

***ENVIRONMENTAL ASSESSMENT FOR THE
DEVELOPMENT AND IMPLEMENTATION OF AN INTEGRATED
NATURAL RESOURCES MANAGEMENT PLAN
AT SAN NICOLAS ISLAND, CALIFORNIA***



September 2005

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ACRONYMS

BO	Biological Opinion
CDFG	California Department of Fish and Game
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DOD	Department of Defense
DON	Department of the Navy
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
ED	Environmental Division
EPA	Environmental Protection Agency
FONSI	Finding Of No Significant Impact
INRMP	Integrated Natural Resources Management Plan
LARWQCB	Los Angeles Regional Water Quality Control Board
MMPA	Marine Mammal Protection Act
NAWCWD	Naval Air Warfare Center Weapons Division
NBVC	Naval Base Ventura County
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
OEIS	Overseas Environmental Impact Statement
SNI	San Nicolas Island
USFWS	U.S. Fish and Wildlife Service

ABSTRACT

Pursuant to Council on Environmental Quality regulations (40 CFR Parts 1500-1508) implementing procedural provisions of the National Environmental Policy Act, the Department of the Navy gives notice that an Environmental Assessment has been prepared and an Environmental Impact Statement is not required for implementation of the Integrated Natural Resources Management Plan (INRMP) at San Nicolas Island (SNI), California. The Proposed Action (PA) is implementation of the INRMP at SNI, in accordance with the Sikes Act Improvement Act. The purpose of the INRMP is to establish a framework for management of natural resources at SNI. The INRMP identifies natural resources and their management and provides recommendations for operating procedures to manage significant natural resources at SNI. The No Action Alternative would continue with Natural Resources Management on SNI without the INRMP guidance documentation. Other alternatives evaluated but rejected were: 1) species-based natural resources management, and 2) compliance only management. Initial evaluation determined both of these other alternatives incapable of meeting the needs of the PA; therefore, they were eliminated from further detailed evaluation. Analysis has determined that, over time, adoption of the Proposed Action would enable SNI to achieve its goal of maintaining ecosystem viability and ensuring sustainability of desired military mission conditions while remaining in compliance with the Sikes Act.

EXECUTIVE SUMMARY

Pursuant to the Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508) implementing procedural provisions of the National Environmental Policy Act (NEPA), the Department of the Navy (DON) gives notice that an Environmental Assessment (EA) has been prepared and an Environmental Impact Statement (EIS) is not required for implementation of the Integrated Natural Resources Management Plan (INRMP), at San Nicolas Island (SNI), California.

The Proposed Action (PA) is implementation of the INRMP at SNI. The purpose of the INRMP is to establish a framework for management of natural resources at SNI. The INRMP identifies natural resources and their management and provides recommendations for operating procedures to manage significant natural resources at SNI. The need for the Proposed Action is to meet requirements of the Sikes Act, as amended (16 United States Code (USC) § 670a *et seq.*), and follow guidelines of the Department of Defense (DOD), Naval Facilities Engineering Command; and the Secretary of the Navy Environmental Policy Memorandum 98-06 (Navy 1998).

Various alternative approaches to accomplishing the Proposed Action were considered. These alternatives include: 1) the proposed action (the PA) to finalize an INRMP and begin implementation in accordance with the Sikes Act and Navy Policy upon issuance of a Finding of No Significant Impact (FONSI) and 2) the No Action alternative, to manage natural resources per *status quo* on SNI without an INRMP guidance document. Alternatives evaluated but rejected were: 1) species-based natural resources management, and 2) compliance only management. Implementation of either of those alternatives would not meet the requirements of the Sikes Act Improvement Act and Navy policy; therefore, they were eliminated from further detailed evaluation.

Analyses indicated the Proposed Action would result in either no significant adverse impacts or positive effects on each resource area. The Proposed Action is the plan that will direct the natural resources management program at SNI to adhere to a written INRMP, in accordance with the Sikes Act Improvement Act. Adopting the Proposed Action would result in a comprehensive environmental strategy for SNI that represents compliance, restoration, prevention, and conservation; improves the existing management approach for natural resources; and meets legal and policy requirements consistent with national natural resources management philosophies. Implementation would improve existing environmental conditions at SNI. In addition, natural resources management measures described in the plan will protect SNI ecosystems and their components from unacceptable damage or degradation and identify and restore previously degraded habitats. Over time, adoption of the Proposed Action alternative would enable SNI to achieve its goal of maintaining ecosystem viability and ensuring sustainability of desired military mission conditions. The No Action Alternative would meet the same needs and requirements of the PA, but would not include a written INRMP, and therefore would not be in compliance with the Sikes Act or Navy Policy.

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CHAPTER 1

PURPOSE AND NEED FOR ACTION

1.1 Background

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 San Nicolas Island (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, for NAWCWD. NBVC is responsible for managing all lands within Station boundaries to support the NAWCWD mission at Point Mugu, Port Hueneme and SNI, maintain environmental compliance, and exercise responsible stewardship of public lands. This is accomplished through the Environmental Division (ED).

Naval facilities at SNI support the mission of the Sea Range, which controls 36,000 square miles of Special Use Airspace over the Pacific Ocean. The Sea Range parallels the California coastline for about 200 miles and extends seaward for more than 180 nautical miles. Primary Naval operations on SNI are composed of test and evaluation of weapons systems. SNI's range support facilities include metric radars, telemetry antennas, receiver and transmitter facilities, a frequency monitoring station, range communications facilities, missile launching pads, ordnance bunkers, surveillance radars, meteorological measurement systems, and target control facilities.

1.2 Purpose and Need

The purpose of this action is to meet statutory requirements under the Sikes Act Public Law 105085, Div. B, Title XXIX, Nov. 18, 1997, 111 Stat 2017-2019, 2020-2022.

In November 1997, the Sikes Act, 16 U.S.C. § 670a et seq. was amended to require the Secretary of Defense to carry out a program to provide for the conservation and rehabilitation of natural resources on military installations. To facilitate this program, the amendments require the Secretaries of the military departments to prepare and implement integrated natural resource management plans for each military installation in the United States unless the absence of significant natural resources on a particular installation makes preparation of a plan for that installation inappropriate.

The principal use of military installations is to ensure the preparedness of the Armed Forces. Sikes Act requires each installation prepare an integrated natural resource management plan that provides

for the following management activities, to the extent that such activities are consistent with use of the installation for military preparedness:

- The conservation and rehabilitation of natural resources on the installation;
- The sustainable multipurpose use of the resources, to include hunting, fishing, trapping, and non-consumptive uses; and
- Subject to safety requirements and military security, public access to this installation to facilitate such uses.

As required by the Sikes Act, the plan must, to the extent appropriate and applicable provide for:

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

Through developing the INRMP, the Navy has worked in cooperation with the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) so that the plan will reflect the mutual agreement of these parties concerning conservation, protection, and management of fish and wildlife resources on SNI. The Navy also sought input from the National Marine Fisheries Service (NMFS) on the plan regarding species under NMFS jurisdiction.

1.3 Regulatory Compliance

The NEPA of 1969, 42 USC § 4231 et seq. as amended, requires federal agencies to take into consideration the potential environmental consequences of proposed actions in their decision-making process. The intent of NEPA is to protect the environment through providing an assessment of alternative actions and providing the opportunity for public comment on federal actions that have the potential to impact the environment. The CEQ was established under NEPA to implement and

oversee federal policy in this process. The CEQ has issued the *Regulations for Implementing Procedural Provisions of the National Environmental Policy Act* (40 Code of Federal Regulations {CFR} § 1500-1508). These regulations specify that an EA be prepared to:

- Briefly provide sufficient evidence and analysis for determining whether to prepare an EIS or a FONSI;
- Aid in an agency's compliance with NEPA when no EIS is necessary; and
- Facilitate the preparation of an EIS when one is necessary.

The Environmental and Natural Resources Program Manual (OPNAVINST 5090.1B) further requires preparation of NEPA documentation prior to INRMP approval. Information on laws, executive orders (EOs) regulations, and DOD directives for environmental management is available on the Internet at <https://www.denix.osd.mil/denix/Public/Library/NCR/about.html>.

1.4 Agency Roles

NBVC is the Lead Agency responsible for compliance with NEPA, in implementation of the herein PA. The ED is responsible for the management of natural resources on the island as part of NBVC's overall environmental program. The NBVC ED is responsible for ensuring management operations are conducted in accordance with all applicable environmental regulations and conditions.

The USFWS is responsible for the protection and management of unique species, particularly threatened and endangered species. The USFWS is a signatory cooperator in implementation of the INRMP in accordance with the Sikes Act.

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 the INRMP in accordance with the Sikes Act.

The NMFS considers SNI an important resource area 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 California sea lion and other research on SNI. 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 SNI. These regulations allow NMFS to issue annual Letters of Authorization (LOA) to the Navy in accordance with Section 101 (a)(5)(A) of the Marine Mammal Protection Act (MMPA).

1.5 Scope of the Environmental Assessment

This EA has been prepared to evaluate the potential environmental impacts of implementing the proposed INRMP for SNI. The analysis process involved the review of installation natural resources-related data collected by the Navy, a variety of other governmental agencies, and private organizations. The process

involved interviews with SNI personnel involved with natural resources management, military training planning, and installation maintenance. The analysis compares and summarizes the environmental consequences of the Proposed Action and the no action alternative rather than individual projects or practices and is therefore a programmatic EA. Site-specific environmental analyses that are required for future projects may be tiered to this EA provided the anticipated impacts of a specific project; project components, the affected resources, or circumstances do not differ substantially from those evaluated in this EA.

CHAPTER 2

PROPOSED ACTION AND ALTERNATIVES

2.1 Selection Criteria for Alternatives

Various alternative approaches to accomplishing the purpose described in Chapter 1 are identified, described, and evaluated in this chapter. These have been chosen to provide a reasonable range of options for consideration by decision-makers in terms of their capacity to meet project objectives. Four alternatives were identified initially, but after preliminary screening, two were eliminated from further consideration, as they clearly were incapable of meeting Sikes Act requirements. Preliminary screening involved examining each of the candidate alternatives on the basis of several key criteria, including:

- compatibility with military mission requirements,
- ecological soundness, and
- economic feasibility.

Emerging from this screening were two alternatives: the Proposed Action and the No Action Alternative. A description of each alternative follows. Potential environmental impacts of the two selected alternatives are analyzed in Chapter 4.

There are issues that will not be considered in alternative analyses sections as they take precedence over almost all management options. First and foremost, the SNI military mission must not be compromised. Therefore, options, such as removing large areas from military use that would inhibit the installation from performing its mission, will not be considered. The exception would be the adoption of restrictions or alterations to standard operating procedures to comply with laws, such as the Endangered Species Act.

The mission of SNI is for testing and evaluation of weapons systems. The island is primarily used for tracking weapons testing as it occurs on the Sea Range around the island. The island itself serves as a launch site for some missile programs and provides an airfield in support. The primary facilities used for this work were built many years ago, and current programs re-use existing sites on a temporary basis. This minimizes the impact footprint and does not result in any military land-use constraints to implementing the INRMP.

Second, the issues of safety and security must not be compromised. Safety and security are high priorities at SNI and are directly related to maintaining the military mission. Therefore, management options that create significant safety and/or security risks (*e.g.*, allowing uninhibited access to the island for recreational purposes) will not be considered.

2.2 Alternatives Considered But Eliminated

Provisions of NEPA require that a range of reasonable alternatives be explored and evaluated (Table 2.1) to the two alternatives described in Sections 2.3 and 2.4 below, two other options were identified: (1) Individual Species Habitat Management alternative, and (2) Compliance Only alternative.

Table 2.1 COMPARISON OF ALTERNATIVES BY SELECTION CRITERIA

<i>ALTERNATIVES</i>	COMPATIBLE WITH MISSION	ECOLOGICALLY SOUND	ECONOMICALLY FEASIBLE	SIKES ACT COMPLIANT
INDIVIDUAL SPECIES/HABITAT MANAGEMENT	No	Yes	No	No
COMPLIANCE ONLY	Yes	No	Yes	No
NO ACTION – NO DEVELOPMENT OF INRMP	Yes	Yes	Yes	No
PROPOSED ACTION – DEVELOP & IMPLEMENT INRMP	Yes	Yes	Yes	Yes

The “Individual Species Habitat Management” alternative would have focused only on actions related to inventorying and protecting habitat of the multitudes of species occurring on SNI, without regard to direct compliance requirements and military land use needs. This alternative would not have been compatible with military land-use since it ultimately would result in the development of habitat protection and permanent access restriction areas island-wide. Furthermore, such a strategy would not have been economically feasible, since the costs to document and protect all the species and habitats on SNI would be astronomical.

The “Compliance Only” alternative would have resulted in the implementation of those practices directly required by federal mandated laws and regulations. Actions not considered absolutely required by legal mandate would have been eliminated from practice. This alternative would not satisfied the criteria of “Ecological Soundness”, since many non-mandated actions provide protection and management to species and habitats that could become critical species of concern if neglected. This situation could result in regulatory-mandated restrictions to future military land-use on SNI, as well as create conflict with other federal and state regional biodiversity initiatives.

Compliance only does not meet the stewardship objectives of the Sikes Act, DOD Instruction 4715.3, or OPNAVINST 5090.1B and was therefore eliminated.

2.3 Alternative A: Manage Natural Resources Per Status Quo – the No Action Alternative

The No Action Alternative is continued implementation of the objectives and practices under the existing natural resources management programs only without an established INRMP. On-going practices used for management of natural resources on SNI would continue without referring to the INRMP guidance and there would be no change to the objectives of the current natural resources management programs. Compliance with laws and executive orders on endangered species, water quality, federal land management, outdoors recreation, wetlands, etc., as well as DOD and Department of Navy (DON) policies, would continue as directed. Under the No Action alternative, natural resource management activities and projects would occur, but planning, coordination, and execution would not be accomplished with the same degree of integration at a programmatic level or ecosystem scale. Therefore, it would be a less focused approach to natural resources management than the PA. Under this alternative, the INRMP would not be implemented, which would constitute non-compliance with the Sikes Act.

2.4 Alternative B: Implementation of the INRMP – the Proposed Action

The Proposed Action consists solely of codifying the existing natural resource management practices at SNI into a written INRMP that is consistent with the military use of the property and the goals and objectives established in the Sikes Act. The INRMP would then be implemented and would include both on-going compliance and stewardship actions and practices that currently meet the goals and objectives established in the Sikes Act. The goal of the INRMP is to continue to implement an ecosystem-based natural resources program that provides for conservation of natural resources in a manner that is consistent with the military mission; integrates and coordinates all natural resources management activities; and provides for sustainable multipurpose uses of natural resources.

The INRMP identifies general goals regarding the management of SNI's natural resources and policies to accomplish these goals. It provides more specific objectives in Chapters 3-5. The INRMP summarizes island land use history and describes the military mission as it relates to natural resources. Brief descriptions of facilities, water supply, and the transportation system are presented. The physical environment (topography, geology, soils, and climate) is described. Known flora and fauna are identified, including species of special interest, such as rare, threatened, or endangered species.

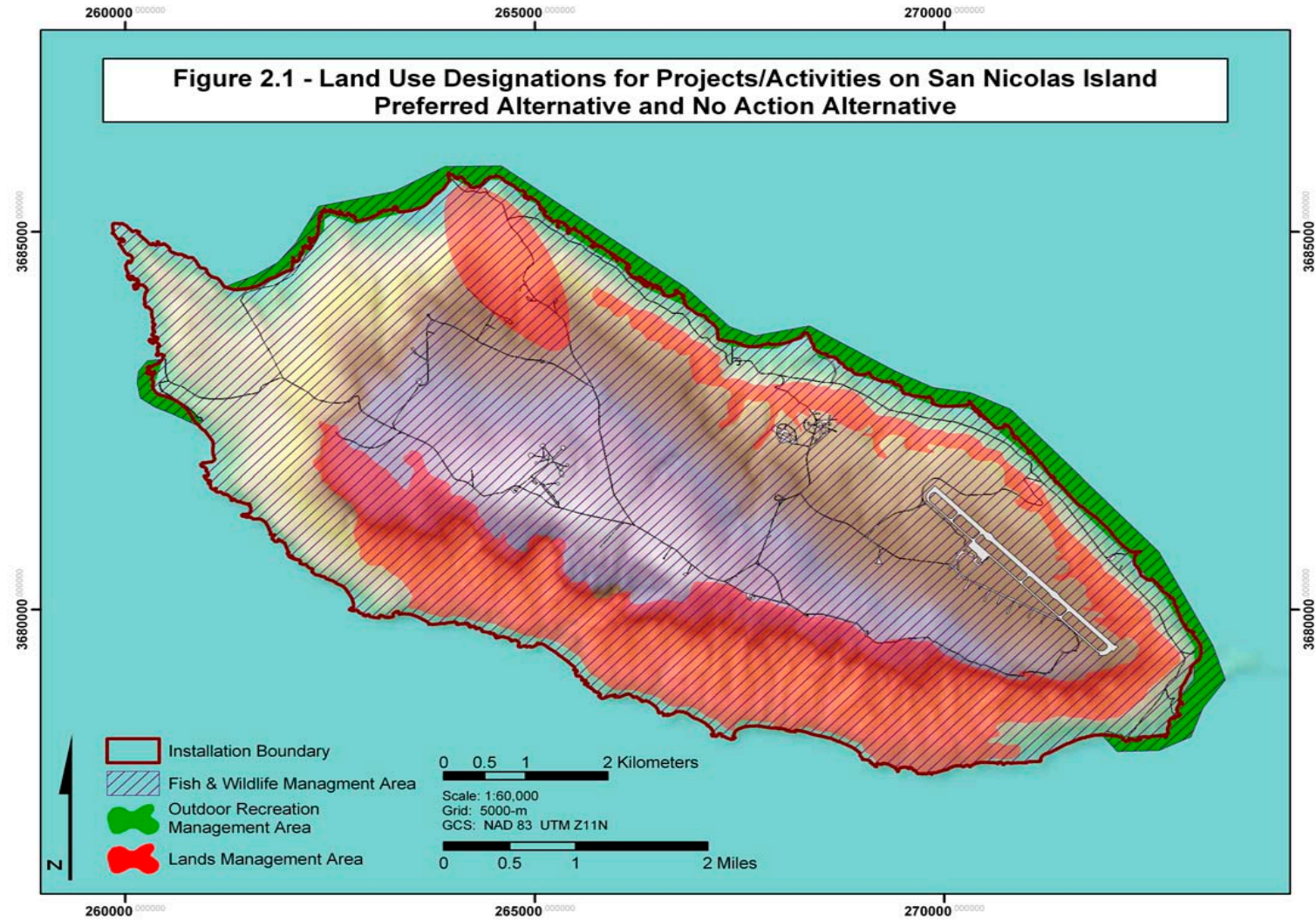
Responsibilities for the management of natural resources on SNI are outlined, including agencies and interested organizations outside of the DOD. The INRMP includes plans for inventory and

monitoring of flora, fauna, soils, and water quality, as well as implementation of a geographic information system and general data storage/analysis capabilities.

The INRMP identifies the natural resources to be managed on SNI. Each resource is analyzed, and both compliance (mandatory) and stewardship (discretionary) objectives are established. Management of natural resources includes wildlife habitat management (re-vegetation, erosion control, and exotic plant control); threatened and endangered species management; management practices specific to the cantonment area; pest and noxious plant management programs; and cultural resources management related to natural resources management. Planning for compatible use of natural resources is discussed. External assistance for natural resources programs is identified and prioritized. Provisions for island access are identified. Outdoors recreation programs, including fishing, boating, and others, are described.

The INRMP describes the use of NEPA on SNI to provide consideration for natural resources during planning of construction projects, military operations, natural resources management, and installation maintenance. Organization, personnel, personnel training, and funding needed to implement the INRMP are identified. All objectives identified in the INRMP are currently being met through implementation of the existing Natural Resources Program on SNI. Development of an INRMP would simply bring the Natural Resources Program on SNI into compliance with the Sikes Act. No additional projects or activities would occur under the new PA, since the Proposed Action is only the writing and implementation of the INRMP document itself. Figure 2.1 shows the land use designations for projects and activities, in accordance with the Chief of Naval Operations, CNO ltr 5090 Ser N456F/8U589129 of 30 Nov 1998 (w/encls). There is no difference in these designations between the no action and the proposed action. Therefore, only one figure is provided for both alternatives. Since there are no forests on SNI, the Forest Management component has been eliminated from Figure 2.1.

In Figure 2.1 Fish and Wildlife Management area corresponds to the area where fish and wildlife activities take place; refer to figures 2.3, 2.3.3a, 2.3.3b, 2.3.3c, 2.3.3d, 2.3.3e, 2.3.3f, 2.3.3g, and 2.3.3h in the INRMP for specific project areas. Outdoor Recreation Management Area corresponds to the area in which outdoor recreation activities are allowed considering military mission requirements and resource compatibility, and is the area in which outdoor recreation activities are actively managed. Lands Management Area corresponds to areas where erosion control measures are required (per Figure 2.4.2 in the INRMP) and where water quality protection measures are instituted (see Figure 2.4.1 in the INRMP).



Projects and activities for no action alternative/proposed action are as follows:

Fish and Wildlife Management Activities

Protect, actively monitor, and maintain a viable population of each listed species.

Support recovery plan efforts to establish stable populations of each listed species and eventual de-listing.

Determine presence or absence of non-native rodents.

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

Maintain compliance with MMPA Small Take Regulations.

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

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

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

Reduce bird/animal aircraft strike hazards (BASH).

Monitor and protect seabird populations and breeding colonies.

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

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

Continue to resolve baseline biological data gaps.

Maintain a viable population of the SNI fox.

Reduce negative, human-caused impacts to foxes.

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

Determine the status of deer mouse populations.

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

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

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

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

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

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

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

Lands Management Activities

Continue erosion control and improve existing practices.

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

Outdoor Recreation Management Activities

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.

Resolve conflicts between recreation and other uses of SNI.

2.5 Issues Not Addressed or Considered to be Potentially Significant

NEPA defines scoping as “*an early and open process for determining the scope of issues to be addressed and for identifying significant issues related to the Proposed Action*” (40 CFR 1501.7). These issues are used to develop alternative actions, including mitigation measures, and to evaluate the environmental consequences of those actions. Many persons contacted during preparation of the INRMP have discussed issues and concerns regarding natural resources management at SNI. This scoping resulted in the elimination of some potential issues, as identified below.

2.5.1 Topography and Geology

Neither the Proposed Action nor the No Action alternative would affect topography or geologic resources.

2.5.2 Climate

Neither the Proposed Action nor the No Action alternative would affect the climate.

2.5.3 Land Use

Neither the Proposed Action nor the No Action alternative would affect established land use patterns at SNI.

2.5.4 Noise Environment

Neither the Proposed Action nor the No Action alternative would affect SNI noise environments. Proposed natural resources management would not create significant noise.

2.5.5 Hazardous and Toxic Materials

Neither the Proposed Action nor the No Action alternative would affect generation or cleanup of hazardous or toxic materials. If such materials were discovered during natural resources management activities, this information would be reported to the ED for action, if needed.

2.5.6 Socioeconomics

Neither the Proposed Action nor the No Action alternative would have any significant impact on socioeconomic factors in the SNI area.

2.5.7 Environmental Justice

Executive Order No. 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* [59 Federal Regulation No. 32], issued in February 1994, provides that “*each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations*”. The Proposed Action and the No Action alternative would be confined to SNI. Neither the Proposed Action nor the No Action alternative would have significant or disproportionate adverse effects on minority or low-income populations.

2.5.8 Environmental Health and Safety Risks for Children

Executive Order No. 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, [62 Federal Regulation No. 78] was issued in April 1997. This Executive Order directs each federal agency to “*ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health or safety risks*”. Sensitive areas for exposure to children are schools and family housing areas. Environmental health and safety risks are attributable to products that a child might come in contact with or ingest as well as safety at SNI. Proposed natural resources management is limited to SNI. Neither the Proposed Action nor the No Action alternative would have significant or disproportionate adverse effects on children or pose health or safety risks.

CHAPTER 3

DESCRIPTION OF AFFECTED ENVIRONMENT

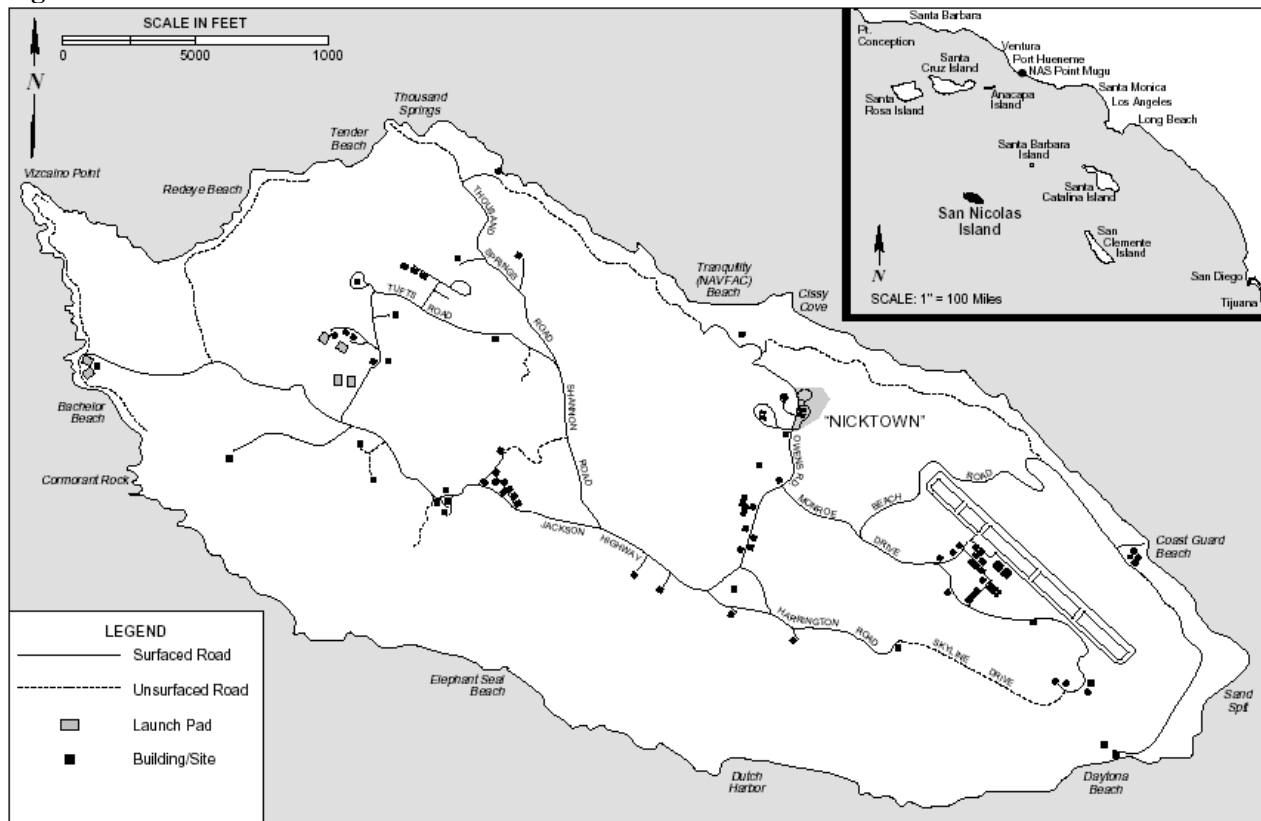
Elements of the affected environment for the proposed activity are described more fully in the *Integrated Natural Resources Management Plan 2004-2008, San Nicolas Island, California*.

3.1 Physical Setting

3.1.1 Location

SNI is located in the Pacific Ocean about 60 miles southwest of Point Mugu, California (Figure 3.1.1). It is one of a group of eight islands referred to as the California Channel Islands. The island is about nine miles long and 3.6 miles wide. The Navy owns the island to the high tide line, an area that encompasses approximately 14,230 acres.

Figure 3.1.1 – Location of San Nicolas Island



3.1.2 Facilities and Mission

SNI has an airfield with a 10,000-foot concrete and asphalt runway, a control tower, hangers, ground control approach capabilities, and a fire station. 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 enables ocean transport of materials and equipment to and from SNI.

Primary Naval operations on SNI are composed of test and evaluation of weapons systems using radar, telemetry, and photography. The military mission at SNI is discussed more fully in Section 1.5, *Land and Airspace Use*, in the INRMP.

3.1.3 Soils

SNI soils are due largely to the varied terrain and generally form a thin layer over bedrock material. Along the steep southern edge of the island, the soil layer is virtually nonexistent. Central and northeastern parts of the island are covered by marine terrace deposits, and the western end of the island is covered by deep (up to 75 feet thick) dune sand deposits composed of wind-transported, medium-grain sand. Marine terrace deposits are composed of unconsolidated clayey, silty sands, some of which are cemented together by caliche, a cement-like calcium carbonate deposit formed by the downward percolation of rainwater in dune and marine terrace deposits. The rest of SNI is covered with sandy loams while sandy beaches are scattered along the coast. Most island soils are rated as severely limited for construction, are highly susceptible to erosion by wind, and are moderately erodable by water (Estrada 1985).

3.1.4 Water Resources

The only perennial watercourse on SNI is Tule Creek, located in the northwestern part of the island, which runs northwestward from the highest part of the island to a sand dune area on the shore. It is fed by natural springs that flow during most of the year.

The top of the east-west trending southern escarpment of the island exhibits a drainage divide. Ephemeral streams along the southern portion of the island drain surface water through very steep, V-shaped canyons along straight courses with few tributaries to the ocean. Surface water runoff on the northern portion of the island drains initially through steep-walled gullies in the upland area, and as the water approaches the ocean it spreads out onto flat marine terraces and then into poorly defined, shallow channels within sand dunes.

Both fresh and salt-water wetlands occur on SNI. The most significant freshwater wetlands occur in Tule Creek and Twin Rivers and Cattail Canyon on the south coast. The most significant salt-water wetlands occur at the sandpit. There are a few small vernal pools on the central plateau. And many small freshwater springs seeps exist along the northwestern shoreline. Many freshwater springs and seeps occur at beach level but do not support typical wetland vegetation.

Waters around SNI to a depth of 300 feet are designated a State Water Quality Protection Area (previously known as Area of Special Biological Significance) by the State Water Resources Control Board. Additionally, these waters are designated as Essential Fish Habitat by NMFS.

3.2 Biological Setting

Biological resources are described more fully in Section 2.3, *Biological Setting*, of the INRMP.

3.2.1 Flora

SNI has strong floristic affinities with nearby geographic regions, sharing 86 percent of its native plants with the southern California mainland, 85 percent with the four northern Channel Islands, 84 percent with the other three southern Channel Islands, and 53 percent with islands off the Pacific coast of Baja California (Junak 1992). Approximately 275 vascular plant species have been documented on SNI (Junak 1992, Smith and Junak 2001). Appendix B of the INRMP contains a list of species known to occur on SNI. Compared to the other seven Channel Islands, SNI has a relatively limited richness of native plant species and also has the highest percentage (46 percent) of introduced plant species (Junak 1992).

Islands are known for high levels of endemism. Almost 14 percent of the island's native vascular plant taxa are endemic to one or more of the California Islands (Junak 1992). Two vascular plant taxa found only on SNI are the SNI buckwheat (*Eriogonum grande* var. *timorum*) and the SNI malacothrix (*Malacothrix foliosa* ssp. *polycephala*). Channel Islands' endemic vascular plants occurring on SNI include: island sagebrush (*Artemisia nesiotica*), Trask's milk vetch (*Astragalus traskiae*), island morning glory (*Calystegia macrostegia* ssp. *amplissima*), Trask's cryptantha (*Cryptantha traskiae*), island tarplant (*Deinandra clementina*), island poppy (*Eschscholzia ramosa*), island jepsonia (*Jepsonia malvifolia*), island mallow (*Lavatera assurgentiflora*), island lomatium (*Lomatium insulare*), silver lotus (*Lotus argophyllus* var. *argenteus*), island cliff-aster (*Malacothrix saxatilis* var. *implicata*), and southern island clover (*Trifolium palmeri*).

Non-vascular plants are also important ecological components of the flora of SNI. The species diversity and ecology of non-vascular plants on the island is poorly understood, although some checklists have been compiled for mosses and lichens (Appendices C and D of the INRMP). The most important non-vascular plants in the ecology of SNI are mycorrhiza fungus, soil algae, and blue-green algae (*Cyanobacteria*), which help form crusts, stabilize soils, and may be vital to repopulation and survival of many shrub species. Lichens are the most conspicuous forms of non-vascular plants on the island, covering large rocky barren areas on northeastern slopes. Mosses and liverworts are found infrequently around seeps and springs and in shady microhabitats. Borlander's moss (*Entosthodon bolanderi*) and California hard-stalk moss (*Scleropodium californicum*) are endemic Channel Island bryophytes present on the island, and two species of lichens (*Niebla ramosissima*) and (*N. dactylifera*) are found only on SNI.

SNI has no federally listed endangered or threatened plant species.

Plant Communities

Twelve vegetation communities have been identified on SNI (Halverson *et al.* 1996), including five scrub communities (caliche, isocoma, baccharis, lupinus, and coreopsis), which comprise 7,349 acres. Freshwater aquatic vegetation communities include vernal pools (0.8 acres) and riparian habitats (201 acres). Coastal and inland dunes are found along the coastline (234 acres), and coastal marsh (9 acres) is found in three small areas. Annual iceplant, native and nonnative grasslands (1,738 acres), and disturbed and developed habitats (324 acres) also occur. Barren areas, which support no vegetation, comprise 3,468 acres.

3.2.2 Fauna

General

SNI has a limited diversity of fauna due to low annual rainfall, small size, isolation from other landmasses, and relatively sparse plant cover.

Invertebrates

This biologically unique, but largely overlooked group includes land snails, insects, and related terrestrial arthropods. Thirteen species of snails have been documented on SNI (Appendix E of the INRMP). Perhaps the rarest land snail is the SNI fraternal snail (*Micrarionta feralis*); its entire global range is limited to one small cactus patch on SNI. The prickly-pear island snail (*Micrarionta opuntia*), Santa Barbara shelled slug (*Binneya notabilis*) (known only from recent fossil records), and bicolor cactus snail (*Xerarionta tryoni*) are also SNI endemics. Other Channel Island endemics found on the island include Durant's island snail (*Haplotrema durantii*), pouch snail (*Physa virgata*), San Clemente Island blunt-top snail (*Sterkia clementina*), and the California vertigo snail (*Vertigo californica*). At least two introduced non-native snail species, the European garden snail (*Helix aspersa*) and the decollate snail (*Rumina decollata*), are present on the island. The decollate snail is a relatively large snail that preys on other mollusks and hence may pose a serious threat to small remnant populations of terrestrial land snails on SNI.

Over 200 species of insects and related terrestrial arthropods have been documented on SNI (Appendix F of the INRMP). Based on the best available data, over a dozen taxa of insects found on SNI are considered endemic specifically to SNI or to the Channel Islands.

SNI has no federally listed endangered or threatened invertebrate species.

Vertebrates

Threatened and Endangered Species

Four federally listed species occur on the island or in the nearshore waters: the Pacific coast population of the Western Snowy Plover (*Charadrius alexandrinus nivosus*), island night lizard (*Xantusia riversiana*), California Brown Pelican (*Pelecanus occidentalis californicus*), and the southern sea otter (*Enhydra lutris nereis*). These species are more fully discussed in Section 2.3.3, *Federally Protected Species*, in the INRMP.

The Pacific coast population of the western snowy plover was listed as a federally threatened species on March 5, 1993. Western snowy plovers nest and forage on beaches and in the intertidal zone of SNI. They are year-round residents on SNI and the breeding season extends from early March to late September. Seasonal use patterns are closely related to the movements of migrating individuals and success of the breeding population. Western snowy plovers forage primarily on wet sand at the beach-surf interface, feeding on small crustaceans, marine worms, insects, and amphipods. On SNI, 12 beaches, totaling 206 acres (based on the 2002 shoreline) and 9.8 miles of shoreline, have been designated as Critical Habitat for this species. The species is declining on the

mainland because of increased human disturbance, loss of feeding and nesting areas, and increased predation by other birds and mammals.

The island night lizard is a medium-sized, cryptically patterned lizard endemic to San Clemente Island, Santa Barbara Island, and SNI. The USFWS listed the island night lizard as a threatened species on August 11, 1977. On SNI, island night lizards are generally distributed only over the eastern half of the island with exception of a few isolated populations along the western and southern shore. Lizard numbers vary greatly depending on available habitat. Grasslands that cover much of the eastern mesa support few or no lizards while the mixed shrub communities support moderate numbers of island night lizards. This species is active primarily from March to September with timing of activities largely dependent on mild to warm temperatures. The island night lizard is omnivorous, eating insects, plants, and small mammals. Predators of the island night lizard include the SNI and fox and feral cats. Introduced southern alligator lizards may compete for burrows and food. Critical Habitat for the island night lizard has not been designated.

The California brown pelican is a state and federally listed endangered. The species was federally listed on June 2, 1970. This coastal seabird requires terrestrial habitat for communal roosting throughout its range. California brown pelicans breed on the Channel Islands (Anacapa, Santa Barbara, and Santa Cruz) and in Baja, California. Approximately 6500 pairs nest on the Channel Islands although this number fluctuates widely. Numbers around the islands swell seasonally with the inundation of post-breeding migrants from Mexico. The species is common on SNI as a non-breeding resident throughout the year. However, abundance is variable throughout the year and from year to year, depending on oceanographic conditions.

The southern sea otter population was listed as threatened on January 14, 1977. Between 1987 and 1990, 139 southern sea otters were translocated to SNI in an attempt to re-establish an extirpated population and presumably ensure the protection of some individuals in the event of a catastrophic oil spill along the mainland coast. SNI sea otters occur throughout the year in sub-tidal kelp beds primarily at the western end of the island and in smaller numbers at other locations around the island. The kelp beds in these areas provide the primary cover and foraging areas preferred by southern sea otters. Occasionally, individuals will haul out on beaches, but most typically prefer shallow coastal waters. Otters feed on approximately 40 different marine invertebrates and fish. Most births occur from February through April, though otters may pup at any time of the year.

Reptiles

Only three reptiles are known to occur on SNI; the southern alligator lizard (*Elgaria multicarinata*), side-blotched lizard (*Uta stansburiana elegans*), and the federally threatened island night lizard. Reptiles are discussed in Section 2.3.2, *Fauna*, in the INRMP.

Birds

Of the over 300 species of birds recorded on SNI, most are not year-round residents but are seasonal visitors, migrants, or vagrants (Wehtje 2000) (Appendix 7 of the INRMP). Only 17 species regularly breed on the island, including three non-native species, the House Sparrow (*Passer domesticus*), European Starling (*Sturnus vulgaris*), and Chukar (*Alectoris chukar*). Resident landbirds include the Western Meadowlark (*Sturnella neglecta*), Rock Wren (*Salpinctes obsoletus*), and three Channel Island endemics, the Horned Lark (*Eremophila alpestris insularis*), San

Clemente Island House Finch (*Carpodacus mexicanus clementae*), and Dusky Orange-crowned Warbler (*Vermivora celata sordida*). Mockingbirds (*Mimus polyglottos*) are often found within developed areas.

SNI provides breeding habitat for several seabird and shorebird species, including the Western Gull, (*Larus occidentalis*) Brandt's Cormorant (*Phalacrocorax penicillatus*), Black Oystercatcher (*Haematopus bachmani*), and the federally threatened Western Snowy Plover. The SNI Brandt's Cormorant colony is the second largest in southern California, and the fourth largest in the world. SNI harbors the third largest Western Gull breeding colony in southern California. The federally endangered California Brown Pelican is common on SNI as a non-breeding resident throughout the year.

Raptors are uncommon visitors to the island, with the exception of American Kestrels (*Falco sparverius*) and Barn Owls (*Tyto alba*), which are permanent residents. SNI sustains a regular wintering population of Burrowing Owls (*Athene cunicularia*), which is considered a state species of special concern. Peregrine Falcons (*Falco peregrinus*) are also regular winter visitors to the island. Birds are discussed in Section 2.3.2, *Fauna*, in the INRMP.

Mammals

SNI supports two native terrestrial mammalian species. The SNI fox (*Urocyon littoralis dickeyi*), a state listed threatened species, and the endemic SNI deer mouse (*Peromyscus maniculatus eximus*) are widely distributed on the island. Feral cats, introduced during the ranching period and later by Navy personnel, are well established and impact native reptiles, birds and mammals. Mammals are more fully discussed in Section 2.3.2, *Fauna*, in the INRMP.

Marine Mammals

SNI is an important refuge for three species of marine mammals. Annually, more than 116,000 California sea lions (*Zalophus californianus*), 23,000 northern elephant seals (*Mirounga angustirostris*), and 500 harbor seals (*Phoca vitulina*) haul out on the island's beaches and rocky outcrops to rest, breed, and give birth. These species are more fully discussed in Section 2.3.3.2, *Marine Mammal Species*, in the INRMP.

The California sea lion is by far the most common pinniped on SNI. This species hauls out at many sites, primarily along the southern and western portions of SNI. Pupping occurs on beaches from early-June to mid-July. Females nurse their pups for about eight days before beginning an alternating pattern of foraging at sea and attending/nursing pups on land. California sea lions also haul-out during the molting period in September and smaller numbers of females and young animals haul-out during most of the year.

Northern elephant seals haul-out at various sites around SNI. SNI is the second largest elephant seal rookery and hauling ground in southern California. The NMFS Southwest Fisheries Science Center has censused northern elephant seals at SNI since 1988. Surveys are conducted during the peak of the breeding season in late January to early February, and late in the breeding season in mid-to-late February. The northern elephant seal population has been steadily increasing on SNI.

Harbor seals are abundant throughout most of their range from Baja, California to the eastern Aleutian Islands. They are common and widely scattered in coastal waters and along coastlines in California. Most harbor seals haul-out at several specific, traditionally used sandy, cobble, and gravel beaches on SNI. Pupping occurs on beaches from late February to early April, with the nursing of pups extending into May. Harbor seals also haul-out during the molting period in late spring, and smaller numbers haul-out at other times of year.

The federally threatened southern sea otter population has about 2,000 individuals (excluding dependent pups) (USFWS 2000). Currently there are 20-30 otters at the island.

3.3 Cultural Resources

Section 2.6, *Cultural Resources*, of the INRMP more fully describes the cultural resources of SNI. Native Americans inhabited SNI for at least 8,000 years. The Nicoleño left over 540 archaeological sites as evidence of their occupation. Also present on the island are historic sites from early sheep ranching operations, sites of early Chinese and Anglo abalone fishers, and a few sites and structures from World War II. In addition, numerous shipwrecks dot the shoreline with hulks and scattered timbers. The most complete inventory of SNI cultural resources located or confirmed a total of 538 sites (Martz 2002).

Historic Resources

An historic inventory and survey of Chinese abalone processing sites resulted in the identification of 26 such historic sites on the island (Schwartz 1994). Historic sheep ranching studies at SNI have been conducted (Swanson 1993, McCawley 1997). 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. One structure (N138) has been found to have National Register of Historic Places eligibility.

3.4 Outdoor Recreation

SNI is the site of weapons testing and sensitive equipment; therefore, public access is prohibited in the interest of security and safety. This precludes recreational use of the island by the general public.

SNI personnel can enjoy recreational opportunities associated with Nicktown, such as a gymnasium, bowling alley, swimming pool, racquetball court, tennis court, and a weight room. Outdoor recreational opportunities are available to island personnel and are regulated by the installation. Outdoor recreational activities at SNI include hiking, biking, fishing, wildlife observation, diving, surfing, kayaking, and boating. Poor weather is a major deterrent to many outdoor recreation pursuits on SNI.

3.5 Air Quality

Although SNI is part of Ventura County, the U.S. EPA has determined that the Channel Islands are separate and distinct from the Ventura County Air Basin. The Channel Islands have been designated Unclassified/Attainment for both federal and state standards for all criteria pollutants.

Due to the lack of major emitting sources on the island, in conjunction with predominantly strong winds from the northwest, the likelihood of pollutants remaining in the ambient air of the island is very low.

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

This section presents an analysis of the potential environmental consequences of the two alternatives described in Section 2.0. Potential impact - direct, indirect, and cumulative - the No Action alternative and the Proposed Action on resources described in Chapter 3 of the INRMP are assessed in this section. The overall management approach and management practices are evaluated on a programmatic level, rather than a project-specific level. The intent is to evaluate the overall impacts of implementing the alternatives in a broad sense. Programmatic analysis provides opportunities for the installation to accommodate unforeseen projects, as well as changes to projects, as long as impacts are covered within the overall scope and analysis of this EA.

Natural resources management activities evaluated were designed to avoid negative environmental impacts and include planning measures for compliance with applicable laws and regulations. Therefore, none of the activities currently being conducted at SNI, the No Action alternative, nor any of the management actions recommended in the Proposed Action would have the potential to cause significant environmental impacts. The Proposed Action would provide greater environmental benefits than continuing the No Action alternative because the fullest range of management objectives would be implemented to ensure an ecosystem approach to natural resources management is achieved.

A summary of potential environmental consequences associated with the No Action alternative and the Proposed Action is presented in Section 4.3, *Summary of Environmental Consequences*. Cumulative impact is discussed in Section 4.4, *Cumulative Impacts*.

4.1 No Action Alternative

Under the No Action alternative natural resources would continue to be managed per status quo on SNI. Compliance with laws and executive orders as well as DOD and DOD policies, would continue as directed. Under the No Action alternative, natural resource management activities and projects would occur, but planning, coordination, and execution would not be accomplished with the same degree of integration at a programmatic level or ecosystem scale as required by the Sikes Act. Baseline conditions of the affected environment would not change under the No Action alternative, nor would the full benefits under the INRMP be achieved.

4.1.1 Soils

Implementation of current soil resources management practices, such as, complying with criteria for management of the closed landfill, implementing erosion control practices on a project-by-project basis, and ensuring that new construction projects include erosion prevention plans would continue to benefit soil resources. Under this alternative, roadway maintenance and improvement activities and new construction projects have the greatest potential to affect soil resources. However, these projects are considered, and appropriate erosion control measures are implemented on a case-by-case basis to reduce the potential to affect soil resources. Erosion control methods proven to be effective on SNI would continue to be used. Implementation of the No Action alternative would, therefore, not result in significant negative impact to soils at SNI.

4.1.2 Water Resources

Management would continue to be conducted in accordance with state and federal regulations for water quality and wetlands protection. Implementation of current water resources management practices such as coordinating with the U.S. Army Corp of Engineers, U.S. Environmental Protection Agency, and Los Angeles Regional Water Quality Control Board (LARWQCB) regarding restrictions on or required permits for Navy actions that may affect water resources; maintaining compliance with LARWQCB objectives for groundwater quality; and review of project-level erosion control plans, would continue to protect water resources on SNI. Therefore, baseline conditions for groundwater, surface water, and wetlands would not change under the No Action alternative and there would be no significant negative impact on water resources.

4.1.3 Biological Resources

Flora

Current management practices that benefit floral resources, such as programs to minimize impacts and protect habitats of federally listed species and species warranting Navy stewardship; working closely with the Public Works Department, Range Department, and other programs to assist with project development and implementation to ensure incorporation of natural resource management considerations; encouraging reuse of existing zones of disturbance; encouraging redirection of new surface-disturbing activities away from areas that are known potential quality habitats; and locating, mapping, and recording locations of plant and animal species and associations that accurately delineate boundaries of high value habitat. These practices would continue to benefit floral resources under the No Action alternative. Therefore, implementation of the No Action alternative would not result in significant negative impact to floral resources.

Fauna

General. Baseline conditions for wildlife would not change under the No Action alternative. Current management practices, including threatened and endangered species, marine mammal, migratory bird, and species warranting Navy stewardship management; habitat conservation practices; and pest control, would continue to be implemented, which would result in overall benefits to wildlife resources.

Special Status Fauna. Implementation of the current management practices would continue to provide benefits to the special status species at SNI. Reasonable and prudent measures and the terms and conditions of the *Biological Opinion (BO) for Activities on San Nicolas Island, California* (USFWS 2001) would continue to be implemented; designated critical habitat would remain unchanged; requirements under the Endangered Species Act for federally listed species (*i.e.*, Western Snowy Plover, island night lizard, California Brown Pelican, southern sea otter) would continue to be followed; MMPA compliance would be maintained; migratory bird management including efforts to reduce the BASH would continue; and those aspects of exotic plant control and pest control currently being conducted would continue under the No Action alternative. Therefore, implementation of the No Action alternative would have no significant negative impact on special status fauna on SNI.

Migratory Birds. The proposed action has been found not likely to have a measurable negative effect on migratory bird populations. The ED has developed and uses principles, standards, and practices that lessen the amount of unintentional take. Therefore, the proposed action would have a positive impact on migratory birds and their habitat on SNI.

4.1.4 Cultural Resources

Protection and management of cultural resources under the No Action alternative would continue to be integrated with natural resources management activities. Activities that have the potential to cause ground disturbance would be evaluated on a case-by-case basis to ensure impacts to cultural resources are avoided. Implementation of the No Action alternative would have no significant negative impact on cultural resources.

4.1.5 Outdoor Recreation

Outdoor recreation opportunities at SNI would continue as is under the No Action alternative. Island personnel would continue to be provided information about fishing, and maps of recommended and prohibited diving, surfing, kayaking, and boating locations would continue to be prepared, updated, and disseminated. Implementation of the No Action alternative would have no significant negative impact on outdoor recreation on SNI.

4.1.6 Air Quality

Implementation of the No Action alternative would result in no changes to local or regional air quality. Potential effects on existing pollutant emissions are precluded by the fact that current natural resource management actions do not involve activities that would contribute to changes in existing air quality. However, some natural resources-related programs, particularly erosion control affects air quality. Erosion control and re-vegetation activities reduce airborne (dust). Implementation of the No Action alternative would therefore not result in significant negative impact to air quality.

Estimated emissions from a proposed federal action are typically compared with the relevant national and state standards to assess the potential for increases in pollutant concentrations. Impacts would occur if the action alternatives would directly or indirectly produce emissions that would be the primary cause of, or would significantly contribute to, a violation of state or federal ambient air quality standards. Emission thresholds associated with Clean Air Act conformity requirements are another means of assessing the significance of air quality impacts. A formal conformity determination is required for federal actions occurring in non-attainment or maintenance areas when the total direct and indirect stationary and mobile source emissions of non-attainment pollutants or their precursors exceed thresholds or de minimis values. Since SNI and the offshore region, proposed for the action alternatives are, classified as “Unclassified/Attainment”, for air quality standards by the U.S. EPA, the provisions of the General Conformity Rule do not apply.

4.2 Proposed Action (PA)

The Proposed Action is to develop and fully implement the INRMP. Under this alternative, a broad range of natural resources management activities and practices, which support Navy policy on

stewardship and ecosystem management, would be implemented. Adaptive management would be used to assess and improve management practices and help ensure stated objectives are achieved. Baseline conditions of the affected environment would remain unchanged or improve under this alternative.

4.2.1 Soils

In addition to soil resources protection measures described in the No Action alternative, a number of other management practices are included in the Proposed Action that are designed to provide long-term benefits to soil resources. Proposed management practices that would benefit soil resources would include considering large-scale erosion patterns in planning, developing a formal erosion plan, recommendations to reduce gully development or expansion, and roadway improvement recommendations and investigating redirecting airport runway runoff. There may be slight increases in erosion during repair and re-vegetation operations of eroded areas, bare ground aspects of maintenance of test sites and roads, and other projects that disturb the soil, but the Proposed Action includes provisions to minimize erosion during and following these actions, such as quickly reseeding or replanting disturbed areas with native plant species and avoiding sites with highly erodible soils. Implementation of the Proposed Action would not have significant negative impact on SNI soil resources.

4.2.2 Water Resources

Under the Proposed Action water resources would continue to be protected through adherence to state and federal water quality and wetlands protection laws and review of project erosion control plans. The Proposed Action includes an integrated program for planning land use, evaluating land use effects, managing and repairing eroding lands, and updating and implementing the SNI Spill Prevention Control and Contingency Plan. The Proposed Action describes projects to evaluate and reduce sedimentation from erosion by maintaining roads and test sites and planning and constructing other sites in areas less prone to erosion. Brief periods of increased sedimentation are possible during repair and construction activities, but these would be more than compensated for by the reduction in sedimentation resulting from use of designated test sites and established roads, repair of significant eroded sites, and including natural resources implications in military project planning. Implementation of the Proposed Action would not have significant negative impact on SNI water resources.

4.2.3 Biological Resources

Flora

In addition to management practices benefiting floral resources described in the No Action alternative, a number of other management practices are included in the Proposed Action that are designed to provide long-term benefits to floral resources. Proposed management practices that would benefit floral resources include initiating involvement with project proponents at the earliest practicable stage; directing protection efforts towards avoidance of impacts to known value habitat areas; developing Geographical Information System databases with spatial data related to detailed supporting data, text, and other documentation; minimizing introduction of non-native exotic plants species; removing high priority exotic species; managing roads, access routes, and new construction

sites to minimize the spread of exotic species; implementing management associated with flora and fauna warranting Navy stewardship; and completing a non-native plant species management plan.

The INRMP uses an ecosystem management strategy to achieve biological diversity conservation, in accordance with the DOD Biodiversity Initiative (The Keystone Center 1996). It emphasizes the use of native species, as emphasized on the Presidential memorandum to the heads of federal agencies (Office of the President 1994). Potential problems, such as loss of non-target species and degradation of water quality, in wetlands from chemical control of exotic plant species, would be avoided by using appropriate application methods, adhering to label instructions, and using appropriate, approved herbicides. In addition, only certified pesticide applicators would be permitted to apply pesticides. Floral resources management practices would provide short- and long-term benefits and overall would not have significant negative impact on floral resources on SNI.

Fauna

General. Proposed management practices under the alternative are designed to provide long-term benefits to wildlife on SNI. In addition to practices and programs described in the No Action alternative, other management practices would benefit fauna in general. Proposed Action management practices that would benefit fauna include requiring all barge and air cargo shipments be inspected for vertebrate and invertebrate species before departing port or airfield for SNI, establishing an enforcement protocol for barge and air cargo shipment inspections, requiring gravel and soils be free of invertebrates, requiring inspection of refuse and shipping bins before transportation to SNI, developing a rodent control/ removal plan and implementing it if introduced species are detected, implementing a feral cat control/ removal program, and investigating and implementing methods to control invertebrate pest species found on SNI. Therefore, implementation of the Proposed Action would not have significant negative impact on wildlife resources on SNI.

Special Status Fauna. State and federal threatened and endangered species protection laws would continue to be implemented under the PA. Additional benefits would be provided by implementation of several proposed actions, such as consideration of conservation recommendations in USFWS (2001); implement a feral cat control/removal program; maintain signs around Western Snowy Plover breeding and nesting areas; conduct site-specific surveys for island night lizards; close seasonal California brown pelican roost sites to incompatible activities; initiate aerial breeding season surveys for harbor seals; inspect, repair, and replace pinniped exclusion barriers as necessary; maintain the educational kiosk and continue educational instructions; conduct surveys for migratory birds, including American kestrels and burrowing owls; and remove tamarix at Tule Creek. In addition, proposed actions described above for fauna in General, Flora, Water Resources, and Soils would provide benefits to special status fauna. Implementation of the Proposed Action would have no significant negative impact on special status fauna on SNI.

Migratory Birds. Proposed management practices under the Proposed Action alternative have been found not likely to have, a measurable negative effect on migratory bird populations. The ED has developed and uses principles, standards, and practices that lessen the amount of unintentional take.

Therefore, the proposed action would have a positive impact on migratory birds and their habitat on SNI.

4.2.4 Cultural Resources

Under the Proposed Action alternative, SNI would continue to review projects that have the potential to cause ground disturbance on a case-by-case basis to ensure impacts to cultural resources are avoided. The NEPA process would be used to ensure protection of known and potential cultural resources while implementing the INRMP. The new initiative that would impact cultural resources would be the finalization and implementation of the SNI Integrated Cultural Resources Management Plan. Implementation of the Proposed Action would have no significant negative impact on cultural resources on SNI.

4.2.5 Outdoor Recreation

Under the Proposed Action alternative, outdoor recreation opportunities at SNI would continue to be available to island personnel and information about fishing and maps of recommended and prohibited diving, surfing, kayaking, and boating locations would continue to be prepared, updated, and disseminated. Additional benefits would be provided by implementation of several proposed actions, such as periodically reviewing the appropriateness of instituting new recreation activities, investigating development of designated hiking trails, and periodically reviewing and updating recreational policies to ensure compliance with environmental management regulations. Therefore, implementation of the Proposed Action would have no significant negative impact on outdoor recreation on SNI.

4.2.6 Air Quality

Implementation of the Proposed Action would be the same or more beneficial than the No Action alternative. Potential effects on existing pollutant emissions are precluded by the fact that most natural resource management actions do not involve activities that would contribute to changes in existing air quality. However, some natural resources-related programs, particularly erosion control, affect air quality. Erosion control and re-vegetation of eroded or military-damaged areas, habitat conservation measures, use of designated roads and test sites, and minimization of disturbance to areas not being used for military activities implemented under the Proposed Action would reduce the generation of dust and other particulates entering the atmosphere. Therefore, implementation of the PA would have no significant negative impact to air quality.

4.3 Summary of Environmental Consequences

The table below provides a summary of environmental consequences and cumulative impacts of the Proposed Action and No Action alternative.

Table 4.1 Summary of Environmental Consequences

Affected Environment	No Action – No written INRMP		Proposed Action – INRMP	
	Environmental Consequences	Cumulative Impacts	Environmental Consequences	Cumulative Impacts
Soils	Positive	Positive	More Positive	More Positive
Water Resources	Positive	Positive	More Positive	More Positive
Biological Resources	Flora	Positive	More Positive	More Positive
	Fauna	Positive	More Positive	More Positive
Cultural Resources	Positive	Positive	More Positive	More Positive
Outdoor Recreation	Positive	Positive	More Positive	More Positive
Air Quality	Positive	Positive	More Positive	More Positive

4.4 Cumulative Impacts

A cumulative impact is defined as an effect on the environment that results from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant, actions taking place locally or regionally over a period of time.

Implementation of either of the two alternatives analyzed in this EA would not result in any negative cumulative impacts to the environment. Provisions of the INRMP that integrate needs of the military mission with natural resources protection and management are designed to minimize cumulative impacts from future military actions that may be planned at SNI. Appropriate NEPA procedures will be applied to any future actions that are proposed for undertaking.

In addition to the current management practices conducted at SNI, the Proposed Action would implement projects that directly support regional ecosystem management initiatives and would enhance and protect habitat for native plant and wildlife species, including several federally protected species and species warranting Navy stewardship. Monitoring programs, annual reviews, and five-year updates of the INRMP allow for continuous reassessment of management goals and objectives (adaptive management) and help to avoid undesirable cumulative impacts. Coordination with state and federal wildlife agencies, as required by the SAIA, further reduces the potential for significant cumulative negative impact.

In addition, the implementation of any alternative would comply with the General Conformity Rule of the Clean Air Act (Sec. 176c), because previously established time lines for attaining air quality standards will still be enforced and no alternatives would cause or contribute to any new violations of air quality standards in the region. Consequently, no significant cumulative impacts to air quality would result from the implementation of any of the alternatives.

Topics that could potentially be affected by cumulative impacts with the Proposed Action or No Action alternative and local and regional projects are discussed below under those projects. The Proposed Action should not produce any cumulative negative effects with other projects. It was designed to protect and enhance the natural resources on SNI while helping to conserve regional plant and wildlife populations. It also considers the cultural and socioeconomic effects to

surrounding communities of actions taken. All other projects were previously reviewed for conflict with existing natural resource management, including the construction projects, BO, and programs that the No Action Alternative is based upon, and were approved in one form or another. Therefore, cumulative impacts with the No Action Alternative would have been addressed during the approval process for each project.

4.4.1 Projects on SNI

The effects of all alternatives must be considered in conjunction with other projects on (or near) SNI to determine if they would produce conflict or result in cumulative effects. Projects that were developed concurrently with the INRMP, and evaluated in this section, are the EIS/Overseas Environmental Impact Statement (EIS/OEIS) for the Sea Range, and the SNI Master Plans (1986, 2002). These are all key documents that influence the future management direction of SNI, and with which the INRMP attempts to be consistent.

4.4.2 EIS, and Associated Increase in Testing Tempo and New Facilities

The Final EIS/OEIS for the Sea Range (2002) addresses an increase in operational tempo and some new facilities on SNI. Missile launches would be increased from approximately 20 launches per year to 40 launches per year. In addition, the EIS/OEIS addresses installation of seven new instrumentation sites, increases the size of one launch pad, and adds one new operations building. All of the facilities improvements were sited in locations, which are previously disturbed, resulting in no negative impacts to natural resources.

4.4.3 SNI Master Plans

There is no up-to-date Master Plan, which addresses SNI in its entirety. The most recent plan that addressed the entire island was prepared in 1986. In 2002 there was an update to the Master Plan, which was limited to facility improvement projects in the main living compound and the airfield area. Each of the two Master Plans calls for specific facilities improvements, and some new facilities. All new facilities have been sited in areas, which were previously disturbed, and result in no negative impacts to natural resources. The planning directives from both of these Master Plans were considered during preparation of the INRMP. No conflicts between these plans were identified.

4.4.4 Programmatic Biological Opinion

A BO was issued by, the Fish and Wildlife Service, in 2001. The BO addresses 13 types of routine activities on SNI that have the potential to impact listed species: Western Snowy Plovers, Island Night Lizards, and California Brown Pelicans. The BO specifies certain mitigations, monitoring, and reporting requirements.

4.4.5 Marine Mammal Small Take Regulations

The Navy has obtained Small Take Regulations under the MMPA to address potential impacts from missile launches from SNI. The Small Take Regulations allow for the take by harassment of small numbers of Northern Elephant Seals, California Sea Lions, and Harbor Seals. The Small Take

Regulations are good for five years starting in 2003, and are implemented in one-year segments through issuance of a Letter of Authorization (LOA). The Regulations prescribe mitigation, monitoring, and reporting requirements.

4.4.6 Recovery Plan for the California Brown Pelican

California Brown Pelicans are common on SNI as non-breeding residents throughout the year. The Fish and Wildlife Service developed a recovery plan for this species in 1983. SNI does not play a major role in this recovery effort, but the Navy does cooperate as much as possible with the recovery efforts for this species.

4.4.7 Draft Recover Plan for the Western Snowy Plover

Western Snowy Plovers nest and forage on beaches and in the intertidal zone of SNI. On SNI, 12 beaches, totaling 206 acres and 9.8 miles of shoreline, have been designated as Critical Habitat for this subspecies. The Fish and Wildlife Service published a draft recovery plan in 2001. SNI plays an important role in the recovery plan.

4.4.8 Regional Shore Infrastructure Plan

The Regional Shore Infrastructure Plan includes an imbedded Activity Overview Plan for SNI with a dual purpose: to provide the Navy with land use planning tenets that will guide general locations for infrastructure, activities, and operations; and to provide a guide for utilities and facilities infrastructure planning, maintenance and future development.

CHAPTER 5

OTHER NEPA CONSIDERATIONS

5.1 Irreversible and Irretrievable Effects of the Proposed Action if Implemented

NEPA requires an analysis of significant irreversible effects. Resources that are irreversibly or irretrievably committed to a project are those that are utilized on a long-term or permanent basis. This includes the use of non-renewable resources such as metal, fuel, and other natural or cultural resources. Human labor would be considered a non-renewable resource because once labor is expended it cannot be renewed. These resources are considered irretrievable because they would be utilized for a project when they could have been used for other purposes. Implementation of the proposed INRMP would result in a minor irreversible and irretrievable commitment of certain non-renewable resources. Erosion control, weed control, and long term monitoring, for example, associated with the INRMP would result in an irretrievable commitment of fossil fuels for vehicles and equipment, and other resources, such as human labor. These commitments of resources are neither unusual nor unexpected, given the nature of the INRMP, and are generally understood to be tradeoffs, which benefit the resources if the INRMP is implemented. These long-term impacts associated with the proposed action that for all purposes are considered irreversible have been discussed in greater detail in Chapter 4 of this EA.

5.2 Short-Term Use versus Long-Term Productivity

This section provides a discussion of the relationship between local short-term uses of the human environment by the PA, and the maintenance and enhancement of long-term environmental productivity. The Proposed Action is the completion and implementation of the INRMP. As described in this EA, the INRMP would not result in any long-term negative effects on the environment of SNI. As a result, the Proposed Action would not result in any environmental impacts that would permanently narrow the range of beneficial uses of the environment, or pose long-term risks to the health or safety of personnel working and residing on the island. In fact, the proposed INRMP would have primarily beneficial impacts to most of the resources on SNI.

5.3 Potential Conflicts between the Proposed Action and the Objectives of Federal, State, and Local Land Use Plans, Policies and Controls for the Area Concerned

The Proposed Action was designed to ensure that activities at SNI are conducted in accordance with all federal, state, and local land use plans, policies and controls. It is in compliance with all Acts of Congress, EOs, and DoD and Naval Instructions. Regulations and strategies to protect populations of sensitive plant and animal species were also followed in preparation of the PA. The following is a discussion of local and regional plans and policies and their interactions with the PA.

Regional Water Quality Control Board's Los Angeles Basin Plan. This plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan: 1) designates beneficial uses for surface and ground waters; 2) sets objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy; and 3) describes implementation programs to protect all waters in the Region. In addition, the Basin Plan incorporates all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. The Basin Plan is a resource for the Regional Board and other agencies that use water and/or discharge wastewater in the Los Angeles Region.

Island Fox Conservation. Four subspecies of the Channel Islands fox were recently listed as Threatened under the ESA by the USFWS. The SNI subspecies was not listed. Fox populations on SNI are high and stable, but ED is constantly engaged with the Fish and Wildlife Service to ensure the population is well monitored and remains stable. This will ensure that this species is not listed in the future.

Strategic Plan for Channel Islands National Park. This plan addresses the management of five of the Channel Islands including the Navy-owned San Miguel Island, jointly managed by the National Park Service and the Navy under a Memorandum of Agreement. The Channel Islands National Park (CINP) includes the islands of San Miguel, Santa Rosa, Santa Cruz, Anacapa, and Santa Barbara, and extends to one nautical mile around these islands. The CINP and the Navy are responsible for management of similar environmentally sensitive habitats. Consequently, the Navy and CINP natural resources staff regularly partner of collaborative efforts to address natural resource issues. The NPS is in the process of developing a new resource management plan for the five park islands. There are no known incompatibilities between the INRMP and the Resource Management Plan for Channel Islands National Park.

Catalina Island Management. Catalina Island, under the direction of the Catalina Island Conservancy, is currently developing a natural resources management plan. There are no known conflicts between the INRMP and the Catalina Island management plan.

California Channel Islands Species Recovery Plan. This plan addresses recovery efforts for a number of plant and animal species that are found on the various Channel Islands. There are no known incompatibilities between the INRMP and the California Channel Islands Species Recovery Plan.

Southern Sea Otter Recovery Plan. An experimental population of Southern Sea Otters were translocated to SNI by the Fish and Wildlife Service in the late 1980s. The Navy facilities the Service's efforts to manage the SNI population by providing logistical support.

Channel Islands National Marine Sanctuary Management Plan. The Channel Islands National Marine Sanctuary surrounds Channel Island National Park (Anacapa, Santa Cruz, Santa Rosa, San Miguel, and Santa Barbara islands) to six nm from shore. A separate five-year management planning process is now in progress for the area. A variety of uses are restricted under a Sanctuary designation. There are no known incompatibilities between the INRMP and the Sanctuary Management Plan.

State Water Quality Protection Areas. The waters around SNI to a depth of 300 feet are designated as a State Water Quality Protection Area by the California Water Quality Control Board. The area was designated such due to the rich marine environment of the waters surrounding the island. The designation prohibits point source discharges, unless exempted by the California Water Control Board. The Board has issued one exemption for SNI, which is for the brine discharge from the reverse osmosis water plant.

Essential Fish Habitat. Waters around SNI are designated Essential Fish Habitat (EFH) by the National Marine Fisheries Service. The designation is specifically for Pacific Coast Ground Fish and includes all suitable breeding habitat within 200 miles of the coastline.

California Coastal National Monument. The California Coastal National Monument (CCNM) was established in 2001. It includes all rocks and pinnacles off the California coast. This includes several dozen rocks located around SNI. The Bureau of Land Management, who is managing the CCNM, is in the process of developing a management plan.

5.4 Findings and Conclusions

The INRMP is the plan that would direct the natural resources management program at SNI. An ecosystem approach was used to develop management projects for each resource area. Implementation of management projects would maintain, protect, and enhance the ecological integrity of the island and biological communities inhabiting it. In addition, natural resources management measures described in this plan would protect SNI ecosystems and their components from unacceptable damage or degradation and identify and restore previously degraded habitats.

Findings indicate that, under the PA, potential consequences would result in no negative impact on each resource area (see table in Section 4.3). Proceeding with the Proposed Action would not significantly or adversely impact the affected environment. Additionally, no significant cumulative impacts would be expected.

Based on this environmental assessment, implementation of the Proposed Action (implementation of the INRMP) would have no significant environmental impacts. Because no significant impacts would result from implementation of the Proposed Action, the preparation of an environmental impact statement is not required, and the preparation of a FONSI is appropriate.

CHAPTER 6

COORDINATION AND PUBLIC INVOLVEMENT

In accordance with the Sikes Act, SNI has worked cooperatively with the USFWS, NMFS, and CDFG to ensure that the INRMP reflects the mutual agreement of these parties concerning the conservation, protection, and management of fish and wildlife resources on SNI. Draft copies of the SNI INRMP were provided to these agencies and made available to the general public upon request for review. All comments were considered in the preparation of the final INRMP and letters of mutual agreement were obtained.

CHAPTER 7

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