 2-8; CNDDB 2013).

2.8.14 Climate Change Vulnerability Assessment

Based on current predictions, the Sacramento region is projected to have more frequent, longer, and more-extreme heat waves and longer periods of drought. Though overall annual precipitation in the region is expected to decline, storms are expected to be more extreme (Sacramento County 2009). These changes may present additional challenges to the region, including:

- Increased transmission of infectious diseases;
- Health problems related to air quality issues and heat waves;
- Increased fire risk;
- Further strains on water supply; and
- Greater risks of flooding due to extreme storm events.

Assessing the impacts of climate change is best approached by identifying an environmental baseline for the future that considers the differences in landscape form and function caused by climate change and other stressors on the landscape. Conducting a climate change vulnerability assessment may guide essential monitoring requirements, as well as develop appropriate adaptive management strategies. However, the abundance and distribution of species and habitats on U.S. Navy properties may be too small in scale to address comprehensive climate change vulnerabilities. Therefore, regional partnerships may be the most appropriate means to conduct such assessments and in developing and implementing adaptation strategies. In general, natural resources managers should identify natural resources management strategies that provide conservation benefits to the ecosystem, regardless of whether climate changes occur.

The ecosystem effects of climate change will likely be incremental and challenging to distinguish and assess for the duration of this INRMP. The analysis to assess potential impacts should be predictive in nature, relying on models to plan for probable complex and indirect changes that are likely to happen in the future. Addressing impacts to protected species and species of concern from global climate changes and developing modifications to natural resources management strategies to address them will require an adaptive process of developing, validating and improving models in the creation of forecasts needed for management.

SECTION 3
NATURAL RESOURCES MANAGEMENT PROGRAM ACTIONS

Resource-specific management actions are provided in this section for obtaining the desired outcomes. The actions have been further divided into compliance-based actions and stewardship-based actions, defined as follows:

- Compliance-based actions - those that are required to meet the legal requirements applicable to the management of U.S. Navy lands and the needs of the military mission.
- Stewardship-based actions - those that are designed to meet ecosystem-based conservation practices but that are not legally mandated.

This section is focused on the U.S. Navy's management responsibilities but it does identify those of the other agencies involved where appropriate. The general nature of those responsibilities and the agreements governing them are described in Section 1.4. The purpose of listing the management measures being implemented by other agencies is to provide a complete picture of natural resources management on NAVOPSPTCEN Sacramento. This INRMP is not a proposal for management changes for any agencies other than the U.S. Navy.

The resource-specific goals, objectives, and strategies, presented below are expected to be implemented during the twenty-year tenure of the INRMP (unless otherwise noted). Because the INRMP has been developed as an adaptive management program, modifications to the resource-specific management elements are anticipated and encouraged, as additional information becomes available. Any requirement for the obligation of funds for projects in this INRMP will be subject to the availability of funds appropriated by Congress, and none of the proposed projects will be interpreted to require obligation or payment of funds in violation of any applicable federal law, including the Anti-Deficiency Act, 31 USC Section 1341, *et seq*.

Based on current conditions and available data it was determined that not every resource required specific objectives. Additionally, management of Forest and Coastal/Marine environs are not presented herein, as these habitats are not relevant to NAVOPSPTCEN Sacramento. NAVOPSPTCEN Sacramento does not contain large stands of forests and as a result, does not have a formal forestry management program.

Management priorities on NAVOPSPTCEN Sacramento are associated with proper landscaping management, invasive species control, and migratory bird related issues. There are no significant natural resources encumbrances to training on NAVOPSPTCEN Sacramento property. Management measures in this INRMP were generally developed to maintain the current biological diversity of terrestrial and aquatic ecosystems.

3.1 Land Use Management

Land Use Primary Regulatory Drivers

- **Sikes Act**
- **EO 13423**
- **EO 13514**
- **EO 12902**

Land use management as it relates to anthropogenic operations will be consistent with the latest conservation and land management principles. Implementation of national land use and conservation policies is required on all federal lands to the extent practicable and in concert with the assigned mission. NAVOPSPTCEN Sacramento will actively cooperate with local, state, and federal organizations to apply national land use and conservation policies consistent with accepted scientific and professional standards and practices.

NAVOPSPTCEN Sacramento will plan land utilization with an awareness of the potential environmental effects of proposed actions. Mission requirements for the land will avoid or minimize adverse effects and restore or enhance environmental quality. NAVOPSPTCEN Sacramento natural resources managers will participate in all planning and decision-making activities of land use to ensure that current and planned activities are compatible with natural resource policies and other environmental requirements.

The U.S. Navy issued water conservation guidelines in 2011 to comply with EO 12902, which requires that "water conservation measures with suitable payback be implemented at all federal facilities" (DoD 2011). The following management measures are intended to implement water conservation within NAVOPSPTCEN Sacramento.

Objective: Provide a sound basis for management and design of landscaping and grounds, their ability to enhance quality of life and foster a sense of community pride among those supporting and participating in activities at NAVOPSPTCEN Sacramento.

Compliance-based Actions:

- Perform a formal facility water conservation audit that would evaluate water conservation options for landscaped facilities and implement water conservation and runoff reduction measures based on the results.

Stewardship-based Actions:

- Select appropriate "water-wise" plants and those with low maintenance requirements for new or replacement landscaping. Plants should be selected from a list of plants suitable for the local climate and native plants should be selected when feasible.
- Replace thirsty lawn areas, where they are not needed for recreation.

3.2 Soils Management

Soils Management Primary Regulatory Drivers

- **Sikes Act**
- **Clean Water Act**
- **OPNAVINST 5090.1D**
- **DoD Directive 5090**
- **DODI 4715.03**
- **EO 11990**
- **EO 11988**

A description of NAVOPSPTCEN Sacramento soil resources is presented in Section 2.8.5 and illustrated on Figure 2-4. The primary goals of soil resources management on NAVOPSPTCEN Sacramento are to protect soil resources, to identify areas prone to soil erosion, and to prevent soil erosion and its subsequent impact on military facilities, water, and wildlife habitat quality.

Soil conservation is needed to provide the ecological structure necessary for terrestrial habitats and communities to function and perform the ecosystem services that support the U.S. Navy's current use of NAVOPSPTCEN Sacramento. The threshold beyond which an area loses its capability to sustain its original training load is loosely termed the carrying capacity. The Sikes Act, CWA, DoDI 4715.03, and OPNAVINST 5090.1D require Best Management Practices (BMPs) for soil and water resources on federal lands. The Clean Air Act (CAA) also restricts particulate matter emissions that result from soil disturbance. As necessary, BMPs are required to protect the soil from erosion by wind and water. Management measures and associated strategies to protect and enhance the soil resources at NAVOPSPTCEN Sacramento are provided below.

Objective: Protect soil productivity, nutrient functioning and wildlife habitat through effective implementation of Best Management Practices (BMPs) to prevent and control soil erosion.

Compliance-based Actions:

- Develop new or use proven BMPs to prevent and control erosion and protect sensitive resources and habitats. Ensure incorporation of BMPs in the preliminary engineering, design, and construction of facilities involving ground disturbance (OPNAVINST 5090.1D).

- Use the specific guidance for selecting BMPs as presented in the *California Stormwater Quality Association's Stormwater Best Management Practice Handbook* (California Stormwater Quality Association's [CSQA] 2009), the National Stormwater BMPs Database and other proven techniques.

Stewardship-based Actions:

- Minimize fugitive dust emissions to minimize impacts to soil sedimentation.

3.3 Vegetation Management

Vegetation Management Primary Regulatory Drivers

- **Sikes Act**
- **OPNAVINST 5090.1D**
- **DoD Directive 5090**
- **DODI 4715.03**
- **EO 11990**
- **EO 11988**
- **EO 13112**

A description of NAVOPSPTCEN Sacramento's vegetation resources is presented in Section 2.8.9 and Figure 2-7. These communities provide wildlife habitat. Plant communities within the site include non-native grassland and landscaped vegetation.

DoD policy calls for restoring and rehabilitating adversely altered or degraded habitats. Native plant species and communities shall also be maintained, enhanced, and restored to conserve their biodiversity and health (DoD 2011). The following management measures are intended to conserve and maintain natural plant communities and habitats within NAVOPSPTCEN Sacramento.

Objective: Manage natural plant communities to conserve biodiversity, erosion control, wildlife habitat, and aesthetics.

Compliance-based Actions:

- Monitor vegetation every five years and maintain a comprehensive floristic species list of plant species, including invasives that occur within the entire installation.

Stewardship-based Actions:

- Educate NAVOPSPTCEN Sacramento grounds maintenance personnel about seasonal restrictions for nesting birds and sensitive habitat areas (i.e., vernal pools) to be excluded from landscape maintenance activities with the exception of weed control activities.

3.4 Wetland and Waters Management

Wetlands Management Primary Regulatory Drivers

- **Sikes Act**
- **Clean Water Act**
- **Porter-Cologne Water Quality Control Act**
- **OPNAVINST 5090.1D**
- **DoD Directive 5090**
- **DODI 4715.03**
- **EO 11990**
- **EO 13112**

Wetlands provide essential breeding, spawning, nesting, and wintering ground for numerous wildlife species. Wetlands also enhance the quality of surface waters by impeding erosive forces moving water and trapping waterborne sediment and associated pollutants. Per EO 11990, *Protection of Wetlands,* federal agencies are required to: *"take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands."* It is also U.S. Navy policy to avoid adverse impacts on existing aquatic resources and to offset those adverse impacts that are unavoidable (OPNAVINST

5090.1D). Management measures and associated strategies to protect and enhance the wetland resources at NAVOPSPTCEN Sacramento are provided below.

Objective: To protect wetland resources at NAVOPSPTCEN Sacramento.

Compliance-based Actions:

- Support the mitigation policy of avoidance, minimization, and compensation for any wetland losses, as mandated by EO 11990, *Protection of Wetlands*. Perform wetland delineations prior to conducting activities in areas identified as potentially jurisdictional wetlands.

- Evaluate proposed projects for impacts to wetland/waters areas.

Stewardship-based Actions:

- Monitor wetland community plant species composition and relative cover. Paying particular attention to invasion by noxious weeds and cover aquatic vegetation.

3.5 Invasive Species & Integrated Pest Management

Pest management programs at NAVOPSPTCEN Sacramento are conducted under an IPMP (2014) in accordance with DoDI 4150.07 and OPNAVINST 6250.4C. The Noxious Weed Control Act requires Federal land managers to cooperate with Federal and State agencies to manage undesirable plants. It also mandates a program and a person be assigned to deal with unwanted plants, funding needs, cooperative agreements, and the use of integrated pest management systems. In addition, DoD policy states that "noxious weeds and other objectionable plant growth shall be controlled by mowing, use of EPA registered or approved herbicides, cultivation, or other appropriate means. Pesticide use should be minimized and used in accordance with DoD policy (DoD 2011). Section 2.8.12 discusses invasive species that occur within the NAVOPSPTCEN Sacramento. Invasive species management measures and associated strategies are provided below.

Invasives/Pest Species Management Primary Regulatory Drivers

- **Sikes Act**
- **Federal Noxious Weed Act**
- **National Aquatic Invasive Species Act**
- **OPNAVINST 5090.1D**
- **OPNAVINST 6250.4C**
- **DoDI 4715.03 and 4150.07**
- **EO 11990**
- **EO 13112**
- **EO 11987**

Objective 1: Eradicate or control invasive plant species that have potential to alter native plant communities.

Compliance-based Actions:

- Conduct an inventory of noxious weeds; identify and prioritize areas that are dominated by invasive species that are considered high priority by the Cal-IPC. Maintain a comprehensive noxious and invasive plant species list and Geographic Information System (GIS) geodatabase.

- Based on the results of the noxious weed inventory, identify management goals and strategies for the control of high priority noxious and invasive plant species.

- Eradicate or control the spread and introduction of nonnative and invasive plant species (i.e., thistles, mustards, fennel, etc.) with emphasis on those with greatest potential for negative impacts.

Objective 2: Use Integrated Pest Management (IPM) methods to control noxious undesirable plants, rodents, and other pests found within NAVOPSPTCEN Sacramento and to reduce the dependence on chemical means of control.

Compliance-based Actions:

- Control identified pest species that pose a nuisance, significant property damage, or potential health hazard to a tolerable level, without incurring any incidental take of non-target wildlife.

- Monitor pesticide/herbicide applications within NAVOPSPTCEN Sacramento. Ensure pesticide/herbicide applications will not negatively affect terrestrial or aquatic wildlife species by complying with all federal, military, state, and local environment standards and obtain necessary permits (contractors) for pesticide/herbicide application

3.6 Wildlife Management

Wildlife Management Primary Regulatory Drivers

- **Sikes Act**
- **Endangered Species Act**
- **OPNAVINST 5090. 1D**
- **DoDI 4715.03**
- **Migratory Bird Treaty Act**
- **Fish and Wildlife Coordination Act**
- **EO 13186**

Since the majority of NAVOPSPTCEN Sacramento is developed, existing wildlife habitats onsite are considered to be of low quality, fragmented, and isolated. Wildlife management at NAVOPSPTCEN Sacramento focuses on maintaining open grassland habitats onsite favorable for wildlife in a manner consistent with the military mission and all applicable laws and regulations. Information pertaining to fish and wildlife species known to occur on NAVOPSPTCEN Sacramento is included in Section 2.8.11**.** Management measures have been identified in order to preserve and protect wildlife resources at NAVOPSPTCEN Sacramento, these measures and associated goals and strategies are provided below.

Objective: Promote a sustainable and diverse wildlife community within NAVOPSPTCEN Sacramento lands through habitat stewardship, population protection and monitoring, invasive species removal, and wildlife damage control compatible with the facility's mission and urban location.

Compliance-based Actions:

- Conduct a basewide wildlife inventory and maintain a comprehensive list of species that have been identified within the installation. Update basewide wildlife surveys every five years. Conduct focused surveys for specific species (i.e., burrowing owl, fairy shrimp etc.) as necessary.

- Maintain a bird checklist for migratory and resident species that use the installation.

- Conduct nest surveys prior to conducting construction, landscape maintenance, and pest control activities in areas that have potential to support breeding bird populations.

Stewardship-based Actions:

- Educate grounds maintenance personnel about sensitive habitat areas (such as vernal pool habitats) to be excluded from landscape maintenance activities with the exception of invasive weed removal.

3.7 Threatened & Endangered Species Management

DoD policy states that T&E species and their habitats shall be protected and managed according to the ESA and implementing USFWS regulations and agreements. Descriptions of federal protection categories are provided in Section 2.8.13. DoD components with land management responsibilities shall maintain records of funds expended for T&E species management. When compatible with military mission and USFWS requirements and recommendations, DoD components shall cooperate in studies, programs, plans, and experiments designed to enhance populations of T&E species.

T&E Species Management Primary Regulatory Drivers

- **Sikes Act**
- **Endangered Species Act**
- **OPNAVINST 5090. 1D**
- **DoDI 4715.03**
- **Fish and Wildlife Coordination Act**
- **EO 13186**

Three T&E species have potential to occur within NAVOPSPTCEN Sacramento: burrowing owl, vernal pool fairy shrimp (Threatened) and the vernal pool tadpole shrimp (Endangered) have the potential to utilize habitats present within the installation. Occurrences of these species have been documented adjacent to the facility (CNDDB 2013) and potential habitat occurs within the grassland in the western portion of the facility. The following general compliance and protection objectives will assist in implementing and achieving the management goals for these species.

Objective 1: Conserve and monitor potential fairy shrimp habitat within the installation.

Compliance-based Actions:

- Conduct surveys for vernal pool habitats and listed fairy shrimp species in accordance with accepted protocols.

- If listed fairy shrimp species are found, evaluate proposed projects for their likelihood to threaten or disturb habitat to avoid impacts.

Objective 2: Monitor potential burrowing owl habitat within the installation.

Compliance-based Actions:

- Perform protocol-level surveys every three (3) years for burrowing owls using accepted CDFW methods (CDFW 2012) if basewide avian surveys determine that this species is present onsite. All occupied burrows will be monitored and mapped during protocol-level surveys.

- If burrowing owls are breeding onsite, management strategies will be implemented to protect them, such as visibly marking active burrows and implementing a mowing buffer during the breeding/nesting season.

3.8 Migratory Bird and Birds of Conservation Concern Management

All neotropical migratory birds, which include several of the species found at the facility, are generally protected from "take" under the MBTA (50 CFR 10). BCC are migratory and non-migratory birds that without additional conservation actions are likely to become candidates for listing under the ESA. Descriptions of these species are presented in Section 2.8.13.4; Appendix I lists MBTA and BCC species detected on NAVOPSPTCEN Sacramento. Management objectives and conservation actions for migratory birds and BCC are provided below.

MBTA/BCC Species Management Primary Regulatory Drivers

- **Sikes Act**
- **OPNAVINST 5090. 1D**
- **Migratory Bird Treaty Act**
- **DoDI 4715.03**

Objective: Conserve and monitor MBTA and BCC species and associated habitat within the installation.

Compliance-based Actions:

- Monitor the suitable habitat within the installation for the presence of MBTA species and breeding habitat.
- Develop and maintain a bird checklist for migratory and resident species that use the facility.
- Evaluate proposed activities and construction projects for their likelihood to kill, injure, or significantly disturb MBTA birds and mitigate for potential impacts and mitigate potential impacts in accordance with applicable requirements.

3.9 Sensitive Species of Regional Concern Management

Several state “sensitive” species are known to utilize the habitats within the installation for roosting or breeding habitat. Descriptions of these species are presented in Section 2.8.14; Appendix J lists each species and their listing status.

Sensitive Species Management Primary Regulatory Drivers

- **Sikes Act**
- **OPNAVINST 5090.1D**
- **DoDI 4715.03**

Objective: To conserve the habitat and populations of sensitive species known to utilize NAVOPSPTCEN Sacramento lands.

Stewardship-based Actions:

- Maintain an inventory and GIS geodatabase of species of regional special concern that have been identified through focused surveys.

3.10 Outdoor Recreation Management

Outdoor Recreation Primary Regulatory Drivers

- **Sikes Act**
- **OPNAVINST 5090. 1D**
- **DoDI 4715.03**
- **Outdoor Recreation - Federal/State Programs Act**

According to the Sikes Act, the U.S. Navy is required to provide outdoor recreation and interpretive opportunities to the public but only when it is compatible with military needs and security. Outdoor recreation activities are intended to support the wise stewardship of DoD's natural resources. In the event of potential conflicts of use, sound biological management practices shall prevail.

The U.S. Navy manages recreation where compatible with the military mission in accordance with the Sikes Act, DoDI 4715.03, and U.S. Navy Regulations and Policies. However, public access to NAVOPSPTCEN Sacramento is restricted by U.S. Navy Security requirements and outdoor recreation opportunities on NAVOPSPTCEN Sacramento are limited to installation personnel. Current recreation activities include picnicking, walking, jogging, and wildlife watching. The U.S. Navy does not permit hunting or OHV use on NAVOPSPTCEN Sacramento.

Objective: Promote compatible, sustainable outdoor recreation opportunities which enhance quality of life for military personnel, while conserving natural resources, and without compromising military readiness.

Stewardship-based Actions:

- Encourage installation personnel to record wildlife species observed on NAVOPSPTCEN Sacramento.
- Continue to promote recreation activities for installation personnel and access for disabled veterans while successful execution of the military mission and the natural environment

3.11 Geographic Information System Management

GIS Management Primary Regulatory Drivers

- **DoDI 4715.03**

NAVOPSPTCEN Sacramento uses GIS to manage information about the installation's environment and resources. GIS allows users to store and manipulate temporal and spatial data (e.g., maps, aerial photos, satellite images). It deals with data in vector (lines, points, and polygons) and raster (imagery) formats. Data can be displayed and manipulated to create maps. More importantly, GIS data are used to process and analyze information used in natural resources management. Primary GIS software consists of ArcGIS. The following goals and strategies have been developed for the management of the installation's GIS Program:

Objective: Ensure the technically sound, practical, and appropriate use of library and computer technology to manage, analyze, and communicate natural resource information in support of management decisions.

Stewardship-based Actions:

- Store, analyze and maintain data for research and survey projects involving natural resources on NAVOPSPTCEN Sacramento, making the information accessible and readily available to multiple users. Data shall be maintained in a Spatial Data Standards for Facilities, Infrastructure, and Environment (SDSFIE) compliant manner.

3.12 Climate Change and Regional Growth

Climate Change & Growth Management Primary Regulatory Drivers

- **Sikes Act**
- **OPNAVINST 5090. 1C CH-1**
- **DoDI 4715.03**

Scientific research indicates that global warming will have long-term, irreversible, adverse consequences on natural resources, including terrestrial and aquatic habitats. The California Wildlife Action Plan identifies climate change as one of four primary stressors affecting wildlife, along with growth and development, water management conflicts, and invasive species, and makes recommendations to include climate change science in restoration work. Models are the only way to project future changes for the NAVOPSPTCEN Sacramento and the surrounding region, and to evaluate needed research, data collection, and potential management strategies. However the use of models to explore the potential implications of climate change is rife with uncertainty. A range of scenarios is possible using accepted models, and local data sets need to be developed and integrated through collaboration and consensus.

The recently updated guidance for U.S. Navy INRMPs (OPNAVINST 5090.1D) added a requirement to address climate change in INRMPs. It states that "the evidence for climate change is extensive and has generated consensus in the scientific community. Addressing climate change poses a new challenge for natural resources managers who will need to understand changes in ecosystem structure and function anticipated from climate change, in addition to understanding ecosystems as they function now and as they have in the past." The guidance continues with a framework for addressing climate change issues, and this is incorporated in the strategies outlined below.

Objective: **Address climate change and subsequent changes to ecosystem structure and function through collaborative planning and adaptive management.**

Compliance-based Actions:

- Identify species and communities resilient/vulnerable to climate change impacts by collaborating, as feasible, with partners in conducting climate change vulnerability assessments.

- Establish partnerships for collaboratively addressing climate change issues, as needed and feasible.

SECTION 4
NATURAL RESOURCES MANAGEMENT AND MISSION SUSTAINABILITY

4.1 Defining Impact to Military Mission

Under the Sikes Act, as amended, NAVOPSPTCEN Sacramento must ensure that there is no net loss to the military mission due to implementation of this INRMP. To do this, the link between land use and the mission of integrated strike warfare training support and the missions of other tenant users, needs to be disaggregated into component parts.

Land use and natural resource management decisions should be evaluated so that resources are protected against short-term, project-by-project impacts which could cumulatively result in significant resource changes, thereby limiting the flexibility of military mission requirements. Additionally, decisions should be considered at appropriate biological scales and time frames so that there is an inherent removal of any conflicts between natural resource management and military mission. A big picture view of the current scenario, or of any existing or future problems, should be aligned with broader ecosystem management goals.

The military will carry out its mission at NAVOPSPTCEN Sacramento while practicing good stewardship of the resources. This involves protecting physical resources, visual resources, biological resources, outdoor recreation programs, and cultural resources. Chapter 3 provides the goals, objectives and management approaches to natural resources on NAVOPSPTCEN Sacramento.

Careful consideration is given to the siting of proposed actions and evaluation of potential impacts is done early in the planning process. As part of ongoing efforts to avoid and/or minimize impacts on special status species, sensitive habitat, cultural or other relevant resources, consideration will first be given to use of lower value management areas. This will assist planners in avoiding areas supporting more sensitive resources. This will, in turn, enable planners to reduce costs (in terms of funding, manpower, and time) to plan, obtain regulatory approvals, and implement proposed actions.

On NAVOPSPTCEN Sacramento there are no significant natural resources encumbrances to military activities.

4.2 Natural Resources Management Overview

The Sikes Act defines the purpose of natural resources management on military lands as "the conservation and rehabilitation of natural resources on military installations; the sustainable multipurpose use of the resources, which shall include hunting, fishing, trapping, and non-consumptive uses; and subject to safety requirements and military security, public access to military installations to facilitate the use [of these resources]."

NAVOPSPTCEN Sacramento's approach to natural resources management takes a long-term view of ecosystem processes and human activities and integrating conservation and management of biological resources with the military mission of the installation. The installation's natural resources conservation and management programs are to be directed toward achieving the overarching natural resource management goals. For NAVOPSPTCEN Sacramento, the primary goal is as follows, specific goals as related to each resources area are presented in Section 3.0:

- **GOAL:** Provide stewardship to protect, manage, and enhance the natural resources of NAVOPSPTCEN Sacramento while fulfilling the military mission and providing support necessary for effective strategic planning and administration of this INRMP.

This goal will ensure the success of the military mission and the conservation of natural resources. The general philosophies and methodologies used throughout the NAVOPSPTCEN Sacramento natural resources management program are focused on conducting required military mission activities while maintaining ecosystem viability.

4.3 Ecosystem Management Approach

NAVOPSPTCEN Sacramento lies within the Mediterranean California ecoregion, which extends 1,300 km from Oregon in the north to Baja California Norte state in the south. This ecoregion abuts the Pacific Ocean on the west and the Sierra California and deserts to the east (CEC 1997).

According to the DoDI 4715.03, the goal of ecosystem management is to ensure that military lands support present and future training and testing requirements while preserving, improving, and enhancing ecosystem integrity. Over the long term, that approach shall maintain and improve the sustainability and biological diversity of terrestrial and aquatic (including marine) ecosystems while supporting sustainable economies, human use, and the environment required for realistic military training operations. The "Ecosystem Integrity" Focus Area of the Navy NR Metrics (refer to Section 1.8.2 and Appendix D) is intended to define the ecosystems that occur on the installation and assess the integrity of these ecosystems. The term, integrity, refers to the quality of state of being complete, unbroken condition, wholeness, entirety, unimpaired, without significant damage, good condition, or general soundness. Terrestrial ecosystems, as defined by Nature Serve's "Ecological Systems of the United States: A Working Classification of US Terrestrial Systems" were selected from a list and assigned to each installation. Locally-defined ecosystems were added, if necessary. The ecosystems at NAVOPSPTCEN Sacramento, as defined by Nature Serve, are defined as California Central Valley and Southern Coastal Grassland (NatureServe 2012).

Development of this INRMP is based on the concept of adaptive management of ecosystems. Adaptive management is founded on the idea that management of renewable natural resources involves continual learning process (Walters 1986). This approach recognizes that there is incomplete data when dealing with natural resources and that, through continued research and monitoring of the effects of management practices, new

information will be developed. In addition, an adaptive management approach recognizes that protection and management actions are often implemented, by necessity, with imperfect knowledge. Recognition of this uncertainty allows development of monitoring and research approaches to progressively improve knowledge, and thus enhance decision-making and management capabilities. The adaptive management process is illustrated in Figure 4-1.

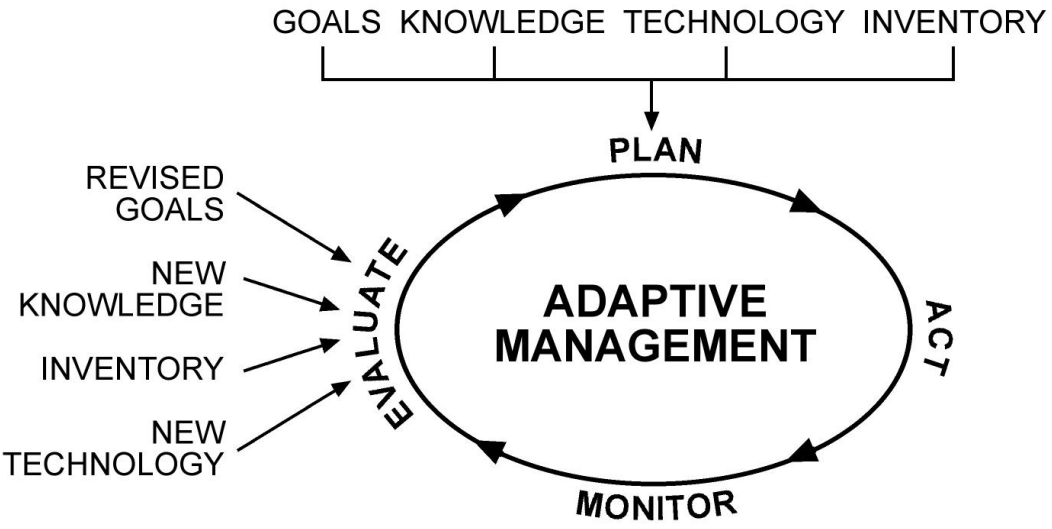


Figure 4-1. Adaptive Management Strategy

4.4 Natural Resources Consultation Requirements

NAVOPSPTCEN Sacramento consults with the USFWS and the CDFW to manage natural resources located within the installation. Cooperative management of the NAVOPSPTCEN Sacramento's natural resources is required under the Sikes Act and the Fish and Wildlife Coordination Act (FWCA) (16 USC 661-667e).

There are multiple natural resources consultation requirements in addition to those associated with INRMP development and review requirements as described in Section 1.8. In the event that any T&E species are identified on the installation, Section 7 ESA consultation would be required for NAVOPSPTCEN Sacramento projects. Appendix F presents the comments received from the CDFW and USFWS during their review of the Draft INRMP.

4.5 National Environmental Policy Act Compliance

NEPA is the basic national charter for the protection of the environment. It is a procedural planning tool which primarily requires a clear evaluation of all federal decisions potentially affecting the human and natural environment. NAVOPSPTCEN Sacramento must consider the environmental consequences of its actions before a commitment is made to proceed.

The ASN (I&E) Memo of August 12, 1998, *DoN Policy Memo 98-06: Review of INRMPs Under NEPA*, has determined that Sikes Act requirements for INRMP implementation necessitate the preparation of NEPA (42 USC 4321-4370, as amended) documentation prior to INRMP approval. NEPA was created to assess the reasonably foreseeable environmental impacts of proposed agency actions, including potential avoidance or minimization of such impacts, and to ensure that agency decision-makers are aware of such impacts before deciding whether or how to implement agency actions.

For other NAVOPSPTCEN Sacramento projects and activities that require a NEPA analysis, NAVOPSPTCEN Sacramento has developed and is using an environmental impact review process and form to review all proposed projects for potential environmental impacts (NEPA). The EIR process allows the NEPA specialist to assess what level of NEPA analysis should be performed to analyze the environmental impacts of a given project. The process allows the natural resources, cultural resources, and environmental compliance specialists to review for possible compliance with federal and state laws and regulations and permitting requirements, as well as interagency agreements, regarding a specific proposed action or project.

4.6 Encroachment Partnering

Non-military encroachment pressures are a result of the increasing urbanization of lands surrounding NAVOPSPTCEN Sacramento. NAVOPSPTCEN Sacramento's policies that support encroachment partnering include the following strategies:

- Maintain good relations with neighbors by interacting with them regularly to ensure good cooperation.
- Support programs by the City of Sacramento that are compatible with the NAVOPSPTCEN mission and operations.

4.7 Beneficial Partnerships and Collaborative Resource Planning

Due to the limited size and natural resources of NAVOPSPTCEN Sacramento, beneficial partnerships with agencies, universities, environmental organizations, and community groups are not a fundamental part of natural resources management at NAVOPSPTCEN Sacramento. However, potential partnerships and collaborative resource planning efforts that may be relevant for the site are detailed below.

4.7.1 DoD Partners in Amphibian and Reptile Conservation

DoD Partners in Amphibian and Reptile Conservation (PARC) is a partnership initiative that provides a network through which the military installation biologists, natural resource managers, and professional herpetologists can work together to avoid future mission restrictions while providing stewardship for threatened and endangered reptiles and amphibians. DoD PARC focuses on habitat and species management; inventory, research, and monitoring; and education, outreach, and training. It provides a framework for the effective management of amphibians and reptiles by the military services and their

installations. DoD PARC's primary responsibility is to ensure that the DoD has the operational and logistical flexibility necessary for testing and training exercises.

4.7.2 DoD Partners in Flight

The DoD Partners in Flight (PIF) program sustains and enhances the military testing, training, and safety mission through proactive, habitat-based management strategies that maintain healthy landscapes and training lands. DoD PIF representatives assist installation natural resources managers in improving the monitoring and inventory, research and management, and education programs involving birds and their habitats. The DoD PIF Strategic Plan identifies actions that support and enhance the military mission while also working to secure bird populations. These actions can be incorporated into installation INRMPs and Bird/Animal Aircraft Strike Hazard (BASH) plans. DoD PIF works beyond installation boundaries to facilitate cooperative partnerships, determine the current status of bird populations, and prevent the listing of additional birds as threatened or endangered. DoD PIF provides a scientific basis for maximizing the effectiveness of resource management, enhancing the biological integrity of DoD lands, and ensuring continued use of these lands to fulfill military training requirements. Participating in partnerships, such as PIF, also helps DoD to more effectively meet its trust responsibility to conserve our nation's biodiversity (DoD 2002a).

4.7.3 Fish and Wildlife Inter-Agency Coordination

Cooperative efforts with the USFWS involve identifying potential T&E species on NAVOPSPTCEN Sacramento. The USFWS is a cooperating and signatory agency for implementation of this INRMP in accordance with the Sikes Act. NAVOPSPTCEN Sacramento will consult informally and/or formally with the USFWS prior to implementation of any action included in this INRMP that may affect listed or proposed species. CDFW is the primary state agency responsible for managing fish and wildlife in California. CDFW is a designated cooperative agency for developing this INRMP. Appendix F presents comments that were received by both agencies during the INRMP review process.

It is not necessary for the INRMP to be consistent with different planning processes, such as any applicable USFWS recovery plans and the state wildlife action. However, the INRMP must state whether it is consistent with these plans (refer to Section 4.8). If the development of this INRMP is used to preclude the designation of Critical Habitat for federally threatened and endangered species from the USFWS, an explanation is required as to how NAVOPSPTCEN Sacramento is participating in the recovery of the species.

4.7.4 Natural Communities Conservation Planning Programs

Regional conservation planning efforts that focus on ensuring the continued survival of sensitive plant and wildlife species and their associated habitats have been facilitated by the Natural Community Conservation Planning (NCCP) Act of 1991 passed by the State of California. The NCCP process was developed to encourage the conservation of natural

communities before species within those communities are threatened with extinction. The program is designed to be a voluntary, collaborative effort and its approach represents an ecosystem view. NCCP program goals were developed to provide a regional framework for long-term protection of natural communities and species, while allowing continued development and economic growth of selected private lands (CDFW 2009).

The following Habitat Conservation Plans (HCPs) and NCCPs that occur within the Sacramento area are currently undergoing the planning process. NAVOPSPTCEN Sacramento is not included within their planning areas; however, through the collaborative inter-agency efforts described above, natural resources data collected on NAVOPSPTCEN Sacramento may provide useful information for these large-scale planning efforts:

- ***South Sacramento Habitat Conservation Plan*** (SSHCP) - The SSHCP protects 30 species of plants and wildlife including 10 that are listed as threatened or endangered under either the federal ESA and the CESA, or both. The SSHCP also protects vernal pool, wetland, and stream habitats that are subject to the federal Clean Water Act (CWA) and California's Porter-Cologne Water Quality Control Act. The SSHCP also seeks a programmatic Streambed Alteration Agreement under Fish and Game Code Sections 1600, *et seq.* (Sacramento County 2010).

- ***Bay Delta Conservation Plan*** (BDCP) - The proposed BDCP sets out a comprehensive conservation strategy for the Sacramento-San Joaquin River Delta (Delta) designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework. The BDCP reflects the outcome of a multiyear collaboration between public water agencies, state and federal fish and wildlife agencies, nongovernment organizations, agricultural interests, and the general public. The BDCP is a long-term conservation strategy that sets forth actions needed for a healthy Delta and would be implemented over the next 50 years (DWR 2013).

4.8 State Comprehensive Wildlife Action Plan

In 2000, Congress enacted the State Wildlife Grants Program in support of state wildlife/ habitat programs for “species of greatest conservation need.” In order to receive funding for this program, State wildlife agencies were required to submit a Wildlife Action Plan (WAP) to the USFWS in 2005. In 2007, the CDFW, in collaboration with the Wildlife Health Center, University of California at Davis, consequently developed the report, California Wildlife: Conservation Challenges, the State’s Wildlife Action Plan, and associated Web publications.

The report is concerned with answering three primary questions:

1. What are the species and habitats of greatest conservation need?

2. What are the major stressors affecting California’s native wildlife and habitats?

3. What are the actions needed to restore and conserve California's wildlife, thereby reducing the likelihood that more species will approach the condition of threatened or endangered?

The WAP provides guidance and recommendations for Statewide and regional conservation actions, as well as for NCCPs on public and private lands, including military installations. The report discusses the State's wildlife challenges and recommendations from a regional perspective, whereby NAVOPSPTCEN Sacramento is located in the Central Valley and Bay-Delta Region. Some of the conservation actions within the WAP are strategies identified in this INRMP.

4.9 Other Land Use Plans

Land use plans that are relevant to NAVOPSPTCEN Sacramento include the City of Sacramento 2030 General Plan (GP). NAVOPSPTCEN Sacramento is located within the Fruitridge Broadway Area Plan of the GP, and is specifically within the Sacramento Army Depot Redevelopment Area (City of Sacramento 2009). The conservation objectives and strategies in this INRMP (refer to 3.0) are consistent with the GP.

4.10 Public Access and Outreach

4.10.1 Public Access and Outdoor Recreation

DoD installations provide for sustained public access and use of natural resources for educational or recreational purposes when such access is compatible with mission activities and with other considerations such as security, safety, or resource sensitivity (DoD 1996). The security of NAVOPSPTCEN Sacramento personnel, assets, facilities, natural resources, and the visitors themselves should receive priority when granting access to U.S. Navy properties.

Outdoor recreation activities are intended to support the wise stewardship of DoD natural resources. In the event of potential conflicts of use, sound biological management practices shall prevail. It is important to protect the military's ability to fulfill its mission and the area's natural resources while respecting responsible public use of areas surrounding NAVOPSPTCEN Sacramento. The goal of public access and outreach is to promote compatible and sustainable outdoor recreation opportunities that enhance quality of life for military personnel, while conserving natural resources, without compromising military readiness.

Some funding for recreation programs is available via the Sikes Act. Under the Sikes Act, fees may be charged for wildlife or recreation opportunities with the money being used to enhance the resource (e.g., restocking of fish with income from user fees).

Due to the limited natural resources present on the facility, there are no recreational opportunities available to the public on NAVOPSPTCEN Sacramento.

4.10.2 Public Outreach

It is the DoD's policy to encourage a conservation ethic by providing an understanding of the need to protect and conserve natural resources through good stewardship. The U.S. Navy seeks to earn public confidence in its stewardship of the nation's natural heritage (DoN 1994). An important objective of such programs is to gain proper public recognition of excellent stewardship. NAVOPSPTCEN Sacramento's policy strategy for public outreach and education are as follows:

- Identify and evaluate settings and forums suitable for enhancing community involvement, compatible with the military mission and security.
- Apply specific conditions to ensure compatibility with the military mission and security.
- Encourage partnerships and volunteers to enhance conservation programs wherever practicable, for example: habitat enhancement, weed eradication and planting.

SECTION 5
IMPLEMENTATION

5.1 Prescription Preparation

NAVOPSPTCEN Sacramento depends on natural resources for the sustainability of many mission-related programs (i.e., aesthetics, stormwater collection and transport, etc.) and will manage natural resources to ensure sustainable use. This INRMP is not intended to impair the ability of NAVOPSPTCEN Sacramento to perform its mission. However, the INRMP does identify usage restrictions on sensitive attributes such as environmentally sensitive habitat areas. Appendix G provides natural resources Constraints Map for the installation.

Implementation of this INRMP will be realized through the accomplishment of specific goals and objectives as measured by the completion of projects described herein. An INRMP is considered implemented if an installation:

- Actively requests, receives, and uses funds for "must fund" projects and activities;
- Ensures that sufficient numbers of professionally trained natural resources management staff are available to perform the actions required by the INRMP;
- Coordinates annually with cooperating agencies;
- Documents specific INRMP action accomplishments undertaken each year.

Successful implementation of this INRMP will depend upon not only the guidelines set up and projects described, but how well these are translated into performance work statements (who will do what and with what money), project lists and scopes of work, and a workload plan. It must fit into the formal EMS established at NAVOPSPTCEN Sacramento for integrating environmental considerations into day-to-day activities across all levels and functions of U.S. Navy enterprise. In order to implement the INRMP to the fullest possible extent, NAVOPSPTCEN Sacramento may need to take advantage of funding opportunities outside normal program boundaries, consistent with authority to receive and use any such funds.

Appendix L identifies the projects to be implemented under this INRMP, schedules for the implementation of projects, objectives, legal drivers, funding classifications and a rough order-of-magnitude cost of each project.

5.2 Funding and INRMP Implementation

The U.S. Navy and NAVOPSPTCEN Sacramento intend to implement recommendations in this INRMP within the framework of regulatory compliance, national U.S. Navy mission obligations, anti-terrorism and force protection limitations, and funding constraints. Any requirement for the obligation of funds for projects in this INRMP shall be subject to the availability of funds appropriated by Congress, and none of the proposed

projects shall be interpreted to require obligation or payment of funds in violation of any applicable federal law, including the Anti-Deficiency Act, 31 USC § 1341, et seq.

For the purposes of this INRMP, the terms stewardship and compliance have specific meanings as criteria for implementing project lists. Project rankings are assigned based on whether an activity is mandatory to comply with a legal requirement such as under the ESA, CWA, or MBTA. Alternatively, a project may be considered good land stewardship but is not considered an obligation for NAVOPSPTCEN Sacramento to be found in compliance with environmental laws. Projects considered necessary to comply with the law are generally funded within budget constraints, whereas stewardship projects are ranked lower for funding consideration when projects are competed among multiple installations. Current policy is, however, that they will eventually be funded.

The funding strategies described here are implemented when projects are defined and prioritized, as for this INRMP in Appendix L. The budgeting plan for the INRMP is based on programming and budgeting priorities for conservation programs described in 5090.1D.

5.2.1 Environmental Readiness Program Assessment Database

Environmental Portal and EPR-Web is an optimized online database used to define all programming for the U.S. Navy's environmental requirements. EPR-Web records data on project expenditures, and provides immediate, web-based access to requirements entered by the multiple U.S. Navy environmental programs, including environmental compliance, pollution prevention, conservation, radiological controls, and range sustainment as related to environmental costs on military ranges. All natural resources requirements are entered into the EPR-Web and that they are available for review/approval by the chain of command by the dates specified in the Guidance letter that is provided annually by CNO (N45). This database is the source document for determining all programming and budgeting requirements of the Environmental Quality Program. EPR-Web is also the tool for providing the four ERL capabilities used in producing programming and budgeting requirements for the various processes within the budget planning system.

5.2.2 U.S. Navy Assessment Levels for Budget Prioritization

Management programming and budgeting priority levels are detailed in DoDI 4715.03, *Environmental Conservation Programs*, which implements policy, assigns responsibilities, and prescribes procedures for funding the integrated management of natural and cultural resources on property under DoD control. Budget priorities are also described in OPNAV1NST 5090.1D. Budget priorities for federally T&E species management, especially compliance with Biological Opinions (BOs), receive the highest possible budgeting priority, and supports the need to avoid critical habitat designations under Section 4(b)(2) of the ESA, or Section 4(a)3 of the ESA (exemption from critical habitat designations for national security reasons). The budgeting plan for the INRMP is based on programming and budgeting priorities for conservation programs described in DoDI 4715.03. Funds will be requested for tasks within the INRMP, with priority given to Class

I, II, and III projects, in that order, based on this guidance. The DoDI 4715.03 document defines classes of conservation programs; compliance activities fall into the first three classes and stewardship activities fall into the fourth class. Accordingly, the projects recommended in this INRMP have been prioritized based on compliance and stewardship criteria.

For the purposes of this INRMP, the terms compliance and stewardship have specific meanings as criteria for implementing project lists. Overall project or activity rankings are aligned with Chief of Naval Operations (CNO) N45 Environmental Readiness Levels (ERLs) to ensure the installation's highest priorities are promoted in future budget cycles. The highest priority ERL4 is assigned to projects or activities based compliance with legal requirements, such as under the ESA, CWA or MBTA. Alternatively, a project or activity may be considered good land stewardship but is not considered a legal obligation, and this investment may yield only undefined future benefits.

Four programming and budgeting priority levels are detailed, with the first three classified as "Compliance" and the fourth as "Stewardship." Funding is routinely programmed three years in advance of project implementation. The DoN funding classes per DoDI 4715.03 are presented below:

Compliance

1. Class 0: Recurring Natural and Cultural Resources Conservation Management Requirements. These are activities needed to cover the recurring administrative, personnel, and other costs associated with managing DoD's conservation program that are necessary to meet compliance requirements (federal and state laws, regulations, EOs, and DoD policies) or that are in direct support of the military mission. Also included are environmental management activities associated with the operation of facilities, installations, and deployed weapons systems.
2. Class I: Current Compliance. These projects and activities are needed because an installation is currently out of compliance (has received an enforcement action from a duly authorized federal or state agency, or local authority); has a signed compliance agreement or has received a consent order; has not met requirements based on applicable federal or state laws, regulations, standards, Presidential Executive Orders (Eos), or DoD policies; and/or are immediate and essential to maintain operational integrity or sustain readiness of the military mission. This also includes projects and activities needed that are not currently out of compliance (deadlines or requirements have been established by applicable laws, regulations, standards, EOs, or DoD policies, but deadlines have not passed or requirements are not in force) but shall be if projects or activities are not implemented in the current program year.
3. Class II: Maintenance Requirements. These are projects and activities needed that are not currently out of compliance (deadlines or requirements have been established by applicable laws, regulations and standards, EOs, or DoD policies, but deadlines have not passed or requirements are not in force), but shall be out of compliance if projects

or activities are not implemented in time to meet an established deadline beyond the current program year.

Stewardship

4. Class III: Enhancement Actions, Beyond Compliance. These are projects and activities that enhance conservation resources or the integrity of the installation mission, or are needed to address overall environmental goals and objectives, but are not specifically required under regulation or EO and are not of an immediate nature.

The Navy assigns an additional assessment level to projects to assist in recognizing appropriate funding sources in Environmental Program Requirements exhibits. The following descriptions of Navy Assessment Levels are summarized from the Navy Environmental Requirements Guidebook (CNO 2004). After each description is the approximate equivalent DoD Class.

- Level 1 (Federal and State Regulation). Level one requirements are those prescribed by existing laws, regulations, and EOs. These projects/ongoing efforts include responding to applicable federal, state and local laws and regulations. Level one also includes costs of ongoing compliance, such as: manpower, training, travel, and program management. [same as DoDI 4715.03 Classes 0 & I]
- Level 2 (Navy Policy). Requirements derived from DoD and/or Navy policy. These projects/proposed efforts are not mandated by law or other federal, state or local regulations/orders, but reflect implementation of Navy and DoD policy decisions and initiatives [same as DoDI 4715.03 Class I]
- Level 3 (Pending Regulation). Requirements derived from pending federal, state or local regulations under development (where publication is scheduled). Using, if available, model state regulation/permit standards. [same as DoDI 4715.03 Class I]
- Level 4 (Future Requirements). Requirements derived from future potential federal, state or local legislation. These requirements are speculative in nature. [same as DoDI 4715.03 Class II]
- Level 5 (Leadership Initiatives). Requirements based on local proactive Navy initiatives not mandated by law, regulation, EO or policy. [same as DoDI 4715.03 Class III]

Budget priorities for T&E species management, especially compliance with BOs, receive the highest possible budgeting priority, and supports the Installation's need to avoid critical habitat designations under Section 4(b)(2) of the ESA, or Section 4(a)3 of the ESA (exemption from critical habitat designations for national security reasons).

5.2.3 Funding

Funds will be requested for actions within this INRMP. The previous classification used Class 0, I, II, and III projects. The guidance has been updated and Enclosure 4 of DoDI 4715.03 defines the four classes of conservation programs. The projects recommended in

this INRMP have been prioritized based on compliance and stewardship criteria provided in the hierarchy below.

Recurring Natural Resources Conservation Management Requirements

These activities are needed to cover the administrative, personnel, and other costs associated with managing the DoD Natural Resources Conservation Program that are necessary to meet applicable compliance requirements in Federal and State laws, regulations, EOs, and DoD policies, or in direct support of the military mission. DoD components shall give priority to recurring natural resources conservation management requirements associated with the operation of facilities, installations, and deployed weapons systems. These activities include day-to-day costs of sustaining an effective natural resources management program, as well as annual requirements, including manpower, training, supplies, permits, fees, testing and monitoring, sampling and analysis, reporting and record keeping, maintenance of natural resources conservation equipment, and compliance self-assessments.

Non-Recurring Current Compliance

These projects and activities are needed to support: an installation currently out of compliance; signed compliance agreements or consent order; meeting requirements with applicable federal or state laws, regulations, standards, EOs, or policies; immediate and essential maintenance of operational integrity or military mission sustainment; and projects or activities that will be out of compliance if not implemented in the current program year.

Non-recurring Maintenance Requirements

These projects and activities are needed to meet an established deadline beyond the current program year and maintain compliance. Examples include: compliance with future deadlines; conservation, GIS mapping, and data management to comply with federal, state, and local regulations, EOs, and DoD policy; efforts undertaken in accordance with non-deadline specific compliance requirements of leadership initiatives; wetlands enhancement to minimize wetlands loss and enhance existing degraded wetlands; and conservation recommendations in BOs.

Non-recurring Enhancement Actions Beyond Compliance

These projects and activities enhance conservation resources or the integrity of the installation mission or are needed to address overall environmental goals and objectives, but are not specifically required by law, regulation, or EO, and are not of an immediate nature. Examples include: community outreach activities; educational and public awareness projects; restoration or enhancement of natural resources when no specific compliance requirement dictates a course or line of action; and management and execution of volunteer and partnership programs.

5.2.4 Implementation Schedule

This INRMP will become effective upon the acceptance and signatory release described in Section 1.4 *Responsibilities*. Current projects, activities, and plans have been incorporated into the INRMP, as the plan serves as a formal structuring and integration of the existing natural resources management program.

Future work identified herein will be implemented as funding becomes available. Priorities identified in this INRMP will generally determine the order of implementation. NAVOPSPTCEN Sacramento will determine what projects and activities are appropriate to initiate, given funding, at any particular time. The INRMP is meant to be flexible, dynamic, and adaptable to the immediate concerns and needs of natural resources management and the U.S. Navy mission.

Program Monitoring

NAVOPSPTCEN Sacramento will be responsible for oversight and monitoring of the overall program identified within this INRMP. Cooperative projects among different U.S. Navy organizations will be monitored by the originating or controlling office as specified prior to project implementation.

5.2.5 External Assistance

Opportunities for external assistance with natural resource programs at NAVOPSPTCEN Sacramento are identified below.

Other Agencies

NAVOPSPTCEN Sacramento recognizes the importance of cooperating with federal and state agencies in addition to private organizations. These organizations, in particular the INRMP signatory partners (USFWS and CDFW) will continue to assist with implementation of various aspects of this INRMP.

University Assistance

Universities are an excellent source of assistance for research and provide resource specific expertise, as well as assistance with implementation of restoration activities. Collaborative investigations performed in conjunction with NAVFAC Southwest biologist provide the most likely and cost effective sources of assistance with implementation of this INRMP.

Contractors

Most projects can be carried out with U.S. Navy staff. Some projects, such as targeted surveys, may require contractor services or other federal agency services, because of a need for expertise or for necessary personnel. In accordance with Circular No. A-76, the federal government is mandated to use commercial sources to supply the products and services the Government needs. Contractors are able to provide a wide variety of

specialties to aid NAVOPSPTCEN Sacramento with implementation of this INRMP. Specialties range from NEPA documentation, vegetation surveys, vertebrate and invertebrate surveys, vegetation surveys, water quality surveys, production of management plans, and similar activities. Contractor supported projects require preparation of a request for proposal to acquire services, which should be considered during project planning, to ensure appropriate funding can be obtained.

5.3 Funding Sources

There are several avenues of funding available to the installation, beyond the typical Naval operational budget, that allow the inclusion of additional projects to assist NAVOPSPTCEN Sacramento in their mission-related and stewardship endeavors. NAVOPSPTCEN Sacramento must continually assess the priority and level of budgetary needs to fulfill U.S. Navy and regulatory requirements and to sustain overall program goals. These funding sources are discussed below in general terms, as this process is dynamic and is dependent on the INRMP's continuously developing program.

These programs will be implemented using U.S. Navy personnel and program resources as much as possible; however, it is likely that contractors will accomplish many projects. NAVOPSPTCEN Sacramento will identify projects that would be accomplished using contract vehicles, with existing contracts being used where possible and appropriate.

For large projects that involve different U.S. Navy organizations, representatives of these organizations would coordinate budgeting and scheduling to ensure that the project can be accomplished in the planned timeframe. Large-budget projects may not be completely funded in a fiscal year, requiring incremental funding over the term of the project.

In some cases, smaller, lower-priority projects may be conducted using unspent funds from other actions or year-end fallout funding. Some projects may be accomplished with little or no funding required, such as those requiring only a change of policy or coordination and effort from volunteer labor. These actions can be implemented virtually as soon as planning is performed.

Legacy Funds

The Legacy Resource Management Program was enacted in 1990 to provide financial assistance to military natural and cultural resources management. The program assists with protection and enhancement of natural resources while supporting military readiness. Legacy projects may involve regional ecosystem management initiatives, habitat preservation efforts, archaeological investigations, invasive species control, and/or monitoring, and predicting migratory patterns of birds and other animals.

The Legacy Resource Management Program has three main components: stewardship, leadership, and partnership. Stewardship projects assist the military in sustaining its natural resources. Leadership initiatives provide programs that serve to guide and often become flagship programs for other military, scientific, and public organizations. Partnerships provide for cooperative efforts in planning, management, and research.

The Legacy Resource Management Program emphasizes five areas:

- Ecosystem approaches to natural resources management to maintain biological diversity and the sustainable use of land and water resources for the military mission and other uses.
- Interdisciplinary approaches that incorporate the often-overlapping goals of natural and cultural resources management. Legacy strives to take advantage of this by sharing management methodologies and techniques across natural and cultural resource initiatives.
- Promoting natural and cultural resources by public and military education and involvement.
- Application of resource management initiatives regionally. The Legacy Resource Management Program supports regional efforts between the military and other governmental and non-governmental organizations.
- Finally, development of innovative new technologies to provide more efficient and effective natural resources management.

Operations and Maintenance Funds

Funding sources for the natural resources program are derived from General and Administrative, Operations and Maintenance Navy (O&MN), and input into the U.S. Navy Environmental Program Requirements (EPR) system for funding. This primary budgetary source is the basis for maintaining the personnel and core programs inherent to the natural resources program. These appropriated funds are the primary source of resources to support must-fund, just-in-time environmental compliance (i.e., U.S. Navy Level ERL 4 projects). It is the responsibility of NAVOPSPTCEN Sacramento to manage the natural resources program budget and funding. Once O&MN funds are appropriated for core personnel and the program, funding can be justified for other project requirements.

Special Initiatives

The DoD or U.S. Navy may establish special initiatives to fund natural resource projects. Funding is generally available only for a limited number of projects. There are currently two such DoD initiatives:

- Streamside Forests: Lifelines to Clean Water is a DoD streamside restoration small grants program. Funds are available to military installations working in partnership with a local school and/or civic organization to purchase locally native plant material for small streamside restoration projects. Funds are distributed as reimbursements. Up to $5,000 may be awarded per project. This is an ongoing program (no deadline), so proposals can be submitted at any time. Applications and additional information are available on the DENIX website.

- Sustaining Our Forests, Preserving Our Future is funding to ensure that the integrity of DoD forested lands remains intact.

5.3.1 Use of Cooperative Agreements and Partnerships

Cooperative agreements are legal relationships between the U.S. Navy and states, local governments, institutions of higher education, hospitals, non-profit organizations or individuals. The principal purpose of the relationship is to transfer a thing of value to the state, local government, or other recipient to carry out a public purpose of support or stimulation authorized by a law of the U.S. instead of acquiring (by purchase, lease, or barter) property or services for the direct benefit or use of the U.S. Government. Cooperative agreements may be entered into for inventories, monitoring, research, minor construction and maintenance, and public awareness, to provide for the maintenance and improvement of natural resources or conservation research on DoD installations (DoDI 4715.03). To use a cooperative agreement, substantial involvement is expected between the U.S. Navy and the state, local government, or other recipient when carrying out the activity contemplated in the agreement. Cooperative agreements provide a mutually beneficial means of acquiring, analyzing, and interpreting natural resources data, which can then be used to inform natural resources management decisions. Cooperative agreements are funded by the U.S. Navy and produce information that can be used to help resource managers achieve project-specific compliance with environmental laws. Authorization for cooperative agreements is arranged through NAVFAC.

NAVOPSPTCEN Sacramento recognizes the importance of cooperating with federal and state agencies, in addition to private organizations; however, no current cooperative agreements and/or ***memorandum of understandings have been undergone to date.***

Cooperative Ecosystem Studies Units

The Cooperative Ecosystem Studies Units (CESU) program is a working collaboration among federal agencies, universities, state agencies, non-governmental organizations, and other nonfederal institutional partners. The CESU National Network provides multidisciplinary research, technical assistance, and education to resource and environmental managers. Although the overall program is overseen by USDI, one of the participating agencies is DoD.

5.3.2 Research Funding Requirements

Environmental program funding in the U.S. Navy is primarily based upon federally mandated requirements. Program managers are encouraged to seek outside funding for projects consistent with the INRMP, such as research, that will benefit natural resources on installations, but that are not directly related to federal mandates. New funding sources should be sought from federal, state, local, and nonprofit organizations with an interest in achieving the goals and objectives of this INRMP in partnership with NAVOPSPTCEN Sacramento. Any such funding would need to be consistent with authorization to receive and use such funds. These will often require cost-sharing. This funding opportunity should

be sought for projects that are not "must fund" items, tied directly to immediate regulatory compliance. Examples are habitat enhancement or wetland restoration.

5.3.3 Non-DoD Funding Sources

There are a number of grant programs available for natural resource management projects such as watershed management and restoration, habitat restoration, and wetland and riparian area restoration. When federally funded, these programs typically require non-federal matching funds. However, installations may be able to partner with other groups to propose eligible projects. One example grant program is listed below, but many more are available.

The *National Association of Counties, National Association of Service and Conservation Corps, National Fish and Wildlife Foundation, and Wildlife Habitat Council sponsor the Five Star Restoration Challenge Grants program*, in cooperation with EPA, NMFS and other sponsors. This program provides modest financial assistance ($5,000 to $20,000) on a competitive basis to support community-based wetland and riparian restoration projects that build diverse partnerships and foster local natural resource stewardship. Installations would need to partner with other groups to be eligible for this type of program. Information is available on the web at http://www.epa.gov/owow/wetlands/restore/5star/.

5.4 Staffing

The Sikes Act specifically requires that there be "sufficient numbers of professionally trained natural resources management and natural resources enforcement personnel to be available and assigned responsibility" to implement an INRMP. Due to the modest amount of natural resources on NAVOPSPTCEN Sacramento, NAVFAC Southwest provides project managers in support of the Natural Resources Program. These personnel ensure that a consistent conservation program is carried out by using strategies outlined in this plan to support the U.S. Navy mission and achieve INRMP goals and objectives. Some of the projects described in this plan will depend on coordination with the Assistant Regional Engineer Public Works Department and other installation personnel. Additional staffing is also available through contractor support.

5.5 Professional Development and Natural Resources Training

Adequate training of natural resource personnel is important to the success of military sustainability and land management. OPNAVINST 5090.1D (Chapter 28) requires that U.S. Navy commands develop, implement, and enforce the management plan through personnel with professional training in natural resources. Natural resources programs shall support military readiness and sustainability, and commands shall assign specific responsibility, provide centralized supervision, and assign professionally trained personnel to the program. Natural resources personnel shall be provided an opportunity to participate in natural resource management job training activities and professional meetings. The Sikes Act (Section 670g) also addresses this need, as does DoD Instruction 4715.03

(February 2011). NAVOPSPTCEN Sacramento personnel must retain copies of training certificates onsite for the minimum required years.

The professional development of natural resources management staff will greatly enhance the effectiveness of this INRMP. This requires maintaining staff knowledge through training and participation in conferences and workshops.

5.6 Annual Metrics

The DoN has also developed a set of Metrics to provide a standard method for the collection and reporting of business metric information for Natural Resources programs. The Metrics are used to determine how well the DoN is doing with respect to natural resources management and INRMP implementation across Navy/Marine Corps installations. The Metrics is comprised of seven focus areas for which each installation is to evaluate the effectiveness of the INRMP on an annual basis. As presented in Section 1.8.2 of this INRMP, these focus areas include:

1. **Ecosystem Integrity** - Evaluate the current status, management effectiveness, and trends of the ecosystems at the installation to support and maintain a community of organisms that have a species composition, diversity, and functional organization comparable to those in the respective region. This Focus Area is intended to define the ecosystems that occur on the installation and assess the integrity of those ecosystems. Terrestrial ecosystems are defined by Nature Serve's "*Ecological Systems of the United States: A Working Classification of US Terrestrial Systems*" (2003).

2. **Listed Species and Critical Habitat** - Evaluate the extent to which federally listed species have been identified and the INRMP provides conservation benefits to these species and their habitats.

3. **Recreational Use and Access** - Evaluate the availability and adequacy of public recreational use opportunities, such as fishing and hunting, and access for handicapped and disabled persons, given security and safety requirements for the installation.

4. **Sikes Act Cooperation (Partnership Effectiveness) -** Determine to what degree USFWS, state fish and wildlife agency, and when appropriate, NOAA Fisheries Service, partnerships are cooperative and result in effective INRMP development and review for operation and effect.

5. **Team Adequacy** - Asses the adequacy of the natural resources team (the natural resource management professional and installation support staff) in accomplishing INRMP goals and objectives at each installation.

6. **INRMP Implementation** - Evaluate the execution of actions taken to meet goals and objectives outlined in the INRMP.

7. **INRMP (Natural Resource Program) Support of the Installation Mission** - Evaluate the level to which existing natural resources requirements support the installation's ability to sustain the current operational mission, ensuring no net loss of mission capability.

Each focus area has three to seven criteria that have been established by natural resources managers and are used to help determine the status of a given functional area within natural resources. This INRMP addresses and supports the requirements of those issues addressed in DoN Metrics.

Each installation must complete an evaluation of the effectiveness of its INRMP on annual basis. The INRMP Annual Review process will also generate Navy conservation program metrics to measure effects of the conservation program on the installation mission and the status of our relationship with the wildlife agencies. The annual evaluation must be completed in cooperation with the appropriate field-level offices of the USFWS and CDFW. The cooperating partners will work together to measure both the successes and issues resulting from INRMP implementation. Appendix E presents the results of the annual review.

5.7 INRMP Implementation Summary and Schedule

The objectives and strategies that support INRMP implementation are identified in this section. Detailed natural resource management prescriptions and a list of projects are in Appendix L. The Sikes Act (as amended) requires implementation of this INRMP; however, INRMP implementation is also subject to the provisions of the Federal Anti-Deficiency Act. Some INRMP projects are accomplished with installation staff; others involve contracting work to specialists. The implementation schedule identified in Appendix L is suggested for long-term planning purposes; however, the schedule may be modified based on need, resources, and seasonal requirements.

SECTION 6
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APPENDIX A

LIST OF NATURAL RESOURCES MANAGEMENT LEGAL DRIVERS

Legislation, Executive Orders, Regulations, and Instructions

Legislation Related To Natural Resources

Antiquities Act of 1906 The Antiquities Act of 1906 (PL 59-209; 16 USC §§ 431 et seq., 1982) authorizes the President to designate as National Monuments historic and natural resources of national significance located on Federally owned or controlled lands. The act further provides for the protection of all historic and prehistoric ruins and objects of antiquity located on Federal lands by providing criminal sanctions against excavation, injury, or destruction of such antiquities without the permission of the Department having jurisdiction over such resources. The Secretaries of the Interior, Agriculture, and Defense are further authorized to issue permits for archaeological investigations on lands under their control to recognized educational and scientific institutions for the purposes of systematically and professionally gathering data of scientific value.

Archaeological and The Archaeological and Historic Preservation Act of 1974 (Moss-Bennett Act; Historic Preservation 16 USC §§ 469 et seq.) provides for the protection of historic and archaeological sites Act of 1974 threatened by Federal or Federally funded or assisted construction projects.

Archaeological Resources Protection Act of 1979 The Archaeological Resources Protection Act of 1979 (16 USC §§ 470 et seq., 1982) sets up penalties for destruction or removal of archaeological materials from Federal land without the proper permits. Requirements for obtaining these permits are also established by this regulation.

Bald Eagle Protection Act The Bald Eagle Protection Act (Bald and Golden Eagles Act; PL 95-616; 16 USC §§ 668 et seq.) provides for protection of the bald eagle and the golden eagle by prohibiting taking, possession, and commerce in the birds.

California Water Code The California Water Code Section 1243 declares the reservation of water for the enhancement and protection of fish and wildlife to be a beneficial use.

Clean Air Act The Clean Air Act (CAA; 42 USC §§ 7401 et seq.) mandates the prevention and control of air pollution from stationary and mobile sources. Requires the establishment of: National Ambient Air Quality Standards (NAAQS) to regulate primary and secondary concentrations for six priority air pollutants; New Source Performance Standards (NSPS) to provide ceiling emission standards for certain new industrial sources; and National Emission Standards for Hazardous Air Pollutants (NESHAP) to control pollutants, not covered under NAAQS, which may increase mortality rates or cause serious irreversible illness.

Clean Water Act The Clean Water Act (PL 92-500, as amended; 33 USC §§ 1251 et seq.). "The objective of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" (Section 101a). The Clean Water Act has three major approaches to water pollution control:

1. Construction grants for reducing municipal discharges;
2. National Pollution Discharge Elimination System (NPDES) permits for control of point source (storm water and waste water) discharges; and
3. Water quality management planning for nonpoint source (NPS) control from diffuse natural origins such as sediment.

In 1972 Congress adopted a "zero-discharge" goal, and a focus on "preventable causes of pollution," to emphasize the source of contamination rather than controls at the outfall or water body itself. Water quality "standards" include a legal designation of the desired use for a given body of water and the water quality

criteria appropriate for that use. The "criteria" are specific levels of water quality which are expected to make a water body suitable for its desired use. "Effluent limitations" are restrictions on quantities, rates, and concentrations in wastewater discharges measured at the discharger's outfall pipe. (Goldfarb 1984)

Administration of the Act is delegated to the State Water Resources Control Board (SWRCB) in California and, locally, to the San Diego Regional Water Quality Control Board (RWQCB). The Regional Board is responsible for setting water quality standards and criteria for water bodies in its regional plan, and for issuing and enforcing NPDES permits.

Section 404 deals with discharge of dredge or fill material into waters of the U.S. Regulatory authority has been delegated by the Environmental Protection Agency to the U.S. Army Corps of Engineers for Sec. 404. Discharges are any material that results in a change in the bottom elevation of a water body or wet-land, including grading, road fills, stream crossings, building pads, and flood and erosion control on streambanks. Vernal pools are considered non-tidal waters that are isolated wetlands under Sec. 404. There are 26 more or less generic nation-wide permits that preauthorize certain minor discharges as long as they meet certain conditions--e.g. construction of outfall structures, backfill or bedding for utility lines, fill for bank stabilization, and minor road crossings. The nationwide permit system is currently being modified. If a discharge would cause the loss of or substantially modify one to 10 acres of water, including adjacent wetlands, then the nationwide permit may not apply. Work cannot begin until the Army Corps notifies the U.S. Navy that the nationwide permit applies.

The individual permit process is much more complex and time-consuming. It requires consultation, an Environmental Assessment prepared by the Army Corps, Public Interest Review and a 404(b)(1) Evaluation. If significant impacts are found, then an EIS must be prepared. These regulations apply to vernal pools. Customarily, the L.A. District Engineer requires Individual Permit and an EA for fills in any vernal pool regardless of the presence or absence of endangered species. The Army Corps is attempting to formalize requirements particular to vernal pools. A Memorandum of Agreement between the Army Corps and EPA dated February 7, 1990 states that all potential impacts must first be shown to have been avoided, minimized and then compensated for. Compensation is considered a last resort only, which involves the creation of a habitat to replace a similar habitat unavoidably eliminated at a project site. The concerned agencies must be completely convinced that the proposed compensation will completely mitigate the lost habitat. Any activity in a wetland will require at least an EA.

Penalties: A Class I or civil penalty may not exceed $10,000 per violation, with the maximum amount of $25,000. Class II civil penalty may not exceed $10,000 per day as each violation continues, with the maximum amount not to exceed $125,000.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA; 42 USC §§ 9601 et seq.) establishes programs for the cleanup of hazardous waste disposal and spill sites to ensure protection of human health and the environment. Designates the President as trustee for Federally protected or managed natural resources.

Conservation and Rehabilitation Program on Military and Public Lands

The Conservation and Rehabilitation Program on Military and Public Lands (PL 93-452; 16 USC §§ 670 et seq.) amends PL 86-797 by providing for fish and wildlife habitat improvements, range rehabilitation, and control of off-road vehicles on Federal lands.

Conservation Programs on Military Reservations

The Conservation Programs on Military Reservations (PL 90-465; 16 USC §§ 670 et seq.) amend PL 86-797 to include outdoor recreation programs on military lands.

Critical Habitat

Critical habitat is a habitat area essential to the conservation of a listed species, though the area need not actually be occupied by the species at the time it is designated. This is a specific term and designation within the U.S. Endangered Species Act.

Defense Environmental Restoration Program

The Defense Appropriations Act of 1991 Legacy Program (10 USC § 2701) provides for the stewardship of biological, geophysical, cultural and historic resources on DoD lands.

Endangered Species Act

The Endangered Species Act (PL 93-205; 16 USC §§ 1531 et seq.), ESA, of 1973 requires that all Federal agencies undertake programs for the conservation of endangered and threatened species. These agencies are prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its "critical habitat" (Section 7). Critical habitat is usually designated concurrently with a listing. Section 9 prohibits the "taking" of endangered fish or wildlife, including direct killing, harming, harassing, or destruction of habitat that may be important to the species' survival or recovery. Prohibitions against threatened species are discretionary on the part of the Secretary of the Interior, but can be as restrictive as those protecting endangered species. Lists are maintained by the Secretary of the Interior. Monitoring of candidate species (Category 1 and Category 2) is required, with adoption of emergency listing when there is significant risk (Section 4).

For plants, collection or removal of seed material or whole plants of a threatened or endangered species, even for revegetation or monitoring purposes, requires a USFWS collection permit. There is no general taking prohibition for plants that compares to that which applies to animals (Bean et al. 1991).

If an area is designated "critical habitat," physical and biological features of the environment must be protected for the purposes of conserving the listed species. "Incidental takes" are permissible only if an "incidental take statement" is issued by the Secretary of the Interior / USFWS with a biological opinion after agency consultation. Management options will likely be limited as a requirement for minimizing the taking.

Coordination regarding threatened and endangered species is addressed in Section 7 of this Act. In particular, Section 7(a) requires a Federal agency to consult with USFWS on any proposed action if the agency has reason to believe that an endangered or threatened species could be directly or indirectly affected by the action. Species under review and those of "special concern" are also included. A Biological Assessment (B.A.) by the lead agency is required under Section 7(c) if listed species or critical habitat may be affected by a major construction activity. The purpose of a B.A. is to evaluate potential effects of the action on listed species and/or critical habitat, and to assist USFWS in rendering a Biological Opinion.

A consultation consists of one or more of these steps: 1) Informal; 2) Formal; or 3) Further Discussion. An informal consultation is an optional process that includes all discussions and correspondence between the USFWS and the Federal agency to determine whether a formal consultation or conference is required. A formal consultation is a process between the USFWS and the Federal agency that commences with Federal agency's written request for consultation and concludes with the USFWS's issuance of a Biological Opinion.

A Biological Opinion must include: 1) a summary of the information on which the opinion was based (the information is to be provided by the Federal agency), 2) a

detailed discussion of the effects of the action on listed species or critical habitat, and 3) the USFWS opinion on whether the action is likely to jeopardize the continued existence of a listed species or adversely modify critical habitat. The biological opinion may include an incidental take statement that specifies: 1) the amount of "take" that is allowed, 2) reasonable and prudent measures that the USFWS considers necessary or appropriate to minimize such a "take", and 3) the terms and conditions that must be complied with to implement the reasonable and prudent measures.

The Navy must take measures to assure that no irreversible or irretrievable commitment of resources is authorized, funded or carried out by them that will likely jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify designated critical habitat, until the Consultation process is complete. The Navy is to provide leadership in identifying and protecting habitat that is critical for any threatened or endangered species.

Navy installations are required to carry out the following:

1. Maintain liaison with local governmental agencies and organizations having an interest in endangered and threatened species protection;
2. Delineate boundaries of the habitat areas of endangered and threatened species on maps;
3. Initiate consultation with the USFWS or NMFS per cooperative agreement procedures when a proposed action or program has been identified that may affect listed species or their habitat;
4. Perform a B.A. for any action that may adversely affect the continued existence of endangered and threatened species or result in the destruction or adverse modification of habitat of such species (The EA should contain the final biological opinion of the USFWS or NMFS following the consultation process);
5. Cooperate with the USFWS or NMFS during development and implementation of a recovery plan for listed species occurring on the installation.

The California State Legislature has expressed its intent to protect, preserve and enhance endangered or rare species as issued in the Fish and Game Code (Div. 2, Chpt. 10 Native Plant Protection and Div. 3, Chpt. 1.5 Endangered Species). California Endangered Species Act (CESA) violations can result in a fine of up to$5,000 and / or one year in prison. While this law does not apply to Federal actions, it does apply to State agencies and private landowners. In the spirit of the law and as a service to State agencies and private landowners, Federal agencies operate under these guidelines.

Penalties: Civil penalty of up to $25,000 per violation or criminal penalty of up to $50,000 and / or one year in prison, knowing violation for a take or damage / destruction of critical habitat of an endangered animal.

Endangered Species Act 1973 Amendments

The Endangered Species Act of 1973 (1978 Amendments), (PL 95-632; 16 USC §§ 1531 et seq.) provides for the conservation and protection of endangered and threatened species of fish, wildlife, and plants and expands the consultation process.

Federal Insecticide and Rodenticide Act

The Federal Insecticide and Rodenticide Act (FIFRA) (7 U.S.C. §136 et seq.) The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) provides for federal regulation of pesticide distribution, sale, and use. All pesticides distributed or sold in the United States must be registered (licensed) by EPA. Before EPA may register a pesticide under FIFRA, the applicant must show, among other things, that using the pesticide according to specifications "will not generally cause unreasonable adverse effects on the environment." FIFRA defines the term "unreasonable adverse effects on the environment" to mean: "(1) any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide, or (2) a human dietary risk from residues that result from a use of a pesticide in or on any food inconsistent with the standard under section 408 of the Federal Food, Drug, and Cosmetic Act.

Federal Flood Disaster Prevention Act

The Federal Flood Disaster Prevention Act (PL 93-234; 42 USC §§ 4001 et seq.) established the Federal Flood Insurance Program, which has provided some incentives for construction outside flood-prone areas. To a limited degree, this has reduced destruction of riparian vegetation by developments. President Carter issued two executive orders in a related effort: E011988 (Floodplain Protection) directed Federal agencies to avoid construction in flood-hazard areas and to seek restoration and preservation of the natural and beneficial values of floodplains; E011990 (Protection of Wetlands) directed Federal agencies to minimize the destruction, loss, or degradation of wetlands.

Federal Noxious Weed Act of 1974

The Federal Noxious Weed Act of 1974 (PL 93-629; 7 USC § 2801) provides for the control and eradication of noxious weeds and their regulation in interstate and foreign commerce.

Federal Water Pollution Control Act Amendments of 1972

The Federal Water Pollution Control Act Amendments of 1972 (see Clean Water Act; PL 92-500; 33 USC §§ 1251 et seq.) sets up a Federal permit and license system to carry out certain pollution discharge activities in navigable waters. Section 314 of this Act established the Clean Lakes Program (CLP). The purpose of the CLP is to develop a national program to clean up publicly owned freshwater lakes. In order to receive a grant for in-lake restoration under this Program, all point sources of pollution must be treated or have treatment planned under Section 201 and 402 of the Clean Water Act.

Fish and Wildlife Conservation Act of 1980

The Fish and Wildlife Conservation Act of 1980 (PL 96-366; 16 USC §§ 2901 et seq.) provides for conservation, protection, restoration and propagation of certain species, including migratory birds threatened with extinction.

Fish and Wildlife Conservation and Military Reservations Act

The Fish and Wildlife Conservation and Military Reservations Act (Sikes Act; 16 USC § 670) applies to any installation in the U.S. with land or water suitable for conservation of fish and wildlife. It requires that fish and wildlife be part of and integrated into a multiple-use program for managing natural resources. This includes a requirement to develop a cooperative management plan with State and Federal fish and wildlife conservation agencies. The law sets the guidelines for charging user fees and retaining the funds to benefit the activity, such as improving habitat or restocking a fish pond. The Fish and Wildlife Conservation and Natural Resources Management Programs on Military Reservations amends the Sikes Act to require that trained professionals be used to integrate fish and wildlife into a balanced natural resource program.

Fish and Wildlife Conservation and Natural Resource Management Programs on Military Reservations	The Fish and Wildlife Conservation and Natural Resource Management Programs on Military Reservations (PL 96-561) amend the Sikes Act above to require that trained professionals be used to integrate fish and wildlife into each base's resource program. This amendment allows net receipts from timber sales to be used for fish and wildlife management instead of going into the general treasury.
Fish and Wildlife Coordination Act	The Fish and Wildlife Coordination Act (PL 85-624; 16 USC §§ 661 et seq.). is a law which mandates that wildlife conservation receive equal consideration and be coordinated with other features of water resource development. The intent is to prevent loss or damage of wildlife and provide for development and improvement of wildlife in conjunction with water development projects. Federal agencies proposing to impound, divert or control surface waters are required to consult with the USFWS and CDFG, to include and give full consideration to the recommendations of these agencies, and to provide justifiable means and measures for benefiting wildlife in project plans. ACOE must coordinate permit applications with USFWS and CDFG. Like NEPA, implementation of this Act is essentially procedural in that no particular outcome is mandated. The Act authorizes project modification, land acquisition, and other measures necessary to protect wildlife.
Historic Sites Act of 1935	The Historic Sites Act of 1935 (PL 74-292; 16 USC §§ 461 et seq., 1982) establishes as national policy the preservation for public use of historic resources by giving the Secretary of the Interior the power to make historic surveys and to document, evaluate, acquire, and preserve archaeological and historic sites across the country. The act led to the eventual establishment within the National Park Service of the Historic Sites Survey, the Historic Buildings Survey, and the Historic Sites Engineering Record.
Migratory Bird Treaty Act	The Migratory Bird Treaty Act (PL 65-186, as amended; 16 USC §§ 703 et seq.) protects most birds, whether or not they migrate. Birds, their nests, eggs, parts or products may not be killed or possessed. Game birds are listed and protected except where specific seasons, bag limits, and other features govern their hunting. Exceptions are also made for some agricultural pests, which require a USFWS permit (yellow-headed, red-winged, bi-colored red-winged, tri-colored red-winged, Rusty and Brewer's blackbirds, cowbirds, all grackles, crows and magpies). Some other birds that injure crops in California may be taken under the authority of the County Agricultural Commissioner (meadowlarks, horned larks, golden-crowned sparrows, white- and other crowned sparrows, goldfinches, house finches, acorn woodpeckers, Lewis woodpeckers, and flickers). Permits may be granted for various non-commercial activities involving migratory birds and some commercial activities involving captive-bred migratory birds. Controlled burns during the avian breeding season (approximately February through October) would violate this Act, according the USFWS Carlsbad Office. Penalties: Violations of this act can cost an individual or organization up to $5,000 and $10,000, respectively, and up to six months imprisonment for a misdemeanor. Felony violations may result in fines of up to $250,000 for individuals, $500,000 for organizations, and up to two years' imprisonment.
Military Construction Authorization Act - Leases; Non-excess property	The Military Construction Authorization Act - Leases; Non-excess property (10 USC § 2667) provides for the outleasing of public lands.

Military Construction Authorization Act - Military Reservation and Facilities-Hunting, Fishing and Trapping	The Military Construction Authorization Act - Military Reservation and Facilities - Hunting, Fishing and Trapping (10 USC § 2671) requires that all hunting, fishing, and trapping on military installations follow Fish and Game laws of the state in which it is located, and be issued appropriate state licenses for these activities.
National Environmental Policy Act of 1969	The National Environmental Policy Act of 1969 (42 USC §§ 4321 et seq.), NEPA, evolved over 10 years from the desire of Congress to have a cohesive statement of the national environmental policy. Agencies must assess, in detail, the potential environmental impact of any proposal for legislation or other major Federal action that has the potential for significantly affecting the quality of the human environment. The Act is intended to help public officials and citizens make decisions that are based on understanding of environmental consequences and take action that protects, restores and enhances the environment.
National Defense Authorization Act for Fiscal Year 2004	The National Defense Authorization Act for Fiscal Year 2004 (Public Law No. 108-136) amended the ESA to address designation of military lands as critical habitat. Specifically, section 4(a)(3)(B)(i) of the ESA (16 U.S.C. 1533(a)(3)(B)(i)) now provides: "*The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.*"
National Heritage Policy Act of 1979	The National Heritage Policy Act of 1979 (HR 6502) authorizes location and establishment of a register of natural land and cultural areas and requires consideration of alternatives prior to taking actions that would adversely affect them.
National Historic Preservation Act of 1966	The National Historic Preservation Act of 1966 (PL 89-665; 16 USC §§ 470 et seq.) expands the National Register of Historic Places, provides a list of significant historic and prehistoric sites and districts, and gives them formal protection. Section 106 requires that Federal agencies with direct or indirect jurisdiction over such properties identify them for the Federal Register. It further directs agencies to consider historic and archaeological resources during planning, and allows the Advisory Council on Historic Preservation, established by this Act, an opportunity to comment when a Federal undertaking could affect historic properties.
National Trails Systems Act of 1968	The National Trail Systems Act of 1968 (16 USC § 1271) promotes development of recreational, scenic, and historic trails for persons of diverse interest and abilities.
Native American Graves Protection and Repatriation Act of 1990	The Native American Graves Protection and Repatriation Act of 1990 (PL101-601; 25 USC §§ 3001 et seq.) provides requirements for treatment, determination of ownership, control of, and repatriation of human remains and cultural items on Federal or Tribal lands. The term "Indian Tribe" refers to any Tribe, band, nation, or other organized Indian group or community that is on the current list of recognized Indian Tribes published by the Bureau of Indian Affairs. "Human remains" refers to all Native American human remains.
Noxious Plant Control Act	The Noxious Plant Control Act (PL 90-583; 43 USC § 1241) provides for the control of noxious plants on lands under control or jurisdiction of the Federal government.
Oil Pollution Act of 1990	The Oil Pollution Act of 1990 (OPA; 33 USC §§ 2701 et seq.) provides that the National Contingency Plan (NCP) include planning, rescue, and minimization of damage to fish and wildlife in responding to oil pollution.

Outdoor Recreation-Federal/State Program Act	The Outdoor Recreation-Federal/State Program Act (PL 88-29; 16 USC §§ 460(L) et seq.) provides for the management of lands used for outdoor recreation. Requires consultations with U.S. National Park Service regarding management.
Resource Conservation and Recovery Act	The Resource Conservation and Recovery Act (RCRA; 42 USC §§ 6901 et seq.) establishes a comprehensive program which manages solid and hazardous waste. Subtitle C, Hazardous Waste Management, sets up a framework for managing hazardous waste from its initial generation to its final disposal. Waste pesticides and equipment/containers contaminated by pesticides are included under hazardous waste management requirements.
Safe Drinking Water Act	The Safe Drinking Water Act (SDWA; 42 USC §§ 300(f) et seq.), SDWA, prescribes treatment and distribution control strategies for abating contamination of drinking water and also requires the establishment of a permit program to regulate injection of liquids into underground strata. The SDWA provides for direct control of underground injection of fluids that may affect groundwater supplies. States may assume the predominant role in executing groundwater protection programs. The EPA has direct responsibility only if a State chooses not to participate in an underground injection control (UIC) program.
Sikes Act	Sikes Act (16 USC 670a-670o, 74 Stat. 1052) was enacted into United States law on September 15, 1960. It provides for cooperation by the Department of the Interior and Department of Defense with State agencies in planning, development and maintenance of fish and wildlife resources on military reservations throughout the United States.
Soil Conservation Act	The Soil Conservation Act (PL 74-46; 16 USC § 590A) provides for application of soil conservation practices on Federal lands. Requires Federal agencies to control and prevent soil erosion and preserve natural resources in managing Federal lands.
Stream Alteration Controls	The Department of Fish and Game's authority over the use of suction dredges (Fish and Game Code, § 5653), alterations of fish spawning areas (Fish and Game Code, § 1505), and alterations of stream beds in general (Fish and Game Code, §§ 1601 et seq.) are all useful tools for the protection of instream resources (but generally not for riparian vegetation outside of the stream or overflow areas). The §§1601-1603 agreements (§1601 covers public projects, while §1603 addresses private work) do not have the status of State approvals under law, instead providing for a negotiation and agreement process.
Wild and Scenic River Act	The Wild and Scenic River Act (PL 90-542; 16 USC § 1274) requires identification and protection of any river or stream that qualifies under the act.
Youth Conservation Corps Act of 1972	The Youth Conservation Corps Act of 1972, amended (PL 93-408, as amended; 16 USC § 1701) expands and make a permanent the Youth Conservation Corps (YCC) program and establishes objectives for youth employment and conservation work on public lands.

Executive Orders Relevant To Natural Resources

Exotic Organisms — The Exotic Organisms Executive Order (EO 11987) restricts Federal Agencies in the use of exotic plant species in any landscape and erosion control measures.

Floodplain Management — The Floodplain Management Executive Order (EO 11988) specifies that "Agencies shall encourage and provide appropriate guidance to applicants to evaluate the effects of their proposals in floodplains prior to submitting applications". This order includes wetlands that are within the 100-year floodplain and especially discourages filling.

Invasive Species — The Invasive Species Executive Order (EO 13112) was issued on February 3, 1999 to enhance federal coordination and response to the complex and accelerating problem of invasive species. The EO directs Federal agencies to work together [as stated in the Preamble] to"*... prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause.*" EO 13112 defines invasive species as "*...an alien (or nonnative) species whose introduction does, or is likely to cause economic or environmental harm or harm to human health*". Only a small proportion of non-native species are invasive ..

Off-Road Vehicles on Public Lands — The Off-Road Vehicles on Public Lands Executive Order (EO 11989) provides for closing areas to use where soil, wildlife, or other resources are adversely affected.

Responsibility of Federal Entities to Protect Migratory Birds — EO 13186 directs federal agencies taking actions with a measurable negative effect on migratory bird populations to develop and implement a Memorandum of Understanding with the U.S. Fish and Wildlife Service that promotes the conservation of migratory bird populations.

Protection and Enhancement of the Cultural Environment — Protection and Enhancement of the Cultural Environment (EO 11503) directs Federal agencies to take a leadership role in preserving, restoring, and maintaining the historic and cultural environment of the Nation. Federal agencies must locate, inventory, and nominate to the National Register all historic resources under their jurisdiction or control. Until these processes are completed, agency heads must exercise caution to ensure that potentially qualified Federal property is not inadvertently transferred, sold, demolished, or substantially altered. When planning projects, agencies are urged to request the opinion of the Secretary of the Interior as to the eligibility for National Register listing of properties whose resource value is questionable or has not been inventoried. Agencies are directed to institute procedures, in consultation with the President's Advisory Council on Historic Preservation, to ensure that Federal plans and programs contribute to the preservation and enhancement of non-Federally owned historic resources. Protection of National Register historic and Archaeological sources is achieved by the Marine Corps through implementation of the Historic and Archeological Resources Protection (HARP) Plan. The plan facilitates compliance by providing management goals, priorities, and standard operating procedures for site protection.

Protection and Enhancement of Environmental Quality — Protection and Enhancement of Environmental Quality (EO 11514) directs issuance of instructions and guidelines relative to preparation of environmental impacts. This order created the Council on Environmental Quality to oversee the implementation of NEPA, mediate disputes and develop environmental policy.

Protection and Enhancement of Environmental Quality — Protection and Enhancement of Environmental Quality (EO 11991) amends EO 11514 to require Council on Environmental Quality to issue regulations to make environmental impact statements more effective. The CEQ was recently abolished by Vice-President Gore, and to date there is no replacement of the body.

Protection of Wetlands The Protection of Wetlands Executive Order (EO 11990) directs all federal agencies to "take action to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands". This applies to the acquisition, management, and disposal of federal lands and facilities; to construction of improvements undertaken, financed, or assisted by the federal government; and to the conduct of federal activities and programs which affect land use. Section 4 of the EO requires that when federally owned lands are leased and easement is assigned, or when disposed of to a non-federal party, a reference be included in the conveyance to identify any wetlands and indicate those uses which are restricted in such areas.

Greening the Government Through Efficient Energy Management The purpose of EO 13123 is to engage the federal government in an effective energy management program. EO 13123 encourages government agencies to promote energy efficiency, water conservation, and the use of renewable energy products. It is also designed to help foster markets for new environmentally conscious technologies.

Federal Regulations, Directives, And Instructions

Federal Regulations

32 CFR 188. Environmental Effects in the United States of DoD Actions.

32 CFR 190. Natural Resources Management Program. Provides goal, policy, and procedural information for managing natural resources on all DoD lands, including those of the DoN. It requires the preparation of integrated natural resources management plans for DoD installations.

32 CFR 775. Procedures for Implementing the National Environmental Policy Act. Dept. of Navy policy to supplement DoD regulations (32 CFR 214) by providing policy and assigning responsibilities to the Navy and Marine Corps for implementing CEQ regulations and implementing NEPA.

33 CFR 330. Dredge & Fill Nationwide Permit Program.

36 CFR 60. National Register of Historic Places.

36 CFR 65. National Historic Landmarks Program.

40 CFR 141-143. EPA National Drinking Water Regulations.

40 CFR 150-186. EPA Regulations for Pesticide Programs.

40 CFR 162. EPA Regulations on Insecticide, Fungicide, and rodenticide Use.

40 CFR 230. EPA Interim Regulations on Discharge of Dredged or Fill Material into Navigable Waters.

40 CFR 1500. Council on Environmental Quality Regulations. Defines the methods of implementing the National Environmental Policy Act (NEPA).

40 CFR 1500. Council on Environmental Quality Regulations. Defines the methods of implementing the National Environmental Policy Act (NEPA).

43 CFR 7. Archaeological Resources Protection Act of 1979; Uniform Regulations.

50 CFR 10.13. List of Migratory Birds.

50 CFR 17.11 and 17.12. Fish and Wildlife Service List of Endangered and Threatened Wildlife.

50 CFR 402. Interagency Cooperation - Endangered Species Act of 1973.

Federal Register 58(188):51144-51190 (1990; also 50 CFR 17). Plant taxa for listing as endangered or threatened species; Notice of review.

Federal Register 70(199): 800 (15 October 1985). Protection of historic and cultural properties.

Department of Defense Directives and Instructions

DoD Directive 4150.07 of 29 May 2008. DoD Pest Management Program (NOTAL).

DoD Directive 4700.1 of 6 November 1978. Natural Resources Conservation and Management (NOTAL). Provides for management of renewable natural resources on military lands.

DoD Directive 4700.2 of 15 July 1988. Secretary of Defense Award for Natural Resources and Environmental Management (NOTAL). DoD Directive 4710.1 of 21 June 1984. Archeological and Historic Resources Management. Establishes policies, procedures, and assigns responsibilities for the management of archeological and historic resources located in and on waters and lands under DoD control. This Directive implements these guidelines consistent with Federal law, Executive orders, and other DoD directives that deal with archeological and

historic preservation issues.

DoD Directive 4715.DD-R. Draft April 1996. Draft integrated natural resources management in the Department of Defense. Prescribes procedures for preparing integrated natural resources management plans for DoD lands.

DoD Directive 6050.1 (1979). Environmental Effects in the U.S. of DoD Actions.

DoD Instruction 4700.1. Instructs the Department of the Navy to implement and maintain natural resource management programs.

DoD Instruction 4715.1 of 24 February 1996. Environmental Security.

DoD Instruction 4715.03 of 18 March 2011. Environmental Conservation Program. Implements policy, assigns responsibilities, and prescribes procedures under DoD Instruction 4715.1 for the integrated management of natural and cultural resources on property under DoD control.

DoD Instruction 5000.13 of 13 December 1976. Natural Resources - the Secretary of Defense Natural Resource Conservation Award (NOTAL). Delineates procedures for participating in completion for Secretary of Defense Conservation Award.

NAVFAC P-73. Real Estate Manual P-73. This manual sets forth the authority of the Commander, Naval Facilities Engineering Command (NAVFACENGCOM), for outgrant of Navy controlled real property. Responsibility for administration, management, and utilization of Navy real property lies with the Commanding Officer, and his superiors, of the installation to whose plant account the property belongs. NAVFACENGCOM does not have general responsibility for management of Navy real property, except for lands of installations under its command. However, NAVFACENGCOM has a technical responsibility for real estate action on lands which have been determined temporarily or partially excess.

NAVFACINST MO-100.4. Guidance on Special Interest Areas.

NAVFACINST 11010.63B, Planning Services for Navy and Marine Corps Shore Activities.

OPNAVINST 5090.1C CH1. Department of the Navy Environment and Natural Resources Procedural Manual. Chapter 22, Natural Resources Management, describes requirements, guidelines, and standards for conserving natural resources on Navy lands. Summarizes the natural resources management (NRM) program to include management of waters, forests, fish and wildlife, and outdoor recreation.

OPNAVINST 6250.4C. Pest Management Programs. Requires Navy and Marine Corps to have a comprehensive Pest Management Plan. Discusses the need to control pest outbreaks which affect the military mission, damage property, or impact the welfare of people.

SECNAVINST 6240.6E. Implementation of DoD directives under DoD Instruction 4700.4 Assigns the responsibility of developing and implementing natural resources programs to the Chief of Naval Operations and the Commandant of the Marine Corps.

APPENDIX B

ENVIRONMENTAL ASSESSMENT AND FONSI FOR THE NAVOPSPTCEN SACRAMENTO INRMP

Environmental Assessment and FONSI for the NAVOPSPTCEN Sacramento INRMP

Navy Operational Support Center Sacramento

Sacramento, California

April 2014

Executive Summary

The purpose of this Environmental Assessment (EA) is to analyze the impacts associated with the proposed implementation of the Integrated Natural Resources Management Plan (INRMP) for Navy Operational Support Center (NAVOPSPTCEN) Sacramento, California. This assessment will determine if an Environmental Impact Statement or Finding of No Significant Impact should be prepared for the implementation of the INRMP.

The purpose of the INRMP is to meet statutory requirements under the Sikes Act Improvement Act (Sikes Act [as amended]), Public Law 105-85, Div. B Title XXIX, 18 November 1997, 111 Stat. 2017-2019, 2020-2022. The INRMP is a programmatic document designed to guide natural resources managers in long-term management decisions at NAVOPSPTCEN Sacramento. The overall natural resources management objectives for the INRMP include land-use; soils; vegetation; wetlands; wildlife; outdoor recreation; GIS; and, climate change/regional growth. The INRMP incorporates U.S. Department of Defense and U.S. Department of the Navy (Navy) guidelines, recent scientific studies and monitoring results, current natural resource management practices, and integrated natural resources management strategies. The INRMP is the first natural resources management document that has been developed for NAVOPSPTCEN Sacramento. The INRMP is also needed to address the known presence of sensitive species in the vicinity of the site, and the onsite occurrence of suitable habitat for the species identified in the 2011 Final Baseline Assessment and Natural Resources Inventory (BANRI).

The range of reasonable alternatives in this EA was identified by evaluating their ability to meet the purpose and need for action, as well as the following criteria (Chief of Naval Operations Instruction 5090.1D):

- Are based on the principles of ecosystem management;
- Provide for sustainable multipurpose use of natural resources;
- Maintain compliance with relevant environmental regulations;
- Provide for public access for the use of natural resources subject to safety and military security considerations;
- Establish specific natural resources management objectives and timeframes for the Proposed Action; and

- Provide for no net loss in the capability of military lands to support the military mission of the installation.

The alternatives considered in this EA are:

- Alternative 1–Proposed Action/Preferred Alternative: Implement the NAVOPSPTCEN Sacramento INRMP;
- Alternative 2–Continue Current Natural Resources Management Practices at NAVOPSPTCEN Sacramento

Each alternative has potential resource impacts associated with its implementation (Table ES-1). Under the No Action Alternative, there would be no comprehensive natural resources management planning document for NAVOPSPTCEN Sacramento and only current natural resources management practices would continue.

Interagency cooperation contributed to the development of the INRMP. As required by the Sikes Act (as amended), the Navy has prepared this INRMP in cooperation with the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife, to achieve mutual agreement among these parties concerning conservation, protection, and management of resources at NAVOPSPTCEN Sacramento.

Table ES-1. Summary of effects by alternative.

Resource Area	Alternative 1: Proposed Action -Implement INRMP	Alternative 2: No Action Alternative–Continue Current Management Practices
Topography, Geology, and Soil Resources	Would benefit through the development of new and implementation of proven Best Management Practices of erosion control and soil conservation measures. No Significant Impact	Continue to implement existing Best Management Practices during grounds maintenance (mowing, removing debris and general weed control) and during any ground disturbing construction/repair projects. These protective measures without a formalized management plan would slightly improve the soil conditions over time. No Significant Impact
Hydrology and Water Quality	Would benefit water resources through the establishment of habitat management actions designed to survey, protect and enhance water resources, including wetlands. Would also benefit hydrology and water quality by the development of new and implementation of proven Best Management practices for erosion/runoff that could reach water resources. Protection of water resources would be improved by education of grounds maintenance staff about wetlands and sensitive areas to avoid. No Significant Impact	Would benefit from the review of wetland maps for any impacts to jurisdictional wetlands. Hydrology and water quality would also benefit from the requirements to obtain needed authorization prior to all military construction projects and the implementation of a storm water pollution prevention plan for all projects. No Significant Impact

Biological Resources	Would benefit through the implementation of numerous monitoring, protecting and enhancing programs aimed at gaining a better understanding of the resources under the INRMP. The result would be a comprehensive and adaptive management approach to installation natural resource management, based on recent findings. Protection of biological resources would be improved through the education of grounds maintenance staff about sensitive species and their habitats. No Significant Impact	**Would benefit through the** implementation of Best Management Practices reviewed by Environmental staff on a project by project basis. No Significant Impact

Acronyms

BANRI	Baseline Assessment and Natural Resources Inventory
BCC	Birds of Conservation Concern
BDCP	Bay Delta Conservation Plan
BMPs	Best Management Practices
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CFGC	California Fish and Game Code
CWA	Clean Water Act
CWAP	California's Wildlife Action Plan
DoD	Department of Defense
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
GHG	Greenhouse gas
GIS	Geographical Information Systems
GP	General Plan
INRMP	Integrated Natural Resources Management Plan
IPM	Integrated Pest Management
MBTA	Migratory Bird Treaty Act
NAVOPSPTCEN	Navy Operational Support Center
Navy	Department of the Navy
NEPA	National Environmental Policy Act
OPNAVINST	Chief of Naval Operations Instructions
SSC	California Species of Special Concern
SSHCP	South Sacramento Habitat Conservation Plan
USDA	United States Department of Agriculture
WL	Watch List
USC	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

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1.0 PURPOSE AND NEED FOR PROJECT

1.1. Introduction/Background

The Department of the Navy (Navy) has prepared this Environmental Assessment (EA) in accordance with the following:

- National Environmental Policy Act (NEPA) of 1969 (42 U.S. Code [USC] §§ 4321-4370)
- Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] 1500-1508)
- Navy Procedures for Implementing National Environmental Policy Act (NEPA)(32 CFR § 775), as described in the Chief of Naval Operations Instructions (OPNAVINST) 5090.1D

The Navy is the action proponent, the landowner, and the lead federal agency for NEPA compliance and preparation of this EA.

The EA presents an analysis of the potential environmental impacts likely to be associated with the implementation of the natural resources management strategies outlined in the Integrated Natural Resources Management Plan (INRMP) for Navy Operational Support Center

(NAVOPSPTCEN) Sacramento. The INRMP is a programmatic document designed to guide natural resources managers in long-term management decisions at NAVOPSPTCEN Sacramento.

This EA analyzes two alternatives: the Proposed Action, which proposes implementation of the INRMP, and a No Action Alternative that would continue current management practices without a comprehensive, long-term natural resources planning document for the installation.

1.2. Project Location Description

NAVOPSPTCEN Sacramento is located in the City of Sacramento in Sacramento County, California (Figure 1-1.) It is approximately 20.1 acres (Figure 1-2). The site contains a main administrative facility, vehicle maintenance shop, storage facility, privately-owned vehicle parking, and three temporary facilities in the northern part of the site that service Navy units. NAVOPSPTCEN Sacramento is located in a highly developed area with approximately four acres of open grassy areas adjacent to the northern boundary of the site. The southern and western boundaries of the site are adjacent to Morrison Creek, a stream that is dry most of the year (Navy 2012).

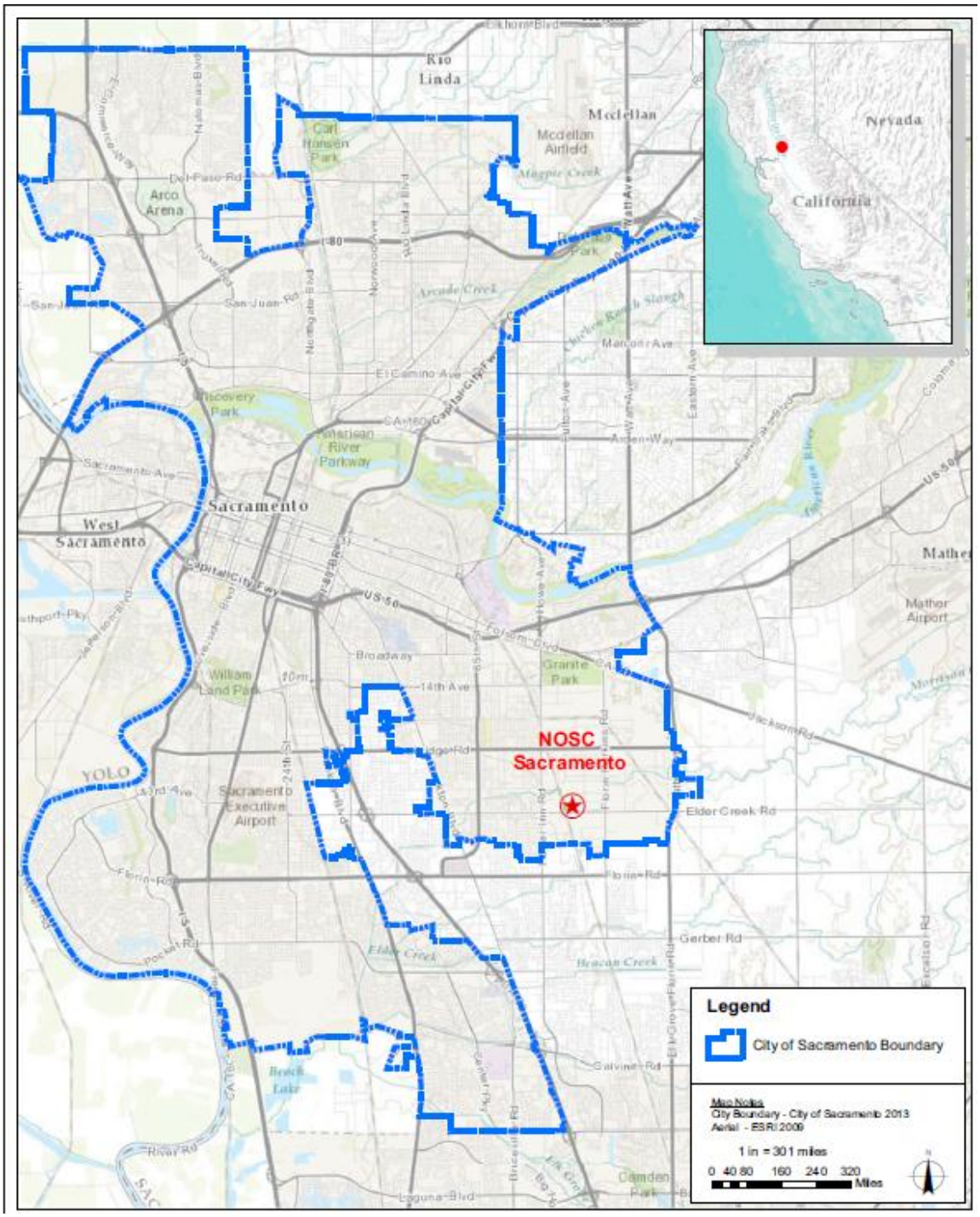

Figure 1-1 Vicinity Map

Figure 1-2 Site Map

1.3. Purpose and Need for the Project

The proposed action is the implementation of the natural resources management strategies outlined in the INRMP for NAVOPSPTCEN Sacramento. The purpose of this project is to manage the natural resources at NAVOPSPTCEN Sacramento and to meet statutory requirements imposed by the Sikes Act Improvement Act (Sikes Act [as amended]), as well as the requirements of various U.S. Department of Defense and Navy Instructions. The INRMP is the first natural resources management document that has been developed for NAVOPSPTCEN Sacramento.

The INRMP is needed to implement an ecosystem-based conservation program that would provide for the conservation and rehabilitation of natural resources in a manner consistent with the military mission. The INRMP would integrate and coordinate all natural resources management activities, provide for sustainable multipurpose uses of natural resources, and provide for public access for the use of natural resources subject to safety and military security considerations.

The INRMP is also needed to address the known presence of sensitive species in the vicinity of the site, and the onsite occurrence of suitable habitat for the species identified in the 2011 Final Baseline Assessment and Natural Resources Inventory (BANRI).

1.4. Decision to Be Made

The decision to be made as a result of the analysis in this EA is to decide if an Environmental Impact Statement (EIS) needs to be prepared. An EIS will need to be prepared if it is determined that the Proposed Action or other alternative ultimately selected would have significant impacts to the human or natural environment. Should an EIS be deemed unnecessary based on the alternative selected for implementation, this selection would be documented in a Finding of No Significant Impact.

1.5. Scope of Analysis

The Council on Environmental Quality regulations, NEPA, and Chief of Naval Operations Instruction 5090.1D indicate that an EA should carry forward detailed analysis of only those resource areas potentially subject to appreciable or noteworthy impacts from one or more of the alternatives, as opposed to no impacts or relatively minimal impacts. Environmental resources potentially affected to such an extent by the alternatives and evaluated in detail in this EA include: biological resources; hydrology and water quality; and topography, geology, and soil resources. Chapter 3 presents the analysis of potential impacts on these resources.

The following resource areas do not warrant detailed analysis in this EA. It is anticipated that there would be no effects, or only minimal effects, to these resource areas upon implementation of the alternatives. Resources not analyzed further include:

- Air Quality
- Noise

- Cultural Resources
- Socioeconomics & Environmental Justice
- Land Use
- Traffic/Circulation
- Utilities
- Public Health & Safety
- Visual Quality
- Public Services
- Coastal Zone Resources

Air Quality: The air quality in Sacramento County has been characterized by the U.S. Environmental Protection Agency as a nonattainment area for ozone (O_3 [NO_x and VOCs]), and an attainment area for carbon monoxide (CO), 24-hour particulate matter less than 10 microns in diameter (PM_{10}), and 24-hour particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) Sacramento County is classified by the U.S. Environmental Protection Agency as unclassified/attainment for all other criteria pollutants (Sacramento Metropolitan Air Quality Management District 2013).

The California Air Resources Board has designated the Sacramento County Air Basin as a nonattainment area for 1-hour and 8-hour O_3, 24-hour and annual PM_{10}, and annual $PM_{2.5}$ and as unclassified/attainment for all other criteria pollutants.

The environmental consequences on local and regional air quality conditions near a proposed Federal action are determined based upon the increases in regulated pollutant emissions relative to existing conditions and ambient air quality. Specifically, the impact in National Ambient Air Quality Standards "attainment" and "non-attainment" areas would be considered significant if the net increases in pollutant emissions from the Federal action would result in any one of the following scenarios:

- Cause or contribute to a violation of any national or state ambient air quality standard
- Expose sensitive receptors to substantially increased pollutant concentrations
- Represent an increase of 10 percent or more in an affected Air Quality Control Region emissions inventory
- Exceed any Evaluation Criteria established by a State Implementation Plan or permit limitations.

Implementation of the Proposed Action or No Action Alternative would not result in any sustained increase or decrease of existing operational emissions from stationary and mobile sources. The restoration/maintenance activities would produce a small amount of air emissions from equipment and machinery, dust from ground disturbing activities and potential airborne pesticides/herbicides. These emissions; however, would be minor, temporary and clearly below CAA General Conformity Rule *de minimis* thresholds (Table 1-1). Therefore there would be no significant impact to air quality from the alternatives and this resource area is not carried forward for further analysis. A Record of Non-Applicability has been prepared since the air basin is in

non-attainment for some criteria pollutants. The Record of Non-Applicability can be found in Appendix A.

Table 1-1 General Conformity De minimis levels for Sacramento County

Criteria Pollutant	*De minimis* Level (tons/year)
NO_x	25
VOC	25
PM_{10}	100
$PM_{2.5}$	100

Noise: Noise-sensitive receptors include those persons who occupy areas where noise is an important element of the environment. Such areas include residential dwellings, mobile homes, hotels, hospitals, nursing homes, education facilities, and libraries. In addition, noise-sensitive receptors may also include wildlife species, such as migratory birds, that rely on vocalizations for communication. Although exposure to high noise levels has been demonstrated to cause hearing loss, the principal human responses to environmental noise are annoyance and stress.

As described in Chapter 3.0, there are wildlife species known to be present at the project site that would be considered sensitive noise receptors. Sensitive noise receptors would also include personnel working at the reserve center and people residing in the neighborhood housing a quarter to a half mile away. The noise associated with the Proposed Action and No Action Alternative would be from surveying, monitoring, and small resources improvement projects. Noises from these activities would be generated from mechanical equipment, and motor vehicles. Machinery used and the amount of noise produced while performing activities would vary by the activity. Any noise generated from the alternatives would be short-term and only take place during daylight hours. Furthermore, noise-generating activities would occur outside listed species or Migratory Bird Treaty Act (MBTA) species breeding seasons to the maximum extent practical.

Any noise impacts to sensitive receptors are expected to be minor, temporary and have no significant impacts from either alternative; therefore, this resource area is not carried forward for further analysis.

Cultural Resources: In 2004, NAVOPSPTCEN Sacramento was surveyed for cultural resources and none were found on the facility. A records search conducted as part of that study indicated that there were no previously recorded archaeological sites associated with NAVOPSPTCEN Sacramento. The available evidence demonstrates that the NAVOPSPTCEN Sacramento

property has been subjected to extensive re-contouring and disturbances during the history of its development, so there was little expectation for finding intact archaeological deposits. Another survey took place in 2010, and encompassed the undeveloped area of the property, west of the buildings that make up the NAVOPSPTCEN facility, with the exception of the paved parking lot at the southeast end of the undeveloped area. The only cultural resource that was observed during the survey was a brown granitic mano that was found on the western edge of the picnic area. This artifact was clearly out of context, as it was discovered on top of the pea gravel that caps the picnic area and had probably been brought in from somewhere else, possibly as part of the fill materials for the picnic area. There were a few other broken rocks around it, none of which displayed any evidence of cultural modification. No other cultural resources were observed in the survey area.

Compliance with Section 106 of the National Historic Preservation Act for the NAVOPSPTCEN Sacramento INRMP is accomplished through conformance with the 36 CFR § 800 process and is the responsibility of NAVOPSPTCEN Sacramento. The potential for effects to historic properties for the INRMP and any future and emergent implementation projects as outlined in Chapter 6 of the INRMP are to be considered on an individual basis as separate undertakings, which require review by authorized Navy Cultural Resources personnel. Pursuant to 36 CFR § 800, such efforts include determining: (1) the area of potential effect (APE); (2) the identification of any historic properties within the APE; and (3) whether there is any effect to historic properties within the area of potential effect and if so, whether any such effect is adverse. Each determination requires consultation with the California State Historic Preservation Officer and any Native American tribe that might attach religious and cultural significance to historic properties in the APE. Therefore, there would be no significant impacts to cultural resources from the alternatives and this resource area is not carried forward for further analysis.

Socioeconomics and Environmental Justice: The primary concern regarding potential effects on socioeconomic resources pertains to changes in population, housing, and economic conditions. The Proposed Action and No Action Alternative do not involve activities that would contribute to changes in socioeconomic resources. The Proposed Action and the No Action Alternative would not create any advantage or disadvantage for any group or individual. Disproportionately high or adverse human health or environmental effects on minority or low-income populations or communities at or surrounding NAVOPSPTCEN Sacramento would not occur. Therefore, there would be no significant impacts to socioeconomics and environmental justice from the alternatives and these resources are not carried forward for further analysis.

Land Use: Implementation of the Proposed Action or No Action Alternative would not change any land use patterns or land ownership in the area. There would be no impact to land use on NAVOPSPTCEN Sacramento; therefore, this resource is not carried forward for further analysis.

Traffic and Circulation: Due to the relatively low number of vehicles that would be utilized during the implementation of the INRMP, there would be no impact to transportation or traffic patterns or routes within or outside of NAVOPSPTCEN Sacramento. Therefore, this resource is not carried forward for further analysis.

Utilities: Under the Proposed Action, the demand for utilities would not be expected to increase. Under the No Action Alternative the demand for utilities would not be expected to change. As none of the alternatives would alter utility capabilities or their usage and would not result in significant impacts to utilities, this resource is not carried forward for further analysis.

Public Health and Safety:

Protection of Children

Federal agencies must "make it a high priority to identify and assess environmental health risks that may disproportionately affect children and shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks and safety risks" (Executive Order 13045). NAVOPSPTCEN Sacramento does not provide access for the public-at-large or children. None of the alternatives include measures that would present health risks to children or the public.

Installation Restoration and Hazardous Materials

As described on page 2-9 of the INRMP, past Army Depot activities resulted in past hazardous materials use and subsequent soil and groundwater contamination on what is currently NAVOPSPTCEN Sacramento. However, the U.S. Environmental Protection Agency has deemed that the actions taken for soil and groundwater restoration at the former Army Depot properties have eliminated the immediate threat of exposure to contamination and are no longer a threat to human health and the environment as described in Section 2.3 of the INRMP.

Currently, potentially hazardous materials are used in limited quantity and concentration at NAVOPSPTCEN Sacramento. All potentially hazardous materials are handled, stored, used, and transported in accordance with applicable U.S. Environmental Protection Agency, state of California, and Navy regulations. Examples of potentially hazardous materials used on the properties include lubricants, degreasers, solvents, acids, paints, and pesticides. Any use of these potentially hazardous materials during the implementation of any of the alternatives, would adhere to all regulations and guidelines.

For all of the reasons stated above, public health and safety is not at risk from the implementation of the Proposed Action and the No Action Alternative. As there would be no significant impacts, this resource area is not carried forward for further analysis.

Visual Quality: Through implementation of the alternatives, minor improvements to visual quality may result from the INRMP's landscaping and vegetation management practices. Therefore, as there would be no significant impacts to visual quality, this resource area is not carried forward for further analysis.

Public Services: Implementation of the alternatives would not increase or decrease the need for any public services on the installation (e.g., fire protection, police protection, health care services or public schools). Therefore, no impacts to public services would occur and this resource is not carried forward for further analysis.

Coastal Zone Resources: NAVOPSPTCEN Sacramento is located inland, so no coastal resources would be affected and this resource is not carried forward for further analysis.

1.6. Intergovernmental Coordination

Interagency cooperation contributed to the development of the INRMP. As required by the Sikes Act (as amended), the Navy has prepared this INRMP in cooperation with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW), with the goal of achieving mutual agreement among these parties concerning the conservation, protection, and management of natural resources at NAVOPSPTCEN Sacramento.

1.7. Public/Agency Participation

A Notice of Availability of the Draft EA was published in the *Sacramento Bee* newspaper. This notice described the Proposed Action and announced that the Draft EA would be available for public review and comment. The Draft EA was made available for a 15 day public comment period at the Southgate Library at 6132 66th Avenue, Sacramento CA, 95823; and on the Commander, Navy Region Southwest website at http://www.navyregionsouthwest.com/go/doc/4275/2080494. Copies of the EA in CD-ROM format were available to any interested parties upon request; Sara Yamashita (NAVFAC_SW_DesertIPTPublicComments@navy.mil) was the Point of Contact for obtaining CDs. No comments were received during the public comment period.

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

CEQ Regulations for Implementing the Procedural Provisions of the NEPA establish a number of policies for federal agencies, including "using the NEPA process to identify and assess the reasonable alternatives to the Proposed Action that will avoid or minimize adverse effects of these actions on the quality of the human environment" (40 CFR 1500.2 [e]). This EA only carries forward for detailed analysis those alternatives that could meet the purpose of and need for the project as defined in Chapter 1.0 and the below-listed reasonable alternative screening factors.

2.1. Reasonable Alternative Screening Factors

The range of reasonable alternatives for this EA was identified by evaluating the ability to meet the purpose and need for action and the ability to meet certain criteria (OPNAVINST 5090.1D, Chapter 10, Section 10-3.15). To be considered reasonable, alternatives must be consistent with these criteria:

- Are based on the principles of ecosystem management;
- Provide for sustainable multipurpose use of natural resources;
- Maintain compliance with relevant environmental regulations;
- Provide for public access for the use of natural resources subject to safety and military security considerations;
- Establish specific natural resources management objectives and timeframes for the Proposed Action; and
- Provide for no net loss in the capability of military lands to support the military mission of the installation.

2.2. Description of the Proposed Action and Alternatives

The two alternatives evaluated in this EA are the Proposed Action (Alternative 1) and the No Action Alternative (Alternative 2).

2.2.1. Proposed Action (Alternative 1): Implement the NAVOPSPTCEN Sacramento INRMP

The Proposed Action would implement the INRMP. The INRMP would be consistent with the military use of the property (and the goals and objectives established in the Sikes Act [as amended]), while providing further improvement in natural resources management. The INRMP

develops goals for the following resource management areas: land-use; soils; vegetation; wetlands; wildlife; outdoor recreation; GIS; and, climate change/regional growth.

Emphasis in the INRMP is on landscaping management, invasive species control, and migratory bird related issues. A complete list of proposed INRMP projects to be implemented is included as Appendix L (of the INRMP) and falls under the following objectives**:**

- Provide a sound basis for management and design of landscaping and grounds, so as to maximize their ability to enhance quality of life and foster a sense of community pride among those supporting and participating in activities at NAVOPSPTCEN Sacramento.
- Protect soil productivity, nutrient functioning and wildlife habitat through effective implementation of Best Management Practices to prevent and control soil erosion.
- Manage natural plant communities to conserve biodiversity, erosion control, wildlife habitat, and aesthetics.
- Protect wetland resources at NAVOPSPTCEN Sacramento.
- Eradicate or control invasive plant species that have potential to alter native plant communities.
- Use Integrated Pest Management (IPM) methods to control noxious undesirable plants, rodents, and other pests found within NAVOPSPTCEN Sacramento and to reduce the dependence on chemical means of control.
- Promote a sustainable and diverse wildlife community within NAVOPSPTCEN Sacramento lands through habitat stewardship, population protection and monitoring, invasive species removal, and wildlife damage control compatible with the facility's mission and urban location.
- Conserve and monitor potential fairy shrimp habitat within the installation.
- Conserve and monitor potential burrowing owl habitat within the installation.
- Conserve and monitor Migratory Bird Treaty Act (MBTA) and Birds of Conservation Concern (BCC) species and associated habitat within the installation.
- Conserve the habitat and populations of other sensitive species known to utilize NAVOPSPTCEN Sacramento lands.
- Promote compatible, sustainable outdoor recreation opportunities which enhance quality of life for military personnel, while conserving natural resources, and without compromising military readiness
- Ensure the technically sound, practical, and appropriate use of library and computer technology to manage, analyze, and communicate natural resource information in support of management decisions.
- Address climate change and subsequent changes to ecosystem structure and function through collaborative planning and adaptive management.

The INRMP would be reviewed annually for operation and effect, and updated as needed.

2.2.2. No Action Alternative (Alternative 2): Continue Current Natural Resources Management Practices at NAVOPSPTCEN Sacramento

Under the No Action Alternative, there would be no comprehensive natural resources management planning document for NAVOPSPTCEN Sacramento and only current natural resources management practices would continue. Current practices include basic maintenance such as mowing and weed control. Best Management Practices for migratory birds (if found) would be implemented on a project by project basis and other Best Management Practices developed as needed with Environmental Department review.

2.2.3. Alternatives Considered But Not Carried Forward for Detailed Analysis

Due to the relatively small size of NAVOPSPTCEN Sacramento and its limited natural resources, there are no reasonable action alternatives to the Proposed Action of implementing the INRMP. Only the Proposed Action Alternative and No Action Alternative were deemed 'reasonable alternatives' and were therefore carried forward for detailed analysis in this EA. Partial implementation of the INRMP was considered but not carried forward because the Proposed Action of implementing the INRMP itself allows for the implementation of a selection of the goals and objectives in the INRMP over time based on: current and future operational needs of the installation; changes in species populations and habitats; and other current and future environmental conditions. Thus, the Proposed Action encompasses a wide range of potential future projects and/or management decisions. Consequently, analysis of "partial implementation of the INRMP" alternatives would not be reasonable since partial implementation of the total projects in the INRMP is already built into the Proposed Action Alternative.

A compliance-driven management alternative to the Proposed Action was also initially considered, which would take a minimal approach to management and only manage natural resources components to the extent required by laws or regulations. Under this alternative, an ecosystem-based approach would not be implemented; rather, management actions would only be implemented if there was a possibility of violating a law, such as the Clean Water Act (CWA) or the Endangered Species Act (ESA). While it would ensure that NAVOPSPTCEN Sacramento would be less likely to receive a notice of violation for noncompliance with natural resource regulations than it would in the absence of any kind of management program, this alternative would not comply with the intent of the Sikes Act (as amended) for natural resources management. The Sikes Act (as amended) requires that the INRMP be developed to ensure that the management approach for resources is ecosystem-based, and thus goes beyond simple compliance. According to the Sikes Act (as amended), the vision of an installation INRMP is to ensure the sustainability of all ecosystems within and near the installation, and to ensure no net loss of the installation's capability to support the military mission. To meet the intent of the Sikes Act (as amended), the Department of Defense adopted an ecosystem-based management approach as the basis for future management of Department of Defense lands and waters through

applying the principles of adaptive management and through collaborating with internal and external parties (DoDI 4715.03). Therefore, the compliance-driven management alternative would not meet the intent of the Sikes Act (as amended) and was eliminated from further detailed analysis in this EA.

2.2.4. Summary of Potential Impacts

Table 2-1 summarizes potential environmental impacts as analyzed and detailed in Chapter 3, Affected Environment and Potential Environmental Impacts.

Resource Area	Alternative 1: Proposed Action -Implement INRMP	Alternative 2: No Action Alternative–Continue Current Management Practices
Topography, Geology, and Soil Resources	Would benefit through the development of new and implementation of proven Best Management Practices of erosion control and soil conservation measures. No Significant Impact	Continue to implement existing Best Management Practices during grounds maintenance (mowing, removing debris and general weed control) and during any ground disturbing construction/repair projects. These protective measures without a formalized management plan would slightly improve the soil conditions over time. No Significant Impact
Hydrology and Water Quality	Would benefit water resources through the establishment of habitat management actions designed to survey, protect and enhance water resources, including wetlands. Would also benefit hydrology and water quality by the development of new and implementation of proven Best Management practices for erosion/runoff that could reach water resources. Protection of water resources would be improved by education of grounds maintenance staff about wetlands and sensitive areas to avoid. No Significant Impact	Would benefit from the review of wetland maps for any impacts to jurisdictional wetlands. Hydrology and water quality would also benefit from the requirements to obtain needed authorization prior to all military construction projects and the implementation of a storm water pollution prevention plan for all projects. No Significant Impact
Biological Resources	Would benefit through the implementation of numerous monitoring, protecting and enhancing programs aimed at gaining a better understanding	Would benefit through the continued surveys prescribed by the BANRI-baseline wildlife and vegetation surveys (burrowing owl, wetlands, fairy shrimp and vegetation species.

	of the resources under the INRMP. The result would be a comprehensive and adaptive management approach to installation natural resource management, based on recent findings. Protection of biological resources would be improved through the education of grounds maintenance staff about sensitive species and their habitats. No Significant Impact	No Significant Impact

3.0 AFFECTED ENVIRONMENT AND POTENTIAL ENVIRONMENTAL IMPACTS

This section describes relevant existing environmental conditions for resources potentially affected by the Proposed Action and the No-Action Alternative. In compliance with Council on Environmental Quality regulations, Navy National Environmental Policy Act requirements, and Chief of Naval Operations Instructions (OPNAVINST) 5090.1D, the description of the affected environment focuses on only those resource areas potentially subject to appreciable or noteworthy impacts.

In the case of the Proposed Action, the affected environment description is limited primarily to Navy Operational Support Center (NAVOPSPTCEN) Sacramento. Resource descriptions focus on: topography, geology and soils resources; water resources; and biological resources.

3.1 Topography, Geology and Soils

Geological resources consist of surface and subsurface materials and their properties. Principal geologic factors affecting the ability to support structural development are seismic properties (i.e., potential for subsurface shifting, faulting, or crustal disturbance), soil stability, and topography. The term soil, in general, refers to unconsolidated materials overlying bedrock or other parent material. Soil structure, elasticity, strength, shrink-swell potential, and erodibility all determine the ability for the ground to support man-made structures. Soils typically are described in terms of their complex type, slope, physical characteristics, and relative compatibility or constraining properties with regard to particular construction activities and types of land use.

3.1.1 Soils

The NAVOPSPTCEN facility and the properties in the immediate vicinity overlie a thick sequence of alluvial sediments consisting of silt, sand, gravel, and hardpans. These sediments are laterally and vertically discontinuous. In general, the shallow site soils have moderate to very low permeability (US Department of Agriculture [USDA] 1993). The USDA's Soil Survey of Sacramento County, California (USDA 1993) indicates that the NAVOPSPTCEN Sacramento facility and the adjacent properties are underlain by primarily five soil series types. (Table 3-1; Figure 3-1). However, the soils directly underlying the NAVOPSPTCEN facility are comprised of two primary soil types: Xerarents-Urban land-San Joaquin complex (13.34 acres), which comprises the majority of the area, and San Joaquin silt loam (0.28 acres), in the southeastern boundary of the facility.

Table 3-1
Soil types present on or adjacent to NAVOPSPTCEN Sacramento

Code	Type
118	Columbia sandy loam, drained, 0-2% slopes
157	Hedge loam, 0-2% slopes
213	San Joaquin silt loam, leveled, 0-1% slopes
214	San Joaquin silt loam, 0-3% slopes
216	San Joaquin-Durixeralfs complex, 0-1% slopes
219	San Joaquin-Urban land complex, 0-2% slopes
221	San Joaquin-Xerarents complex, leveled, 0-1% slopes
227	Urban Land
238	Xerarents-San Joaquin complex, 0-1% slopes
240	Xerarents-Urban land-San Joaquin complex, 0-5% slopes
247	Water

Source: USDA 1993

3.1.2 Action Impacts

Implementation of the Proposed Action at NAVOPSPTCEN Sacramento would involve minor disturbance of soils during clearing of invasive vegetation and grading activities. However, these activities would be short-term in nature, and would have no impact on sensitive or regional geologic or topographic features. Under the INRMP, the Soil Management Program would include developing new or implementing proven Best Management Practices (BMPs) to prevent and control erosion and protect sensitive species and habitats. In addition, BMPs would be incorporated into the design and construction of any facility projects involving ground disturbance. Therefore, implementation of the Proposed Action would result in an overall beneficial impact to soil resources. There would be no significant impacts to soil resources.

3.1.3 No-action Alternative Impacts

Under the No-Action Alternative, management programs proposed within the INRMP would not be implemented. The No-Action Alternative would result in maintaining the status quo of ecosystem management at NAVOPSPTCEN Sacramento. Consequently, there would be no change from present conditions with regards to impacts to geological (specifically soil) resources at NAVOPSPTCEN Sacramento and geological resources would remain as described in Section 3.1.1 of this EA. The continuation of existing practices (limited to mowing, removing downed debris, and general control of weeds) would result in beneficial impact to soil resources. Overall benefits to soil resources would occur. Therefore, there would be no significant impact to soil resources.

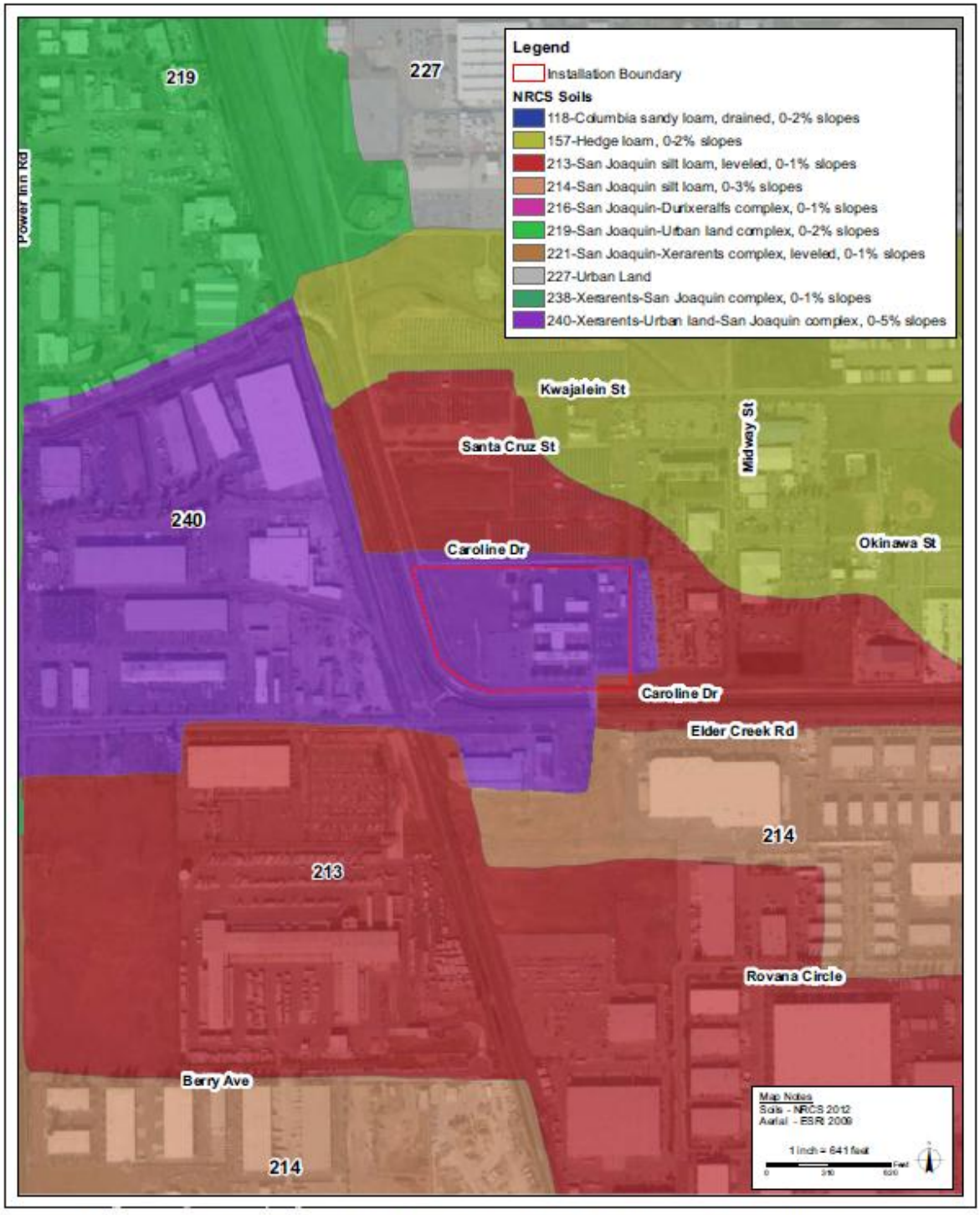

Figure 3-1. Soils Map for Navy Operational Support Center Sacramento, Sacramento, California.

3.2 Water Resources

Water resources analyzed include surface water and groundwater resources. The quality and availability of surface and groundwater and potential for flooding are addressed in this section. Surface water resources comprise lakes, rivers, and streams and are important for a variety of reasons including ecological, economic, recreational, aesthetic, and human health. Groundwater comprises subsurface hydrologic resources and is an essential resource in many areas; groundwater is commonly used for potable water consumption, agricultural irrigation, and industrial applications. Groundwater properties are often described in terms of depth to aquifer, aquifer or well capacity, water quality, and surrounding geologic composition.

Wetlands are defined by the U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (USEPA) as "*those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas*" (33 CFR 328.3 [b]).

Wetlands provide a variety of functions including groundwater recharge and discharge; flood flow alteration; sediment stabilization; sediment and toxicant retention; nutrient removal and transformation; aquatic and terrestrial diversity and abundance; and uniqueness. Three criteria are necessary to define wetlands: vegetation (hydrophytes); soils (hydric); and hydrology (frequency of flooding or soil saturation). *Hydrophytic vegetation* is classified by the estimated probability of occurrence in wetland versus upland (non-wetland) areas throughout its distribution. *Hydric soils* are those that are saturated, flooded, or ponded for sufficient periods during the growing season and that develop anaerobic conditions in their upper horizons (i.e., layers). *Wetland hydrology* is determined by the frequency and duration of inundation and soil saturation. Permanent or periodic water inundation or soil saturation is considered a main force in wetland establishment and proliferation. Jurisdictional wetlands are those subject to regulatory authority under Section 404 of the Clean Water Act and Executive Order 11990, *Protection of Wetlands.*

3.2.1 Existing Conditions

3.2.1.1 Hydrologic

There are no open water bodies, such as ponds, lakes or waterways on the NAVOPSPTCEN Sacramento site. However, Morrison Creek is an adjacent channelized waterway that runs to the south and west. It is cement-lined along the segment adjacent to the facility, and dry most of the year (Figure 3-2). The creek leaves the site to the west and then flows toward the southwest until it discharges into Beach Lake. The water-bearing zones beneath NAVOPSPTCEN Sacramento are composed of a series of sand, silty sand, and sandy silt units. Depth to groundwater ranges from approximately 80 to 85 feet (CPUC 2007).

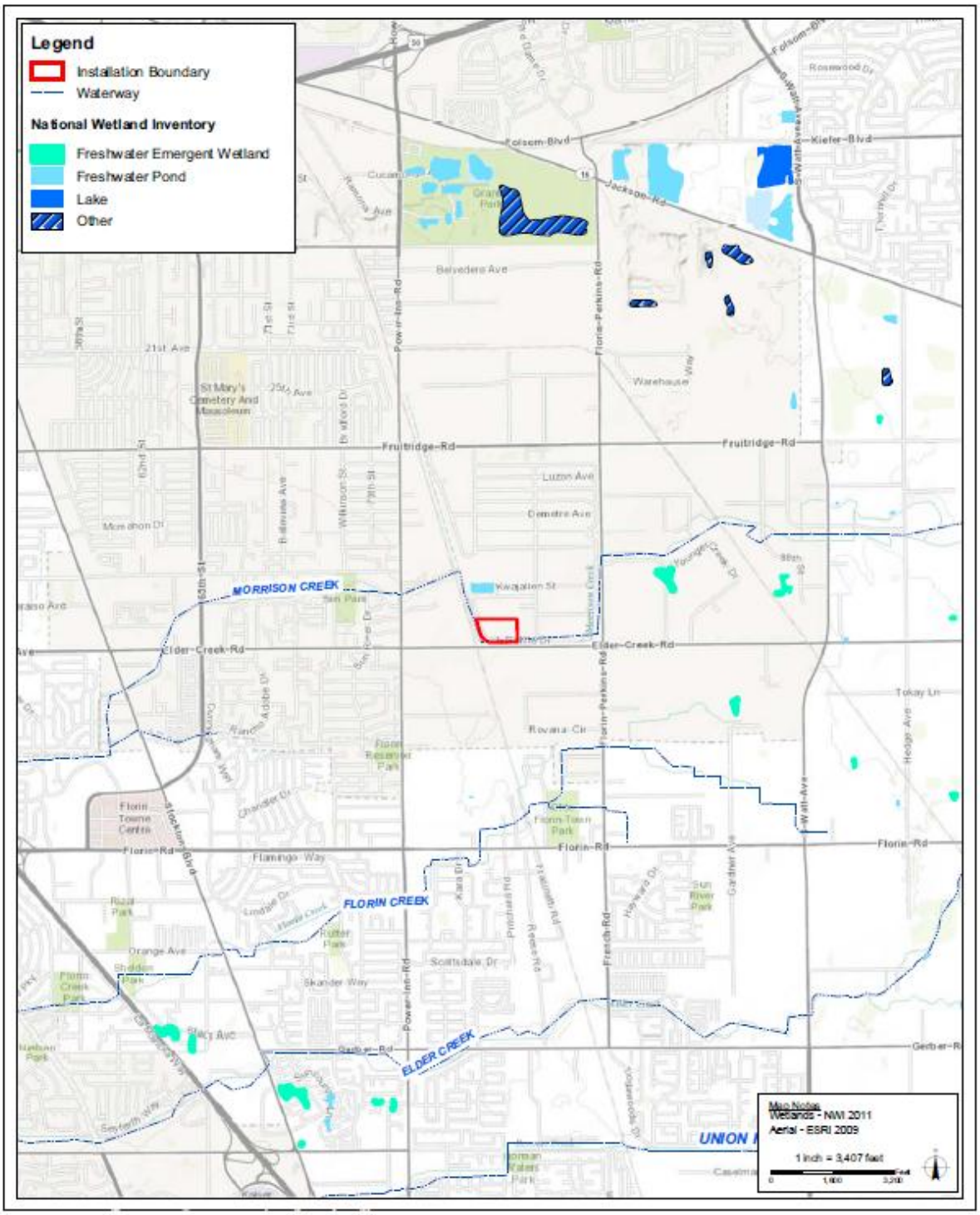

Figure 3-2. Regional Hydrology for Navy Operational Support Center Sacramento, Sacramento, California.

3.2.1.2 Wetlands

A protocol-level wetland delineation was completed within the installation in 2013 (ICF International [ICF] 2013). Results of these surveys identified 11 seasonal wetlands comprising 0.2059 acre and 0.0351 acre of "other waters" (drainage ditch) onsite (Table 3-2; Figure 3-3). The seasonal wetlands contain hydrophytic vegetation and exhibit indicators for wetland hydrology and hydric soil and all appear to be adjacent and/or hydrologically connected to the drainage ditch. The drainage ditch appears to convey water during the winter and spring. Sources of water for the drainage ditch include surface runoff, direct precipitation, and runoff from the developed portions of the site. This drainage ditch is hydrologically connected to Morrison Creek just outside the delineation area, approximately 55 feet to the southeast. Morrison Creek drains to the Stone Lakes, which are hydrologically connected to the Sacramento River. Considering this information, the drainage ditch would meet the criteria for being considered waters of the U.S. Appendix K of the INRMP presents the reporting associated with this survey in its entirety. The wetlands and "other waters" at the site were interpreted to be within the scope of USACE jurisdiction under Section 404 of the Clean Water Act (CWA). The features have a significant nexus with the Sacramento River and would likely be subject to USACE jurisdiction under Section 404 of the CWA.

Table 3-2
Summary of wetlands and other waters identified at NAVOPSPTCEN Sacramento

Wetlands and Other Waters	Acreage in Delineation Area
Wetlands	
Seasonal wetlands	0.2059
Wetland subtotal	*0.2059*
Other waters	
Drainage ditch	0.0351
Other waters subtotal	*0.0351*
Total	**0.2410**

Figure 3-3. Vegetation Communities, Wetlands, and Waters for Navy Operational Support Center Sacramento, Sacramento, California.

3.2.2 Proposed Action Impacts

Implementation of the Proposed Action would involve implementation of programs outlined in the INRMP. Individual actions listed in the Wetland and Waters Management, Soils Management, and Vegetation Management Programs and, as well as other habitat management actions would each be designed and evaluated to survey, protect, and enhance water resources and wetlands at NAVOPSPTCEN Sacramento. Proposed activities would be evaluated for impacts to wetland/waters, particularly those areas identified as potentially jurisdictional wetlands, to comply with avoidance, minimization, and compensation policies as mandated by EO 11990, *Protection of Wetlands*. Wetland community plant species and composition would be monitored during vegetative surveys. In addition, BMPs to control potential erosion and sedimentation as well as education of grounds maintenance personnel about sensitive wetland areas would be implemented during all future ground disturbance. The wetlands have not been previously managed or identified as the first delineation of these water resources occurred in 2013 with surveys associated with the INRMP. As there has been no previous INRMP, there has been no development or implementation of specific management for these previously unknown resources. Therefore, implementation of the Proposed Action would have an overall beneficial impact to water resources. There would be no significant impacts to water resources.

3.2.3. No-Action Alternative Impacts

Under the No-Action Alternative, management programs proposed within the INRMP would not be implemented. The No-Action Alternative would result in maintaining the status quo of ecosystem management for water resources at NAVOPSPTCEN Sacramento. Activities include basic removal of downed debris, pruning, mowing, general control of invasive weeds, and pest control. Current management does not include preventing chemical or mechanical damage from grounds management or development plans that could result in potential damage to the wetlands. Wetland surveys determined these areas likely would be deemed jurisdictional by the USACE, in which case Section 404 permits would be required for any fill or dredge activities that may occur.

Overall limited benefits to water resources would occur. Therefore, there would be no significant impact to water resources.

3.3 Biological Resources

Biological resources include plants, animals and the habitats in which they occur, as well as ecological phenomena that support them. Sensitive biological resources include the plant and animal species listed as threatened or endangered, or proposed as such, by the United States Fish and Wildlife Service (USFWS) or California Department of Fish and Wildlife (CDFW). The Endangered Species Act of 1973 protects listed species against unlawful "take," which can include the killing, harm, or harassment of individuals, or any actions that may damage the

habitat of such species. Federal Species of Concern are not protected by law; however, these species could become listed and protected—or proposed for such status—at any time.

Migratory birds, as listed in 50 CFR 10.13, are also sensitive biological resources and are both ecologically important and economically important to U.S. recreational activities, including bird watching and hunting. Under the Migratory Bird Treaty Act, 16 USC § 703 *et seq*, the Navy may be required to consult with USFWS and to obtain permits for certain actions affecting migratory birds. (See section 3.3.1.3, below.) Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds 2001) requires federal agencies to evaluate the environmental effects of their actions on migratory bird species and, where feasible, implement policies and programs, which support the conservation and protection of migratory birds.

3.3.1 Existing Conditions

3.3.1.1 Flora and Vegetation Communities

NAVOPSPTCEN Sacramento flora is characterized by ornamental species associated with the facility and nonnative species associated with the open grassland habitat that occurs within the eastern portion of the installation. Appendix I of the INRMP presents a list of botanical species documented on NAVOPSPTCEN Sacramento.

Vegetation mapping activities were conducted on NAVOPSPTCEN Sacramento in 2013 (ICF 2013). Three natural communities—California annual grassland, ruderal grassland, and seasonal wetland—were observed on the site (Table 3-3). In addition, ornamental/landscaped areas, developed/paved areas, and a drainage ditch are present on the site. The aforementioned community types are described below and are illustrated in Figure 3-3.

California Annual Grassland
California annual grassland areas occur primarily along the western edge of the site, east of the Morrison Creek channel. Dominant species include wild oat (*Avena barbata*, *A. fatua*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordaeceus)*, and Italian ryegrass (*Festuca perenne)*. Associated nonnative forb species are a significant component of this community and dominate the landscape in places. These species include mustards (*Brassica* spp., *Hirschfeldia incana*), wild radish *(Raphanus sativus)*, filaree *(Erodium botrys)*, and hairy cat's ear *(Hypochaeris radicata)*.

Table 3-3.
Vegetation Communities present on NAVOPSPTCEN Sacramento

Vegetation Type	Acres
California Annual Grassland	2.24
Developed	8.11
Drainage Ditch	0.04
Ornamental/landscaped	0.71
Ruderal Grassland	2.13
Seasonal Wetland	0.21
Total	**13.44**

Ruderal Grassland
Ruderal grassland vegetation occurs in the north-central portion of the site, where the natural vegetation has been highly degraded by past or current human activities (e.g., mowing and foot traffic) (Figure 3-3). Vegetation in this community type is highly variable but often includes a mix of nonnative annual grasses such as ripgut brome, soft chess, Bermuda grass (*Cynodon dactylon*), wild oat, Italian ryegrass, and weedy forbs such as bur clover (*Medicago polymorpha*), white clover (*Trifolium repens*), and filaree.

Seasonal Wetland
Seasonal wetlands are a broad class of wetlands characterized by seasonal inundation and annual, hydrophytic vegetation. Seasonal wetlands support a variety of both native and nonnative wetland plant species and may occur in a variety of landforms where there is seasonal saturation or inundation. Although sharing a similar hydrologic regime, seasonal wetlands are distinguished from vernal pool wetlands by their lack of distinctive floristic components (i.e., vernal pool indicator species) and by the absence of a distinctive claypan or hardpan soil.

At the site, seasonal wetlands are considered somewhat degraded based on nonnative plant community assemblages and land management modifications (e.g., mowing and grading). Species observed in this community include stalked popcorn flower (*Plagiobothrys stipitatus*), pygmy weed (*Crassula aquatica*), tidy tips (*Layia munzii*), Carter's buttercup (*Ranunculus bonariensis*), and weak manna grass (*Glyceria declinata*).

Ornamental/Landscaped
Ornamental/landscaped areas in the site occur in a picnic area near the training field and areas next to the buildings. Large landscape trees and shrubs such as elm (*Ulmus* sp.), blue gum (*Eucalyptus globulus*), southern live oak (*Quercus virginiana*), and oleander (*Nerium oleander*) were typical of species observed in these areas. Groundcover in these areas is dominated by turf grass.

Developed Areas
Developed areas constitute approximately 50% of the site and include parking areas, buildings, roads, and barren areas where vegetation has been removed or is absent.

3.3.1.2 Fauna

The City of Sacramento, including areas immediately adjacent to the NAVOPSPTCEN Sacramento site, is heavily developed and disturbed. Due to the highly developed nature of the NAVOPSPTCEN Sacramento site, species present are those that can persist in or adjacent to human development. With the exception of forage and roosting opportunities for migrating birds, the site does not provide a migration corridor between any natural areas for terrestrial species.

3.3.1.2.1 Mammals

Mammals potentially *occ*urring in the vicinity of the site include typical urban species such as raccoons *(Procyon lotor*), skunks (*Mephitis mephitis), opossum (Didelphis virginiana),* and coyotes (*Canis latrans).* Due to the partially rural location of the site, other species such as California vole (*Microtus californicus*), ground squirrels *(Spermophilus beecheyi*) black-tailed jackrabbit (*Lepus californicus*), and American badger (*Taxidea taxus*; CDFW – Species of Special Concern) may also be observed (AMEC 2009).

3.3.1.2.2 Birds

Although the quality of habitat on NAVOPSPTCEN Sacramento is low, the open grass area in the western portion of the site could provide valuable forage habitat for raptors and other avian species. In addition, the ornamental trees on-site have the potential to provide roosting, forage, or nesting habitat for a variety of bird species. Based on recent 2012/2013 general avian surveys conducted on NAVOPSPTCEN Sacramento, typical avian species on site include house finch (*Haemorhous mexicanus*), rock pigeon (*Columba livia*), mourning dove (*Zenaida macroura*), black phoebe (*Sayornis migricans*), and red-tailed hawk (*Buteo jamaicensis*) (USGS 2012). An inventory of avian species detected on NAVOPSPTCEN Sacramento is presented in Appendix I of the INRMP.

3.3.1.2.3 Amphibians and Reptiles

The site is fully developed and offers limited habitat for amphibians and reptiles. Reptiles potentially occurring on the site are limited to species adapted to developed urban environments, such as small lizards and snakes. Potential habitat for the giant garter snake (*Thamnophis gigas*), a federally- and state-listed threatened species, occurs in Morrison Creek; however, there are no records of the snake occurring in the vicinity of the site and Morrison Creek is not within the boundaries of the installation. Limited suitable habitat for amphibians exists due to a lack of water resources on the site. No amphibians or reptiles were observed during a site visit in November 2009 (AMEC 2009).

3.3.1.2.4 Fishes

The NAVOPSPTCEN Sacramento site offers no habitat for fish or other aquatic species. Morrison Creek is located offsite.

3.3.1.2.5 Invertebrates

There has not been a formal invertebrate survey on NAVOPSPTCEN Sacramento property; however due to the presence of vernal pool fairy shrimp (*Branchinecta lynchi),* vernal pool tadpole shrimp ***(****Lepidurus packardi),* and California linderiella (*Linderiella occidentalis*) adjacent to the site (California Natural Diversity Database [CNDDB] 2013), a protocol-level branchiopod survey was completed during the 2012/2013 wet season. No fairy shrimp were documented onsite as a result of this survey. An additional wet-season survey will be conducted during the 2013/2014 wet season as well in order to complete protocol requirements. Appendix K of the INRMP presents the detailed protocol level survey report from the 2012/2013 wet season survey (ICF 2013).

3.3.1.3 Migratory Birds and Birds of Conservation Concern

Some of the species of birds that may use NAVOPSPTCEN Sacramento for foraging and breeding habitat are protected by federal law under the Migratory Bird Treaty Act (MBTA) (16 USC § 703 et seq.) and Executive Order 13186. The MBTA, enforced by the USFWS, makes it unlawful "by any means or manner, to pursue, hunt, take, capture [or] kill" any migratory bird except as permitted by regulation. The number of bird species covered by the MBTA is extensive, includes listed and non-listed species, and is listed at 50 CFR § 10.13. The regulatory definition of "migratory bird" is broad and includes any mutation or hybrid of a listed species and includes any part, egg, or nest of such bird (50 CFR §10.12.).

To provide guidance for conflicts arising between military readiness activities and the MBTA, the USFWS issued the final rule on, "Migratory Bird Permits: Take of Migratory Birds by the Armed Forces" (50 CFR Part 21 in FR 28 February 2007, pages 8931-8950), hereinafter referred to as the Migratory Bird Rule. The Migratory Bird Rule authorizes the military to "take" migratory birds during military readiness activities under the MBTA without a permit. However, if the military determines that the activity will have a "significant adverse effect" on a population of migratory birds, they must work with the USFWS to develop and implement conservation measures to minimize and/or mitigate the effects. Currently there are no anticipated takes of migratory birds that would fall under this exemption. Conservation measures under the Migratory Bird Rule require monitoring and record-keeping for years from the date the Armed Forces commence their conservation action. During INRMP reviews, the Armed Forces must report to the USFWS migratory bird conservation measures implemented and the effectiveness of the conservation measures in avoiding, minimizing, or mitigating take of migratory birds. For activities which do not constitute military readiness activities under the Rule, the normal permitting requirements applicable to take of migratory birds apply.

Birds of Conservation Concern (BCC) designates migratory and non-migratory birds that "without additional conservation actions" are likely to become candidates for listing under the Endangered Species Act of 1973" (Fish and Wildlife Conservation Act amended 1988). Per the statutory requirements of the Sikes Act, in coordination with the USFWS and CDFW, NAVOPSPTCEN Sacramento is to ensure proper consideration of BCC and MBTA species.

Based on Department of Defense policy, neotropical migratory bird programs shall be established in support of and consistent with the military mission. The Department of Defense strategy is to focus on inventory, on-the-ground management practices, education, and long-term monitoring (DoD 2011). Its Partnership in Flight program seeks to conserve and manage these birds and their habitat on military installations. A list of all bird species observed on NAVOPSPTCEN Sacramento is provided in Appendix I of the INRMP with their associated BCC and MBTA rankings.

3.3.1.4 Special-status Species

Special-status species include Threatened and Endangered (T&E) species (those listed by the Federal Government as threatened or endangered); species proposed for federal listing as threatened and endangered; and candidate species for such federal listing. Also included in this category are Birds of Conservation Concern (BCC) and species protected by the Bald Eagle and Golden Eagle Protection Act of 1940 (16 U.S.C. 668-668d, 54 Stat. 250) as amended (Eagle Act) and Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-712; Ch. 128). The applicable federal classification system for special-status species is as follows:

- ***Endangered*** - Any species that is in danger of extinction throughout all or a significant portion of its range.
- ***Threatened*** - Any species that is likely to become an endangered species within foreseeable future through all or a significant portion of its range.
- ***Proposed*** - Any species that has been proposed for listing as threatened or endangered species.
- ***Birds of Conservation Concern*** - All Nongame birds, gamebirds without hunting seasons, subsistence-hunted nongame birds in Alaska; and Endangered Species Act candidate, proposed endangered or threatened, and recently delisted species.
- ***Candidate*** - Species for which there is sufficient information on biological vulnerability and threats to support proposals to list them as endangered or threatened.
- ***Fully Protected*** - The classification of Fully Protected was the State's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Most of the species on these lists have subsequently been listed under the state and/or federal endangered species acts; white-tailed kite, golden eagle, trumpeter swan, northern elephant seal and ring-tailed cat are the exceptions. Records of the white-tailed kite and the golden eagle are kept by the CDFW; no records of the trumpeter swan, northern elephant seal and ring-tailed cat are formally maintained.
- ***Species of Special Concern*** - Species formerly under consideration by the USFWS for status changes (includes Category 1, 2, and 3 taxa). As of 1996, the USFWS discontinued the use of this designations, however, encourage further study into their conservation status.

DoD policy states that T&E species and their habitats shall be protected and managed according to the Endangered Species Act (ESA) and implementing USFWS regulations and agreements.

Per the statutory requirements of the Sikes Act (as amended), and in coordination with the USFWS and CDFW, NAVOPSPTCEN Sacramento is to ensure proper consideration of T&E

species as well as their associated federally designated critical habitat. Figure 3-4 presents special-status species that have been documented within a 2-mile radius of NAVOPSPTCEN Sacramento.

3.3.1.4.1 Special-status Species with Potential to Occur

No T&E species have been documented within NAVOPSPTCEN Sacramento. Suitable habitat however does occur onsite for three special status species: burrowing owl (*Athene cunicularia*), Vernal Pool Fairy Shrimp, and Vernal Pool Tadpole Shrimp. A description of each is provided below.

Burrowing owl (*Athene cunicularia*)
Federal Status: Protected under the MBTA; USFWS BCC
State Status: California Species of Special Concern.

The burrowing owl is a small, ground-dwelling owl found in open, dry grasslands, agricultural and range lands, as well as desert habitats with low-growing vegetation (Haug et al. 1993). They are often associated with other burrowing animals such as ground squirrels and coyotes, and may make use of burrows abandoned by these species. Although burrowing owls are capable of excavating their own burrows in the absence of other burrowing species, it is uncommon (Karalus and Eckert 1987). The elimination of burrowing mammals through pest control programs and habitat loss have been identified as the primary factors responsible for the decline of burrowing owls (Klute et al. 2003).

Status on NAVOPSPTCEN Sacramento
Protocol-level surveys for the burrowing owl were conducted on NAVOPSPTCEN Sacramento in 2013 but no individuals or burrows were reported. Burrowing owls have additionally been documented within the vicinity of NAVOPSPTCEN Sacramento (Figure 3-4).

Figure 3-4. Special-status Species for Navy Operational Support Center Sacramento, Sacramento, California.

Vernal Pool Fairy Shrimp *(Branchinecta lynchi)*
Federal Status: Federally Threatened
State Status: California Species of Special Concern

The vernal pool fairy shrimp is a small freshwater crustacean (0.12 to 1.5 inches long) that exists only in vernal pools or vernal pool-like habitats and does not occur in riverine, marine, or other permanent bodies of water. Vernal pools are generally small, shallow wetlands, located on a clay or hardpan layer, that fill with water during the winter and spring, then dry up until the next rainy season. When the temporary pools dry, vernal pool fairy shrimp offspring persist in suspended development as desiccation-resistant embryos (commonly called cysts) in the pool substrate until the return of winter rains and appropriate temperatures allow some of the cysts to hatch (USFWS 2002b).

Status on NAVOPSPTCEN Sacramento
Suitable habitat (clay soils and seasonally ponded depressions) for vernal pool fairy shrimp occurs within the open grassland habitats of the installation. One protocol level vernal pool branchiopod survey was conducted onsite during the 2012/2013 wet season. No federally listed vernal pool branchiopods or other special status species were observed in any of the pools that held water during this survey period. The USFWS protocol for determining absence requires that two wet season surveys be conducted within a 5-year period or that one wet season and one dry season survey be conducted consecutively. A second wet season survey is planned for the 2015/2016 wet season.

Vernal Pool Tadpole Shrimp (*Lepidurus packardi*)
Federal Status: Federally Endangered
State Status: None

The vernal pool tadpole shrimp is a freshwater crustacean (up to 2 inches long) that can be found in ephemeral freshwater habitats, including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales, and other seasonal wetlands in California. Like vernal pool fairy shrimp, their offspring persist in cysts during the dry season until adequate rainfall and appropriate temperatures occur for hatching (USFWS 2002c).

Status on NAVOPSPTCEN Sacramento
Vernal pool tadpole shrimp have been documented adjacent to the installation (Figure 3-4) (CNDDB 2013). One protocol level vernal pool branchiopod survey was conducted onsite during the 2012/2013 wet season. No federally listed vernal pool branchiopods or other special status species were observed in any of the pools that held water during this survey period. The USFWS protocol for determining absence requires that two wet season surveys be conducted within a 5-year period or that one wet season and one dry season survey be conducted consecutively. A second wet season survey is planned for the 2015/2016 wet season.

3.3.1.4.2 Special-status Plants

No special-status plants have been documented within the vicinity of NAVOPSPTCEN Sacramento. The only special status plant species that has the potential to occur on the

NAVOPSPTCEN site is Sanford's arrowhead (*Sagitaria sanfordii*). However, no records indicate this species has occurred within the vicinity of NAVOPSPTCEN Sacramento (Figure 3-4).

3.3.1.5 Sensitive Species of Regional Concern

Sensitive species of regional concern may include former candidates for federal listing as threatened or endangered, state endangered or threatened species, species of special concern to the state of California, and species that are regionally rare or of limited distribution. Although protection of non-federally-listed species is not mandatory on federal installations, management of these species contributes to the overall maintenance of their natural populations and reduces the likelihood that these species will be given additional legislative protection in the future. Managing for these species and their habitats by way of an ecosystem-based management process can also be beneficial to other species.

California Endangered Species Act (CESA): Sections 2050-2098 of the California Fish and Game Code (CFGC) prohibit the take of State-listed endangered and threatened species unless specifically authorized by the CDFW. CDFW administers CESA and authorizes take through permits or memorandums of understanding issued under Section 2081 of CFGC, or through a consistency determination issued under 2080.1. Section 2090 of CFGC requires state agencies to comply with threatened and endangered species protection and recovery and to promote conservation of these species. The state definition of take is to hunt, pursue, catch, capture, or kill a member of a listed species or attempt to do so.

***California Species of Special Concern (SSC*)**: California SSC is a designation conferred by the CDFW for animal species for which declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. Species on the CDFW Watch List (WL) are taxa that were previously SSCs but no longer merit SSC status or which do not meet SSC criteria but for which there is concern and a need for additional information to clarify status. SSC and WL are administrative designations, and although they carry no formal legal status, the intention is to achieve conservation and recovery of these animals before they meet CESA criteria for listing as threatened or endangered.

***California Fully Protected Species*:** The classification of Fully Protected was the State's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Most of the species have subsequently been listed under the state and/or federal endangered species acts; white-tailed kite, golden eagle, trumpeter swan, northern elephant seal and ring-tailed cat are the exceptions. The CFGC sections dealing with Fully Protected species state that these species "....may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected" species, although take may be authorized for necessary scientific research.

The Navy notes that there is no waiver of sovereign immunity making federal agencies subject to state wildlife (or fish and game) laws, or granting state wildlife agencies jurisdiction over federal enclaves. The Navy is not subject to the take prohibitions or permitting requirements of the

CESA or CFGC, or other California state law requirements discussed here in Section 3.3.1.5, and such requirements are included here solely to provide background information on certain categories of species that will be considered sensitive or special for purposes of natural resources management under the NAVOPSPTCEN Sacramento INRMP.

3.3.1.5.1 Sensitive Fauna with Potential to Occur

Four California sensitive species designations have been documented or have the potential to occur on or around NAVOPSPTCEN Sacramento. A description of each species and its listing status is provided below. Figure 3-4 presents the location of special status species known from the vicinity and a species list with additional status information is provided in Appendix J of the INRMP.

Mammals

American badger (*Taxidea taxus*) - Although not commonly found in developed urban settings, there is one documented siting of an American badger within a mile of the NAVOPSPTCEN Sacramento (Figure 3-4; CNDDB 2013). The American badger is designated a SSC by CDFW.

Birds

Cooper's hawk (*Accipiter cooperii*) – The Cooper's hawk is a designated WL species by CDFW and is protected under the MBTA as defined by the USFWS. This species was documented on NAVOPSPTCEN Sacramento property during 2012 bird surveys (USGS 2012).

Great Egret (*Ardea alba*). The great egret is listed as a "Special Animal" by the CDFW (CDFG 2011). No egret rookeries (nesting areas) have been documented in the vicinity of NAVOPSPTCEN Sacramento (CNDDB 2013). This species was observed foraging onsite during recent avian surveys (USGS 2012).

Invertebrates

California linderiella (*Linderiella occidentalis*) – California linderiella is species of fairy shrimp that is identified by the CNDDB as a "Special Animal" list (CDFG 2011). California linderiella is known to occur from the vicinity of NAVOPSPTCEN Sacramento (Figure 3-4; CNDDB 2013).

3.3.1.6 Invasive Species

Invasive and exotic species may include plants, insects, or animals. An invasive species is defined as "an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health." A non-native (or alien) species is defined as a "species including its seeds, eggs, spores, or other biological material capable of propagating that species that is not native to that ecosystem (Executive Order 13112 *Invasive Species*)." Because of their invasive capacity, many exotic species have the ability to spread rapidly through ecosystems since their natural predators are often not present. Such species often retard natural

succession and reforestation and generally cause a reduction of biological diversity in natural ecosystems. In accordance with OPNAVINST 6250.4C and OPNAVINST 5090.1D, Chapter 24, An Integrated Pest Management Plan has been prepared for the NAVOPSPTCEN Sacramento site (DoN 2000). All pest management programs at NAVOPSPTCEN Sacramento are conducted in accordance with the Integrated Pest Management Plan.

3.3.1.6.1 Invasive Animals

Management of invasive animals is limited to managing pest species, using the Integrated Pest Management program. Specific management strategies for invasive animal species are described in the Integrated Pest Management Plan (DoN 2000). Several groups of animals are considered pests and may conflict with the military mission on NAVOPSPTCEN Sacramento. Pest mammals include rabbits, skunk, raccoon, squirrels, coyotes, feral dogs, and feral cats.

3.3.1.6.2 Invasive Plants and Noxious Weeds

Invasive plants as defined in Executive Order 13112 are, "an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health". The Federal Noxious Weed Act requires Federal land managers to cooperate with State and Federal agencies to manage undesirable plants. It defines noxious weed as, "any living stage (including seeds and reproductive parts) of a parasitic or other plant of a kind which is of foreign origin, is new to or not widely prevalent in the U.S., and can directly or indirectly injure crops, other useful plants, livestock, poultry or other interests of agriculture, including irrigation, navigation, fish and wildlife resources, or the public health". It also mandates a program and a person be assigned to deal with unwanted plants, funding needs, cooperative agreements, and the use of integrated pest management systems. Navy Instruction, OPNAVINST 6250.4C, requires a comprehensive Integrated Pest Management Plan and discusses the need to control pest outbreaks which affect the military mission, damage property, or impact the welfare of people. All pesticide use must comply with applicable regulations to prevent pollution. In addition, DoD policy states that "noxious weeds and other objectionable plant growth shall be controlled by mowing, use of USEPA registered or approved herbicides, cultivation, or other appropriate means. Pesticide use should be minimized and used in accordance with DoD policy" (DoD 2011).

Although most of plants on NAVOPSPTCEN Sacramento are non-native, the majority are not considered invasive or noxious. However, yellow starthistle and perennial pepperweed were both documented in the grassland to the west of the facility (CPUC 2007). Both species are designated noxious weeds by the State of California (California Department of Food and Agriculture 2010).

3.3.2 Proposed Action Impacts

Implementation of the Proposed Action would involve implementation of programs outlined in the INRMP, including individual actions listed in the Vegetation Management, Wetland and Waters Management, Invasive Species & Integrated Pest Management, Wildlife Management, Threatened and Endangered Species Management, Migratory Bird and Birds of Conservation Concern, and Sensitive Species of Regional Concern Management Programs (Section 3 of INRMP). These individual activities would be intended to monitor, protect, and enhance

vegetation communities (including invasive species control), wildlife (including MBTA birds), threatened and endangered species, and species of regional concern at NAVOPSPTCEN Sacramento, and would be designed and evaluated for project-specific environmental outcomes so as to fulfill that goal. Wildlife and vegetation surveys would occur every three to five years to maintain species lists and to monitor the status of any federally-listed or special-status species. Invasive species control efforts would be focused on identifying management goals that would target high priority pest species posing the greatest threat to the native habitat and the property. Education of grounds personnel about sensitive species and habitat areas to be excluded from landscape maintenance activities would be provided to ensure sustained protection and successful implementation of management objectives into the future. This installation has not had a prior INRMP and has conducted few biological surveys to collect baseline data to determine the presence of species and quality of habitat; consequently, implementation of this action would add to ecological knowledge to help guide future installation decisions related to natural resource management. Therefore, implementation of the Proposed Action would result in an overall beneficial effect to biological resources at NAVOPSPTCEN Sacramento. There would be no significant impact to biological resources.

3.3.3 No-Action Alternative Impacts

Under the No-Action Alternative, management programs proposed within the INRMP would not be implemented. The No-Action Alternative would result in maintaining the status quo of ecosystem management at NAVOPSPTCEN Sacramento. Under the No-Action Alternative management strategies that promote basic grounds maintenance (e.g. mowing, weeding, pest control) would be continued. Overall benefits to biological resources would occur. Therefore, there would be no significant impact to biological resources.

4.0 CUMULATIVE IMPACT ANALYSIS

4.1 Introduction

The cumulative impacts analysis was developed per the National Environmental Policy Act objectives, Council on Environmental Quality regulations, and Council on Environmental Quality guidance. Council on Environmental Quality regulations (40 Code of Federal Regulations §§ 1500-1508) provide the implementing procedures for the National Environmental Policy Act.

Cumulative impacts are defined as: The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions (40 CFR 1507).

Geographic boundaries for analysis of cumulative impacts vary for the impacted resources and the extent of their reach. For example, air quality is considered on a basin-wide basis, as defined by the California Air Resource Board, whereas the reserve center may be the appropriate boundary for certain other resources.

4.2 Potentially Cumulative Projects

Since the Navy's Proposed Action and No Action Alternative both involve potential implementation of a plan, and since the implementation of the plan in each instance would in itself generate almost exclusively beneficial impacts (apart from, e.g., de minimis motor vehicle emissions associated with surveying/mapping) which as a practical matter would not add to impacts associated with non-planning projects such as construction or energy development, the Navy is limiting the range of potential cumulative projects for this analysis to other planning-type projects in the vicinity of NAVOPSPTCEN Sacramento.

4.2.1 State Wildlife Comprehensive Wildlife Plan

The 2007 California’s Wildlife Action Plan (CWAP) has a section that could pertain to the region that NAVOPSPTCEN Sacramento is in. The Central Valley and Bay-Delta region have identified the following stressors affecting wildlife and habitat:

- Growth and development (including urban, residential, and agricultural)
- Water management conflicts and reduced water for wildlife
- Water pollution
- Invasive species
- Climate change

Each of these stressors is critical in the loss or degradation of habitat and ecosystem processes. In aquatic environments, including wetlands and riparian, the overall amount and quality of habitat has been reduced by water management and water pollution. Invasive species are important stressors in both upland and aquatic areas. Climate change has only recently been recognized as a major stressor that is likely to have significant, long-term effects on the human and natural environment in the next few decades.

4.2.2 Integrated Pest Management Plan

The Integrated Pest Management Plan (IPMP) details pest management activities at the 28 Naval Reserve Centers, and Naval Reserve Facilities (collectively referred to as "Reserve Centers" in the IPMP) located throughout the western states, Alaska and Hawaii under the Commander, Naval Surface Reserve Force West. The IPMP is intended to be an overall or "umbrella" IPMP to assist Reserve Centers that are not a tenant at a larger military installation. The IPMP is currently being re-written and should be completed by 2014.

4.2.3 Recovery Plans for Listed Species

Species-specific recovery plans have been developed for federally listed species known to have appropriate habitat on the reserve center (although species have not been confirmed on the property). These plans call for the protection and management of known federally listed species habitat in a manner that moves the species toward down-listing or de-listing.

4.2.4 Regional Habitat Conservation Planning

The following Habitat Conservation Plans and Natural Communities Conservation Programs that occur within the Sacramento area are currently undergoing the planning process. NAVOPSPTCEN Sacramento is not included within their planning areas; however, through the collaborative inter-agency efforts described above, natural resources data collected on NAVOPSPTCEN Sacramento may provide useful information for these large-scale planning efforts:

> ***South Sacramento Habitat Conservation Plan*** (SSHCP) - The SSHCP protects 30 species of plants and wildlife including 10 that are listed as threatened or endangered under either the federal ESA and the CESA, or both. The SSHCP also protects vernal pool, wetland, and stream habitats that are subject to the federal Clean Water Act (CWA) and California's Porter-Cologne Water Quality Control Act. The SSHCP also seeks a programmatic Streambed Alteration Agreement under Fish and Game Code Sections 1600, *et seq.* (SSHCP 2010).
>
> ***Bay Delta Conservation Plan*** (BDCP) - The proposed BDCP sets out a comprehensive conservation strategy for the Sacramento-San Joaquin River Delta (Delta) designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework. The BDCP reflects the outcome of a

multiyear collaboration between public water agencies, state and federal fish and wildlife agencies, nongovernment organizations, agricultural interests, and the general public. The BDCP is a long-term conservation strategy that sets forth actions needed for a healthy Delta and would be implemented over the next 50 years (BDCP 2013).

4.2.5 City of Sacramento General Plan

The reserve center is located within the Fruitridge Broadway Area Plan of the Sacramento General Plan (GP), and is specifically within the Sacramento Army Depot Redevelopment Area (City of Sacramento 2009). Fruitridge Broadway is mainly residential, commercial and industrial land uses. Much of the area has vacant land available for development, with vacant parcels located in the northeast and smaller parcels scattered throughout the Plan Area. The area adjacent to the reserve center zoned as industrial and employment uses will remain or intensify.

No specific development projects are identified in the City of Sacramento GP; however, the GP is designed to serve as guidance for future decisions concerning for land use, urban design, housing, mobility, economic development, public safety, environmental resources, parks and recreation, and services and facilities. The GP aims to develop a sustainable future that includes conserving air, water, land, soils, minerals, natural habitat, energy, and protecting aesthetic resources.

4.3 Cumulative Impacts Analysis

4.3.1 Greenhouse Gases and Climate Change

A small amount of greenhouse gas (GHG) emissions would result from implementation of Alternatives 1 and 2 and they would primarily be from the use of motorized vehicles associated with surveying, monitoring, mapping, and restoration/enhancement activities. A small amount of GHG emissions would also result from implementation of the potentially cumulative projects and would primarily be from the use of small equipment at sites undergoing restoration and from the use of motorized vehicles associated with the movement of personnel to, from, and around project sites. All of these GHG emissions would be minor and short-term.

The potential effects of GHG emissions are, by nature, global and cumulative, as most individual sources of GHG emissions are not large enough to have an appreciable effect on global climate change. The effects from either alternative, when added to the effects from the cumulative projects, are minor and not large enough to have an appreciable effect on GHGs and global climate change. Therefore, there would be no significant cumulative impacts to GHGs and global climate change from either alternative.

4.3.2 Geology, Topography and Soils

Implementation of Proposed Action would result in beneficial effects to geology and soils. All projects within NAVOPSPTCEN Sacramento with the potential to produce soil erosion would be conducted in compliance with best management practices that would minimize effects to geological and soil resources.

Geology and soils management objectives for NAVOPSPTCEN Sacramento under Alternative 1 would be consistent with other existing approved plans for the reserve center and in the region, including the CWAP and GP. The CWAP seeks to reduce impacts to soil resources indirectly through water quality goals to reduce nonpoint source pollution from cities and agricultural areas. The City of Sacramento GP would indirectly benefit soils by requiring that the Storm Water Pollution Prevention Plans for individual projects include Best Management Practices and Low Impact Development to minimize run-off.

Therefore, when added to the impacts from the potentially cumulative projects, the Proposed Action would not result in significant cumulative impacts to geology and soil resources.

The continuation of landscape management practices (limited to mowing, removing downed debris, and general control of weeds) of the No Action Alternative do not conflict with the other existing approved plans.

Therefore, when added to the impacts from the potentially cumulative projects, the No-Action Alternative would not result in significant cumulative impacts to geology and soil resources.

4.3.3 Water Resources

Implementation of the Proposed Action would result in beneficial impacts to water and hydrological resources. For example, the Revised INRMP would support the policy of avoidance, minimization, and compensation for any wetland losses as mandated by Executive Order 11990, *Protection of Wetlands*.

The potentially cumulative projects are currently providing and will continue to provide benefits to water and hydrologic resources. The Recovery Plan for fairy shrimp protects vernal pools. The SSHCP protects vernal pools, wetlands, and stream habitats subject to the Clean water Act. The BDCP also has goals to restore and protect water quality for ecosystem health.

The GP would have individual projects comply with conservation or restoration of open space of areas that provide water quality benefits such as riparian corridors, buffer zones, wetlands, undeveloped open space areas, levees, and drainage canals for the purpose of protecting water resources in the City's watershed, creeks, and the Sacramento and American rivers. *(City of Sacramento 2009).* The City would also work with local, regional and federal agencies to

protect water resources. In development areas, the GP would require Best Management Practices and Low Impact Development as part of the storm water permitting process to mitigate for run-off.

Therefore, when added to the impacts from the potentially cumulative projects, the Proposed Action would not result in significant cumulative impacts to water resources.

There could be degradation to wetlands without staff training of environmental protection. Without an INRMP under the No Action Alternative, dredge and fill projects would still be subject to the Clean Water Act Section 404 permits (if the wetlands are found to be jurisdictional) and individual projects would need to obtain appropriate Storm Water Permits that would include protective BMPs. However, the project-by-project approach of the No-Action Alternative does not contribute to research to better protect or restore wetland resources. When added to the highly beneficial impacts from the potentially cumulative projects, the No-Action Alternative's limited benefits would not be significant.

4.3.4 Biological Resources

Implementation of the Proposed Action would result in benefits to biological resources by taking complete inventories of wildlife species, monitoring and controlling for specific invasive plant species, and providing for the protection of potential habitat for federally-listed species.

The potentially cumulative projects are currently providing and will continue to provide benefits to area biological resources. In considering overlapping resources with NAVOPSPTCEN Sacramento, the Recovery Plans and regional plans/programs call for the conservation and restoration of habitat for federally-listed species and other special status species (vernal pools and grasslands for shrimp and burrowing owls respectively). The CWAP suggests that land managers should develop and implement management prescriptions that benefit wildlife, sustain populations, and reduce the effects of invasive species.

Therefore, when added to the impacts from the potentially cumulative projects, the Proposed Action would not result in significant cumulative impacts to biological resources.

The No-Action Alternative would benefit biological resources through broad pest management treatments and the potentially cumulative projects would also result in beneficial effects to these resources. Therefore, implementation of the No-Action Alternative would not result in significant cumulative impacts to biological resources.

5. OTHER NEPA CONSIDERATIONS

5.1. Possible conflicts between the Proposed Action and alternatives, and the objectives of Federal, State, Local and Regional land use plans, policies and controls

Implementation of the alternatives would comply with existing federal regulations and state, regional and local policies and programs while maintaining the military mission. Relevant federal regulations to the alternatives are listed in Chapter 1; compliance with additional regulations that arise during the course of implementation of any of portion of the alternatives would also occur on a case-by-case basis as necessary.

5.2. Energy requirements and conservation potential of various alternatives and mitigation measures being considered.

Consumption of energy for routine maintenance, restoration projects, and conservation activities would be minimal and temporary in implementing the alternatives. Mitigation measures would not be required for implementation of the alternatives; however, Alternative 1 does include the establishment of mitigation conceptual goals, which would direct mitigation decisions. Consequently, there would be no energy conservation potential or mitigation measures from implementation.

5.3. Irreversible or irretrievable commitment of natural or depletable resources.

Resources that are considered irreversibly and irretrievably committed to a project are those that are used on a long-term or permanent basis. This includes non-renewable natural and human resources, such as labor, petroleum and metals, and cultural resources. If a resource could have been used for other purposes, it is considered irretrievable. The unavoidable destruction of natural resources that could limit the range of potential current and future uses of the site also falls into this category. Examples of irreversible commitments include mining and harvesting old growth forest products.

Implementation of all of the alternatives would involve the consumption of resources for land management, restoration and land maintenance activities. Implementation of all of the alternatives would require fuel, chemical products in the form of herbicides and pesticides, and

human labor; however, the commitment would be short-term and amounts would be not substantial.

5.4. Relationship between short-term uses of the environment and long term-productivity.

NEPA requires an analysis of the relationship between a project's short-term impacts to the environment and the effects that these impacts may have on the maintenance and enhancement of the long-term productivity of the affected environment. Impacts that limit the range of beneficial uses of the environment are of particular concern. This refers to the possibility that choosing a single development option reduces future flexibility in pursuing other options, or that giving over a parcel of land or other resource to a certain use essentially eliminates the possibility of other uses considered at that site.

The implementation of either of the alternatives affects both short-term and long-term uses of the environment. The effects would be beneficial to natural resources and directed toward enhancing the long-term productivity of the environment through conservation and restoration. In some cases the long-term effects may become permanently restricted by a considerable change in environmental conditions, and could therefore, constitute an irretrievable commitment of resources. Most of the long-term effects of the alternatives, however, would involve the increase in productivity of the environment concerning natural resource functions and the use would be considered temporary given that the resources could be converted to provide a different function if needed.

5.5. Any probable adverse environmental effects that cannot be avoided and are not amenable to mitigation.

Implementation of the Proposed Action and the No Action Alternative would not result in adverse environmental effects that are unavoidable or not amenable to mitigation. Both alternatives would result in overall beneficial effects to natural resources on NAVOPSPTCEN Sacramento.

6. LIST OF AGENCIES AND PERSONS CONSULTED

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7. LIST OF PREPARERS

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Appendix A: INRMP Implementation/Action Table

Project or Activity/Objective	EPR Number	ERL Number	INRMP Section	Scheduled Implementation	Prime Legal Driver	Funding Class	Focus Area	Cost Estimate	Responsible Party
Wildlife Management									
Objective: Promote a sustainable and diverse wildlife community within NOSC Sacramento lands through habitat stewardship, population protection and monitoring, invasive species removal, and wildlife damage control compatible with the facility's mission and urban location.									
Conduct a basewide wildlife inventory and maintain a comprehensive list of all species that have been identified to occur within the installation, to include migratory and resident species. Update basewide wildlife surveys every five years.		4	3.7		Sikes Act, ESA, MBTA, FWCA, EO 13186	1	Fish and Wildlife Management and Public Access		
Threatened and Endangered (T&E) Species and Species Management									
Objective 1: Conserve and monitor potential fairy shrimp habitat within the installation.									
Conduct surveys for vernal pool habitats and listed fairy shrimp species in accordance with accepted protocols Update fairy shrimp surveys every 5 years to maintain status of species on the installation.		4	3.8		Sikes Act, ESA	1	Listed Species and Critical Habitat		
Objective 2: Conserve and monitor potential burrowing owl habitat within the installation.									
Perform protocol-level surveys every three (3) years for burrowing owls using accepted methods to update status of species on the installation. .		4	3.8		MBTA/ Calif. ESA (Species of Special Concern - Priority 2)	1		Listed Species and Critical Habitat	

Priority/Proponent for funding requests:

Class 1 - Requirements derived from existing laws, regulations, and EOs.
Class 2 - Requirements derived from DoD and/or Navy policy.
Class 3 - Enhancement Actions beyond Compliance

Acronyms:

ARPA - Archaeological Resources Protection Act
CWA - Clean Water Act
DoD - Department of Defense
DoDI - Department of Defense Instruction
EO Executive Order
ESA - Endangered Species Act
FNWA - Federal Noxious Weed Act
FWCA - Fish and Wildlife Coordination Act
OPNAVINST - Naval Operations Instruction
NHPA - National Historic Preservation Act
Sikes Act - Sikes Act Improvement Act

Appendix B: Record of Non-Applicability (RONA)

Appendix B: Record of Non-Applicability

Department of Defense
U.S. Navy

Record of Non-Applicability

Navy Operational Support Center, Sacramento, California

Integrated Natural Resources Management Plan

Pursuant to Section 176 (c) of the Clean Air Act, as amended by the 1990 amendments; the General Conformity Rule at 40 CFR Parts 51 and 93; and the Chief of Naval Operations Interim Guidance on Compliance with the Clean Air Act Conformity Rule (CNO Guidance), the Department of Navy (DoN) determined that the potential actions and managements practices outlined in the Navy Operational Support Center Integrated Natural Resources Management Plan (INRMP) are exempt from conformity requirements in accordance with sections 40 CFR 93.153 (c) (2) (ii), (iv), (vi), (vii), (viii), (ix), (x) and (xiii). The INRMP outlines many routine and continuing activities for the Navy Operational Support Center Sacramento, located in the Sacramento County Air Basin, which would result in no emission increase or an increase that is clearly *de minimis*.

General Conformity *De minimis* Levels for Sacramento County

Criteria Pollutant	*De minimis* Level (tons/year)
NO_x	25
VOC	25
PM_{10}	100
$PM_{2.5}$	100

Development of projects and future implementation of planning guidelines for a range of activities, including habitat restoration and landscape maintenance projects, are expected to result in emissions increases that would be *de minimis*; Consequently, the proposed action is exempt from the conformity determination requirements of the Environmental Protection Agency's conformity rule.

To the best of my knowledge, the information contained in this Record of Non-Applicability is correct and accurate.

01 APR 2014

LT Michael Mathis
Public Works Officer
Navy Region Southwest Reserve Component Command

Date

DEPARTMENT OF DEFENSE
DEPARTMENT OF THE NAVY

FINDING OF NO SIGNIFICANT IMPACT FOR THE ENVIRONMENTAL ASSESSMENT FOR THE INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN FOR NAVY OPERATIONAL SUPPORT CENTER SACRAMENTO, CITY OF SACRAMENTO, CALIFORNIA

Pursuant to the Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508) implementing the National Environmental Policy Act (NEPA) and Navy NEPA regulations (32 CFR Part 775), and Chief of Naval Operations Instruction 5090.1D, the Department of the Navy (Navy) gives notice that an Environmental Assessment(EA) has been prepared and an Environmental Impact Statement is not required for the proposed implementation of the Integrated Natural Resources Management Plan (INRMP) for Navy Operational Support Center (NAVOPSPTCEN) Sacramento, City of Sacramento, California.

Proposed Action: The Proposed Action is needed to implement the INRMP for NAVOPSPTCEN Sacramento, which is consistent with the Sikes Act Improvement Act. The INRMP is the first natural resources management document that has been developed for NAVOPSPTCEN Sacramento. The INRMP is needed to address the known presence of sensitive species in the vicinity of the site, and the onsite occurrence of suitable habitat for the species identified in the 2011 Final Baseline Assessment and Natural Resources Inventory (BANRI). The Proposed Action consists of continuing NAVOPSPTCEN Sacramento's existing natural resource management practices along with the addition of new management actions in conjunction with development and implementation of an overall management plan, including: implementing ecosystem-based management; integrating and coordinating all natural resource management activities; and integrating new guidance from the Departments of Defense and of the Navy.

The Proposed Action would provide benefits in the areas of: land-use; soils; vegetation; wetlands; wildlife; outdoor recreation; and climate change/regional growth.

Public Participation: A Notice of Availability of the Draft EA was published on 7-9 March 2014 in the Sacramento Bee newspaper. The Draft EA was made available for public review at the Southgate Library and on the Navy Region Southwest website. The public comment period on the Draft EA was from March 7 to March 22, 2014 and no public comments were received.

Alternatives Analyzed:
Alternative 1: Proposed Action (as described above).

Alternative 2: No Action Alternative. Current natural resources management practices would continue, but without development and implementation of an overall natural resources management plan. Current practices include basic maintenance such as mowing and weed control.

Alternative to be Implemented: The Proposed Action is selected for implementation because it meets the purpose and need of the project and charts the best course for future natural resources management on NAVOPSPTCEN Sacramento.

Existing Conditions: The INRMP addresses natural resources management on the NAVOPSPTCEN Sacramento property.

No Special Status Species have been observed on NAVOSPTCEN Sacramento; however, suitable habitat for two federally-listed threatened species (the vernal pool fairy shrimp and vernal pool tadpole shrimp) exists on the Installation. Suitable habitat also exists for the burrowing owl, a Migratory Bird Treaty Act/Birds of Conservation Concern species.

The installation contains areas identified by the Navy as "potentially jurisdictional wetlands". These areas have been delineated using U.S. Army Corps of Engineers (USACE) standards to identify the type and extent of wetlands and other waters subject to USACE regulation under Section 404 of the Federal Clean Water Act. Jurisdictional determination can only be made by the USACE.

Environmental Effects: The following is a summary of the environmental consequences of the Proposed Action:

Topography, Geology and Soils:
The Proposed Action would involve minor disturbance of soils during clearing of invasive vegetation and grading activities. However, these activities would be short-term in nature and would have no impact on sensitive or regional geologic or topographic features. The Proposed Action would provide beneficial effects to these resources through the development of new (and the continued implementation of proven) Best Management Practices, including erosion control and soil conservation measures to be incorporated into the design and construction of

facility projects. Therefore, implementation of the Proposed Action would not have a significant impact on topography, geology, and soils resources and would have beneficial impact.

Hydrology and Water Quality:

The Proposed Action would provide beneficial effects to water resources through the establishment of additional and/or enhanced habitat management actions designed to survey, protect and enhance water resources, including wetlands. Implementation of the Proposed Action would enhance the evaluation of future proposed activities for impacts to wetland/waters, particularly those areas identified as potentially jurisdictional wetlands, to comply with avoidance, minimization, and compensation policies as mandated by EO 11990, *Protection of Wetlands*. Wetland community plant species and composition would be monitored during vegetative surveys. Hydrology and water quality would further benefit from the development of new (and the implementation of proven) Best Management practices to minimize potential erosion/runoff that could reach water resources. Protection of water resources would also be improved through the education of grounds maintenance staff about wetlands and sensitive areas to avoid. Therefore, no significant impacts to hydrology and water quality would occur from implementation of the Proposed Action and beneficial impacts would occur.

Biological Resources:

The Proposed Action would provide beneficial effects to biological resources through the implementation of monitoring, protection and enhancement programs (described in Section 3 of the INRMP). These benefits would occur in the areas of vegetation management, wetland and waters management, invasive species and integrated pest management, wildlife management, threatened and endangered species management, and migratory bird and Birds of Conservation Concern and Sensitive Species of Regional Concern management.

This NOSC has not had a prior INRMP and has conducted few biological surveys to collect baseline data to determine the presence of species and quality of habitat. Consequently, implementation of the Proposed Action would add to ecological knowledge to help guide future Installation decisions related to natural resource management.

Wildlife and vegetation surveys would occur every three to five years to maintain species lists and to monitor the status of any Federally-listed or special-status species found. Invasive

species control efforts would be focused on identifying management goals that would target high priority pest species posing the greatest threat to the native habitat and the property. Protection of biological resources would be improved through the education of grounds maintenance staff about sensitive species and their habitats.

The result of the INRMP implementation would be a comprehensive and adaptive management approach to Installation natural resource management. Therefore, no significant impacts on biological resources would occur from implementation of the Proposed Action and beneficial impacts would occur.

Finding: Based on the information and science analyzed during preparation of the EA, and in coordination with the U.S. Fish and Wildlife Service, Sacramento Office and the California Department of Fish and Wildlife, Rancho Cordova Office during the development of the NAVOPSPTCEN Sacramento INRMP, the Navy finds that implementation of the Proposed Action will not significantly impact the quality of the human or natural environment or generate significant controversy.

The EA prepared by the Navy addressing this action is on file and interested parties may obtain a copy from NAVFAC SW, Desert IPT, JE20.SY, 1220 Pacific Hwy, San Diego CA 92132.

26 JUN 2014
Date

RADM Patrick J. Lorge, USN
Commander Navy Region Southwest

APPENDIX C

TRI-PARTITE AGREEMENT

MEMORANDUM OF UNDERSTANDING
AMONG
THE U.S. DEPARTMENT OF DEFENSE
AND
THE U.S. FISH AND WILDLIFE SERVICE
AND
THE INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGENCIES
FOR A
COOPERATIVE INTEGRATED NATURAL RESOURCE MANAGEMENT PROGRAM
ON MILITARY INSTALLATIONS

A. PURPOSE

The purpose of this Memorandum of Understanding (MOU) is to establish a cooperative relationship between the U.S. Department of Defense (DoD), the U.S. Department of the Interior, Fish and Wildlife Service (FWS), and the State fish and wildlife agencies as represented by the International Association of Fish and Wildlife Agencies (IAFWA) in preparing, reviewing, and implementing integrated natural resource management plans (INRMPs) on military installations.

B. BACKGROUND

In recognition that military lands have significant natural resources, Congress enacted the Sikes Act in 1960 to address wildlife conservation and public access on military installations. The 1997 amendments to the Sikes Act require the DoD to develop and implement an INRMP for each military installation with significant natural resources. The INRMP must be prepared in cooperation with the FWS and the State fish and wildlife agency (States) and reflect the mutual agreement of the parties concerning conservation, protection, and management of fish and wildlife resources on military lands.

INRMPs provide for the management of natural resources, including fish, wildlife, and plants. They incorporate, to the maximum extent practicable, ecosystem management principles and provide the landscape necessary for the sustainment of military land uses. INRMPs allow for multipurpose uses of resources, including public access necessary and appropriate for those uses, provided such access does not conflict with military land use requirements. Effective partnering among the DoD, the FWS, and the States, initiated early in the planning process at national, regional, and the military installation levels, is essential to the development and implementation of comprehensive INRMPs. When such partnering involves the participation of all parties and synchronization of INRMPs with existing FWS and State natural resource management plans, the mutual agreement of all parties is achieved more easily. Consistent with the use of military installations to ensure the readiness of the Armed Forces, the purpose of INRMPs is to provide for the conservation and rehabilitation of natural resources on military lands. Thus, a clear understanding of land use objectives for military lands should enable DoD, the FWS, and the States to share a common understanding of land management requirements while preparing and reviewing INRMPs.

This MOU addresses the responsibilities of the Parties to facilitate optimum management of natural resources on military installations. It replaces a DoD-FWS MOU on "Ecosystem-based Management of Fish, Wildlife and Plant Resources on Military Lands" which expired May 17, 2004.

C. AUTHORITIES

This MOU is established under the authority of the Sikes Act, as amended, 16 U.S.C. 670a-670f, which requires the Secretary of Defense to carry out a program to provide for the conservation and rehabilitation of natural resources on military installations in cooperation with the FWS and the State fish and wildlife agencies. The DoD's primary mission is national defense. DoD manages approximately 30 million acres of land and waters under the Sikes Act to conserve and protect biological resources while supporting sustained military land use.

The FWS manages approximately 96 million acres of the National Wildlife Refuge System, and administers numerous fish and wildlife conservation and management statutes and authorities, including: the Fish and Wildlife Coordination Act, the Migratory Bird Treaty Act of 1918, the Endangered Species Act, the Marine Mammal Protection Act, the Bald and Golden Eagle Protection Act, the Anadromous Fish Conservation Act, the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990, the Federal Noxious Weed Act, the Alien Species Prevention Enforcement Act of 1992, the North American Wetland Conservation Act, and the Coastal Barrier Resources Act.

The States in general possess broad trustee and police powers over fish and wildlife within their borders, including – absent a clear expression of Congress' intent to the contrary – fish and wildlife on Federal lands within their borders. Where Congress has given Federal agencies certain conservation responsibilities, such as for migratory birds or species listed as threatened or endangered under the Endangered Species Act, the States, in most cases, have cooperative management jurisdiction.

The Sikes Act (16 U.S.C. 670c-1) allows the Secretary of a military department to enter into cooperative agreements with States, local governments, nongovernmental organizations, and individuals to provide for the maintenance and improvement of natural resources, or to benefit natural and cultural resources research, on DoD installations.

The Sikes Act (16 U.S.C. 670f(b)) also encourages the Secretary of Defense, to the greatest extent practicable, to enter into agreements to use the services, personnel, equipment, and facilities, with or without reimbursement, of the Secretary of the Interior in carrying out the provisions of this section.

The Economy Act (31 U.S.C. 1535 and 1536) allows a Federal agency to enter into an agreement with another Federal agency for services, when those services can be rendered in a more convenient and cost effective manner by another Federal agency.

The Intergovernmental Cooperation Act of 1968 (P.L. 90-577 (82 Stat. 1098)) allows the "improvement of the administration of grants-in-aid to the States, to permit provision of reimbursable technical services to State and local government.

D. RESPONSIBILITIES

The Parties to this agreement hereby enter into a cooperative program of INRMP development and implementation with mutually agreed-upon fish and wildlife conservation objectives to satisfy the goals of the Sikes Act.

1. **The DoD, the FWS and IAFWA (the Parties) mutually agree, in accordance with all applicable Federal, State and local laws and regulations:**

   a. To meet at least annually to discuss implementation of this MOU. The DoD will coordinate the annual meeting and any other meetings related to this MOU. Proposed amendments to the MOU should be presented in writing to the parties at least 15 days prior to the annual meeting. The terms of this MOU and any proposed amendments may be reviewed at the annual meeting. The meeting may also review mutual Sikes Act accomplishments, research and technology needs, and other emerging issues.

   b. To establish a Sikes Act Tripartite Working Group consisting of representatives from the Parties. This Working Group will meet at least quarterly to discuss and develop projects and documents to assist in the preparation and implementation of INRMPs and to discuss Sikes Act issues of national importance.

   c. The Sikes Act Tripartite Working Group will encourage the establishment of INRMP Development and Implementation Teams to facilitate early communication during preparation, review, revision or implementation of an INRMP and to ensure that such INRMPs are comprehensive and implemented as mutually agreed.

   d. Supplemental Sikes Act MOUs or other agreements may be developed at the regional and/or State level.

   e. To recognize the current DoD and FWS Sikes Act Guidelines on http://www.fws.gov and http://www.denix.osd.mil as the guidance for communication and cooperation of the Parties represented by this MOU.

   f. That none of the Parties to the MOU is relinquishing any authority, responsibility, or duty as required by law, regulation, policy, or directive.

g. To engage in sound management practices for natural resource protection and management pursuant to this MOU with due regard for military readiness, the welfare of the public, native fish and wildlife, threatened and endangered species, and the environment.

h. Consistent with DoD's primary military mission and to the extent reasonably practicable, to promote the sustainable multipurpose use of natural resources on military installations, to include hunting, fishing, trapping, and nonconsumptive uses such as wildlife viewing, boating, and camping.

i. To designate the individuals listed below as the national representative from each signatory to participate in the activities pursuant to this MOU. Representatives may also be designated at the regional and local levels to participate in similar Sikes Act planning or coordination activities.

    i. DoD: Conservation Team Leader, ODUSD (I&E) EM, 1225 Clark Street Suite 1500, Arlington, VA 22202-4336

    ii. FWS: National Sikes Act Coordinator, U.S. Fish and Wildlife Service, 4401 North Fairfax Drive, Room 400, Arlington, VA 22203.

    iii. IAFWA: Executive Vice-President, IAFWA, 444 North Capitol Street, NW, Suite 544, Washington, DC 20001.

2. DoD agrees to:

a. Communicate the establishment of this MOU to all DoD Components.

b. Take the lead in the development of policies related to INRMP development and implementation and seek the cooperation of the FWS and the State fish and wildlife agencies during development, review, and implementation.

c. Ensure distribution of the DoD and revised FWS Sikes Act Guidelines to all appropriate DoD offices at every level of command.

d. Encourage military installations to invite appropriate FWS and State fish and wildlife agency offices to participate in developing and updating the INRMPs. All such invitations should be extended well in advance of the needed date for the product or work in order to facilitate meaningful participation by all three Parties.

e. Encourage military installations to take advantage of FWS and State fish and wildlife agency natural resources expertise through the use of Economy Act transfers and cooperative agreements. Priority should be given to projects that:

i. Sustain the military mission;

ii. Consider the strategic planning priorities of the FWS and the State fish and wildlife agency; and

iii. Effectively apply the principles of ecosystem management.

f. Encourage military installation to identify INRMP project requirements and give priority to those that:

i. Ensure conservation of natural resources while sustaining military mission activities;

ii. Achieve compliance with Federal, State, and local laws; and

iii. Provide adequate staffing for the development and implementation of the INRMP.

g. Discuss with the FWS and the State fish and wildlife agencies all issues of mutual interest related to the protection, conservation, and management of fish and wildlife resources on DoD installations, and obtain the mutual agreement of the FWS and the States regarding all INRMP provisions related to activities within their legal jurisdiction.

h. Subject to mission, safety and security requirements, provide public access to military installations to facilitate the sustainable multipurpose use of its natural resources.

i. Identify DoD natural resource research needs, and develop research proposals with input from FWS and/or the IAFWA.

j. Encourage the Military Services to establish natural resources management liaisons to facilitate:

i. Coordination and mutual agreement of INRMPs;

ii. Development and implementation of cooperative regional and local natural resource conservation partnerships and conservation initiatives with FWS and State fish and wildlife agency offices; and

iii. Natural resources conservation technology transfer and training initiatives between the Military Services, Federal land management agencies, and State fish and wildlife agencies.

3. FWS agrees to:

a. Communicate the establishment of this MOU to each FWS Regional Office and appropriate field stations in close proximity to military installations.

b. Distribute the DoD and revised FWS Sikes Act Guidelines to each FWS Regional Office and appropriate field station in close proximity to military installations.

c. Designate regional and field station FWS liaisons to develop partnerships and assist the DoD in implementing joint management of ecosystem-based natural resource management programs.

d. Identify FWS personnel needs for the development, review, updating, and implementation of INRMPs and expedite the fulfillment of those needs, as appropriate, based on funding and FWS priorities.

e. Provide technical assistance to the DoD in managing Federal trust resources such as endangered species, migratory birds, interjurisdictional fisheries, invasive species, contaminants, wetlands, coastal resources, law enforcement, or other natural resource issues within the scope of FWS responsibilities, funding constraints and expertise.

f. Work with the DoD to coordinate military natural resource research efforts and the creation of a consolidated source of information, with a particular emphasis on research on listed species and species at-risk.

g. Disseminate upcoming proposed listing and critical habitat designations to DoD Headquarters offices and potentially affected installations as part of outreach efforts before the Federal Register publication of such proposed designations.

h. Provide law enforcement support to protect fish, wildlife and plant resources on military installations within the jurisdiction of the FWS.

4. IAFWA agrees to:

a. Communicate the establishment of this MOU to each State fish and wildlife agency director and appropriate field offices.

b. Distribute the DoD and revised FWS Sikes Act Guidelines to each State fish and wildlife agency director and appropriate field offices.

c. Facilitate and coordinate with the States to encourage them to:

i. Participate in the development, review, updating and implementation of INRMPs upon request of military installations.

ii. Designate State liaisons to assist in developing partnerships and to assist the DoD in implementing natural resource conservation and management programs.

iii. Identify State wildlife management areas in close proximity to military installations and, where appropriate, participate in the joint management of ecosystem-based natural resource management projects.

iv. Provide technical assistance to the DoD in managing natural resource issues such as endangered species, migratory birds, interjurisdictional fisheries, invasive species, contaminants, wetlands, coastal resources, law enforcement, outdoor recreation, or other natural resource issues within the scope of State responsibility and expertise.

v. Identify State personnel needs for the development, review and implementation of INRMPs and expedite the fulfillment of these needs as appropriate based on available funding and State priorities.

vi. Coordinate current and proposed State natural resource research efforts with those that may relate to DoD installations.

vii. Coordinate with DoD installations in development of comprehensive state wildlife conservation plans.

E. STATEMENT OF NO FINANCIAL OBLIGATION

This MOU does not impose any financial obligation on the part of any signatory.

F. ESTABLISHMENT OF COOPERATIVE AGREEMENTS

The Parties are encouraged to enter into cooperative agreements to coordinate and implement natural resource management on military installations. If fiscal resources are to be transferred in support of this MOU, the Parties must develop a separately funded cooperative agreement. Such cooperative agreements may be entered into under the authorities of the Sikes Act (16 U.S.C. 670a-670f, as amended) and the Economy Act (31 U.S.C. 1535 and 1536). Each funded cooperative agreement shall include a work plan and a financial plan that identify goals, objectives, and a budget and payment schedule. A cooperative agreement to accomplish a study or research also will include a study design and methodology in the work plan. It is understood and agreed that any monies allocated via these cooperative agreements shall be expended in accordance with its terms and in the manner prescribed by the fiscal regulations and/or administrative policies of the party making the funds available.

G. AMENDMENTS

This MOU may be amended at any time by mutual agreement of the parties in writing.

H. TERMINATION

Any party to this agreement may remove itself from this MOU upon sixty (60) days written notice to the other parties.

I. EFFECTIVE DATE AND DURATION

This MOU will be in effect upon date of final signature and will continue for five years from date of final signature. The parties will meet 6 months prior to the expiration of this MOU to discuss potential modifications and renewal terms.

1/31/06 — Alex A. Beehler
Date

Assistant Deputy Under Secretary of Defense
(Environment, Safety and Occupational Health)
U.S. Department of Defense

1/31/06 — H Dale Hall
Date

Director
Fish and Wildlife Service
U.S. Department of Interior

1/31/06 — [signature]
Date

Executive Vice-President
International Association of Fish and Wildlife Agencies

APPENDIX D

NAVY NATURAL RESOURCES METRICS

Overview of the Navy Natural Resources Metrics by Focus Area

Introduction

The Navy Natural Resources (NR) Metrics were developed to support the annual Natural Resources Program reviews between the Navy and its Sikes Act partners, the U. S. Fish and Wildlife Service, state fish and wildlife agencies and when applicable National Oceanic and Atmospheric Administration Fisheries Service . There are seven (7) Focus Areas that comprise the NR Metrics to be evaluated during the annual review of the Natural Resources Program and associated Integrated Natural Resources Management Plan (INRMP).

1. Ecosystem Integrity
2. Listed Species and Critical Habitat
3. Fish and Wildlife Management for Public Use
4. Partnership Effectiveness
5. Team Adequacy
6. INRMP Project Implementation
7. INRMP Impact on the Installation Mission

Each of the seven Focus Areas contains a series of questions. The questions are slightly weighted, with responses to questions having different values, ranging from 0.0 to 1.0. Each Focus Area is scored, using a rating scheme of Green (1.0-0.67), Yellow (0.66-0.34), and Red (0.33-0.0), the final report summarizes the scorecards for all focus areas evaluated for each Navy installation.

Focus Area 1: Ecosystem Integrity

Note: This Focus Area is intended to define the ecosystems that occur on the installation and assess the integrity of those ecosystems. Terrestrial ecosystems, as defined by Nature Serve's "Ecological Systems of the United States: A Working Classification of US Terrestrial Systems" and marine ecosystems, as defined by NOAA's "Coastal and Marine Ecological Classification Standard".

Question	Response 1	Response 2	Response 3	Response 4	Responses 5 & 6
Q1: To what extent is the ecological system on the installation fragmented due to land conversion? (0-5)	Ecosystem fragmentation is the result of five (5) of the phenomena (0)	Ecosystem fragmentation is the result of four (4) of the phenomena (0.20)	Ecosystem fragmentation is the result of three (3) of the phenomena (0.40)	Ecosystem fragmentation is the result of two (2) of the phenomena (0.60)	Ecosystem fragmentation is the result of one (1) of the phenomena (0.80) No fragmentation (1.00)
Q2: Is the ecosystem effectively managed to sustain viable populations of species? (0-3)	Not effectively managed (0)	Minimally effective management (0.33)	Moderately effective management (0.67)	Effectively managed (1.00)	
Q3: To what degree is the ecological system vulnerable to stressors? (0-5)	Completely Vulnerable (0)	Severely Vulnerable to Stress (0.20)	Highly Vulnerable to Stress (0.40)	Moderately Vulnerable to Stress (0.60)	Slightly Vulnerable to Stress (0.80) Not Vulnerable to Stress (1.00)
Q4: To what degree has the installation's INRMP/NR Program provided an overall benefit to ecological integrity? (0-3)	0 = No Benefit (0)	Minor Benefit (0.33)	Moderate Benefit (0.67)	Significant Benefit (1.00)	

Focus Area 2: Listed Species & Critical Habitat

Question	Response 1	Response 2	Response 3	Response 4	Response 5
Q1: To what extent do INRMP projects & programs provide a benefit to this species? (0-4, NA)	No benefit (0.0)	Minor benefits (0.25)	Moderate benefit (0.50)	Major benefit (0.75)	Significant benefit (1.00)
Q2: To what degree have projects been funded in support of this species? (0-4, NA)	No funding (0.0)	1% to 25% funded (0.25)	26% to 50% funded (0.50)	51% to 75% funded (0.75)	76% to100% funded (1.00)
Q3: To what extent are quantifiable goals, parameters, and monitoring requirements in place to assess conservation effectiveness? (0-4, NA)	None (0.0)	Minimal (0.25)	Moderate (0.50)	Good (0.75)	Excellent (1.00)
Q4: Do existing surveys provide adequate data on habitat conditions? (Y/N)	Yes (1.0)	No (0.0)			
Q5: Do existing surveys provide adequate data on population presence and numbers? (Y/N)	Yes (1.0)	No (0.0)			

Focus Area 3: Fish and Wildlife Management for Public Use

Question	Response 1	Response 2	Response 3	Response 4	Response 5
Q1: Are recreational opportunities available on the installation? (Y/N)	Yes (1.0)	No (0.0)	Not Applicable (landscape doesn't support recreational opportunities)		
Q2: If recreational opportunities are available, are they limited and/or restricted for security reasons? (Y/N/NA)	Yes (1.0)	No (0.0)	Not Applicable (recreational opportunities are not available)		
Q3: If recreational opportunities are available, are they offered to the public? (Y/N/NA)	Yes (1.0)	No (0.0)	Not Applicable (recreational opportunities are not available)		
Q4: If recreational opportunities are available, are they offered to DoD personnel?	Yes (1.0)	No (0.0)	Not Applicable (recreational opportunities are not available)		
Q5: If recreational opportunities are available, are they accessible by disabled veterans/Americans?	Yes (1.0)	No (0.0)	Not Applicable (recreational opportunities are not available)		

Focus Area 3: Fish and Wildlife Management for Public Use

Question	Response 1	Response 2	Response 3	Response 4	Response 5/6
Q6: Are Sikes Act fees collected for outdoor recreational opportunities? (Y/N/NA)	Yes (1.0)	No (0.0)	Not Applicable - (recreational opportunities do not include hunting or fishing)		
Q7: Is there an active natural resources law enforcement program on the installation? (Y/N/NA)	Yes (1.0)	No (0.0)	Not Applicable - (recreational opportunities do not include hunting or fishing)		
Q8: Are sustainable harvest goals addressed in the INRMP and effective for the management of the species' population? (0-4, NA)	Not effective (0)	Minimal effectiveness (0.25)	Moderate effectiveness (0.50)	Effective (0.75)	Highly effective (1.00) NA (recreational opportunities do not include hunting and fishing)
Q9: Is public outreach/educational awareness provided? (0-4, NA)	No public outreach provided (0)	Low outreach (0.25)	Moderate outreach (0.50)	Good outreach (0.75)	Excellent outreach (1.00) Not Applicable

Focus Area 4: Partnership Effectiveness

Purpose: The purpose of this Focus Area is to determine to what degree partnerships are cooperative and result in effective implementation of the INRMP.

Question	Response 1	Response 2	Response 3	Response 4	Response 5
Q1: Does your Natural Resources program support the regional conservation efforts of the USFWS?	Yes (1.0)	No (0.0)			
Q2: Does your Natural Resources program support State conservation goals identified in State Wildlife Action Plans (SWAPs)? (Y/N)	Yes (1.0)	No (0.0)			
Q3: Does your Natural Resources program support regional NOAA/NMFS conservation objectives/efforts? (Y/N/NA)	Yes (1.0)	No (0.0)	Not Applicable		
Q4: Does your Natural Resources program support other Conservation Initiatives? (Y/N)					

Focus Area 5: Team Adequacy

Purpose: The purpose of this Focus Area is to assess the effectiveness and adequacy of the Navy natural resources team in accomplishing the goals and objectives of the INRMP and Natural Resources Program at each installation. "Team" in this section refers to the Navy staff only

Question	Response 1	Response 2	Response 3	Response 4	Response 5
Q1: Is there a Navy professional Natural Resources Manager assigned by the Installation Commanding Officer? (Y/N)	Yes (1.0)	No (0.0)			
Q2: Is there an on-site Navy professional Natural Resources Manager? (Y/N)	Yes (1.0)	No (0.0)			
Q3: Is HQ and Regional support adequate, e.g. reach back support for execution, policy support, etc.)? (0-4)	No support (0)	Minimal support (0.25)	Satisfactory support (0.50)	Well supported (0.75)	Very well supported (1.00)
Q4: Is there adequate Natural Resources staff to properly implement the INRMP goals and objectives? (Y/N)	Yes (1.0)	No (0.0)			

Focus Area 5: Team Adequacy (Continued)

Question	Response 1	Response 2	Response 3	Response 4	Responses 5/6
Q5: The team is enhanced by the use of contractors. (0-4)	Disagree (0)	Somewhat agree (0.25)	Neutral (0.50)	Agree (0.75)	Strongly Agree (1.00)
Q6: The team is enhanced by the use of volunteers. (0-4, NA)	Disagree (0)	Somewhat agree (0.25)	Neutral (0.50)	Agree (0.75)	Strongly Agree (1.00) Not Applicable
Q7: The Natural Resources team is adequately trained to accomplish its duties to ensure compliance. (0-4)	Disagree (0)	Somewhat agree (0.25)	Neutral (0.50)	Agree (0.75)	Strongly Agree (1.00)

Focus Area 6: INRMP Project Implementation

Note: The purpose of this Focus Area is to assess how the goals and objectives of the INRMP have been met through the projects implemented during the previous fiscal year.

Question	Response 1	Response 2	Response 3	Response 4	Responses 5
Q1: Is project accomplishment on schedule? (Y/N)	Yes (1.0)	No (0.0)			
Q2: What is the Project Status? (0,1)	On-Hold (0.0)	Funds Not Yet Received (0.0)	In EPRWeb; In POM; or Emergent Project (1.0)	Funding Received; SOW Prepared, Awarded/Executed (1.0)	Now In-Progress; Project Completed (1.0)
Q3: Which Natural Resources Program Area was most benefitted from the project? (0,1)	0 = None (0)	1 = Flora; Fauna; At Sea; INRMP; Wetlands; Listed Species; Forestry; Invasive Mgmt; Soils; Erosion Control; Outdoor Recreation; Training; Other(1.0)			
Q4: The project design met the goals and objectives of the INRMP. (0-4)	Disagree (0)	Neither agree nor disagree (0.25)	Somewhat Agree (0.50)	Fully Agree (0.75)	Strongly Agree (1.00)

Focus Area 7: INRMP Impact on Installation Mission

Question	Response 1	Response 2	Response 3	Response 4	Responses 5
Q1: Has Coordination between natural resources staff and other installation departments and military staff been successful/effective?(0-4)	No coordination (0)	Minimal coordination (0.25)	Satisfactory coordination (0.50)	Effective coordination (0.75)	Highly effective coordination (1.0)
Q2: To what extent has the INRMP successfully supported other mission areas? (e.g. encroachment, BASH, range support, port operations, air operations, facilities management, etc.) (0-4)	Not supported (0)	Minimally supported (0.25)	Satisfactorily supported (0.50)	Well supported (0.75)	Very well supported (1.0)
Q3: To what extent has there been a net loss of training lands or mission-related operational/training activities? (0-4)	Mission activities are fully impeded; training activities cannot be conducted (0)	Mission/Training activities are somewhat impeded with workarounds (0.25)	Neutral (0.50)	No loss occurred (0.75)	Mission has seen benefits (1.0)
Q4: Does the Natural Resource program effectively consider current mission requirements? (0-4)	Strongly disagree (0)	Disagree (0.25)	Neutral (0.50)	Agree (0.75)	Strongly Agree (1.0)

Terms and Definitions:

Compliant INRMP - A compliant INRMP is defined as "a complete plan that meets the purposes of the Sikes Act (§101(a)(3)(A-C)), contains the required plan elements (§101(b)(1)(A-J)), and has been reviewed for operation and effect within the past 5 years (§101(2)(b)(2))." Therefore, a compliant INRMP must be Sikes Act compliant and less than 5 years old. If the INRMP is greater than 5 years old, then it must have undergone a review for operation and effect within the past 5 years.

Review for Operation and Effect - A review for operation and effect is defined as "a comprehensive review by the Parties, at least once every 5 years, to evaluate the extent to which the goals and objectives of the INRMP continue to meet the purpose of the Sikes Act, which is to carry out a program that provides for the conservation and rehabilitation of natural resources on military installations.

Ecosystem Integrity - The term Ecosystem Integrity refers to the quality of state of being complete, unbroken condition, wholeness, entirety, unimpaired, without significant damage, good condition, or general soundness.

APPENDIX E

NAVY NATURAL RESOURCES METRICS QUESTIONS

Navy Natural Resource Metrics Questions

Last Revised: October 2013

Navy INRMP Status Check

Objective: This purpose of this section of the Natural Resources data call is to gather required information associated with the Natural Resources program, specifically the status of Integrated Natural Resources Management Plans (INRMP). Responses to the questions in this section are not scored as a part of the Natural Resources Metrics data call. These questions have been added here to collect information that will support the Defense Environmental Program Annual Report to Congress (DEPARC). By combining these questions with the Natural Resources Metrics data call, the field is required to only respond to a single annual data call. Data provided in previous year's data calls may be available and values pre-loaded for the following questions (see the Navy Conservation Website User's Guide for additional information on preloading data to questions).

1. Has the site/installation been surveyed to determine if significant natural resources exist?
Options: No, Yes
1a. If the site has been surveyed, were significant natural resources found?
Options: No, Yes
1b. If the site has not been surveyed, please explain why a survey has not been conducted.

Explanation: Significant - Resources identified as having special importance to an installation and/or its ecosystem. Natural resources may be significant on a local, regional, national, or international scale. All threatened, endangered and at-risk species are significant natural resources that normally will require an INRMP. Installations that actively manage fish and wildlife, forestry, vegetation and erosion control, agricultural outleasing or grazing, or wetlands protection should be evaluated for significance, but normally will require an INRMP. An evaluation for significance should also consider the degree of active management, special natural features, aesthetics, outdoor recreational opportunities, and the ecological context of the installation. (DoDI 4715.03)

1.c. For those installations where it has been determined that an INRMP is NOT necessary due to insufficient natural resources or other rationale, please provide signed documentation to substantiate this assessment and answer the question below.
Options: Approved Waiver Provided Below, Not Applicable
To provide signed documentation to substantiate that an INRMP is NOT necessary, click here.

2. If significant natural resources were found, is there a compliant INRMP that covers this site?
Options: No, Yes

Explanation: Compliant INRMP – A complete plan that meets the purposes of the Sikes Act (§101(a)(3)(A-C)), contains the required plan elements (§101(b)(1)(A-J)), and has been reviewed for operation and effect within the past 5 years (§101(2)(b)(2)). (CNO-N45)

2.a. Name of First Compliant INRMP (Long text name)

2.b. Date of First Compliant INRMP (Expected date: 2001/2002)

2.c. What type of NEPA Documentation was done for the first compliant INRMP?

Options: EA / FONSI, EIS / ROD

2.d. When was the NEPA completed for the first compliant INRMP? *Format: MM/DD/YYYY*

2.e. Please enter the name and date of the most current INRMP that covers this site/installation?
Name:
Date:

2.f. If the most current INRMP was used to exempt the site/installation from the designation of critical habitat for a federally listed species under ESA Section (4(a)(3)(B)(i) please list those species below:

2.g. If there is no INRMP for the site, but an INRMP is needed, has funding been requested to develop an INRMP?
Options: Yes, No

2.g.1. If funding has been requested, what is the expected date to receive funding?
If the response to 2.g was "Yes", please enter the expected date to receive funding for a new/updated INRMP.

2.g.2. If no funding has been requested, please explain.
If the response to 2.g. "No", please explain why there is no funding requested for a new/updated INRMP.

3. Has a 5-year INRMP review for operation and effect been completed for the most recent INRMP? *
REVIEW FOR OPERATION AND EFFECT *– A comprehensive review by the Parties, at least once every 5 years, to evaluate the extent to which the goals and objectives of the INRMP continue to meet the purpose of the Sikes Act, which is to carry out a program that provides for the conservation and rehabilitation of natural resources on military installations. The outcome of this review will assist in determining if the INRMP requires a revision (§101(f)(1)(A)). (CNON45) The annual review can qualify for the 5-year review for operation and effect, which is legally required by the Sikes Act, if mutually agreed upon by both partners (i.e. USFWS and State).*
Options: Yes, No, N/A

3.a. If a 5-year INRMP review for operation and effect been completed, did the review result in an addendum/appendix, update or revision of the INRMP?
*DEFINITION [**REVISION**] – A substantive change to an INRMP that requires coordination and mutual agreement by the Parties. [List examples of things that would trigger a revision – Navy needs to review current list.] A revision is not minor changes to the INRMP text, work plans, or projects. Rather, these changes are updates that should be made as a result of annual reviews per DoD policy, to ensure the INRMP reflects the current condition of the natural resources and program goals and objectives.*
(CNO-N45)
Options: Addendum/Amendment, Update, Revision

3.b. What is the expected completion date of the Addendum/Amendment, Update, Revision?

3.c. If a 5-year INRMP review for operation and effect has not been completed; please explain why a review for
operation and effect has not been completed?

REMINDER: IF YOUR INRMP IS OLDER THAN 3 YEARS OLD THE REVIEW FOR OPERATION AND EFFECT ADMINISTRATIVE PROCESS SHOULD BE UNDERWAY IN CASE THE INRMP NEEDS TO BE UPDATED/REVISED.

4. Has USFWS concurrence been received on the most recent INRMP or review for operation and effect?
DEFINITION [REVIEW FOR OPERATION AND EFFECT] – A comprehensive review by the Parties, at least once every 5 years, to evaluate the extent to which the goals and objectives of the INRMP continue to meet the purpose of the Sikes Act, which is to carry out a program that provides for the conservation and rehabilitation of natural resources on military installations. The outcome of this review will assist in determining if the INRMP requires a revision (§101(f)(1)(A)).
Options: Yes, No

4. If there is no INRMP for the site, has funding been requested to develop an INRMP?
Options: No, Yes

4.a. **If question 4. is "Yes"**, which USFWS Region(s) are applicable? (Choose all that apply)
Options: Pacific Region (Region 1) , Southwest Region (Region 2) , Great Lakes-Big Rivers Region (Region 3) , Southeast Region (Region 4) , Northeast Region (Region 5) , Mountain-Prairie Region (Region 6), Alaska Region (Region 7) , California and Nevada Region (Region 8) , Headquarters, Washington D.C. (Region 9)

4.b. List the Field Office(s), if applicable, that signed concurrence documentation.
Office Name:
City:
State:

4.c. **If answer to question 4 is "Yes"**, what is the date of concurrence? *(MM/DD/YYYY)*

4.d. **If answer to question 4 is "No"**, what is the reason for the delay?

4.e Was an ESA Section 7 Consultation completed with USFWS for the INRMP?
Options: Yes, No, N/A

4.f. Which USFWS field office do you regularly conduct ESA Section 7 consultations with typically?
Office Name:
City:

State:

4.g. Did the Threatened and Endangered Species Listing and Recovery personnel participate in the INRMP review, update or revisions?
This question is intended to clarify whether USFWS personnel responsible for listing and recovery, specifically the designation of critical habitat have been participating in the review of your site/installation INRMP.
Options: Yes, No, N/A

5. Has NMFS concurrence been received on the most recent INRMP or review for operation and effect?*
Options: Yes, No, N/A
5.a. **If question 5. is "Yes"**, which NMFS Region(s) are applicable? (Choose all that apply)
Options: Alaska, Southeast and Caribbean, North-East, North-West, Pacific Island, Southwest

5.b. List the local office, if applicable, that signed concurrence documentation.
Office Name
City
State

5.c. If question 5. is "Yes", what is the date of concurrence? *(MM/DD/YYYY)*

5.d. If question 5. is "No", what is the reason for the delay?

5.e. Was an ESA Section 7 Consultation completed with NMFS for the INRMP?
Options: Yes, No, N/A

5.f. Did the Threatened and Endangered Species Listing and Recovery personnel participate in the INRMP review,
update or revisions?
This question is intended to clarify whether USFWS personnel responsible for listing and recovery, specifically the designation of critical habitat
have been participating in the review of your site/installation INRMP.
Options: Yes, No, N/A

6. Has State fish and wildlife agency(ies) concurrence been received on the most recent INRMP or review for
operation and effect?*
Options: Yes, No, N/A

6.a. If question 6 is "Yes", which State fish and wildlife agency(ies)?
Office Name:

City:
State:

6.b. **If answer to question 6 is "Yes"**, what is the date of concurrence?

6.c. **If answer to question 6 is "No"**, what is the reason for the delay?

7. If the INRMP was update/revised did the INRMP require new or supplementation NEPA?*
Options: Yes, No

7.a. If so, what was the type of NEPA?
Options: CATEX, EA / FONSI, EIS / ROD

7.b. When was the NEPA completed? *(MM/DD/YYYY)*

8. Has Installation Commanding Officer concurrence been received on the most recent INRMP or review for operation
and effect?*
Options: Yes, No

8.a. **If question 8. is "Yes"**, If yes, date of concurrence?

8.b. **If question 8. is "No"**, what is the reason for the delay?

9. If the Regional Commander has final authority over whether your site/installation INRMP is compliant has the
Regional Commander concurred with/signed the most recent INRMP or review for operation and effect?*
Options: Yes, No, N/A

9.a. **If question 9. is "Yes"**, If yes, date of concurrence?

9.b. **If question 9. is "No"**, what is the reason for the delay?

10. Please upload the following documents where applicable:

a. INRMP
b. INRMP NEPA documentation
c. Signed correspondence letters with agencies
d. 5-year operation & effect review letter
e. Annual review briefs to CO
f. INRMP Waiver Letter

11. Please confirm if you have uploaded or sent any INRMP related documents. [Select one]
- Uploaded directly to Conservation website document library

- Uploaded through Army SAFE website
- Uploaded through NAVFAC File Transfer System (NFTS)
- Sent by U.S. Mail
- Documents not uploaded or sent

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Focus Area 1: Natural Resources Management (Ecosystem Integrity)

Focus Area Purpose: Evaluate the effectiveness of management activities for conserving and rehabilitating installation natural resources as defined in the INRMP.

Objective: According to the DoDI 4715.3, the goal of ecosystem management is to ensure that military lands support present and future training and testing requirements while preserving, improving, and enhancing ecosystem integrity. Over the long term, that approach shall maintain and improve the sustainability and biological diversity of terrestrial and aquatic (including marine) ecosystems while supporting sustainable economies, human use, and the environment required for realistic military training operations.

This Focus Area is intended to define the ecosystems that occur on the installation and assess the integrity of these ecosystems. The term, integrity, refers to the quality of state of being complete, unbroken condition, wholeness, entirety, unimpaired, without significant damage, good condition, or general soundness. Terrestrial ecosystems are defined by first selecting a Landcover Class, then a Biogeographic Division, and finally Ecological System from the drop-down menu at the top of the page, which refers to the Nature Serve's "Ecological Systems of the United States: A Working Classification of US Terrestrial Systems". Marine ecosystems (identified from NOAA's Coastal and Marine Ecological Classification Standard), including only the Benthic Biotic Component, Surface Geology Component, and Water Column Component of the classification scheme, have been appended to the list. Marine ecosystems are presented in the same format as terrestrial ecosystems with CMECS Components categorized under Land Cover Class and NOAA's Large Marine Ecosystems categorized under Biogeographic Divisons. Locally-defined ecosystems may be added by selecting "Other" from the drop-down list.

Note: Answer questions 1-5 for each ecosystem selected.

Assessment of Ecosystem Integrity

Select "New Item" to add an ecosystem and begin answering questions.

Note: Refer to the list of ecosystems hyperlinked in the instructions above the Ecosystems drop-down menu in this Focus Area. This list may be added to by selecting 'Other' and entering the locally-defined ecosystem in the comment box.

Add item to table then select Ecosystem [Dynamic list of ecosystems is displayed]

1. Has the ecosystem been identified in the INRMP? (Y/N) [Scored]

2. If the ecosystem has been identified in the INRMP, to what degree are the INRMP goals and objectives being achieved? [Scored]

Answers:

0 = Not Achieved (0)

1 = Somewhat Achieved (0.5)

2 = Fully Achieved (1.0)

3. What is the level of effect Natural Resources management actions have had on desired outcomes within the installation? [Scored]

Answers:
0 – Actions have not been effective (0)
1 – Actions have had a limited effect on conditions (0.5)
2 – Actions have had a positive effect on conditions (1.0)

4. To what extent is the ecological system on the installation fragmented due to land conversion?

Options: Ecosystem and habitat fragmentation is the result of five (5) of the phenomena, Ecosystem fragmentation is the result of four (4) of the phenomena, Ecosystem fragmentation is the result of three (3) of the phenomena, Ecosystem fragmentation is the result of two (2) of the phenomena, Ecosystem fragmentation is the result of one (1) of the phenomena, No fragmentation

Explanation: Habitat fragmentation includes five discrete phenomena: (1) Reduction in the total area of the habitat; (2) Decrease of the interior to edge ratio; (3) Isolation of one habitat fragment from other areas of habitat; (4) Breaking up of one patch of habitat into several smaller patches; and (5) Decrease in the average size of each patch of habitat.

5. To what degree is the ecological system vulnerable to stressors?

Options: Completely Vulnerable, Severely Vulnerable to Stress, Highly Vulnerable to Stress, Moderately Vulnerable to Stress, Slightly Vulnerable to Stress, Not Vulnerable to Stress

Explanation: Environmental stressors (physical, chemical, and/or biological) result from environmental and/or anthropogenic factors, such as wildfires, pollution, invasive species, disease, climate change, competition, etc.

6. Is the ecosystem effectively managed to sustain viable populations of species?

Options: Not effectively managed, Minimally effective management, Moderately effective management, Effectively managed

<u>General Ecosystem Integrity Questions (outside of the table)</u>

7. Are conservation easements, or buffers, in place to provide an ecosystem integrity benefit on the installation? (Y/N/NA) [Scored]

Answers:
N (0) = opportunity exists, but easements/buffers have not been pursued
Y(1.00) = buffers and/or easements are in place to provide benefits
N/A = no opportunity, development is immediately adjacent to installation

8. Are Conservation Banking actions used to achieve positive outcomes and /or INRMP goals and objectives?
(Yes/No) [Not scored]

8.a If yes, please describe below.

To complete this focus area; please enter Findings and Recommendations in the space provided below. Findings and Recommendations are required if the score for this focus area results in a Yellow or Red score. You will be unable to proceed to the next focus area until Findings and Recommendations have been entered. In short, a "finding" is usually an activity or issue to be addressed, and a "recommendation" is the proposed solution or action needed to address the finding.

If your score is Green, Findings and Recommendations serve are optional, however they can provide clarification to the answers provided for the Focus Area, and they are encouraged in order to provide a better understanding of existing activities, issues to be addressed, and unique circumstances.

Findings: _____

Recommendations: _____

Please enter Findings and Recommendations. Findings and Recommendations serve as additional clarification to the answers provided for this Focus Area, and they are encouraged in order to provide a better understanding of existing activities, issues to be addressed, and unique circumstances. *Note: You will need to enter all answers to the above questions directly into the Navy Conservation Website prior to providing responses to Findings and Recommendations. Answers supplied online are scored, which generates a green-yellow-red score for each response. Findings and Recommendations are required for each ecosystem that scored as a yellow or red.*

Findings: Findings are required for answers that scored yellow or red. Findings explain why the score is yellow or red. Findings are encouraged for answers that scored green. This allows you to document natural resources management practices that are benefiting ecosystem integrity.

Recommendations: Recommendations are required for answers that scored yellow or red. Recommendations explain how the Findings will be mitigated. Recommendations are encouraged for answers that scored green. This allows you to document natural resources management practices that may be implemented to further improve ecosystem integrity.

Comment on this question: Select this link below each question if you would like to elaborate on the answer provided. This is also a good way to document unique circumstances and the assumptions made by all partners that contributed to the answer.

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Focus Area 2: Listed Species and Critical Habitat

Focus Area Purpose: Evaluates the extent to which federally listed species have been identified and the INRMP provides conservation benefits to these species and their habitats.

Supplemental Information: The intent of this Focus Area is to identify the federally listed species that occur on a Navy installation, as well as assess if an INRMP provides the conservation benefits necessary to preclude designation of critical habitat for a particular species. The USFWS has defined criteria to determine if an INRMP provides adequate special management or protection. These criteria must be detailed in the INRMP to demonstrate that designation of critical habitat is not necessary and that the installation is implementing the necessary measures to protect and conserve the habitat. Answer the questions for each of the federally listed species selected from the preloaded list. The list is comprised of USFWS and NMFS federally threatened and endangered species.

Note: Answer questions 1-6 for each federally listed species selected.

Assessment of Listed Species and Critical Habitat
Select "New Item" to add a species and begin answering questions.

General species information -
If you are entering a federally listed species, please select it below.
Note: Refer to the USFWS (http://www.fws.gov/endangered/) for a list of federally listed species.

If you are entering a state listed species, candidate species, or species at risk, please enter the species name below. [See table down below]
Note: Answering the Species Assessment questions below for state listed species, candidate species, or species at risk is optional, but it may be beneficial to begin documenting how the INRMP/Natural Resources program may be benefiting these species.

1. Have surveys been completed for this species on the installation?

   Answers:
   No (0)
   Yes (1.0)

2. Do existing surveys provide adequate data on habitat conditions on the installation? (Y/N)

   Answers:
   No (0)
   Yes (1.00)

3. Do existing surveys provide adequate data on population presence and numbers on the installation? (Y/N)

   Answers:
   No (0)
   Yes (1.00)

4. To what extent are quantifiable goals, objectives, and monitoring requirements in place to address the conservation needs of the species? (0-4, NA)

Answers:
0= None (0)
1= Minimal (0.25)
2= Moderate (0.50)
3= Good (0.75)
4= Excellent (1.00)
N/A

5. Has critical habitat been proposed or designated for the species during the reporting period on the installation (per Federal Register [FR] Final Rule)? (Y/N/)

Answers:
Yes (0)
No (1.0)
N/A (Critical habitat designation was not proposed)

6. If critical habitat was proposed for this species but has not been designated during the reporting period on the installation, under which provision of the ESA (Sec. 4) was exemption or exclusion granted?

Answers:
National Security (Exclusion) (0)
INRMP (Exemption) (1.0)
N/A (Critical habitat designation was not proposed)

7. If any exempted or excluded critical habitat exists for this species on the installation, are critical habitat management projects clearly identified in the INRMP?

Answers:
No (0)
Yes (1.0)
N/A

8. If a designated critical habitat exemption or exclusion was obtained in a previous year for this species on the installation, are critical habitat management projects clearly identified in EPRWeb? [Scored]

Answers:
No (0)
Yes (1.0)
N/A

9. Have any conservation recommendations pertaining to this species been identified during the reporting period that should be considered for incorporation in the INRMP? (Y/N) [Non-Scored]

10. Are migratory birds adequately addressed in the INRMP for this installation to support the mission and needed NEPA analyses? (Y/N) [Not scored]

Unoccupied Critical Habitat Questions –

1. Has unoccupied critical habitat for any federally listed species been designated on the installation? (Y/N)

a. For which species? [Select each species and answer the following questions]

2. Have management projects addressing unoccupied critical habitat been clearly identified in the INRMP? [Scored]

Answers:
No (0)
Yes (1.0)
N/A

3. Have management projects addressing unoccupied critical habitat been clearly identified in the EPRWeb? [Scored]

Answers:
No (0)
Yes (1.0)
N/A

Candidate Species/Species of Concern Question

1. Does the ecosystem management approach outlined in the INRMP provide conservation benefits to this candidate species/species of concern?

Answers:
No (0)
Yes (1.0)

Please enter Findings and Recommendations. Findings and Recommendations serve as additional clarification to the answers provided for this Focus Area, and they are encouraged in order to provide a better understanding of existing activities, issues to be addressed, and unique circumstances. *Note: You will need to enter all answers to the above questions directly into the Navy Conservation Website prior to providing responses to Findings and Recommendations. Answers supplied online are scored, which*

generates a green-yellow-red score for each response. Findings and Recommendations are required for each ecosystem that scored as a yellow or red.

Findings: Findings are required for answers that scored yellow or red. Findings explain why the score is yellow or red. Findings are encouraged for answers that scored green. This allows you to document natural resources management practices that are benefiting listed species.

Recommendations: Recommendations are required for answers that scored yellow or red. Recommendations explain how the Findings will be mitigated. Recommendations are encouraged for answers that scored green. This allows you to document natural resources management practices that may be implemented to further improve management of listed species.

Comment on this question: Select this link below each question if you would like to elaborate on the answer provided. This is also a good way to document the assumptions made by all partners that contributed to the answer.

Focus Area 3: Recreational Use and Access

Focus Area Purpose: Evaluate the availability and adequacy of public recreational use opportunities, such as fishing and hunting, and access for handicapped and disabled persons, given security and safety requirements for the installation.

1. Are there Natural Resources related recreational opportunities on the installation?
Options: N/A: Landscape doesn't support recreational opportunities, No, Yes

2. If recreational opportunities are available, are they offered to the public?
Options: N/A: Recreational opportunities are not available, No, Yes

3. If recreational opportunities are available, are they offered to DoD personnel?
Options: N/A: Recreational opportunities are not available, No, Yes

4. If recreational opportunities are available, are they accessible by disabled veterans/Americans?
Options: N/A: Recreational opportunities are not available, No, Yes

5. Are fees collected for outdoor recreational opportunities?
Options: N/A, No, Yes

6. Are the recreational facilities in good condition?
Options: N/A, No, Yes

7. Are sustainable harvest goals in the INRMP effective for the management of the species' population?
Options: Effective, Highly effective, Minimal effectiveness, Moderate effectiveness, N/A: Recreational opportunities do not include hunting and fishing, Not effective

8. To what extent did the installation develop and provide public outreach/educational awareness, e.g. environmental educational opportunities, natural resource field trips/tours, pamphlets?
Options: Excellent outreach, Good outreach, Low outreach, Moderate outreach, N/A, No public outreach provided

9. Is there an active conservation law enforcement program (CLEP) on the installation? (Y/N/NA) [Scored]

Answers:
N (0) If answer is No or NA, then proceed to next Focus Area
Y (1.00)
NA (recreational opportunities do not include hunting and fishing)

Please enter Findings and Recommendations. Findings and Recommendations serve as additional clarification to the answers provided for this Focus Area, and they are encouraged in order to provide a better understanding of existing activities, issues to be addressed, and unique circumstances.

Findings: Findings explain why the score is yellow or red. Findings are encouraged for all answers. This allows you to document issues related to the questions on recreational opportunities.

Recommendations: Recommendations explain how the Findings will be mitigated. Recommendations are encouraged for all answers. This allows you to document recommendations agreed upon by all partners.

Comment on this question: Select this link below each question if you would like to elaborate on the answer provided. This is also a good way to document the assumptions made by all partners that contributed to the answer.

Focus Area 4: Sikes Act Cooperation (Partnership Effectiveness)

Focus Area Purpose: Determine to what degree USFWS, State Fish and Wildlife Agency and, when appropriate, NMFS Service, partnerships are cooperative and result in effective INRMP development, review for operation and effect, and mutual agreement.

1. Was the USFWS invited to participate in the annual INRMP/Natural Resources Program review?
Options: Yes, No

1.a. By what method was the USFWS invited to participate in the annual INRMP/Natural Resources Program review? *Options: Telephone call, Electronic mail, Official letter, Multiple methods, Other, NA (USFWS was not invited)*

1b. Did the USFWS respond to the invitation to participate in the annual INRMP/Natural Resources Program review? *Options: Yes, No, Not Applicable*

1c. How many attempts were made to invite the USFWS to participate in the annual INRMP/Natural Resources Program review?
Options: 0-3, 4-6, 7-10, >10, N/A (USFWS was not invited)

1d. Did the USFWS participate in the annual INRMP/Natural Resources Program review?
Options: Yes, No

1e. If the USFWS participated in the annual INRMP/Natural Resources Program review, was it recognized as a review for operation and effect? *Options: Yes, No*

1f. If the USFWS did not participate in the annual review, what type of correspondence was received from the USFWS to inform the installation that they were not able to participate?
Options: Telephone Call, Electronic mail, Official letter, Other

1g. If the USFWS did not participate in the annual INRMP/Natural Resources Program review, was a separate meeting held/correspondence sent as a review for operation and effect? (Y/N) When? *Options: Yes, No*

1.h. Was a report of the previous year's annual review submitted to the USFWS during this reporting period? *Options: Yes, No*

2. Was the State Fish and Wildlife Agency invited to participate in the annual INRMP/Natural Resources Program review? *Options: Yes, No*

2a. By what method was the State Fish and Wildlife Agency invited to participate in the annual INRMP/Natural Resources Program review? [Not Scored]
Answers:
Telephone call

Electronic mail
Official Letter
Multiple methods
Other
NA (the State Fish and Wildlife Agency was not invited)

2b. Did the State Fish and Wildlife Agency respond to the invitation to participate in the annual INRMP/Natural Resources Program review? (Y/N/NA) [Not Scored]

2c. How many attempts were made to invite the State Fish and Wildlife Agency to participate in the annual INRMP/Natural Resources Program review? [Not Scored]
Options: 0-3, 4-6, 7-10, >10, N/A (the State Fish and Wildlife Agency was not invited)

2d. Did the State Fish and Wildlife Agency participate in the annual INRMP/Natural Resources Program review? *Options: Yes, No*

2e. If the State Fish and Wildlife Agency participated in the annual INRMP/Natural Resources Program review, was it recognized as a review for operation and effect? *Options: Yes, No*

2f. If the State Fish and Wildlife Agency did not participate in the annual review, what type of correspondence was received from the State Fish and Wildlife Agency to inform the installation that they were not able to participate?
Options: Telephone call, Electronic mail, Official letter, Other

2g. If the State Fish and Wildlife Agency did not participate in the annual INRMP/Natural Resources Program review, was a separate meeting held/correspondence sent as a review for operation and effect? *Options: Yes, No – Provide date*

2h. Was a report of the previous year's annual review submitted to the State Fish and Wildlife Agency during this reporting period? (Y/N) [Scored]

3. Was NMFS invited to participate in the annual INRMP/Natural Resources Program review, if applicable? *Options: Yes, No, N/A*

3a. By what method was NMFS invited to participate in the annual INRMP/Natural Resources Program review, if applicable?
Options: Telephone call, Electronic mail, Official letter, Multiple, Other, NA

3b. Did NMFS respond to the invitation to participate in the annual INRMP/Natural Resources Program review, if applicable? *Options: Yes, No, N/A*

3c. How many attempts were made to invite the NMFS to participate in the annual INRMP/Natural Resources Program review, if applicable?
Options: 0-3, 4-6, 7-10, >10, N/A

3d. Did NMFS participate in the annual INRMP/Natural Resources Program review, if applicable? *Options: Yes, No, N/A*

3e. If NMFS participated in the annual INRMP/Natural Resources Program review, was it recognized as a review for operation and effect, if applicable? *Options: Yes, No, N/A*

3f. If NMFS did not participate in the annual INRMP/Natural Resources Program review, was a separate meeting held/correspondence sent as a review for operation and effect, if applicable? *Options: Yes, No, N/A – Provide dates*

3g. If NMFS did not participate in the annual review, what type of correspondence was received from NMFS to inform the installation that they were not able to participate, if applicable? *Answers: Telephone Call, Electronic mail, Official Letter, Other, N/A*

3h. Was a report of the previous year's annual review submitted to NMFS during this reporting period, if applicable? *Yes, No, N/A*

4. What is the level of collaboration/cooperation between Sikes Act partners? *Answers: None, Minimal collaboration/cooperation, Satisfactory collaboration/cooperation, Effective collaboration/cooperation, Highly effective collaboration/cooperation*

5. How well are installation natural resource management goals and objectives aligned with conservation goals of Sikes Act partners, e.g. USFWS regional goals and State Wildlife Action Plans (SWAPs)? *Answers: Not aligned, Somewhat aligned, Completely aligned*

Findings: _____

Recommendations: _____

Please enter Findings and Recommendations. Findings and Recommendations serve as additional clarification to the answers provided for this Focus Area, and they are encouraged in order to provide a better understanding of existing activities, issues to be addressed, and unique circumstances. *Note: You will need to enter all answers to the above questions directly into the Navy Conservation Website prior to providing responses to Findings and Recommendations. Answers supplied online are scored, which generates a green-yellow-red score for each response. Findings and Recommendations are required for each ecosystem that scored as a yellow or red.*

Focus Area 5: Team Adequacy

Focus Area Purpose: Assess the adequacy of the natural resources team (professionally trained natural resources management and/or installation support personnel) in accomplishing INRMP goals and objectives at each installation.

1. Is there a Navy professional Natural Resources Manager assigned by the installation Commanding Officer?
Options: No, Yes

2. Is there an on-site Navy professional Natural Resources Manager?
Options: No, Yes

3. Is there adequate installation staff assigned or available to properly implement the INRMP goals and objectives? *Options: No, Yes*

4. How well do higher echelon offices support the installation natural resources program, e.g. reach back support for execution, policy support, etc.)? *Answers: No support, Minimal support, Satisfactory support, Well supported, Very well supported*

5. The team is enhanced by the use of contractors.
Options: Agree, Disagree, N/A, Somewhat agree, Strongly agree, Uncertain

6. The team is enhanced by the use of volunteers.
Options: Agree, Disagree, N/A, Somewhat agree, Strongly agree, Uncertain

7. The Natural Resources team is adequately trained to accomplish its duties to ensure compliance.
Options: Agree, Disagree, Somewhat agree, Strongly agree, Uncertain

Please enter Findings and Recommendations. Findings and Recommendations serve as additional clarification to the answers provided for this Focus Area, and they are encouraged in order to provide a better understanding of existing activities, issues to be addressed, and unique circumstances.

Findings: Findings explain why the score is yellow or red. Findings are encouraged regardless of the score. This allows you to document issues related to the questions on team adequacy.

Findings: _____

Recommendations: Recommendations explain how the Findings will be mitigated. Recommendations are encouraged for all answers. This allows you to document recommendations agreed upon by all partners.

Recommendations: _____

Focus Area 6: INRMP Implementation

Focus Area Purpose: Evaluates the execution of actions taken to meet goals and objectives outlined in the INRMP.

Supplemental Information: The intent of this Focus Area is to assess how well actions are being implemented to execute the goals and objectives of the INRMP. Actions can include projects submitted via EPRWeb, as well as activities executed with alternative funds, not programmed through EPRWeb, or carried out by the use of volunteers or cooperative partnerships with other entities.

Assessment of INRMP Project Implementation

Select a project from the list below (imported from EPRWeb) to begin answering questions. If this is an incomplete list, select "New Item" to add additional INRMP projects, e.g. emergent projects, and begin answering questions.

Assessment of INRMP Implementation table -

Project Number	Project Title	Funding Source	Funds Obligated	Funds Spent
EPRweb data	EPRweb data	EPRweb data	EPRweb data	*User Validates*

Note: All Natural Resources Program requirements must be entered into EPRWeb. All projects, regardless of funding source (such as OM&N, MIS, Forestry Reserve Account, Agricultural Outlease Program funds, and Sikes Act fees, etc.) must be in EPRWeb. Conservation recommendations identified during regulatory consultation (e.g. ESA Section 7, EFH, etc.), over the past year, may have resulted in the development of emergent requirements. These projects should also be evaluated during this annual review.

1. Is the INRMP action on schedule?
Options: No, Yes

2. What is the current status of the INRMP action?
Options: Not Requested; Not Completed; Programmed; Not in EPRWeb, Project Not Yet Underway, Funding Not Received, In EPRWeb; Funding Received; SOW Prepared; Awarded/Executed; Project Underway, Project Now In-Progress; Project Completed

3. The action was designed to meet the goals and objectives of the INRMP. *Options: Disagree, Neither agree nor disagree, Somewhat Agree, Agree, Strongly Agree*

4. How much progress has been made in implementing the action? *Progress to date: 0%-25%; 26%-50%; 51%-75%; 76%-100%)*

5. If the INRMP action provided an ecosystem integrity benefit, select the ecosystem benefited. (user selects from ecosystem list built in Focus Area #1)

Listed Species Implementation Table Questions -

For each INRMP action executed during the reporting period for the installation, the following questions are asked to evaluate the amount of funding spent on listed species related-actions.

1. INRMP Action? (user selects from a list of actions pre-populated from EPRWeb, plus additional actions added by the user in this Focus Area, that may have listed species funding associated with it) [Non-Scored]

2. Species? (user selects from federally listed species list built in Focus Area #2)

3. Amount Spent? (user enters dollar amount)

General INRMP Implementation Questions –

1. Do the goals and objectives of the INRMP/Natural Resources Program support other conservation partnerships/initiatives? *Options: No, Yes*

2. Which conservation partnerships/initiatives are supported? [Select all that apply]

3. To what level is the Natural Resource program and/or INRMP meeting USFWS conservation management expectations? (0-4)
Options: Dissatisfied, Minimally satisfied, Somewhat satisfied, Completely satisfied, More than satisfied

4. To what level is the Natural Resource and/or INRMP meeting State Fish and Wildlife Agency conservation management expectations? (0-4)
Options: Dissatisfied, Minimally satisfied, Somewhat satisfied, Completely satisfied, More than satisfied

1. To what level are Natural Resource program executions meeting NMFS conservation management expectations, if applicable?
Options: Dissatisfied, Minimally satisfied, Somewhat satisfied, Completely satisfied,More than satisfied, N/A

2. To what extent has the INRMP/Natural Resources program successfully supported other mission areas? (e.g. encroachment, BASH, range support, port operations, air operations, facilities management, etc.) (0-4) [Scored]
Options: Not supported, minimally supported, satisfactorily supported, well supported, Very well supported

3. Are Cooperative Agreements used to execute natural resources program requirements? (Y/N) [Non-Scored]

4. Describe any obstacles to INRMP implementation. (user enters text) [Non-Scored]

Findings: _____

Recommendations: _____

Proceed to next section

Focus Area 7: INRMP Support of the Installation Mission

Objective: This Focus Area is designed to measure the level to which existing Natural Resources compliance requirements and associated actions support the installation's ability to sustain the current operational mission.

Mission statement
Note: The installation's mission statement may be preloaded. If not, please enter it here.

1. The Natural Resources program effectively considers current mission requirements. (0-4)
Options: Agree, Disagree, Neutral, Strongly agree, Strongly disagree

2. What is the level of coordination between natural resources personnel and other installation departments and military staff? (0-4)
Options: Effective coordination, Highly effective coordination, Minimal coordination, No coordination, Satisfactory coordination

3. To what extent does the INRMP successfully support the mission by minimizing possible constraints imposed by regulatory requirements? (0-4)
Options: Minimally supported, Not supported, Satisfactorily supported, Very well supported, Well supported

4. To what extent has there been a net loss of training lands or mission-related operational/training activities?
Options: Mission has seen benefits, Mission is fully impeded; training activities cannot be conducted, Mission/Training activities are somewhat impeded with workarounds, Neutral, No loss occurred

5. Please provide examples of how the INRMP or Natural Resources Program has resulted in any mission impacts (work-around, etc) or specific benefits (e.g. able to increase training areas by 100 acres). [Narrative]

Please provide examples of how the INRMP or Natural Resources Program has resulted in any mission impacts (work-around, etc) or specific benefits (e.g. able to increase training areas by 100 acres). Please enter Findings and Recommendations. Findings and Recommendations serve as additional clarification to the answers provided for this Focus Area, and they are encouraged in order to provide a better understanding of existing activities, issues to be addressed, and unique circumstances.

Findings: Findings explain why the score is yellow or red. Findings are encouraged for all answers. This allows you to document issues related to the questions on INRMP Impact on Installation Mission.

Recommendations: Recommendations explain how the Findings will be mitigated. Recommendations are encouraged for all answers. This allows you to document recommendations agreed upon by all partners.

Comment on this question: Select this link below each question if you would like to elaborate on the

answer provided. This is also a good way to document the assumptions made by all partners that contributed to the answer.

Findings: _____

Recommendations: _____

Summary

1. As a result of this year's annual for operation and effect, have any conservation recommendations identified that should be considered for incorporation into the INRMP? (e.g. ESA Section 7, EFH, etc.)
Options: No, Yes

Explanation: The purpose of this question is to assess whether the INRMP needs to be updated, either in content or projects to be implemented, as a result of the outcome of the annual review for operation and effect that was conducted.

2. What are the findings and recommendations that resulted from the annual review? (Narrative) [Not Scored]

A "finding" in general is something within the Natural Resources Program that needs further attention. Examples include: Communication, Coordination, Methodology, Activities to be included or excluded, Timing or schedule adjustments, etc.

3. In addition to any recommendations submitted in the previous 7 Focus Areas, please provide any additional or general recommendations? (Narrative) [Not Scored]

A "recommendation" in general is a solution to a finding (see above) that would improve some aspect of the Natural Resources program. Examples include: Regular meetings or increased communication, increased focus or emphasis on conservation measures, adjustments to methods used, increased or decreased activities that may provide benefits to a given resource(s).

4. List the top three accomplishments for the Natural Resources Program during this reporting period.

4a._____

4b. _____

4c. _____

[Natural Resources Metrics summary score card displayed here] 0-33 34 - 66 67-100

>>Upload Annual Metrics Report – To upload copies of annual Natural Resources Metrics Reports <<

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APPENDIX F

AGENCY AND PUBLIC INRMP REVIEW COMMENTS

Agency Comment Response Matrix
Draft INRMP
Integrated Natural Resources Management Plan
Navy Operational Support Center Sacramento
Sacramento, CA
February – May 2013

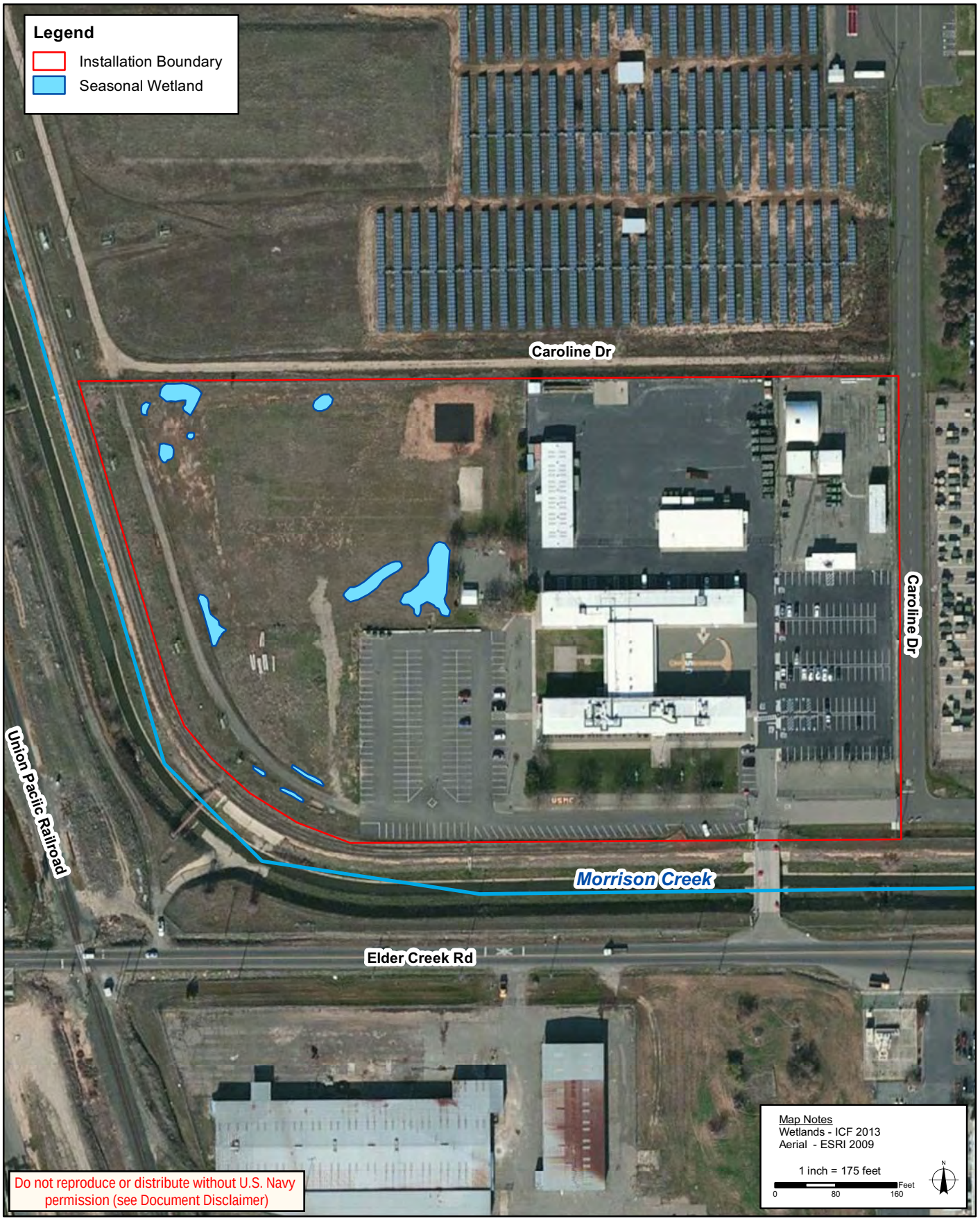
#	Location				Comment	Reviewer	Response
	Doc.	**Section**	**Page**	**Line**			
0	Draft INRMP 2/2013	APPRO-VAL	*ii*		*"Susan K. Moore, Field Supervisor"*; Susan Moore recently retired. Replace with "*Jan C. Knight, Acting Field Supervisor"*	R. Montgomery; USFWS	Revised per comment.
1		1.7.2.2	1-13	32	Two periods at the end of the sentence.		Revised per comment.
2		1.9	1-16	20	Typo,'D0D' instead of 'DoD'		Revised per comment.
3		3.1	3-2	31	"Select appropriate "water-wise" plants…" include prioritizing the use of native plants in the landscape		Revised per comment.
4		3.8	3-8	15	"(Candidate)" The burrowing owl is not a federal candidate species		Revised per comment.
5		3.8	3-8	30	***"Compliance-based Tasks:"*** recommend including ongoing, non-protocol-level, monitoring/observing for burrowing owls on site		Revised per comment.
6		3.9	3-9	20	***"Compliance-based Tasks:"*** recommend annual surveys for MBTA species, once every five years would likely miss a substantial number of occurrences.		Revised per comment.

#	Location				Comment	Reviewer	Response
	Doc.	Section	Page	Line			
8		Appendix I	I-1	Table: Wildlife Species Detected on NOSC	Under common name; "ground squirrel" should be either "California ground squirrel" or "Beechey ground squirrel"		Revised per comment.
1	dINRMP	3.8	3-8	15	Please remove "(Candidate)"	Nancy Ferguson; USFWS	Revised per comment.
0		3.8	3-9		Current Burrowing Owl Guidelines have been released by the Department which suggests a 500 meter buffer (in some instances). The Department suggests incorporating the new buffer criteria into the document, and referencing it for solutions when or if a burrowing owl is detected within a work zone.	Amy Kennedy, CDFW	Included the use of CDFW protocols for surveys.
Reviewer: Rocky Montgomery, Senior Biologist, USFWS, 916-414-6528, April 2013 Reviewer: Nancy Ferguson, Regional Sikes Act Coordinator, USFWS, 760-431-9440, May 2013 Reviewer: Amy Kennedy, Environmental Scientist, CDFW, 916-358-2842, May 2013							

NOTE: No public comments were received.

APPENDIX G

CONSTRAINTS MAP



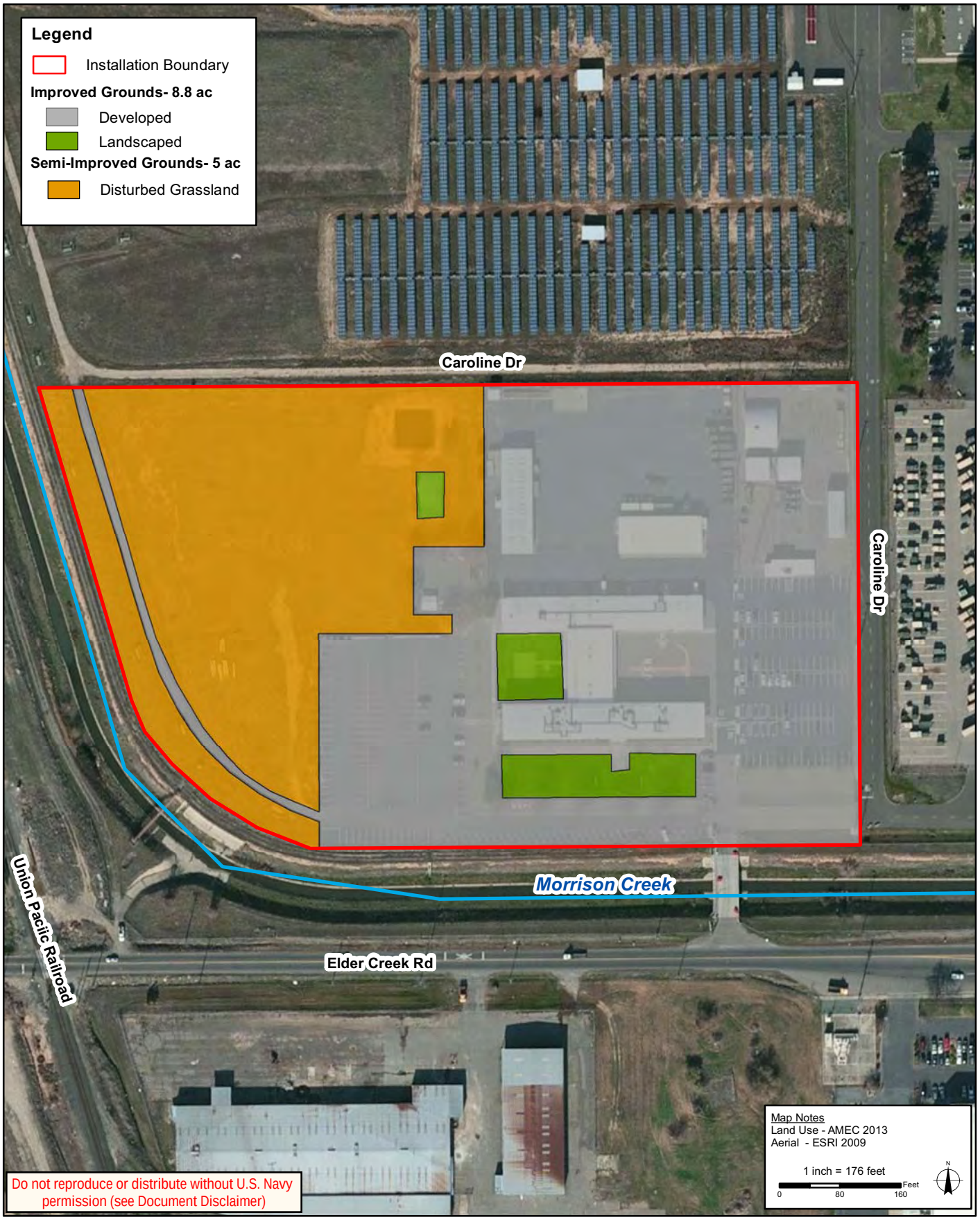
amec

Environmental Constraints
NAVOPSPTCEN
Sacramento, California

APPENDIX
G

APPENDIX H

LAND USE COVER TYPES & ACREAGES



amec

Land Cover Types
NAVOPSPTCEN
Sacramento, California

APPENDIX
H

APPENDIX I

SPECIES DOCUMENTED ON NAVOPSPTCEN SACRAMENTO

Wildlife Species Detected on NAVOPSPTCEN

Order	Family	Scientific Name	Common Name	Status Int/Fed/State
Mammals				
Carnivora	Canidae	*Canis latrans*	coyote	-/-/-
Rodentia	Sciuridae	*Spermophilus beecheyi**	ground squirrels	-/-/-
Lagomorpha	Leporidae	*Lepus californicus**	black-tailed jackrabbit	-/-/-
Birds				
Accipitriformes	Accipitridae	*Accipiter cooperii*	Cooper's Hawk	CITES/MBTA/-
		Buteo jamaicensis	Red-tailed Hawk	CITES/MBTA/-
		Buteo lineatus	Red-shouldered Hawk	-/MBTA/-
		Buteo swainsoni	Swainson's Hawk	CITES/BCC;MBTA/-
		Circus cyaneus	Northern Harrier	CITES/MBTA/SSC
	Cathartidae	*Cathartes aura*	Turkey Vulture	-/MBTA/-
Anseriformes	Anatidae	*Anas platyrhynchos*	Mallard	MBTA/-
Apodiformes	Trochilidae	*Calypte anna*	Anna's Hummingbird	CITES/MBTA/-
Charadriiformes	Charadriidae	*Charadrius vociferus*	Killdeer	-/MBTA/-
	Scolopacidae	*Tringa melanoleuca*	Greater Yellowlegs	-/MBTA/-
Columbiformes	Columbidae	*Columba livia*	Rock Pigeon	-/MBTA/-
		Zenaida macroura	Mourning Dove	-/MBTA/-
Falconiformes	Falconidae	*Falco sparverius*	American Kestrel	-/MBTA/-
Passeriformes	Corvidae	*Aphelocoma californica*	Western Scrub-Jay	-/MBTA/-
		Corvus brachyrhynchos	American Crow	-/MBTA/-
		Corbus corax	Common Raven	-/MBTA/-
	Emberizidae	*Junco hyemalis*	Dark-eyed Junco	-/MBTA/-
		Passerculus sandwichensis	Savannah Sparrow	-/MBTA/-
		Zonotrichia atricapilla	Golden-crowned Sparrow	-/MBTA/-
		Zonotrichia leucophrys	White-crowned Sparrow	-/MBTA/-
	Fringillidae	*Carpodacus mexicanus*	House Finch	-/MBTA/-
		Spinus psaltria	Lesser Goldfinch	-/MBTA/-
	Hirundinidae	*Hirundo rustica*	Barn Swallow	-/MBTA/-
		Petrochelidon pyrrhonota	Cliff Swallow	-/MBTA/-
	Icteridae	*Agelaius phoeniceus*	Red-winged Blackbird	-/MBTA/-
		Euphagus cyanocephalus	Brewer's Blackbird	-/MBTA/-
		Sturnella neglecta	Western Meadowlark	-/MBTA/-
	Mimidae	*Mimus polyglottos*	Northern Mockingbird	-/MBTA/-
	Motacillidae	*Anthus rubescens*	American Pipit	-/MBTA/-
	Parulidae	*Dendroica coronata*	Yellow-rumped Warbler	-/MBTA/-
	Regulidae	*Regulus calendula*	Ruby-crowned Kinglet	-/MBTA/-
	Sturnidae	*Sturnus vulgaris*	European Starling	-/MBTA/-
	Tyrannidae	*Sayornis nigricans*	Black Phoebe	-/MBTA/-
		Sayornis saya	Say's Phoebe	-/MBTA/-
		Tyrannus verticalis	Western Kingbird	-/MBTA/-
Piciformes	Picidae	*Colaptes auratus*	Northern flicker	-/MBTA/-
		Picoides nuttallii	Nuttall's Woodpecker	-/MBTA/-
Pelecaniformes	Ardeidae	*Ardea alba*	Great Egret	-/MBTA/-

Notes:
CITES - Convention on International Trade in Endangered Species of Wild Fauna and Flora (2012)
BCC - Birds of Conservation Concern (USFWS 2012)
MBTA - Migratory Bird Treaty Act (USFWS 2010)
BSSC - California Bird Species of Special Concern (CDFG 2008)
Source: NAVFAC 2012; *AMEC 2012

APPENDIX J

SPECIAL STATUS SPECIES KNOWN TO OCCUR ON OR HAVE POTENTIAL TO OCCUR ON NAVOPSPTCEN SACRAMENTO

Special Status Species Known to Occur on or Have Potential to Occur on NAVOPSPTCEN

Family	Scientific Name	Common Name	Status				Presence	Reference
			Federal	State	CDFW/CNPS	CNDDB Rank[1]		
Wildlife								
Birds								
Accipitridae	*Accipiter cooperii*	Cooper's hawk	-	-	WL	G5S3	Y	NAVFAC SW 2012
	Buteo jamaicensi	red-tailed hawk	MBTA	-	-	G5SS	Y	NAVFAC SW 2012
	Buteo swainsoni	Swainson's hawk	BCC/MBTA	TH	-	G5S2	Y	NAVFAC SW 2012
	Elanus leucurus	white-tailed kite	MBTA	-	FP	G5S3	U	CNDDB 2012
Charadriidae	*Charadrius vociferus*	killdeer	MBTA	-	-	G5S5	Y	NAVFAC SW 2012
Columbidae	*Zenaida macroura*	mourning dove	MBTA	-	-	G5S5	Y	NAVFAC SW 2012
Hirundinidae	*Riparia riparia*	bank swallow	MBTA	TH	-	G5S2S3	U	-
Icteridae	*Sturnella neglecta*	western meadowlark	MBTA	-	-	G5S5	Y	NAVFAC SW 2012
Ardeidae	*Ardea herodias*	great blue heron	MBTA	-	-	G5S4	Y	NAVFAC SW 2012
Strigidae	*Athene cunicularia*	burrowing owl	BCC/MBTA	-	SSC	G4S2	Y	AMEC 2012
Invertebrates								
Branchinectidae	*Branchinecta lynchi*	vernal pool fairy shrimp	TH	-	-	G3S2S3	U	CNDDB 2012
Chirocephalidae	*Linderiella occidentalis*	California linderiella	-	-	-	G3S2S3	U	CNDDB 2012
Triopsidae	*Lepidurus packardi*	vernal pool tadpole shrimp	EN	-	-	G3S2S3	U	CNDDB 2012
Mammals								
Mustelidae	*Taxidea taxus*	American badger	-	-	SSC	G5S4	U	CNDDB 2012

Family	Scientific Name	Common Name	Status				Presence	Reference
			Federal	State	CDFW/CNPS	CNDDB Rank[1]		
Plants								
Alismataceae	*Sagitaria sanfordii*	Sanford's arrowhead	-	-	CRPR 1B.2	G3S3	U	CNDDB 2012

Sources:

Naval Facilities Engineering Command Southwest (NAVFAC SW). 2012.
California Natural Diversity Database (CNDDB). 2013. Rarefind 3 query for the Sacramento East USGS quadrangle.

Notes:

[1] California Natural Diversity Database Ranking System

Global Ranking (G)	
G1	Less than 6 viable elements occurrences (populations for species) OR less than 1,000 individuals OR less than 809.4 hectares (ha) (2,000 acres [ac]).
G2	6 to 20 element occurrences OR 809.4 to 4,047 ha (2,000 to 10,000 ac).
G3	21 to 100 element occurrences OR 3,000 to 10,000 individuals OR 4,047 to 20,235 ha (10,000 to 50,000 ac).
G4	Apparently secure; this rank is clearly lower than G3 but factors exist to cause some concern (i.e. there is some threat, or somewhat narrow habitat).
G5	Population or stand demonstrably secure to ineradicable due to being commonly found in the world.
State Ranking*	
S1	Less than 6 element occurrences OR less than 1,000 individuals OR less than 809.4 ha (2,000 ac)
S2	6 to 20 element occurrences OR 3,000 individuals OR 809.4 to 4,047 ha (2,000 to 10,000 ac)
S3	21 to 100 element occurrences OR 3,000 to 10,000 individuals OR 4,047 to 20,235 ha (10,000 to 50,000 ac)
S4	Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern (i.e., there is some threat, or somewhat narrow habitat). NO THREAT RANK.
S5	Demonstrably secure to ineradicable in California. NO THREAT RANK.
SH	All California sites are **historic**; the element has not been seen for at least 20 years, but suitable habitat still exists.
SX	All California sites are **extirpated;** this element is extinct in the wild.

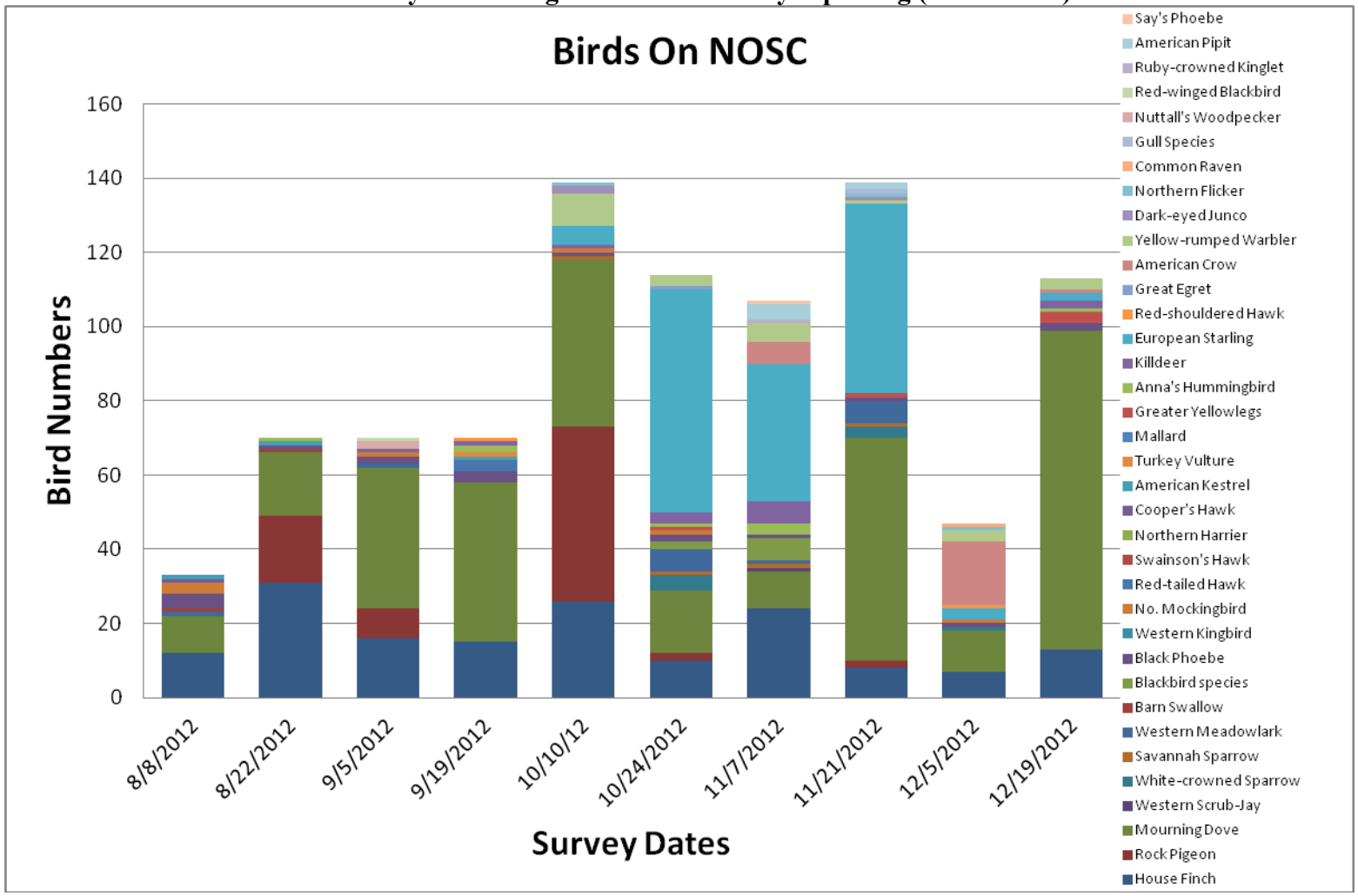
*Uncertainty about the rank of an element is expressed by expressing the rank as a range of values (e.g., S2S3 means the rank is somewhere between S2 and S3).

BCC	Birds of Conservation Concern
CDFW	California Department of Fish and Wildlife
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR 1B.2	California Rare Plant Rank 1B.2: Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
EN	Endangered species
FP	Fully protected by CDFW
MBTA	Migratory Bird Treaty Act
SSC	Species of special concern
TH	Threatened species
U	Unknown
WL	Watch list
Y	Yes

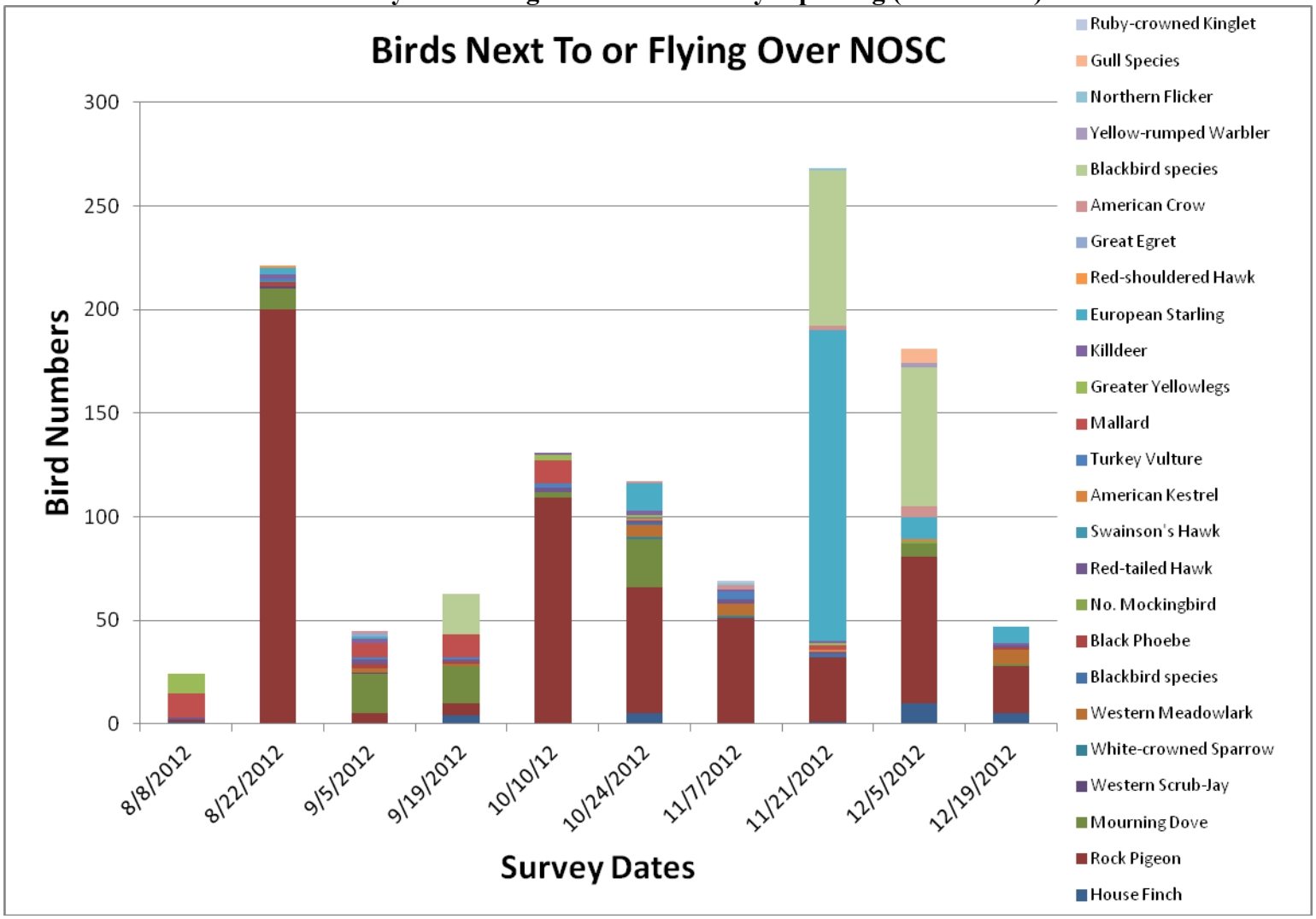
APPENDIX K

BIOLOGICAL SURVEY REPORTING

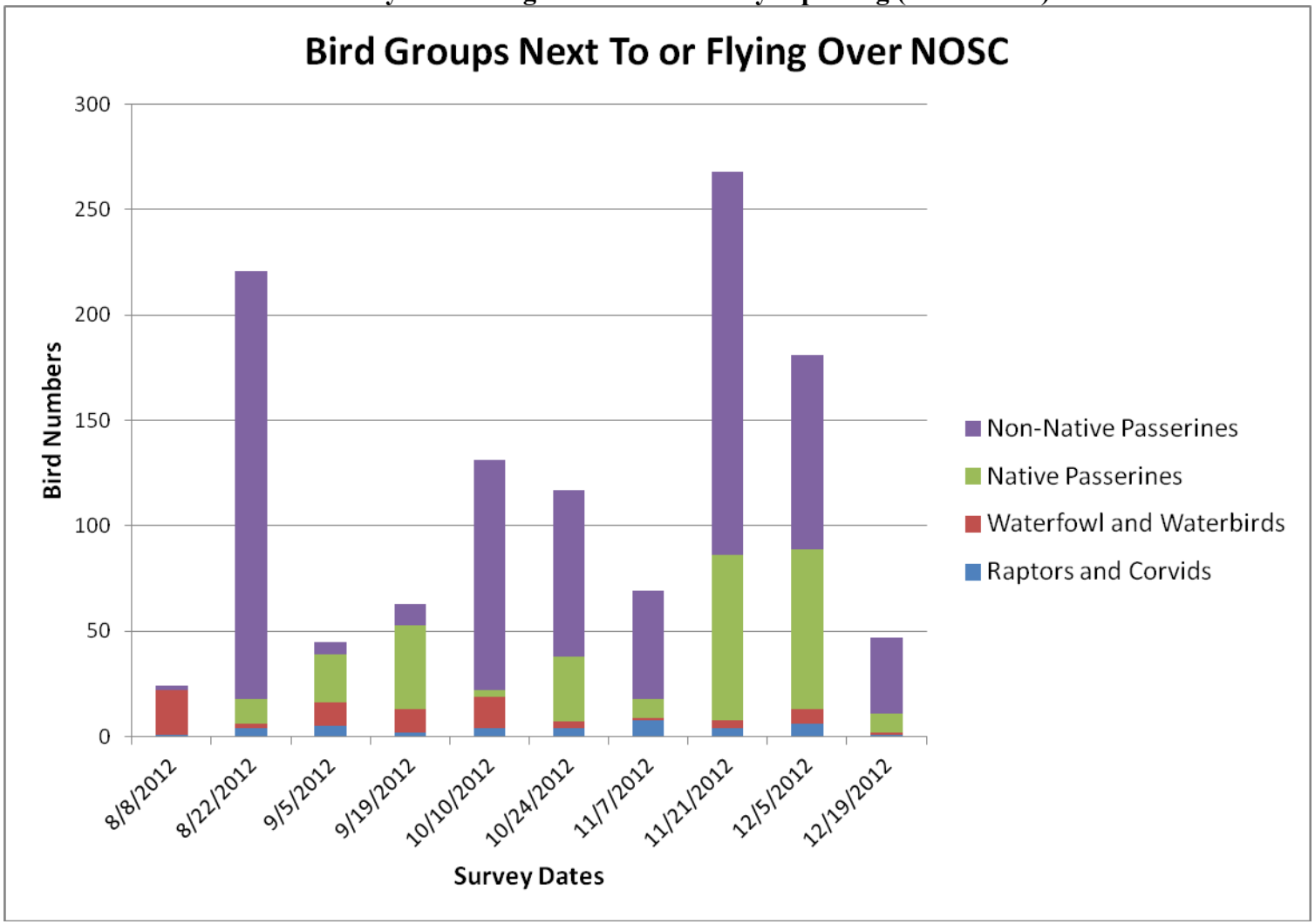
Preliminary results of general avian survey reporting (USGS 2012).



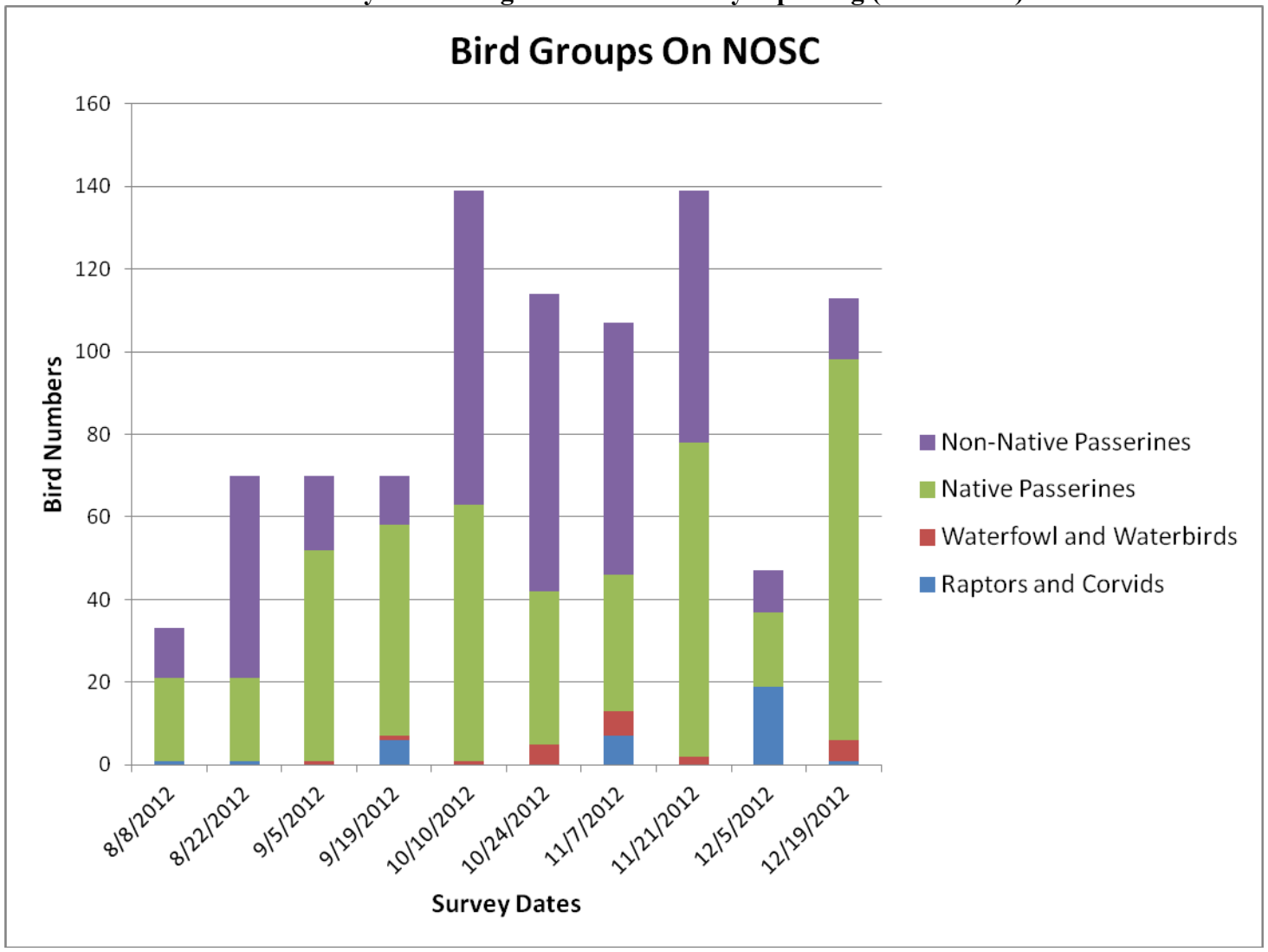
Preliminary results of general avian survey reporting (USGS 2012).



Preliminary results of general avian survey reporting (USGS 2012).



Preliminary results of general avian survey reporting (USGS 2012).



APPENDIX L

NAVOPSPTCEN SACRAMENTO ACTIONS

NAVOPSPTCEN Actions

Project or Activity/Objective	EPR Number	ERL Number	INRMP Section	Scheduled Implementation	Prime Legal Driver	Funding Class	Focus Area	Cost Estimate	Funding Type
Vegetation Management Program									
Objective: Manage natural plant communities to conserve biodiversity, erosion control, wildlife habitat, and aesthetics.									
Conduct a baseline vegetation inventory and maintain a comprehensive GIS geodatabase and list of plant species (including nonnatives and invasives) that occur within the entire installation. Update basewide vegetation surveys every five years.		4	3.3		Sikes Act, DoD 4715, & 5090, EO13112	1	Ecosystem Integrity		
Invasive Species Management Program									
Objective 1: Eradicate or control invasive plant species that have potential to alter native plant communities.									
Identify management goals and strategies for the control of high priority noxious and invasive plant species with emphasis on those with greatest potential for negative impacts. Identify and prioritize areas of greatest infestation and control the spread and introduction of these species.		4	3.6		FNWA, OPNAVINST 5090.1C CH-1, OPNAVINST 6250.4C, DoDI 4715.03 and 4150.07 EO 11990, EO 13112, EO 11987	1	Ecosystem Integrity		

Project or Activity/Objective	EPR Number	ERL Number	INRMP Section	Scheduled Implementation	Prime Legal Driver	Funding Class	Focus Area	Cost Estimate	Funding Type
Wildlife Management									
Objective: Promote a sustainable and diverse wildlife community within NAVOPSPTCEN lands through habitat stewardship, population protection and monitoring, invasive species removal, and wildlife damage control compatible with the facility's mission and urban location.									
Conduct a basewide wildlife inventory and maintain a comprehensive list of all species that have been identified to occur within the installation, to include migratory and resident species. Update basewide wildlife surveys every five years.		4	3.7		Sikes Act, ESA, MBTA, FWCA, EO 13186	1	Fish and Wildlife Management and Public Access		
Threatened and Endangered (T&E) Species and Species Management									
Objective 1: Conserve and monitor potential fairy shrimp habitat within the installation.									
Conduct surveys for vernal pool habitats and listed fairy shrimp species in accordance with accepted protocols Update fairy shrimp surveys every 5 years to maintain status of species on the installation.		4	3.8		Sikes Act, ESA	1	Listed Species and Critical Habitat		
Objective 2: Conserve and monitor potential burrowing owl habitat within the installation.									
Perform protocol-level surveys every three (3) years for burrowing owls using accepted methods to update status of species on the installation. .		4	3.8		MBTA/ Calif. ESA (Species of Special Concern - Priority 2)	1	Listed Species and Critical Habitat		

Priority/Proponent for funding requests:

Class 1 - Requirements derived from existing laws, regulations, and EOs.
Class 2 - Requirements derived from DoD and/or Navy policy.
Class 3 - Enhancement Actions beyond Compliance

Acronyms:

ARPA - Archaeological Resources Protection Act
CWA - Clean Water Act
DoD - Department of Defense
DoDI - Department of Defense Instruction
EO Executive Order
ESA - Endangered Species Act
FNWA - Federal Noxious Weed Act
FWCA - Fish and Wildlife Coordination Act
OPNAVINST - Naval Operations Instruction
NHPA - National Historic Preservation Act
Sikes Act - Sikes Act Improvement Act

APPENDIX M

NATURAL RESOURCE MANAGER'S DESIGNATION LETTER

DEPARTMENT OF THE NAVY
NAVY OPERATIONAL SUPPORT CENTER
8277 ELDER CREEK ROAD
SACRAMENTO, CALIFORNIA 95828

IN REPLY REFER TO
5090
Ser N00/212
11 JUL 13

From: Commanding Officer, Navy Operational Support Center Sacramento
To: Mr. Matthew Brandon Barr

Subj: DESIGNATION AS NAVY OPERATIONAL SUPPORT CENTER SACRAMENTO NATURAL RESOURCES MANAGER

Ref: (a) OPNAVINST 5090.1C, Chapter 24, Section 13.5(e)

1. Reference (a) requires Commanding Officers (CO) of shore activities holding Class 1 plant accounts to appoint, by letter, an installation Natural Resources (NR) Manager/Coordinator. By notice of this letter, you are appointed to this position for Navy Operational Support Center Sacramento (NAVOPSPTCEN Sacramento).

2. You are responsible for coordinating the following: prepare and maintain the NAVOPSPTCEN Sacramento Integrated Natural Resources Management Plan (INRMP) and implementation of objectives; and day-to-day management of associated wetlands, sensitive habitat, and natural resource tasks.

3. This designation remains in effect until cancelled or superseded in writing by another letter bearing the same subject.

S. P. CHEELEY

Copy to:
NAVFAC SW (Code EV42.KL)

DEPARTMENT OF THE NAVY
NAVY OPERATIONAL SUPPORT CENTER
8277 ELDER CREEK ROAD
SACRAMENTO, CALIFORNIA 95828

IN REPLY REFER TO
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