

**GUIDELINES FOR PREPARING
INTEGRATED NATURAL RESOURCES MANAGEMENT
PLANS
FOR NAVY INSTALLATIONS**

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LIST OF ACRONYMS

BAM	Baseline Assessment Memorandum
CEQ	Council on Environmental Quality
COMNAVFACENGCOM HQ	Commander Naval Facilities Engineering Command Headquarters
CNO	Chief of Naval Operations
CRMP	Cultural Resources Management Plan
DOD	Department of Defense
EA	Environmental Assessment
EFA	Engineering Field Activity
EFD	Engineering Field Division
EIS	Environmental Impact Statement
GIS	Geographical Information System
HPP	Historic Preservation Plan
INRMP	Integrated Natural Resources Management Plan
ITAM	Integrated Training Area Management
LCTA	Land Condition Trend Analysis
LRAM	Land Rehabilitation and Maintenance
MOU	Memorandum of Understanding
MWR	Morale, Welfare and Recreation
NEPA	National Environmental Policy Act
POL	Petroleum, Oil, Lubricants
POM	Program Objective Memorandum
PR	Program Review
RDP	Range Development Plan
SAIA	Sikes Act & Improvements Amendments of 1997
SAV	Submerged Aquatic Vegetation
TRI	Training Requirements Integration
USFWS	United States Fish and Wildlife

Guidelines for Preparing Integrated Natural Resources Management Plans for Navy Installations

1. Introduction

The purpose of these guidelines is to provide natural resource managers at Navy installations with an interpretation of what processes are necessary to prepare integrated natural resources management plans (INRMPs). INRMPs must comply with federal laws and regulations (including the Sikes Act Improvements Act (SAIA) of 1997), Navy policies and needs, and provide appropriate stewardship of the natural resources entrusted to the Navy's care and use.

The INRMP documents a planning process that draws from many disciplines and sources. Its First goal is to support and sustain the military mission while managing, protecting and enhancing the biological integrity of Navy lands and waters. The Navy's use of these resources must comply with legal mandates and should, to the extent practicable, be integrated with large-scale ecosystem goals outside the installation's boundaries.

Managing these many, often conflicting, goals and land uses is not an easy task. When added to difficulties understanding the complexities of biological systems and the limits of science and our individual knowledge, the task of preparation can be daunting. This guide is intended to assist the natural resources manager in assembling the appropriate inputs and direction for his or her plan. Navy natural resource managers are encouraged to be fully involved in creating an INRMP, and not rely on contractors to produce "a plan" for the shelf.

You should view these guidelines not as a cookbook, but as a starting point. Planning and management should reflect unique attributes of the installation's mission and ecological circumstances. For example, one installation may contain endangered species, while another installation may have no significant wildlife resources. The natural resources manager should adapt the elements in this guide to fit those characteristics.

These guidelines are organized into three major sections.

The first suggests a process that can assist the natural resources manager in arriving at a natural resources management plan that takes into consideration:

- The installation's mission,
- The various uses of the natural resources,
- The legal and biological needs of the natural resources,
- The role of the natural resources in the context of the surrounding ecosystem.

The second section touches on the traditional technical areas, which should be included, when applicable, in the plans discussion of the natural resources.

The final section adds a discussion on implementation of the elements of the plan.

1.2 What Is an Integrated Natural Resources Management Plan?

An INRMP is a planning document that charts the use and conservation of natural resources on lands and waters under Department of Defense (DOD) control. While primarily for use by the installation natural resources manager the INRMP also provides master planners with baseline information necessary for the development of master plans. An INRMP also serves as a principal information source for preparing environmental assessments or environmental impact statements for proposed installation actions. In addition, INRMPs provide the basis for formulating the natural resources budget. Each plan strives to balance the ecosystem management of resources unique to each installation with mission requirements and other land use activities affecting an installation's natural resources. An integrated plan requires input from military planners and trainers, scientists, natural resources managers, regulatory agencies and the public. The final plan should also reflect the cooperation and basic agreement of the U. S. Fish and Wildlife Service and the State Department of Fish and Game with respect to management of fish and wildlife.

1.3 When is an INRMP Needed?

Installations that occupy land and water property suitable for the conservation and management of natural resources must prepare and implement a comprehensive INRMP by 17 November 2001. INRMP plans must be continually monitored, reviewed annually, updated if necessary, and re-approved at least every five years. These evaluations require at least one Navy natural resources professional to render an opinion, based on a minimum of a site visit and current general assessment of the

resources. Evaluations take into consideration military uses of the area and capacity to support the mission; acreage, habitat types and special natural features; aesthetics; outdoor recreational opportunities; the ecological context of the installation within its physiographic region; and the local community and cultural resources context. Even a very small installation might require a plan if it is important to conservation and management of natural resources. For example, if the installation provides a habitat that is rare in the area or that is home to endangered species, supports an agricultural outlease program, or it is important to the local community for aesthetic reasons, an INRMP is justified. A general rule of thumb might be that if the installation requires natural resources funding, it should have an INRMP. Intensely developed installations may not have resources that would benefit from a plan, however, it is important to document this decision by reporting it to the installation commander, major claimant, and Commander Naval Facilities Engineering Command Headquarters (COMNAVFACENGCOM HQ). Installations that are not required to have an INRMP must be re-evaluated every five years to retain this status.

2. The INRMP Process

The process of creating an INRNIP takes time, effort and patience on the part of natural resources managers. You can find partners or consultants to assist in information gathering, organization and groundwork. However, natural resource managers should participate heavily in developing strategy and writing and reviewing the plan. The act of working through the information, making decisions, resolving conflicts and writing the plan is where institutional learning and buy-in occur. The process summarized below should help you use a methodological approach to create a plan which ensures the successful accomplishment of the Navy mission by merging and integrating all aspects of natural resources management with each other. The flowchart in Appendix I illustrates the basic process for development of an INRMP.

2.1 Responsibilities

All Navy installations with sufficient natural resources are required by law to prepare an approved INRMP by 30 September 2000 and to begin implementing the INRMP by 17 November 2001. Installation commanding officers are responsible for the preparation and implementation of an INRMP that fulfills both stewardship and legal requirements. Technical assistance is available from the cognizant Engineering Field Division or Activity (EFD or EFA). It should be noted that responsibilities may shift from installation Commanding Officers to Regional Commanders upon implementation of Navy regionalization efforts. It should also be noted that if regionalization is implemented

INRMPs must still be prepared on an installation-by-installation basis, unless subsequently advised otherwise.

2.2 Getting Started

Once you have identified the need for an INRMP, the next step is to develop an initial concept of the plan as it would best fit the situation at your installation. Depending on past efforts, many of the initial steps for planning may be in place, such as completed biological inventories and good working relationships with military operators. If you are working on a large installation, the initial concept may be to develop a full-blown ecosystem management strategy using a Geographical Information System (GIS). At a smaller base, the concept may be more modest. Draw on your own experience; consider the Navy's needs and relevant guidance, literature and legal requirements; and consult with your supervisors, colleagues at Engineering Field Divisions, other activities and installations, and others who have relevant experience. Once you have developed a concept, get the approval of your Commanding Officer.

2.3 Funding

Since development and implementation of an INRMP is a requirement of the Sikes Act, funding requests should be submitted to the major claimant during the Program Objective Memorandum/Program Review Baseline Assessment Memorandum (POM/PR BAM) process. The Chief of Naval Operations, CNO (N45), is the assessment sponsor at the Naval Operations level. Environmental compliance funding is the right source for INRMP funds. The Environmental Requirement Cookbook, Chapter 12, gives guidance for funding sources and cost guidance. Please use the Cookbook only as a guide and cite actual contractor cost estimates for POM/PR submittals. This is also the place to identify recurring costs, such as plan updates. The EFD/EFA can assist in formulating your request and finding contract mechanisms that might be needed for preparation of the INRMP as well as implementation of projects.

2.4 Assembling the Planning Team

Identify a small group of individuals representing the critical interests at the installation to serve as the core of the planning team. This group should include representatives from the military operators and trainers, major tenants who utilize natural resource areas, as well as natural resources managers and experts. Initially, this group should reach agreement on the purpose of the planning process, underlying assumptions, a protocol for meetings, legal review, the role of stakeholders, and command support for

conservation priorities and strategies. Leadership of this group is important. If this group is too large or contentious, consider using a facilitator to assist.

2.5 Identifying the Stakeholders and Conducting Interviews

Stakeholders are those organizations or individuals who have a vested interest in land management on your installation. These may include:

- Managers of military operations/training activities
- Environmental managers
- Master Planning staff
- Federal and state agencies (at a minimum the US Fish and Wildlife Service, state fish and game departments)
- Agricultural lessees
- Recreational groups
- Environmental and conservation groups
- Native American tribal interests
- Neighboring land owners
- Local government planning groups
- Scientists with expertise relevant to installation ecosystems

This is not a comprehensive list; you will have to tailor your list to the installation's situation. Identify the key stakeholders, and determine the level of interest and power of each. They will appreciate being advised early in the process. One way is to invite them to a meeting to discuss your initial concepts, get their reactions, and assure them that they will be involved in the process. Another way to ensure stakeholder involvement is

to arrange specific interviews to obtain their input. Involvement with stakeholders may require a substantial investment of time, but is a critical part of the planning process.

2.6 Assessing Ecological Needs

An INRMP should aim for healthy natural resources, which in turn will produce sustainable military and other uses and benefits. The generic question is "What are the ecological conditions necessary to support the military mission, important species or natural communities, allowable public uses and commodities, and to comply with laws?" In order to answer this question fully, each component must be examined individually before interactive effects can be distinguished.

- Gather basic information about the military mission:
- What are the existing and planned levels of operations or training?
- What environmental conditions are necessary for these activities?
- Are there concerns about the condition or management of the natural resources that may affect the mission?
- How are the military uses governed, and how flexible are the activities and schedules?

You must evaluate current and past ecological information. Assemble biological inventories and surveys to produce a basic profile of the installation's resources. Utilize remote sensing when available to assess landscape level features. Examine the installation's resources within a regional perspective. Gather and review background materials, such as previous Natural Resources Management Plans, species surveys, agricultural leases, installation master plan, installation instructions bearing on land use and military operations/training, and cultural resource plans.

Examine legal requirements affecting natural resources. Review requirements of laws and regulations such as the Sikes Act, Endangered Species Act, the Migratory Bird Treaty Act, wetlands regulations and historic preservation requirements. DODINST 4715.3 Environmental Conservation Program, OPNAVINST 5090.1 B and NAVFACINST P-73 are applicable regulations for natural resources conservation. Include in this review commitments made through NEPA mitigation plans and Biological Opinions for endangered species on the installation. See Appendix II which lists many laws and regulations that affect the natural resources program. In addition the following website lists and describes many laws and regulations relevant to our program: <http://www.fws.gov/laws/federal/summaries/index.html>.

Learn the installation's role in the socioeconomic context of the surrounding community. Often the master plan can be of assistance here. Sometimes the community's need for, or expectation of, products or services from the installation can have an effect on the management of natural resources.

2.7 Developing a Mission Statement

After investigating the ecological components of the installation, development of a mission statement will provide a standard by which to measure the effects of decisions made in the INRMP. A mission statement is a clarification of an organization's most important purpose and a view of how its members should behave. The statement should reflect the philosophy, core values, mandates, and natural resources management goals on the installation. A mission statement will provide a clear concept of where the installation is going and help define the job of the INRMP.

2.8 Setting Conservation Priorities

Although supporting the military mission and being good stewards of the land are the primary goals, perhaps the most challenging part of preparing an INRMP is establishing conservation priorities and developing a clear vision of the future. Not all problems in natural resource management can be addressed at once, so setting priorities is necessary. Focus first on species or native communities that have particular importance and urgency--examples might be those species with legal protection, communities with biological rarity, wetlands, and forest stands with disease or insect infestations. Consult with experts to understand what is known about the ecological relationships that sustain these species or communities. Next, systematically identify and assess threats to these priority populations. Follow this by developing a vision of a desired future with respect to those priorities in the military context. Reaching agreement among the core team and important stakeholders like the Fish and Wildlife Service on the vision of the future and general management goals will help define the INRMP.

2.9 Developing Objectives and Strategies

Objectives should translate your future vision into action. Objectives should be specific, measurable, achievable, realistic within the given time frame and budget and have a fixed endpoint in time. For each objective, consider alternative conservation strategies that can be broken down into a set of actions or tasks. It is important to note that because of the number of unknowns, these strategies must be selected with some degree of uncertainty. Current thinking uses the term "adaptive management" to

promote the view that management actions should be treated as a scientific hypothesis to be tested. As scientist learn more, and as you measure your management actions against the desired result, modifications may be necessary to achieve the objectives.

2.10 Management Actions

Once you have decided which strategies you want to follow, you must develop specific projects or activities to initiate, develop a schedule for completing them, and assign roles and responsibilities to those responsible for getting the job done.

A good project outline states:

1. Need for project,
2. What will be accomplished,
3. Its relationship to the plan's objectives,
4. The actions and techniques to be used
5. Required funding and staff time.
6. Plans for contract or partnership support.
7. A basis for competitive ranking with other projects, and
8. How the project is a mechanism for creativity and accountability.

Given the uncertainty of funding, consider how the scope of each project could be trimmed with minimal impact to the program, as well as how it could be usefully expanded in the event of a windfall.

2.11 Baseline Monitoring

Baseline monitoring is used to characterize existing organic and inorganic conditions and to establish an information base for future comparisons. You may find that existing biological inventories provide you with an acceptable starting point, or that baseline monitoring is necessary before implementing any management actions. It makes little sense to initiate projects if you have no measure of whether they move you towards a goal. An understanding, however imperfect, of the status quo is essential to gauge whether conservation objectives are being met and management strategies are effective.

2.12 Monitoring

There are many different types of monitoring, but generally all monitoring actions are repeated over time and their results are interpreted by comparison to some standard or goal for the purpose of detecting directional change. Monitoring can be performed at different levels, from minute to colossal. Some monitoring may be required by regulation or to fulfill mitigation measures specified in National Environmental Policy Act (NEPA) or endangered species documents. In some cases, monitoring may be necessary to enhance the understanding of ecological dynamics. In designing your monitoring plan, you must specify how monitoring will assess success or failure in meeting your management objectives, and should specify the variables to be measured, the direction and amount of change in those variables considered meaningful, and the frequency of measurement. If you are sampling, acceptable levels of sampling error must be specified. Monitoring is an essential part of learning about the resources you are managing, testing the assumptions you have made, and finding out the effectiveness of the management actions you have taken.

2.13 Products and Services

Management actions will result in a range of products and services, which may include improvement of conditions for military activities, harvesting of timber, development or improvement of grazing and agriculture, protection of endangered species, and enhancement of biodiversity. Management can also increase values for hunting, fishing and other forms of recreation.

2.14 Adaptive Management

Adaptive management is important to the ecosystem approach. It is more than just monitoring the effectiveness of management actions. It requires that the assumptions underlying a management approach, as well as expected outcome, be made explicit before action is taken. Adaptive management involves establishing hypotheses and a framework for analyzing differences between expected and observed outcome. Adaptive management is also about experimentation and probing ecosystems to understand how they operate. Natural resources managers are not just testing a specific management approach; they are trying to understand the structure, patterns, and processes that sustain the ecosystem integrity. Over time, this knowledge enriches the foundation for management. Adaptive management helps assure that the INRMP will not be a document on a shelf, but a framework for an ongoing management process.

3. Elements of an INRMP

This section of the guide is intended to help create a comprehensive look at your installation's natural resources; it does not supplant (Federal, DOD, or State) regulations or other current instructions, nor does it necessarily provide a format for an INRMP. It is important to define the purpose of the INRMP and discuss the techniques and management philosophy that was used to develop it, along with the overall goals of the plan. Describe the history of natural resources law enforcement on the installation and the sources of authority, including any installation efforts to attain or maintain professional natural resources law enforcement. Identify the jurisdiction of each part of the installation with respect to natural resources laws. Discuss enforcement and its relationship to the installation natural resources program. Document who provided input and reviews of the plan. Also, discuss the authority and approvals for the plan, how the plan will be used and how and when it will be revised.

3.1 Format

This guide is not a formal instruction, so definitive format recommendations are deliberately excluded. However, the process outlined in Section 2 should be a recognizable part of an INRMP. An INRMP checklist is presented in Appendix III to help remind you of the elements that should be considered during the planning process. For each technical area that is applicable to the installation, the INRMP process should result in a *statement* of goals for that resource including a discussion of alternatives that were considered and a discussion of how those goals have been developed. Also important is a statement of the *management and monitoring actions that are planned*, both routine and experimental. Since there are always limits, discuss the installation's overall *conservation priorities* and factors that determined them. Document which *agencies and other interested parties* had comments on or input to the plan, and discuss how the INRMP responds to these parties. Finally, consider how best to use appendices to include the necessary information while allowing a concise explanation of the plan.

3.2 Sikes Act Requirements

The Sikes Act & Improvements Amendments of 1997 requires, to the extent appropriate and applicable that INRMPs provide for:

1. Fish and wildlife management, land management, forest management, and fish and wildlife oriented recreation.

2. Fish and wildlife habitat enhancement or modifications.
3. Wetlands protection, enhancement, and restoration, where necessary for support of fish, wildlife, or plants.
4. Integration of and consistency among the various activities conducted under the plan.
5. Establishment of specific natural resources management goals and objectives and time frames for proposed actions.
6. Sustainable use by the public of natural resources to the extent that the use is not inconsistent with the needs of the fish and wildlife resources.
7. Public access to the military installation that is necessary and appropriate for the use described in #6, subject to requirements necessary to ensure safety and military security.
8. Enforcement of applicable natural resources laws and regulations.
9. No net loss in the capability of military installation lands to support the military mission of the installation; and
10. Such other activities as the Secretary of the Navy determines appropriate.

3.3 Geographic Information Systems (GIS)

The representation of geographical data and associated information is important to integrated natural resources planning. As you develop a complete picture of the installation's resources, begin grouping land uses and constraints by location. This data dictionary of physical information can best be captured, stored, updated, manipulated, displayed and analyzed on a computerized GIS. The data in the GIS can be made available to planners and land managers as an aid in making informed land-use decisions. Development of a GIS will help to ensure that you are not using conflicting resource management techniques or planning land uses that conflict with natural resources preservation or the installation's mission. This information can also help with buy in from other stakeholders if made available for their use.

3.4 Installation Location and Mission

The position, size and role of the installation in its surroundings can be very important in determining ecological values as well as human ones. Provide maps, develop a history emphasizing land uses and management practices, and describe surrounding communities and local and regional natural areas. Learn and document the current military missions, including those of major tenants.

3.5 Mission Needs and Impacts on the Environment

An INRMP is designed to support the military mission by protecting and enhancing the lands upon which the mission is critically dependent. Find out what the Navy needs from its natural resources for its mission. Investigate current and ongoing major problem areas that have the greatest impact on ecosystem functions. Learn whether there are any pollution concerns that may affect natural resource management, such as hazardous waste sites, groundwater contamination, surface water contamination, air pollution or visibility problems. Document any future mission changes or major projects and their possible consequences for natural resources management.

3.6 General Physical Environment

Collect information and maps about the climate, topography, geology and soils that will be important to managing natural resources. Document the acreage and general distribution of improved and unimproved lands on the installation. Look at waterways, watersheds, wetlands, old growth forest, impoundments and drainage patterns.

3.7 General Biological Environment

Gather information about the historic vegetative and watershed types on the installation. Look at current native vegetative cover and highlight areas that are rare or biologically important in some way, such as threatened or endangered species. Document the native fauna on the base, emphasizing sensitive species and seasonal migrants. Pay particular attention to wetlands and Submerged Aquatic Vegetation (SAV) beds as they are pollution run-off sinks and nursery grounds for biota. Map any critical habitat.

3.8 Ecosystem Context

Look at the installation in a regional setting. Evaluate the relationship and importance of its natural resources in the region beyond its boundaries. Learn about its role in biological terms and any economic or aesthetic role that it plays in the human community. Learn about any regional biopolitical issues.

An ecosystem management approach needs to be incorporated into the plan. The ecosystem approach has an overriding goal of protecting the properties and functions of natural ecosystems. The ecosystem management sections of the INRMP include; Inventory and Monitoring; Protection and Damage Prevention; Soil, Water, and Vegetation Management; Wildlife Population Management; Research; Enforcement; and Awareness. Within these ecosystem management sections are programs involving the following: fish and wildlife management; grounds maintenance: land restoration; endangered species: noxious animal control; natural resources law enforcement; research programs: and overall conservation education.

3.9 Natural Resources Constraints

Build a good picture of major natural resources constraints to the military mission or to natural resources management. Common constraints are endangered species or critical habitats, wetlands, floodplains, coastal issues, highly erodible soils, steep slopes or sensitive plant communities. These types of constraints can best be illustrated through the use of a GIS.

3.10 Legal Requirements

There are many laws and regulations which may apply to the management of natural resources. A partial list is attached to this guide as Appendix II. Review all pertinent regulations and instructions for their applicability to the natural resources on the installation or the management techniques that you may wish to use. While the Endangered Species Act obviously applies if there are endangered species on the installation, it may not be so obvious that local air pollution ordinances apply to your prescribed burning. INRMPs will also provide pertinent information for Clean Water Act permits as well as CERCLA and RICRA related information to be shared with environmental engineers.

3.11 Threatened or Endangered Species and Critical Habitats

Collect copies of any surveys for listed species which have been performed on the installation, species recovery plans which impact the base, Section 7 consultations and biological opinions. Examine the health of the installation's habitats and impacts on the mission.

3.12 Wetlands

Learn about any jurisdictional wetlands, surveys, pending 402 and 404 permits and mitigation projects. Document the health of existing wetlands and any applicable wetlands banking. Maps of hydric soils and aerial photography can also be helpful. Wetland delineation maps for most installations are available from the EFDs/EFAs. These digital products have been prepared through a partnership with the Fish and Wildlife Service National Wetlands Inventory.

3.13 Watershed Protection

Locate any non-point source pollution plans addressing soil erosion prevention, pesticide and fertilizer use. Map permitted wastewater and stormwater discharge points, and floodplains. Determine any wastewater or stormwater management issues. Learn whether there are regional programs for watershed protection, such as the Chesapeake Bay Protection Act. Find out about the installation spill plans which address watershed protection and natural resources damage assessment. In order to fully address watershed protection issues you should become familiar with the newly developed "Clean Water Action Plan" published by the Environmental Protection Agency, reference #EPA-840-R-98-001. This document can be viewed on the Internet at: <http://www.cleanwater.gov/>.

3.14 Fish and Wildlife Management

Review projects, programs, and cooperative agreements with the U.S. Fish and Wildlife Service, the National Marine Fisheries Service and the state fish and game agency. Develop maps of managed fish and wildlife areas. Document existing management practices such as stocking, food plots, permits and fees, and any animal damage control procedures or Bird Aircraft Strike Hazard issues. Research any local zoonotic disease concerns (Lyme disease, rabies, encephalitis, etc.). Learn the current demand for the installation's resources and any existing programs for Watchable Wildlife,

Recreational Fisheries, or protection of neotropical migratory birds. Develop any requirements for habitat improvement, and address issues of public access.

3.15 Forestry

Document the current status of commercial forestry management and ecosystem management within commercial forest areas. Assemble maps and detailed descriptions of individual forest stands with timber access roads. Document current forest resource inventory data and statistical summaries by stands or compartments. Describe silvicultural management practices such as timber stand improvement techniques, harvesting methodologies, reforestation practices, fire protection methods, and endangered species and cultural resources protection initiatives. Learn about the markets for applicable forest products.

3.16 Agricultural Outleasing

Look at any coordination and cooperative agreements with the Natural Resources Conservation Service, and investigate the suitability and availability of land for agricultural outlease. Assemble maps and detailed descriptions of current or potential outleased land, including soil types, erodibility, fertility, productivity potential and current vegetative cover. Document the monitoring systems and schedules for lease compliance, any applicable land use controls, and specifications for construction and maintenance of improvements.

3.17 Outdoor Recreation

Collect any cooperative agreements or document any coordination with the National Park Service for outdoor recreation, and provide maps and detailed descriptions of outdoor recreation areas. Learn about any issues such as public accessibility for hunting, fishing, and trapping, future demands for outdoor recreation, boating access or off-road vehicles. Include any specifications or constraints about construction techniques, materials, or signage. Determine the appropriate interface with the installation's program for Morale, Welfare and Recreation (MWR).

3.18 Grounds Maintenance

Review any installation landscape plan and the sections of the integrated pest management plan pertaining to outdoor pest management. Learn about best

management practices for erosion control and any non-point source pollution problems. Investigate the feasibility of creating or expanding the installation urban forestry program.

3.19 Coastal Issues

If the installation is in the coastal zone, learn about the state's coastal zone management plan and consistency determinations. Investigate whether there are important issues involving coastal barrier resources or marine animal protection. Look for involvement opportunities with the Coastal America Program.

3.20 Legal Commitments

Make sure that you understand any commitments that the installation has for mitigation for past projects, leases and use agreements with other entities, and other requirements that may affect how natural resources may be managed.

3.21 Land Management Units

Once the technical information is assembled and mapped, land management units can be developed. Management units are land or water areas that can be physically identified on the ground and on maps or photographs, and can be managed apart from other units. These units are usually a management combination of land use (impact area, forest management compartments, agricultural fields) and features or constraints such as soil, vegetation type, topographic changes, or access. Use of land management units is a practical way to group management techniques and goals to assure compatibility of resource uses within the unit.

3.22 National Environmental Policy Act (NEPA)

The Navy Office of General Counsel (I&E) has determined that SAIA requirements for INRMP implementation necessitate the preparation of NEPA documentation prior to Plan approval. The preparation of an Environmental Assessment (EA) will suffice for most proposed installation INRMPs. However, in cases where implementation of the INRMP will have significant impact on the environment, the preparation of an Environmental Impact Statement (EIS) is required. Coordination with your Environmental Planning Office will ensure that the appropriate document is prepared. It may be tempting to presume that only the implementation of the INRMP, rather than the

choices/projects the plan represents, will have the environmental impact and therefore require NEPA analysis. However, if decisions affecting future land or resource use are being made in an INRMP, NEPA is triggered. The Council on Environmental Quality (CEQ), defines plans as a major Federal action requiring NEPA analysis. In addition, CEQ points out that discussion of, and public input on plan options (alternatives) and their environmental pros and cons (impacts) would be valuable in making broad policy-level decisions. While public-comment on the draft document is not required for preparation of the EA it is required for preparation of an EIS or an INRMP. You should refer to Chapter 2 of the OPNAV 5090.1B for basic guidance on the preparation of NEPA documents. You should also become familiar with the CEQ "Regulations for Implementing NEPA" and "NEPAs 40 Most Asked Questions". These documents, as well as other useful NEPA related information, can be found on CEQ's website. <http://ceq.eh.doe.gov/nepa/nepanet.htm>.

It is recommended that the INRMP and associated environmental documentation be prepared as individual documents to ensure that the viability, integrity, and intent of each instrument is maintained. The intent of the EA is to analyze the various options available for development, while the intent of the INRMP is to detail specific projects to fulfill our stewardship obligations. While physically separate documents, they should be prepared simultaneously. It is also important for installation natural resources managers to integrate the two documents at the earliest possible stage to ensure that decisions reflect current environmental values and avoid potential conflicts. Preparation of the EA should be accomplished early to accommodate Navy decision-makers, rather than done as a traditional permitting or compliance process.

One of the first steps in preparing the EA is to define the proposed action and explain its purpose and need. Briefly stated, the subject action is to develop and implement an INRMP that integrates natural resources management with the installation's military use in a manner that ensures military preparedness and provides for sustainable multipurpose uses and conservation of the natural resources. The purpose and need for INRMPs is to meet statutory requirements imposed by the SAIA of 1997 as well as the requirements of various DOD and Navy Instructions. The purpose and need section can be further clarified with a brief discussion of the required plan elements (as outlined in the SAIA) applicable to your installation.

Most of the EA should be devoted to the discussion of real environmental issues and reasonable alternatives. Alternatives that are not feasible because they are unreasonably expensive, too technically or logistically complex, inconsistent with the installation mission, or that have severe environmental impacts should be eliminated from analysis. The CEQ has defined reasonable alternatives as those which are

economically and technically feasible and show evidence of common sense. Feasibility is an initial measure of whether the alternative makes sense and is achievable.

The analysis process should be focused on the alternatives and methodologies for accomplishment of the management objectives/program elements. The range of alternatives for preparation of INRMPs should always include the no action alternative. The no action alternative means that the installation would not implement a new INRMP, but would continue to operate using existing plan or no plan. The no action alternative is essentially a baseline from which to compare the other alternatives. The preferred alternative is implementation of the INRMP. Each alternative should describe the general geographical extent of where each management objective/program element would occur. Each reasonable alternative might only reflect a difference in the intensity in one of the management objectives/program elements, (i.e. forest management or fish and wildlife management or outdoor recreation) over another. It is recommended that there be a brief discussion of the alternatives considered, within the INRMP, to indicate to the review agencies and local community that various management schemes were analyzed.

While it is not required that specific projects be analyzed in the EA, there must be a complete project list with description, cost estimate, funding priority designation, and implementation schedule in the INRMP. The projects must be consistent with the methodologies analyzed in the NEPA document. Refer to section 3.25 for details. You should ensure however, that INRMP environmental documentation is prepared in a way that will accommodate unforeseen projects as well as changes to original projects.

3.23 Public Review

The Sikes Act Improvements Act of 1997 requires that INRMPs be made available to the public for review. This may be accomplished by placing an ad in the local newspaper and providing copies to those requesting the opportunity to review the plan. It is recommended that 15-30 days be scheduled to accommodate the public review process.

3.24 Approvals

The INRMP title page should include a signature block for the installation Commanding Officer, installation Natural Resources Manager/Coordinator, and the EFD/EFA Natural Resources Manager to reflect concurrence and acceptance of the plan. If regionalization is implemented the INRMP should also be signed by the Regional Commander. Sikes Act Improvements Amendments of 1997 require that INRMPs be

prepared in cooperation with the U.S. Fish and Wildlife Service (USFWS) and the state department(s) of fish and game, and that the management of fish and wildlife in DOD INRMPs reflect mutual agreement of the parties. For this reason, it is important to include representatives of these agencies early in the INRMP process. The resulting fish and wildlife objectives and actions should be acceptable to these agencies. A Memorandum of Understanding (MOU) among the installation, USFWS, and state may be used to address the responsibilities, expectations, and commitments of the various partners. The MOU or signatures of the appropriate USFWS and state officials on the INRMP title page will satisfy the Sikes Act mutual agreement requirement. Letters of endorsement from the USFWS and State can be put in the INRMP appendix to indicate concurrence.

3.25 Summary of Implementation Recommendations

In order to meet SAIA planning and implementation requirements, it will be necessary to describe and list projects in enough detail to determine their priority, schedule and fund source. Many projects which implement-decisions of an integrated plan are associated with a legal driver and are appropriately funded through the environmental programming and budgeting process in the POM. Refer to enclosure (4) of DODINST 4715.3 and annual Navy guidance for details regarding compliance funding criteria and appropriate class/level assessment. The Navy's Environmental Requirements Cookbook (Chapter 12. Natural Resources Requirements) will assist you in determining estimated cost and class; level for compliance projects. It is critical that projects be properly assessed and assigned the appropriate level to meet compliance criteria for both recurring and non-recurring projects. This document will serve as the basis for assessing future funding requirements and developing the installation's POM submission. Because the approved INRMP is a public document, it is imperative that the implementation measures and schedules presented be closely matched with appropriate POM level and date of request for funding. -Level 1 compliance-type projects are considered "must fund" and are associated with legal drivers such as the CWA, ESA, CZMA, MMPA, etc. Additionally, the list of projects in the INRMP should include non-compliance/ stewardship-type projects that may be associated with agricultural outleasing, forestry or fish and wildlife funding criteria. DODINST 4715.3, OPNAV 5090.1 B, and NAVFAC P-73 Volumes I & II provide information regarding these programs. The INRMP will also provide the basis for seeking funding from these sources. The table in Appendix IV should be used as a template to outline project descriptions and funding criteria and assessment in the INRMP.

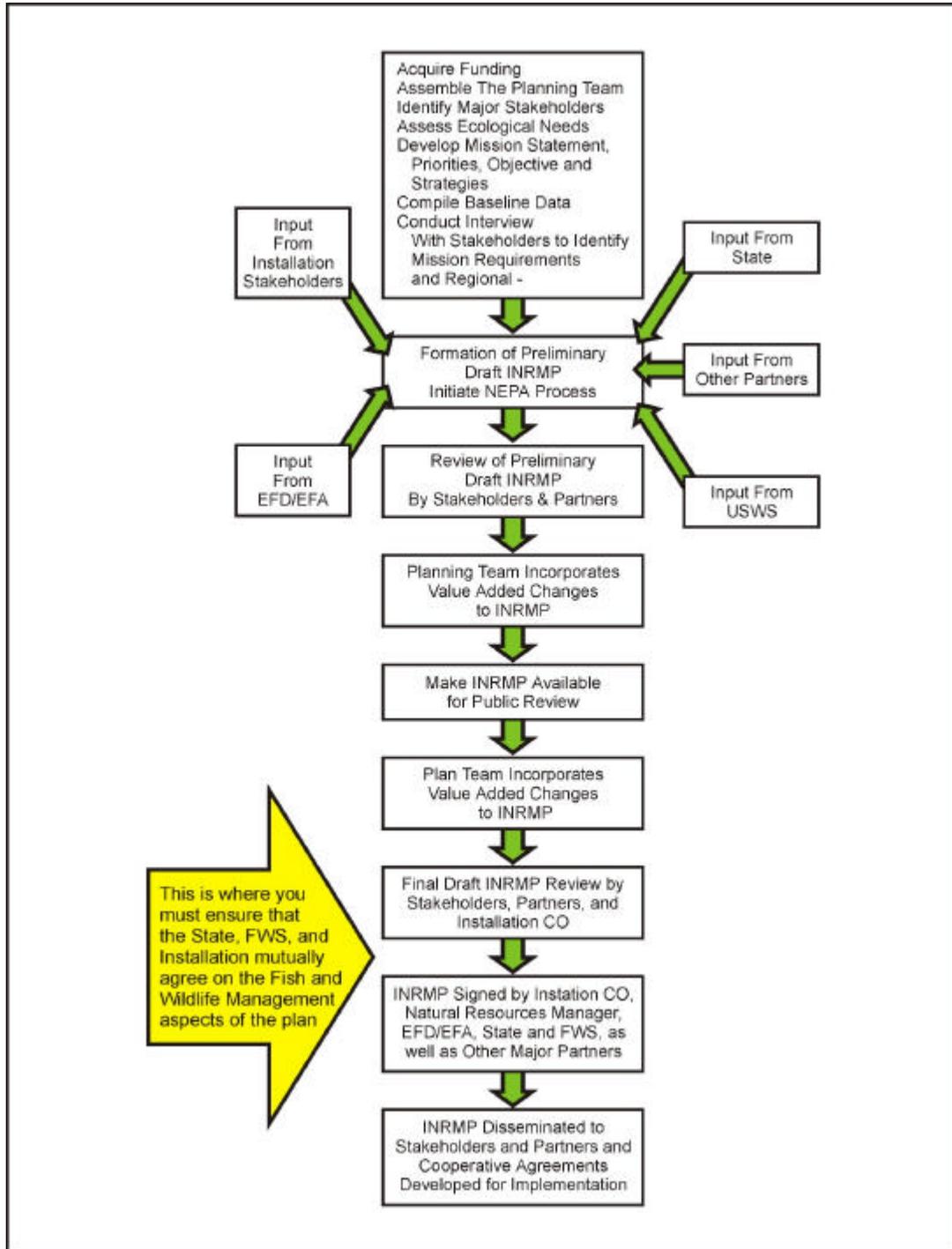
4. Implementation of the INRMP

Natural resources managers should describe the organizational resources necessary to implement the INRMP and identify the roles and responsibilities of the individuals and organizations at the installation that will be required to fully implement the plan. Managers must also identify the manpower required to implement the INRMP. The Sikes Act includes a specific requirement that there be "sufficient numbers of professionally trained natural resources management and natural resources enforcement personnel to be available and assigned responsibility" to implement an INRMP. Describe sources of manpower, both internal and external that will be required by the installation and any training that is necessary. Include contractors, partners, and volunteers.

Implementation of an INRMP will be in part dependent upon building successful partnerships with other agencies, universities, environmental organizations and community groups. Many of these parties will have been identified as stakeholder and interested parties in the INRMP process, and will have had input to the plan. Cooperative agreements may be used to provide a framework for obtaining assistance from these groups and individuals for natural resources management.

Successful implementation of the INRMP can hinge on your success in instilling a conservation ethic in installation civilian and military personnel and in providing a bridge to the public via awareness and education programs. On base, personnel can respond to posters, videotapes, maps, handbooks and personal presentations. You might use techniques such as public forums, newspapers, prepared talks, special events, conservation education centers, and nature trails to inform the public of the values of natural resources conservation and ways they can help to support the program.

APPENDIX I: INRMP PROCESS



APPENDIX II: RELEVANT ENVIRONMENTAL AND CONSERVATION LAWS

	Influence	
	High	Medium
Abandoned Shipwreck Act of 1987 [43 US-C 2101]		X
American Heritage Rivers Initiative [EO 13061]		X
American Indian Religious Freedom Act of 1978, as amended [42 USC 1996] [PL 95-341]		X
Anadromous Fish Conservation Act (1965) [16 USC 757]		X
Antiquities Act of 1906 [16 USC 431] [PL 59-209]		X
Archaeological and Historic Resources Management [DoDD 4710-1]	X	
Archaeological and Historic Data Preservation Act of 1974 [16 USC 469]		X
Archaeological Resources Protection Act of 1979 [16 USC 470] [PL 96-095]	X	
Bald Eagle Protection Act of 1940 [16 USC 668]		X
Clean Air Act (CAA) (1955) [42 USC 7401]		X
Clean Water Act (CWA) (1972) [33 USC 1251] [PL 92-500]	X	
Coastal Zone Management Act of 1972 [16 USC 1451] [PL 92-583]		X
Conservation and Rehabilitation Program on Military and Public Lands [PL 93-452]		X
Conservation Programs on Military Reservations (Sikes Act) [16 USC 670] [PL 86-797]	X	
Curation of Federally Owned and Administered Archaeological Collections [36 CFR § 79]	X	
Determination of Eligibility for Inclusion in the National Register of Historic Places [36 CFR § 63]	X	
Emergency Wetlands Resources Act of 1986 [16 USC 3901]		X
Environmental Conservation Program [DoD DIR 4715.3]		X
Endangered Species Act (ESA) [PL 93-205]	X	
Environmental Effects Abroad of Major Federal Actions		
Environmental Protection and Enhancement: Subpart H Historic Preservation [32 CFR § 650]		X
Environmental Security [DoD DIR 4715.1]		X
Erosion Protection Act [33 USC 426]		X
Estuary Protection Act of 1968 [16 USC 1221]		X
Exotic Organisms [EO 1 1987]	X	

	Influence	
	High	Medium
Farmland Protection Policy Act of 1981 [7 USC 4201] [PL 97-098]		X
Federal Cave Resources Protection Act of 1988		X
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended [7 USC 136]	X	
Federal Land Policy and Management Act of 1976 [43 USC 1701]		X
Federal Noxious Weed Act of 1974, as amended [7 USC 2801]	X	
Fish and Wildlife Conservation Act of 1980 [16 USC 2901] [PL 96-366]		X
Fish and Wildlife Coordination Act of 1934 [16 USC 661]		X
Floodplain Management [EO 1 1988]		X
Food, Agricultural, Conservation and Trade Act of 1990 (Pesticide Reporting) [7 USC 1361]		X
Historic Preservation Certificates [36 CFR § 67]		X
Historic Sites Act of 1935 [16 USC 461] [PL 74-292]		X
Historic Preservation [AR 420-40]	X	
Hunting, Fishing and Trapping on Military Lands		X
Indian Sacred Sites [EO 13007]	X	
Intergovernmental Coordination Act (1968) [42 USC 4231] [PL 90-577]		X
Lacey Act of 1900		X
Marine Mammal Protection Act of 1972 [16 USC 1361] [PL 92-522]		X
Migratory Bird Treaty Act (1918) [16 USC 703] [PL 65-186]	X	
Multiple-Use Sustained Yield Act of 1960 [16 USC 528]		X
National Environmental Policy Act of 1969 (NEPA) [42 USC 4321] [PL 91-190]	X	
National Historic Landmarks Program [36 CFR § 65]		X
National Historic Preservation Act of 1966, as amended [16 USC 470] [PL 89-665]	X	
National Register of Historic Places [36 CFR § 60]	X	
Native American Graves Protection and Repatriation Act of 1990 [25 USC 3001] [PL 101-601]	X	
Native American Graves Protection and Repatriation Act Regulations	X	
Natural Resources Management Procedure Manual [NAVFAC P-73]		X
North American Wetlands Conservation Act [16 USC 4401]	X	

	Influence	
	High	Medium
Outdoor Recreation on Federal Lands		X
Outleasing for Grazing and Agriculture on Military Lands [10 USC 2667]	X	
Preservation of American Antiquities [43 CFR § 3]		X
Protection and Enhancement of the Cultural Environment [EO 11593]	X	
Protection and Enhancement of Environmental Quality [EO 11 5141]		X
Protection of Archaeological Resources: Uniform Regulations [32 CFR § 229]	X	
Protection of Historic and Cultural Properties [36 CFR § 800]	X	
Protection of Wetlands [EO 1 1990]	X	
Recreational Fisheries [EO 12962]	X	
Religious Freedom Restoration Act		X
Rivers and Harbors Act of 1899 [33 USC 401]		X
Safe Drinking Water Act of 1974, as amended [42 USC 300] [PL 93-523]		X
Salmon and Steelhead Conservation and Enhancement Act of 1980		X
The Secretary of Interior's Standards for Historic Preservation Projects [36 CFR § 68]	X	
Soil and Water Resources Conservation Act of 1977 [16 USC 2001]		X
Taylor Grazing Act (1934) [43 USC 315] [PL 73-482]		X
Timber Sales on Military Lands [10 USC 2665]	X	
Use of Off-Road Vehicles on Public Lands [EO 11989]		X
Waiver of Federal Agency Responsibility under Section 110 of the National Historic Preservation Act [36 CFR § 78]		X
Water Resources Planning Act [42 USC 1962]		X
Watershed Protection and Flood Prevention Act [16 USC 1001] [33 USC 701]		X
Wild and Scenic Rivers Act of 1968 [16 USC 1271] [PL 90-542]		X

Note that summaries of these laws and many others can be located at:
<http://www.fws.gov/laws/federal/summaries/index.html>.

APPENDIX III: INRMP PREPARATION CHECKLIST

This checklist is intended as a reminder of resource materials that could be used as references during the development of the INRMP or of elements that could be incorporated into the INRMP. This list is not inclusive, nor may every element listed here be applicable for every installation.

1.0 GENERAL

Installation's organizational structure (including tenants)

Satellite installations

Responsibilities of each branch within the environmental directorate

Number and type of staff within the environmental directorate

Environmental directorate staff training needs

Current partners (e.g., universities, other federal/state agencies) working with the installation

Neighbors surrounding the installation

Surveys or assessments currently being conducted

Surveys or assessments needed

Geographic Information System (GIS) capabilities

Software and data management

Microcomputer systems

History of natural resources management at the installation

- Forest management
- Fish and wildlife management
- Land management
- Watershed management

Structure of Integrated Training Area Management (ITAM) program

Installation's ITAM work plan

Copies of related Environmental Assessments/Environmental Impact Statements

Copies of relevant maps (e.g., soil surveys, wetlands, training areas, watersheds)

2.0 MILITARY MISSION

Overview of military mission

Number, type, and location of training, testing, storage, and impact areas

Number, type, and location of firing ranges

Type of military activities within each area

Copies of maps depicting training, testing, storage, and impact areas

Copies of maps depicting firing ranges

Copies of current and future training schedules (if available)

Number of units and troops that train on the installation

Number and type of vehicles and equipment

Type of munitions or ordnance used

Projected changes in the military mission

Copy of Range Development Plan (RDP)

Copies of guidance for petroleum, oil, lubricants (POL) and antifreeze disposal

3.0 LAND MANAGEMENT

Published soil survey

Soil erodibility

Locations most susceptible to soil erosion

Copies of erosion control plan

Possible Land Rehabilitation and Maintenance (LRAM) projects (e.g., training area rehabilitation, road drainage correction, establishing dedicated river crossings, hardened sites)

Training Requirements Integration (TRI)

- Training area rotation
- Mission sitting
- Training restrictions

Number and location of agricultural/grazing leases

Provisions of lease agreements

Copies of agricultural/grazing leases

Water quality monitoring (surface water and groundwater)

Stormwater management requirements

Copies of Stormwater Management Plans

Special Area Protection

- Special status plant species
- Waters of the United States (including wetlands)
- Riparian communities
- Other communities

Land use restrictions (e.g., streamside forested buffers)

Copies of Installation Master Plan/Property Utilization Plan

4.0 VEGETATION MANAGEMENT

Land Condition Trend Analysis (LCTA)

Range condition surveys

Floral surveys

Wetlands surveys

Use/need for aerial photographs/satellite imagery

Photo points

Vegetative mapping efforts

Fire Management

- Firebreaks (location and maintenance)
- Prescribed fire (location of burn sites, burn schedules)
- Wildfire suppression
- Wildfire impacts on natural resources

5.0 FISH AND WILDLIFE MANAGEMENT

Faunal inventory and monitoring

- Game species
- Nongame species
- Threatened and endangered species
- Fish species
- Neotropical birds
- Livestock (if applicable)

6.0 RARE, THREATENED, AND ENDANGERED SPECIES

Copy of Endangered Species Management Plan

Endangered species act consultation

Effects of installation activities on endangered species

Endangered species activities

- Preactivity surveys
- Abundance and distribution studies
- Predator and prey population studies
- Incidental take record keeping

Inventorying and monitoring

Copies of biological assessments

Copies of biological opinions

- Permitted number of "takes"
- Conditions for "harassment" (e.g., harassment from training is inadvertent)
- Necessary reasonable and prudent measures

7.0 PEST MANAGEMENT

Responsibility of noxious animal control

Noxious Plant Control

- Noxious plants present on the installation
- Noxious plant control methods
- Responsibility for noxious plant control

Animal Control

- Domestic pets
- Insects and rodents
- Predators and related pests
- Feral animals
- Stray cattle

8.0 ENVIRONMENTAL AWARENESS

Copies of installation environmental regulations

Copies of installation training regulations

Handbooks

Posters Field Cards

Earth Day activities

Installation newspaper

Other

9.0 OUTDOOR RECREATION

Hunting

- Game harvest strategies
- Population trends of game species
- Maintenance of harvest data
- Hunting seasons (bow. rifle. shotgun. blackpowder)
- Bag limits
- Check in/check out procedures

- Hunter safety requirements
- Number and location of hunting areas (map of hunting areas)
- Restrictions in various hunting areas
- Hunting permit fees
- Other fees (e.g., access fee)
- Enforcement

Fishing

- Type of fish species present on the installation
- Type of fish species stocked/provided by the state, USFWS, or commercial hatcheries
- Location/map of fishing areas
- Water release schedules (if applicable)
- Fishing permit fees
- Other fees (e.g., access fee)
- Check in/check out procedures

Other Natural Resources Related Activities

- Hiking
- Camping
- Biking
- Boating
- Other

10.0 CULTURAL RESOURCES MANAGEMENT

Cultural resources surveys completed

Future cultural resources surveys scheduled

Historic building surveys completed

Future historic building surveys scheduled

Number of historic/cultural sites on the National Register of Historic Places

Number of sites eligible for the National Register of Historic Places

Copies of Historic Preservation Plans (HPPs)

Copies of Cultural Resources Management Plans (CRMPs)

APPENDIX IV: SUMMARY OF RECOMMENDED PROJECTS

Project #	Project Description	INRMP Page Ref.	Scheduled Implementation (FY)	1/ Fund Source and Budgeting Priority	Cost Estimate	2/ Budget Criteria	3/ NEPA Requirement	Date Completed
Example:								
1	Endangered Species Survey.	22	2001	Environmental Compliance Class 1.	\$20K		Covered by INRMP EA.	
Example:								
2	Wetlands Delineation.	15	2001	Environmental Compliance Class 1.	\$15K		Covered by INRMP EA.	
Example:								
14	Construction of Watchable Wildlife Viewing Area.	34	2001	Agricultural Outlease Funds.	\$30K		Covered by INRMP EA.	

Notes:

- 1/: Class I Compliance Projects being funded through the POM process should be addressed first, as they are must funds. Class II, III, & IV Projects, and Projects funded with forestry, agricultural outlease, fish and wildlife, Legacy, or other fund source, which are stewardship type projects, should be listed next.
- 2/: Refer to the Navy Environmental Requirements Cookbook, Chapter 12, Natural Resources Requirements.
- 3/: Most projects listed here will not require further NEPA documentation as they will be covered under the EA/EIS prepared for the INRMP. Other projects not specifically addressed in the INRMP, or modified projects, will usually be closed enough related to the INRMP that they can be Categorically Excluded. Only in very special circumstances will an individual natural resources project require it's own EA or EIS.