



Department of Defense MANUAL

NUMBER 4715.03

November 25, 2013

Incorporating Change 3, September 10, 2025

USD(A&S)

SUBJECT: Integrated Natural Resources Management Plan (INRMP) Implementation Manual

References: See Enclosure 1

1. PURPOSE. In accordance with the authority in DoD Directive 5135.02 (Reference (a)) and pursuant to DoD Instruction 4715.03 (Reference (b)), this manual:

a. Provides procedures to prepare, review, update, and implement INRMPs in compliance with sections 670-670o of Title 16, United States Code (U.S.C.) (also known and referred to in this manual as “the Sikes Act” (Reference (c))).

b. Incorporates and cancels Deputy Under Secretary of Defense for Installations and Environment memorandum (Reference (d)) and Assistant Deputy Under Secretary of Defense for Environment, Safety and Occupational Health memorandums (References (e) and (f)).

2. APPLICABILITY. This manual:

a. Applies to:

(1) OSD, the Military Departments, the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Combatant Commands, the Office of Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities in the DoD (referred to collectively in this manual as the “DoD Components”).

(2) All DoD operations, activities, real property, and property interests owned, leased, permitted, and controlled in the United States, including near shore areas and public lands withdrawn from all forms of appropriation pursuant to public land laws and reserved for use by the DoD, **unless the law specifically places responsibilities on another organization.**

b. Does not apply to:

(1) Overseas operations and activities outside U.S. territories, possessions and commonwealths.

(2) Civil works projects of the U.S. Army Corps of Engineers (USACE) and projects that USACE performs for non-DoD entities.

3. POLICY. It is DoD policy in accordance with Reference (b) to implement and maintain natural resources conservation programs to ensure access to land, air, and water resources for realistic military training and testing while ensuring that the natural resources under the Secretary of Defense's stewardship and control are managed to support and be consistent with the military mission.

4. RESPONSIBILITIES. In addition to the responsibilities in Reference (b), DoD Component heads with land management responsibilities:

a. Integrate natural resources conservation program requirements with mission activities. This includes preparing, maintaining, and implementing INRMPs in coordination with the U.S. Fish and Wildlife Service (USFWS), appropriate State fish and wildlife agencies, and National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries), when relevant, as part of overall installation planning consistent with military training or test mission requirements.

b. Develop policies requiring installations with significant natural resources to develop:

(1) INRMPs pursuant to section 670a(a) of the Sikes Act.

(2) Procedures for coordinating plans at the military installation level.

5. PROCEDURES. See Enclosures 2-8.

6. RELEASABILITY. **Cleared for public release.** This manual is available on the Directives Division Website at <https://www.esd.whs.mil/DD/>.

7. SUMMARY OF CHANGE 3. The changes to this issuance update language to comply with the March 17, 2025 Secretary of Defense Memorandum (Reference (g)).

8. EFFECTIVE DATE. This manual is effective November 25, 2013.



Under Secretary of Defense for
Acquisition, Technology, and Logistics

Enclosures

1. References
2. General INRMP Provisions
3. Coordination, Review, and Public Comment
4. Critical Habitat Exclusions, Special Management, and Implementation
5. INRMP Contents
6. Ecosystem-Based Management Principles and Guidelines
7. Authorities and Other Considerations
8. Planning for Impacts to Natural Resources and Military Installation Resilience

Glossary

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ENCLOSURE 1

REFERENCES

- (a) DoD Directive 5135.02, “Under Secretary of Defense For Acquisition And Sustainment (USD(A&S)),” July 15, 2020
- (b) DoD Instruction 4715.03, “Natural Resources Management,” July 22, 2024, as amended
- (c) Title 16, United States Code
- (d) Deputy Under Secretary of Defense for Installations and Environment Memorandum, “Implementation of Sikes Act Improvement Act: Updated Guidance,” October 10, 2002 (hereby cancelled)
- (e) Assistant Deputy Under Secretary of Defense for Environment, Safety and Occupational Health Memorandum, “Implementation of Sikes Act Improvement Amendments: Supplemental Guidance concerning INRMP Reviews,” November 1, 2004 (hereby cancelled)
- (f) Assistant Deputy Under Secretary of Defense for Environment, Safety and Occupational Health Memorandum, “Implementation of Sikes Act Improvement Amendments: Supplemental Guidance concerning Leased Lands,” May 17, 2005 (hereby cancelled)
- (g) Secretary of Defense Memorandum, “Mission Focus of the Department of Defense,” March 17, 2025
- (h) Title 33, United States Code
- (i) Title 42, United States Code
- (j) Draft Memorandum of Understanding, “Between the U.S. Department of Defense and the U.S. Fish and Wildlife Service and the Association of Fish and Wildlife Agencies for Cooperative and Integrated Natural Resource Management,” October 16, 2024¹
- (k) U.S. Fish and Wildlife Service, “Guidelines for Coordination on Integrated Natural Resource Management Plans,” June 2015²
- (l) Section 318 of Public Law 108-136, “National Defense Authorization Act for Fiscal Year 2004,” November 24, 2003
- (m) Section 313 of Public Law 110-417, “Duncan Hunter National Defense Authorization Act for Fiscal Year 2009,” October 14, 2008
- (n) Chapter 63 of Title 31, United States Code
- (o) Part 21 of Title 32, Code of Federal Regulations
- (p) Title 10, United States Code
- (q) Title 31, United States Code
- (r) DoD Directive 4715.21, “Improving Military Installation and Critical Resources Resilience” January 14, 2016, as amended
- (s) DoD Instruction 4715.28, “Military Installation Resilience,” December 17, 2024, as amended
- (t) Subpart 17.5, Federal Acquisition Regulation, “Interagency Acquisitions Under the Economy Act, current edition

¹ Available at https://www.fishwildlife.org/download_file/view/5509/354. All signatures are present on this MOU and so it is a final document, retention of “draft” in the title is an administrative error.

² Available at <https://www.fws.gov/service/integrated-natural-resources-management-plans-inrmps>.

- (u) Office of the Chairman of the Joint Chiefs of Staff, "DoD Dictionary of Military and Associated Terms," current edition
- (v) Federal Register, Volume 60, Page 58605, November 28, 1995

ENCLOSURE 2

GENERAL INRMP PROVISIONS

1. SCOPE

a. INRMPs address natural resources management on DoD lands and near shore environments, where appropriate, and at installations with jurisdiction and control, including lands occupied by tenants or lessees or being used by others pursuant to a permit, license, right of way, or any other form of permission. The DoD Component permitting authorities may include provisions in leases, permits, or licenses requiring the grantee to perform natural resources conservation duties as a condition of occupancy or use of the parcel. Installation commanders still address natural resources management on any of these lands.

b. In accordance with Reference (b), installations conduct planning level surveys (PLSs) and data analysis as the foundation for effective planning and decision-making. When feasible, installations develop PLSs in accordance with applicable DoD Component requirements and standards, and will maintain each PLS as geospatial data. New PLSs will be conducted if data, information, or technologies change substantially enough that current PLSs are inaccurate.

2. INRMP CONTENTS. Pursuant to the Sikes Act, INRMPs include:

a. Mission Sustainment

(1) The goal of DoD environmental programs and policies is conserving the environment for mission sustainment.

(2) Each DoD Component will ensure that its INRMPs will, to the extent appropriate, applicable and consistent with the use of the installation, enable the preparedness of the Military Services to provide for no net loss in the capability of military installation lands to support the military mission of the installation, pursuant to section 670a(b)(1)(I) of the Sikes Act.

(3) During the planning process, natural resources personnel consider appropriate management goals, objectives, and timelines for implementing actions to protect or enhance installation mission capabilities when determining INRMP resourcing priorities. Projects developed to support INRMP goals and objectives incorporate sustainable practices, take advantage of ecosystem management principles, where practicable.

(4) The DoD Component integrates mission requirements and priorities identified in the INRMP in other environmental programs and policies, where applicable, to help ensure these natural resources are maintained in the best ecological condition possible to fully support current and future mission requirements. The DoD Component annually evaluates INRMP effectiveness in preventing net loss, including accounting for instances where effective workarounds are implemented by natural resources personnel to ensure no net loss of training areas.

(5) There may be instances in which a net loss may be unavoidable to fulfill legal requirements other than the Sikes Act, such as complying with a biological opinion pursuant to the provisions of sections 1531-1544 of Reference (c) or protecting wetlands pursuant to section 1251 of Title 33, U.S.C., also known and referred to in this manual as “the Clean Water Act”) (Reference (h)). To the extent practicable, the installation will identify the loss of mission capability in these instances in its INRMP, and will include a discussion of measures taken to minimize the effects of any restrictions on training and testing.

b. Managing Threatened and Endangered Species. The INRMP incorporates inventory, monitoring, and management of ESA listed species and agreed upon elements of specific Endangered Species Act (ESA) consultations.

c. Implementation

(1) Natural resources personnel assess INRMP implementation for compliance with various other federal laws, including but not limited to:

(a) Section 470-470x-6 of Reference (c), also known as the “National Historic Preservation Act.”

(b) Section 470aa-470mm of Reference (c), also known as the “Archaeological Resources Protection Act.”

(c) Section 703-712 of Reference (c), also known as the “Migratory Bird Treaty Act.”

(d) The Clean Water Act.

(e) Section 1361-1423h of Reference (c), also known as the “Marine Mammal Protection Act.”

(f) Section 1451-1466 of Reference (c), also known as the “Coastal Zone Management Act.”

(g) Section 1531-1544 of Reference (c), also known and referred to in this issuance as the “ESA.”

(h) Section 1801-1884 of Reference (c), also known as the “Magnuson-Stevens Fishery Conservation and Management Act.”

(i) Section 7401 et seq. of Title 42, U.S.C. (Reference (i)), also known as the “Clean Air Act.”

(2) The process of evaluating compliance with these and other laws, as well as the effects of implementing the INRMP, will be evaluated in accordance with sections 4321-4370h of Reference (i), also known as “the National Environmental Policy Act of 1969.”

d. Accommodating Public Access. In addition to the general areas and conditions appropriate for public access in Enclosure 3 of Reference (b), the INRMP:

(1) Identifies areas available to the general public for hunting, fishing, and trapping programs, subject to access restrictions and safety requirements.

(2) Ensures compliance with section 1996 of Reference (i), also known as “the American Indian Religious Freedom Act of 1978,” so that American Indians, Alaska Natives, and Native Hawaiians will have reasonable access to DoD sites and resources that are of religious or cultural importance (e.g., burial and sacred grounds) or where treaties allow.

(3) Describes outdoor recreation areas appropriate for handicap access pursuant to section 670c of the Sikes Act.

(4) Identifies and plans for public and volunteer access to military lands for approved purposes (e.g., National Public Lands Day, Earth Day), as appropriate. Further installation safety and security reviews are required to carry out such activities.

3. INRMP IMPLEMENTATION. The DoD Components implement INRMPs by:

a. Actively requesting and using funds for natural resources management projects, activities and other requirements in support of goals, and objectives identified in the INRMP.

b. Ensuring that sufficient numbers of professionally trained natural resources management personnel are available to perform the tasks required by the INRMP.

c. Inviting annual feedback from the appropriate USFWS and State fish and wildlife agency offices on the effectiveness of its INRMP.

d. Documenting specific INRMP action accomplishments undertaken each year.

e. Evaluating the effectiveness of past and current management activities and adapting those activities as needed to implement future actions.

4. AVAILABILITY OF INRMPS

a. Installation personnel submit INRMPS for appropriate security review before making them available to the public. Restricted information, such as classified imagery, budgetary details and sensitive locations must be excised before posting.

b. The DoD Components make draft INRMPs available electronically to USFWS and the appropriate State fish and wildlife agency to expedite review and comments.

c. The DoD Components make final INRMPs available electronically to the general public through the installation's website or other appropriate outlets.

ENCLOSURE 3

COORDINATION, REVIEW, AND PUBLIC COMMENT

1. SIKES ACT GENERAL COORDINATION REQUIREMENTS

a. The DoD Component involves the USFWS and appropriate State fish and wildlife agency in preparing, implementing, and reviewing the INRMP annually to ensure it is current, and to generate metrics to measure and track progress.

b. The DoD, USFWS, and the State review the INRMP for technical adequacy of the content and to secure mutual agreement from all signatories. If USFWS or a State fish and wildlife agency objects to an INRMP based on elements not within the scope of the agency's authority, the DoD Component may finalize the INRMP. Mutual agreement is attained when the INRMP is signed by the:

(1) USFWS regional director or his or her designee.

(2) Appropriate State fish and wildlife agency director or his or her designee.

(3) Military Service representative.

c. Installations will engage with other federal (e.g., NOAA Fisheries, U.S. Forest Service, Bureau of Land Management) and State agencies, when necessary.

d. Installations will consult with federally recognized Indian tribes, Alaska native entities, and Native Hawaiian organizations where tribal treaty rights, sacred sites, burial sites, or other rights to natural and cultural resources may be affected.

2. SPECIFIC COORDINATION REQUIREMENTS

a. Minimum Requirements

(1) To ensure effective coordination, USFWS and the State fish and wildlife agency should be engaged in INRMP scoping, design, preparation, and periodic review.

(2) DoD Components will ensure that natural resources managers engage installation stakeholders (e.g., operations and training, public works, planners) in developing, reviewing and updating the INRMP to ensure goals, objectives, and actions are in line with mission requirements, and to identify potential project conflicts or opportunities for cooperative program implementation.

(3) DoD Components will ensure that installation representatives will, at a minimum, communicate annually with USFWS and State fish and wildlife agency personnel regarding

INRMP implementation progress, potential areas of improvement, and expected projects for the coming year.

b. Engaging Internal Stakeholders. Natural resources managers engage annually, at a minimum, other installation stakeholders (e.g., operations and training, public works, planners) in developing, reviewing, and revising the INRMP to:

(1) Ensure goals, objectives, and actions are consistent with mission requirements, and the installation strategic plan, real property master plan, and range complex master plan.

(2) Identify potential project conflicts or opportunities for cooperative program implementation.

(3) Establish specific goals and measurable objectives for all elements of the INRMP, pursuant to section 670a(b) of the Sikes Act.

(4) Establish installation-specific objectives and measure progress toward achieving those objectives, as appropriate.

c. Engaging USFWS and the State

(1) Process for Engagement. Installations will engage USFWS and the State fish and wildlife agency in scoping, designing, preparing, and reviewing periodically the INRMP. The natural resources manager initially contacts the USFWS field office when developing and reviewing INRMPs. Consistent with the Sikes Act Tripartite Memorandum of Understanding (Reference (j)), a field office reviews the INRMP and provides preliminary agreement concerning the conservation, protection, and management of fish, wildlife, and plant resources. If an installation needs help contacting a field office, natural resources managers may contact the USFWS Regional Sikes Act Coordinator. The installation natural resources manager facilitates INRMP coordination and ensures adequate documentation of the coordination process by:

(a) Notifying the appropriate USFWS and State fish and wildlife offices of its intent at least 60 calendar days before delivering an updated INRMP for review and coordination.

(b) Sending the draft INRMP to the USFWS field office and State fish and wildlife agency office and other federal agencies, when appropriate, for review and comment.

(c) Requesting written acknowledgement that the draft INRMP was received within 15 days of receipt. Written acknowledgement may be in electronic format.

(d) Requesting written comments from the USFWS field office and the State fish and wildlife office within 45 days, and requesting that the offices furnish copies of their written comments to the USFWS Regional Sikes Act Coordinator's office and the State fish and wildlife agency director's office.

(e) Considering all comments received, and sending a final draft INRMP to the USFWS regional office or delegated field office and the State fish and wildlife agency office with a letter documenting how the installation addressed their comments within 90 days.

(f) Requesting that the regional USFWS and State fish and wildlife agency directors provide consolidated written comments from all appropriate offices and divisions within 60 days of receiving the final draft INRMP, unless the participants mutually agree on a longer review period. This concludes the review process.

(2) Cooperative Preparation

(a) The final INRMP will reflect mutual agreement of the USFWS and State fish and wildlife agency representatives concerning the conservation of the natural resources under their respective legal authorities, consistent with the Department of the Interior's memorandum of understanding (Reference (k)).

(b) The natural resources manager coordinates with NOAA Fisheries when the INRMP will benefit from their participation and review.

(3) Section 7 Consultation. If formal consultation pursuant to the ESA is required, the time-frames for that process will apply. The DoD Component requests the appropriate office to provide notification of the review timeline within 15 days of receiving the draft INRMP.

(4) Final Comments. Except for the special situations described in paragraph 2.c. (3), if after a period of 120 days the appropriate USFWS and State offices do not provide final comments, an installation may request expedited review of its previously submitted INRMP. The installation submits a written request to USFWS and to the appropriate State fish and wildlife agency via the Military Service chain of command. Representatives from these offices will meet within 30 days of the request to resolve any outstanding coordination issues. Otherwise, the installation may view the INRMP as final and approved for implementation purposes until outstanding coordination issues are resolved.

(5) Communication. Installation representatives, at a minimum, communicate annually with USFWS and State fish and wildlife agency personnel on progress implementing the INRMP, potential areas of improvement, and expected projects for the coming year.

d. Integrating Other Plans, Programs, and Policies

(1) Installation natural resources managers prepare INRMPs in coordination with all applicable regulatory permits and requirements, and relevant planning documents including but not limited to: installation master plans, range complex master plans, training plans, integrated cultural resources management plans (ICRMPs), integrated pest management plans, encroachment management plans, installation restoration plans, wildland fire plans, installation information management systems, and applicable regulatory permits, requirements, and mitigations. The INRMP briefly summarizes the key interrelationships with other plans, references where plans may be obtained, and describes where detailed information can be found. INRMPs are not a comprehensive compilation of information on all these related topics.

(2) Natural resources personnel coordinate INRMPs with natural resources conservation-related plans and programs on and adjacent to the installation to foster collaborative efforts, and ensure that priorities align with military mission and resource management requirements.

(3) Key plans or portions thereof can be included, if appropriate and desired, as INRMP appendices or links.

3. INRMP REVIEWS AND REVISIONS

a. **Sikes Act Formal Review Requirements.** The DoD Components, USFWS, and appropriate State fish and wildlife agency review the INRMP every 5 years to determine whether it is implemented pursuant to the Sikes Act, and contributes to the conservation and rehabilitation of natural resources on military installations. A 5-year review is final once the relevant installation(s), the USFWS, and appropriate State fish and wildlife management agencies have signed the document or provided signed record of coordination. The DoD Components:

(1) Ensure the USFWS and appropriate State fish and wildlife agencies review each INRMP on a regular basis, but not less often than every 5 years. NOAA Fisheries is included in the 5-year review if it participated in the INRMP development, if listed species are included in its jurisdiction or the near shore environment is involved, or if the INRMP will benefit from its participation and review.

(2) Conduct a review for operation and effect to determine whether the installation is implementing the existing INRMP to:

(a) Meet Sikes Act requirements.

(b) Contribute to the conservation and rehabilitation of natural resources on military installations.

(3) Update or revise INRMPs as necessary based on the results of these reviews.

b. **DoD Annual Review.** In accordance with Enclosure 3 of Reference (b), the DoD Components review INRMPs annually in cooperation with the other internal and external parties to the INRMP. DoD annually reviews the INRMP goals and objectives, establishes a realistic schedule for undertaking proposed actions, determines adjustments needed to keep INRMPs current, and generates annual assessments of the Natural Resource Conservation Metrics in accordance with Enclosure 5 of Reference (b).

(1) The DoD Components may use the documented annual reviews when developing the reports required by section 670a(f) of the Sikes Act, as well as expedite or, in appropriate cases, substitute for the more formal 5-year reviews, provided these reviews comprehensively address all items that have changed significantly since the last review, and the DoD Component documents the parties' mutual agreement.

(2) External tri-partite stakeholders (i.e., USFWS, State) may be invited to participate in these reviews.

c. Revising an INRMP. During the review process, the DoD Components, USFWS, and appropriate State fish and wildlife agencies should determine whether an existing INRMP needs formal revision.

(1) Circumstances that may suggest that a revision is necessary include:

(a) The current INRMP no longer provides adequately for the conservation and rehabilitation of the natural resources on the base;

(b) The installation mission or physical features have changed significantly; or

(c) There are substantial natural resources effects anticipated from base realignment and closure, such as: a new species listing, new construction, new training, changes to training type or tempo, or other factors that were not addressed in the existing INRMP.

(2) The parties to the INRMP shall, in consultation with one another, determine whether an INRMP should be revised.

d. Updating an INRMP. An INRMP may be simply updated to accommodate changes to the information contained in the INRMP that do not require substantial changes in the way natural resources on the base are to be managed. The DoD will provide a means to easily identify all such updates when forwarding the INRMP to the other parties for review (e.g., by providing a summary iterating all changes or by providing the updated INRMP in a track changes format).

4. SOLICITING PUBLIC COMMENT

a. National Environmental Policy Act (NEPA) Review. Although not expressly required by the Sikes Act, installations should offer members of the public an opportunity to comment on an INRMP revision, as appropriate. In addition, if the proposed revisions reflect changes in the natural resources management actions described in the existing INRMP, NEPA review must, in most cases, be performed before the new INRMP may be adopted. Installations should afford the appropriate USFWS and State fish and wildlife management offices the opportunity to review all public comments received on any revised INRMP.

b. INRMP Reviews, Updates, and Revisions

(1) Review, No Change. Installations are not required to invite the public to review or to comment on the decision to continue implementing an existing INRMP that has not been updated or revised.

(2) Update. If only minor changes to an existing INRMP are required, and these changes are not expected to require natural resources management practices materially different from

those described in the existing INRMP, the installation is not required to perform additional NEPA analysis or provide an additional opportunity for public comment. If an applicable Categorical Exclusion exists, it should be cited.

(3) Revision. If significant revisions are proposed to be made to an INRMP that may result in environmental effects not previously analyzed (e.g., changes to the natural resource management practices that will be implemented), the installation must conduct a new or supplemental environmental impact analysis of the proposed action under NEPA, and make the INRMP and the environmental document available for public review and comment, as appropriate.

ENCLOSURE 4

CRITICAL HABITAT EXCLUSIONS, SPECIAL MANAGEMENT, AND
IMPLEMENTATION

1. CRITICAL HABITAT DESIGNATION AND SPECIAL MANAGEMENT CRITERIA

a. ESA

(1) Critical Habitat Designation Restrictions. Pursuant to section 4(a)(3)(B)(i) of ESA, the Secretaries of the Departments of Interior and Commerce are prohibited from designating as critical habitat any lands or other geographical areas owned or controlled by the DoD, or designated for its use, that are subject to an INRMP prepared pursuant to section 670a of the Sikes Act. This restriction applies if either Secretary determines in writing that a given INRMP provides a benefit to the species for which critical habitat is proposed for designation pursuant to section 318 of Public Law 108-136 (Reference (1)).

(2) Threatened and Endangered Species and Critical Habitat. Pursuant to section 7 of ESA, the DoD consults with the USFWS, and NOAA Fisheries when threatened or endangered species or designated critical habitats are in question, to ensure no DoD action will likely jeopardize the continued existence of listed species, or destroy or adversely modify designated critical habitats. An Incidental Take Statement acquired in accordance with section 7(b)(4) of the ESA is necessary for DoD action proponents to be exempt from the take prohibitions described in section 9 of the ESA.

b. USFWS Special Management Criteria. The USFWS uses three criteria to determine if an INRMP provides adequate special management or protection to obviate the need for critical habitat designation:

(1) The INRMP provides a conservation benefit to the listed species. The cumulative benefits of the management activities identified in the INRMP for its duration maintains or provides for an increase in a species' population or the enhancement or restoration of its habitat within the area included in the INRMP (i.e., those areas essential to the conservation of the species). A conservation benefit may result from reducing habitat fragmentation, maintaining or increasing populations, insuring against catastrophic events, enhancing and restoring habitats, buffering protected areas, or testing and implementing new conservation strategies.

(2) The INRMP provides certainty that relevant agreed-on actions will be implemented. Persons implementing the INRMP can accomplish its goals and objectives, have adequate funding to implement agreed upon activities, have implementation authority, and have obtained all the necessary authorizations or approvals. The INRMP includes an implementation schedule, including completion dates, for the conservation effort.

(3) The INRMP provides certainty that the conservation effort will be effective. USFWS considers these criteria when determining the effectiveness of the conservation effort:

- (a) Biological goals, which are broad guiding principles for the program, and objectives, which are measurable targets for achieving the goals.
- (b) Quantifiable, scientifically valid parameters that demonstrate achieving objectives and standards measuring progress.
- (c) Provisions for monitoring and, where appropriate, adaptive management.
- (d) Provisions for reporting progress on implementation based on compliance with the implementation schedule and effectiveness based on evaluation of quantifiable parameters of the conservation effort.
- (e) A period of time sufficient to implement the actions and achieve the benefits of its goals and objectives.

c. Exclusion. Pursuant to section 4(b)(2) of the ESA, the Secretary of the Interior may exclude a military installation or portion of an installation from critical habitat if, after considering the economic impact and the impact on national security, the Secretary determines that the benefits of exclusion outweigh the benefits of inclusion. An installation provides the necessary and relevant information explaining the national security implications of critical habitat designation on the military installation.

2. IMPLEMENTATION TO AVOID CRITICAL HABITAT. To take advantage of the ESA 4(a)(3)(B)(i) exemption and avoid USFWS or NOAA Fisheries designation of critical habitat on DoD installations, each installation implements its INRMP by executing appropriate projects and activities in accordance with specific timeframes identified in the INRMP. The DoD Components prioritize projects with the assistance from the USFWS, appropriate State fish and wildlife agencies, and NOAA Fisheries if applicable. The DoD Components may provide this information after review and validation of the priorities and estimated costs of the requirements.

ENCLOSURE 5

INRMP CONTENTS

General INRMP contents address how natural resources management goals support no net loss in military mission capability for military installation lands while enhancing training and testing capabilities to the maximum extent practicable. Natural resources personnel will coordinate INRMPs with other installation plans and include this information, as applicable:

- a. Summary of general information about the installation's mission and history, including the ecological history of the landscape.
- b. Summary of how the installation's natural resources support the military mission.
- c. Identification of all legal requirements pertinent to natural resources management.
- d. Identification of the installation's natural resources, including but not limited to vegetation communities, topography, soils, local weather patterns, water resources, wildlife, federal and State listed species, other sensitive species, and context within the regional ecosystem.
- e. Description of any sensitive areas that federal regulation or installation requirement restricts, such as critical habitats, essential fish habitats, wildland fire, or special management areas.
- f. Description of natural resources programs specific to the installation, such as forestry, agricultural outlease, and hunting and fishing.
- g. Description of land management partnerships affecting military training and natural resources management on the installation, such as the DoD Readiness and Environmental Protection Integration Program, agreements with other federal or State agencies, or nongovernmental organizations.
- h. Procedural recommendations for managing the installation's natural resources in ways that are compatible with the installation mission, satisfy legal requirements, and that ensure long-term stewardship is not compromised by agricultural out-lease, timber sales, or energy development.
- i. Natural resources management priorities that ensure compliance with legal requirements and ongoing stewardship responsibilities, as well as goals and objectives that are clear and practical and that the DoD Components can assess for adaptive management.
- j. Management procedures for the ongoing identification, maintenance, and enhancement of natural resources.

k. Recommendations for managing the installation's Bird/Wildlife Aircraft Strike Hazards, if applicable.

l. Establishment of requirements, goals, and objectives reflected in budget documents and decision-making processes, and addressed in conservation self-assessments.

m. Analysis of natural resources, ecosystems, and areas of critical or special concern from both technical and policy perspectives.

n. Consideration of access for the public (e.g., disabled Americans, disabled sportsmen, American Indians, Alaska Natives, Native Hawaiians) and comprehensive outdoor recreation and planning.

o. Assessment of regional context, challenges and opportunities with respect to managing natural resources on the installation (e.g., landscape scale partnerships, ecosystem services, opportunities for conservation or mitigation banking, compatible use buffer programs, in lieu of fee banking).

p. Identification of the critical management requirements necessary for maintaining ecosystem health and integrity to ensure the sustainment of the land for current and future military missions and to ensure effective stewardship of public land.

q. Identification of critical natural resources related encroachment areas and prioritization of adaptive management objectives relative to natural resources related impacts on the installation mission.

r. Strategies and actions to maintain or enhance military mission and installation resilience to ensure no net loss of military mission capability.

ENCLOSURE 6

ECOSYSTEM-BASED MANAGEMENT PRINCIPLES AND GUIDELINES

1. IMPORTANCE OF ECOSYSTEM MANAGEMENT. The DoD Components use ecosystem management on their military lands to support present and future training and testing requirements while preserving, improving, and enhancing ecosystem integrity. Over the long term, this approach maintains and improves the sustainability and biological diversity of terrestrial and aquatic, including marine, ecosystems while supporting sustainable economies, human use, and the environments required for realistic military training operation. The DoD Components consider and use a full and evolving array of ecosystem-based management tools as appropriate.

2. SUPPORT TO MILITARY READINESS. To support military operations, the DoD Component:

- a. Uses ecosystem-based management and responsibilities in accordance with existing natural resources conservation management authorities to provide realistic and sustainable training and testing environments (e.g., adaptive management, vulnerability assessment).
- b. Integrates ecosystem-based management with mission readiness in the context of a shrinking DoD land base and budget.
- c. Performs operational, testing, training, and maintenance activities in coordination with natural resources conservation actions.
- d. Integrates ecosystem conservation considerations into marine operations and planning.
- e. Confirms biodiversity conservation contributes to overall ecosystem integrity and sustainability.
- f. Uses regional approaches in cooperation with other DoD Components, other federal agencies, and with adjoining property owners to coordinate cooperative and partnership-based actions and support, not diminish, military operations and training lands capacity.

3. IMPLEMENTING ECOSYSTEM-BASED MANAGEMENT. The DoD Component incorporates ecosystem-based management by:

- a. Maintaining and improving the sustainability and native biodiversity of ecosystems. The DoD Component conducts installation programs and activities to identify, maintain, and restore the composition, structure, and function of natural communities that comprise ecosystems to ensure their long-term sustainability and biodiversity at landscape and other relevant ecological scales to the maximum extent that mission needs allow.

b. Considering ecological units and timeframes. The DoD Component considers the effects of installation programs and actions at spatial and temporal ecological scales that are relevant to natural processes. A larger geographic view and more appropriate ecological timeframes assist in the analysis of cumulative effects on ecosystems that may not be apparent with smaller and shorter scales. Regional ecosystem-based management efforts are generally more appropriate than either national or installation-specific efforts.

c. Supporting sustainable human activities. Consistent with mission requirements, the DoD Component actions support multiple use (e.g., outdoor recreation, hunting, fishing, forest timber products, agricultural outleasing) and sustainable development by meeting the needs of the present without compromising the ability of future generations to meet their own needs.

d. Developing a vision of ecosystem health. All interested parties (e.g., federal, State, tribal, and local governments; nongovernmental organizations; private organizations; public) collaborate in developing a shared vision of what constitutes desirable future ecosystem conditions for the region of concern. The appropriate parties should factor existing social and economic conditions into the vision, as well as methods by which all parties may contribute to the achievement of desirable ecosystem goals.

e. Developing priorities and reconciling conflicts. The DoD Components, along with stakeholders, prioritize the ecosystem-based management objectives and the methods for meeting those objectives, in accordance with long-term mission planning goals. Identifying local installation objectives and urban development trends can help identify opportunities and determine compatibility with ecosystem objectives.

f. Developing coordinated approaches to work toward ecosystem health. To develop the collaborative approach necessary for successful ecosystem-based management, installations:

(1) Involve the military operational community early in the planning process to accomplish ecosystem-based management consistent with the military mission.

(2) Develop a detailed ecosystem-based management implementation strategy for installation lands and other programs based on the vision developed in paragraph 3d of this enclosure and those principles and guidelines.

(3) Meet regularly with regional stakeholders (i.e., State, tribal, and local governments; nongovernmental entities; private landowners; public) to discuss issues and to work toward common goals.

(4) Incorporate ecosystem-based management goals into strategic, financial, and program planning and design budgets to meet the goals and objectives of the ecosystem-based management implementation strategy.

(5) Prevent undesirable duplication of effort, minimize inconsistencies, and create efficiencies in programs affecting ecosystems.

g. Relying on the best science and data available. Ecosystem-based management is centered on scientific understanding of ecosystem composition, structure, and function. It requires more and better research and data collection, as well as better coordination and use of existing data and technologies. Information should be accessible, consistent, and proportionate. Established standards should be used for the collection, taxonomy, distribution, exchange, update, and format of ecological, socioeconomic, cartographic, and managerial data.

h. Using goals and objectives to monitor and evaluate outcomes. Implementation strategies include specific and measurable objectives and criteria to evaluate activities in the ecosystem. Efficiencies gained through cooperation and streamlining should be included in those objectives.

i. Using adaptive management. Installations develop flexible management practices to accommodate the evolving scientific understanding of ecosystems and adjust as necessary based on, at a minimum, annual reviews. Installations also accommodate training and test mission changes and coordinate resultant impacts on existing ecosystem management to preserve both training/test and conservation processes and objectives.

j. Implementing through installation plans and programs. Installations work with their stakeholders to identify an ecosystem's desired future conditions and incorporate implementing activities, as appropriate, in installation INRMPs, ICRMPs, and other planning and budgeting documents.

4. ADAPTIVE MANAGEMENT. The DoD Components include these systematic procedures in an adaptive management approach:

- a. Identify and assess military mission operating and facility requirements.
- b. Analyze and assess risk to natural resources.
- c. Complete needs assessment surveys.
- d. Monitor and prepare the needs assessment results.
- e. Update natural resources inventories to ensure information is current.
- f. Reanalyze and reassess risk to natural resources.
- g. Adjust the overall program, as necessary.

ENCLOSURE 7

AUTHORITIES AND OTHER CONSIDERATIONS

1. AUTHORIZING COOPERATIVE AGREEMENTS FOR LAND MANAGEMENT ON DoD LANDS. This authorization is intended to facilitate the acquisition of natural resources management services on military installations, to include monitoring and the transfer of funds for services provided.

a. The Secretary of a Military Department may enter into cooperative agreements with State and local governments, nongovernmental organizations, and individuals. He or she may enter into interagency agreements (IAGs) with other federal department and agency heads to maintain and improve natural resources on or to benefit natural and historical research on military installations pursuant to section 670c-1(a) of the Sikes Act.

b. The Secretary of a Military Department may enter into cooperative agreements or IAGs for off-installation lands if the cooperative agreement could relieve or eliminate current or anticipated challenges that could restrict, impede, or otherwise interfere with, directly or indirectly, current or anticipated military activities pursuant to section 313 of Public Law 110-417 (Reference (m)).

c. These cooperative agreements or IAGs are not considered, nor treated as, cooperative agreements to which chapter 63 of Title 31, U.S.C. (Reference (n)) applies. The DoD Grants and Cooperative Agreement regulations in part 21 of Title 32, Code of Federal Regulations (Reference (o)) do apply to Sikes Act cooperative agreements.

d. The Secretary of Defense may negotiate and enter into cooperative agreements with public and private agencies, organizations, institutions, individuals, and other entities to carry out the DoD Legacy Resource Management Program consistent with section 2694 of Title 10, U.S.C. (Reference (p)).

e. The DoD may order goods and services from another federal agency in accordance with section 1536 of Title 31 U.S.C., also known as the Economy Act. (Reference (q)). DoD funds may not be used to augment the resources of other federal agencies (e.g., USFWS, NOAA Fisheries) or State agencies to conduct actions that are their statutory responsibility.

f. The DoD may partner with non-federal governments or private organizations to establish buffers around installations or to develop habitat enhancement programs that benefit the military's no net loss to training needs pursuant to section 2684a of Reference (p).

2. INRMP SUPPORT AND OTHER AGENCIES

a. DoD installations may prioritize for funding contracts and cooperative agreements for implementation and enforcement services with federal and State agencies responsible for

conservation and management of fish and wildlife pursuant to section 670a(d)(2) of the Sikes Act.

b. The DoD may use funds to obtain information and technical assistance from federal and State agencies to prepare or implement INRMPs by:

- (1) Conducting biological inventories.
- (2) Monitoring and assessing management results.
- (3) Recommending management prescriptions to meet identified goals.
- (4) Obtaining maps, surveys, and other technical information.

c. Consistent with section 670c-1 of the Sikes Act, the DoD may use funds or transfer funds to the entities specified in paragraph 1a of this enclosure by a cooperative or IAG to:

- (1) Prepare for and participate in meetings with INRMP signatories to discuss INRMP status and whether they need to update or revise the INRMP.
- (2) Prepare the INRMP and any updates or revisions to the INRMP, including requisite studies and surveys.
- (3) Execute projects identified in the INRMP concerning conservation, protection, and management of fish and wildlife resources.
- (4) Develop or evaluate buffer area proposals and other natural resource or habitat identification, modifications, or restoration activities related to Sikes Act responsibilities.

3. FUNDS AUTHORIZATION FOR THE COST OF GOODS AND SERVICES PROVIDED THROUGH A COOPERATIVE AGREEMENT OR IAG. The DoD Component develops policies delegating the authority to enter into cooperative agreements or IAGs. All such agreements will state that the DoD Component will carry out its obligations contingent on available funding and to the extent the installation's approved INRMP authorizes the proposed actions.

4. WILDLAND FIRE MANAGEMENT. The DoD Components that are subject to wildfire hazards and utilize prescribed burns as a land management tool, develop and implement an integrated Wildland Fire Management Plan and incorporate it into the INRMP.

ENCLOSURE 8

PLANNING FOR IMPACTS TO NATURAL RESOURCES AND MILITARY
INSTALLATION RESILIENCE

1. INRMPS AND MILITARY INSTALLATION RESILIENCE. The DoD Components address potential impacts of changing environmental, ecological, and weather conditions to the military installation and the military mission in INRMPS in accordance with DoD Directive 4715.21 (Reference (r)), DoD Instruction 4715.28 (Reference (s)), and Reference (b). This includes using appropriate planning documents, tools, information, and resources as discussed in paragraph 2 of this enclosure.

2. INFORMATION TO UPDATE INRMPS TO ADDRESS NATURAL RESOURCES AND MILITARY INSTALLATION RESILIENCE. Natural resources personnel use this information when updating an INRMP to address resilience of natural resources and of military installations:

a. Historical regional trends and projections of future environmental conditions relevant to the region, installation resilience, and natural resources. Examples include records of changing land cover over time, precipitation records, wildland fire risk tools, and species phenology records.

b. Information developed for other purposes (e.g., facilities risk assessments) that natural resources personnel can use to assess impact or strategies to facilitate installation resilience.

c. Information from regional collaboration to identify areas to address military installation resilience and develop vulnerability assessments and management strategies. Identification of these in the INRMP, the INRMP implementation table, or in other planning documents will enable the allocation of funding.

d. Collaboration with DoD mission leads for comprehensive incorporation of natural resources management in installation resilience planning where appropriate. Examples include incorporation of the use of natural resources management, natural or nature-based features, use of nature-based solutions, or other natural infrastructure enhancements into military installation resilience plans or installation master plans. Identification of these in the INRMP, the INRMP implementation table, or in other planning documents will enable the allocation of funding.

e. The streamlining of documentation and effort by referencing or incorporating other applicable installation planning documents into the INRMP. Examples include incorporating risks and vulnerabilities to mission activities from weather-related or environmental impacts already identified in installation resilience plans by reference, or impacts of environmental hazards to training already identified in wildland fire or pest management plans, wherever applicable or possible.

3. ECOSYSTEM EFFECTS. The ecosystem effects of environmental change will likely be incremental and challenging to distinguish and assess. DoD's analysis to assess potential impacts should be predictive in nature, relying on models to plan for probable complex and indirect changes that are likely to happen in the future. The DoD Components will require an adaptive process of developing, validating, and improving forecast models to develop new and improve existing natural resources management strategies to address environmental impacts to protected species and species of concern.

4. SPECIALIZED FORECASTING. Steps in this area of specialized forecasting can include modification of already existing analyses that the DoD Components perform in planning for environmental impacts to natural resources, including:

- a. Conducting a vulnerability assessment of natural resources of interest and how those vulnerabilities may impact installation mission.
- b. Developing common regional goals.
- c. Addressing already existing environmental variability to identify trends.
- d. Adding potential weather-related and environmental hazards to military installation resilience to the threats analysis prepared as part of the INRMP process, which can be accomplished by integrating the INRMP with existing resilience planning or installation planning efforts.
- e. Where authorized by statute, participating in regional efforts to adapt to or mitigate for environmental change, including monitoring impacts and identifying migratory pathways to support species movement and habitat shift by use of existing borderlands, mitigation banks, and conservation buffers.
- f. Updating best management practices to address the risks posed by environmental change to unique landscapes, ecosystems, and habitats.
- g. Using regional conservation partnerships and alliances to share information and collaborate across jurisdictions.

GLOSSARY

PART I. ABBREVIATIONS AND ACRONYMS

ESA	Endangered Species Act
IAG	interagency agreement
ICRMP	integrated cultural resources management plan
INRMP	integrated natural resources management plan
NEPA	National Environmental Policy Act
NOAA Fisheries	National Oceanic and Atmospheric Administration National Marine Fisheries Service
PLS	planning level survey
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service

PART II. DEFINITIONS

Unless otherwise noted, these terms and their definitions are for the purpose of this manual.

Bird/Wildlife Aircraft Strike Hazards. Potential risk or threat of striking a bird or other animal with military fixed or rotary winged aircraft.

cooperative agreement. A cooperative agreement is an agreement, in accordance with section 103a of the Sikes Act, between a Military Department and a State, local government, nongovernmental organization, or individual to provide for the maintenance or improvement of natural resources on, or to benefit natural and historic research on, a DoD installation.

critical habitat. Defined in section 3(5)(A) of the ESA.

INRMP. Defined in Reference (b).

installation. Defined in Section 670 of the Sikes Act as “military installation.”

IAG. An agreement, in accordance with section 670c-1(b) of the Sikes Act, between a Military Department and another federal department or agency to provide for the maintenance or improvement of natural resources on, or to benefit natural and historic research on, a DoD installation. IAGs may provide for the acquisition of goods and services from another federal agency in accordance with the subpart 17.5 of the Federal Acquisition Regulation (Reference (t)) and Reference (q).

Military Service. Defined in the DoD Dictionary of Military and Associated Terms (Reference (u)).

mitigation banking. Defined in Page 58605 of Volume 60, Federal Register (Reference (v)).

natural features. Defined in Reference (b).

nature based solutions. Defined in Reference (b).

near shore areas. Defined in Reference (b).

review for operation and effect. A comprehensive, joint review by the parties to the INRMP, conducted no less often than every 5 years, to determine whether the plan needs an update or revision to continue to adequately address Sikes Act purposes and requirements.

significant natural resources. Defined in Reference (b).

sustainment. The ability to meet current DoD mission and stewardship needs while enabling its ability to meet future needs.