



# 620 FW 1 Habitat Management Plans

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**1.1 What is the purpose of this chapter?** This chapter establishes Fish and Wildlife Service (we or the Service) policy for planning habitat management within the National Wildlife Refuge System (System). The guidance in this chapter applies to the development of Habitat Management Plans (HMP) and Annual Habitat Work Plans (AHWP) and discusses their relationship to refuge Comprehensive Conservation Plans (CCPs). The policy and guidance in this chapter describe strategies and implementation schedules for meeting CCP goals and objectives. If a habitat management activity described in an HMP (e.g., timber harvest) produces an economic output requiring a special use permit or compatibility determination, the requirements for administration of refuge management economic activities in [603 FW 2](#) apply.

**1.2 What is the scope of this chapter?** This chapter applies to habitat management planning within the System, to the extent we have jurisdiction over habitat management. This chapter also applies to habitat management in special designation areas (e.g., wilderness, wild and scenic rivers); however, the specific provisions set forth in the special designations apply. In general, we develop an HMP for any refuge complex, refuge complex subunit, or wetland management district, including waterfowl production area, currently, or in the future, covered in whole, or in part, by a single CCP.

**1.3 What is the statutory authority for conducting habitat management planning within the System?** We derive our statutory authority from the National Wildlife Refuge System Administration Act of 1966 (Refuge Administration Act), as amended by the National Wildlife Refuge Improvement Act of 1997 (Refuge Improvement Act), 16 U.S.C. 668dd - 668ee. Section 4(a)(3) of the Refuge Improvement Act states: "With respect to the System, it is the policy of the United States that -- (A) each refuge shall be managed to fulfill the mission of the System, as well as the specific purposes for which that refuge was established ..." and Section 4(a)(4) states: "In administering the System, the Secretary shall -- (N) monitor the status and trends of fish, wildlife, and plants in each refuge." The Refuge Improvement Act provides the Service the authority to establish policies, regulations, and guidelines governing habitat management planning within the System.

#### **1.4 What are the definitions for some terms used in this chapter?**

**A. Adaptive Management.** The rigorous application of management, research, and monitoring to gain information and experience necessary to assess and modify management activities. A process that uses feedback from refuge research and monitoring and evaluation of management actions to support or modify objectives and strategies at all planning levels.

**B. Annual Habitat Work Plan (AHWP).** The specific habitat management strategies and prescriptions applied during a single year's work plan. A process that provides specific information to refuge managers for implementation and fulfillment of habitat management objectives or strategies identified and set forth in HMPs.

**C. Comprehensive Conservation Plan (CCP).** A document that describes the desired future conditions of a refuge or planning unit and provides long-range guidance and management direction to achieve the purpose(s) of the refuge; helps fulfill the mission of the System; maintains and, where appropriate, restores the biological integrity, diversity, and environmental health of each refuge and the System; helps achieve the goals of the National Wilderness Preservation System, if appropriate; and meets other mandates.

**D. Habitat Management Plan.** A dynamic working document that provides refuge managers a decisionmaking process; guidance for the management of refuge habitat; and long-term vision, continuity, and consistency for habitat management on refuge lands. Each plan incorporates the role of refuge habitat in international, national, regional, tribal, State, ecosystem, and refuge goals and objectives; guides analysis and selection of specific habitat management strategies to achieve those habitat goals and objectives; and utilizes key data, scientific literature, expert opinion, and staff expertise.

**E. Invasive Species.** Invasive species are alien species whose introduction does or is likely to cause economic or environmental harm, or harm to human health. Alien species, or nonindigenous species, are species that are not native to a particular ecosystem. We are prohibited by Executive Order, law, and policy from authorizing, funding, or carrying out actions that are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere.

**F. National Wildlife Refuge System (System) lands.** All lands, waters, and interests therein administered by the Fish and Wildlife Service as wildlife refuges, wildlife ranges, wildlife management areas, waterfowl production areas, and other areas for the protection and conservation of fish and wildlife including those threatened with extinction, as determined in writing by the Director or so directed by Presidential or Secretarial Order. The Director may not delegate the determination.

**G. Resources of Concern.** All plant and/or animal species, species groups, or communities specifically identified in refuge purpose(s), System mission, or international, national, regional, State, or ecosystem conservation plans or acts. For example, waterfowl and shorebirds are a resource of concern on a refuge whose purpose is to protect "migrating waterfowl and shorebirds." Federal or State threatened and endangered species on that same refuge are also a resource of concern under terms of the respective endangered species acts.

**H. You.** For the purpose of generating an HMP, "you" refers to the refuge manager or their designee responsible for developing the plan.

**1.5 What is Service policy for developing Habitat Management Plans and Annual Habitat Work Plans?** We will manage all refuge habitats in accordance with approved CCPs and HMPs that, when implemented, will help achieve refuge purposes, fulfill the System mission, and meet other mandates. This policy requires that an HMP and, where appropriate, an AHWP be developed for each refuge in the System. An HMP is a step-down management plan of the refuge CCP, and the AHWP is an annual work plan that provides specific guidance in support of HMPs. Habitat Management Plans and AHWPs comply with all applicable laws, regulations, and policies governing the management of System lands. The lifespan of an HMP is 15 years and parallels that of refuge CCPs. Habitat Management Plans are reviewed every 5 years utilizing peer review recommendations, as appropriate, in the HMP revision process or when initiating refuge CCPs. Annual Habitat Work Plans are reviewed each year, and restructured based on results and observations of previous years' work plans and goals and objectives outlined in refuge CCPs and HMPs. If active manipulation is not necessary on an annual basis, AHWPs may not be necessary on all refuges to meet habitat goals and objectives outlined in refuge CCPs or HMPs. [Exhibit 1](#) outlines and provides guidance on developing HMPs; [Exhibit 2](#) outlines and provides guidance on AHWPs.

## **1.6 Who is responsible for developing Habitat Management Plans within the System?**

### **A. The Director:**

- (1)** Establishes national policy and guidance for habitat management planning within the System.
- (2)** Ensures compliance with all applicable authorities.

### **B. Regional Directors will:**

(1) Ensure refuge managers follow all applicable laws and regulations when developing HMPs and AHWPs.

(2) Notify the Director of controversial or complex habitat management decisions.

**C. Regional Chiefs will:**

(1) Approve and authorize implementation of HMPs and major plan modifications.

(2) Ensure HMPs meet national policy guidelines.

(3) Ensure periodic peer review (e.g., Regional, State, academic, etc).

**D. Refuge Supervisors will:**

(1) Ensure refuge managers follow policy and guidelines when preparing HMPs.

(2) Ensure refuge managers attain appropriate public and State conservation agency involvement.

(3) Approve HMPs and major plan modifications.

(4) Submit HMPs to the Regional Chief for final approval.

**E. Refuge Managers will:**

(1) Develop, implement, monitor, evaluate, and revise HMPs.

(2) Ensure we attain appropriate public involvement.

(3) Invite participation by, and consultation with, the appropriate State conservation agencies.

(4) Submit HMPs to the refuge supervisor for first level approval.

(5) Develop AHWPs, as appropriate.

**1.7 What guiding principles should I use to develop HMPs and AHWPs?**

**A.** Use available biological information and ecological principles to provide the foundation for developing habitat goals, objectives, and subsequent management strategies and decisions. The conservation of fish, wildlife, and plant populations depends upon integration of biological information into management decisions.

**B.** Derive habitat goals, objectives, and management strategies from the individual refuge purpose(s) and System mission that provides a foundation to conserve and protect functional communities of native fish, wildlife, and plants, and explicitly link international, national, regional, State, and ecosystem goals and objectives, as appropriate. Additionally, derive HMPs from and ensure their consistency with other conservation plans such as threatened and endangered species recovery plans, Service ecosystem plans, the North American Waterfowl Management Plan, State conservation plans, etc., and assist in attaining the goals and objectives of those conservation efforts, to the extent practicable.

**C.** Consider opportunities, constraints, or limitations posed by existing special designations (e.g., designated wilderness, wilderness study areas, wild and scenic rivers, Western Hemisphere Shorebird

Reserve Network sites, Convention on Wetlands of International Importance [RAMSAR], research natural areas, marine protected areas, and public use natural areas) when implementing habitat goals, objectives, and applying management strategies.

**D.** View the highest measure of biological integrity, diversity, and environmental health as those intact and self-sustaining habitats and wildlife populations that existed under historic conditions (see [601 FW 3](#) ). We evaluate biological integrity by examining the extent to which biological composition, structure, and function have been altered from historic conditions. Individual refuges contribute to biological integrity, diversity, and environmental health at larger landscape scales, especially when they support populations and habitats that we have lost at an ecosystem, national, or international scale. Refuge purpose(s) may, however, compromise these components at larger landscape scales. When evaluating the appropriate management direction for refuges, refuge managers consider their refuge's contribution at multiple landscape scales.

**E.** Consider a range of habitat management strategies to meet specific wildlife or habitat management goals and objectives. To select appropriate strategies, consult with external partners such as other Federal, State, and tribal natural resource agencies and consider the natural/historic frequency and timing of processes such as flooding, fires, and grazing. Where it is not appropriate or feasible to restore ecosystem function, refuge management strategies will mimic natural processes to the extent practicable. For example, prescribed burning simulates natural fire regimes and water level management mimics natural hydrological cycles. Consider constraints and potential positive and negative effects on wildlife, plants, and other resources. Use the least intrusive and intensive management strategies to achieve desired habitat management objectives, as appropriate.

**F.** Use adaptive management to assess and modify management strategies to achieve habitat objectives. For further guidance on adaptive management, refer to [paragraph 1.14B](#) .

**G.** Manage invasive species to improve or stabilize biotic communities to minimize unacceptable change to ecosystem structure and function and prevent new and expanded infestations of invasive species. Conduct refuge habitat management activities to prevent, control, or eradicate invasive species using techniques described through an integrated pest management plan, or other similar management plan, which comprehensively evaluates all potential integrated management options including defining threshold/risk levels that will initiate the implementation of proposed management actions. Evaluate native habitat management activities with respect to their potential to accidentally introduce or increase the spread of invasive species and modify our habitat management operations to prevent increasing invasive species populations. Refuge integrated pest management planning will address the abilities and limitations of potential techniques including chemical, biological, mechanical, and cultural techniques. We manage invasive species on refuges under the guidance of the National Strategy for Invasive Species Management and within the context of applicable policy.

**H.** Use peer review to provide credible, independent, and expert assessment of refuge habitat management and ensure that we use appropriate techniques, protocols, and processes in the management of refuge habitats. Use and incorporate consultation and assistance from outside conservation interests, such as State conservation agencies, tribal governments, or nongovernmental organizations, where appropriate.

**1.8 What is the relationship of HMPs to CCPs?** Comprehensive Conservation Plans identify refuge management goals, objectives, and strategies. An HMP "steps down" the direction provided in a CCP to provide refuge managers specific guidance for the implementation of habitat management strategies on refuge lands. If a CCP has been completed, incorporate habitat goals, objectives, and management strategies from the CCP into the HMP. The HMP provides specific details for implementing strategies identified in the CCP. If you have not completed a CCP, the HMP includes development of refuge habitat goals, objectives, and management strategies and the process for implementation of those strategies (see Section IVB, [Exhibit 1](#) ). When initiating the CCP process, you should reexamine the HMP as part of the CCP and incorporate and revise information from the HMP into the CCP, as appropriate.

**1.9 What is the relationship of HMPs, CCPs, and NEPA?** We require refuge managers to conduct the appropriate level of National Environmental Policy Act (NEPA) documentation and public involvement during development of HMPs. You may exclude specific habitat management strategies in an HMP from NEPA documentation if you have identified, addressed, and authorized them in a CCP. For more information on NEPA compliance, see Departmental and Service NEPA guidance in [516 DM 6, Appendix 1](#) , and [550 FW 1-3](#).

**1.10 What are the three basic scenarios describing the development of an HMP?** The following scenarios describe how HMPs relate to CCPs. In each case, the appropriate level of NEPA documentation must occur.

**A. Simultaneous development of a CCP and an HMP.** The development of the HMP within the CCP utilizes habitat management information set forth in the CCP and creates efficiency and economy by taking advantage of the concurrent public involvement, peer review, and other pertinent processes stemming from the CCP. You should prepare and include the HMP within the body of the CCP or as an appendix to the CCP.

**B. A CCP exists.** When a CCP has been completed, an HMP should restate the habitat goals, objectives, and strategies identified in the CCP. The HMP may further define the objectives outlined in the CCP and describe specific prescriptions for habitat management strategies identifying how, when, and where they will be implemented.

**C. No CCP exists.** If a CCP does not exist and is not scheduled for several years, you may develop an HMP in advance of the CCP. You should develop habitat goals, objectives, and management strategies during development of the HMP in this situation. When initiating the CCP process, you should reexamine the HMP as part of the CCP and incorporate and revise information from the HMP into the CCP, as appropriate.

**1.11 When are compatibility determinations required for refuge management activities implemented through an HMP?** We require compatibility determinations for any management activity on a national wildlife refuge resulting in generation of a commodity that we sell for income or revenue or trade for goods or services, as defined in 603 FW 2 as "refuge management economic activities." Examples include farming, grazing, haying, and timber harvesting. We do not require compatibility determinations for habitat management activities that do not result in generation of a commodity. We do not require compatibility determinations for habitat management activities described in an HMP unless the HMP proposes a habitat management activity not addressed in the CCP. If the proposed habitat management strategy results in an economic benefit for the refuge and is not part of the CCP, a revision of the CCP must occur prior to inclusion into, and approval of, the HMP. If a CCP is not completed, we require compatibility determinations for any refuge management economic activity.

**1.12 How do I develop an HMP?** [Exhibit 1](#) provides an outline and guidance for developing an HMP. If an existing or concurrently developed CCP contains the level of specificity required in an HMP, then either restate or reference the CCP information in the HMP.

**1.13 When is the HMP complete?**

**A.** The HMP is complete after applying the policy and guidance in [paragraphs 1.1 - 1.11](#) and the process for developing an HMP in [Exhibit 1](#) . The refuge manager submits the HMP through the refuge supervisor to the Regional Chief for review and approval. Upon final review and approval, the refuge manager can implement the HMP. Keep the signed, original HMP on file at the refuge or its administrative office. Note: If you concurrently develop the HMP and CCP, the process for completion is the same.

**B.** File the signed original HMP and later revisions with dated changes and accompanying rationale or amendments at the refuge headquarters or its administrative office, providing an administrative record of the refuge's habitat management program.

#### **1.14 What is the process for evaluating, monitoring, and revising HMPs?**

**A. Habitat monitoring.** Develop habitat inventory and monitoring essential to the HMP in accordance with the guidance provided in the Habitat and Wildlife Inventory and Monitoring chapter ([701 FW 2](#)). Habitat monitoring, in association with monitoring wildlife response to habitat manipulation, provides the best measure of achievement for HMP objectives. Monitoring wildlife population response to assess habitat manipulations is difficult and introduces more variability into the monitoring process. Monitoring wildlife populations as a sole indicator of wildlife habitat is not usually appropriate. Animal population changes may result from events other than habitat manipulations (e.g., biotic and abiotic conditions such as weather, disease, human intervention, and contaminants). Often these external factors can impact wildlife populations and mask benefits associated with improved habitat conditions. Thus, habitat monitoring is the primary basis for evaluating the effectiveness of management actions to achieve habitat objectives set forth in CCPs and HMPs.

**B. Adaptive management.** Use adaptive management to assess and modify management strategies and prescriptions, as necessary, and to achieve habitat goals and objectives. Evaluate management strategies and prescriptions by comparing results to desired outcomes, and determine if the strategies and prescriptions were effective. The refuge manager may modify the CCP and/or HMP if significant new information suggests the plans are inadequate or refuge resources would benefit from the changes. The appropriate level of NEPA compliance is required if we propose significant changes.

**C. HMP Revision.** Modify HMP habitat objectives and management strategies, as necessary, utilizing decisions for the refuge's resources of concern from the adaptive management process. If you revise the HMP prior to its normal review period, major modifications follow the appropriate review and approval process outlined in [paragraph 1.6](#). The appropriate level of NEPA documentation must occur. For each HMP revision, record the date and file a copy at the refuge or its administrative office (see the guidance in [paragraph 1.13B](#) on creating an administrative record). Incorporate the same changes into a working HMP copy so the latest version is current and easily available.

**1.15 How do I develop an AHWP?** The AHWP is developed with input from key refuge personnel, including management, biological, visitor service, and maintenance staff and incorporates the scope and vision of the HMP and CCP. The AHWP includes a review of the previous year's habitat management activities, analysis of monitoring and evaluation results, and recommendations for habitat management strategies and prescriptions for the next year. [Exhibit 2](#) provides an outline and guidance for developing AHWPs. In certain circumstances, AHWPs may not be necessary for all refuges. Refuge managers should use their best judgment to determine if an AHWP is necessary and appropriate.

**1.16 When is the AHWP complete?** After applying the policy and guidance in this chapter and [Exhibit 2](#), the AHWP is complete. The refuge manager authorizes staff to implement the habitat management strategies set forth in the AHWP. Keep the signed, original AHWP on file at the refuge or its administrative office.

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