

Chapter 4



Erin Victory/TCI

Opening in the Refuge canopy

Management Direction and Implementation

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Introduction

This CCP includes an array of management actions that, in our professional judgment, work towards achieving the refuge purpose, the vision and goals for the refuge, and State and regional conservation plans. In our opinion, it effectively addresses the key issues identified in Chapter 2. We believe it is reasonable, feasible and practicable.

In all program areas, this CCP will enhance the quality and sustainability of current compatible activities, develop long-range and strategic step-down plans, and promote partnerships.

Relating Goals, Objectives, and Strategies

The Refuge goals are intentionally broad, descriptive statements of the desired future condition of Refuge resources. By design, they define the targets of our management actions in terms more prescriptive than quantitative. They also articulate the principal elements of the Refuge purposes and our vision statement, and provide a foundation for developing specific management objectives and strategies.

The objectives are essentially incremental steps toward achieving a goal; they further define management targets in measurable terms. Typically, they provide the basis for determining strategies that are more detailed, monitoring Refuge accomplishments, and evaluating our successes. “Writing Refuge Management Goals and Objectives: A Handbook” (USFWS 2004a) recommends writing “SMART” objectives that are: (1) Specific; (2) Measurable; (3) Achievable; (4) Results-oriented; and (5) Time-fixed.

Where possible, we incorporated the principles of Strategic Habitat Conservation in the development of our objectives and strategies. According to the National Ecological Assessment Team (NEAT 2006), “This approach focuses on the ability of the landscape to sustain species as expressed in measurable objectives. Developing a strategy to attain a biological outcome, such as a population objective, requires documented and testable assumptions to determine whether the objective is met.” Not only will this approach ensure refuges are contributing to the National Wildlife Refuge System and USFWS mission and goals in a strategic, standardized, and transparent way, but also refuges can ensure that they contribute to local and regional conservation priorities and goals as well (USFWS 2008b).

A rationale accompanies each objective to explain its context and importance. We will use the objectives to write the Refuge step-down plans, which we describe later in this chapter.

The strategies for each objective are the specific or combined actions, tools, or techniques we may use to achieve the objective. The list of strategies in each objective represents the potential suite of actions we may implement. We will evaluate most of them further as to how, when, and where we should implement them when we write our Refuge step-down plans. We will measure our successes by how well our strategies achieve our objectives and goals.

General Refuge Management

We primarily developed our management direction hierarchically, from goals to objectives to strategies. However, we also found that some important actions either relate to multiple goals or represent general administrative or compliance activities. We present those below.

Assessing Refuge Staffing and Administration Needs

Our proposals in this document do not constitute a commitment for staffing increases, or funding for operations, maintenance, or future land acquisition. Congress determines our annual budgets, which our

Washington headquarters and regional offices distribute to the field stations. Chapter 3 presents our current levels of staffing and operating and maintenance funds for the Refuge. We describe below activities pertaining to staffing, administration, and operations: some are new; others are ongoing. Implementing them supports all our Refuge goals.

Permanent Staffing and Operational Budgets

Our objective is to sustain levels of annual funding and staffing that allow us to achieve Refuge purposes, as interpreted by the goals, objectives, and strategies in this CCP. While special project funds are potentially available, their flexibility is limited because we cannot use them for any other priority project that may arise, and they typically only have a one- to two-year duration. As an unstaffed satellite refuge, John Hay NWR does not have its own base budget, and is instead managed through the Silvio O. Conte National Fish and Wildlife Refuge (NFWR) budget.

In response to declines in operational funding nationwide, we developed the “Strategic Workforce Plan for the National Wildlife Refuge System in Region 5” (Phase 2; January 16, 2007) to support a new base budget approach. Its goal is a maximum of 75 percent of a refuge station budget to cover salaries and fixed costs, while the remaining 25 percent or more will be operating and maintenance funds. Our strategy is to improve the capability of each refuge manager to do the project work of the highest priority, and not to have a refuge budget tied up in inflexible, fixed costs. Unfortunately, in a level or declining budget environment, that also may have implications for the level of permanent staffing.

Appendix D lists our Refuge Operating Needs (RONS) and Service Asset Maintenance Management System (SAMMS) construction and maintenance projects currently listed in those databases, and indicate the regional and refuge ranking. We also included new projects not yet in the databases, which we propose to implement as part of this CCP. Once approved, if funding is not available, we will continue to seek alternate means of accomplishing our projects; for example, through collaborative partnerships, volunteers, challenge cost share grants or other partnership grants, and internships.

Within the guidelines of the new base budget approach, we will seek to achieve a level of staffing that will enable us to accomplish our highest priority projects. We propose additional temporary staff to provide depth in our visitor services programs (Appendix D). Appendix E identifies our plan for current and future staffing growth.

Facilities Construction and Maintenance

Maintenance will be focused on addressing basic trail upkeep, signage, and safety concerns. In addition, the Woods Road will be maintained in its present condition due to its historical value, as well as its utility in providing access to the Refuge for public safety and/or management concerns and actions. The southernmost section of the road will provide a limited amount of parking for anglers, along with informational signage. The current gate will be moved as needed to control vehicular access beyond the area intended for parking. The pipeline from the well house that crosses the Refuge through an easement will be maintained as-needed by The Fells. The addition of on-site staff under this CCP will most likely be situated at The Fells gatehouse.

We will construct an alternate route for the John Hay II Forest Ecology Trail (Ecology Trail) to allow visitors to return to the trailhead without entering The Fells' property. By constructing a trail section that returns to the trailhead entirely on Refuge property, visitors will be better informed of their options and can decide to continue on to The Fells property, for which there is admission, or to stay on the Refuge. Explanatory signage at the trailhead and at the point of entry to The Fells will be posted. Installation of a kiosk at the trailhead and interpretive and informational signs throughout the Refuge will be a priority to incrementally increase visitor awareness of Refuge resources. Included in this endeavor will be the addition of a spur trail to the fen and back, with informational signage on the ecology of fens. We will also continue to make progress toward improving access and visibility for visitors, including the installation of a footbridge(s) where stream crossing is a concern for public safety and stream health.



Karen Terwilliger/TCI

Brochure rack

Refuge Operating Hours

We will open the Refuge for appropriate and compatible public uses from official sunrise to sunset, seven days a week, to ensure visitor safety and protect Refuge resources. However, the Refuge manager does have the authority to issue a special use permit to allow access outside those periods. For example, we may permit access for research personnel at different times, or organized groups to conduct nocturnal activities, such as wildlife observation, or educational and interpretive programs.

Maintaining Partnerships

The Fells has been a close partner since 1996, initially established to assist the Refuge in the day to day operations and maintenance of the Hay estate and grounds, and to provide educational opportunities. Many of these activities have been conducted under a Memorandum of Understanding (MOU) with the Service. With the completion of the land exchange in 2008, the relationship between the Service and The Fells has changed and a new partnership agreement is needed to reflect this change. We will seek to establish a new partnership agreement that reflects the new tenets of our close partnership and that matches the cooperative spirit engendered in The Fells Master Plan (The Fells 2006). This will include recognizing the easement The Fells has on the viewshed corridor that is on Refuge lands, their commitment to maintaining it, the shared parking lot and proposed trailhead, educational programs, availability of workspace in the gatehouse for Service employees, and other facets that delineate our working relationship. We will continue to appreciate and rely on the assistance of The Fells organization to provide general on-site oversight, the point-of-contact for the Refuge, and collaboration on land management issues.

We will maintain the existing partnerships identified in Chapter 3. These relationships are vital to our success in managing all aspects of the Refuge, from managing habitats and protecting species, to outreach and education, and providing wildlife-dependent recreation. The Fells, NH FGD, Society for the Protection of New Hampshire Forests (Forest Society), and Lake Sunapee Protective Association (LSPA) have been particularly important and valued partners.

Implementing Adaptive Management

We will include flexibility in management to allow us to respond to new information, spatial and temporal changes, and environmental events, whether foreseen or unforeseen, or other factors that influence management. Our goal is to be able to respond quickly to any new information or events. The need for flexible or adaptive management is very compelling today because our present information on Refuge species and habitats is incomplete, provisional, and subject to change as our knowledge base improves. “Adaptive Management: The U.S. Department of the Interior Technical Guide” (Williams et al. 2009) promotes flexible decision-making, adjusting management in the face of uncertainties.

Adaptive management, as it relates to refuge management, promotes flexible decision-making through an iterative learning process that responds to uncertainties, new information, monitoring results, and natural variability in the ecosystems. It is designed to facilitate more effective decisions and enhanced benefits. At the refuge level, monitoring management actions and outcomes and key resources will be very important. The Refuge manager is responsible for changing management objectives or strategies as new information is acquired. Substantial changes from what we present in this CCP may warrant additional NEPA analysis and public comment. Minor changes will not, but we will document them in our project evaluation reports or annual reports.

Generally, we can increase monitoring and research that support adaptive management without additional NEPA analysis, assuming the activities, if conducted by non-Refuge personnel, are designated a Categorical Exclusion (Department of Interior Manual 516 DM 2.3A(2) and 516 DM 6, Appendix 1, January 16, 1997) and determined to be compatible by the Refuge manager in a compatibility determination.

Strategic Habitat Conservation

Strategic Habitat Conservation is a framework that utilizes adaptive management to redefine broad scale conservation from the general pursuit of conserving “more” habitat and species, to a more planned approach based on scientific data, at a landscape level, and in cooperation with partners. It starts with explicit, measurable objectives that are based on testable assumptions that can be evaluated, and is enacted through an iterative process of biological planning, conservation design, conservation delivery, assumption-driven research, and outcome-based monitoring. The goal is to set specific population objectives for species that are limited in some way by habitat (though this will be effective for other limiting factors as well), and to use targeted habitat management approaches to meet those objectives. Inherent in the process is a continual evaluation of biological outcomes and approaches, with the intent to adapt the overall conservation strategy to respond to changing circumstances and new information.

Protecting Land

The permanent protection of land is the keystone of wildlife and habitat conservation. Land brought into the Refuge System will be available forever to support fish, wildlife and plants. We can restore, enhance, or maintain the land owned by the United States and managed as part of the Refuge System to provide suitable conditions for priority species targeted for conservation, such as threatened or endangered species and those whose populations are in decline. The land we protect through conservation easements will never convert to uses that will remove permanently their value for fish and wildlife.

Though the Refuge encompasses the approved acquisition boundary, it is part of a regional matrix of conserved land. It is our goal to create new and enhance our existing conservation partnerships to both encourage and provide education about land conservation in the region.

To continue our progress toward our shared objectives in protecting land, we will employ the following, ongoing strategies.

1. Participate in local land protection meetings with partners to facilitate communication and cooperation.
2. Provide information to elected officials on land protection issues upon request.
3. Work with partners and landowners to encourage land conservation outside the Refuge boundary.
4. Keep communities around the Refuge informed about land protection issues through the distribution of outreach material and personal appearances by staff.



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Japanese barberry

Managing Invasive Species

The Refuge System has identified management to control the establishment and spread of invasive species as a national priority. This is a substantial problem that reaches across all habitat types. For the purposes of this discussion, we use the definition of invasive species contained in the Service Manual (620 FW 1.4E): “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 non-indigenous 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.”

Fortunately, the occurrence of invasive species on the Refuge is low. To date, only Japanese barberry (*Berberis thunbergii*) has been documented in two places on the property, although the Refuge has not completed a systematic survey. Our objective is to continue to work with our partners to monitor invasive species on the property. As staffing and funding allow, we will endeavor to prevent the establishment of new invasive species, and we will manage to control the spread of what does exist. For plant and animal invasive aquatic species, we will coordinate with LSPA and NH FGD for monitoring and treatment in nearshore Refuge habitat, and in Beech Brook. To the extent possible, we will physically remove invasive species where they are encountered.

In conjunction with the HMP and IMP, we will develop a list of species of greatest concern on the Refuge, identify priority areas in which to be vigilant, and establish monitoring and treatment strategies for invasive species in these areas. The Refuge will accomplish this through coordination with Conte Complex and regional staff, as well as our other partners including LSPA and NH FGD. Refer to the *National Wildlife Refuge System Invasive Species Management Strategy* released in May 2004 (USFWS 2004b) for additional tools, processes, and strategies. The 2004 report is complemented by a technical report issued in May 2005 by the U.S. Geological Survey (USGS) titled: *The Invasive Species Survey: A Report on the Invasion of the National Wildlife Refuge System* (USGS 2005). These reports together give both a status review and a management strategy for combating invasive species. In addition, we will stay abreast of Service policy revisions currently being reworked to facilitate implementation.

Integrated Pest Management

In accordance with 517 DM 1 and 7 RM 14, an integrated pest management approach will be utilized, where practicable, to eradicate, control, or contain pest and invasive species (hereafter collectively referred to as pests) on the Refuge. Biological or mechanical means will be considered first, before chemical means.

IPM will involve using methods based upon effectiveness, cost, and minimal ecological disruption, which considers minimum potential effects to non-target organisms and the Refuge environment. If deemed necessary, pesticide uses with appropriate and practical best management practices (BMPs) for habitat management will be approved for use on the Refuge where there likely would be only minor, temporary, and localized effects to non-target species and environmental quality based upon non-exceedance of threshold values in Chemical Profiles. Pesticides may be used on a refuge where substantial effects to species and the environment are possible (exceed threshold values) in order to protect human health and safety (e.g., mosquito-borne disease).

The Refuge's IPM program is one of the top ten step-down plans from the CCP prioritized by the Refuge. Once written, it will be on file at the Refuge Complex headquarters. It supplements both the CCP and HMP with documentation on how to manage invasive or pest species. Along with a more detailed discussion of IPM techniques, this documentation describes the selective use of pesticides for pest management on the Refuge, where necessary.

We will refine our control program to address the most critical problems first. We may adjust our priorities to reflect regional Service priorities, the availability of new information, or a new resource.

Monitoring and Abating Wildlife and Plant Diseases

The Service has not yet published its manual chapter on Disease Prevention and Control (701 FW 7). In the meantime, we derive guidance on this topic from the Refuge Manual and specific directives from the Director of the Fish and Wildlife Service or the Secretary of the Interior. The Refuge Manual (7 RM 17.3) lists three objectives for the prevention and control of disease.

1. Manage wildlife populations and habitats to minimize the likelihood of the contraction and contagion of disease.
2. Provide for the early detection and identification of disease mortality when it occurs.
3. Minimize the losses of wildlife from outbreaks of disease.

The Service published those objectives in 1982. Since then, in addition to diseases that cause serious mortality among wildlife, diseases transmitted through wildlife to humans have received more attention. One example is Lyme disease. In 2002, the Service published a Service Manual chapter (242 FW 5) on Lyme Disease Prevention to inform employees, volunteers, and national service workers about this disease, its prevention, and treatment.

Other serious wildlife diseases include avian influenza and chronic wasting disease. In addition to the diseases of wildlife, the Service will be attentive to the diseases that affect forest health. Human activities that dramatically alter the landscape, such as development and sprawl, forest fragmentation, new road and utility construction, agriculture, introduction of non-native invasive species, and transport of disease-bearing hosts through the landscaping trade, can weaken and degrade the quality of habitats, particularly of trees and forests. These actions will be coordinated through Conte Complex and regional staff, as well as through local partners including NH FGD, Forest Society, and others.

These are the general strategies for preventing or controlling disease.

1. Continue to conduct disease surveillance in conjunction with any fieldwork.

2. Cooperate with state agencies, particularly the New Hampshire Fish and Game Department, or New Hampshire Division of Forests and Lands, in conducting surveillance, providing access for sampling, and following protocols in the event of an outbreak.
3. Inform volunteers and others who work in the field about the dangers of Lyme disease and measures to avoid contracting it.
4. Work with partners to monitor Refuge forests for indicators of the increased occurrence of pests or disease. For example, note signs of physical damage, decay, weakening, sudden death, particularly of canopy and source trees of major host species, and changes in wildlife use of habitats, such as the absence of breeding birds that used to appear regularly, or changes in flowering or fruiting phenology.
5. Follow the protocols in national, state, and Refuge disease prevention and control plans.

Biological and Ecological Research and Investigations

The Refuge Manual and the Service Manual both contain guidance on conducting and facilitating biological and ecological research and investigations on refuges. In 1982, the Service published three objectives in the Refuge Manual for supporting research on units of the Refuge System (4 RM 6.2):

1. to promote new information and improve the basis for, and quality of, refuge and other Service management decisions;
2. to expand the body of scientific knowledge about fish and wildlife, their habitats, the use of these resources, appropriate resource management, and the environment in general; and,
3. to provide the opportunity for students and others to learn the principles of field research.

In 2006, the Service Manual provided supplemental guidance on the appropriateness of research on refuges: “We actively encourage cooperative natural and cultural research activities that address our management needs. We also encourage research related to the management of priority general public uses. Such research activities are generally appropriate. However, we must review all research activities to decide if they are appropriate or not as defined in section 1.11. Research that directly benefits refuge management has priority over other research.” (603 FW 1.10D (4))

All research conducted on the Refuge must be determined in writing to be both appropriate and compatible, unless we determine it to be an administrative activity. Research projects also must contribute to a need identified by the Refuge or the Service. The Refuge manager also may consider requests that do not relate directly to Refuge objectives, but to the protection or enhancement of native species and biological diversity in the region and that support the goals of recognized ecoregional conservation teams, such as the Atlantic Coast or Eastern Brook Trout Joint Ventures. We will generally approve special use permits that provide a direct benefit to the Refuge, or for research that will strengthen our decisions on managing natural resources on the Refuge.

Protecting Cultural Resources

As a federal land management agency, we are responsible for locating and protecting all historic resources: specifically, archaeological sites and historic structures eligible for listing or listed on the National Register of Historic Places. That applies not only to Refuge land, but also to land affected by Refuge activities, and includes any museum properties. The New Hampshire State Historical Preservation Office (NH SHPO) has indicated a high potential for archaeological sites to be on the Refuge. Considering the proximity to water (Lake Sunapee and Beech Brook), it is likely that prehistoric or historic sites could be discovered on the Refuge in the future.

We will evaluate the potential for impact on archaeological and historical resources as required, and will consult with the NH SHPO in program or project implementation, especially any ground disturbing

activities. These procedures will ensure that we comply with Section 106 of the National Historic Preservation Act. That compliance may require any or all of the following: a State Historic Preservation Records survey, literature survey, or field survey.

Providing a Wildlife-Dependent Recreational Program

The National Wildlife Refuge System Improvement Act of 1997 designated six priority public uses on national wildlife refuges: hunting, fishing, wildlife observation and photography, and environmental education and interpretation. The latter four are available as staffing and funding allows. Fishing will be allowed under this CCP as a new public use. Per the General Guidelines for Wildlife-Dependent Recreation, Fish and Wildlife Service Manual, 605 FW 1, we will strive to meet the following criteria for a quality wildlife-dependent recreation program:

1. promotes safety of participants, other visitors, and facilities;
2. promotes compliance with applicable laws and regulations and responsible behavior;
3. minimizes or eliminates conflict with fish and wildlife population or habitat goals or objectives in an approved plan;
4. minimizes or eliminates conflicts with other compatible wildlife-dependent recreation;
5. minimizes conflicts with neighboring landowners;
6. promotes accessibility and availability to a broad spectrum of the American people;
7. promotes resource stewardship and conservation;
8. promotes public understanding and increases public appreciation of America's natural resources and our role in managing and conserving these resources;
9. conserving these resources;
10. provides reliable/reasonable opportunities to experience wildlife;
11. uses facilities that are accessible to people and blend into the natural setting; and,
12. uses visitor satisfaction to help to define and evaluate programs.

Findings of Appropriateness and Compatibility Determinations

Chapter 1 describes the requirements for determinations of appropriateness and compatibility. Appendix B includes draft appropriateness and compatibility determinations to support the activities in this CCP, including a compatibility determination for fishing. We will allow only the activities determined appropriate and compatible as prescribed in Service policy 603 FW 1 and 2. As noted above, hunting, fishing, wildlife observation and photography, and environmental education and interpretation, when compatible, are the priority general wildlife-dependent uses of the National Wildlife Refuge System. According to Service policy 603 FW 1.3, these six wildlife-dependent recreational uses are determined to be appropriate, and therefore, do not require a separate Finding of Appropriateness. Service Manual 605 FW 1 states that these uses should receive preferential consideration in refuge planning and management before the refuge manager analyzes other recreational opportunities for appropriateness and compatibility.

Activities Not Allowed

We have received requests for non-priority, non-wildlife-dependent activities that we have never allowed on this Refuge. There are also some activities that were allowed when the Refuge included the Hay estate

buildings and grounds, but those determinations have expired. Those activities were determined compatible in 1994, but are now obsolete. The activities evaluated by the Refuge manager and determined not to be appropriate on Refuge lands, are: motorized vehicles of any kind, backpacking (i.e., to carry a pack containing gear and provisions to camp; however, hiking with a day pack is allowed), camping, picnicking (this refers to the traditional sense of the term and is not meant to prohibit people from eating food while engaged in approved activities), biking, jogging, pet dogs, horseback riding, or geocaching. Appendix B provides the appropriateness and compatibility documents that apply to new activities provided with this CCP, and outlines the Refuge manager's decision on the appropriateness of the activities above in accordance with the policy (see Chapter 1). Other ownerships nearby sufficiently provide most of those activities, so the lack of access on the Refuge does not eliminate those opportunities in the Lake Sunapee region. According to Service policy, (603 FW 1), if the Refuge manager determines a use is not appropriate, it can be denied without determining its compatibility.

Developing Refuge Operational Plans (“Step-down plans”)

Service planning policy identifies 25 step-down plans that may be applicable on any given refuge. We have identified the 10 plans below as the most relevant to this planning process, and we have prioritized their completion, if they are not already developed. This CCP presents sections of the Refuge HMP that require public review; we will incorporate them into the final version of the HMP immediately after the approval of the final CCP.

We will also develop an AHWP and IMP as the highest priority step-down plan. We describe them in more detail below. To keep them relevant we will modify and update them as we obtain new information. This CCP schedules the completion of these step-down management plans.

- a HMP, which we will immediately begin working on following CCP approval (see discussion below)
- an AHWP, annually after CCP approval (see discussion below)
- a IMP, within 2 years of CCP approval (see discussion below)
- a Visitor Services Plan, within 3 years of CCP approval
- a Law Enforcement Plan, within 3 years of CCP approval
- a Safety Plan, within 3 years of CCP approval.
- a Fire Plan, within 5 years of CCP approval
- a Facilities and Sign Plan, within 5 years of CCP approval
- an Integrated Pest Management Plan, within 5 years of CCP approval
- a Fish plan, within 2 years of CCP approval

Habitat Management Plan

A HMP for the Refuge is the requisite first step toward achieving the objectives of Goal 1. For example, the HMP will incorporate the habitat objectives developed herein, and will identify “what, which, how, and when” actions and strategies we will implement over the 15-year period to achieve those objectives. Specifically, the HMP will define management areas and treatment units, identify the type or method of treatment, establish the timing for management actions, and define how we will measure success over the next 15 years. In this CCP, the goals, objectives, and list of strategies in each objective identify how we intend to manage habitats on the Refuge. We base both the CCP and HMP on current resource information, published research, and our own field experiences. We will update our methods, timing, and

techniques as new, credible information becomes available. As appropriate, we will incorporate the actions of this CCP into the HMP.

Annual Habitat Work Plan and Inventory and Monitoring Plan

The AHWP and IMP for the Refuge are also priorities for completion upon CCP approval. These plans also are vital for implementing habitat management actions and measuring our success in meeting the objectives. Each year, we will generate from the HMP an AHWP that will outline specific management activities for that year. The IMP will outline the methodology to assess whether our original assumptions and proposed management actions support our habitat and species objectives. We will prioritize our inventory and monitoring needs in the IMP. The results of inventories and monitoring will provide us with more information on the status of our natural resources and allow us to make more informed management decisions.

Conducting a Wilderness Review

The Refuge System planning policy requires that we conduct a wilderness review during the CCP process. The first step is to inventory all refuge lands and waters the Service owns in fee simple. Our inventory of this Refuge determined that no areas meet the eligibility criteria for a wilderness study area as defined by the Wilderness Act. Therefore, we did not analyze further the Refuge's suitability for wilderness designation. See Appendix C for the results of the wilderness review. The Refuge will undergo another wilderness review in 15 years as part of the next comprehensive conservation planning process.

Distributing Refuge Revenue Sharing Payments

As we describe in Chapter 3, we pay the Town of Newbury in New Hampshire annual refuge revenue sharing payments based on the acreage and the appraised value of Refuge lands in their jurisdiction. Those annual payments are calculated by a formula determined by, and with funds appropriated by, Congress. We will continue those payments in accordance with the law, commensurate with changes in the appraised market value of Refuge lands, and new appropriation levels dictated by Congress.

Additional NEPA Analysis

For all major federal actions, NEPA requires the site-specific analysis and disclosure of their impacts, either in an EA or in an EIS. Generally, those include the administrative actions listed in this chapter. Most of the actions proposed in the three alternatives and fully analyzed in the draft CCP and EA were described in enough detail to comply with NEPA, and would not require additional environmental analysis. Although this list is not all-inclusive, the following projects do not require additional NEPA analysis:

- the HMP, including its forest and meadow management programs;
- the IMP;
- addition of a trailhead kiosk or other educational trail improvements for visitor services;
- relocation of, or installation of a footbridge(s) on, the Ecology Trail that crosses and follows Beech Brook;
- addition of a small parking area on the Woods Road at the southeast corner of the Refuge;
- installation of a primitive foot trail from the above parking site to Lake Sunapee for fishing;
- addition of a primitive foot trail section to allow visitors to complete the Ecology Trail without entering onto The Fells property;
- addition of a primitive foot trail section to allow visitors to visit the fen;
- expanding or reducing priority public use programs;

- controlling invasive plants.

Refuge Goals, Objectives and Strategies

This CCP includes an array of management actions that, in our professional judgment, work best towards achieving the Refuge's purpose, vision, and goals, and will make an important contribution to conserving Federal trust resources of concern in northern New England forests, and maintaining the cultural heritage of the area. These goals, objectives and strategies most effectively address the key issues identified in Chapter 2. We believe it is reasonable, feasible, and practicable within the 15-year timeframe.

This management strategy builds upon the strong foundation of the conservation partnerships in the area and the conserved forest landscape to provide coordinated ecological and recreational management on the Refuge and describes a slightly more active forest management and visitor services component than current management over the next 15 years, as our levels of funding and staffing permit. We will continue our adaptive management approach of modifying actions based on new information with a constant effort to collect more and better data upon which to make management decisions. Chapter 3 presents the types of Refuge habitat, in Table 3.5 and Map 3-2.

Habitat Management

We will incorporate the principles of adaptive management, and specifically Strategic Habitat Conservation where possible, as habitat management is the primary tool in attaining population objectives under this framework. We will monitor the Refuge forest for change on a 10 to 15 year basis, conducting updated inventories and surveys, and use the principles of adaptive management to determine management actions, if any, at that time. We will incorporate a landscape-level approach in making management decisions to evaluate how the Refuge can complement landscape habitat diversity in compliance with the recommendations of regional conservation plans. Management actions will include relocating the Ecology Trail away from Beech Brook and/or installing a footbridge(s) at the stream crossing(s) to minimize negative ecological and water quality impacts. This will also address the safety issues associated with the current stream crossing, as it requires stepping across slippery rocks. We will also evaluate the need to mitigate impacts from human disturbances on the shoreline from near-shore rafting and unauthorized boat landings on the Refuge. We will continue to work with our partners to monitor forest health, water quality, visitor impacts and safety.



Barry Parrish/USFWS

Beech Brook stream crossing

The meadow acreage will be increased in size to total approximately 3.0 (+/-) acres, by either expanding the existing meadow or creating a new one, if a review of historical documents, maps, and the recent habitat inventory indicate that meadow habitat can be increased without impacting the mature forest component of the Refuge. Historical land uses on the Refuge resulted in open grassy habitat due to farming and pasturing, and this effort will seek to recreate some of that habitat available to species dependent upon open lands. We will continue to mow and mechanically maintain the newly expanded meadow to accomplish the desired habitat condition.

Inventories and Monitoring

The Service will initiate monitoring and inventory efforts through existing Service programs and partnerships such as NH FGD, NH Audubon, LSPA, The Fells, and other organizations and volunteers to

provide key information on federal trust resources commensurate with the necessary resources to accomplish them. We will target any alterations or additions to these ongoing surveys toward helping us better understand the implications of our management actions and ways to improve our efficiency and effectiveness. We will likely use habitat monitoring as a surrogate for evaluating the effects of our management on priority wildlife species. It is not feasible, considering the Refuge size, staffing and funding available for the Refuge, to monitor migratory bird populations on this 80-acre Refuge in a statistically reliable way. We will also continue to seek ways to reduce our management costs for establishing and maintaining forest and grasslands.

Visitor Services

We will expand existing opportunities for the four priority public uses already allowed, and establish a limited fishing program on the Refuge. This was evaluated simultaneously with the CCP/EA through compatibility and appropriateness assessments (Appendix B).

A seasonal visitor services specialist will be stationed at the Refuge during the summer, pending sufficient funds, allowing us to expand our visitor services program. This will include designing Refuge brochures, conducting interpretive programs, providing on-site presence to help monitor public use, and continuing to work with our partners to provide quality visitor experiences. Stand-alone signs interpreting wildlife and habitats, along with signs about the Service, National Wildlife Refuge System, the Connecticut River Watershed, and other relevant themes will be installed along the trail and/or the new trailhead kiosk. Once The Fells has moved their parking lot to its new and final location, we will establish a trailhead for the Ecology Trail and build a Refuge informational kiosk there (Map 4-2).

The section(s) of the Refuge trail that crosses and parallels Beech Brook will be relocated and/or replaced by a footbridge(s) to protect the stream channel and banks and improve visitor safety. Two additions to the Ecology Trail and a new trail for anglers will be installed. All three will be primitive, native surface trails similar to the existing Ecology Trail. These additions will include adding a spur trail from the Ecology Trail to the nearest fen and back to provide additional opportunities for interpretation and wildlife observation and photography. The second addition will loop the Ecology Trail back to the trailhead on Refuge property for visitors not wishing to enter The Fells property. The angler trail will provide access to the Lake Sunapee shoreline from the new angler parking site on the southern end of the Woods Road. This parking area will serve as the point of entry for anglers, will have informational signage, and will be limited to a small number of cars. The Refuge gate will be moved if necessary from its present location to accommodate a few cars, but will continue to prevent the use of motorized vehicles on the Refuge. Boundary signs will be posted on the Refuge shoreline.

In expanding opportunities for compatible outdoor recreational opportunities, we will strive to contribute to communities around the Refuge, both in terms of health and well-being, and economically. By offering places and programs where children and their parents can observe wildlife in natural settings, and actively participate through opportunities such as fishing, we will contribute to the growing national initiative to reconnect children with nature. Research has also shown that by offering places where visitors can enjoy watching birds and other wildlife, local economies benefit (http://training.fws.gov/library/Refuges/EconBen_refuges97.pdf). Benefits come in the form of increased sales by local businesses for food, lodging, fuel, and supplies and from associated tax revenues.

Refuge Administration

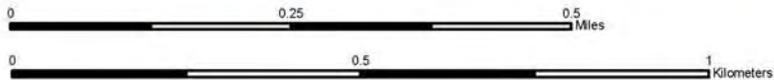
We intend to achieve a level of staffing that reflects the size of the Refuge and public use levels by adding a seasonal staff position as described in RONS (Appendix D). This seasonal visitor services specialist will be hired during the summer months (approximately Memorial Day to Labor Day) to better achieve Refuge goals for improving visitor experience and expanding public use programs. The Service will work with The Fells to locate this position in the gatehouse, to minimize costs and enhance collaboration. We will work



John Hay National Wildlife Refuge - Comprehensive Conservation Plan Public Use



Sources:
Refuge roads, trails and
boundaries from USFWS.
Public roads from NH DOT
Basemap 2003 NAIP imagery



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with them to enhance Service visibility through signs and brochures to create awareness of Service presence and to interpret ecological and cultural aspects of the property at the contact point as appropriate and as resources allow. This staff person could provide coordination among the Conte Complex and regional Service program staff and partners for any new surveys, inventories, research, and monitoring efforts for priority resources that are initiated.

The MOU with The Fells will need to be updated with a new partnership agreement to reflect our collaborative partnership and similar goals for natural resource stewardship. This includes the use of The Fells parking lot, which is currently located on the north side of the gatehouse. This agreement will still apply if The Fells completes their plan to move this parking lot to the south side of the gatehouse to accommodate a larger number of cars. Maintenance on the Refuge will include maintaining boundary and regulatory signs, posting interpretive signs as necessary, and maintaining the Ecology Trail and proposed trail additions. Refuge law enforcement presence will be scheduled on an as-needed basis.

We will base any increases in staffing on available, permanent sources of funding, and will consider them in the context of regional and Refuge Complex priorities.

In the discussion that follows, we describe in detail the goals, objectives, and strategies that we will implement under this CCP.

Goal 1. Contribute to the biological diversity and integrity of the Atlantic northern forest in the larger context of the Lake Sunapee region and Connecticut River watershed by protecting, enhancing, and restoring the Refuge's habitats, with an emphasis on breeding, migrating, and wintering birds.

Objective 1.1 Forest Habitat

Over the next 15 years, allow natural processes (e.g., mortality, blow downs) to continue to shape the approximately 76 acres, assuming expansion of the existing meadow, of upland forest that may encourage natural regeneration and diversification of forest structure. This will benefit migratory and nesting birds of conservation concern in BCR 14 and NH WAP including, but not limited to, the Canada warbler and wood thrush. Any meadow expansion will not be at the expense of mature forest habitat.

Rationale

Transition hardwood-conifer forests, including the Refuge forest, are regionally common but important because they host a high proportion of the total population of many avian species of priority conservation concern. They mark the transition between central hardwood species to the south, and boreal forests to the north, and offer diverse species assemblages based on elevation, soil, and topographical characteristics. The Refuge forest is part of the Hemlock-Hardwood-Pine matrix forest as described by the NH WAP, and it is the most widely distributed forest type in the state of New Hampshire covering almost 50 percent of the state's land area (NH FGD 2005). Despite its abundance, it is listed as one of the state's most at-risk habitat types because of the threat of human development, and introduced species. The suppression of natural disturbance regimes, such as fire, has resulted in a forest dominated by older age classes (NH FGD 2005), and a loss of diversity in species composition and successional stages.

This lack of diversity in forest age and composition is cited by regional bird conservation plans, such as BCR 14 and PIF 27, to be a factor in the population declines of some high priority bird species. For example, the wood thrush, with 9.1 percent of its breeding population in BCR 14, has shown a steady decline of 2.49 percent per year between 1966 and 1999, and the Canada warbler, with 14 percent of its breeding population in BCR 14, has shown a decrease of 2.46 percent per year during the same time period (Dettmers [updated 2006]). Both of these species breed on the Refuge along with many other migratory species of regional conservation concern such as veery, yellow-bellied sapsucker, eastern wood-pewee, American redstart, and

purple finch. The recently published *The State of New Hampshire Birds* (Hunt 2009) also documented declines in Canada warbler and wood thrush populations.

The Canada warbler breeds in a range of habitat types including deciduous forested swamps, cool, moist, mature forest or streams and swamps with dense undergrowth, streamside thickets, and cedar bogs (Conway 1999). Although shrub-scrub is an important habitat component over some of its range, it may be of lesser importance in the Northeast. It nests on or near the ground, generally near water. Suitable habitat often has a layer of moss and an uneven forest floor; however, they may be less common in shrub wetlands (Conway 1999). On the White Mountain National Forest in New Hampshire and Maine they occur in northern hardwoods with a softwood understory (DeGraaf and Yamasaki 2001). In central Maine, Collins (1983) found the Canada warbler in forests with a high percent shrub cover (70%), moderate canopy cover (64%), and minor component of conifers in the canopy. Hagan and Grove (1999) suggest the species is likely adapted to natural tree fall gaps, hence their positive response to forest management that creates dense deciduous understory with some overstory remaining. The wood thrush prefers mature, moist, closed-canopy forest with a shrub-subcanopy understory, moist soil, and leaf litter (DeGraaf and Yamasaki 2001).



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Canada warbler

Overall conservation goals in BCR 14 are to increase the populations of both of these species by 50 percent. Habitat objectives for the BCR are a total of 29,417 hectares (approximately 72,660 acres) for Canada warbler at a density of 5.6 hectares (13.8 acres) per pair, and 502,273 hectares (1,240,614 acres) for wood thrush at a density of 5.0 hectares (12.4 acres) per pair (Dettmers [updated 2006]). For the wood thrush, population objectives under PIF 27 focus on stabilizing the current declining population trend at a minimum, and maintaining 250,000 breeding pairs (Hodgman and Rosenberg 2000). For the Canada warbler, overall PIF 27 population objectives are to maintain 20,000 breeding pairs (one to two birds per breeding bird survey (BBS) route; Hodgman and Rosenberg 2000). Differences in the population estimates for the same species between these two regional conservation plans are due in large part to the differences in land area included in each ecoregion. Both plans use BBS survey data and provide rough approximations of population size.

PIF has also provided state-level population objectives for birds of conservation concern in relevant physiographic areas. For New Hampshire, recommended objectives are to increase the state wood thrush population from an estimated 160,000 individuals to 240,000 individuals (Rosenberg 2004). For the Canada

warbler, Rosenberg (2004) recommends increasing the state population from an estimated 7,100 individuals to 11,000 individuals.

Limitations in Refuge resources and staff availability result in a lack of surveys and monitoring to adequately assess Refuge bird population densities and trend data, and this will likely remain unchanged. However, the Service has the responsibility for protecting migratory birds under international migratory bird treaties with Mexico and Canada, and to uphold the establishing purpose of the Refuge as a wildlife and migratory bird reservation. In fulfilling these mandates, the Refuge will strive to provide quality, mature forest habitat and to consider the needs of birds of conservation concern on a sub-regional or statewide scale according to the NH WAP, BCR 14, and PIF 27 conservation plans.

Furthermore, due to the fact that many northern hardwood forest-dependent species, including Canada warbler, respond positively to silvicultural practices, we open up the possibility to conduct more active forest management as needs arise and as staff availability and resources allow. By continuously evaluating the forest on a 10 to 15 year basis, and using the principles of adaptive management, we will be able to determine forest management priorities and actions to potentially promote suitable habitat for these and other species of conservation concern. This recurring forest inventory will also serve the dual purpose of creating baseline data and subsequent monitoring for potential changes due to climate change (e.g., cumulative factors including forest species composition, forest health, and exotic invasive species). Due to the size of the Refuge, it may be most effective to take a landscape level approach and tailor our forest management to habitat conditions in the region. We will continue to work with our partners, including Forest Society and state agencies (including NH FGD), to identify regional needs and appropriate management actions.

In addition to its regional importance, the current character of the Refuge forest is locally unique. Though predominately a result of old field regeneration, the forest is a mix of age classes and structural complexity that provide a diversity of wildlife habitat. Large, legacy white pines found on the southern end of the property are remnants of second-growth forests that germinated during the post-farm abandonment era in the mid-1800's. The hurricane of 1938 had a profound impact on New England, and locally reset forest stands that are now approximately 70 years old. Regeneration following other natural mortality events such as blow downs due to heavy winds and ice storms, and insects and disease has created within-stand age diversity. These features in combination with the location of the Refuge on the lake highlight its cultural and biological importance and we will continue to take this into consideration as a part of any forest management activities. Should a disturbance event such as a windstorm or wildfire reset a portion or all of the mature forest, the Refuge will likely allow habitat to recover through natural succession. We will, however, continue to work with our partners to monitor forest health and to determine appropriate responses to ice storms, heavy winds and other natural events that may alter the forest character.

There is an existing viewing corridor that runs slightly southeast from the Hay's main house, through the Refuge, to the lake. As a result of the land exchange, The Fells now have an easement that allows them to maintain it over time as a cultural resource. From a habitat standpoint this corridor functions as early successional forest habitat, important for species such as chestnut-sided warblers. We will work with The Fells to identify a treatment schedule that meets their needs while contributing beneficial diversity on the Refuge.

Strategies

Continue to:

- Eliminate trees that present safety hazards as needed where brought to the attention of the Service. These will be trees that have fallen or are leaning over the trail or other key visitor use areas to maintain safety and access. Hazard trees will be dropped and left in place to serve as

coarse woody debris used as foraging sites and cover by wildlife, and to replenish soil nutrients. On other areas of the Refuge, dead or dying trees will be left as part of the natural landscape.

- Respond to natural events that change forest structure, such as ice storm and wind damage to address safety and viewshed concerns (e.g., if a big windstorm left broken and toppled trees throughout sections of the Refuge forest, we will consider initiating salvage operations to clean up some of the debris, depending on the extent and severity of damage).
- Treat for disease and insect outbreaks as needed by working with state and local partners to prevent excessive losses on the Refuge or from affecting adjacent lands.

Within 1 year of CCP approval:

- Complete and implement an HMP.

Within 5 years of CCP approval:

- Work with The Fells to develop a treatment schedule for the viewing easement within the new partnership agreement that incorporates both scenic and wildlife habitat objectives.
- Develop rapid response protocols with partners to quickly detect and address invasive plant species, disease and insect outbreaks, and blow down events due to wind, ice and other natural occurrences.

Within 15 years of CCP approval:

- Initiate forest inventories on a 10- to 15-year recurring basis that will serve the dual purpose of establishing baseline information as well as a systematic method to detect potential impacts associated with climate change over time.
- Collaborate with partners including NH Audubon and NH FGD to conduct bird species inventories every 10 to 15 years to monitor species presence over time.
- Ensure that Refuge habitat complements the larger landscape composition and structure for priority species.

Accountability Measures

- Forest acreage by stand composition and structure, based on the forest inventory from 2008.
- Number of acres impacted by natural processes and the resultant compositional and structural changes.

Objective 1.2 Meadow Habitat

Within five years, if suitable sites are located, expand the current meadow up to a total of 3.0 (+/-) acres, depending on habitat and historical factors, to support species of conservation concern. This will include American woodcock and other migratory and breeding species dependent upon meadow for habitat. Suitable sites will have site conditions suitable for meadow establishment and be generally devoid of large trees. Any meadow expansion will not be at the expense of mature forest habitat.

Rationale

Historically, fields and other open lands were maintained through natural processes such as fire, extreme weather events, herbivory, and beaver activity (NH FGD 2005). Native Americans created and maintained localized grassy areas through the regular use of fire, and early European settlers created openings through timber and firewood harvesting, agriculture, and controlled burning (see Chapter 3). By the mid-

1800's, there were 2,248,659 acres of grassland throughout New Hampshire. Today, after the abandonment of farms, the suppression of natural events including fire, and the reversion of much of the land back to forest, there are approximately 252,047 acres of grassland in the state, and much of that is too intensively worked to be suitable for wildlife (NH FGD 2005).

Meadows are important to a number of species for breeding and foraging. In New Hampshire, these include reptile species such as the wood turtle and black racer (*Coluber c. constrictor*), a host of invertebrate species, and avian species including the American woodcock. A complete species inventory is needed for the Refuge, but American woodcock do use the existing meadow and have been documented on the Refuge during the breeding season.

Listed as a priority species of conservation concern in both BCR 14 and PIF 27, and as SGCN in New Hampshire, the American woodcock is facing declines range-wide due to habitat loss and degradation. Woodcock require several different habitat conditions that must be in close proximity to one another. These include clearings for their well-known courtship displays to attract females (singing grounds), large openings for night roosting, young second growth hardwoods (15 to 30 years) for nesting and brood-rearing and functional foraging areas (Sepik et al. 1981; Keppie and Whiting 1994). Research has shown that the quality of woodcock singing grounds is tied to the proximity of openings to forested habitats with a high density of understory vegetation that provides adequate cover for nesting and brood-rearing (Kelley et al. (eds) 2008). Functional foraging habitat for woodcock occurs on moist, rich soil dominated by dense shrub cover (75-90%); alder is ideal, although young aspen and birch are also suitable as feeding areas and daytime (diurnal) cover. Open meadow and early successional forest are two habitat types that are declining in New England.

Singing ground surveys for American woodcock have taken place throughout their range annually since the early 1970's. Over that period of time, these surveys have shown a steady decline of 1.9 percent per year in the eastern portion of their range. In addition, the national Wing-collection Survey, a collection of woodcock wings submitted by hunters that provides a ratio of immature birds per adult female in the harvest, has shown that recruitment is declining as well (Kelley et al. (eds) 2008).

In New Hampshire, American woodcock are distributed throughout the state, with the highest concentrations found in the west-central and southeast regions. Singing ground surveys (SGSs) have shown American woodcock numbers to be stable statewide (NH FGD 2005), however, BBS data show a regional decline of 6.37 percent per year (Dettmers [updated 2006]). The current estimate of singing male woodcock is approximately 13,255 in New Hampshire (Kelley et al. (eds) 2008).

According to the American Woodcock Conservation Plan (Kelley et al. (eds) 2008), overall conservation objectives for woodcock are to: (1) halt woodcock population declines by 2012 as measured by SGSs; (2) achieve positive population growth by 2022 as measured by SGSs; (3) halt decline of early succession habitat by 2012 as measured by the Forest Inventory Analysis system (FIA); and, (4) increase early succession habitat by 2022 as measured by the FIA. Many of the regional conservation plans advocate maintaining representative tracts of different forest habitat types throughout the landscape, providing a mosaic of available habitat for a number of different species requirements (Dettmers [updated 2006], Hodgman and Rosenberg 2000). In addition, the American Woodcock Conservation Plan (Kelley et al. (eds) 2008) advocates a mix of early successional habitat types that will provide adequate resources for the various requirements of this species. They estimated the amount of habitat needed in BCR 14 to re-establish former woodcock densities, and in New Hampshire, this totals approximately 269,000 acres (Kelley et al. (eds) 2008).

The location and history of the Refuge reflect land use changes throughout northern New England. Once cleared for farmland, it has slowly reverted back to forest, and today is primarily a mix of mature upland hardwood, white pine, and hemlock (*Tsuga canadensis*) species. Only 1.4 acres of meadow remains on the

Refuge. We will evaluate the Refuge in terms of historic levels of fields and other open land and potential effects to the existing mature forest habitat to determine whether we will increase the existing meadow acreage to benefit breeding woodcock on the Refuge, and other species that require meadow habitat. Our intent will be to avoid deleteriously impacting the mature forest component of the Refuge in creating this meadow. In addition, using our recently completed forest habitat inventory as a baseline, and evaluating the forest on a 10- to 15-year recurring basis, it may be possible to incorporate woodcock habitat recommendations as needed for nesting and brood rearing habitat in proximity to the existing or potentially expanded meadow. We will also work with our conservation partners to take a landscape level approach to early succession habitat management and evaluate conservation needs in a larger context.

Strategies

Continue to:

- Use mechanical treatments (e.g., mowing) once every two years after September 15th or as conditions warrant to retain a primarily herbaceous composition.

Within 5 years of CCP approval:

- Identify partnership opportunities to mow the field.
- Review historical records, maps, stone walls, and habitat inventory, and, as appropriate, consult with the Service's Regional Archaeologist and/or New Hampshire SHPO, to help determine whether there is an appropriate place to expand meadow acreage on the Refuge.

Within 15 years of CCP approval:

- Collaborate with partners including NH Audubon and NH FGD to conduct bird species inventories every 10 to 15 years to monitor species presence over time.

Accountability Measures

- Number of meadow acres.
- Frequency of treatments.

Objective 1.3. Wetlands Habitat

Over the next 15 years, protect and monitor Refuge wetlands for the benefit of amphibians and reptiles by completing at least one vernal pool species breeding survey within the next 15 years. In addition, continue to allow natural processes to influence fens, vernal pools, and other wetland habitats on the Refuge that may provide important breeding and foraging habitat for amphibians and reptiles of conservation concern identified in the NH Wildlife Action Plan, NE PARC, and other regional plans, such as spotted salamander.

Rationale

Wetland habitat on the Refuge includes two fens that total approximately one acre, and at least one vernal pool. These wetland communities are small, but no less important to many plants and animals of conservation concern. Vernal pools were categorized as one of the most at-risk habitat types in New Hampshire (NH FGD 2005). Though found statewide, they have no regulatory protection, are not well documented, and are therefore often overlooked during development projects. Oftentimes they are filled in or otherwise lost.

Vernal pools play a vital role in the life cycles of certain, sometimes rare, species. They are slight depressions in the ground that hold water for a period of time in the spring and summer before eventually drying out. A suite of species must lay their eggs in these ephemeral pools of water. The eventual drying of these pools during the growing season prevents predatory fish from becoming established. Vernal pool-obligate species include the spotted salamander, blue-spotted salamander, wood frog, and fairy shrimp. Other species, including Blanding's (*Emydoidea blandingii*) and spotted turtles (*Clemmys guttata*), use vernal pools for foraging and as staging areas for migration (NH FGD 2005).

The Refuge lacks adequate data to say with certainty the number of vernal pools on the Refuge, or what species they support. The one vernal pool documented thus far gave some indication that it may have been a result of human modification of the landscape (LaPointe 2008). More information on the hydroperiod and the presence of vernal pool-obligate species is needed to see what ecological role it serves on the Refuge. In addition, a more complete inventory of vernal pools throughout the Refuge needs to be conducted, though the soil types and topography indicate there may not be many more (LaPointe 2008).

In carrying out this objective, we will try to fill these knowledge gaps by conducting a thorough inventory of vernal pools on the Refuge, and georeferencing the location of any found. We will conduct at least one breeding species survey to evaluate the quality of the vernal pool(s) by the species utilizing them. We will work with the NH FGD to comply with state survey and reporting standards.

Fens, a type of peatland, are perennial wetland systems with a limited supply of ground and surface water that slowly decay organic matter over time resulting in a buildup of peat. They are similar to bogs in that they help to improve water quality, prevent flooding, and play a role in nitrogen and carbon cycling, but are generally less acidic, and support a more diverse animal and plant community because they have higher nutrient levels.

Often characterized by sedges, grasses, and wildflowers, they can support rare plant and animal species specifically adapted to the nutrient levels and pH conditions. According to the New Hampshire Natural Heritage Bureau (2010), there is one record of the state-threatened Loesel's twayblade, or fen orchid, associated with the John Hay NWR, and this species could very well be found in these habitats. A more thorough inventory needs to be conducted of these fens. Peatlands can be very diverse, and New Hampshire marks a transitional boundary between southern and northern fen habitat types. More information is needed about the type of fens on the Refuge and any at-risk species they support. As staff availability and resources allow, we will attempt to address these data needs.

Threats to these wetland communities include any activities that could alter the hydrology by changing water flow, or soil moisture holding capacity. In addition, any plant and animal species that depend upon fens for a part of their life cycle require intact surrounding upland habitat to protect the integrity of the wetlands, and for certain herpetofauna, to aid in dispersal. These factors will be taken into consideration for any forest management activities or meadow enhancements proposed on the Refuge. More information is needed regarding the impacts of road run-off, if any, given the distance between the wetlands and Route 103A.

Strategies

Continue to:

- Monitor to ensure that management activities including trail relocation do not adversely impact the fens.

Within 3 years of CCP approval:

- Inventory and georeference vernal pools on the Refuge, before any trail enhancement or habitat management is implemented.

Within 5 years of CCP approval:

- Coordinate with NH FGD for survey protocols and data submission to the NH FGD vernal pool database, and Reptile and Amphibian Reporting Program.

Within 10 years of CCP approval:

- Record the presence/absence of vernal pool-obligate species according to acceptable survey protocols.

Accountability Measures

- Number of vernal pool surveys.
- Number of vernal pools and fens on the Refuge.
- Number of species associated with vernal pools and fens.
- Total acreage of wetland habitats on the Refuge.

Objective 1.4 Riparian and In-stream Habitat

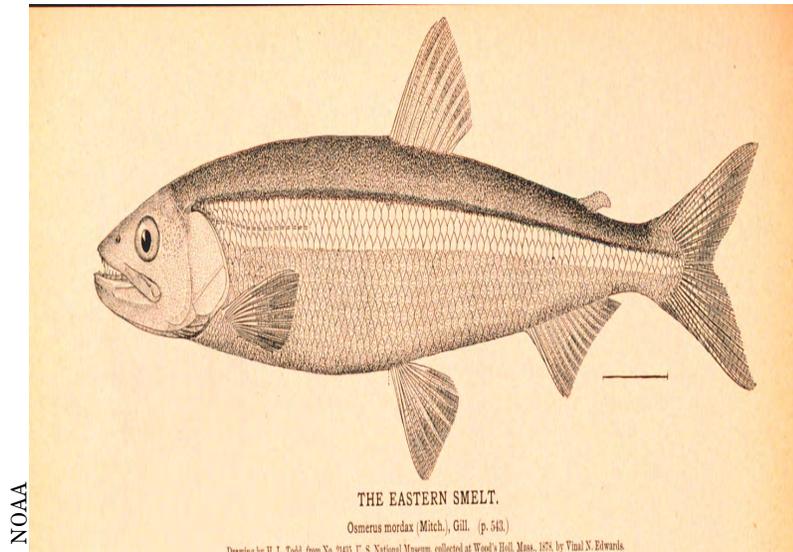
Within 5 years, evaluate the quality of the in-stream habitat and riparian corridor along approximately 1,750 feet of Beech Brook for species identified as conservation priorities, including eastern brook trout, by the Brook Trout Joint Venture and NH WAP plans.

Rationale

Originating on Sunset Hill, Beech Brook flows entirely through conserved forest land until it discharges into Lake Sunapee from the Refuge, and is therefore subject to minimal human impact. Route 103A, acting as the boundary between Forest Society property and the Refuge, crosses over the brook and poses a threat to it through run-off and sedimentation. Stormwater runoff poses a risk to the entire lake as phosphorus levels continue to increase at nearshore and tributary monitoring stations (SAWC 2008). As one of the tributaries to Lake Sunapee, LSPA has monitored Beech Brook, upstream from the Refuge, as part of its Volunteer Lake Assessment Program (VLAP) program for 18 years, and it consistently has one of the lowest levels of phosphorus and conductivity on the lake, two measures of human impacts. In addition, due to its high water quality, it has been used as the biological control for the lake (J. Fichter, pers. comm.). In addition, Beech Brook is reported to serve as an important migratory corridor for wildlife including black bear (*Ursus americanus*), mink (*Mustela vison*), otter (*Lutra canadensis*), and fisher (*Martes pennanti*; D. Anderson, pers. comm.).

The water quality of Beech Brook is exemplary in a region heavily influenced by human factors, and it has habitat characteristics that could support a native brook trout population. This trout is listed as SGCN by the state, and is also a species of regional conservation concern due to regional declines and local extirpations throughout its native range. According to the Eastern Brook Trout Joint Venture, most of New Hampshire has only qualitative data, but the state is one of a few with intact, self-sustaining wild brook trout populations (Trout Unlimited 2006). Though Beech Brook has not yet been surveyed by the NH FGD, anecdotal information does indicate the presence of brook trout in Beech Brook (D. Anderson, pers. comm.). Other tributaries to Lake Sunapee have been found to contain self-sustaining brook trout populations in

surveys conducted by the NH FGD (C. Bridges, pers. comm.). Whether or not this can definitively be said for Beech Brook needs to be determined before any further actions can be determined, and this will be accomplished through stream surveys in cooperation with our partners in the NH FGD.



Rainbow smelt

Rainbow smelt is another species associated with Beech Brook. An important forage base for many species, including land-locked salmon and lake trout, rainbow smelt are listed as SGCN in New Hampshire (NH FGD 2005). They are present in Lake Sunapee, and use the mouth of Beech Brook as a spawning area.

It is evident that the good water quality of Beech Brook provides excellent fish habitat on the Refuge and aids in understanding human impacts on the lake. We will strive to maintain these qualities under any management action. We will continue to rely on LSPA to monitor Beech Brook as

part of their VLAP program, in particular for impacts due to acid deposition and increases in phosphorus from stormwater runoff. This continued water quality monitoring in addition to a stream survey will also serve the dual purpose of creating baseline data and subsequent monitoring for potential changes due to climate change or other anthropogenic-induced impacts (e.g., cumulative factors including species composition, water temperature, presence and levels of biological and chemical parameters, as well as exotic invasive species). Any forest management actions required to maintain forest health or public safety will follow best management practices to minimize impacts on the water quality of Beech Brook.

Strategies

Continue to:

- Continue to rely on LSPA to monitor Beech Brook and collect water quality data.

Within 1 year of CCP approval:

- Post the area around the mouth of Beech Brook with Refuge boundary signs.

Within 5 years of CCP approval:

- Relocate the Refuge's nature trail away from sensitive riparian areas and/or replace existing crossings with a footbridge(s) if it is found to negatively affect stream health or pose a safety threat to visitors.
- Assess the impacts of rafting, and other public use on the biological health and integrity of Beech Brook and manage to mitigate those impacts.
- Work with partners to assess the impacts of winter road treatments on the biological health and integrity of Beech Brook and mitigate any negative impacts.

Within 10 years of CCP approval:

- Partner with NH FGD to:
 - Conduct a baseline survey of in-stream habitats and fish;
 - Assess brook trout population structure;
 - Identify key habitats for brook trout.

Accountability Measures

- Brook trout population structure.
- Fish species richness of Beech Brook.
- Quality of brook trout habitat.
- Measurements of water quality.

Objective 1.5 Shoreline/Minute Island

Continue to protect the 3,100 feet of undeveloped Refuge shoreline and 0.1 acres of Minute Island by preventing public use activities that may pose threats to the biological integrity of these habitats.

Rationale

The Refuge and The Fells combined, own approximately three quarters of a mile of contiguous, undeveloped, relatively undisturbed shoreline on Lake Sunapee, and the Refuge owns Minute Island as well, just offshore. Nearing its northernmost distribution, a stand of black gum (*Nyssa sylvatica*) exists along the shoreline. These are uniquely natural features on the heavily residential and recreational lake, providing an aesthetic quality to the Refuge that enhances visitor experience. This undeveloped lakefront will have increasing importance as the area continues to grow in population and the housing and other infrastructure to support it.

The natural features of the town, including Lake Sunapee, will continue to draw both year-round and summer residents as well as day-use visitors. Newbury has already seen some impressive population growth, increasing from 509 year-round residents in 1970 to 1,702 in 2000, at a rate of 4.1 percent annually (Newbury Planning Board 2007). This is in comparison to a growth rate of 1.8 percent in Merrimack County and 1.7 percent in the state during the same time period. In addition, the 2000 summer population was estimated around 4,000 people. As the number of visitors and associated lake-use increases, so will impacts to the lake and shoreline.



Barry Parrish/USFWS

Minute Island

The undeveloped shoreline habitat provides a benefit to a wide array of species. The mouth of Beech Brook serves as a congregation area for spawning rainbow smelt, and waterfowl and wading birds use the habitat for cover and forage. More information is needed to assess habitat condition along the shoreline and we will make that a priority. With this baseline data, we will be able to evaluate any negative impacts from the practice of rafting watercraft offshore and associated increases in shoreline use, or from unauthorized boat landings. Any restoration needs will be determined as well. In addition, baseline data and subsequent monitoring of the shoreline could provide valuable data to

assessing impacts associated with climate change over time. We will continue to post boundary signs along the shoreline and work with our local conservation partners and NH Marine Patrol to monitor shoreline use.

Strategies

Continue to:

- Maintain Refuge boundary signs to prohibit boat landing on the Refuge shoreline or Minute Island.
- Deploy law enforcement officers to patrol the Refuge on select high-use days.
- Work with NH Marine Patrol to patrol the Refuge shoreline.

Within 1 year of CCP approval:

- Install boundary signs along the Refuge shoreline and Minute Island to facilitate enforcement actions on prohibited activities such as rafting, beaching of boats, and public access from the lake to minimize adverse impacts to the undeveloped shoreline and nearshore habitats.

Within 3 years of CCP approval:

- Hire a seasonal Visitor Services Specialist who will help monitor for shoreline policy compliance and shoreline condition from approximately Memorial Day to Labor Day.
- Increase awareness of Refuge boat landing policies by conducting outreach with town and local marinas by posting flyers.
- Assess baseline shore condition and evaluate the need for restoration.

Within 5 years of CCP approval:

- Evaluate the impacts, if any, of rafting/beaching water craft on the Refuge.

Accountability Measures

- Feet of disturbed shoreline and the underlying cause.
- Number of days law enforcement officers deployed to Refuge.
- Number of incidents reported.
- Number of signs posted or maintained.

Goal 2. Promote natural resource conservation, stewardship, the mission of the National Wildlife Refuge System and enjoyment of the John Hay Refuge by providing high-quality, compatible, wildlife-dependent public use opportunities on Refuge lands and neighboring conserved lands and waters.

Objective 2.1 Hunting

Maintain a year-round no-hunting policy on the Refuge over the next 15 years.

Rationale

The Improvement Act identifies hunting as a priority wildlife-dependent recreation and locally it is an established traditional resource use. Furthermore, hunting promotes public understanding and

appreciation of natural resources and their management on all lands and waters in the Refuge System. The John Hay Refuge is a relatively recent addition to the Silvio O. Conte NFWR Complex, having been previously managed under the Great Bay NWR Complex, and the Eastern Massachusetts NWR Complex. Current staffing and funding levels at the Conte Complex have thus far prevented our ability to assess if it is feasible to provide, monitor, or enforce quality hunting opportunities on the Refuge. Historically, hunting has not been allowed on the Refuge, and the addition of a general hunting program has the potential to lead to user conflicts due to the small size of the Refuge and the interconnected trail system between The Fells and the Refuge, if not appropriately managed. This trail system loops through roughly half of the Refuge and is used by both visitors to The Fells, as well as Refuge hikers. Hunting is allowed on Forest Society property across Route 103A, therefore there is adequate opportunity to enjoy this recreation in the local area. Under this CCP, we will continue to maintain our no-hunting policy.

Strategies

Continue to:

- Work with partners to monitor and enforce a no-hunting policy on Refuge property.
- Assign notifications of violation to a Refuge Law Enforcement Officer.

Within 3 years of CCP approval:

- Work closely with partners to make Refuge visitors aware that hunting is allowed on Forest Society property and other areas in the region.

Accountability Measures

- Reports of illegal hunting.

Objective 2.2 Recreational Fishing

Within two years of CCP approval, open the Refuge to sport fishing.

Rationale

The Improvement Act identifies fishing as priority wildlife-dependent public use. The act states, “compatible wildlife-dependent recreation is a legitimate and appropriate general public use of the System.” Fishing promotes public understanding and appreciation of natural resources and their management on all lands and waters in the Refuge System. The recent addition of the John Hay Refuge to the Silvio O. Conte NFWR Complex, and our current staffing and funding levels have precluded our ability to consider the feasibility of fishing on the Refuge. We have utilized this CCP/EA as our opportunity to assess the feasibility of fishing on the Refuge (see Appendix B for the compatibility determination), and believe that with the cooperation of partners, including the NH FGD, a limited fishing program will be possible. Fishing at the Refuge will occur along Beech Brook and the Lake Sunapee shoreline.

Angler access will be restricted to the southeast corner where the Woods Road meets Route 103A. They will be allowed to park on a short section of the Woods Road that will accommodate a few vehicles. The placement of the current gate may or may not be adjusted, depending on the space available at present; however, in either case, motorized access to the Refuge will continue to be restricted beyond this parking area. We will work with the Town of Newbury and the New Hampshire Department of Transportation (NH DOT) to ensure that access to and from Route 103A meets highway safety standards. We also will consult with the NH SHPO on prior to any ground disturbing activities. Informational signs regarding fishing on

the Refuge will be posted in this small parking area. A new primitive foot trail will connect this parking area with the Lake Sunapee shoreline. Because of the heavy vegetation along the shoreline, it is anticipated that most fishing will be conducted from the lake waters, and therefore shoreline condition is not expected to be heavily impacted. However, as previously stated, we will monitor shoreline condition and may adjust public access to the shoreline should conditions warrant. Anglers will not be allowed to park in the parking lot adjacent to The Fells gatehouse, and signs will be posted to this effect.



Duane Raver/USFWS

Brook trout

Fishing from the lake will be under the jurisdiction of the state, and all fishing on the Refuge will follow state guidelines. Pursuant to the policies in 605 FW 3, we follow these guiding principles for fishing opportunities at the Refuge.

1. Effectively maintain healthy and diverse fish communities and aquatic ecosystems through the use of scientific management techniques;
2. Promote visitor understanding of, and increase visitor appreciation for, America's natural resources;
3. Provide opportunities for quality recreational and educational experiences consistent with criteria describing quality found in 605 FW 1.6;
4. Encourage participation in this tradition deeply rooted in America's natural heritage and conservation history; and
5. Minimize conflicts with visitors participating in other compatible wildlife-dependent recreational activities.

A limited fishing program of this scale should have little effect on the shoreline condition, as few anglers will be encouraged to park at any given time, a specific access point will be provided, and the heavy vegetation along the shoreline will likely necessitate that angling take place from the waters of Lake Sunapee. In addition, seasonal staff will be stationed on the Refuge and will provide on-site presence and oversight.

Strategies

Continue to:

- Monitor public use impacts to the shoreline and habitats associated with the angler trail once established.

Within 2 years of CCP approval:

- Coordinate with NH FGD, The Fells, local government officials, local conservation organizations, and the public to establish a fishing program.
- Establish a primitive foot trail from the angler parking area to the Lake Sunapee shoreline.
- Convert the southern-most section of the Woods Road into a limited parking area for anglers following consultation with the Town of Newbury, NH DOT, and NH SHPO.
- Install a gate to restrict vehicular access beyond the parking area.
- Install signs at the angler parking area explaining that it is the angler point of entry.
- Install signs at The Fells parking lot that explains that angler parking is not allowed.

Accountability Measures

- Number of angler-use days.

Objective 2.3 Wildlife Observation and Photography

Enhance quality wildlife observation and photography opportunities throughout the approximately 80 acres of the Refuge over the next 15 years by implementing trail improvements. These will include considerations for increasing public safety, minimizing adverse impacts to sensitive habitats, and providing greater access to the diversity of Refuge habitats, including one of the fens.

Rationale

Wildlife observation and photography are identified in the Refuge Improvement Act as priority public uses. Priority public uses are to receive enhanced consideration when developing goals and objectives for Refuges. Providing high quality opportunities (as defined in 605 FW 1.6) for the public to engage in these activities on the Refuge promotes visitor appreciation and support for programs.

Pursuant to the policies in 605 FW 4 and 5, we follow these guiding principles for wildlife observation and photography opportunities at the Refuge.

1. Provide safe, enjoyable, and accessible wildlife viewing and photography opportunities and facilities.
2. Promote visitor understanding of, and increase visitor appreciation for, America's natural resources.
3. Focus on providing quality recreational and educational opportunities, rather than quantity, consistent with Service criteria describing quality found in 605 FW 1 Part 1.10.
4. Minimize conflicts with visitors participating in other compatible, wildlife-dependent recreation.

Quality wildlife observation and photography opportunities are currently available on the Refuge. Additional opportunities will be provided through the creation of a Refuge brochure and/or fact sheets highlighting common wildlife and habitat. The existing crossings of the Ecology Trail at Beech Brook are affecting channel integrity and the slick footing presents a safety hazard to visitors. This will be addressed by installing a footbridge(s). The Ecology Trail will still highlight Refuge natural features and wildlife, and additional interpretive signs will be installed along the trail to describe other Refuge resources and ecological processes.

The Ecology Trail currently ends near the main house on The Fells property. Typically visitors return to the parking lot via the long estate driveway. This poses an administrative problem because The Fells charges an admission fee to enter their property. We will work with The Fells staff to design an alternative

route back to the parking lot that stays within the Refuge boundary, and will monitor any impacts from public use on habitats associated with this trail.

We will continue to work with The Fells, Forest Society, LSPA, and others to promote enjoyment and awareness of Refuge wildlife and habitats and those of adjacent conservation lands.

Strategies

Continue to:

- Maintain boundary signs.
- Monitor public use impacts to habitats associated with the Ecology Trail and trail additions.

Within 1 year of CCP approval:

- Create an alternative route extending the current Ecology Trail back to the trailhead within the Refuge boundary to provide an option for hikers who do not want to cross over onto The Fells property.

Within 2 years of CCP approval:

- Continue to authorize partners including The Fells through a new partnership agreement to maintain the trail as needed for safety.

Within 5 years of CCP approval:

- Relocate the trail away from sensitive habitats, including in-stream habitat, and to take advantage of wildlife/habitat observation opportunities.
- Install footbridges or some other improvement at stream crossings to promote public safety and environmental stewardship.
- Install interpretive signs along the trail that describe the wildlife, fish, plants and habitats, the Service, National Wildlife Refuge System, the Connecticut River Watershed, and the Refuge.
- Coordinate with The Fells, Forest Society, and NH Audubon and others to increase awareness of, and opportunities to experience, the diversity of habitats and associated wildlife observation experiences on the Refuge and adjacent conservation lands.

Within 10 years of CCP approval:

- Develop a trail extension from the Ecology Trail to one of the fens and back, with the addition of interpretive panels to provide information about the ecological role of fens.
- Install a kiosk and provide associated interpretive panels and a fact sheet listing common wildlife species and habitats in The Fells new parking lot. Should construction for The Fells proposed parking area take longer than 10 years, we will endeavor to install the kiosk and associated materials within two years of completion of the parking area.

Accountability Measures

- Number of participants using the Refuge.
- Number and type of interpretive signs installed.
- Length of the Ecology Trail that is relocated.
- Length of boundary line maintained.

Objective 2.4 Environmental Education and Interpretation

Over the next 15 years, conduct interpretive and environmental education programs and create informational materials that cumulatively reach 50 percent of the total visitors to The Fells between Memorial Day and Labor Day.

Rationale

Environmental education is a process designed to develop a citizenry that has the awareness, concern, knowledge, attitudes, skills, motivations, and commitment to work toward solutions of current environmental problems and the prevention of new ones. It is intended to address the audience's course of study, or curriculum, through directed materials, activities, programs, and products that also incorporate the Refuge's purpose and the mission of the National Wildlife Refuge System (605 FW 6). Interpretation is defined by the National Association of Interpreters as a communication process that forges emotional and intellectual connections between the interests of the audience and the inherent meanings in the resource. This occurs through activities, talks, publications, signs, audio-visual media, and exhibits (605 FW 7). Both are included in the six wildlife-dependent public use priorities within the Refuge System, according to the Refuge Improvement Act of 1997. Providing high quality environmental education and interpretation opportunities for the public on a refuge can: promote stewardship of natural resources; develop an understanding of the Refuge's purposes and the mission of the National Wildlife Refuge System; and, help raise awareness, understanding, and an appreciation of the role of the Refuge in northern New England forests and its contribution to migratory bird conservation. It also can garner support for other Refuge programs.

The addition of a seasonal visitor services specialist will enhance our ability to provide additional interpretive programs and materials. A priority for this position will be to increase the level of interpretation programming on the Refuge to provide greater opportunities for the public to learn about the Refuge's resources. Working with The Fells provides an opportunity to reach an audience not necessarily aware of the Refuge, its role in the Refuge System, or how it contributes to regional resource conservation and we will continue to partner with them to broaden our audience. The visitor services specialist will also continue to partner with The Fells, Forest Society, LSPA, NH FGD, and others to continue to provide a diversity of quality programs on the Refuge. The Fells Master Plan (The Fells 2006) includes environmental education in their goals, and we will continue to work with them in the spirit of cooperation from the old MOU and pursue a new partnership agreement. New interpretive signs will be added along the Refuge trails, and once The Fells completes the relocation of their parking lot, we will install a kiosk at the trailhead to provide interpretive information, maps and brochures, and to increase visibility of the Refuge.

Strategies

Continue to:

- Provide Refuge access to partners offering outdoor environmental education.
- Advertise events in local papers.

Within 2 years of CCP approval:

- Complete the new partnership agreement with The Fells as soon as possible, but no later than 2 years following CCP approval.

Within 3 years of CCP approval:

- Partner with others including The Fells, LSPA, Forest Society, and NH Audubon for educational programming and for materials distribution.
- If funding permits, hire a seasonal (i.e., Memorial Day through Labor Day) Visitor Services Specialist co-located with The Fells at the gatehouse or main house, who will:
 - Present interpretive programs about migratory birds and facets of management;
 - Conduct one teacher's workshop in the summer to facilitate environmental education use in the school year;
 - Lead interpretive walks on the Refuge;
 - Develop interpretive fact sheets for the Refuge, including a list of common Refuge wildlife and habitats.

Within 5 years of CCP approval:

- Design and install interpretive signs along the trail to replace the existing numbered interpretive stations.
- In coordination with partners, provide (additional) National Wildlife Refuge information at key sites.
- Provide educational materials and supplies to teachers in cooperation with our partners.

Within 10 years of CCP approval:

- Install a kiosk and provide associated interpretive panels and a fact sheet listing common wildlife species and habitats in The Fells new parking lot. Should construction for The Fells proposed parking area take longer than 10 years, we will endeavor to install the kiosk and associated materials within two years of completion of the parking area.

Accountability Measures

- Number and type of education and interpretive programs.
- Number of participants in environmental education and interpretation programs.
- Number of teacher's workshops conducted.

Goal 3. Communicate and collaborate with local communities, federal and state agencies, The Fells, and conservation organizations throughout the Lake Sunapee region to promote natural resource conservation, stewardship and the mission of the National Wildlife Refuge System.

Objective 3.1 Partner and Community Outreach

Continue to work closely with partners and increase community understanding and appreciation of the Refuge's importance to natural resource conservation and its contribution to the Refuge System, and garner additional support for Refuge programs, by meeting with partners at least once a year, and by conducting at least one community outreach program between Memorial Day and Labor Day.

Rationale

We rely heavily upon our partnerships given our limitations in staff and funding. It is of utmost importance for us to reach out and collaborate with our conservation partners in the region, including The Fells, Forest Society, NH FGD, LSPA and others, and to continue to facilitate communication regarding Refuge management, local conservation issues, and potential cooperative opportunities. We will continue to foster these partnerships. Historically, we have worked very closely with The Fells, and updating our partnership agreement will be a priority, as we share common goals and resources. For example, one of the tenets of The Fells strategic vision and mission is to instill environmental awareness and stewardship in visitors (The Fells 2006). With this partnership agreement, we have the opportunity to work cooperatively towards environmental conservation and public interaction with local natural resources.

It is particularly important that local residents understand, appreciate, and support the Refuge System mission and the Refuge’s important contribution to that mission. It is through our partnerships that we strive to develop an effective outreach program targeted at local communities and residents who may be unaware that a national wildlife refuge is nearby. We will continue to develop and strengthen these partnerships and to collaborate with them for outreach. We will submit press releases and make announcements in The Fells newsletter if possible for Refuge accomplishments, special events, and major initiatives in cooperation with our partners to keep the community interested and informed about Refuge activities.

Strategies

Continue to:

- Work closely with The Fells and Forest Society to coordinate with their outreach efforts.
- Keep local communities informed about Refuge events and attractions through direct contacts and local and statewide publications.
- Issue news releases on important accomplishments, to advertise special events, and to announce major management initiatives, in cooperation with partners.



Forest Society property sign

Within 2 years of CCP approval:

- Complete the new partnership agreement with The Fells as soon as possible, but no later than 2 years following CCP approval.

Accountability Measures

- Partnership agreement with The Fells completed within 2 years.
- Annually meet with partners at The Fells.
- Number of newsletters and/or emails used to communicate with the public, including through The Fells.
- Number of news releases submitted.
- Number of local and statewide recreation and events publications/guides that include John Hay Refuge attractions and activities.

Objective 3.2 Outreach to Elected Officials

Over the next 15 years, inform elected officials about the Refuge purposes and management activities at least once a year, or as important issues arise.

Rationale

Gaining support from federal, state, and local elected officials is essential to meeting our goals. This can only happen when these elected officials are fully informed, and understand and appreciate the significant contribution of the Refuge to the Refuge System and the importance of federal trust resources in New Hampshire. The support of elected officials is integral for the continued funding and delivery of other resources necessary to achieve the goals and objectives of this plan. Our efforts to keep them informed will include meeting with the town select board once a year to provide annual Refuge updates, and continue to work with our partners to keep elected officials informed as issues arise. We will also make an effort to include elected officials in any outreach events held on the Refuge in collaboration with our partners.

Strategies

Continue to:

- Meet with town select board or a town-designated commission at least once a year to provide an update on Refuge activities.
- Meet with elected officials on as needed basis.
- Provide written or personal briefings for members of Congress, or their staff, as needed or as requested, to inform them about important Refuge issues.

Within 3 years of CCP approval:

- Invite federal, state, and local elected officials to attend and participate in outreach events held on the Refuge in cooperation with partners.

Accountability Measures

- Number of contacts with federal, state, and town officials.
- Number of outreach events attended by federal, state, and local officials.
- Annual meeting with town select board.

Objective 3.3 Intergovernmental Partnerships

Over the next 15 years, work to strengthen and enhance partnerships with federal, state, and local governmental agencies to fulfill mutual natural resource conservation goals.

Rationale

Present staffing and funding levels underscore the importance of creating and maintaining working partnerships with other governmental agencies to achieve Refuge goals, and to share expertise and resources. These agencies include NH FGD, NH Department of Environmental Services (NH DES), and NH Department of Resources and Economic Development (NH DRED). We will continue to foster these partnerships and facilitate communication regarding Refuge management, and conservation issues in the region, to enhance our ability to achieve these goals and objectives.

Strategies

Continue to:

- Coordinate with NH FGD and the Newbury Conservation Commission for resource management activities on or that may potentially affect the Refuge.
- Coordinate with NH FGD on fish and wildlife management facilitating close collaboration on biological, recreational, and law enforcement programs.
- Coordinate with the local governments in the Lake Sunapee Region.
- Coordinate water quality efforts and issues with NH DES (see Chapter 3) via the Lake Sunapee Protective Association.

Accountability Measures

- Number and types of collaborations pertaining to the Refuge with other government agencies.
- Number of contacts with governmental partners.