

## Chapter 1



USFWS

*Welcome sign at Sunkhaze Meadows National Wildlife Refuge*

## Purpose of, and Need for, the Action

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## Introduction

This comprehensive conservation plan (CCP) for Sunkhaze Meadows National Wildlife Refuge (Sunkhaze Meadows NWR, refuge) and Carlton Pond Waterfowl Production Area (Carlton Pond WPA, WPA) was prepared pursuant to the National Wildlife Refuge Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997 (Refuge Improvement Act) (Public Law 105-57; 111 Stat. 1253). An environmental assessment (EA), as required by the National Environmental Policy Act of 1969 (NEPA), was prepared with the draft CCP.

This final CCP presents the combination of management goals, objectives, and strategies that we believe will best achieve our vision and goals for the refuge; contribute to the mission of the National Wildlife Refuge System (Refuge System); achieve refuge purposes; fulfill legal mandates; address key issues; incorporate sound principles of fish and wildlife management; and serve the American public. This CCP will guide management decisions and actions on the refuge over the next 15 years. The U.S. Fish and Wildlife Service (Service) will use the CCP to promote understanding of, and support for, refuge management among State agencies in Maine, our conservation partners, Tribal governments, local communities, and the public.

This CCP has 6 chapters and 10 appendixes. This first chapter sets the stage for the subsequent chapters. Specifically, Chapter 1, “Purpose of, and Need for, Action”:

- Explains the purpose of, and need for, a CCP for the refuge.
- Defines the project area.
- Presents the mission, policies, and mandates affecting the development of this plan.
- Identifies other conservation plans used as references in the development of this plan.
- Lists the purposes for which the refuge was established.
- Presents the vision and goals that drive refuge management.
- Describes refuge operational (or “step-down”) plans.

Chapter 2, “The Planning Process,” describes our planning process, including public and partner involvement, its compliance with NEPA regulations, and identifies public issues or concerns that surfaced during plan development.

Chapter 3, “Existing Environment,” describes the physical, biological, and human environments of the refuge and WPA, including the land acquisition history of refuge units and the WPA.

Chapter 4, “Management Direction and Implementation,” presents the actions, goals, objectives, and strategies that will guide our decision-making and land management for the refuge. It also outlines the staffing and funding needed to accomplish that management.

Chapter 5, “Consultation and Coordination,” summarizes how the Service involved the public and its partners in the planning process; their involvement is vital for the future management of the refuge and WPA and all other Refuge System lands.

Chapter 6, “List of Preparers,” credits Service and non-Service contributors to the CCP.

A series of appendixes, a glossary with acronyms, and a bibliography provide additional documentation and references to support the developed narratives and analysis in the plan.

## **Purpose of, and Need for, the Action**

We developed a CCP for the refuge that we believe best achieves the establishing purpose(s), vision, and goals of the refuge; contributes to the mission of the National Wildlife Refuge System (Refuge System); adheres to Service policies and other mandates; addresses identified issues of significance; and incorporates sound principles of fish and wildlife science.

The *purpose* of the CCP is to provide a management direction that best achieves the refuge and WPA purposes, attains the vision and goals developed for the refuge and WPA (see “Refuge and WPA Goals” section below), contributes to the Refuge System mission, addresses key issues and relevant mandates, and is consistent with sound principles of fish and wildlife management.

There are several reasons a CCP is *needed* for these areas. First, the Refuge Improvement Act requires national wildlife refuges to develop CCPs to help fulfill the mission of the Refuge System. Second, Sunhaze Meadows NWR and Carlton Pond WPA need up-to-date plans that establish priorities and ensure consistent management. Third, the refuge was administratively consolidated in 2005 to increase management efficiencies. Currently, Sunhaze Meadows NWR and the Carlton Pond WPA are administered by the staff at the Maine Coastal Islands National Wildlife Refuge Complex in Rockland, Maine.

Lastly, several Service policies providing specific guidance on implementing the Refuge Improvement Act have been developed since the refuge and WPA were established. A CCP incorporates these policies and develops strategic management direction for 15 years by:

- Stating clearly the desired future conditions for refuge habitat, wildlife, visitor services, staffing, and facilities.
- Explaining concisely to state agencies, refuge neighbors, visitors, partners, and other stakeholders the reasons for management actions.
- Ensuring that refuge management conforms to the policies and goals of the Refuge System and legal mandates.
- Ensuring that present and future public uses are appropriate and compatible.
- Providing long-term continuity and consistency in management direction.
- Justifying budget requests for staffing, operating, and maintenance funds.

## **Project Area**

Sunhaze Meadows NWR, Carlton Pond WPA, and the four associated Farmers Home Administration (FmHA) conservation easements lie within two large watersheds: the Lower Penobscot River and Kennebec River watersheds (map 1.1, map 1.2). The Sunhaze Meadows Unit in Milford, Maine, encompasses 11,484 acres. Sunhaze Stream, which flows through the Sunhaze Meadows Unit, drains directly into the Penobscot River. This portion of the refuge protects the second largest and one of the most remarkable peatlands in Maine. Although Sunhaze Meadows NWR is a small part of the total conserved lands throughout the State of

Maine, these lands protect important parts of the regional landscapes in which they are located. Adding significantly to the conserved lands network around the Sunhaze Meadows Unit is the Lower Penobscot Forest Project, a collaboration of The Nature Conservancy (TNC) and the Forest Society of Maine (see lands adjacent to Sunhaze Meadows Unit in map 1.3). Together they are working to conserve over 42,000 acres abutting the southeast boundary of the refuge.

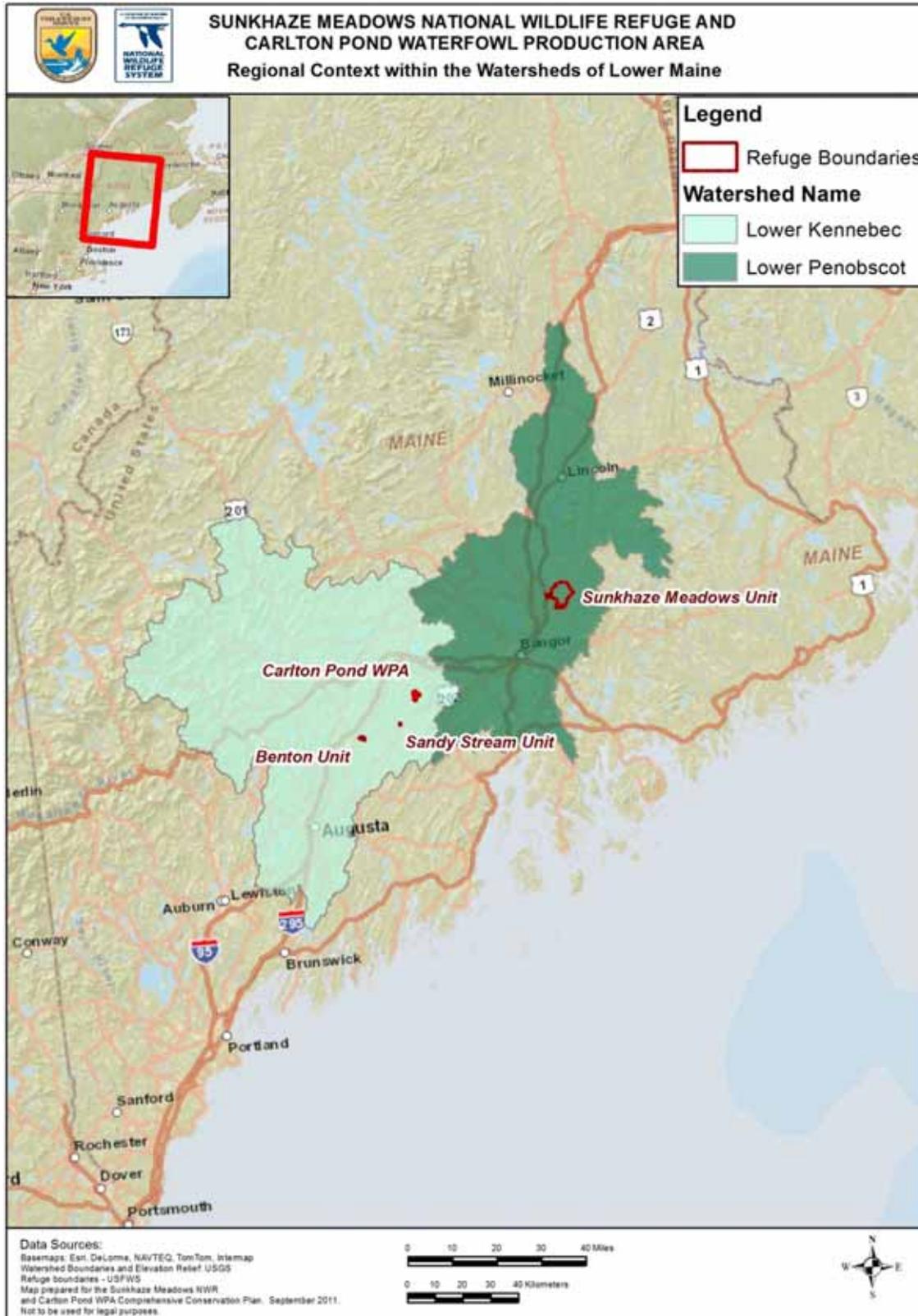
Carlton Pond WPA, as well as the refuge's Benton and Sandy Stream Units, lie within the Lower Kennebec River watershed (map 1.2). These sites drain toward the Sebasticook River that in turn flows into the Kennebec River. The Penobscot and Kennebec Rivers are subcomponents of the Gulf of Maine watershed, an immense area extending from eastern Quebec to Cape Cod, Massachusetts. Maine is the only state located entirely within the watershed boundary (see map 1.1). The Gulf of Maine watershed encompasses the great rivers of Maine: St. John, Penobscot, Kennebec, Androscoggin, Saco, and the coastal drainages of Downeast Maine. It also provides habitat for more than a dozen State-listed threatened or endangered species.

Sunhaze Meadows NWR also has responsibility for four conservation easements on private lands in Maine, totaling about 320 acres. One easement (54 acres) is located in the Penobscot River watershed, about 35 miles north and a little east of Millinocket. Another easement (213 acres) is located in the Penobscot River watershed about 23 miles northwest of Bangor. The remaining two easements are located in the Kennebec River watershed. One easement (about 16 acres) is located about 4 miles northwest of Waterville, the other (37 acres) is located about 26 miles northwest of Waterville.

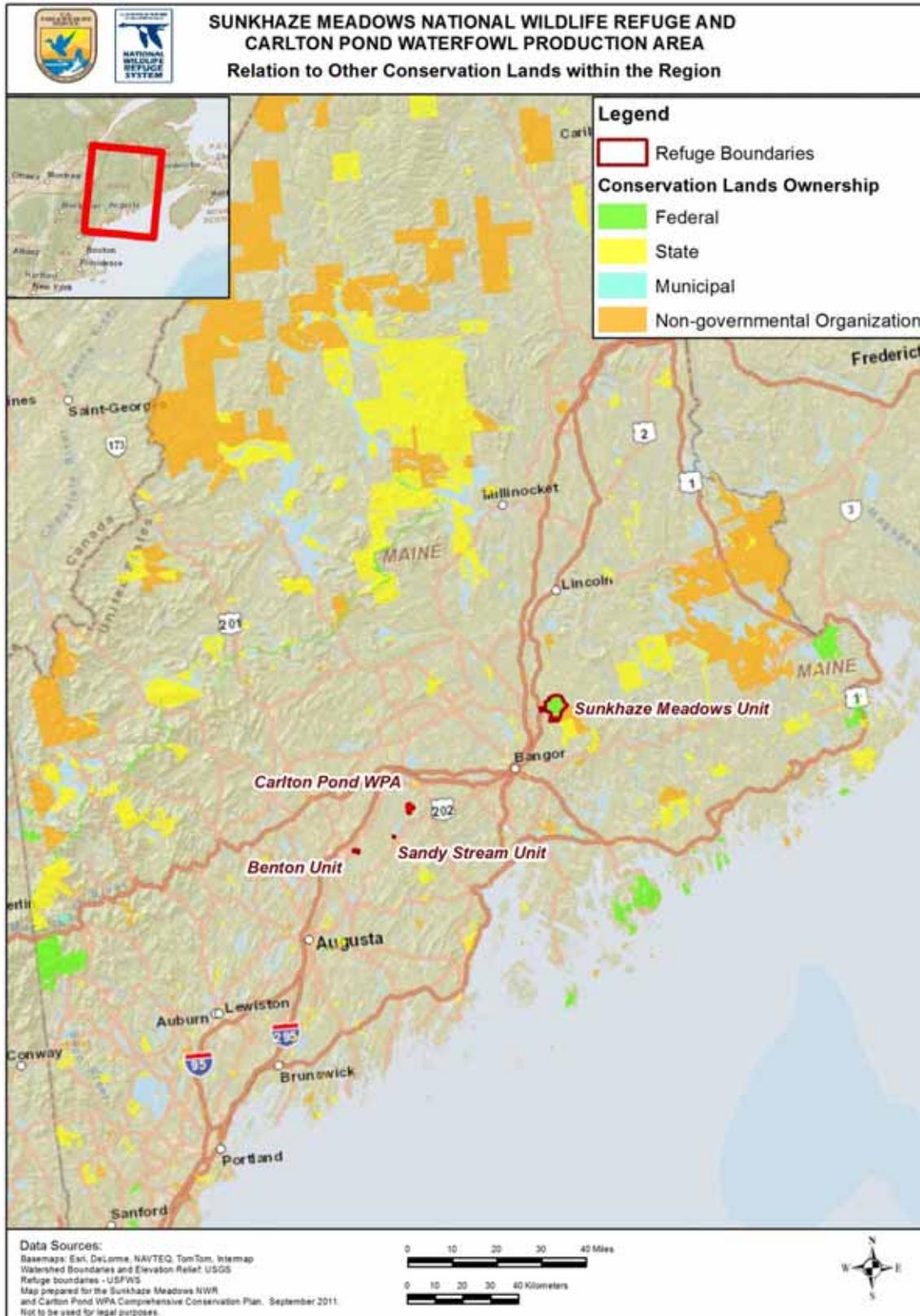
Map 1.1. Sunkhaze Meadows NWR and Carlton Pond WPA and their relationship to the Gulf of Maine watershed.



Map 1.2. Relationship of Sunkhaze Meadows NWR and Carlton Pond WPA to the lower Kennebec River watershed and the lower Penobscot River watershed.



Map 1.3. Sunkhaze Meadows NWR and Carlton Pond WPA and their relationship to other conservation lands in Maine.



## **Service and Refuge System: Policies and Mandates Guiding Planning**

### **The U.S. Fish and Wildlife Service and its Mission**

As part of the Department of the Interior, the Service administers the Refuge System. The Service mission is “Working with others, to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.”

Congress entrusts the Service with the conservation and protection of these Federal trust resources: migratory birds and fish, federally listed threatened or endangered species, interjurisdictional fish, wetlands, certain marine mammals, and national wildlife refuges. The Service also enforces Federal wildlife laws and international treaties on importing and exporting wildlife, assists states with their fish and wildlife programs, and helps other countries develop conservation programs.

The Service Manual (USFWS 2011) contains the standing and continuing directives on implementing our authorities, responsibilities, and activities. In addition, the Service publishes special directives that affect the rights of citizens or the authorities of other agencies separately in the Code of Federal Regulations (CFR); the Service Manual does not duplicate them (see 50 CFR 1–99).

### **The National Wildlife Refuge System and its Mission and Policies**

The Refuge System is the world’s largest network of lands and waters set aside specifically for the conservation of wildlife and the protection of ecosystems. More than 555 national wildlife refuges encompass more than 150 million acres of lands and waters in all 50 States and several island territories. Each year, more than 40 million visitors hunt, fish, observe and photograph wildlife, or participate in environmental education and interpretation on refuges (Carver and Caudill 2007).

In 1997, President Clinton signed the Refuge Improvement Act into law. This act establishes a unifying mission for the Refuge System and a new process for determining the compatibility of public uses on refuges, and requires us to prepare a CCP for each refuge. The mission of the Refuge System, as established by the Refuge Improvement Act, focuses on wildlife conservation first. The Refuge Improvement Act also established that the mission of the Refuge System, coupled with the purpose(s) for which each refuge was established, will provide the principal management direction on each refuge. The mission of the Refuge System is:

“To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.” (National Wildlife Refuge System Improvement Act; P.L. 105–57)

The National Wildlife Refuge System Manual (Refuge Manual) contains policy governing the operation and management of the Refuge System that the Service Manual does not cover, including technical information on implementing refuge policies and guidelines on enforcing laws (USFWS 2010). We have summarized a few noteworthy policies instrumental in developing this CCP in the next section.

### **Policy on the National Wildlife Refuge System Mission, Goals, and Purposes**

This policy (601 FW 1) sets forth the Refuge System mission noted above, how it relates to the Service mission, and explains the relationship of the Refuge System mission and goals and the purpose(s) of each unit in the Refuge System. In addition, it identifies the following Refuge System goals:

- Conserve a diversity of fish, wildlife, and plants.
- Develop and maintain a network of habitats.
- Conserve those ecosystems, plant communities, and wetlands that are unique within the United States (U.S.).
- Provide and enhance opportunities to participate in compatible, wildlife-dependent recreation.
- Help to foster public understanding and appreciation of the diversity of fish, wildlife, and plants and their habitats.

This policy also establishes management priorities for the Refuge System:

- Conserve fish, wildlife, and plants and their habitats.
- Facilitate compatible, wildlife-dependent recreational uses.
- Consider other appropriate and compatible uses.

### **Policy on Refuge System Planning**

This policy (602 FW 1, 2, 3) establishes the requirements and guidance for Refuge System planning, including CCP and step-down management plans. It states that the Service will manage all refuges in accordance with an approved CCP that, when implemented, will help:

- Achieve refuge purposes.
- Fulfill the Refuge System mission.
- Maintain and, where appropriate, restore the ecological integrity of each refuge and the Refuge System.
- Achieve the goals of the National Wilderness Preservation System and the National Wild and Scenic Rivers System.
- Conform to other applicable laws, mandates, and policies.

That planning policy provides step-by-step directions and identifies the minimum requirements for developing all CCPs. Among them, the Service is to review any existing special designation areas, such as Wilderness and Wild and Scenic Rivers, specifically address the potential for any new special designations, and incorporate a summary of those reviews into each CCP (602 FW 3).

### **Policy on the Appropriateness of Refuge Uses**

Federal law and Service policy provide the direction and planning framework for protecting the Refuge System from inappropriate, incompatible, or harmful human activities and ensuring that visitors can enjoy its lands and waters. This policy (603 FW 1) provides a national framework for determining appropriate refuge uses to prevent or eliminate uses that should not occur on Refuge System lands or waters. It describes the initial decision process the refuge manager must follow when first considering whether to allow a proposed use on a refuge. An appropriate use must meet at least one of the following four conditions:

- The use is a wildlife-dependent recreational use as identified in the Refuge Improvement Act.
- The use contributes to fulfilling the refuge purpose(s), the Refuge System mission, or goals or objectives described in a refuge management plan approved after October 9, 1997, the date the Refuge Improvement Act became law.
- The use follows state regulations for the take of fish and wildlife.
- The use has been found to be appropriate after concluding a specified findings process using 10 criteria.

Commercial uses are subject to additional conditions before they can be found appropriate (see 50 CFR 29.1). Findings of appropriateness for Sunhaze Meadows NWR and Carlton Pond WPA are provided in appendix B.

### **Policy on Compatibility**

This policy (603 FW 2) complements the appropriateness policy. After finding a use appropriate, the refuge manager must conduct an assessment to determine compatibility. The compatibility determination ensures refuge uses are consistent with refuge purposes and the mission of the Refuge System. Compatibility determinations completed for those public uses found to be appropriate are included in appendix B as part of this CCP.

Service policy on compatibility determinations (603 FW 2) provides guidelines for determining compatibility of uses and procedures for documentation and periodic review of existing uses.

Highlights of the guidance in that chapter are as follows:

- The Refuge Improvement Act and its regulations require an affirmative finding by the refuge manager on the compatibility of a public use before the Service allows it on a refuge.
- A compatible use is one “that will not materially interfere with or detract from the fulfillment of the mission of the Refuge System or the purposes of the refuge.”
- The act defines six wildlife-dependent uses that are to receive enhanced consideration on refuges: hunting, fishing, wildlife observation and photography, and environmental education and interpretation.
- The refuge manager may authorize those priority uses on a refuge when they are compatible and consistent with public safety.
- When the refuge manager publishes a compatibility determination, it will stipulate the required maximum reevaluation dates: 15 years for wildlife-dependent recreational uses; or 10 years for other uses.
- However, the refuge manager may reevaluate the compatibility of a use at any time. For example, the refuge manager may reevaluate compatibility sooner than its mandatory date, or even before the Service completes the CCP process, if new information reveals unacceptable impacts or incompatibility with refuge purposes (603 FW 2.11, 2.12).
- The refuge manager may allow or deny any use, even one that is compatible, based on other considerations such as public safety, policy, or available funding.

### **Policy on Wildlife-dependent Public Uses**

Part 605, chapter 1 of the Service manual presents specific guidance on implementing management of the priority public uses, including the following criteria for providing a quality, wildlife-dependent recreation program that:

- Promotes safety of participants, other visitors, and facilities.
- Promotes compliance with applicable laws and regulations and responsible behavior.
- Minimizes or eliminates conflict with fish and wildlife population or habitat goals or objectives in an approved plan.
- Minimizes or eliminates conflicts with other compatible, wildlife-dependent recreation.
- Minimizes conflicts with neighboring landowners.
- Promotes accessibility and availability to a broad spectrum of the American people.
- Promotes resource stewardship and conservation.
- Promotes public understanding and increases public appreciation of America's natural resources and our role in managing and conserving these resources.
- Provides reliable and reasonable opportunities to experience wildlife.
- Uses facilities that are accessible to people and blend into the natural setting.
- Uses visitor satisfaction to help define and evaluate programs.

### **Policy on Maintaining Biological Integrity, Diversity, and Environmental Health**

This policy (601 FW 3) provides guidance on maintaining or restoring the biological integrity, diversity, and environmental health of the Refuge System, including the protection of a broad spectrum of fish, wildlife, and habitat resources in refuge ecosystems. It provides refuge managers with a process for evaluating the best management direction to prevent the additional degradation of environmental conditions and restore lost or severely degraded components of the environment. It also provides guidelines for dealing with external threats to the biological integrity, diversity, and environmental health of a refuge and its ecosystem.

### **Native American Policy**

The Service adopted a Native American Policy in 1994. This policy is a framework for our relationships with Native American Tribes in order to address whole ecosystems in conservation, and do it with the greatest assistance possible. You may view this policy on the Web at: [www.fws.gov/policy/npi94\\_10.html](http://www.fws.gov/policy/npi94_10.html) (accessed September 2013).

Some highlights of the Service's Native American Policy include:

- The Service recognizes the sovereign status of Native American governments.
- There is a unique and distinctive political relationship between the U.S. and Native American governments that differentiates Native American governments from other interests and constituencies.
- The Service will maintain government-to-government relationships with Native American governments.
- Affected Native American governments will be afforded opportunities to participate in the Service's decision-making process for Service lands.
- The Service will consult with Native American governments on fish and wildlife resource matters of mutual interest and concern to the extent allowed by the law. The goal is to

keep Native American governments involved in such matters from initiation to completion of related Service activities.

- The Service will involve Native American governments in all Service actions that may affect their cultural or religious interests, including archaeological sites.
- The Service will provide Native Americans reasonable access to Service managed or controlled lands and waters for exercising ceremonial, medicinal, and traditional activities recognized by the Service and by Native American governments.
- The Service will provide Native American governments with the same access to fish and wildlife resource training programs as provided to other government agencies.
- The Service will facilitate the development of Native American fish and wildlife professionals through innovative educational programs and on-the-job training, partnerships and cooperative relationships with Native American educational institutions, and including Native American schools in its environmental education outreach programs.

### **Other Mandates**

Although Service and Refuge System policy and the purpose(s) of each refuge provide the foundation for its management, other Federal laws (e.g., Migratory Bird Treaty Act, Archaeological Resources Protection Act, The Historic Sites, Buildings and Antiquities Act, National Historic Preservation Act), executive orders, treaties, interstate compacts, and regulations on conserving and protecting natural and cultural resources also affect how the Service manages refuges. The “Digest of Federal Resource Laws of Interest to the U.S. Fish and Wildlife Service” describes many of them at: <http://www.fws.gov/laws/Lawsdigest.cfm> (accessed September 2013).

Of particular note for Sunhaze Meadows NWR, are The Wilderness Act of 1964 (16 U.S.C. 1131–1136; P.L. 88–577) and The Wild and Scenic Rivers Act of 1968, as amended.

#### The Wilderness Act

The Wilderness Act establishes a National Wilderness Preservation System (NWPS) that is composed of federally owned areas designated by Congress as wilderness areas. The act directs each agency administering designated wilderness to preserve the wilderness character of areas within the NWPS, and to administer the NWPS for the use and enjoyment of the American people in a way that will leave those areas unimpaired for future use and enjoyment as wilderness. The act also directs the Secretary of the Interior to review every roadless area of 5,000 acres or more and every roadless island (regardless of size) within the Refuge System and the National Park System for inclusion in the NWPS. Service planning policy requires that the Service evaluate the potential for wilderness on refuge lands, as appropriate, during the CCP planning process. The Wilderness Review is available in this document as appendix C.

#### The Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act of 1968, as amended, selects certain rivers of the Nation possessing remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, preserves them in a free-flowing condition, and protects their local environments. Service planning policy requires that the Service evaluate the potential for wild and scenic rivers designation on refuge lands, as appropriate, during the CCP planning process.

## History and Establishing Purposes

Refuges and WPAs can be established by U.S. Congress through special legislation, by the President through Executive Order, or administratively by the Director of the Service (with authority delegated by the Secretary of the Interior). Refuge lands may be acquired under a variety of administrative and legislative authorities as well.

### Sunkhaze Meadows NWR

In the early 1980s, the peat mining industry was exploring the potential to mine peat from Sunkhaze Meadows Unit for use as heating fuel, threatening the bog and the integrity of the wetland complex. The mining plans were not implemented and because of the heightened awareness of the ecological significance of the area, funding was secured for its permanent protection as a national wildlife refuge.

Sunkhaze Meadows NWR was established administratively in 1988 to ensure the ecological integrity of the Sunkhaze Meadows Unit peat bog and to conserve wetland, stream, and forest habitats, and associated wildlife. The Sunkhaze Meadows NWR also includes two smaller units, Benton (334 acres) and Sandy Stream (58 acres), and four conservation easements scattered throughout central Maine.

Sunkhaze Meadows NWR was established under the authority of the Fish and Wildlife Act of 1956 and the Refuge Recreation Act. The purposes for which Sunkhaze Meadows NWR was established are:

- “...for the development, advancement, management, conservation, and protection of fish and wildlife resources...” 16 U.S.C. 742f(a)(4) (Fish and Wildlife Act of 1956).
- “...for the benefit of the United States Fish and Wildlife Service, in performing its activities and services.” 16 U.S.C. 742f(b)(1) (Fish and Wildlife Act of 1956).
- “...suitable for— (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species ....” 16 U.S.C. 460k-1 (Refuge Recreation Act of 1966, as amended).

### Carlton Pond WPA

Carlton Pond WPA was authorized by administrative action on July 15, 1964. The WPA was officially established when the first parcel was acquired on November 24, 1965, under the authority of the Migratory Bird Conservation Act and Migratory Bird Hunting and Conservation Stamp Act. The intent was to provide primarily breeding habitat for waterfowl, as well as benefitting shorebirds, waterbirds, and other wildlife. About 95 percent of the Nation’s waterfowl production areas occur in the prairie potholes region of the Midwest (USFWS 2007). Carlton Pond WPA is the only waterfowl production area in the Service’s Northeast Region. The 1,068-acre Carlton Pond WPA was managed by Moosehorn NWR until Sunkhaze Meadows NWR was established in 1988.

The purposes for which Carlton Pond WPA was established are:

- “...as Waterfowl Production Areas subject to... all of the provisions of such Act [Migratory Bird Conservation Act] ...except the inviolate sanctuary provisions ...” 16 U.S.C. 718(c) (Migratory Bird Hunting and Conservation Stamp Act).

- “...for any other management purpose, for migratory birds.” 16 U.S.C. 715(d) (Migratory Bird Conservation Act).

### **Farmers Home Administration Conservation Easements**

From the late 1980s to the mid-1990s, the FmHA acquired many properties throughout the country through foreclosure sales. Under the terms of a memorandum of understanding between FmHA and the Service, a review team consisting of their staff, our staff, staff from the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service, and staff from USDA Agricultural Stabilization and Conservation Service evaluated those properties for their conservation value. Based on those evaluations, and before reselling the properties, the FmHA placed permanent conservation easements on many of these properties to protect important habitats, as authorized by the Food, Agriculture, Conservation, and Trade Act of 1990. FmHA retained full ownership in a smaller number of the properties. The responsibility for monitoring and enforcing those easements and managing the retained properties rests was transferred to the Service under authority of the Consolidated Farm and Rural Development Act (7 U.S.C. 2002). We have usually delegated this authority to the manager of the closest refuge. As discussed previously under “Project Area,” Sunkhaze Meadows NWR has responsibility for four conservation easements on private lands in Maine, totaling about 320 acres. The Service’s rights and responsibilities are specific to conditions stipulated in each easement.

The Farmers Home Administration properties (Benton and Sandy Stream Units) and conservation easements were transferred “...for conservation purposes...” 7 U.S.C. 2002 (Consolidated Farm and Rural Development Act).

## **Conservation Plans and Initiatives Guiding Planning**

Important guidance for habitat management and visitor service management at Sunkhaze Meadows NWR and Carlton Pond WPA has already been provided by a series of refuge-specific, State, regional, and national plans and initiatives, and their priorities.

### **Regional and National Plans and Initiatives**

#### Refuge System Visioning: Fulfilling the Promise, Conserving the Future

In 1999, the report, “Fulfilling the Promise, The National Wildlife Refuge System; Visions for Wildlife, Habitat, People, and Leadership” (USFWS 1999a), culminated a year-long process by teams of Service employees that created a nationwide vision for the Refuge System.

To update the vision for the Service’s future, the *Conserving the Future* conference was convened in July 2011 for the purpose of working toward a renewed and updated vision for the Refuge System. It was the largest gathering regarding the future of the Refuge System since the *Fulfilling the Promise* conference in 1998. It began with a draft vision document and over the course of the conference, both online and in-person feedback was gathered for its revision and finalization. The final vision document and its recommendations were published in the fall of 2011 (USFWS 2011a). This 21st century strategic vision for the Refuge System acknowledges the broad social, political, and economic changes that have made habitat conservation more challenging since the agency last set comprehensive goals in 1999. The vision document

represents the Service's vision for how to protect and conserve lands and waters in the coming decades and outlines a series of 24 recommendations for Service staff and other conservation partners to consider in future management.

We have often looked to the recommendations in these documents for guidance when writing this CCP. For example, one recommendation is that we “ensure these plans view refuges in a landscape context and describe actions to project conservation benefits beyond refuge boundaries.” To address this, we have viewed the refuge and WPA within a wider landscape context throughout this document and have targeted conservation actions that directly relate to needs within the larger landscape. Another recommendation of the vision document involves partnerships, “develop and nurture active and vibrant Friends groups or community partnerships for every staffed refuge or refuge complex.” Throughout this CCP, we have recognized the value that the Friends and other partnerships bring to the refuge and WPA and our reliance on them for its future. The vision document also outlines other recommendations for the Service, including other programs outside of the Refuge System. Many of these other recommendations are supported in part by refuge management guided by this CCP.

### Strategic Habitat Conservation

The Service has a goal of establishing and building capacity for science-driven landscape conservation on a continental scale. Our approach, known as strategic habitat conservation, applies adaptive resource management principles to the entire range of species, groups of species, and natural communities of vegetation and wildlife. This approach is founded on an adaptive, iterative process of biological planning, conservation design, conservation delivery, and monitoring and research. The Service is refining this approach to conservation in a national geographic framework. This geographic frame of reference will allow us to more precisely explain to partners, Congress, and the American public why, where, and how we target resources for landscape-scale conservation and how our efforts connect to a greater whole. More information regarding SHC can be found at: <http://www.fws.gov/landscape-conservation/> (accessed September 2013).

### North Atlantic Landscape Conservation Cooperative Operations Plan (USFWS 2010)

The Service and our partners are implementing a network of Landscape Conservation Cooperatives (LCCs) to help protect our Nation's natural and cultural resources and landscapes from negative effect of land use changes, drought, wildfire, habitat fragmentation, contaminants, pollution, invasive species, disease, and a rapidly changing climate. LCCs are public-private partnerships that recognize these challenges transcend political and jurisdictional boundaries and require a more networked approach to conservation that is collaborative, adaptive, and grounded in science to ensure the sustainability of America's land, water, wildlife, and cultural resources. The North Atlantic LCC is a conservation science-management partnership, consisting of Federal agencies, states, Tribes, universities and private organizations, focused on collaboratively developing science-based recommendations and decision-support tools to implement on-the-ground conservation. The goal is having all partners working together to sustain landscapes capable of maintaining abundant, diverse, and healthy populations of fish, wildlife, and plants. The work of the North Atlantic LCC will be integrated with a U.S. Geological Survey (USGS) regional climate impact response center to conduct studies and develop landscape-scale conservation plans. The North Atlantic LCC will also address impacts

to ecosystems beyond those of climate change, such as potential extirpation of wildlife populations from disease or habitat loss.

LCCs use principles of strategic habitat conservation to develop and communicate landscape-scale scientific information to shape conservation across the Northeastern U.S. This initial plan outlines the regional threats to conservation, some priority species and habitats, as well as active regional partnerships.

#### North American Bird Conservation Initiative (NABCI)

The North American Bird Conservation Initiative (NABCI) brings together the individual landbird, shorebird, waterbird, and waterfowl plans into a coordinated effort to protect and restore all native bird populations and their habitats in North America. By integrating bird conservation partnerships, NABCI strives to reduce redundancy in the structure, planning, and implementation of conservation projects. It uses Bird Conservation Regions (BCRs) to guide landscape-scale, science-based approaches to conserving birds and their habitats.

Sunkhaze Meadows NWR lies within BCR 14, the Atlantic Northern Forest. A blueprint for the design and delivery of bird conservation in this region was created by the Service based on input from dozens of bird experts from around the region (Dettmers 2006). The BCR 14 blueprint identifies 52 bird species designated “highest” or “high” conservation priority in the region, and 15 habitat types important for supporting one or more of those priority bird species during at least one of their life stages. Those habitats either need critical conservation attention, or are crucial in long-term planning to conserve continentally and regionally important bird populations. Of the 52 highest and high-priority birds, 17 breed on the Sunkhaze Meadows NWR or Carlton Pond WPA and several others migrate through.

Each of the individual bird plans noted below were referenced as we developed habitat goals and objectives for the Sunkhaze Meadows NWR and Carlton Pond WPA:

- Partners In Flight Landbird Conservation Plan: Physiographic Area 27: Northern New England (Hodgman and Rosenberg 2000).
- Partners In Flight Landbird Conservation Plan: Physiographic Area 28: Eastern Spruce-Hardwood Forest (Rosenberg and Hodgman 2000).
- Northern Atlantic Regional Shorebird Plan Version 1.0. (Clark and Niles 2000).
- Regional Waterbird Conservation: Mid Atlantic/New England/Maritimes (MANEM Waterbird Working Group 2006).
- Atlantic Coast Joint Venture Waterfowl Implementation Plan (ACJV 2005).

#### Partners in Flight Area 27 Landbird Conservation Plan

In 1990, Partners in Flight (PIF) was conceived as a voluntary, international coalition of government agencies, conservation organizations, academic institutions, private industry, and other citizens dedicated to reversing the population declines of bird species and “keeping common birds common.” The foundation of PIF’s long-term strategy for bird conservation is a series of scientifically based bird conservation plans, using physiographic areas as planning units. Sunkhaze Meadows NWR and Carlton Pond WPA straddle the PIF physiographic areas 27, Northern New England, and 28, Eastern Spruce-Hardwood Forest.

The PIF Area 27 (Northern New England) plan (Rosenberg and Hodgman 2000) includes objectives for the following habitat types and associated species of conservation concern on the refuge.

- |                            |  |
|----------------------------|--|
| Northern hardwood forest:  | Canada warbler, wood thrush, black-throated blue warbler, and blackburnian warbler |
| Early successional forest: | American woodcock and chestnut-sided warbler                                       |

#### Partners in Flight Area 28 Landbird Conservation Plan

The PIF 28 (Eastern Spruce-Hardwood Forest) plan (Rosenberg and Hodgman 2000) includes objectives for the following habitat types and associated species of conservation concern on the refuge.

- |                              |  |
|------------------------------|--|
| Northern hardwood forest:    | Canada warbler, wood thrush, and veery   |
| Conifer (spruce-fir) forest: | Bay-breasted warbler, Cape May warbler, blackburnian warbler, spruce grouse, and red crossbill |
| Boreal peatland/edge/shrub:  | American woodcock, chestnut-sided warbler, and olive-sided flycatcher                          |

#### North American Waterbird Conservation Plan

The North American Waterbird Conservation Plan (Kushlan et al. 2002) represents an independent partnership among individuals and institutions with interest and responsibility for conserving waterbirds and their habitats. The primary goal of the plan is to ensure that the distribution, diversity, and abundance of populations and habitats of breeding, migratory, and non-breeding waterbirds are sustained or restored throughout the lands and waters of North America, Central America, and the Caribbean. The plan facilitates continentwide planning and monitoring, national-state-provincial conservation action, regional coordination, and local habitat protection and management.

A partnership of organizations and individuals working to facilitate waterbird conservation in the Mid-Atlantic/New England/Maritimes (MANEM) region of the U.S. and Canada has developed a regional waterbird conservation plan (MANEM Waterbird Working Group 2006). Over 200 partners comprising the MANEM Waterbird Working Group have compiled and interpreted technical information on the region's waterbird populations and habitats, assessed conservation status of these natural resources, developed strategies to ensure the persistence of sustainable waterbird populations in the region, and identified near-term priorities.

Seventy-four waterbird species use habitats in MANEM for breeding, migrating, and wintering. Avian families include loons, grebes, shearwaters, storm-petrels, boobies, pelicans, cormorants, herons, ibises, rails, gulls, terns, skuas, jaegers, and alcids. Partners in four subregions of MANEM selected 43 focal species for immediate conservation action. In addition, 55 of MANEM's waterbirds are identified in state wildlife action plans as Species of Greatest Conservation Need (MANEM Waterbird Working Group 2006).

#### U. S Fish and Wildlife Service's Migratory Bird Program Strategic Plan

The Migratory Bird Program Strategic Plan (USFWS 2004) provides direction for the Services' migratory bird management over the next decade (2004 to 2014). The plan contains a vision and recommendations for the Refuge System's place in bird conservation. It defines strategies for the

Service, including the refuge system, to actively support bird conservation through monitoring, conservation, consultation, and recreation. To the extent practicable, considerations for standard monitoring protocols, habitat assessment and management, and promoting nature-based recreation and education to forward the vision of the Migratory Bird Program Strategic Plan have been incorporated into this plan.

#### U. S Fish and Wildlife Service's Birds of Conservation Concern (USFWS 2008)

The 1988 amendment to the Fish and Wildlife Conservation Act mandated that the Service “identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973.”

This report identifies the migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent the Service's highest conservation priorities and draws attention to species in need of conservation action. The geographic scope includes the U.S. in its entirety, including island territories in the Pacific and Caribbean. Birds considered within this report include nongame birds; gamebirds without hunting seasons; subsistence-hunted nongame birds in Alaska; and ESA candidate, proposed endangered or threatened, and recently delisted species. Assessment scores are based on several factors, including population trends, threats, and distribution, abundance, and area importance.

#### Maine Comprehensive Wildlife Conservation Strategy

Maine's Comprehensive Wildlife Conservation Strategy (MDIFW 2005) targets species in greatest need of conservation for the State while keeping “common species common.” The plan covers the entire State, from the coastline to the heights of Mt. Katahdin. It builds on existing fish and wildlife programs and on a species planning effort that has been ongoing for nearly 40 years and a landscape approach to habitat conservation that was initiated in 2000. These efforts incorporate a long history of public involvement and collaboration among conservation partners. The Maine landscape is not static but the result of profound natural and human-caused changes. Changes brought about by fire, land conversion, abandonment of agricultural land, timber harvesting, and the defoliation of forest by insects have had, and will continue to have, a dramatic impact on habitats and levels of biodiversity. Similarly, aquatic ecosystems in Maine have been profoundly and adversely affected by exotic introductions, dam building, pollution, pesticide use, and excessive nutrient input. These effects have occurred, and are occurring, statewide, but they differ in intensity from north to south.

In their Statewide wildlife conservation plan, the Maine Department of Inland Fisheries and Wildlife (MDIFW) noted the following: “Historically, wildlife conservation efforts tended to focus on single species. Other conservation efforts identify and protect areas of land (focus areas) that contain diverse assemblages of at-risk species. However, as we continue to change our landscape, species-by-species and focus-area conservation approaches, while both laudable may not be the most effective means to conserve biodiversity, and they do little to ensure the continued well-being of more common species under Department stewardship. Landscape-level conservation that addresses the needs of many species by conserving underlying resources upon which they depend, may be a more productive way to use limited resources to benefit the greatest number of species and address the full array of wildlife in Maine.”

### U. S Fish and Wildlife Service's Fisheries Program, Northeast Region Strategic Plan 2009 to 2013

The primary mission of the Service's Fisheries Program is to work with others to maintain self-sustaining, healthy populations of coastal and diadromous fish (fish that spend part of their lives in freshwater and part in the ocean), fish species that cross state or national boundaries, and endangered aquatic animals and their habitats. In the Northeast Region, 25 fishery management offices and national fish hatcheries work with states and other partners to restore and protect a variety of fish and other aquatic species.

The Regional Fisheries Program Strategic Plan (USFWS 2009) is an extension of the vision, describing more specifically the tactics to be implemented by the Northeast Region to fulfill the goals and objectives identified in the vision. The first plan covered years 2004 to 2008. One step-down effort resulting from the plan is the identification and ranking of fish and other aquatic species according to their level of conservation concern by USGS hydrologic unit (i.e., HUC watersheds). We used this ranking and have consulted with the Regional Fisheries Program staff in developing aquatic objectives and strategies.

### Eastern Brook Trout Joint Venture Conservation Strategies

The Joint Venture's Conservation Strategy (EBJV 2011) is directed by rangewide objectives to guide conservation efforts across the eastern range of brook trout. The regional objectives represent expectations to be achieved by 2012. The Joint Venture, working with the National Fish Habitat Partnership, will use the Conservation Strategy as its blueprint for raising and using resources at the State level. The Eastern Brook Trout Joint Venture Conservation Strategies (EBJV 2011) for Maine were developed to maintain and restore then native brook trout populations in the streams, rivers, lakes, and ponds of Maine. Short- and long-term goals of the Joint Venture include determining the status of wild brook trout in watersheds lacking adequate and current data, identifying degraded stream habitats and prioritizing restoration efforts, restore degraded brook trout habitat, and prevent further degradation of existing brook trout habitat.

### Sebasticook Regional Land Trust's Unity Wetlands Conservation Plan

The Sebasticook Regional Land Trust (formerly the Friends of Unity Wetlands) developed the Unity Wetlands Conservation Plan (FUW 2006) with support from TNC and The Natural Resource Conservation Service. The plan encompasses the 42,000-acre Unity Wetlands Focus Area, a unique and significant resource, with a combination of wild and working lands that is rich in biodiversity, scenic beauty, and economic value. This large tract of relatively undeveloped land stretches from the west side of Unity through all of Unity Plantation and into portions of Albion, Benton, Burnham, Clinton, and Freedom. It is home to many threatened and rare plants, animals, and natural communities, as well as to more wide-ranging creatures like black bear, moose, and bobcat. It is home, too, to a rich agricultural heritage that is critical to the regional economy. The farms and infrastructure within and adjacent to the Unity Wetlands are a vital component in Maine's Dairy Belt. They also provide habitat in their own right for fish and wildlife, contribute to several blocks of contiguous undeveloped habitat, and are a buffer between the interior undeveloped blocks and encroaching development.

The Benton and Sandy Stream Units are located within the Unity Wetlands Focus Area. Recommendations in the conservation plan support refuge management objectives of increasing

the riparian buffer at Sandy Stream and managing habitat for grassland birds at Benton. The Sebasticook Regional Land Trust is interested in partnering with the refuge to increase public understanding of refuge lands, their conservation values and public use opportunities. Carlton Pond WPA is located north and east of Unity Pond, just outside of the Unity Wetlands Focus Area.

### **Refuge-specific Plans**

A number of other refuge-specific plans have been consulted either in their draft or final format to help guide decision-making. These plans will also be maintained and updated as necessary to maintain accordance with the recommendations of the CCP.

#### Sunkhaze Meadows NWR Station Management Plan

The original master plan (USFWS 1992) for the refuge was developed in 1992 through collaboration amongst individuals within the Northeast Region of Service's Division of Refuges. The master plan set the original guidance for management of Sunkhaze Meadows NWR and outlined the resources it protected.

#### Visitor Service Review

A Service-based review team assessed the public use issues, opportunities, and facilities available at Sunkhaze Meadows NWR in preparation for the refuge's comprehensive conservation planning process and to develop recommendations to improve the quality of the refuge's visitor services program. A visitor services review was conducted for Sunkhaze Meadows NWR on October 18 to 22, 2010, by a review team consisting of visitor services personnel from the Regional Office and other refuges. This review focused on the Sunkhaze Meadows Unit of the refuge, and recommendations included increased staffing, visitor use access, and public outreach. The Visitor Services Review recommendations were used as a stepping-off point for visitor services planning; its recommendations were also used to help develop goals, objectives, and strategies for refuge visitor services planning.

### **Step-down Plans**

The Service Manual, (602 FW 4) identifies more than 25 step-down management plans that may be completed for each refuge. These plans provide the details necessary to "step-down" general goals and objectives to specific strategies and implementation schedules. Some require annual revisions; others are revised on a 5- to 10-year schedule. Some require additional NEPA analysis, public involvement, and compatibility determinations before they can be implemented.

Following is a list of step-down plans for the refuge and WPA:

- Annual Habitat Work Plan, most recently completed in 2010.
- Fire Management Plan, completed in 2001.
- Furbearer Management Plan, completed in 2001.
- Fisheries Management Plan, completed in 1999, to be updated after approval of the final CCP.
- Wildlife Inventory Management Plan, completed in 1995.
- Hunting Management Plan, completed in 1990, to be updated after approval of the final CCP.
- Law Enforcement Plan, to be completed after approval of the final CCP.
- Visitor Services Plan, to be completed after approval of the final CCP.

- Safety Plan, to be completed after approval of the final CCP.

## Refuge and WPA Vision

The planning team developed the following vision statement to provide a guiding philosophy and sense of purpose in the CCP.

*Sunkhaze Meadows NWR and Carlton Pond WPA are a tapestry of natural lands within central Maine.*

*The Sunkhaze Meadows Unit supports an expansive, intact peat bog system. The free-flowing Sunkhaze Stream and its tributaries meander through diverse habitats including raised peat domes, grassy wet meadows, and floodplain forests before joining the restored Penobscot River. Mature upland forests surround the wetlands, protecting this unspoiled landscape for future generations of plants, animals, and people.*

*Bobolink and sedge wren sing and woodcock dance in the large contiguous grassland and deer overwinter in the forest mosaic comprising the Benton Unit. Wood turtles and rare mussels are protected by the wide, shaded riparian forests of the Sandy Stream Unit.*

*Carlton Pond WPA is a beautiful wetland jewel amidst a pastoral landscape. Rare black terns nest in the emergent marsh, while bald eagles, bitterns, and marsh wrens forage amid the shallow open waters and emergent pickerelweed and wild rice.*

*Visitors experience wildness and find respite within nature throughout the year. In spring, birders observe migratory waterfowl and songbirds. Wildlife enthusiasts and anglers enjoy fishing, paddling, and hiking throughout summer. Hunters spend crisp autumn mornings stalking their prey. In winter, people snowshoe and ski through the silent woods. Through our close partnerships and programs, visitors gain further appreciation of conservation and are inspired stewards of nature.*

## Refuge and WPA Goals

The planning team developed seven goals after considering the vision statement, the purposes for establishing the refuge and WPA, the missions of the Service and the Refuge System, and the mandates, plans, and conservation initiatives noted above. These goals are intentionally broad, descriptive statements of purpose. They highlight elements that we will emphasize during future management.

Goal 1. Sunkhaze Meadows Biological Management. Promote the environmental health of Sunkhaze Meadows Unit wetland, forest, and aquatic habitats to protect water quality and sustain native rare plants, natural communities, and wildlife, including species of conservation concern.

- Goal 2. Carlton Pond WPA Biological Management. Promote the environmental health of forest, open water, and emergent wetland habitat at Carlton Pond WPA to benefit waterfowl and sustain a diversity of wildlife including species of conservation concern.
- Goal 3. Benton and Sandy Stream Biological Management. Promote the environmental health of forest, grassland, and shrubland habitat at Benton and Sandy Stream Units to sustain a diversity of wildlife, including species of conservation concern.
- Goal 4. Sunkhaze Meadows Public Use. Engage visitors, students, and nearby residents in the Refuge System's six priority public uses, as well as other compatible public uses, to enhance public understanding, enjoyment, and environmental stewardship of the wetlands, woods, wildlife, and cultural resources of the Sunkhaze Meadows Unit.
- Goal 5. Carlton Pond WPA Public Use. Engage visitors, students, and nearby residents in the Refuge System's six priority public uses, as well as other compatible public uses, to enhance public understanding, enjoyment, and environmental stewardship of the wetlands, woods, and wildlife at Carlton Pond WPA.
- Goal 6. Benton and Sandy Stream Units Public Use. Engage visitors, students, and nearby residents in the Refuge System's six priority public uses, as well as other compatible public uses, to enhance public understanding, enjoyment, and environmental stewardship of the shrublands, woods, grasslands, and wildlife at the Benton and Sandy Stream Units.
- Goal 7. Partnership Coordination. Communicate and collaborate with local communities, Federal and State agencies, local and Tribal representatives, and other organizations throughout Maine and the region to further the purposes of the refuge and the mission of the Refuge System.

