

**SAN NICOLAS ISLAND
CALIFORNIA**

**INTEGRATED NATURAL
RESOURCES MANAGEMENT
PLAN**

2006-2010

September 2005

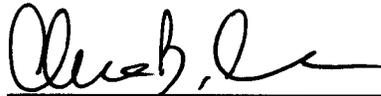
INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN

SAN NICOLAS ISLAND, CALIFORNIA

APPROVAL

This Integrated Natural Resources Management Plan meets the requirements of the Sikes Act (16 USC 670a *et seq.*) as amended.

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TABLE OF CONTENTS

1.0 INTRODUCTION	1
1.1 Purpose, Mission, and Goals	1
1.1.1 Purpose of the Integrated Natural Resources Management Plan	1
1.1.2 Military Mission.....	1
1.1.3 INRMP Goals.....	1
1.1.4 Key Natural Resources Program Elements	2
1.1.4.1 Federally Protected Species	2
1.1.4.1.1 Threatened and Endangered Species	2
1.1.4.1.2 Marine Mammals.....	2
1.1.4.1.3 Migratory Birds	3
1.1.4.2 Species Warranting Navy Stewardship.....	3
1.1.4.3 Habitat Conservation	3
1.1.4.4 Resources Inventory and Data Management	4
1.2 INRMP Design, Use, and Management Strategy	4
1.2.1 INRMP Organization	4
1.2.2 Plan Revision.....	4
1.2.3 Ecological Strategy	5
1.3 Real Estate	6
1.3.1 Location.....	6
1.3.2 Facilities	6
1.4 Historic Land Use.....	7
1.4.1 Pre-Navy Land Use	7
1.4.2 Historic Navy Land Use.....	7
1.5 Land and Airspace Use.....	9
1.5.1 Ranges	9
1.5.2 Categories of Operations.....	10
1.5.3 San Nicolas Island Population.....	10
1.5.4 The Military Mission and Natural Resources.....	10
1.6 Land Use Management and Environmental Planning	11
1.6.1 Regulatory Framework.....	11
1.6.2 Relationship of the INRMP to Existing Plans and Applicable Directives	12
1.6.3 Relationship of the INRMP to Other Plans in Development	12
1.6.4 Roles and Responsibilities	13
1.6.4.1 Naval Base Ventura County.....	13
1.6.4.2 Naval Air Warfare Center Weapons Division	13
1.6.4.3 Southwest Division, Naval Facilities Engineering Command.....	14
1.6.4.4 Other Federal Agencies.....	14
1.6.4.5 State Agencies.....	14
1.6.4.6 Local Governments.....	15
1.6.4.7 Universities	15
1.6.4.8 Other Interested Parties.....	15
2.0 RESOURCES SETTING	17
2.1 Regional Summary	17
2.2 Physical Setting	19
2.2.1 Climate	19
2.2.2 Topography	19
2.2.3 Geology	19
2.2.4 Soils.....	19

2.2.5 Water Resources.....	20
2.3 Biological Setting	20
2.3.1 Flora	21
2.3.1.1 General.....	21
2.3.1.2 Plant Communities.....	21
2.3.2 Fauna	24
2.3.3 Federally Protected Species.....	26
2.3.3.1 Threatened and Endangered Species.....	26
Figure 2.3.3b: Prime Habitat for the Island Night Lizard at San Nicolas Island.....	30
Figure 2.3.3c: Moderate and Low Habitat for the Island Night Lizard at San Nicolas Island	30
2.3.3.2 Species	32
2.3.3.3 Migratory Birds.....	37
2.3.4 Species Warranting Navy Stewardship	39
2.3.4.1 Flora	39
2.3.4.2 Fauna.....	40
2.4 Habitat Conservation	41
2.4.1 Water Resources.....	41
2.4.2 Erosion Control	42
2.4.3 Exotic Species Control	45
2.4.4 Pest Control	45
2.5 Resources Inventory Data Management	46
2.5.1 Data Gaps and Research Needs.....	46
2.5.2 Data Management	46
2.6 Cultural Resources.....	47
2.7 Outdoor Recreation.....	48
2.7.1 Public Access	48
2.7.2 Recreation Activities	48
3.0 RESOURCES MANAGEMENT	50
3.1 Introduction	50
3.2 Federally Protected Species.....	50
3.2.1 Threatened and Endangered Species	50
3.2.1.1 Western Snowy Plover (USFWS: Threatened).....	51
3.2.1.2 Island Night Lizard (USFWS: Threatened)	52
3.2.1.3 California Brown Pelican (USFWS: Endangered).....	53
3.2.2 Marine Mammals	53
3.2.3 Migratory Birds	55
3.3 Species Warranting Navy Stewardship	57
3.4 Habitat Conservation	59
3.4.1 Water Resources.....	60
3.4.2 Erosion Control	61
3.4.3 Exotic Plant Control	61
3.4.4 Pest Control	62
3.5 Resources Inventory and Data Management	63
3.5.1 Introduction	63
3.5.2 Data Gaps and Research Needs.....	64
3.5.3 Data Management	64
3.6 Cultural Resources.....	64
4.0 PLANNING FOR COMPATIBLE USE OF NATURAL RESOURCES	65
4.1 Military Mission and Environmental Compatibility.....	65
4.2 Commercial Forestry and Agriculture	65
4.3 Landscaping and Grounds Maintenance.....	66
4.4 Outdoor Recreation.....	66

5.0 PLANNING AND ADMINISTRATION.....	69
5.1 Island wide Land Use and Environmental Planning.....	69
5.1.1 National Environmental Policy Act Implementation	69
5.1.1.1 Responsibilities	69
5.1.1.2 NEPA Documentation	69
5.1.2 Mitigation.....	70
5.1.3 NEPA and Natural Resources Management.....	71
5.1.4 NEPA and This INRMP.....	71
5.2 Cooperative Resource Planning.....	72
5.2.1 Introduction	72
5.2.2 Endangered Species Recovery Planning Efforts	72
5.2.3 Other Regional Planning Efforts	72
5.3 Project Funding.....	72
5.4 INRMP Implementation	74
5.4.1 Organization.....	74
5.4.2 Personnel	75
5.4.2.1 Staffing.....	75
5.4.2.2 Personnel Training.....	75
5.4.3 External Assistance	76
5.4.3.1 Support Mechanisms.....	77
5.4.3.1.1 Volunteers.....	77
5.4.3.1.2 Other Agencies	77
5.4.3.1.3 University Assistance	77
5.4.3.1.4 Contractor Support	77
5.4.3.2 Planned External Support	77
5.4.4 Summary of INRMP Objectives	78
INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN	83
APPENDICES	83
Appendix 1: Regulatory Instruments that Affect Natural Resources Management on San Nicolas Island	84
Appendix 2: A Checklist of Vascular Plants of San Nicolas Island.....	85
Appendix 3: A Checklist of the Mosses of San Nicolas Island	94
Appendix 4: Lichens of San Nicolas Island	95
Appendix 5: Snails of San Nicolas Island	97
Appendix 6: San Nicolas Island Insects, Spiders and Related Animals.....	100
Appendix 7: A Checklist of the Birds of San Nicolas Island	106
Appendix 8: San Nicolas Island Flora Warranting Navy Stewardship	119
Appendix 9: San Nicolas Island Fauna Warranting Navy Stewardship.....	121
Appendix 10: Non-native Plants of Special Concern San Nicolas Island, CA.....	124
Appendix 11: San Nicolas Island Landscaping Project Plant List	126
Appendix 12: List of San Nicolas Island INRMP Objectives	127

FIGURES

Figure 1.3: Location and Existing Facilities of San Nicolas Island.....	8
Figure 2.1: Island Ownership and Channel Islands National Park and Marine Sanctuary Boundaries..	18
Figure 2.3: SNI Plant Communities	22
Figure 2.3.3a: Western Snowy Plover Nesting Areas and Critical Habitat at San Nicolas Island	28
Figure 2.3.3b: Prime Habitat for the Island Night Lizard at San Nicolas Island.....	30
Figure 2.3.3c: Moderate and Low Habitat for the Island Night Lizard at San Nicolas Island	30
Figure 2.3.3d: Brown Pelican Feeding and Roosting Areas on San Nicolas Island.....	31
Figure 2.3.3e: Southern Sea Otter Distribution	33
Figure 2.3.3f: California Sea Lion Distribution	34

Figure 2.3.3g: Northern Elephant Seal Distribution.....	36
Figure 2.3.3h: Harbor Seal Distribution	38
Figure 2.4.1: San Nicolas Island Water Resources.....	43
Figure 2.4.2: San Nicolas Island Soil Erodibility	44

TABLES

Table 2.3.3a: Breeding Season Snowy Plover Surveys on San Nicolas Island	27
Table 2.3.3b: Population Estimate of Island Night Lizards on San Nicolas Island Based on Habitat Types	29
Table 5.3: Natural Resources Projects*.....	74
Table 5.4.3.2: 2006-2010 Natural Resources External Support Project Needs	77

1.0 INTRODUCTION

1.1 Purpose, Mission, and Goals

1.1.1 Purpose of the Integrated Natural Resources Management Plan

The purpose of the San Nicolas Island (SNI) Integrated Natural Resources Management Plan (INRMP) is to establish a framework for management of natural resources at SNI. This guidance is consistent with the Sikes Act, as amended (16 United States Code (USC) § 670a *et seq.*); the guidelines of the Department of Defense (DoD), Naval Facilities Engineering Command (NAVFACENGCOM); and the Secretary of the Navy (SECNAV) Environmental Policy Memorandum 98-06 (Navy 1998). The INRMP identifies natural resources and their management and provides recommendations for operating procedures to manage significant natural resources at SNI. The INRMP helps support the maintenance of quality lands to accomplish SNI's military mission on a sustained basis and to implement natural resources conservation measures consistent with military activities and federal stewardship requirements. It assists decision-makers in planning, developing, and implementing environmental compliance activities.

The SNI INRMP is intended to:

- outline a proactive, management program that provides for conservation of natural resources in a manner consistent with the military mission;
- integrate and coordinate all natural resources management activities; and
- support sustainable multipurpose uses of natural resources.

1.1.2 Military Mission

The mission of Naval Air Warfare Center Weapons Division (NAWCWD) is to conduct state-of-the-art weapons system testing and evaluation by providing safe, operationally realistic, and thoroughly instrumented test ranges and to maintain the level of operational readiness of military services by providing a realistic training environment. NAWCWD consists of a number of ranges, with SNI being located in the Sea Range. The Sea Range consists of 36,000 square miles of controlled air and sea space and is the primary use area for NAWCWD test and evaluation activities.

Naval Base Ventura County (NBVC) operates and maintains base facilities and provides support services, including airfield operations. NBVC is responsible for managing all lands within Station boundaries and to support the NAWCWD mission at San Nicolas Island, maintain environmental compliance, and exercise responsible stewardship of public lands.

Primary Naval operations on SNI are composed of test and evaluation of internal and external missile data systems using radar, telemetry, and photography. Facilities on SNI are discussed in Section 1.3.2.

1.1.3 INRMP Goals

Goals established in this INRMP are compatible and consistent with DoD's natural resources program goals (DoD Instruction 4715.3, *Environmental Conservation Program*) and goals defined in the *Natural Resources Conservation Strategic Plan* (DON 1994). Goals for SNI include:

- Goal 1.** Manage natural resources to support sustainability of the military mission.
- Goal 2.** Ensure compliance with natural resources-related laws and regulations, including the protection of listed species.
- Goal 3.** Continue to protect, maintain, and enhance populations of endangered and threatened species, or species warranting Navy stewardship within guidelines of ecosystem management.
- Goal 4.** Continue to develop and maintain data collection and processing systems, which provide efficient data storage, retrieval, and presentation capabilities to facilitate informed management decisions.
- Goal 5.** Maintain and enhance natural resources education programs and accommodate compatible outdoor recreational opportunities, consistent with the Navy mission and sound ecological principles.

Objectives and guidelines for achieving these goals are defined for each project within the plan (chapters 3, 4, and 5).

1.1.4 Key Natural Resources Program Elements

Natural resources and the management actions needed to meet the goals discussed above (Section 1.1.3) fall into four general program categories. The discussion of SNI natural resources (Chapter 2) and the management Objectives and Guidelines for specific species and issues (Chapter 3) are organized by these general program categories. These program categories, which are discussed below, are considered to represent the key natural resources issues at SNI.

1.1.4.1 Federally Protected Species

Conservation priorities were developed to provide feasible solutions and enable logical, strategic natural resources management. Among the highest priorities are provisions for legal requirements involving listed species and other protected natural resources.

1.1.4.1.1 Threatened and Endangered Species

The Endangered Species Act of 1973 (ESA), and DoD Instruction 4715.3, mandate active protection and management of federally threatened and endangered species on military installations. Activities relating to and management of endangered species on SNI are guided by the reasonable and prudent measures and the terms and conditions of the Biological Opinion (BO) issued by the U.S. Fish and Wildlife Service (USFWS 2001). Navy environmental staff reviews all proposed activities, construction designs, and land use plans for compliance with protected species mandates. Management of federally listed threatened and endangered species will continue to be accomplished by managing land uses in close coordination with the U.S. Fish and Wildlife Service (USFWS). This management includes control of non-native species.

1.1.4.1.2 Marine Mammals

Under provisions of the Marine Mammal Protection Act (MMPA) of 1972 it is unlawful for a Federal agency to take (harass or kill) a marine mammal. National Marine Fisheries Service (NMFS) may grant permits for a take of small numbers of marine mammals incidental to Naval activities. As part of this process, NMFS, upon application from the Navy, issued regulations to govern the unintentional takings of small numbers of marine mammals incidental to missile launch operations from San Nicolas Island. These regulations allow NMFS to issue annual Letters of Authorization (LOA's) to the Navy in accordance with Section 101 (a)(5)(A) of the MMPA. Proposals for new and continuing actions that may affect marine mammals are reviewed and coordinated with the Navy environmental staff, and comply with Navy policy for protection of marine mammals.

1.1.4.1.3 Migratory Birds

Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, directs each Federal agency taking actions having or likely to have a negative impact on migratory bird populations to work with the USFWS to develop an agreement to conserve those birds. The DoD is in the process of negotiating a department-wide MOU to address migratory bird issues on military installations. Navy policy requires informal consultation to ensure that actions result in minimal loss (or takes) of migratory birds. This includes taking their nests or eggs. Migratory bird conservation, including restoration and enhancement of habitat is incorporated into planning processes whenever possible.

1.1.4.2 Species Warranting Navy Stewardship

Species warranting Navy stewardship is a designation used to identify rare and vulnerable species regardless of legal status. These species are those that occur on former federal candidate lists; state endangered, threatened, or rare lists; state Natural Diversity Data Base lists; California Native Plant Society inventories; or are known to be rare based on the professional knowledge of the Navy natural resources management personnel.

Maintenance of healthy populations of species warranting Navy stewardship focuses on maintaining habitat quality and connectivity, limiting human access into critical nesting or breeding grounds and feral or invasive species control.

1.1.4.3 Habitat Conservation

Habitat conservation, particularly in areas supporting protected species, is often crucial to the survival of those species. On SNI this is considered an integral component of the natural resources program. Additionally, the Navy is required to manage the environment from an ecosystem level in cooperation with concerned regulatory agencies, while not compromising the Navy's mission (Chief of Naval Operations Instruction [OPNAVINST] 5090.1B 2002). The protection of habitats will be accomplished by implementation of impact elimination or minimization measure whenever practicable.

Prior to Naval acquisition, decades of disturbance from grazing occurred over the entire island (Schwartz 1994). Although sheep ranching and grazing have not occurred since 1943, grazing animals had significant effects on the SNI ecosystem. The Navy has no plans to incorporate grazing into SNI land use, as there are obvious conflicts between grazing practices, island operations, and resource conservation interests.

Part of the effect of historic grazing and human occupation of SNI is the introduction and proliferation of invasive non-native plants and animals. Controlling these species is critical to managing the biota of SNI. The reduction of non-native species that often outcompete native species is the first step toward enhancing the island's biological integrity.

1.1.4.4 Resources Inventory and Data Management

A variety of resource management and research activities have been and continue to be conducted on SNI, including inventory and monitoring of federally listed species and species warranting Navy stewardship, and the habitats they occupy. The Environmental staff utilizes a Geographic Information System (GIS), for storage and computerized retrieval of this data. Development of this system is an ongoing effort. Knowledge of the distribution of listed species and species warranting Navy stewardship facilitates mission accomplishment by allowing assessment of potential impacts to these resources early-on in the planning process.

1.2 INRMP Design, Use, and Management Strategy

The SNI INRMP is developed in accordance with the Sikes Act (Public Law 86-797, as amended), OPNAVINST 5090.1B, and SECNAV Instruction (SECNAVINST) 6240.6E directives.

1.2.1 INRMP Organization

Chapter 1. Introduction. Chapter 1 describes the purpose and goals of the INRMP, the military mission, key natural resources issues and their management strategies, responsible parties, and background information on SNI.

Chapter 2. Natural Resources Setting. Chapter 2 describes the physical setting, biological setting, cultural resources, and water resources of SNI.

Chapter 3. Resources Management. Chapter 3 describes management of natural resources. Specific management of federally protected species, species warranting Navy stewardship, habitat conservation, and resources inventory and data management, are discussed.

Chapter 4. Planning for Compatible Use of Natural Resources. Chapter 4 describes how the military mission integrates with environmental resources management and describes the integration of recreational use and natural resources management.

Chapter 5. Planning and Administration. Chapter 5 details the specifics of INRMP implementation.

1.2.2 Plan Revision

The INRMP and future updates or revisions receive approval by signature from the NBVC Commanding Officer, USFWS, and the California Department of Fish and Game (CDFG).

To maintain quality control, ensure proper coordination, and address appropriate issues, it is critical that the ED and the installation Natural Resources Manager oversee INRMP development and any subsequent

updates or revisions to the INRMP. Reviews and revisions take place with the cooperative involvement of all the signatories to the original plan.

The following review procedures are mandated per guidelines in OPNAVINST 5090.1B CH-2, Natural Resources Management, Chapter 22-4.1, (b), and implementing DoD instructions thereof:

- Monitoring: The ED will continuously monitor this INRMP and its programs.
- Reviews: The ED will review the INRMP at least yearly for updates or minor revisions.
- Revisions: The installation Commander will review, revise (if necessary), and re-approve the INRMP at least every five years.

1.2.3 Ecological Strategy

NBVC intends to use an ecosystem management strategy to plan and implement natural resources management on lands entrusted to its use. This overall strategy is described at Department of Defense and Department of the Navy levels, as summarized below:

Biological diversity (biodiversity) refers to the variety and variability among living organisms and the environment in which they occur. Biodiversity has meaning at various levels including ecosystem diversity, species diversity, and genetic diversity. The Department of Defense has developed *A Department of Defense (DoD) Biodiversity Management Strategy* (The Keystone Center, 1996). This Strategy identifies five reasons to conserve biodiversity on military lands:

- (1) *sustain natural landscapes* required for the training and testing necessary to maintain military readiness;
- (2) *provide the greatest return on the Defense investment* to preserve and protect the environment;
- (3) *expedite the compliance process* and help avoid conflicts;
- (4) *engender public support* for the military mission; and
- (5) *improve the quality of life* for military personnel.

The Department of Defense (DoD Instruction 4715.3, *Environmental Conservation Program*) describes ecosystem management as, “a process that considers the environment as a complex system functioning as a whole, not a collection of parts, and recognizes that people and their social and economic needs are a part of the whole.” The Department of Defense goal with regard to 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 Department of the Navy has published an ecosystem management policy (OPNAVINST 5090.1B, *Environmental and Natural Resources Program Manual*). The Navy “goal is to preserve and enhance ecosystem integrity, and to sustain both biological diversity and continued availability of those resources for military and other human uses.” The Navy policy lists the following three aspects of ecosystem-based management:

- a shift from single species to multiple species conservation,

- formation of partnerships necessary to consider and manage ecosystems that cross boundaries, and
- use of the best available scientific information in decision-making and adaptive management techniques in natural resource management.

Principles of ecosystem management will guide the natural resources program on San Nicolas Island in the next five years and beyond. This management strategy will enable the military mission to be conducted while conserving natural resources. Conservation priorities were developed to aid natural resources management (Section 1.1.4 - *Key Natural Resource Program Elements*). Among the highest priorities are provisions for compliance with federal legal requirements and Navy mandates involving listed species and other protected natural resources. However, there are numerous other species and biological resources of concern on SNI. Managing natural resources at the ecosystem level allows integration of these priorities with protection of the properties and functions of the island's natural environment as a whole.

1.3 Real Estate

1.3.1 Location

San Nicolas Island is located in the Pacific Ocean about 60 miles southwest of Point Mugu, California. It is one of a group of eight islands referred to as the California Channel Islands. The Navy owns the island to the high tide line, an area that encompasses approximately 14,230 acres (Figure 1.3).

The island is about 9 miles long and 3.6 miles wide. The highest elevation on SNI is 908 feet. In general, the island exhibits sparse vegetation and subsequent erosion. This poor vegetation cover is mostly attributable to past sheep ranching, the island's arid climate, and high winds.

The Naval facilities at SNI support the mission of the NAWCWD Point Mugu Sea Range, which controls 36,000 square miles of Special Use Airspace over the Pacific Ocean. The Point Mugu Sea Range parallels the California coastline for about 200 miles and extends seaward for more than 180 nautical miles.

1.3.2 Facilities

San Nicolas Island has a 10,000-foot concrete and asphalt runway located on the mesa in the eastern portion of the island. A control tower, hangers, ground control approach capabilities, and a fire station are adjacent to the airfield.

There are 85 buildings and 71 structures on SNI with facilities to transport, house, and support personnel and related materials. Infrastructure includes water wells, a desalination plant, water distribution and sewage systems, and a power plant and distribution system. The island has 47 miles of roads, with 22 miles paved. A barge landing area at Daytona Beach enables ocean transport of materials and equipment to and from SNI. Figure 1.3 shows existing facilities on SNI.

SNI's range support facilities include metric radars, telemetry antennas, receiver and transmitter facilities, a frequency monitoring station, and range communications facilities, microwave transmission facilities, missile launching pads, ordnance bunkers, surveillance radars, meteorological measurement systems, and target control facilities.

1.4 Historic Land Use

1.4.1 Pre-Navy Land Use

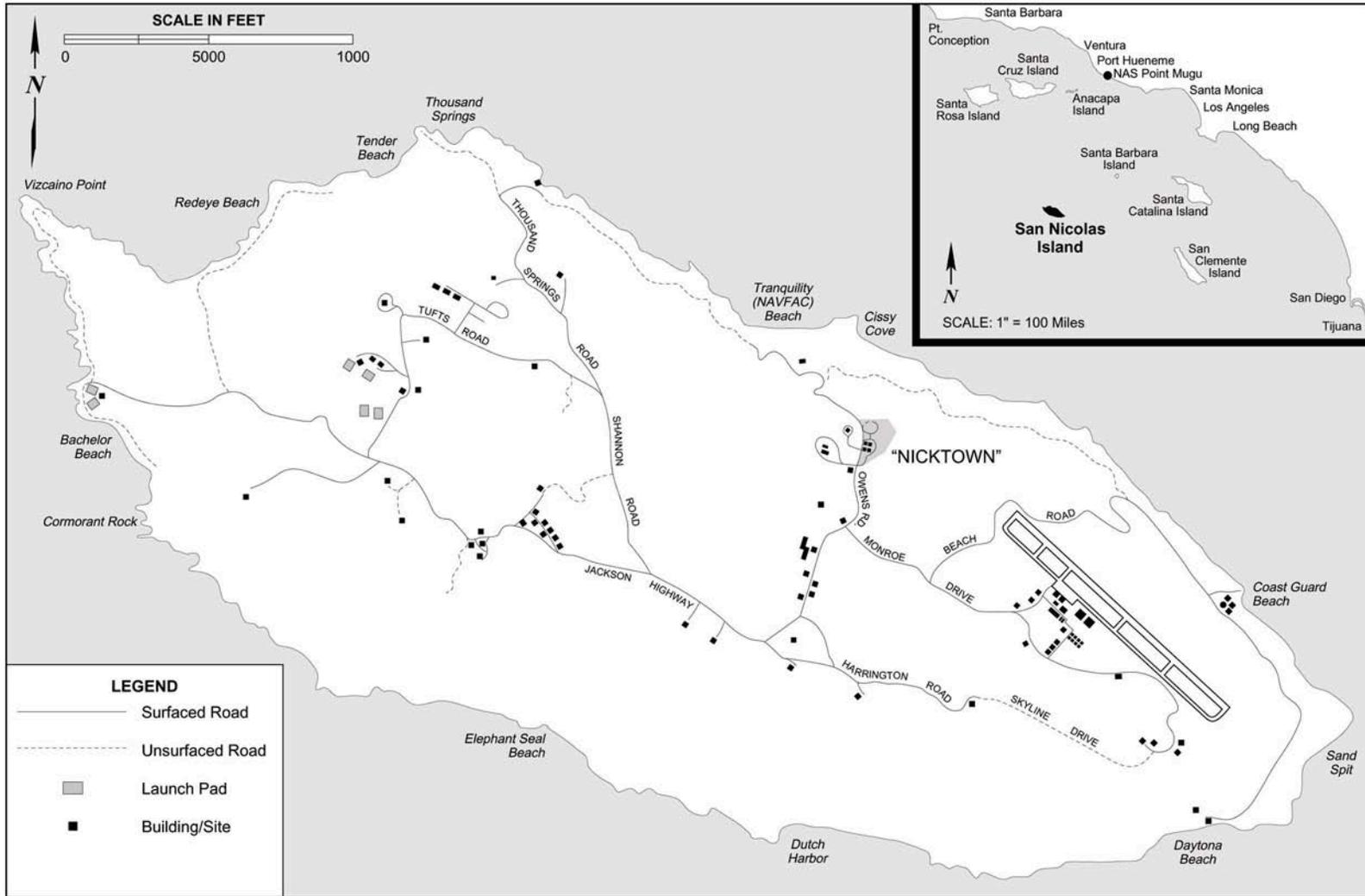
Archaeological investigations on SNI have revealed over 540 prehistoric archaeological sites dating from over 8,000 years ago. These sites are located primarily within the island's coastal zone and within one mile of major freshwater springs. Inhabitants were primarily occupied with harvesting marine resources, as evidenced by the huge quantity of fish, marine mammal, and shellfish remains and the tools required to obtain them. Other sites include whalebone houses, a rock art cave, lithic quarries, and special use sites.

European use of the island began during the early 1800s when sea otter hunting became a profitable industry at the island. The Franciscan missionaries removed the last native inhabitants in 1835. Sheep ranching began on the island in 1857 and continued sporadically through 1943. The earliest ranch compound, containing a stone house, barn, shearing sheds, a cistern, and a water catchment system, was located at Corral Harbor. Subsequent ranches were located near the sandspit and then on the north shore. Chinese abalone fisherman exploited the vast supply of abalone in the island's tidal areas and established numerous camps along the shoreline, circa 1860-1910.

1.4.2 Historic Navy Land Use

In 1933 administration of the island was transferred to the Department of the Navy. At the outbreak of World War II, the island was placed under the jurisdiction of the U.S. Army and served as an aircraft surveillance post. Control of SNI reverted back to the Navy in 1944. Naval administration persisted throughout the Cold War era and continues to the present day. Naval operations at SNI result in relatively few ground-disturbing activities.

Figure 1.3: Location and Existing Facilities of San Nicolas Island



1.5 Land and Airspace Use

1.5.1 Ranges

The Point Mugu Sea Range provides safe, highly instrumented, air and sea space in which controlled tests and operational training missions are conducted. The Point Mugu Sea Range is used by U.S. and allied military services to test and evaluate weapon systems associated with air warfare, missiles and missile subsystems, aircraft weapons integration, and airborne electronic warfare systems to provide realistic training opportunities and to maintain the operational readiness of these forces. This test and evaluation process is critical to successful assessment, safe operation, and improvement of the capabilities of current and future Naval weapon systems.

Most of SNI is used as a range instrumentation site to support Sea Range operations. Instrumentation facilities are identified in Section 1.3.2.

Because of its strategic location, SNI can be used to mimic shipboard launches of missiles and targets. Island facilities support all aspects of range operations, such as missile and target launches. The Alpha Launch Complex is located inland in the northwest portion of the island, and the Building 807 Launch Complex is on the west coast portion. Ordnance and missile assembly facilities are located near the Alpha launch complex. An Explosive Ordnance Disposal site is located on the plateau near the center of the island.

There are no officially designated Ranges on SNI, but island operations can be grouped into a few key locations.

Alpha Launch Complex

The Alpha Launch Complex is on the island's central plateau, at its western end at an elevation of over 620 feet above mean sea level (msl). This site includes the Vandal launcher and various other concrete pads, which are used to launch missiles and targets from mobile or portable launch stands. The most commonly launched targets are the Vandal and BQM-34s, but almost any portable launch system can be brought in.

B-807 Launch Site

The Building 807 Launch Site is on the western shoreline at an elevation of over 30 feet msl. It consists of a number of concrete pads where portable missile launchers can be bolted down, or portable launchers can be parked. A wide variety of missiles have been launched from here over the years, but the most common recent missiles have been RAM, Tomahawk, and AGS.

SLAM Target

The only impact area on the island is for the Standoff Land Attack Missile (SLAM). The site has been in use since 1989 and has been used for testing of the SLAM missile and for training pilots to launch the SLAM. An environmental assessment established the current SLAM impact area (NAWCWD 1998). Other precision weapons have been proposed to be used at the SLAM target, but SLAM is the only weapon that has been fired there to date.

Tomahawk Soft Recovery Area

A soft recovery area has been established on the eastern end of SNI to support Tomahawk launches on the Sea Range. There are instances when the missile flight must be terminated, but the missile can be controlled to fly to a designated area. The missile is then landed by means of a parachute, thus, a soft recovery. A ground crew can then pick up the missile with assistance of a truck or helicopter (NAWCWD 2000).

1.5.2 Categories of Operations

All development on SNI is associated with the military, and land uses are considered either military-support or open space. There are five general categories of tests to evaluate sea, land, and air weapons systems conducted on the Sea Range and supported by SNI facilities: 1) air-to-air tests, 2) air-to-surface tests, 3) surface-to-air tests, 4) surface-to-surface tests, and 5) subsurface-to-surface tests. The Sea Range also supports three categories of training, including 1) fleet training exercises, 2) small-scale amphibious warfare training, and 3) special warfare training. These activities occur in waters surrounding SNI and instrumentation on the island is used to record and evaluate the operations.

Future operations may include new facilities and two new target launch systems to support the following additional theater missile defense activities: 1) boost phase intercept, 2) upper tier, 3) lower tier, and 4) nearshore intercept events at SNI (NAWCWD 2002).

1.5.3 San Nicolas Island Population

Approximately 200 people work on the island and live in quarters in Nicktown (Figure 1.3). There is no public access to the island, and island population fluctuates almost daily with visitors from many different activities within DoD.

1.5.4 The Military Mission and Natural Resources

OPNAVINST 5090.1B CH-22, Natural Resources Management (2002) provides guidance for natural resource management goals on Navy installations. Resources are to be managed in the public interest using a multiple-use/sustained-yield approach within the limitations of the overriding military mission. The primary military mission and the welfare of the protected wildlife and their habitats are to be considered the highest priority where conflicts occur, provided that the military mission to ensure the preparedness of the Armed Forces is not compromised.

The military mission affects the land and its natural resources, and the military mission is, in turn, affected by the nature of the land and its resources. The challenge at SNI is to conduct the military mission while conserving natural and cultural resources, maintaining compliance with environmental laws, and providing stewardship of public lands.

There are several important points regarding the military mission and natural resources at SNI.

- Land use patterns are already established for test and training activities.
- Navy use of the island is not particularly land intensive.
- Test sites are routinely re-used, which takes advantage of existing instrumentation and infrastructure and avoids costs and potential impacts associated with establishing new areas.

- Large areas remain undisturbed and serve as safety and security buffer zones for test activities.

1.6 Land Use Management and Environmental Planning

The INRMP contributes baseline resource descriptions (type, location, legal status, etc.) and management guidelines and procedures that will be integrated with mission planning and management processes to support military land use requirements.

1.6.1 Regulatory Framework

Preparation and implementation of this INRMP are required by the Sikes Act (16 U.S.C. §670 *et seq.*), Department of Defense Instruction 4715.3 (*Environmental Conservation Program*), and Naval Operations Instruction OPNAVINST 5090.1B (*Environmental and Natural Resources Program Manual*). This INRMP was prepared using guidance within the *Natural Resources Management Procedural Manual* (NAVFAC P-73) with some modifications to better facilitate ecosystem management and implement 1997 revisions to the Sikes Act.

This INRMP helps NBVC comply with federal and state laws, most notably laws associated with environmental documentation, endangered species, wetlands, and wildlife management in general. Appendix 1 lists significant, but not complete, federal and state laws and regulations and other regulatory instruments that govern implementation of this INRMP. This plan describes how NBVC will implement provisions of Department of Navy regulations and other applicable policies.

Sikes Act Improvement Act

The Sikes Act, as amended according to the Sikes Act Improvement Act of 1997, states,

The Secretary of Defense shall carry out a program to provide for the conservation and rehabilitation of natural resources on military installations. To facilitate the program, the Secretary of each military department shall prepare and implement an integrated natural resources management plan for each military installation under the jurisdiction of the Secretary. Consistent with the use of military installations to ensure the preparedness of the Armed Forces, the Secretaries of the military departments shall carry out the program to provide for the conservation and rehabilitation of natural resources on military installations; the sustainable multipurpose use of the resources, which shall include hunting, fishing, trapping, and nonconsumptive uses; and subject to safety requirements and military security, public access to military installations to facilitate the use.

The Sikes Act requires that INRMPs include, as applicable, the following

- no net loss in the capability of military installation lands to support the military mission of the installation;
- fish and wildlife management, land management, forest management, and wildlife-oriented recreation;
- fish and wildlife habitat enhancement or modifications;
- wetland protection, enhancement, and restoration where necessary for support of fish, wildlife, or plants;

- integration of, and consistency among, the various activities conducted under the Plan;
- establishment of specific natural resources management goals and objectives and time frames for the proposed action;
- sustainable use by the public of natural resources to the extent that the use is not inconsistent with the needs of fish and wildlife resources;
- public access to the military installation that is necessary or appropriate for sustainable use by the public of natural resources to the extent that the use is not inconsistent with the needs of fish and wildlife resources, subject to requirements necessary to ensure safety and military security;
- enforcement of applicable natural resource laws;
- regular review of this INRMP and its effects, not less often than every five years;
- provisions for spending hunting and fishing permit fees exclusively for the protection, conservation, and management of fish and wildlife, including habitat improvement, and related activities in accordance with the INRMP;
- exemption from procurement of services under Office of Management and Budget Circular A-76 and any of its successor circulars; and
- priority for contracts involving implementation of this INRMP to state and federal agencies having responsibility for conservation of fish and wildlife.

1.6.2 Relationship of the INRMP to Existing Plans and Applicable Directives

The INRMP provides guidance and direction for natural resources management activities and provides a framework for plan implementation. It incorporates other planning documents from a variety of sources, as listed below:

- *Programmatic Biological Assessment*, 2000.
- *Programmatic Biological Opinion*, 2001.
- *Marine Mammal Small Take Regulations*, 2003.
- *Environmental Impact Statement/Overseas Environmental Impact Statement, Point Mugu Sea Range*, 2002.
- *California Channel Islands Species Recovery Plan* (USFWS 1984).
- *Recovery Plan for the Southern Sea Otter* (USFWS 1982).
- *Draft Revised Recovery Plan for the Southern Sea Otter* (USFWS 2000).
- *Recovery Plan for the California Brown Pelican* (USFWS 1983).
- *Stormwater Pollution Prevention Plan*, 2000.
- *Spill Prevention, Control and Countermeasures Plan*, 2002.
- *Ocean Pollution Act (OPA 90) Plan*, 2001.
- *Draft Recovery Plan for the Western Snowy Plover* (USFWS 2001)

1.6.3 Relationship of the INRMP to Other Plans in Development

The INRMP integrates natural resources management with the Navy mission and operations, and also integrates various constituent natural resources management plans. These are plans required by regulation

or law, or that have been developed to support the intent of certain resources management goals. Natural resources plans currently under development, or that are planned for development include the following:

- Regional Shore Infrastructure Plan
- Alien Plant Management Plan
- Integrated Cultural Resources Management Plan
- Bird Aircraft Strike Hazard Plan (BASH)
- Pest Management Plan
- Erosion Control Management Plan

1.6.4 Roles and Responsibilities

1.6.4.1 Naval Base Ventura County

Naval Base Ventura County provides the land, facilities, and other services to support the military mission at SNI. Thus, NBVC is the land manager of the installation.

The Commanding Officer, NBVC is responsible for implementing policies and instructions of the Department of the Navy, in accordance with OPNAVINST 5090.1B.

Environmental Division

The ED, as delegated by command directive, is responsible for the management of natural resources on the island as part of the NBVC overall environmental program. ED, acting through the Natural Resources Manager, is responsible for preparation and implementation of this INRMP. This is the direct “vehicle” for accomplishment of many of the above responsibilities of the Commanding Officer.

Public Works Department

The NBVC Facilities Planning Office, Public Works, is responsible for the comprehensive oversight and planning of all land use issues relating to SNI.

1.6.4.2 Naval Air Warfare Center Weapons Division

Office of Counsel

The Office of Counsel provides legal services to NAWCWD on a variety of environmental matters. Particularly pertinent to natural resources management are review of NEPA documentation, review, and legal interpretations involving compliance with natural resources laws as they pertain to Range operations.

Public Affairs Office

The Public Affairs Office is involved in aspects of the environmental program at SNI. These include public involvement within the NEPA process and other activities involving the public.

Pacific Ranges and Facilities Department

The Pacific Ranges and Facilities Department is responsible for accomplishment of much of the military mission at SNI. As such, the Pacific Ranges and Facilities Department and land and natural resource managers at SNI must coordinate to minimize conflicts between mission requirements and stewardship/compliance aspects of natural resources management and to effectively use natural resources management to support the military mission.

1.6.4.3 Southwest Division, Naval Facilities Engineering Command

The Southwest Division, NAVFACENGCOCOM is responsible for providing support for natural resources management at SNI when requested. The Southwest Division is currently providing funding and contractual oversight support for the preparation of the Alien Plant Management Plan, plant surveys, and non-native plant eradication efforts. Contractual support is also being provided for the island fox monitoring work.

1.6.4.4 Other Federal Agencies

U.S. Fish and Wildlife Service

The USFWS has had a continued presence on SNI. Between 1987 and 1990 the USFWS translocated 140 southern sea otters to SNI, with monitoring of the population continuing to the present. The USFWS is a signatory cooperator in implementation of this INRMP in accordance with the Sikes Act.

National Park Service

The National Park Service manages, in part or in whole, 5 of the 8 islands in the Channel Islands group. The Channel Islands National Park (CINP) and the Navy are responsible for management of similar environmentally sensitive habitats. Consequently, Navy and CINP natural resources staff regularly partner on collaborative efforts to address common natural resource issues.

National Marine Fisheries Service

San Nicolas Island is considered an important resource area by the NMFS because of the large pinniped population it supports, and the agency is an active partner in the marine mammal program. The NMFS Southwest Fisheries Science Center is conducting a long-term study of the food habits of the California sea lion on the island, as well as other ancillary research. As part of a cooperative effort, the Navy and the NMFS conduct annual aerial surveys of pinnipeds to determine relative spatial and seasonal distribution and abundance.

The Navy has been issued Small Take Regulations by the regulatory branch of the agency to take by harassment small numbers of seals and sea lions incidental to target missile launch operations thus necessitating constant interaction between the two agencies.

1.6.4.5 State Agencies

California Department of Fish and Game

The CDFG is responsible for the management of fish and wildlife resources within the State, including those on federal lands. CDFG is a signatory cooperator in implementation of this INRMP in accordance with the Sikes Act. CDFG has primary responsibility for enforcement of fishing laws and regulations on SNI. CDFG maintains the California Natural Diversity Database (CNDDDB), which is useful for management of natural resources at SNI.

California Department of Toxic Substance Control

The California Department of Toxic Substance Control participates in the SNI Installation Restoration Program (IRP). The SNI natural resources program provides input and otherwise supports the IRP as needed.

California State Water Resources Control Board

The State Water Resources Control Board, through the Los Angeles Regional Water Quality Control Board (LARWQCB), is responsible for managing state water resources. LARWQCB's responsibilities include implementation of the Clean Water Act §402 provisions within its region.

1.6.4.6 Local Governments

San Nicolas Island's location, about 60 miles off the coast of California, results in little interest or involvement in resource management by local government agencies. SNI is located within Ventura County, California.

1.6.4.7 Universities

Regional universities have provided specialized expertise to help manage natural resources on SNI. The University of California (UC), Riverside has studied the intrinsic and extrinsic factors limiting rare plant species. The Veterinarian Teaching Hospital at UC Davis provides invaluable support regarding health issues of the island fox. Long-term monitoring of marine resources is conducted by UC Santa Cruz. California State University at Humboldt researchers have assisted with numerous seabird studies. The University of Arizona supports development of the GIS system used in the management of island resources.

NBVC anticipates the continued use of university expertise to better understand ecosystem functionality during the next five years and beyond.

1.6.4.8 Other Interested Parties

Numerous regional research facilities and interest groups have conducted Navy funded or independent research on SNI. The Santa Barbara Botanical Garden (SBBG) has conducted botanical surveys and is currently working on an updated illustrated flora of the island. The Santa Barbara Museum of Natural History has a long-standing interest in the management of island natural resources. The museum has compiled data on all aspects of terrestrial resources with an emphasis on avian usage and is the repository for most SNI species. The Western Foundation of Vertebrate Zoology has been an active partner in island seabird and shorebird research. For over 20 years, Hubbs Sea World Research Institute has conducted pinniped research on the island and provided resource managers with information valuable to the management of marine species.

The Channel Islands Research Coordinating Committee is composed of land management agencies, research organizations, and academics conducting terrestrial natural resource projects on the Channel Islands. The group provides a forum for information exchange and development of collaborative efforts to address natural resources management and research issues.

2.0 RESOURCES SETTING

2.1 Regional Summary

San Nicolas Island is the outermost of the eight islands comprising the California Channel Islands chain located off southern California (Figure 2.1). It lies on the Santa Rosa-Cortez Ridge, one of several northwest-trending ridges, which characterize the offshore region.

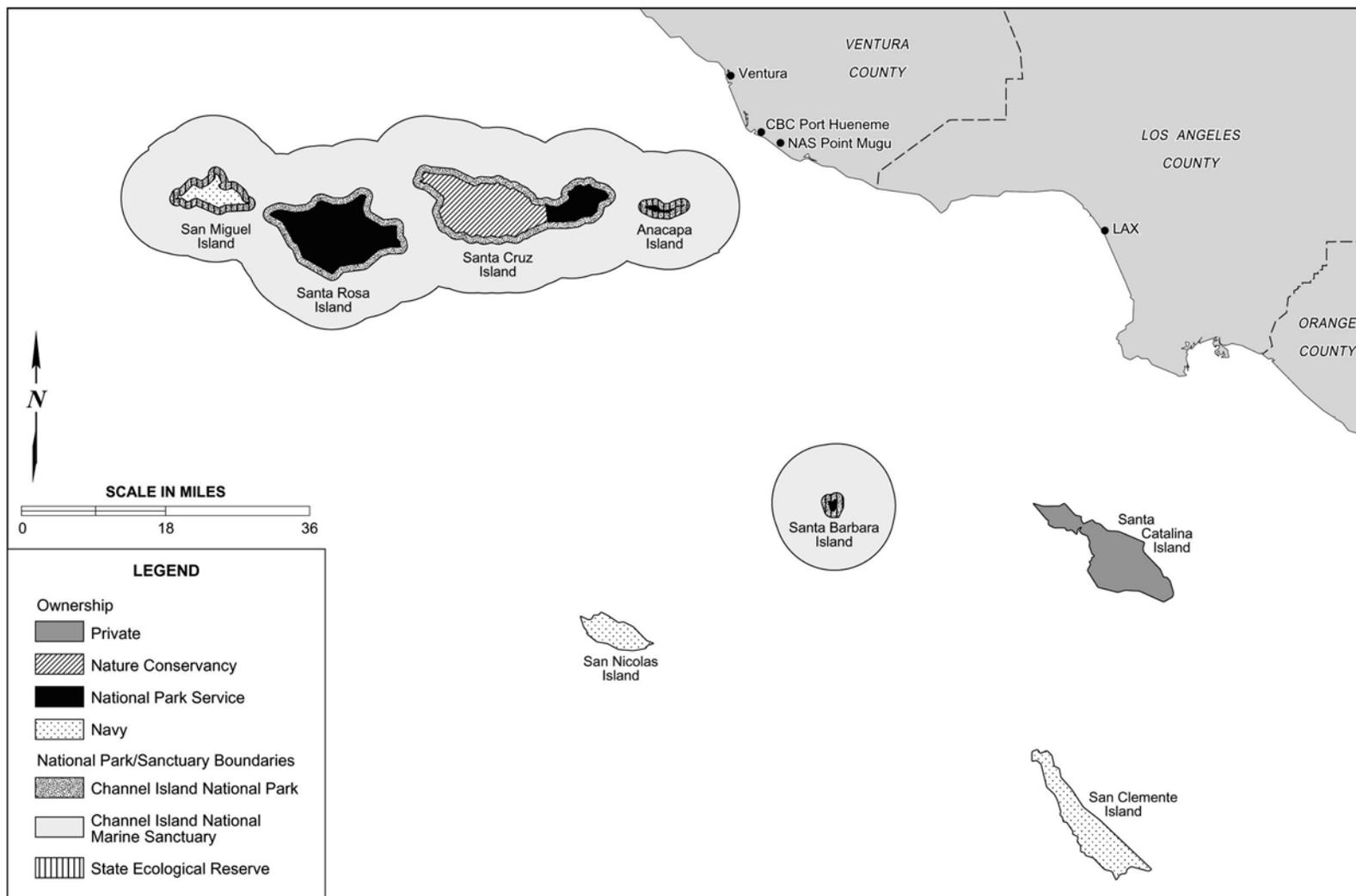
The islands are rich in cultural and natural history, and the desire to conserve these unique resources and open spaces, has resulted in most of the area being managed by federal or private resource organizations. Five of the eight islands fall within the boundaries of the Channel Islands National Park: San Miguel, Santa Rosa, Santa Cruz, Anacapa and Santa Barbara. Of these the Nature Conservancy, a national land conservation group, owns the western portion of Santa Cruz. Eighty-six percent of Santa Catalina Island is managed by the Catalina Island Conservancy, the primary focus being the preservation of native plants, animals and biotic communities. Within this high profile, environmentally sensitive regional area, the Navy owns three islands: San Nicolas Island, San Clemente Island and San Miguel Island. San Miguel Island is managed as part of CINP under a cooperative agreement with the National Park Service.

The waters surrounding the islands are also managed for preservation. The Channel Islands National Marine Sanctuary (CINMS) encompasses the waters within 6 nautical miles of the CINP. The CINMS was established in 1980 for the purpose of protecting areas off the southern California coast, which contain significant marine resources. Additionally the waters surrounding the islands have been designated by the state as Areas of Special Biological Significance in recognition of the high quality of the marine ecosystems.

The Channel Islands are significantly influenced by California ecosystems. At various times in geologic history, they have been more or less isolated from the mainland because of tectonic action or sea-level rise and fall during the ice ages. This ebb and flow of isolation, while maintaining a strong ecological influence from the mainland, has also produced unique ecological settings and unique endemic species.

SNI contains remnants of the original island ecological condition, but it has been heavily disturbed from past land uses and exploitation, as described in Section 1.4 and by Schwartz (1994). Natural ecosystems on SNI are degraded and have been impacted by non-native species, particularly non-native plants and sheep grazing. The following sections describe current knowledge of the physical setting and natural resources on SNI, as well as a brief discussion of cultural resources efforts in relation to natural resources management.

Figure 2.1: Island Ownership and Channel Islands National Park and Marine Sanctuary Boundaries



Two introduced non-native invertebrate species may represent serious threats to native invertebrate populations. The decollate snail (*Rumina decollata*) is a relatively large snail which preys on other mollusks and could severely impact the small remnant populations of terrestrial land snails on SNI. Argentine ants (*Linepithema humile*) are a fairly recent introduction to the island, probably arriving via barged materials. These aggressive and proficient competitors have been responsible for local extinctions of native ant populations on the mainland and have the potential to do the same on SNI.

2.4.5 Installation Restoration Program

The DoD has established the Installation Restoration Program (IRP) as a means to identify, investigate, and remediate or control hazardous waste sites located at military installations. The IRP is intended to be a tool for the identification and clean up of any contaminant releases that could endanger public health, welfare, or the environment. There are three phases in the IRP process: Phase I, the Site Inspection Phase, includes the identification of potential hazardous waste sites through interviews, record searches, and minimal sampling; Phase II, the Remedial Investigation/Feasibility Study Phase, includes exhaustive sampling and remediation design planning; and Phase III, the Remedial Design/Remedial Action Phase, within which the site is remediated or secured.

There are no active IRP sites located on San Nicolas Island. Several sites have been investigated in the past but have been either dismissed or closed after remediation.

2.5 Resources Inventory Data Management

The inventory and recordation of biological field data and the development of a computerized retrieval system for these data are ongoing efforts at SNI. This is particularly important for those species that may be, or are being, considered for listing under provisions of the ESA. It is also equally important to provide this information, in a usable format, to adjacent land managers since management of species warranting Navy stewardship can best be accomplished when all forms of potential impacts are considered for a species throughout its entire range. Ecosystem-wide resource management requires mutual cooperation of regional land managers, regulators, and scientific groups and facilitates regional planning efforts towards common goals.

2.5.1 Data Gaps and Research Needs

Objectives and guidelines throughout Chapter 3 identify data gaps remaining in the natural resources program on SNI.

2.5.2 Data Management

The collection of natural resources data is a virtually useless venture without the capability to store, retrieve, and analyze these data. NBVC is committed to providing efficient, cost-effective systems for data storage and analysis.

A GIS is administered within the ED. GIS data manipulation, analysis, and development are currently being performed under contract with the University of Arizona Advanced Resources Technology Lab.

Most recent data development includes conversion of GPS data to ArcView® for cultural resources data layers, such as surveys, sites, and relational databases. The natural resources program will produce many new databases and make more use of the analytical capabilities of the SNI GIS to provide natural resources management options.

The oldest aerial photographs of SNI were taken in 1940. The latest aerial photographs, taken in 2002, cover the entire island and are in color. The 2002 aerial photographs are digital and in a GIS format.

Computer technology provides a means of using aerial photographs and/or aerial videos for a wide range of natural resources-related tasks. Current aerial photographs are probably adequate for SNI's needs but should be updated every few years.

2.6 Cultural Resources

San Nicolas Island boasts a considerable cultural heritage. The Nicoleño Indians inhabited the island for at least 8,000 years. The Nicoleño left over 540 archaeological sites as evidence of their occupation. Among these are village sites, kitchen middens, food processing sites, and stone quarry sites. The Nicoleño left the most spectacular rock art site on the Channel Islands. The 'Cave of the Whales' contains many paintings (pictographs) and engravings (petroglyphs) of local sea life including, whales, sharks, porpoises, and fish as evidence of their highly maritime oriented culture.

Also unique to the island is the tale of the Lone Woman of San Nicolas Island, the last inhabitant who was left alone on the island for 18 years. Her story was told in the popular novel and movie "Island of the Blue Dolphins". About six dozen historic sites have been located on SNI. Aleuts, from Alaska, were brought to the island in the early 1800s to hunt sea otter, and left their mark on the island. Also present on the island are historic sites from early sheep ranching operations (circa 1857 -1943), sites of early Chinese and Anglo abalone fishers (circa 1860s -1910s), and a few sites and structures from World War II. In addition, numerous shipwrecks dot the shoreline with hulks and scattered timbers.

Archaeological investigations began on SNI more than a century ago when early collectors visited the island and removed countless specimens for museum display.

The earliest comprehensive field survey (inventory) of SNI's cultural resources was conducted by Meighan and Eberhart (1953) and resulted in identification of 68 prehistoric archaeological sites. At about this same time, the UCLA Archaeological Survey Office was conducting a Channel Island Program. As a result of this program, additional inventories discovered 50 new cultural resource sites (Reinman 1962). Westec Services, Inc. conducted an archaeological and biological field survey of the island in 1978, and reinvestigated the original 118 archaeological sites. The Westec survey discovered 31 additional archaeological sites and confirmed that one of the previously recorded sites had been destroyed.

The most complete inventory of SNI was implemented in 1983 when 100 percent of the island was resurveyed by Reinman and Lauter (1984). Modern survey methods (constant systematic intervals) and precise mapping and recording techniques were used during this field survey. This provided the first complete systematic survey investigation of the island's resources and fulfilled the requirements of Section 110 of the NHPA. This inventory confirmed the location and condition of previously recorded archaeological sites on the island and recorded newly discovered sites. A total of 355 sites were located during this field survey (Reinman and Lauter 1984).

During 1996-1998 California State University Los Angeles re-mapped all previously located archaeological sites using a global positioning system (GPS) to more accurately locate known sites. The survey also identified and recorded about 200 additional prehistoric sites (Martz 2002).

Historic Resources

An historic inventory and survey of Chinese abalone processing sites was completed by Schwartz (1995). This study presents a preliminary survey of the Chinese abalone processing sites and resulted in the identification of 26 such historic sites on the island. This study adds valuable information regarding the important and frequently overlooked aspect of historic use of the island's resources. Two historic studies on sheep ranching at SNI have been prepared (Swanson 1993, McCawley 1997). These studies provide a valuable historic overview of the ranching era.

An overview of World War II activities on the island (JRP 1999a) and a Cold War overview (JRP 1999b) were used as a basis for architectural evaluations of standing structures. JRP Historical Consulting Services (1998) evaluated all standing structures on the island for National Register eligibility. One structure (N138) was found to be eligible.

2.7 Outdoor Recreation

2.7.1 Public Access

Department of Defense Directive 4715.3, *Environmental Conservation Program*, May 3, 1996, states, *“The principal purpose of DoD lands and waters is to support mission-related activities. Those lands and waters shall be made available to the public for educational or recreational use of natural and cultural resources when such access is compatible with military mission activities, ecosystem sustainability, and other considerations such as security, safety, and fiscal soundness. Opportunities for such access shall be equitably and impartially allocated”*.

OPNAVINST 5090.1B states,

“Military lands will be available to the public and DoD employees for enjoyment and use of natural resources, except when a specific determination has been made that a military mission prevents such access for safety or security reasons, or that the natural resources will not support such usage.”

Unauthorized public access onshore at SNI is prohibited, primarily due to security and safety requirements associated with the island's weapons testing mission and associated equipment. However, personnel working/living on SNI are allowed to pursue a variety of recreational activities, as discussed in sections 2.7.2, *Recreation Activities* and 4.4, *Outdoor Recreation*.

2.7.2 Recreation Activities

San Nicolas Island personnel can enjoy recreational opportunities associated with Nicktown, such as a gymnasium, bowling alley, swimming pool, racquetball court, tennis court, and weight room. Outdoor recreational opportunities, such as hiking, biking, fishing, swimming, and boating, are also available on SNI. These and other recreational pursuits are discussed in Section 4.4, which describes the management

of outdoor recreation and compatibility issues associated with outdoor recreation. Poor weather is a major deterrent to many outdoor recreation pursuits.

3.0 RESOURCES MANAGEMENT

3.1 Introduction

Natural resources management of San Nicolas Island (SNI) incorporates the mission, objectives, strategy, and conservation priorities stated in Chapter 1. Natural resources on SNI are numerous and in many cases, endemic to the island or the Channel Islands group.

The military mission on SNI impacts relatively small land areas, and there is a low requirement to disturb new areas. This facilitates natural resources management. The management of plant and animal populations on SNI is aided by restricted public access and the ability to implement feral, domestic, and exotic species control.

Significant changes in impacts of the military mission on SNI natural resources are not anticipated in the foreseeable future. New zones of disturbance are not anticipated unless conducting a mission related activity within an existing zone of disturbance is not a viable option.

This chapter includes aspects of natural resources management, such as protected species and species warranting Navy stewardship, habitat conservation, and natural resources data acquisition, maintenance, and use. Objectives outlined in this chapter are aimed at the optimal management of resources at SNI. In some cases, it may not be possible for objectives to be accomplished fully. The objectives are pursued through guidelines that fall into two distinct categories: 1) those which NBVC is legally required to accommodate (Mandatory Guidelines), and 2) those which are desirable for enhanced management of resources at SNI and will be undertaken subject to available funding and NBVC priorities (Recommended Guidelines).

3.2 Federally Protected Species

3.2.1 Threatened and Endangered Species

Activities relating to, and management of endangered species on SNI are guided by the reasonable and prudent measures and the terms and conditions of the Biological Opinion (BO) (included within the objectives and guidelines below) (USFWS 2001).

General Objective and Guidelines for Threatened and Endangered Species

Objective: Protect and maintain viable populations of threatened and endangered species and maintain compliance with ESA requirements.

Mandatory Guidelines:

- Ensure that land use plans and activities in or near threatened or endangered species habitats are accomplished in accordance with the ESA.
- Conduct formal and informal consultations with the USFWS as early as practicable in the project planning process for actions that may affect listed species in accordance with ESA Section 7 Consultation Handbook (USFWS/NMFS March 1998).
- Comply with requirements of species or site-specific consultations and with terms and conditions of Section 7 Consultation Biological Opinions.

- Conduct censuses of listed species for the purpose of monitoring the effects of Navy activities on these species in accordance with the Terms and Conditions listed in the BO (USFWS 2001).
- Review all existing and new structures to determine which shall be fitted with materials to prevent their use as perches by predatory birds in accordance with the Terms and Conditions listed in the BO (USFWS 2001).
- Monitor the barge landing area and other areas of concentrated human activity for non-native species and remove any such species found in accordance with the Terms and Conditions listed in the BO (USFWS 2001).
- Comply with the Incidental Take Statement in the BO (USFWS 2001).
- Provide the USFWS an annual report containing the number of island night lizards, California brown pelicans, and western snowy plovers killed or injured by Navy activities, and a summary of Navy activities and their effects on listed species in accordance with the Reporting Requirements in the BO (USFWS 2001).

Recommended Guidelines:

- Consider Conservation Recommendations (USFWS 2001) regarding San Nicolas Island fox, domestic pets, feral animal removal, and listed species research permits.

3.2.1.1 Western Snowy Plover (USFWS: Threatened)

On SNI, 12 beaches, totaling 206 acres have been designated as Critical Habitat for this species. The primary threats to the western snowy plover are displacement from preferred nesting areas as a result of increasing pinniped populations, disturbance by humans, and predation.

Objectives and Guidelines for Western Snowy Plover

Objective 1: Protect, actively monitor, and maintain a viable population of snowy plovers.

Mandatory Guidelines:

- Monitor snowy plover nests during missile or target launches, barge landings, and other activities that may disturb nesting behaviors in accordance with the Terms and Conditions listed in the BO (USFWS 2001).
- Maintain compliance with the ESA by closing nesting areas to recreational activity during the March 1 - September 15 breeding season. Alternative measures to ensure compliance will be evaluated periodically.
- Monitor the effects of Navy activities on snowy plovers as required by the BO (USFWS 2001) by conducting island-wide snowy plover censuses twice annually, once during the breeding season and once during the winter season. Alternative monitoring programs may be implemented if they are determined to provide adequate monitoring data.
- Educate island personnel regarding protected species regulations and responsibilities.
- Maintain signs around breeding sites to alert personnel of closures.
- Conduct site-specific snowy plover surveys in potential or known breeding habitat prior to disturbance activities as required by the BO (USFWS 2001).
- Remove unnecessary structures in snowy plover nesting areas in accordance with the Terms and Conditions of the BO (USFWS 2001) and attach avian excluders to essential structures, if feasible.
- Conduct amphibious training exercises on beaches not harboring nesting snowy plovers.

Recommended Guidelines:

- Reduce predation upon snowy plovers on SNI by conducting a feral cat control/removal program.
- Develop and maintain a computer database for storing information on locations of nesting sites, incidental sightings and size and results of surveys for resource management purposes.

Objective 2: Support recovery plan efforts to establish stable western snowy plover populations and eventual delisting.

Recommended Guidelines:

- Continue to participate with recovery planning and other efforts to help establish stable snowy plover populations.
- Support research to explore the effects of increasing pinniped populations on nesting success of snowy plovers.

3.2.1.2 Island Night Lizard (USFWS: Threatened)

The island night lizard is affected by the actions of humans and predation. Construction activities that involve the grading of cactus and box-thorn thickets or large areas of coastal scrub pose the greatest threat to island night lizards.

Objectives and Guidelines for Island Night Lizard

Objective 1: Maintain a viable population of island night lizards on SNI.

Mandatory Guidelines:

- Conduct relocation of island night lizards in accordance with the Terms and Conditions listed in the BO (USFWS 2001).
- Define and clearly mark work areas during road maintenance and other activities to prevent island night lizard mortality in accordance with the Terms and Conditions listed in the BO (USFWS 2001).
- Conduct site-specific surveys in known or suitable habitat prior to disturbance activities.
- Exclude high quality lizard habitat areas from the roadside-mowing regime.
- Maintain a 50-foot bare ground buffer zone around equipment and storage areas in high quality island night lizard habitat.

Recommended Guidelines:

- Reduce predation upon island night lizards, by conducting a feral cat control/removal program.
- Maintain island night lizard habitat quality and integrity.
- Site staging areas for storage of equipment and materials in areas with low island night lizard densities, whenever feasible.
- Support scientific studies of competition relationships between alligator lizards and island night lizards.

Objective 2: Continue to resolve baseline, biological data gaps and continue habitat enhancement efforts.

Mandatory Guidelines:

- Continue habitat enhancement by planting appropriate cover in areas adjacent to currently utilized habitat.

Recommended Guidelines:

- Develop protocols to monitor distribution, population size, population trends, and habitat usage of the island night lizard population at 3-5 year intervals.

Objective 3: Support recovery plan efforts to establish stable island night lizard populations and eventual delisting.

Recommended Guidelines:

- Support Channel Islands-wide review of population status of the species.

3.2.1.3 California Brown Pelican (USFWS: Endangered)

The federally and state endangered California brown pelican roosts along the shoreline of SNI year-round. Efforts to deter human disturbance are a year-round management concern.

Objective and Guidelines for California brown pelican

Objective 1: Protect California brown pelican roosting sites.

Recommended Guidelines:

- Close seasonal roost sites to incompatible activities.
- Continue regular aerial surveys to identify seasonal roost sites.
- Establish ground-based survey methodology to monitor roost sites.

3.2.2 Marine Mammals

The MMPA establishes conservation of marine mammals as well as making the take or import of those animals illegal, with specific exceptions, primarily for commercial fishing. The USFWS is responsible for shore-using and near-shore mammals (such as sea otters). Those mammals that are truly marine inhabitants, cetaceans and pinnipeds, other than walrus, are the responsibility of the Department of Commerce's NMFS. The USFWS may authorize and permit take (with limitations and mitigation measures) of marine mammals under their purview. Pinniped occurrence on SNI is discussed in Section 2.3.3.2.

Similar to USFWS regulatory oversight, the NMFS is authorized to grant exemptions to the take moratorium and provide observation and data collection on the extent of authorized incidental take. NMFS, upon application from the Navy, issued regulations (50 CFR 216.151-158) to govern the unintentional takings of small numbers of marine mammals incidental to missile launch operations from San Nicolas Island. These regulations allow NMFS to issue annual Letters of Authorization (LOA's) to the Navy in accordance with Section 101 (a)(5)(D) of the MMPA. The Small Take Regulations address impacts to the northern elephant seal, California sea lion, and harbor seal. LOA's are applicable for a one-year period, at the end of which, a new authorization can be obtained; up to five years, which is the limitation of the regulations.

Specific effects addressed in the regulations are primarily related to noise, such as startle responses (*e.g.*, stampeding) and physiological stress. A suite of mitigation measures and monitoring and reporting

requirements are required by the regulations to minimize these potential harassment-related takes. Mitigation measures include the following:

- prohibit personnel from entering pinniped haul out sites below the missile's predicted flight path prior to planned launches;
- avoid launch activities during harbor seal and other pinniped pupping seasons, where operationally practicable;
- prohibit the launch of Vandal target missiles from Alpha Complex at low elevations on azimuths that pass close to pinniped haul out sites;
- avoid, where practicable, launching multiple target missiles in quick succession over haul out sites;
- limit launch activities during nighttime hours where operationally practicable;
- ensure that a minimum altitude of 1,000 feet is maintained from pinniped haul outs for aircraft and helicopter flight paths; and
- contact the NMFS if injurious or lethal take is discovered (NMFS 2003).

General Objectives and Guidelines for Marine Mammals

Objective 1: Maintain compliance with MMPA mandates.

Mandatory Guidelines:

- Ensure that activities that affect marine mammals are accomplished in accordance with the MMPA.
- Apply for required authorizations as early in the project planning process as practicable for actions that may impermissibly impact marine mammals.
- Comply with conditions contained in regulations or authorizations granted to the Navy by the NMFS or the USFWS.
- Apply for annual LOA's from NMFS.

Recommended Guidelines:

- Maintain compliance with the MMPA by continuing the year-round closure of the south side to unauthorized activities.
- Maintain compliance with the MMPA by closing north-side breeding and haul out sites to incompatible and unauthorized activities.

Objective 2: Monitor and protect island-wide pinniped breeding and haul out sites.

Mandatory Guidelines:

- Maintain minimum flight level of 1,000 feet over shoreline when pinnipeds are present in accordance with the Small Take Regulations.
- Avoid launch activities during harbor seal and other pinniped pupping seasons, where operationally practicable in accordance with the Small Take Regulations.

Recommended Guidelines:

- Continue annual aerial breeding season surveys for northern elephant seals and California sea lions in cooperation with the NMFS to gather data on distribution, abundance, age structure, pup production, and reproductive phenology.
- Initiate aerial breeding season survey for harbor seals in cooperation with the NMFS to determine pup production and total population.
- Maintain closure signs around breeding and haul out sites.
- Prohibit sonic booms under 30,000 feet or less than 30 miles off shore.
- Continue educational instruction on marine mammal issues and individual responsibility for island personnel; maintain the educational kiosk at the barge-landing site.
- Continue to provide support for pinniped research.

Objective 3: Continue displacement and exclusion of pinnipeds from the barge operational area.

Mandatory Guidelines:

- Continue participation in activities at the barge-landing site as required for protection of pinnipeds.
- Submit required reports to the NMFS detailing displacement and exclusion activities.

Recommended Guidelines:

- Inspect, repair, and replace exclusion barriers as necessary.
- Maintain signage warning of the possibility of seals in the roadway.
- Maintain the educational kiosk at the barge-landing site.

3.2.3 Migratory Birds

The Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 USC. §§703-711) is the domestic law that implements the United States' commitment to four international conventions (with Canada, Japan, Mexico, and Russia) for the protection of a shared migratory bird resource. Each of the conventions protects selected species of birds that are common to the respective countries (*i.e.*, they occur in these countries at some point during their annual life cycle). The MBTA mandates that all migratory birds and their parts (including eggs, nests, and feathers) be fully protected.

Executive Order 13186, Responsibility of Federal Agencies to Protect Migratory Birds (dated 10 January 2001), acknowledges that migratory birds are of ecological and economic value to the United States and internationally, and that the United States has an obligation to conserve these birds and their habitats. The Order directs executive departments and agencies to take certain actions in furthering the MBTA.

Bird Aircraft Strike Hazard (BASH) is defined as the threat of aircraft collision with birds during flight operations, particularly during take-off and landing and low-altitude training exercises. In general, the times of greatest threat during migratory bird activity are March, April, and August through November. While a safety hazard at SNI, bird-strikes occur infrequently. Only one bird strike has been officially reported for SNI.

BASH plans are required by the Department of Defense for military installations where there is a potential for a conflict between military activity and wildlife. Usually BASH plans contain installation-specific guidelines to minimize collisions between aircraft and birds, such as ducks, geese, and raptors.

Generally such a plan requires the training of a staff biologist and review of the plan by the U.S. Air Force.

Objectives and Guidelines for Migratory Birds In General

Objective 1: Provide protection and enhancement of habitats used by resident and migratory bird species.

Recommended Guidelines:

- Implement a feral cat control/removal program.
- Ensure that use, protection, and enhancement of naturally occurring and man-made water sources do not adversely affect use by avian species.
- Ensure that birds are not unnecessarily attracted to areas that may create hazards with respect to collisions with aircraft.
- Continue to support the documentation of avian use of SNI, especially sightings of species with special status and rare sightings.
- Support biological research of species, interactions with mammalian predators, and impacts from increasing marine mammal presence.
- Remove unused communication towers, antennae and other structures, which could pose a hazard to migratory birds.
- When operationally practicable, follow the USFWS guidelines for the siting, construction and operation of communications towers.

Objective 2: Reduce bird/animal aircraft strike hazards (BASH).

Mandatory Guidelines:

- Collect bird/animal aircraft incident data and maintain records of BASH incidents, including time of day, date, species involved, and location.
- Continue efforts to develop and implement a BASH plan.

Recommended Guidelines:

- Ensure that SNI natural resources manager attends classes on bird hazards to aircraft operation.
- Mow airfield and adjacent areas to discourage use by avian species.
- Remove potential bird perches from the airfield vicinity
- Conduct censuses of the airfield area to determine avian usage patterns.

Objective and Guidelines for Seabirds

Objective: Monitor and protect seabird populations and breeding colonies.

Recommended Guidelines:

- Continue aerial surveys of Brandt's cormorants nesting colonies to determine distribution and breeding population size.
- Maintain closure signs and gates around Brandt's cormorants nesting colonies.
- Investigate methods to assess distribution of western gull nest sites and reproductive success.
- Support outside research of seabird biology, interactions with mammalian predators, and impacts from increasing marine mammal presence.
- Continue environmental education of SNI personnel and visitors

Objectives and Guidelines for Land birds

Objective 1: Monitor populations of resident land birds.

Recommended Guidelines:

- Conduct biannual point counts (using established methodology), to determine relative abundance of species during breeding and non-breeding season.
- Conduct additional surveys to determine the status of American kestrels.
- Conduct winter surveys to determine numbers and locations of burrowing owls.
- Whenever possible, conduct roadside and airfield mowing outside the breeding season of native ground nesting land birds.

Objective 2: Enhance important surface water areas used by resident and migratory passerines.

Recommended Guidelines:

- Continue *Arundo donax* removal and riparian restoration at Humphrey Sump.
- Remove tamarix at Tule Creek.
- Encourage transition to desalinization as the total potable water source and restore depleted near surface and fresh water sources.

3.3 Species Warranting Navy Stewardship

Although NBVC is not required to manage for species warranting Navy stewardship, we recognize the value of maintaining diverse ecosystems. We also recognize that it is prudent to protect rare species as a proactive strategy to prevent future Federal listings. To the extent that resources are available to support the management of these species, NBVC intends to implement the following objectives and guidelines.

General Objectives and Guidelines for Flora and Fauna Warranting Navy Stewardship

Objective 1: Provide for the recovery, enhancement, and protection of species warranting Navy stewardship, as a proactive strategy to prevent Federal listings.

Recommended Guidelines:

- Maintain contact with regional specialists and regulatory agencies regarding the listing status of unique species known or thought to occur on SNI.
- Continue to participate in the USFWS/NMFS review and listing process for species known or thought to occur on SNI that are being considered for listing under the ESA.
- Stay updated on agency decisions, published material, and meetings that change the listing status of species.
- To the extent practical, avoid or minimize impacts from military activities to species warranting Navy stewardship.

Objective 2: Continue to resolve baseline biological data gaps.

Recommended Guidelines:

- Support on-going and new research on distribution and ecology of species warranting Navy stewardship. Encourage academic institutions to facilitate resource data collection.
- Continue to inventory and map existing species warranting Navy stewardship.

- Determine taxonomic status of selected species.

Species warranting Navy consideration and the habitats which support those species, will be protected to the extent practicable by giving them consideration during the land use planning processes. The two native species of terrestrial mammals, the island fox and the island deer mouse, warrant additional special considerations and are further discussed below.

General Objective and Guidelines for Island Fox and Island Deer Mice.

Objective: Maintain viable populations of island fox and island deer mice on SNI.

Recommended Guidelines:

- Preserve habitat quality and integrity to the extent practicable.
- Implement a feral cat control/removal program.
- Ensure that pest management practices minimize harm to island fox and deer mouse populations. Continue to restrict the use of rodenticides to avoid secondary poisoning of foxes and discourage habitation of buildings by mice through appropriate measures.

San Nicolas Island Fox

The San Nicolas Island fox population is affected both by competition with feral cats, and the acts of human beings. Management of island foxes consists primarily of maintaining current population levels through protection of habitat, and reduction of human caused impacts.

Objectives and Guidelines for San Nicolas Island Fox

Objective 1: Maintain a viable population of the San Nicolas Island fox.

Recommended Guidelines:

- Continue regular monitoring of the island fox population.
- Continue prohibition of domestic dogs on SNI to protect foxes against transfer of infectious canine diseases.

Objective 2: Reduce negative, human-caused impacts to foxes.

Recommended Guidelines:

- Maintain island speed limit at 35 mph or less.
- Maintain roadside mowing to increase visibility of foxes to drivers.
- Maintain roadside signs warning of foxes.
- Maintain self-closing lids on dumpsters to exclude foxes.
- Continue education of island personnel to fox issues and their role in helping to preserve the species.

Objective 3: Remain an active participant with other agencies regarding island fox issues.

Recommended Guidelines:

- Maintain contact with regional specialists and regulatory agencies to stay updated on the listing status of the island fox.

San Nicolas Island Deer Mouse

The status of the San Nicolas Island deer mouse population is unknown at this time. Management of mouse populations consists primarily of habitat protection.

Objective and Guidelines for Deer Mice

Objective: Determine the status of deer mouse populations.

Recommended Guidelines:

- Establish and implement a monitoring program to evaluate population status and overall health.

3.4 Habitat Conservation

Habitat conservation on SNI can be accomplished by implementing objectives and guidelines discussed below. Management associated with flora and fauna warranting Navy stewardship, and other management practices associated with vegetation, such as erosion control and exotic plant control, will further provide for habitat conservation on SNI.

The establishment of a habitat conservation strategy prior to initiating construction projects and routine maintenance activities aides in avoiding negative habitat impacts once the project is underway.

Objectives and Guidelines for Habitat Conservation

Objective 1: Continue programs to minimize impacts and protect the habitats of federally listed and species warranting Navy stewardship to the maximum extent practicable.

Recommended Guidelines:

- Continue to work closely with the Public Works Department, Range, and other departments/programs. Assist with project development and implementation to ensure incorporation of natural resource management considerations.
- Initiate involvement with project proponents at the earliest practicable stage in the planning process.
- Continue efforts to encourage reuse of existing zones of disturbance to the extent practicable.
- Continue to encourage redirection of new surface-disturbing activities away from areas that are known potential quality habitats or habitats of potentially significant species.
- Direct protection efforts towards avoidance of impacts to known high value habitat areas.
- Ensure development will either avoid or mitigate impacts to these areas to the extent practicable.

Objective 2: Develop an accurate and precise database for sensitive, unique, or protected habitats, particularly those associated with flora and fauna warranting Navy stewardship.

Recommended Guidelines:

- Use global positioning system (GPS) technology to delineate locations of flora and fauna warranting Navy stewardship.
- Develop GIS databases with spatial data related to detailed supporting data, text, and other documentation.
- Continue to use GPS and GIS to locate, map, and record locations of plant and animal species and associations that accurately delineate boundaries of high value habitat, such as (but not limited to) wetlands, endangered species habitats, unique plant assemblages or plant-animal associations, and areas of scientific interest.

3.4.1 Water Resources

Executive Order 12608, *Protection of Wetlands*, is an overall wetlands policy for all agencies managing federal lands, sponsoring federal projects, or providing federal funds to state or local projects. It requires federal agencies to follow avoidance, mitigation, and preservation procedures with public input before proposing new construction in wetlands. To achieve compliance with this executive order, the project proponent and ED design projects to avoid wetlands, minimize activities in wetlands, and coordinate with the U.S. Army Corps of Engineers (USACE) and the Clean Water Act Section 404 process, as appropriate, to determine wetland management needs.

Water Quality

The quality of surface and groundwater is enhanced when soil erosion and contamination are reduced. Implementation of the Spill Prevention Control and Containment Plan (SPCC) and a soil erosion program will greatly reduce potential for contamination and erosion influences on the water quality in Tule Creek and other surface water bodies.

Due to the isolation of SNI, limited access, and island operations, potential contaminants of the watershed are limited; however, the Los Angeles Regional Water Quality Control Board (LARWQCB) has established groundwater quality objectives for SNI.

Effluent discharge (amount and concentration of potential contaminants) for the San Nicolas Island Wastewater Treatment Plant is governed by a Waste Discharge Requirement issued by the Los Angeles Regional Water Quality Control Board. The primary method of wastewater disposal is via evaporation from a series of three oxidation ponds. Irrigation is the secondary method of disposal. Treated wastewater is sprayed over a six-acre land area, which is restricted and off-limits to personnel. A plan to meet limitations for chlorides and total dissolved solids as set forth under the Waste Discharge Permit for SNI is in effect.

Urban storm water runoff is addressed in the SNI Storm Water Pollution Prevention Plan. SNI is covered under the National Pollution Discharge Elimination System (NPDES) General Industrial Activities Storm Water Permit, which was issued by the State Water Resources Control Board (SWRCB). To comply with permit requirements, SNI has implemented a storm water pollution prevention program, which includes eliminating illicit discharges, implementing best management practices, conducting storm water monitoring, conducting industrial inspections, and training employees.

Objective and Guidelines for Water Resources

Objective: Maintain compliance with the Clean Water Act, Executive Orders, and other applicable water quality-related regulations or directives.

Mandatory Guidelines:

- Coordinate with the USACE, USEPA, and LARWQCB as appropriate with regard to restrictions on, or required permits for, any Navy actions that may affect water resources.
- Maintain compliance with LARWQCB objectives for groundwater quality on SNI.

Recommended Guidelines:

- Update and implement the SNI SPCC.
- Review military and nonmilitary uses at SNI and determine which uses may impact water resources.

3.4.2 Erosion Control

The military mission and preparedness at SNI could be impacted by severe erosion, as infrastructure and facilities are potentially threatened. There are many types of soil erosion, such as that caused by wind or water (including runoff and wave action). Soil erosion depends on numerous factors, including slope, propensity of certain soil types to erode under various conditions, how consolidated (compacted) the soil is, water infiltration capacity, etc. Soil erosion control and improving existing practices is an important part of natural resources management on SNI. An approach involving large-scale (island-level) erosion prevention and small-scale (site-specific) erosion control is essential.

Objective and Guidelines for Erosion Control

Objective: Continue erosion control and improve existing practices.

Mandatory Guidelines:

- Continue to comply with 40 CFR 258, Criteria for Municipal Solid Waste Landfills for the closed landfill.

Recommended Guidelines:

- Ensure that large-scale erosion patterns are considered in planning, allowing decision-makers to better place activities, new construction, and habitat rehabilitation efforts.
- Assess individual sites for small-scale (or perhaps large-scale) erosion threats.
- Develop a formal erosion plan, including recommendations.
- Implement recommendations to reduce gully development or expansion.
- Implement roadway improvement recommendations and investigate redirecting runway runoff to the ocean.
- Examine and maintain erosion control projects and roadways during the dry season and monitor areas of concern during rainy periods.
- Spread gravel in appropriate areas to slow runoff and increase percolation.
- Ensure that new construction projects include erosion prevention plans.

3.4.3 Exotic Plant Control

The Federal Noxious Weed Act (7 USC §2801 *et seq.*) provides for control and eradication of noxious (pest) plants and weeds on land under the control of the federal government. Executive Order 13112,

Invasive Species, requires federal agencies to prevent the introduction of invasive species and provide for their control. Pesticide use in natural resources management programs must comply with applicable requirements of Chapter 13 of OPNAVINST 5090.1B. Such programs must also allow for the conservation of federal and state listed plants and promote their delisting by maintaining or enhancing the ecosystem they depend upon. The control and eradication of non-native species, especially invasives, is of primary importance to natural resources management on SNI and is a fundamental step toward conservation of island ecosystems.

Objectives and Guidelines for Exotic Plant Control

Objective 1: Minimize introduction of non-native exotic plant species to SNI.

Mandatory Guidelines:

- Require vehicles and equipment be cleaned prior to shipment to the island, and between uses at different island construction sites.
- Require documentation that all gravel and fill materials being brought to the island are certified, “weed free.”
- Prohibit use of non-island plants for landscaping unless specifically approved by ED.

Objective 2: Remove high priority exotic species and continue to evaluate the necessity for removal of other species.

Recommended Guidelines:

- Complete a non-native plant species management plan.
- Expand the current weedy species removal program.
- Continue investigating the best methods for removal, control, and timing of removal of non-native plants and ensure compliance with applicable regulations governing removal.
- Map the distribution of noxious weeds, and those that have the potential to become noxious, every five years.

Objective 3: Manage roads, access routes and new construction sites to minimize the spread of exotic species.

Recommended Guidelines:

- Designate and maintain roads and access routes.
- Require that maintenance or repair of existing roads stay within established footprints.
- Clean roadside mowing equipment of adhering dirt and vegetation between mowing cycles.
- Schedule roadside mowing to minimize weedy species seed distribution.
- Require construction projects in predominantly native habitat to set aside topsoil for redistribution post-construction, to conserve the native species seed bank and reduce conditions for weedy species invasion.

3.4.4 Pest Control

Pest control on SNI is primarily concerned with the control or elimination of established pests and prevention of new pest species (invertebrates and vertebrates) introductions. Pest species known to occur on SNI include feral cats, decollete snails, European garden snails, argentine ants, European starlings, English house sparrows, and the occasional rock dove. Other known vertebrates introduced to SNI in the

last 10 years include the Virginia opossum, Beeche's ground squirrel, and dusky footed wood rat. All were caught and removed by Environmental personnel.

Objective and Guidelines for Pest Species in General

Objective: Minimize, to the greatest practical extent, the introduction of pest species to SNI.

Recommended Guidelines:

- Continue the prohibition on bringing pets to the island.
- Require all barge and air cargo shipments (both contractor and government) be inspected for vertebrate and invertebrate species before departing port or airfield for SNI.
- Establish an enforcement protocol for barge and air cargo shipment inspections.
- Require gravel and soils be free of invertebrates.
- Require refuse and shipping bins be inspected before transportation to SNI.
- Develop a rodent control/removal plan and implement if introduced species are detected.

Objective and Guidelines for Feral Cats

Objective: Manage the feral cat population within the capacity of SNI resources.

Recommended Guidelines:

- Assess the potential for control/removal of feral cats.
- Fully fund and implement a feral cat control/removal program.

Objectives and Guidelines for Rodents

Objective 1: Determine presence or absence of non-native rodents.

Recommended Guidelines:

- Conduct a comprehensive island survey for rats and house mice.
- Establish permanent rat monitoring stations in areas of likely invasion.

Objective and Guidelines for Invertebrate Pests

Objective: Investigate and implement methods to control invertebrate pest species found on SNI.

Recommended Guidelines:

- Research control methods for argentine ant and decollete snails.
- Determine the distribution of argentine ants on SNI.
- Determine the distribution of decollete snails on SNI.
- Prevent the spread of decollete snails by restricting use of SNI Native Plant Nursery stock to landscaping projects in the living compound.

3.5 Resources Inventory and Data Management

3.5.1 Introduction

The inventory and recordation of biological field data and the development of a computerized retrieval system for these data are ongoing efforts at SNI. This is particularly important for those species that may be, or are being, considered for listing under provisions of the ESA. It is also equally important to provide this information, in a usable format; to other land managers since management of species can best be accomplished when all forms of potential impacts are considered for a species throughout its entire range. Ecosystem-wide resource management requires mutual cooperation of regional land managers, regulators, and scientific groups and facilitates regional planning efforts towards common goals.

3.5.2 Data Gaps and Research Needs

Objectives and guidelines throughout Chapter 3 identify data gaps remaining in the natural resources program on SNI.

3.5.3 Data Management

The collection of natural resources data is a virtually useless venture without the capability to store, retrieve, and analyze these data. NBVC is committed to providing efficient, cost-effective systems for data storage and analysis.

Objective and Guidelines for Data Management

Objective: Continue to develop and maintain SNI's data management capabilities.

Recommended Guidelines:

- Continue to support ongoing and new research, encouraging the use of specialists to facilitate recognition and discovery of previously unrecorded species or species occurring in previously unrecorded locations.
- Direct specific attention towards locating and identifying rare, endemic, undescribed, and potentially new species.
- Continue to update the GIS database.
- Develop databases for invertebrate species. Little is known about this group at SNI, and it is the most likely to produce new or previously unrecorded species.
- Provide appropriate data to the California Natural Diversity Database.

3.6 Cultural Resources

Cultural resources known from San Nicolas Island are described in Section 2.4. The cultural resources program is described in detail in the Cultural Resources Summary Report (NAVFACENGCOM SWDIV 1997). The cultural resource management program is described in the SNI Integrated Cultural Resources Management Plan, which is currently under development.

4.0 PLANNING FOR COMPATIBLE USE OF NATURAL RESOURCES

4.1 Military Mission and Environmental Compatibility

Guidance on setting and prioritizing the implementation of INRMP goals is provided in OPNAVINST 5090.1B, *Integrated Natural Resources Management*. Natural resources on military installations are managed in the public interest using a multiple-use/sustained-yield approach within limitations of the overriding military mission. Management goals for resources are based on an ecosystem management approach, giving the highest priority to endangered and threatened species.

Objective and Guidelines for Compatibility

Objective: Ensure no net loss in military mission support capabilities while pursuing environmental conservation and protection needs.

Recommended Guidelines:

- Facilitate ongoing and evolving mission support activities by integrating land use and environmental planning.
- Minimize land use compatibility constraints for on-site projects.
- Standardize procedures for guiding ongoing mission support projects by using existing agreements and programmatic consultations.
- Pursue new agreements and programmatic consultations to augment standard operating procedures for guiding new projects.
- Protect the integrity of important natural resources while accommodating needed mission support activities. Utilize existing land use footprints or previously disturbed areas to the fullest extent practical for new and ongoing mission support projects.
- Continue to update knowledge of resource patterns (type, sensitivity, distribution) and transfer information to the GIS. Map and characterize disturbed land use patterns created by existing and previously utilized mission support activities.

4.2 Commercial Forestry and Agriculture

OPNAVINST 5090.1B requires the Navy to identify areas that may be suitable and available for agricultural out leasing or commercial forestry. More specifically, the Military Construction Authorization Act provides for the use of DoD lands under a lease to an agency, organization, or person for the purpose of agricultural out leasing or the production of and sale of forest products that have commercial value.

At SNI there are no forestlands suitable for timber production. Because of the lack of timber, aridity of the island, and limited water resources for irrigation, the development of timber resources on SNI is unlikely. Commercially viable agriculture is not realistic for the island and is not compatible with SNI's mission.

Because the determining factors regarding island usage are compatibility with the military mission, safety issues associated with the military mission, and the protection of cultural sites, sensitive environmental

habitats and managed species, the Navy has no plans to initiate commercial use, such as grazing or oil exploration, on the island.

4.3 Landscaping and Grounds Maintenance

Maintenance of semi-developed and developed grounds is accomplished at SNI with technical assistance from Environmental personnel. NBVC supports the policies regarding the use of native species in accordance with the presidential memo on the subject (Office of the President 1994).

Water conservation is emphasized in landscaping and grounds maintenance at SNI. Xeriscaping, an important aspect of the water conservation program, is based on the use of native or drought-resistant plants and efficient irrigation practices that require less water. Xeriscaping can be both functional and aesthetic. Xeriscaping will continue to be used to the extent possible.

Principals of xeriscaping include the following:

- using drought tolerant species of plants that require a minimum of maintenance;
- using mulch as a ground cover to preclude weed growth and enhance water retention;
- using plastic or rubber-based products to prevent the growth of undesirable species;
- using species that accomplish a goal, such as using ground cover to prevent blowing dust and soil erosion;
- watering using automatically controlled cycles during low evaporation periods; and
- using drip irrigation whenever possible.

Intact native ecosystems at SNI are easier to manage for long-term stability with the use of native plants for landscaping, as exotic non-native species have the potential to escape into natural areas. Native plants, especially successional species, are considered as a landscaping choice. Native plants provide extra resources for native pollinators and birds thus helping to buffer the edge effect on neighboring intact ecosystems. Land developments and road maintenance provide opportunities for plant salvage as ecologically appropriate and low cost landscaping resources. Native plants suitable for landscaping on SNI are listed in Appendix 11.

Objective and Guidelines for Landscaping

Objective: Consider environmental factors in landscape planning.

Recommended Guidelines:

- Implement new technology to reduce water usage whenever possible.
- Utilize xeriscaping to the maximum extent possible.
- Use native species to the greatest extent possible.
- Utilize landscaping practices that reduce the use of toxic chemicals.

4.4 Outdoor Recreation

Naval Operations Instruction (OPNAVINST) 5090.1B, states that military lands and waters shall be made available to the public for recreational usage to the extent it is appropriate and consistent with the military

mission, and that the natural resources will support such usage. Since SNI is the site of weapons testing and sensitive equipment, public access is prohibited in the interest of security and safety. This precludes recreational use of the island by the general public.

Outdoor recreational opportunities are available to island personnel, and are regulated by the installation for the protection of cultural and natural resources. Land-based recreational activities are not allowed on the south side of the island. This INRMP does not regulate offshore recreational activities, other Navy requirement such as safety and security do.

Outdoor recreational activities at SNI include hiking, biking, fishing, wildlife observation, diving, surfing, kayaking, and boating. Interested individuals periodically suggest the potential for Chukar hunting on the island. Safety, security, cultural resource protection, and natural resource management concerns, make hunting on the island infeasible. Bird hunting programs have a significant potential to negatively impact the island fox population. Introduction of a canid disease via hunting dogs could jeopardize the existence of the population, and hunting would result in reduction of an important prey resource of the fox.

Three objectives are recognized as essential for coordinating outdoor recreation with the protection of natural resources:

- provide outdoor recreation opportunities to enhance the quality of life for island personnel while meeting resource protection requirements;
- provide outdoor recreation opportunities to island personnel while protecting the military mission; and
- resolve conflicts between recreation and other uses of SNI.

Three categories of outdoor recreation opportunities are recognized for island personnel: concentrated area activities, dispersed area activities, and special interest area activities. Existing programs and facilities and proposed opportunities are discussed below.

Concentrated Outdoor Recreation Areas and Activities

Cissy Cove, Corral Harbor, and Daytona Beach are popular sites for outdoor recreational pursuits. Recreational fishing boats are launched from Cissy Cove. Corral Harbor is favored for snorkeling, diving, and kayaking. Daytona Beach is a popular fishing spot.

Dispersed Outdoor Recreation Areas and Activities

Fishing is probably the most popular dispersed recreational activity on SNI. The island is surrounded by lush kelp forests, exhibits an upwelling of nutrients, and has numerous fishing spots along the shoreline. Many of the better areas to fish are identified by fishing signs. Some of the more common species include cabezon, California sheephead, rock bass, white bass, and calico bass. Fishermen must have a California ocean-fishing license to fish on SNI and abide by bag and size limits. The CDFG is responsible for the enforcement of fishing regulations on the island, although among the small SNI community, peer pressure to abide by the rules and regulations appears to foster self-regulation of fishing laws. Fishermen also must abide by SNI area closures due to environmental laws protecting certain wildlife and respect cultural resources areas, such as Indian middens located near coastal areas. Environmental personnel post flyers regarding fishing on SNI, including specific information on different species of fish and catch limits, in obvious locations.

Hiking has the greatest potential for development as a dispersed outdoor recreational activity. However, due to the abundance of protected natural and archaeological resources, hiking is currently limited. A system of officially designated and marked (route markers and interpretive signs) hiking trails could be developed in appropriate areas. Designated trails would reduce disturbance to sensitive areas, reduce destruction of vegetation, and provide additional recreational opportunities on SNI.

Special Interest Area Outdoor Activities

Surfing

Surfing is authorized at Daytona Beach and Anchor Point and is governed by NAWSPMNOTE 1710.5, dated 25 Feb 1997. Surfing is restricted to specific areas.

Recreational Boats

Written procedures for the use of inflatable boats available for recreational purposes were established in 1993 by NAVOLFSNIINST 3130.1H dated 15 Apr 1993. Boat use is limited to the north side of the island between Vizcaino Point and the Sand Spit.

Kayaking

Regulations for kayaking were approved in 1996 by NAVOLFSNIDEPTINST 1710.3, dated 31 July 1996, and specify that this activity be consistent with the preservation of natural and cultural resources.

Recreational Diving

Instructions for recreational divers were filed in 1994 by NAVOLFMEMO94-03 1710, dated 03 Nov 1994. Divers must avoid operationally restricted areas, culturally sensitive sites, and ecologically sensitive areas.

Objective and Guidelines for Outdoor Recreation

Objective: Evaluate opportunities for recreation on SNI and ensure ongoing recreational activities are consistent with military needs and protection of resources.

Mandatory Guidelines:

- Maintain recreational opportunities on SNI consistent with the military mission.

Recommended Guidelines:

- Periodically review appropriateness of instituting new outdoor recreation activities.
- Continue to provide information about fishing on SNI to island personnel.
- Investigate development of designated hiking trails.
- Periodically review and update recreational policies to ensure compliance with environmental management regulations.
- Prepare and annually update maps of recommended and prohibited diving, surfing, kayaking and boating locations.

5.0 PLANNING AND ADMINISTRATION

5.1 Island wide Land Use and Environmental Planning

The INRMP establishes the baseline setting and condition of natural resources on SNI. From this baseline condition, the Plan identifies resources management needs, the proposed management focus, and prioritizes management objectives and guidelines to ensure the long-term conservation and enhancement of identified resource values.

A key element of the natural resources management program is the early identification of projects and programs that may affect managed resources. Close coordination with project planners and early identification of potential conflicts with natural resource management issues provides both project planners and resource managers with the opportunity to jointly design and implement project plans in a manner that minimizes or eliminates adverse impacts. The primary means by which this is accomplished at SNI is through the environmental review process. This process has been designed to meet the requirements of the National Environmental Policy Act (NEPA) and has proven to be an effective tool to minimize impacts and support the military mission. The NEPA process is discussed in Section 5.1.1 below.

With the passage of the Sikes Act Improvement Act of 1997, INRMPs must be coordinated with the USFWS and the CDFG. It is acknowledged that management of resources of mutual concern to the Navy and other agencies is often best accomplished by region-wide, mutually supporting management efforts. Cooperative resource planning efforts are discussed in Section 5.2 below

5.1.1 National Environmental Policy Act Implementation

NEPA was created to disclose environmental concerns with human activities and resolve them to the best degree possible. Implementing NEPA instructions (OPNAVINST 5090.1B, Chapter 2, *Procedures for Implementing the National Environmental Policy Act*) require evaluation of damage to the environment. NEPA was not legislated to stop actions. Rather, it was crafted to identify environmental problems, providing an opportunity to resolve them using planning at early stages of project development.

5.1.1.1 Responsibilities

The NBVC ED has primary responsibility for NEPA implementation. Responsibilities include:

- ensuring each action proposal is reviewed in a timely manner;
- completing and forwarding documentation for Categorical Exclusions (CE) and continuing action determinations to the action proponent;
- coordinating consultation and document preparation with the proponent for actions requiring an Environmental Assessment (EA) or Environmental Impact Statement (EIS),
- assisting action proponents in development of an EA or EIS;
- serving as a member of the Project Review Board (NBVCINST 1010.1);
- forwarding EA and EIS documents to OPNAV via the chain of command; and
- serving as a single point of contact with regulatory agencies while engaged in the NEPA process.

5.1.1.2 NEPA Documentation

Results of project analyses are recorded through each step of environmental review. Either the proponent organization environmental coordinator or an ED representative performs an initial environmental review. Projects are analyzed initially for significant impacts to resources outlined in the NEPA process. If, during this initial review, a planned project is determined to have the potential to adversely impact one of these resources (such as natural resources), the proponent will generate a request for formal ED environmental analysis. The ED reviews all projects, whether requiring formal analysis or not, prior to implementation.

The ED works with the proponent to resolve data gaps or planning concerns. Once the necessary information and concerns are addressed to adequately identify and describe the proposed project, the ED then follows the environmental analysis process, outlined by NEPA, other pertinent federal laws, and Navy operating instructions and mandates, toward the appropriate avenue of closure.

NEPA documentation would consist of either a CE or EA when determined that the proposed action would not require an EIS. The EA as defined in regulations is a concise public document that serves to:

- provide sufficient evidence and analyses for determining whether to prepare an EIS or a Finding of No Significant Impact (FONSI);
- aid the agency to comply with NEPA when no EIS is required; and
- facilitate the preparation of an EIS when required (40 CFR 1508.9).

When it is deemed that an action may have a significant impact on the human environment, a detailed EIS is usually prepared as required by Section 102(2)(C) of the NEPA. Actions for which an EIS must be prepared include:

- large dredging projects;
- proposed major construction and filling of tidelands and/or wetlands;
- establishment of major new installations, and/or major land acquisitions that will result in changed property uses;
- new sanitary landfills; and
- disposal of biological or chemical munitions or pesticides or herbicides in a manner other than that for which they are authorized (OPNAVINST 5090.1B).

Actions that may have a significant impact on the quality of the human environment or are controversial in environmental effects, or when an EA concludes that an action's impacts will be significant or environmentally controversial, require the preparation of an EIS.

5.1.2 Mitigation

Mitigation is an option within NEPA and OPNAVINST 5090.1B when a proposed action affects the environment. Mitigation is a way to either consider less damaging options or provide means to offset damage to the environment. Below are five general mitigation tactics:

Avoidance: Avoid adverse impacts on natural resources by not performing activities that would result in such impact. Confine construction to areas where no significant impact would occur to natural resources.

Limitation of action: Reduce the extent of an impact by limiting the degree or magnitude of the action. Minimize impacts of construction projects by arranging timing, location, and magnitude of actions so that they have the least impact on natural resources.

Restoration of the environment: Restore the environment to its previous condition or better. This could involve reseeding and/or replanting an area with native plants after it has been damaged by construction projects.

Preservation and maintenance operations: Design the action to reduce adverse environmental effects. This could involve actions such as monitoring and controlling pollution, contamination, disturbance, or erosion caused by construction projects that would impact natural resources.

Replacement: Replace the resource or environment that will be impacted by construction projects. Replacement can occur in-kind or otherwise, on-site, or at another location. This could involve creation of the same type or better quality habitat for a particular impacted fish or wildlife species or creation of habitat for another species.

Mitigation that is identified in a FONSI is a Class 1 “must fund” for environmental purposes. This provides a mechanism to fund mitigation included in NEPA documents.

5.1.3 NEPA and Natural Resources Management

The ED uses NEPA to ensure its activities (as described in this INRMP) are properly planned, coordinated, and documented. It also uses NEPA to identify issues associated with other organizations’ projects, which affect SNI’s natural resources, when it has the opportunity to review such projects.

Siting projects is perhaps the most basic decision, which requires input from Environmental personnel. If this phase is done within the cooperative spirit of NEPA, most other environmental issues are generally resolved with relative ease. Decisions such as specific siting or mission planning should be cooperatively discussed prior to preparing NEPA draft documents.

An important offshoot of proper NEPA implementation is that projects are often enhanced by the effort. When natural resources managers understand mission/project requirements in terms of land features and requirements, they often not only offer more potential site options to mission or project planners but also offer alternatives to avoid future environmental conflicts.

5.1.4 NEPA and This INRMP

San Nicolas Island has no NEPA documentation for the natural resources program as a whole. Effects of implementation of this INRMP are being documented through an EA prepared concurrently with this INRMP. This INRMP can be referenced in descriptions of affected environment to reduce verbiage in other NEPA documents.

Objective and Guidelines for NEPA Implementation

Objective: Implement NEPA on SNI.

Mandatory Guidelines:

- Use NEPA to identify projects and activities on SNI, which might impact natural resources and work with project planners to resolve issues as early in the planning process as practical.
- Ensure this INRMP is documented according to NEPA.

5.2 Cooperative Resource Planning

5.2.1 Introduction

Effective natural resources management requires exchange of scientific and procedural knowledge among professionals and organizations. This is important because many species often range beyond a particular area, and their population stability may be dependent on collective, integrated management within the region. Thus, local and regional planning organizations often cooperate, and sometimes integrate efforts, to provide more effective and unified conservation goals.

5.2.2 Endangered Species Recovery Planning Efforts

The Navy is required to comply with laws and regulations governing federally protected species. Part of this duty is to consult with federal regulatory agencies and integrate species recovery and planning efforts of those agencies into Navy environmental programs. Additionally, cooperation in regional planning efforts with federal and state agencies and non-governmental conservation groups is encouraged to the extent practicable and feasible.

5.2.3 Other Regional Planning Efforts

The Navy cooperates and partners with governmental and non-governmental organizations for conservation of natural resources beyond those mentioned in the previous section. These proactive, cooperative efforts have a wide variety of benefits, including military mission sustainability and regional conservation.

5.3 Project Funding

In order to implement the various research, surveys, and programs necessary to fulfill the mission of the ED, funding must be identified and acquired. There are several avenues of funding available to the ED, beyond the typical Naval operational budget, that allow the inclusion of additional projects to assist the ED in their mission-related and stewardship endeavors. The ED must continually assess the priority and level of budgetary needs to fulfill 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 INRMPs continuously developing program.

These programs will be implemented using Navy personnel and program resources as much as possible; however, it is likely that contractors will accomplish many projects. The ED 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 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 tasks 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 tasks can be implemented virtually as soon as planning is performed.

Sikes Act Funds

Sikes Act funds are collected via sales of licenses to hunt or fish. They are authorized by the Sikes Act and may be used only for fish and wildlife management on the installation where they are collected. SNI generates no Sikes Act funds, and none are anticipated unless security and safety conditions change to allow hunting on the installation, which is not anticipated.

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 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 Program emphasizes five areas (Legacy Resources Management Program 2001).

- 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 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 (O&M), Major Range Test Facility Base, and input into the 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. It is the responsibility of ED to manage the natural resources program budget and funding. Once O&M funds are appropriated for core personnel and the program, funding can be justified for other project requirements.

Table 5.3: Natural Resources Projects*

Project	FY 06	FY 07	FY 08	FY 09	FY 10	Totals
Island Fox Monitoring	\$35	\$35	\$35	\$40	\$40	\$185
Pinniped Monitoring	\$150	\$200	\$150	\$150	\$150	\$800
Feral Cat Removal	\$40	\$40	\$40	\$40	\$40	\$200
Alien Plant Eradication	\$25	\$25	\$30	\$30	\$30	\$140
Pinniped Censusing	\$10	\$10	\$15	\$15	\$15	\$65
GIS Data Input	\$15	\$15	\$15	\$15	\$15	\$75
Wetlands Mapping	\$15	0	0	0	0	\$15
Island Night Lizards	0	0	0	0	\$15	\$15
Brown Pelican Monitoring	\$10	\$10	0	0	0	\$20
Vegetation Surveys	0	\$25	\$30	0	0	\$55
Total	\$300	\$360	\$315	\$290	\$305	\$1,570

* Funding in thousand of dollars.

The total budget for this INRMP is estimated at \$1,570,000 for 2006-2010. Budget estimates will be adjusted, as needed each year.

Objective and Guidelines for Funding

Objective: Adequately fund natural resources planning initiatives.

Recommended Guidelines:

- Provide documentation to secure appropriate levels of in-house (overhead) funding to support natural resource management programs.
- Develop prioritized lists of proposed management efforts to facilitate accomplishment of programs required for compliance with legal mandates and support the military mission.
- Develop long-range plans and supporting documentation to secure off-site funding.
- Continue to request funding from other agencies for programs of mutual benefit.
- Continue to support scientific, academic, and volunteer efforts to initiate or supplement natural resource management programs.

5.4 INRMP Implementation

This Plan is only as good as the Navy’s capability to implement it. This INRMP was prepared with a goal of 100 percent implementation. This INRMP becomes effective by signature of the installation commander, the USFWS, and CDFG. The INRMP is implemented by the appropriate laws, statutes, directives, and policy of the United States, Department of Defense, and the U.S. Navy.

5.4.1 Organization

Environmental staff at SNI can implement most of this INRMP and fulfill goals and objectives established in Chapter 1. Other organizations identified in Chapter 1 are also capable of implementing their portions of this INRMP with no organizational changes, although they may elect to make changes for improved operations efficiency.

5.4.2 Personnel

Personnel assigned to natural resources management are the core staff responsible for implementing the INRMP. These personnel ensure that a consistent conservation program is carried out by using strategies outlined in this plan to support the Navy mission and achieve INRMP goals and objectives.

5.4.2.1 Staffing

The ED is responsible for identifying personnel requirements to accomplish INRMP goals. The ED is also responsible for providing input into this process by allocating existing budgetary and personnel resources and then identifying staffing needs based on any additional current and future projects. The following staffing is required to implement this INRMP at SNI:

Ecologist
Biological Technician
Environmental Protection Specialist (NEPA)

Objective and Guidelines for Staffing

Objective: Continue to adequately staff natural resource management programs.

Recommended Guidelines:

- Maintain in-house expertise.
- Provide the means for adequate staffing for those projects and programs not supportable by in-house staff.

5.4.2.2 Personnel Training

Properly trained personnel are required to achieve objectives and guidelines of this INRMP. Environmental staff members entrusted with this work must have a thorough knowledge and understanding of biology and natural resources, as well as administrative duties such as project management, reporting, and contracting. Periodically, additional training is needed to keep personnel updated on the current practices and advances in knowledge of these topics. This training may be obtained from a variety of sources, including universities, regulatory agencies, professional societies, and other Navy or military organizations. These training opportunities may be offered in the forms of structured courses or conferences, workshops, and symposia. NBVC will evaluate the following annual workshops or professional conferences for attendance depending on funding available for travel and training:

- National Military Fish and Wildlife Association annual workshop;
- North American Natural Resources Conference; and

- Partners in Flight national, regional, and state meetings (generally in conjunction with other listed meetings).

Other conferences/workshops will be evaluated for their usefulness, and decisions will be made based on appropriateness to ongoing projects and funding availability. Projects, which are especially useful, are GPS, GIS, and endangered species training.

The Wildlife Society, Society for Ecological Restoration, and National Military Fish and Wildlife Association are among the professional societies applicable to meeting the needs of SNI's natural resources managers. Membership in these societies is encouraged. The Wildlife Society has some of the best scientific publications in the profession, and literature review is a necessary commitment to maintain standards. Attending meetings of these societies provides excellent opportunities to communicate with fellow professionals as well as maintain professional standards.

Objective and Guidelines for Personnel Training

Objective: Continue to improve the success of natural resources management activities through professional development and information exchange.

Recommended Guidelines:

- Maintain staff knowledge of management strategies through training and participation in or hosting workshops, research presentations, and other activities of regional, interstate, and international professional natural resources research and conservation programs.
- Share information with natural resources experts to ensure maximum benefits of adaptive management and research efforts.

Implementation Schedule

This INRMP will become effective upon the acceptance and signatory release described in Section 5.4, INRMP Implementation. 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. The ED 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 Navy mission.

Program Monitoring

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

5.4.3 External Assistance

Personnel limits have resulted in the need for outside assistance with natural resources programs on SNI. The growth of environmental compliance requirements has increased the need for external assistance, including on-the-ground personnel support.

5.4.3.1 Support Mechanisms

5.4.3.1.1 Volunteers

Volunteers are a valuable source of personnel assistance at SNI. Volunteers contribute about 1000 hours of assistance annually to the SNI natural resources program. Volunteers will continue to be an opportunistic source of assistance.

5.4.3.1.2 Other Agencies

NBVC recognizes the importance of cooperating with federal and state agencies in addition to private organizations. Chapter 1 and Section 5.2 identify other agencies and organizations with which SNI has cooperatively worked in recent years. These organizations, particularly this INRMP's signatory partners (USFWS and CDFG) and National Park Service will continue to assist with implementation of various aspects of this INRMP during the next five years.

5.4.3.1.3 University Assistance

Universities are an excellent source of research assistance. SNI has used several universities in recent years to help with specialized needs, such as the University of Arizona for GIS development, the University of California Riverside, the University of California Davis, and the University of California Santa Cruz. These are the most likely sources of assistance with implementation of this INRMP.

5.4.3.1.4 Contractor Support

Contractors give SNI access to a wide variety of specialties and fields. Contractors are involved in projects such as NEPA documentation, vegetation surveys, species surveys, management plans, and similar activities.

5.4.3.2 Planned External Support

The table below outlines needed external support projects in two priorities. Many of these projects will be determined by funding availability.

Table 5.4.3.2: 2006-2010 Natural Resources External Support Project Needs

Project	Priority*	Agency	Completion	Comments
Vegetation Surveys	2	Contractor	Various Projects	Planned, various studies
GIS Support	2	Contractor	Indefinite	Ongoing
Island Fox Monitoring	1	Contractor	Indefinite	Ongoing
Marine Mammal Censusing	1	NMFS	Indefinite	Ongoing
Night Lizard Monitoring	1	Biological	Intermittent	Planned

		Resources Division, USGS		
Brown Pelican Monitoring	1	Contractor	Intermittent	Planned
Snowy Plover Monitoring	1	Contractor	Indefinite	Ongoing
Feral Cat Removal	1	Contractor	Indefinite	Planned

* 1 Needed as soon as possible for immediate management application.

2 Useful for improving management to a significant degree over a long period.

Objective and Guidelines for External Assistance

Objective: Use external assistance as needed.

Recommended Guidelines:

- Provide funding and support for research and other studies to further SNI natural resources management.
- Provide personnel to manage certain aspects of the SNI natural resources program.
- Provide logistics and administrative support for various SNI natural resources programs.

5.4.4 Summary of INRMP Objectives

Appendix 12 lists specific objectives within this INRMP (sections identified within Chapters 3-5) in the order discussed. This list serves as a broad checklist to measure implementation of this INRMP. Most objectives have multiple guidelines for specific implementation. These guidelines (within each section) can be used as a specific checklist for INRMP implementation.

INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN

SAN NICOLAS ISLAND, CALIFORNIA

APPENDICES

Appendix 1: Regulatory Instruments that Affect Natural Resources Management on San Nicolas Island

Below is a list of the most significant federal and state laws and regulations and other regulatory instruments that may govern implementation of this Integrated Natural Resources Management Plan.

Bald Eagle Protection Act (PL 86-70, as amended)
Clean Water Act (PL 92-500, as amended; 33 USC §§ 1251 et seq)
Conservation and Rehabilitation Program on Military and Public Lands (PL 93-452)
Conservation Programs on Military Reservations (PL 90-465)
DoD Directive 4700.4, Natural Resources Management Program
DoD Instruction 4715.3, Environmental Conservation Program
DoD Instruction 4715.9, Environmental Planning and Analysis
DoD Instruction 5000.13, Natural Resources
DoD Directive 6050.1, Environmental Effects in the United States of DOD Actions
DoD Directive 6050.2, Use of Off-Road Vehicles on DOD Lands
Endangered Species Act of 1973 (PL93-305; 16 U.S.C. 1531 et seq)
Executive Order 11991, Protection and Enhancement of Environmental Quality: Amends Executive Order 11514
Executive Order 12608, Protection of Wetlands: Amends Executive Order 11990
Executive Order 12962, Recreational Fisheries
Executive Order 13112, Invasive Species, 1999
Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds
Federal Insecticide, Fungicide and Rodenticide Act (7 USC 136 *et seq.*)
Federal Noxious Weed Act of 1973 (PL 93-629)
Federal Water Pollution Control Act (PL 92-500, as amended)
Fish and Wildlife Coordination Act (PL 85-624)
Fish and Wildlife Conservation Act of 1980 (PL 96-366; 16 USC 2901)
Fish and Wildlife Conservation and Natural Resource Management Programs on Military Reservation (Amends Public Law 86-797 (Sikes Act) (PL 96-561)
Hunting, Fishing and Trapping on Military Lands (an update to the Military Construction Authorization Act 10 USC 2665)
Marine Mammal Protection Act of 1972 (Public Law 92-522; 16 U.S.C. 1361 et seq)
Migratory Bird Treaty Act (PL 65-186; 16 USC 703 *et seq.*)
National Environmental Policy Act of 1969 (as amended, PL 91-190; 42 USC 4321 *et seq.*)
Naval Operations Instruction OPNAVINST 5090.1B, Environmental and Natural Resources Program Manual
NAVFAC P-73. Real Estate Manual P-73.
Non-game Act (PL 93-366)
Noxious Plant Control Act (PL 90-583)
Presidential Memorandum, Environmentally and Economically Beneficial Practices on Federal Landscaped Grounds (April 26, 1994)
SECNAVINST 6240.6E, Implementation of DoD Directives under DoD Instruction 4700.4
Sikes Act Improvement Act of 1997 (PL 105-85, U.S.C. 670a et seq)
Watershed Protection and Flood Prevention Act (PL 92-419; 68 Stat 666, as amended & 86 Stat 667; 16 USC 1001)

Appendix 12: List of San Nicolas Island INRMP Objectives

The below list of **objectives** are presented in the order they appear in this INRMP in Chapters 3-5.

Threatened and Endangered Species in General (3.2.1)

Objective: Protect and maintain viable populations of threatened and endangered species and maintain compliance with ESA requirements.

Western Snowy Plover (3.2.1.1)

Objective 1: Protect and maintain island-wide viable populations of snowy plovers.

Objective 2: Support recovery plan efforts to establish stable Western snowy plover populations and eventual delisting.

Island Night Lizard (3.2.1.2)

Objective 1: Maintain a viable population of island night lizards on SNI.

Objective 2: Continue to resolve baseline, biological data gaps and continue habitat enhancement efforts.

Objective 3: Support recovery plan efforts to establish stable island night lizard populations and eventual delisting.

California Brown Pelican (3.2.1.3)

Objective: Protect seasonal roosting sites of the California brown pelican.

Marine Mammals in General (3.2.2)

Objective 1: Maintain compliance with MMPA mandates.

Objective 2: Monitor and protect island-wide pinniped breeding and haulout sites.

Objective 3: Continue authorized displacement and exclusion of pinnipeds from the barge operational area.

Migratory Birds in General (3.2.3)

Objective 1: Provide protection and enhancement of habitats used by resident and migratory bird species.

Objective 2: Reduce bird/animal aircraft strike hazards (BASH).

Seabirds (3.2.3)

Objective: Monitor and protect seabird populations and breeding colonies.

Landbirds (3.2.3)

Objective 1: Monitor populations of resident landbirds.

Objective 2: Enhance important surface water areas used by resident and migratory passerines.

Flora and Fauna Warranting Navy Stewardship (3.3)

Objective 1: Provide for the recovery, enhancement, and protection of species warranting Navy stewardship, as a proactive strategy to prevent Federal listings.

Objective 2: Continue to resolve baseline biological data gaps.

Mammals in General (3.3.2.1)

Objective: Maintain viable populations of mammal species on SNI.

San Nicolas Island Fox (3.3.2.1)

Objective 1: Maintain a viable population of the San Nicolas Island fox.

Objective 2: Reduce negative, human-caused impacts to foxes.

Objective 3: Remain an active participant with other agencies regarding island fox issues.

San Nicolas Island Deer Mouse (3.3.2.1)

Objective: Determine the status of deer mouse populations.

Habitat Conservation (3.4)

Objective 1: Continue programs to minimize impacts to protect the habitat of federally listed and species warranting Navy stewardship to the maximum extent practicable.

Objective 2: Develop an accurate and precise database for sensitive, unique, or protected habitats, particularly those associated with flora and fauna warranting Navy stewardship.

Water Resources (3.4.1)

Objective: Maintain compliance with the Clean Water Act, Executive Orders, and other applicable water quality-related regulations or directives.

Erosion Control (3.4.3)

Objective: Continue erosion control and improve existing practices.

Exotic Plant Control (3.4.4)

Objective 1: Minimize introduction of non-native exotic plant species to SNI.

Objective 2: Remove high priority exotic species and continue to evaluate the necessity for removal of other species.

Objective 3: Manage roads, access routes and new construction sites to minimize the spread of exotic species.

Pest Species in General (3.4.5)

Objective: Minimize, to the greatest practical extent, the introduction of pest species to SNI.

Feral Cats (3.4.5)

Objective: Manage the feral cat population within the capacity of SNI resources.

Rodents (3.4.5)

Objective 1: Determine presence or absence of non-native rodents.

Invertebrate Pests (3.4.5)

Objective: Investigate and implement methods to control invertebrate pest species found on SNI.

Data Management (3.5.3)

Objective: Continue to develop and maintain SNI's data management capabilities.

Compatibility (4.1)

Objective: Ensure no net loss in military mission support capabilities while pursuing environmental conservation and protection needs.

Landscaping (4.3)

Objective: Consider environmental factors in landscape planning.

Outdoor Recreation (4.4)

Objective: Evaluate opportunities for recreation on SNI and ensure ongoing recreation is consistent with military needs and the need to protect managed species.

NEPA Implementation (5.1.4)

Objective: Implement NEPA on SNI.

Funding (5.3)

Objective: Adequately fund natural resources planning initiatives.

Staffing (5.4.2.1)

Objective: Continue to adequately staff natural resource management programs.

Personnel Training (5.4.2.2)

Objective: Continue to improve the success of natural resources management activities through professional development and information exchange.

External Assistance (5.4.3.2)

Objective: Use external assistance as needed.