



View from the top of North Pack Monadnock
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Alternatives Considered, Including the Service-preferred Alternative

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Introduction

This chapter presents

- the process for formulating alternatives,
- the actions common to both alternatives,
- the alternatives we considered but eliminated from detailed study, and
- the alternatives A, “Current Management,” and B, “The Service-preferred Alternative.”

At the end of this chapter, table 2.1 compares the alternatives: how they address the key issues in chapter 1, support major programs, and achieve refuge goals.

Formulating Alternatives

Relating Goals, Objectives, and Strategies

One of the earliest steps in the planning process is to formulate refuge goals: the intentionally broad, descriptive statements of the desired future condition of refuge resources. Goals articulate the principal elements of refuge purposes and the vision statement, and provide a foundation for developing specific management objectives and strategies. By design, goals are less quantitative and more prescriptive than their objectives in defining the targets of our management. The goals stay the same in both management alternatives below. Their objectives and strategies distinguish one alternative from the other.

The next step is to consider a range of possible management objectives that would help us meet those goals. Objectives are incremental steps toward achieving a goal; they also further define the management targets in measurable terms. They typically vary among alternatives, and provide the basis for determining more detailed strategies, monitoring refuge accomplishments, and evaluating our success. “Writing Refuge Management Goals and Objectives: A Handbook” (USFWS 2004) recommends that objectives possess five properties to be “SMART”: They must be (1) specific, (2) measurable, (3) achievable, (4) results-oriented, and (5) time-fixed.

A rationale accompanies each objective to explain its context and why we think it is important. When we write our refuge step-down plans, we would base them on the objectives in the alternative selected for the final CCP, and measure our success by how well we achieve them.

For each objective, we develop strategies: the combination of specific actions, tools, or techniques we may use to achieve that objective. In writing our refuge step-down plans, we would reevaluate how, when, and where we should implement most of the strategies.

Developing Alternatives, including the “No Action” Alternative

The National Environmental Policy Act (NEPA) requires that we evaluate a reasonable range of alternatives for managing the refuge before selecting the best one possible. Alternatives are packages of complementary objectives and strategies designed to meet refuge purposes, the Refuge System mission, refuge goals, while responding to the issues and opportunities identified during the planning process. We believe the objectives in the two alternatives below offer that reasonable range of proposals for managing the refuge over the next 15 years.

Alternative A satisfies the NEPA requirement of a “no action” alternative, which we define as “continuing current management.” It describes our existing management priorities and activities, and serves as a baseline for comparing and contrasting alternative B. For detailed descriptions of current refuge resources and programs, please see chapter 3, “Affected Environment.”

Many of the objectives in alternative A do not strictly follow the guidance in the Service's goals and objectives handbook, because we are describing current management decisions and activities that we established prior to that guidance. Rather, our descriptions of those activities derive from a variety of formal and informal management decisions and planning documents. Thus, the objectives in alternative A are fewer and more subjective than those in alternative B.

Alternative B, the Service-preferred alternative, combines the actions that we believe would achieve the purposes, vision, and goals of the refuge and respond to public issues most effectively. It emphasizes the management of refuge species and habitats by engaging in partnerships to monitor refuge resources with the U.S. Forest Service (USFS) and local conservation organizations. This alternative also proposes several improvements in visitor services, including the establishment of a parking area and a greater presence and visibility of the Service, trail maintenance through memorandums of understanding (MOU) with both the Friends of the Wapack and Mountain View Hiking Club, and increased outreach and education through enhanced partnerships.

Actions Considered but Eliminated from Detailed Study

Federal-Designated Wilderness

During the scoping phase of our planning process, we learned of an interest in designating the refuge as part of the National Wilderness Preservation System (NWPS). Appendix B, "Wilderness Review," documents our analysis of the wilderness potential of the refuge, and explains that the formal designation requires an act of Congress. That usually is predicated upon a recommendation from a federal agency. Our analysis determined that such a recommendation is not warranted at this time. However, we will reassess that determination in 15 years, when we revise the CCP.

Refuge Expansion

Many responses in our public scoping process encouraged us to expand the refuge for a variety of reasons. Some were concerned about the rapid rate of development nearby. Some wanted to link refuge land with two large conservation areas nearby.

- One is the Quabbin to Cardigan Conservation Collaborative (Q2C), which focuses on protecting land along the Monadnock Highlands, from the Quabbin Reservoir in central Massachusetts north to New Hampshire's Mt. Cardigan (The Society for the Protection of New Hampshire Forests 2004). The refuge lies in the "Wapack Focus Area" of the Quabbin to Cardigan corridor. If you would like more information, please visit the website <http://www.spnhf.org/landconservation/q2c.asp>.
- The other is the Temple to Crotched Community Conservation Corridor. The Monadnock Conservancy, which leads this effort, envisions linking the conservation areas on Crotched Mountain, Pack Monadnock, and Temple Mountain with a network of conservation easements in the towns of Greenfield, Peterborough, Sharon, and Temple (Monadnock Conservancy 2006). As with Q2C, the refuge lies directly in the Temple to Crotched Mountain corridor. For the latest information, please visit http://www.monadnockconservancy.org/html/what_news20.html.

Despite our interest in seeing those lands conserved for wildlife, neither alternative recommends that we acquire additional land at this time. Our regional perspective on all the other land protection priorities of the Service leads to doubt we would be able to secure the funding to buy additional land here or hire staff to manage it. However, if conditions change in the future and more land acquisition becomes possible, we may pursue that under a separate environmental assessment, after public review. As always, we would evaluate separately any opportunities that arose to accept donations of land.

Vegetation Management

Some members of the public who suggested that we actively manage refuge habitats in order to support a larger diversity of wildlife species were interested in providing less dense forest habitat, through selective cutting and prescribed burning, to bring more mammal species (e.g., moose and bobcats) to the refuge.

Some suggested that the refuge establish clearings along the Wapack Trail to provide better views and bird watching at the top of the mountain. They recommended selective cutting along the trail, particularly because the tree growth at the top of the mountain has obscured some views. One individual expressed an interest in actively managing trees and shrubs on North Pack Monadnock to maintain blueberry shrubs, which cannot survive under heavy shade. That would require selective cutting or prescribed burning to remove the shade. The deed donating the land to the Service prohibits cutting trees on the refuge, except as necessary for maintaining trails. That restriction prevents us from implementing these proposals to manage vegetation.

Actions Common to Both Alternatives

The alternatives share some actions in common. Some are required by law, policy, or refuge regulations, or may be administrative actions that do not require public review, but we want to highlight them in this public document. Others may be actions we believe are crucial in achieving the refuge purpose, vision, and goals.

Controlling Invasive Plant Species

One national priority of the Refuge System is to manage and control the spread of invasive plants. We have not conducted an inventory of invasive species on the refuge; however, we recently initiated a partnership with the USFS to conduct one.

One particular concern is glossy buckthorn, which is well established near the refuge. That invasive plant rapidly forms dense, even-aged thickets in both wetlands and woodland understories. Its seedlings invade apparently stable habitats, and grow most successfully where there is ample light and exposed soils, such as along woodland edges and in forest openings created by windfalls (Nashua Conservation Commission 2004).

Those are the areas we would focus on in the future. Our objectives are to ensure that no new invasive plants establish themselves, and to control the spread of any that the USFS inventory may find.

Maintaining Partnerships

We would maintain our present partnerships with the Friends of the Wapack (FOW), the New Hampshire Fish and Game Department (NHFG), and the Mountain View Hiking Club. Those three groups are particularly important and valued partners, whose contributions are vital to our success in managing many aspects of the refuge. For example, the FOW maintains the 4-mile section of the Wapack Trail and the 1.1-mile Cliff Trail where they run through the refuge. The Mountain View Hiking Club maintains the combined 5.15-mile Ted's and Carolyn's trails where they run through the refuge. The NHFG assists us with law enforcement.

Permitting Special Uses, Including Research and Economic Uses

We would require the refuge manager to evaluate the appropriateness and compatibility of all activities that require a special use permit. All research and commercial or economic uses require special use permits.

Research

Research on species of concern and their habitats would continue as a priority. We would continue to approve permits that provide a direct benefit to the refuge, or for research that would strengthen our decisions on managing its natural resources. The refuge manager may also consider requests that do not

relate directly to refuge objectives, but rather to the protection or enhancement of native species and biological diversity in the region.

All researchers would be required to submit detailed research proposals following the guidelines established by Service policy and refuge staff. Special use permits would also identify the schedules for progress reports, the criteria for determining when a project should cease, and the requirements for publication or other interim and final reports. All publications must acknowledge the Service and the role of Service staff as key partners in funding and/or operations. We would ask our refuge biologists, other divisions of the Service, USFS, select universities or recognized experts, and the state of New Hampshire to review as peers and comment on research proposals or draft publications, and would share the research results both internally and with those reviewers and other conservation agencies and organizations.

Some projects, such as depredation and banding studies, require additional Service permits. The refuge manager would not approve those projects until all their required permits have been received.

Commercial and Economic Uses

All commercial and economic uses would adhere to Title 50 of the Code of Federal Regulations (CFR), Subpart A, §29.1 and Service policy, which allow those activities if they are necessary to achieve the Refuge System mission or refuge purposes and goals. Allowing those activities also requires the Service to prepare a finding of appropriateness, a compatibility determination, and an annual special use permit outlining the terms, conditions, fees, and any other stipulations to ensure compatibility.

We would consider issuing a special use permit to commercial operators for each activity, such as guided wildlife viewing, that takes place completely on refuge lands, if that activity meets the thresholds noted above, including compatibility. In addition, we would require all operators to complete a detailed summary of their activities on the refuge each year, and require that they conduct periodic visitor satisfaction surveys using a survey method we review and approve prior to its use. We would modify or deny any subsequent issuance of annual permits based on annual reports, our field reviews and inspections, and the results of those surveys.

Distributing Refuge Revenue Sharing Payments

In accordance with the Refuge Revenue Sharing Act (16 U.S.C. 715s), Congress appropriates funds each year for refuge revenue sharing payments, which are calculated by a formula based on the acreage and value of refuge land in each taxing jurisdiction. Those payments change with changes in the appraised market values of refuge lands and new appropriations by Congress. Both of the alternatives would continue the payments described in chapter 3 to the Towns of Greenfield and Temple.

Protecting Cultural Resources

As a federal land management agency, we are responsible for locating and protecting all historic resources on the refuge or on land affected by refuge activities: specifically, archeological sites and historic structures eligible for or listed in the National Register of Historic Places, and any museum properties. Section 106 of the National Historic Preservation Act (NHPA) requires our evaluation of the effects of our actions on any archeological and historical resources on the refuge, and our consultation with respective State Historic Preservation Offices. Our compliance with the act may require any or all of the following: a State Historic Preservation Records survey, literature survey, or field survey.

We know of no archeological or historic sites on the refuge. Nevertheless, both alternatives would comply with the NHPA, should we find any.

Managing the Refuge According to Deed Stipulations

When the land for the refuge was donated to the Service, it was given under the condition that we would manage the refuge in a “wilderness-like” setting. Although the Wapack refuge is not designated as part of

the National Wilderness Preservation System (NWPS), the donors wanted the land to be preserved “as a place where the earth and its community of life are untrammelled by man, where man is a visitor who does not remain.” That wording in the deed closely resembles the text in the Wilderness Act of 1964. We explain in appendix B why we are not recommending the refuge for NWPS status. However, both of the alternatives would continue to manage the refuge in a “wilderness-like” setting and adhere to the restrictions listed in the deed: the prohibition of hunting, fishing, trapping, travel in or use of vehicles, and the cutting of trees except for the maintenance of trails. Neither of the alternatives would result in the manipulation of refuge habitat, including selective cutting or prescribed burning.

Establishment of New Trails on the Refuge

Since the establishment of the refuge in 1972, two new trails have been developed on the refuge in addition to the Wapack Trail and the Cliff Trail: the Ted’s and Carolyn’s trails. We provided the descendant of the donors with a map of all the refuge trails, after determining their exact locations by using the Global Positioning System (GPS). With her approval, we officially recognized those two new trails in September 2007.

Neither alternative would authorize additional trails on the refuge. Please see map 2-1 below to view all designated refuge trails.

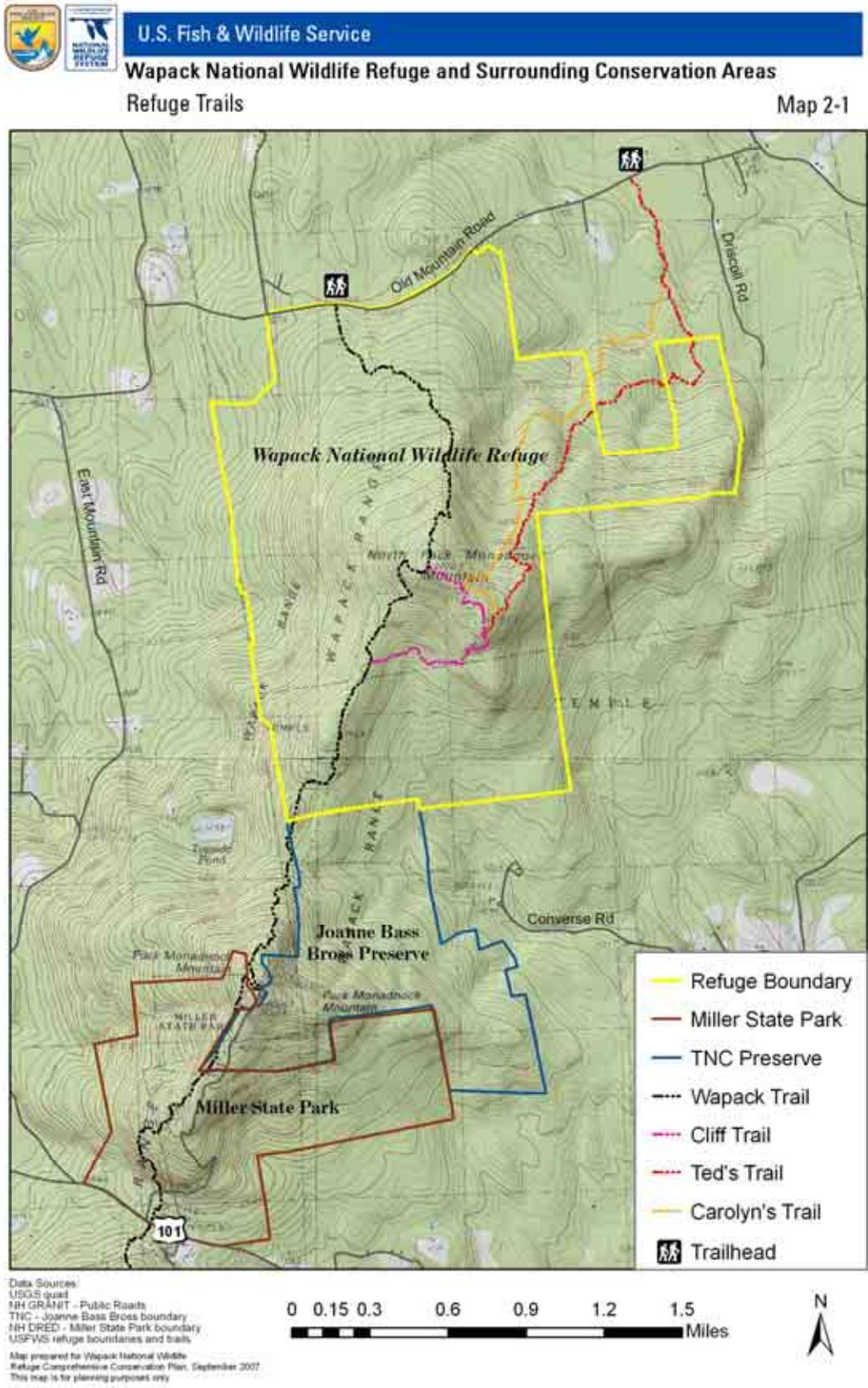
Staffing the Refuge

This unstaffed refuge is administered by the refuge manager at the Great Bay refuge, headquartered in Newington, NH. The 2006 Regional Strategic Downsizing Plan includes the decision to de-staff the Great Bay refuge and administer both the Wapack and Great Bay refuges from the Parker River refuge in Newburyport, MA.

We expect to implement that change in 2008. Under the new organization, we would continue to ensure that visitors have a safe visit, engage in approved appropriate and compatible activities, and understand and adhere to refuge regulations.

Operating Hours

We would continue to open the refuge for public use from one-half hour before official sunrise to one-half hour after official sunset, seven days a week, to ensure visitor safety and protect refuge resources. At the refuge manager’s discretion, special use permits may allow organized, nocturnal activities, such as celestial observation or wildlife research.



Adaptive Management

Both alternatives would implement adaptive management. “Adaptive Management: The U.S Department of Interior Technical Guide (2007),” promotes flexible decision-making that can be adjusted in the face of uncertainties as we understand better the outcomes of management actions and other events. Careful monitoring of these outcomes advances scientific understanding and helps adjust policies or operations as part of an iterative process. Adaptive management does not represent an end in itself, but rather, a means to more effective decisions and enhanced benefits (William and Shapiro 2007).

The need for adaptive management is even more compelling, because our present information on refuge species and habitat is incomplete, provisional, and subject to change as our knowledge base improves.

We realize that we must adapt our objectives and strategies to respond to new information and spatial and temporal changes. We would continually evaluate management actions, both formally and informally through monitoring or research, to reconsider whether our original assumptions and predictions are still valid. In that way, management becomes a proactive process of learning what really works.

The refuge manager is responsible for changing management strategies or objectives if they do not produce the desired conditions. Significant changes may warrant additional NEPA analysis and public comment. Minor changes would not, but we would document them in our annual monitoring, in project evaluation reports, or in our annual narrative report.

Generally, we can increase monitoring and research that support adaptive management without additional NEPA analysis, and assuming the activities, if conducted by non-Service personnel, are determined compatible by the refuge manager in a compatibility determination.

Additional NEPA Analysis

NEPA generally requires site-specific analysis of impacts for all major federal actions in either an environmental assessment (EA) or an environmental impact statement (EIS). Our two alternatives propose many actions and associated impacts in enough detail to comply with NEPA without additional environmental analysis. The following examples fall into that category: implementing priority public use programs, new visitor services infrastructure and controlling invasive plants. Other activities are categorically excluded from the NEPA requirements to prepare environmental documents. Those generally include routine administrative actions, and are listed in chapter 4, “Environmental Consequences.” The only proposed action in this CCP that would require additional NEPA analysis is the construction of a parking area (see alternative B). We have yet to determine the design and location of that parking area, so we decided to postpone detailed NEPA analysis until that time.

Alternative A. Current Management

Introduction

This alternative portrays our current management activities and those already planned or approved.

- We would continue to manage the refuge in a “wilderness-like” setting.
- We would not actively manage habitat on the refuge. Rather, we would allow natural succession to continue without human interference.
- We would allow only uses that are consistent with the “wilderness-like” setting, other deed restrictions, and existing compatibility determinations. We would not allow hunting, fishing, trapping, driving motor vehicles or cutting trees (except in maintaining trails).
- We would continue to prohibit camping, mountain biking, horseback riding and dog walking.
- We would not take any new actions to improve the presence or visibility of the Service (e.g., posting an informational sign or posting refuge regulations) or access to the refuge (i.e., creating a parking area).
- We would continue our informal relationships with the FOW and the Mountain View Hiking club to maintain refuge trails, and continue to work under a MOA with the NHTG to resolve interjurisdictional issues on the refuge as they arise.

Goal 1. Allow natural processes and disturbances to provide biological diversity and integrity of upland wildlife habitat.

Objective 1a. (Natural Succession)

Continue to let the process of vegetative succession occur on the 1,625-acre refuge, primarily to provide breeding and migrating habitat for northern hardwood and spruce-fir-dependent birds.

Rationale for Objective

The deed of donation restricts the cutting of trees, except when necessary to maintain trails. That restriction prohibits us from actively managing the forest. Therefore, by engaging in passive management, we allow for the natural succession of the ecosystem. Succession is the natural, sequential change of the species composition of a community. Beginning in the eighteenth century, sheep and cattle were pastured on the hillsides. By the end of the nineteenth century, raising cattle became economically problematic and the fields were abandoned and allowed to grow back into forest. Throughout the 1900s, forests in the area were logged when demand was high. Since the last period of significant deforestation in the 1940s, timber harvests have been selective, resulting in mixed-aged stands of forest. The lower elevations of the refuge show signs of advanced succession into mature hemlock-beech-oak-pine forest. In higher elevations on the refuge, juniper is an indicator of transition from cleared field stage to a shrub stage to a spruce/fir forest.

If a natural disturbance was to occur on the refuge (e.g., an ice storm, hurricane, wildfire), the Service would not intervene unless the conditions became extreme. For example, if a fire posed a danger to surrounding landowners, we would take action to control it. In the case of less extreme conditions, we would not remove fallen trees, but rather, leave them to decompose as they would under natural conditions.

Strategies

Continue to

- Maintain the refuge in a “wilderness-like” setting with no development, minimal signs and other infrastructure.
- Allow natural succession and natural disturbances to occur without interference, except under extreme conditions, such as those that threaten human health and safety or the catastrophic loss of forest habitat.

Goal 2. Establish a public use program that will encourage compatible, low-impact recreation on refuge trails.

Objective 2a. (Trail Maintenance)

Continue our informal relationships with the Friends of the Wapack (FOW) for maintaining the sections of the Wapack Trail and the Cliff Trail that cross the refuge, and with the Mountain View Hiking Club for maintaining the sections of the Ted’s and Carolyn’s trails that cross the refuge.

Rationale for Objective

The FOW is an independent, non-profit organization of hikers, volunteers, supporters and landowners. The FOW encourages mutual courtesy, friendship and cooperation between hikers and landowners. Its volunteers are dedicated to the preservation of the Wapack Trail. We have maintained an informal agreement with FOW to maintain and preserve the 4-mile segment of the Wapack Trail and the 1.1-mile Cliff Trail that cross the refuge. This segment of the Wapack Trail is very popular among hikers, and sustains heavy use.

The Mountain View Hiking Club consists of neighboring landowners who provide maintenance of the Ted’s and Carolyn’s trails: 5.15 miles of hiking trails, of which 3 miles cross the refuge. Both trails cross both private and refuge land. From the top of North Pack Monadnock, one of their two spurs connects to the Wapack Trail; the other connects to the Cliff Trail.

Hiking facilitates wildlife observation and photography. Providing opportunities for the public to engage in those activities on the refuge promotes visitor appreciation of and support for refuge programs. According to the FOW and the Mountain View Hiking Club, the section of the Wapack Trail on the refuge, the spur of the Cliff Trail and the Ted’s and Carolyn’s trails are in very good shape. Continuing our informal agreements with the FOW and the Mountain View Hiking Club would maintain those conditions and ensure that refuge visitors enjoy a safe, quality experience.

Strategies

- Continue our informal agreement with the Friends of the Wapack to maintain the 4-mile segment of the Wapack Trail that runs through the refuge and the 1.1-mile Cliff Trail.
- Continue our informal agreement with the Mountain View Hiking Club to maintain the 3 miles of the Ted’s and Carolyn’s trails that cross the refuge.

Objective 2b. (Trailhead Access)

Continue to allow public access to the northern end of the refuge via the Wapack Trailhead on Old Mountain Road, and to the southern end via Joanne Bass Bross Preserve and Miller State Park.

Rationale for Objective

To access the northern end of the refuge and the start of the Wapack Trail, visitors must enter via Old Mountain Road. Parking is available only on the road shoulder; no established or developed parking area

exists. If visitors would like to begin at the southern end of the refuge, they can park at Miller State Park and hike north about 1 mile. Admission to the state park costs \$3 for adults and \$1 for children. Before entering the Wapack refuge, hikers would also pass through the Joanne Bass Bross Preserve, owned and maintained by The Nature Conservancy (TNC). This objective would not improve refuge access or parking. Maps, literature, and the refuge website direct visitors to these points of entry.

Strategies

Continue to

- Direct visitor access to the northern end of the refuge (beginning of Wapack Trail) via Old Mountain Road.
- Direct visitor access to the southern end of the refuge through Joanne Bass Bross Preserve; encourage parking at adjacent Miller State Park.
- Maintain the refuge website (profile page) to communicate points of entry and directions to the refuge.

Objective 2c. (Service and Refuge System Visibility)

Continue limited Service presence and visibility at the refuge and in the local community.

Rationale for Objective

Limited refuge resources have prevented us from being able to focus on establishing greater presence and visibility in the local community and to refuge visitors. Only one refuge sign, erected by the FOW at the trailhead, carries a topographic map (the northern end of the refuge). That map shows the layout of the Wapack Trail, but does not provide any information about the refuge or the Service. The boundary of the refuge is posted intermittently with standard Refuge System “blue goose” signs. This objective would not provide any additional signage or improve the visibility or presence of the Service.

Strategies

Continue to

- Allow the FOW to maintain one trailhead information sign.
- Maintain refuge boundary signs.

Objective 2d. (Public Uses on the Refuge)

Continue to allow uses that are consistent with the “wilderness-like” setting and have complete, approved compatibility determinations.

Rationale for Objective

As we discussed previously, the land for the refuge was donated under the condition that we would manage the refuge in a “wilderness-like” setting and adhere to other deed restrictions prohibiting hunting, fishing, trapping, traveling in or using vehicles, and the cutting of trees except to maintain trails.

The Refuge Improvement Act and our compatibility policy require an affirmative finding by the refuge manager on the appropriateness and compatibility of a public use before we allow it on a national wildlife refuge. In 1994, the refuge manager completed compatibility determinations for observing and photographing wildlife, berry picking, hiking/backpacking, jogging/walking, picnicking, and snowshoeing and cross-country skiing. Those were found to be compatible with the mission of the Refuge System and the purpose for which the refuge was established. We would continue to allow them in alternative A on the refuge. In addition to the activities listed in the deed, we would continue to prohibit in alternative A the following activities, which previous refuge managers either did not evaluate or determined them incompatible: dog walking, camping, mountain biking, and horseback riding.

Strategies

Continue to

- Prohibit those activities listed in the deed: hunting, fishing, trapping, traveling in or using vehicles, and cutting trees, except to maintain trails.
- Prohibit dog walking, camping, mountain biking, and horseback riding.
- Allow wildlife observation, photography, berry picking, hiking/backpacking, jogging/walking, picnicking, and snowshoeing and cross-country skiing

Goal 3. Enhance the conservation, management, and stewardship of wildlife resources through partnerships with public and private conservation groups, private landowners, State agencies and local entities.

Objective 3a. (Current Partnerships)

Continue to maintain our current partnerships with the New Hampshire Fish and Game Department (NHFG) for assistance with law enforcement.

Rationale for Objective

Our limited refuge staff and budget make it difficult for us to address law enforcement issues. Partnerships are essential in accomplishing the goals for this unstaffed refuge. In 1994, the Service and the NHFG approved a memorandum of agreement (MOA) for cooperative law enforcement. Alternative A would continue our work under that MOA. In it, our regional director delegated to the NHFG the authority to enforce the following federal laws dealing with the protection and conservation of fish, wildlife and natural resources: The

1. Lacey Act Amendments of 1981
2. Migratory Bird Treaty Act
3. Migratory Bird Hunting and Conservation Stamp Act
4. Bald and Golden Eagle Protection Act
5. Airborne Hunting Act
6. National Wildlife Refuge Systems Administration Act
7. Endangered Species Act of 1973.

Although the MOA allows conservation officers from the NHFG to enforce refuge regulations, we do not expect them to take on the duties of full-time refuge law enforcement officers. At this time, the conservation officer patrolling the surrounding area would be responsible only for responding to extreme situations or complaints as they arise. For example, a conservation officer would provide search and rescue on the refuge. Again, this relationship with NHFG is essential in protecting refuge resources and visitors.

Strategies

Continue to

- Work under the MOA for cooperative law enforcement with the NHFG.

Alternative B. The Service-preferred Alternative

Introduction

Alternative B is the one we are recommending to our regional director for implementation. It includes an array of management actions that, in our professional judgment, work best toward achieving the purpose of the refuge, our vision and goals for the refuge, and state and regional conservation plans. In our opinion, this alternative would most effectively address the key issues identified by the Service, the state, and the public (see chapter 1).

Alternative B proposes that we focus on improving our biological and visitor services programs by expanding our partnerships with other federal and state agencies, town departments, local conservation organizations, and individuals. We would assess and monitor threats to the integrity of refuge habitat. One important component of that assessment is gathering baseline data on plant and wildlife populations on the refuge. We would use partnerships to continue the maintenance of trails and the development and maintenance of a refuge parking area. We would also work to increase the presence of the Service and the visibility of the refuge in the local community, and better communicate information about the refuge, its rules and regulations, and contact information to the public.

Although we cannot acquire more land for the refuge at this time, we would offer our support in protecting other land in the area. We would help our partners identify land that should be protected for wildlife conservation, and help them choose the best methods or techniques for managing that land. Please refer to alternative B, goal 3, for additional information on land protection partnerships.

Goal 1. Allow natural processes and disturbances to enhance the biological diversity and integrity of upland wildlife habitat.

Objective 1a. (Collecting Resource Information)

Over the 15 years following the approval of this CCP, this alternative would promote a biologically diverse, healthy, and mature forest habitat on 1,625 acres that supports breeding and migrating bird species of conservation concern, such as the bay-breasted warbler, black-throated blue warbler, black-throated green warbler, blackburnian warbler, blackpoll warbler, Canada warbler, eastern wood-pewee, ovenbird, veery, wood thrush, and yellow-bellied sapsucker. In addition, we would conserve habitat for other species listed in the NH Wildlife Action Plan whose presence is possible on the refuge, such as the American marten, bobcat, eastern small-footed bat, marbled salamander, spotted turtle, and northern leopard frog.

Rationale for Objective

The Service policy “Maintaining the Biological Integrity, Diversity, and Environmental Health of the National Wildlife Refuge System” provides refuge managers with an evaluation process to analyze their refuge and recommend the best management direction to prevent the further degradation of environmental conditions. To fully implement that policy, we must first assess the current status of the biological integrity, diversity, and environmental health through surveys of baseline vegetation, population surveys and studies, and any other environmental studies necessary. Fully assessing the current environmental conditions at the refuge would give us the information we need to maintain its biological integrity, diversity, and environmental health.

Because the Wapack refuge is unstaffed, resources are not readily available to conduct biological surveys. Limited refuge budgets also make it difficult to contract those surveys to other organizations or individuals. James Kowalsky completed the last surveys for the Wapack refuge in 2003. They included information on breeding bird species presence; no information was collected on productivity and survivorship. We have not conducted any surveys of forest health, mammals, amphibians and reptiles, or vegetation. Members of the

local community are concerned with that lack of biological data and its unavailability to the public. It is important that we obtain more up-to-date information on all refuge resources and make that information available to the public.

We would use a partnership with the U.S. Forest Service (USFS) Forest Health Protection Program (FHPP) to complete an assessment of forest health on the refuge. The FHPP works to protect and improve the health of America's forests. Its goal is to respond rapidly to forest health threats to avoid unacceptable losses of forest resources. The FHPP would compile a plant species list, identify tree mortality, and determine the presence of any invasive species. That assessment would allow us to identify and monitor any threats to the integrity of the refuge forest habitat.

To gather information about vegetation and wildlife populations on the refuge, we would use such partnerships as New Hampshire Audubon, The Nature Conservancy, the Keene State College citizen survey group, local conservation groups, and individual volunteers. That research would focus on species of concern that other state and conservation management plans have identified.

- The New Hampshire Wildlife Action Plan (WAP) (NHFG 2005) identifies the bay-breasted warbler, Canada warbler, veery, and wood thrush as forest-dependent species of concern. In addition to bird species, the New Hampshire WAP lists as species of concern some mammals known in the vicinity of the refuge, including the black bear, bobcat, and moose.
- The Atlantic Northern Forest Bird Conservation Region (BCR 14) Blueprint (Dettmers 2005) lists the black-throated blue warbler, black-throated green warbler, blackburnian warbler, blackpoll warbler, eastern wood-pewee, ovenbird, and yellow-bellied sapsucker as moderate to high conservation priority in forest types found on the refuge.

To provide consistent information that we can compare from year to year, the refuge would develop a Habitat and Species Inventory and Monitoring Plan (HSIMP). That HSIMP would outline the methodology to assess whether our assumptions and proposed management actions are, in fact, supporting our habitat and species objectives. A HSIMP would promote the use of coordinated, standardized, cost-effective, defensible methods for gathering and analyzing population data. It would also allow us to assess new and ongoing surveys and focus our limited resources on data collection for resources of conservation concern. Our primary interest in establishing a thorough, consistent inventory and monitoring program is that it would allow us to control threats to refuge resources (e.g., a threat from invasive species, or overuse of an area by recreational visitors).

Strategies

Within 2 years of CCP approval

- Meet with various partners (e.g., NHFG, New Hampshire Audubon, The Nature Conservancy, the Keene State College citizen survey group, local conservation groups, and individual volunteers) to discuss possible partnership opportunities for prioritizing, funding, and conducting compatible natural resource surveys.
- The USFS Forest Health Protection Program would complete a full forest health assessment and help us identify what to evaluate and monitor as threats to the biological integrity of the refuge.

Within 7 years of CCP approval

- Use partnerships (e.g., established from those contacts made in strategy above) for resource data collection following peer-reviewed or agency approved protocols. Obtain all required permits prior to field implementation.
- Complete a Habitat and Species Inventory and Monitoring Plan (HSIMP).

Goal 2. Establish a public use program that will encourage compatible, low-impact recreation on refuge trails.

Objective 2a. (Trail Maintenance)

Within 2 years of the approval of this CCP, develop a memorandum of understanding (MOU) with the Friends of the Wapack (FOW) for maintaining the segments of the Wapack Trail and the Cliff Trail that cross the refuge, and an MOU with the Mountain View Hiking Club for maintaining the sections of the Ted's and Carolyn's trails that cross the refuge.

Rationale for Objective

Under an informal agreement, the FOW maintains the 4-mile section of the Wapack Trail that crosses the refuge. They also maintain the 1.1-mile Cliff Trail, a spur off that 4-mile segment at the top of North Pack Monadnock. Both the Service and the FOW are interested in formulating a MOU for refuge trail maintenance. We would use as a template for our final MOU one we drafted in 2004 but never implemented. Under the final MOU, the FOW would be responsible for removing major obstructions and litter, installing water diversions to minimize erosion, or rerouting the trail if necessary to minimize erosion or mitigate the effects of heavy use. They would assist in marking the trail, with care to mark only what is necessary to keep people on the trail. Yellow triangles painted on trees or rock outcrops would designate the Wapack Trail, while blue triangles would designate the Cliff Trail. Given the amount of work and the help the FOW members provide to the refuge, it is important that we complete a formal agreement that documents their exact responsibilities. We would meet annually with the FOW to discuss plans for trail maintenance for the ensuing year. That would give both the FOW and the Service the opportunity to discuss any concerns over the safety or inappropriate uses of the trail.

The Mountain View Hiking Club maintains the combined 5.15-mile Ted's and Carolyn's trails. Three miles traverse the refuge, while the other 2.15 miles cross private land. The Mountain View Hiking Club is very interested in developing a MOU with the Service for the continued maintenance of the sections of the two trails that cross the refuge. As in the MOU with the FOW, the club would be responsible for removing major obstructions and litter, installing water diversions to minimize erosion, or rerouting the trail if necessary to minimize erosion or mitigate the effects of heavy use. They would also assist in marking the trail. Some of the refuge sections of the Ted's and Carolyn's trails are designated sporadically with yellow markers stamped with the Service logo. The Service would provide additional trail markers to the club so that the refuge sections of the trails can be more adequately marked. In addition, we would meet annually with the club to discuss plans for trail maintenance in the ensuing year.

During the planning process, we established communications with a direct descendant of Mr. and Mrs. Marshall (the couple who originally donated the refuge property), who lives locally and is very interested in the refuge and its management according to the deed restrictions.

Strategies

Within 2 years of CCP approval

- Complete a MOU with the Friends of the Wapack for trail maintenance on the refuge.
- Complete a MOU with the Mountain View Hiking club for trail maintenance on the refuge.
- Meet annually with the FOW and the Mountain View Hiking Club to review plans for trail maintenance.
- Establish contact with the Marshall family descendant, or designee, if refuge activities may result in significant removal of vegetation or ground disturbance.

Objective 2b. (Trailhead Improvements)

Within 15 years of the approval of this CCP, work with state and local partners to seek funding for the design, construction, or, if necessary, land acquisition for a trailhead parking area.

Rationale for Objective

The only way that visitors can access the northern end of the refuge is by parking on the shoulder of Old Mountain Road. That can be problematic for several reasons. First, we have seen up to 15 cars parked along the road shoulder during peak season weekends for access to the Wapack Trail. With limited space for cars, visitors are forced to park in unsafe areas or sometimes leave altogether. Once visitors have parked their cars, they have to walk along the road to the refuge entrance. That creates another safety concern, particularly when through-traffic on the road is heavy. Parking on the road also creates a problem for the Town of Greenfield Department of Transportation. In the winter, cars parked on the side of the road make it very difficult for snow plows to safely pass and clear a road that is already narrow. The Town of Greenfield is very concerned about this recurring problem, and would like us to work with them in solving it.

If visitors wanted to access the southern entrance of the refuge, they would have to park at Miller State Park and hike north through the Joanne Bass Bross Preserve (TNC). Parking at Miller State Park can be inconvenient, not only because visitors have to hike a farther distance to get to the refuge, but also because they have to pay for parking. In 2007, admission to the state park cost \$3 for adults and \$1 for children.

By creating a parking area at the northern entrance of the refuge, we would increase visitor convenience, improve public safety, and resolve concerns about snow plowing. We would like to build the parking area on a parcel of land on or near the refuge and the Wapack trailhead. We would consider purchasing a tract from a willing seller at market value to provide adequate space to establish a safe parking area. If possible, we would also like to work with the Town of Greenfield to arrange plowing for the new parking area. We do not have a location or a parking design yet; the location and ownership of the land would dictate the size and configuration of the parking area. Because the Town of Greenfield owns most of the land around the refuge, we would meet with the town to discuss possible options for establishing a parking area.

The Brantwood Camp also owns land next to the refuge. It provides a positive camping experience for boys and girls from various backgrounds who otherwise would miss the opportunity to attend summer camp (Brantwood Camp 2007). We know that campers quite often use the refuge trail, so they also might benefit from additional parking. We would also meet with the Brantwood Camp to discuss opportunities to work together in establishing the parking area. Because the location of the refuge is so close to Miller State Park, we also propose to meet with the NH Division of Parks and Recreation to discuss partnership and funding opportunities to develop parking.

Over the next 5 years, we would seek sources of funding for the design and construction of the parking area. Two possible sources are the Recreational Trails Program (RTP) and the Public Lands Highways Discretionary Program (PLHD).

The RTP is an assistance program of the Department of Transportation Federal Highway Administration (FHWA). Federal transportation funds benefit recreation by making funds available to the states to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational uses. RTP funds come from the Federal Highway Trust Fund, and represent a portion of the motor fuel excise tax collected from nonhighway recreational fuel use: fuel used for off-highway recreation by snowmobiles, all-terrain vehicles, off-highway motorcycles, and off-highway light trucks (FHWA 2006).

The PLHD Program was designed to improve access to and within federal lands. PLHD funds are available for transportation planning, research, engineering, and the construction of the highways, roads, parkways, and transit facilities on federal public lands. Those funds are also available for the operation and maintenance of transit facilities. In both of these programs, the state would assist in applying for a grant,

which could propose funds for designing, constructing or, if necessary, acquiring land on which to build the parking area.

Strategies

Within 2 years of CCP approval

- Meet with the Town of Greenfield, Brantwood Camp, and the NH DRED, Division of Parks and Recreation, to discuss possible partnership opportunities for establishing and maintaining a parking area on Old Mountain Road.

Within 5 years of CCP approval

- Determine a specific location for the construction of the parking area on Old Mountain Road.
- Work with the State of New Hampshire to seek funding for the design, construction, or, if necessary, land acquisition for a parking area.
- Work with an engineer to design the layout of the parking area.

Within 15 years of CCP approval

- Complete construction of the parking area.

Objective 2c. (Service and Refuge System Visibility)

Within 5 years of the approval of this CCP, increase the visibility of the Service in the local community and improve public recognition and awareness of the refuge and the Refuge System to the extent that 90 percent of visitors contacted know they are on a national wildlife refuge, can identify its purpose, and know that it is part of a national system of refuges.

Rationale for Objective

Limited resources have prevented us from improving the presence of the Service and the visibility of the refuge to the public as well as its recognition in the local community.

This alternative proposes that we increase Service visibility through increasing signage, engaging in new partnerships for outreach and education, and communicating regularly with federal, state and local elected officials. We would install a new informational panel at the northern trailhead of the refuge. That panel would provide general refuge resource and contact information. It would also publish refuge rules and regulations, including why keeping dogs on leash is important. Because the refuge does not provide any accessible trails, the panel would also identify the accessible trails in the area.

We would meet with the FOW to discuss providing more signage, and providing information on the refuge and the FOW. We would also work with the Mountain View Hiking Club to install standard “Welcome to your National Wildlife Refuge” signs at the refuge entrances of the Ted and Carolyn’s trails. That sign would simply notify trail users that they are leaving private land and entering a national wildlife refuge.

By posting the rules and regulations on a trailhead sign, we hope to minimize the number of violations on the refuge. We hope that refuge visitors would respect and adhere to all rules and regulations.

We also propose to improve the posting of the refuge boundary. We would post additional signs around the refuge boundary to ensure that they are intervisible.¹ That would help visitors realize that they are on a national wildlife refuge, and reduce the number of trespassers that enter it.

¹ **intervisible** *adj* mutually visible (*surveying*): i.e., visitors can see from one sign to the next

Our proximity to Miller State Park makes it a great asset in our effort to increase our visibility. We propose to meet with the NH Division of Parks of Recreation to discuss developing a MOA for assistance in outreach and education. The MOA would lay the foundation to work with the Miller State Park to increase public recognition and awareness of the refuge. Ideas for further discussion include having park personnel hand out refuge information at the park entrance toll booth. A small information panel might also be constructed and placed at the end of the park's trail, where visitors leave the park and enter the Joanne Bass Bross Preserve. That panel would explain the detrimental effects of allowing unleashed dogs on the trail system, and would help reduce such violations both on the refuge and in the park.

To help increase knowledge about the refuge in the local community, we propose to develop and distribute at the Wapack trailhead an interpretative brochure describing key habitats, species and sights that visitors should look for as they travel the refuge trails. We hope that the brochure would not only increase public knowledge of the refuge, but also improve the visitor experience.

Strengthening our relationships with federal, state and local elected officials can strengthen political support for the refuge and its programs. This alternative proposes that we provide updates on the refuge to Congress each year, or as significant issues arise. We would also work to increase refuge visibility among state and local elected officials by improving communication about refuge resources, issues, and visitor activities.

Strategies

Within 1 year of CCP approval

- Meet with the FOW to cooperate in developing an informational panel at the Wapack trailhead.

Within 5 years of CCP approval

- Install an informational panel at the northern trailhead of the refuge that includes general refuge information, rules and regulations, and contact information.
- Install standard "Welcome to the National Wildlife Refuge" signs at the refuge entrances of both the Ted and Carolyn's trails to notify hikers that they are entering a national wildlife refuge.
- Increase the number of boundary signs posted around the refuge, where necessary to make them intervisible.
- Meet with the NH Division of Parks and Recreation to discuss the possibility of developing a MOA for assistance with outreach and education.
- Develop an interpretative brochure that describes key habitats, species and sights that visitors should watch for as they travel along refuge trails.
- Provide congressional updates each year or as significant issues arise.
- Improve refuge visibility among state and local elected officials through improved communication.
- Create a more informative website to provide better orientation to the refuge.
- Contact various authors of hiking guides that refer to the Wapack refuge to update refuge resource and contact information.
- Contact publishers of regional hiking guides (e.g., Appalachian Mountain Club) to share accurate information about refuge trails.

Objective 2d. (Public Uses on the Refuge)

Within 1 year of the approval of this CCP, communicate our findings of appropriateness and compatibility determinations for refuge uses to the public, refuge partners, and elected officials.

Rationale for Objective

A compatible use is one “that will not materially interfere with or detract from the fulfillment of the mission of the Refuge System or the purposes of the refuge.” Please refer to “Policy on Appropriateness of Refuge Uses and Compatibility” in chapter 1 for additional, detailed information.

In 1994, we determined that the following activities on the refuge were compatible: berry picking, hiking/backpacking, jogging/walking, picnicking, cross-country skiing and snowshoeing, and observing and photographing wildlife. At least every 15 years, or sooner if new information warrants, we reevaluate our compatibility determinations for the six priority public uses: hunting, fishing, wildlife observation and photography, and environmental education and interpretation; we reevaluate all other uses every 10 years. Except for wildlife observation and photography, all of those compatibility determinations have passed their reevaluation date.

To comply with 2006 Service policy on appropriateness, we reevaluated all non-priority public uses and completed draft findings for these activities: berry picking; walking/hiking, backpacking, cross-country skiing, or snowshoeing; jogging; organized or facility supported picnicking; dog walking; research by non-Service personnel; camping; mountain biking; and, horseback riding. Appendix A includes those draft findings. Of those activities, we found jogging, picnicking, camping, mountain biking and horseback riding to be inappropriate; we would not allow them on the refuge.

Although we found jogging and picnicking compatible in 1994, this alternative would prohibit them. Since 1994, conditions at the refuge have changed and our new policies have raised the standard for determining appropriateness. We now feel the two activities could adversely impact refuge resources and other refuge visitors. An increase in refuge visitation and trail erosion has elevated our cause for concern about the effects on wildlife and public safety. After reevaluating those activities under current conditions and Service policies, we determined that they are not consistent with those policies and public safety and would hinder our ability to provide quality, wildlife-dependent recreation on the refuge. Furthermore, jogging and picnicking are rarely observed at the refuge, and they were not raised as activities of interest at our public scoping meetings. In our opinion, jogging would detract from the enjoyment of the refuge for other visitors engaged in wildlife dependent activities.

We reevaluated the compatibility determinations from 1994 as well as added a few others (e.g., dog walking, research by non-Service personnel). Prior to this CCP, no decision had ever been made on whether dogs were allowed on the refuge. Without a finding of appropriateness and a compatibility determination, this use technically is prohibited on the refuge. Alternative B would only allow dog walking if the dogs are leashed.

The public will have the opportunity to comment on all the draft compatibility determinations during the 30-day review and comment period for this draft CCP/EA.

Strategies

Within 1 year of CCP approval

- Develop outreach materials to communicate the prohibition of jogging, picnicking, camping, mountain biking, and horseback riding on the refuge.
- Work with partners and volunteers to monitor refuge uses and step up outreach and education on why these uses are considered inappropriate with refuge purposes.

Within 5 years of CCP approval

- With help from our partners, monitor dog walking to determine whether visitors are adhering to the “dog on leash” regulation. If we find that the majority are not complying, then we would prohibit dog walking altogether.

Goal 3. Enhance the conservation, management, and stewardship of wildlife resources through partnerships with public and private conservation groups, private landowners, State agencies and local entities.

Objective 3a. (Partnerships Focusing on Refuge Resources)

Within 15 years of the approval of this CCP, increase our efforts to maintain and expand partnerships with other federal agencies, state agencies, local conservation groups and individuals with similar conservation missions.

Rationale for Objective

The refuge is an unstaffed satellite of the Great Bay refuge. In 2008, both the Wapack and Great Bay refuges will become unstaffed satellites of the Parker River refuge in Newburyport, MA. Limited resources make it difficult for the Service to address key refuge issues, including data collection on refuge resources, trail maintenance, refuge access, outreach and education, and law enforcement. The refuge can receive help to deal with those issues through partnerships. They will be essential for this unstaffed refuge to accomplish its goals.

Goals 1 and 2 in alternative B propose several partnerships to fulfill our needs for inventorying and monitoring species and habitat. We propose to partner with several groups in the local community: the Monadnock Conservancy, the Society for the Protection of New Hampshire Forests, Open Space Committee of Greenfield, Piscataquaog Watershed Association, and local town conservation commissions. We would first contact each of these groups to converse about possible opportunities for their assistance in monitoring the refuge. That could range anywhere from general observations while hiking the trail, to detail analysis through scientific studies.

The Friends of the Wapack group is focused on maintaining the Wapack Trail both within and beyond the refuge. If we discover enough interest in the local community, we may consider forming a Friends of Wapack NWR group with a broader mission to help monitor refuge resources, facilitate visitor service programs, and advocate for the refuge with the local community and elected officials.

Goal 2, objective 2a proposes MOUs with the FOW and the Mountain View Hiking Club for trail maintenance. In conjunction with our proposed improvements to refuge access, under goal 2, objectives 2b and 2c, we identify partnerships with various groups to help establish a parking area and signage at the northern end of the refuge (Old Mountain Road). Those include the Town of Greenfield, Brantwood Camp, the NH Division of Parks and Recreation, and FOW. We would also like to pursue partnerships with the Harris Center for Conservation Education and the Brantwood Camp. They could play a crucial role in helping with environmental education and outreach.

The Harris Center is dedicated to promoting understanding and respect for our natural environment through education of all ages, direct protection and exemplary stewardship of the region's natural resources, and programs that encourage active participation in the great outdoors (Harris Center 2005). We would contact the Harris Center about distributing refuge information at their facility as well as using the refuge as a site for their outdoor programs and hiking trips. Although the refuge lacks an active environmental education program, the Harris Center could help in using the refuge as an outdoor classroom.

The Brantwood Camp provides a positive camping experience for boys and girls who would not otherwise have the opportunity to afford summer camp (Brantwood Camp 2007). Since the Brantwood Camp is adjacent to the refuge, it provides campers with a great opportunity to learn about nature without them having to travel too far. A part of their camping experience could incorporate a trip to the refuge, where the staff could introduce them to the forest ecosystem and the many species of wildlife that inhabit it. Outreach materials could also be handed out to campers at the main facility.

Our limited law enforcement capabilities are a concern on the refuge. We rely on the local community to be the “eyes and ears” of the refuge and continue to encourage notifying the refuge or the local conservation officer from the NHFG when any violations are observed. We would use this information to better focus our outreach efforts or refuge signage. We would continue work under the MOA for cooperative law enforcement with the NHFG (refer to alternative A, objective 3a). In addition, alternative B proposes to improve communication with the zone conservation officer from NHFG. The Service zone officer and the state conservation officer would discuss any new law enforcement issues, develop contingency plans for search and rescue operations, and/or discuss concerns that arise with implementing the CCP affecting NHFG.

Strategies

Within 1 year of CCP approval

- Meet with the FOW to cooperate in developing an informational sign, including refuge information, at the Wapack trailhead.

Within 2 years of CCP approval

- Complete a MOU with the FOW for trail maintenance on the refuge.
- Complete a MOU with the Mountain View Hiking club for trail maintenance on the refuge.
- Evaluate and monitor threats to the biological integrity of the refuge through a full forest health assessment to be completed by the USFS Forest Health Protection Program.
- Meet with the Town of Greenfield, Brantwood Camp, and the NH Division of Parks and Recreation to discuss possible partnership opportunities for establishing the parking area.
- Improve communication with the zone conservation officer from NHFG to discuss any new law enforcement issues or concerns that arise and possible solutions.

Within 5 years of CCP approval

- Meet with the NH Division of Parks and Recreation to discuss the possibility of developing a MOA for assistance with outreach and education.
- Contact various potential partners (i.e. Monadnock Conservancy, the Society for the Protection of New Hampshire Forests, Open Space Committee of Greenfield, Piscataquaog Watershed Association, and local town conservation commissions) to initiate a conversation about possible opportunities for assistance with refuge monitoring and inventories.
- Contact the Harris Center for Conservation Education and the Brantwood Camp to initiate a conversation about possible opportunities for education and outreach.
- Use partnerships (e.g., New Hampshire Audubon, The Nature Conservancy, Keene State College citizen survey group, local conservation groups, and individual volunteers) to collect data on vegetation and wildlife species on the refuge.

Objective 3b. (Partnerships Focusing on the Regional Landscape)

Over the next 15 years, expand our partnerships with state agencies, local conservation groups, town planning commissions, and individuals in support of regional land conservation.

Rationale for Objective

“Actions Considered but Eliminated from Detailed Study” in this chapter describes why we are not pursuing a refuge expansion. In chapter 1, we also identified regional land conservation partnerships that include the refuge. The first is the Quabbin to Cardigan Conservation Collaborative (Q2C). The second is the Temple to Crotched Community Conservation Corridor (see chapter 1). The refuge lies in both conservation planning areas.

We value the importance of land protection on the regional landscape, and would support those conservation efforts by offering assistance in identifying lands of high wildlife resource value, providing information for writing any management plans on the regional landscape, or identifying management techniques for various habitats and ecosystems. Although our ability to acquire refuge land is now limited, we believe we can provide unique expertise in support of those larger conservation efforts.

Strategies

Within 5 years of CCP approval

- Meet with the Society for the Protection of New Hampshire Forest and the Monadnock Conservancy to apprise them of what data we have available and what resources are available in other Service programs.

Over the next 15 years after CCP approval

- Provide support as requested to regional conservation efforts through identification of areas of high wildlife resource value and determination of proper management techniques for habitats and ecosystems.

Table 2.1. Highlights of respective alternatives' actions as they relate to goals

Refuge Resource or Program	Alternative A <i>Current Management</i>	Alternative B <i>Service-preferred alternative</i>
Goal 1. Allow natural processes and disturbances to provide biological diversity and integrity of upland wildlife habitat.		
Habitat and Species Management	<p>Continue to manage refuge in a “wilderness-like” setting; no development, minimal signs and other infrastructure</p> <p>Continue to allow natural succession and natural disturbances to occur without interference, unless extreme situations occur.</p>	<p><i>In addition to Alternative A:</i></p> <p>Set up meetings with various partners (i.e. NH Audubon, the Nature Conservancy, Keene State College citizen survey group, local conservation groups, and individual volunteers) to discuss possible partnership opportunities for conducting wildlife surveys, and collecting vegetation data, consistent with Service protocols.</p> <p>Partner with USFS to complete a full forest health assessment and help us identify what to evaluate and monitor as threats to the biological integrity on the refuge.</p> <p>Complete a Habitat and Species Inventory and Monitoring Plan. Prioritize projects and identify the appropriate peer-reviewed or agency approved protocols for inventories and surveys.</p>
Goal 2. Establish a public use program that will encourage compatible, low-impact recreation on refuge trails.		
Trail Maintenance	<p>Continue informal agreement with the Friends of the Wapack to maintain 1.1-mile Cliff Trail and the 4-mile segment of the Wapack Trail that runs through the refuge.</p> <p>Continue informal agreement with Mountain View Hiking club to maintain 3 miles of Ted’s and Carolyn’s Trails that traverse the refuge.</p>	<p>Complete an MOU with both the Friends of the Wapack and the Mountain View Hiking Club for trail maintenance on the refuge.</p> <p>Establish annual meetings with the Friends of the Wapack and the Mountain View Hiking Club to discuss and review plans for trail maintenance activity.</p> <p>Maintain communication with the Marshall family descendant (or designee) when major refuge projects planned</p>
Trailhead Improvements	<p>No improvements planned. Continue to direct visitor access to the Wapack trailhead at the northern end of the refuge via Old Mountain Road, and to the southern end of the refuge through Joanne Bass Bross Preserve, with parking at adjacent Miller State Park.</p>	<p><i>Continue to direct visitors to the refuge as in alternative A. In addition:</i></p> <p>Within 2 years, set up meeting with the Town of Greenfield, Brantwood Camp, Friends of the Wapack, and the NH DRED, Division of Parks and Recreation, to discuss partnership opportunities for establishing and maintaining year round parking area. If needed, pursue land purchase with partners from willing seller.</p> <p>Work w/engineer to determine location/design for the construction of parking area on Old Mountain Rd. Within 15 years, implement construction.</p>

Refuge Resource or Program	Alternative A <i>Current Management</i>	Alternative B <i>Service-preferred alternative</i>
<i>Service Visibility</i>	<p>Continue to allow FOW to maintain one informational sign at Wapack trailhead.</p> <p>Continue to maintain refuge boundary signs.</p>	<p>Install an informational panel at the Wapack trailhead of the refuge that includes general refuge information, rules and regulations and contact information.</p> <p>Install standard “Welcome to your National Wildlife Refuge” signs at the refuge entrances of both Ted and Carolyn’s Trails to notify trail users that they are entering a national wildlife refuge.</p> <p>Increase the number of boundary signs posted around the refuge to ensure they are intervisible.</p> <p>Meet with the NH Division of Parks and Recreation to discuss the possibility of developing a MOA for assistance with outreach and education.</p> <p>Provide congressional updates on an annual basis, or as significant issues arise.</p> <p>Improve refuge visibility among state and local elected officials through improved communication.</p> <p>Create a more informative website to provide better orientation to the refuge.</p>
<i>Public Uses on the Refuge</i>	<p>Continue to allow wildlife observation, photography, berry picking, hiking/backpacking, jogging/walking, picnicking, and snowshoeing and cross-country skiing.</p> <p>Continue to prohibit hunting, fishing, trapping, travel in or use of vehicles, and cutting of trees, except for the maintenance of trails (as listed in the deed).</p> <p>Continue to prohibit dog walking, camping, mountain biking, and horseback riding.</p>	<p>Finalize new findings of appropriateness and compatibility determinations for all refuge uses listed in alternative A. Differences from allowed uses in alternative A include formally opening refuge to dog walking on leash only, and closing the refuge to jogging and organized, or facility-supported, picnicking.</p> <p>Continue to prohibit hunting, fishing, trapping, travel in or use of vehicles, and cutting of trees, except for the maintenance of trails. Develop outreach materials to communicate prohibitions on jogging, picnicking, camping, mountain biking, and horseback riding on the refuge.</p> <p>Work with NH DRED, Division of Parks and Recreation, to develop outreach material on responsible dog walking.</p> <p>Monitor dog walking, with help from partners, to determine if visitors are adhering to “dogs-on-leash” regulation. If visitors are not complying, determine need for a prohibition on dog walking altogether.</p> <p>Work with partners and volunteers to monitor refuge uses and step-up outreach.</p>

Refuge Resource or Program	Alternative A <i>Current Management</i>	Alternative B <i>Service-preferred alternative</i>
Goal 3. Enhance the conservation, management, and stewardship of wildlife resources through partnerships with public and private conservation groups, private landowners, State agencies and local entities.		
<i>Partnerships</i>	<p>Continue to work under the MOA for cooperative law enforcement and search and rescue with the NHFG.</p> <p>Continue informal agreement with the Friends of the Wapack to maintain 1.1-mile Cliff Trail and the 4-mile segment of the Wapack Trail that run through the refuge.</p> <p>Continue informal agreement with Mountain View Hiking club to maintain 3 miles of Ted's and Carolyn's Trails that cross the refuge.</p>	<p><i>In addition to other partnerships listed above in Alternative B:</i></p> <p>Improve communication with zone conservation officer from NHFG to discuss any new law enforcement issues, develop contingency plans for search and rescue operations, and/or discuss any other concerns that arise with CCP implementation affecting NHFG.</p> <p>Contact various partners (i.e., Monadnock Conservancy, the Society for the Protection of NH Forests, Open Space Committee of Greenfield, Piscataquaog Watershed Association, and local town conservation commissions) to initiate conversation about possible opportunities for assistance with refuge monitoring.</p> <p>Contact the Harris Center for Conservation Education and the Brantwood Camp to initiate conversation about possible opportunities for assistance with education and outreach.</p> <p>Provide support as requested to regional conservation efforts through identification of areas of high resource value and determination of management techniques for habitats and ecosystems.</p>