

# Chapter 4: Future Management Direction: Tomorrow's Vision

## Introduction

The planning team developed goals and objectives for three management alternatives at Seney NWR. Cooperating agencies, conservation organizations, and Refuge staff all participated in this endeavor. The alternatives are:

- Alternative 1: Current Management Direction of Opportunistic Conservation, Restoration, and Preservation (No Action);
- Alternative 2: Management Gradient of Conservation Emphasis (Unit 1), to Conservation/Restoration Emphasis (Unit 2), to Restoration/Preservation Emphasis (Unit 3); to Wilderness Preservation (Unit 4)
- Alternative 3: Management to Emphasize Historic Patterns and Processes through Restoration and Wilderness Preservation (Unit 4).

The Environmental Assessment (Appendix A) describes and evaluates each alternative. The preferred alternative is Alternative 2 (Habitat Management Gradient), and this forms the basis for the Seney NWR CCP. The goals, objectives, and strategies are presented on the following pages. The planning team established goals for major management areas, objectives for achieving those goals, and the specific strategies that will be employed by Refuge staff. The goals are organized into the broad categories of wildlife, habitat, and people.

1. Goal 1: Wildlife – Preserve, conserve, and (where and when appropriate) restore the diversity of wildlife native to the eastern Upper Peninsula of Michigan; with an emphasis on Region 3 Conservation Priority Species (see Refuge species lists in Appendices)Goals, Objectives and Strategies.



*Seney NWR. USFWS photo.*

2. Goal 2: Habitat – Conserve the range of habitat conditions now found within the Refuge and (where and when possible) restore pre-European conditions once characteristic of the eastern Upper Peninsula of Michigan.
3. Goal 3: People – Provide visitors and the community with opportunities to experience quality, wildlife-dependent activities and to understand and appreciate the rich mosaic of wildlife and habitats found within the Eastern Upper Peninsula of Michigan.

## Goal 1: Wildlife

Preserve, conserve, and (where and when appropriate) restore the diversity of wildlife native to the eastern Upper Peninsula of Michigan; with an emphasis on Region 3 Conservation Priority Species (see Refuge species lists in Appendices).

### Objective 1.1. Trust Resources

Implement a monitoring program to track the presence, abundance, population trends, and/or habitat associations of select Trust Resources, including but not limited to Region 3 Conservation Priority Species, habitats, communities and ecosystems (e.g., patterned fen in Strangmoor Bog National Natural Landmark). As the need arises, implement research to answer questions that have been raised regarding the management of Trust Resources.

*Rationale:* The heterogeneity of Seney NWR, its position in the landscape, and its remoteness all contribute to its role as a place for many USFWS Trust Resources, including Region 3 Conservation Priority Species. Priority Species that currently inhabit Seney NWR include (but are not limited to) the gray wolf, Common Loon, Trumpeter Swan, American Bittern, Yellow Rail, Bald Eagle, Osprey, Northern Goshawk, Upland Sandpiper, Olive-sided Flycatcher, Black-throated Blue Warbler, Canada Warbler, Connecticut Warbler, Le Conte's Sparrow, and Bobolink. USFWS Trust Resources also include unique habitat types, communities and ecosystems. An example of the latter is the Strangemoor Bog National Natural Landmark, which constitutes the largest patterned fen in the Lower 48 States.

#### Strategies

1. Follow the monitoring plan.
2. Conduct annual review of monitoring plan to assess trends of Trust Resources and determine if there are any priorities for research or monitoring.
3. If a Trust Resource research issue has been identified, initiate research at the station level. If the issue goes beyond the boundary of the Refuge, take lead role in contacting other federal, state, university, and NGO partners and develop a broader scale research project to address those issues.



*Pine marten. USFWS photo.*

### Objective 1.2. Wildlife, Habitat, Community and Ecosystem Research

Promote applied research aimed at answering wildlife, habitat, community, and ecosystem-based questions without compromising wildlife, visitor, and Wilderness values.

*Rationale:* Applied research is an important component of management at Seney NWR. It is used when questions arise that cannot be answered via past experience, discussions with other management professionals, or a review of the literature. Often research is used to develop or evaluate a management technique to insure it is having the desired effect. Currently there are a number of research projects being conducted at the Refuge that will assist in directing future planning and management for wildlife species, their habitats, and associated communities and ecosystems.

#### Strategies

1. Monitor and assess research annually, including access for researchers and the location, duration, and impacts of research.
2. Promote applied research and initiate dialogue with federal and state agencies, universities, and NGOs to answer management questions.

3. Propose the development of Seney NWR as a Land Management Research and Demonstration Area. This would help the Refuge to become a leader in northern forest research, wetland ecology, and conservation and would enable the sharing of that knowledge with others to benefit both private and publicly-owned lands.
4. Seek external research funding through partnerships with others outside of the Service, where and when possible.
5. Communicate research findings with the broader conservation community through peer-reviewed and other publications, lectures, and other outreach activities.
6. Inform visitors of research findings and explain their importance for planning and management at Seney NWR.
7. Prioritize research on trust species, habitats, communities, and ecosystems of conservation priority.
8. Develop a better understanding as to how Refuge ecosystems function on a landscape and regional scale.

## **Goal 2: Habitat**

Conserve the range of habitat conditions now found within the Refuge and (where and when possible) restore to pre-European conditions once characteristic of the eastern Upper Peninsula of Michigan.

### **Objective 2.1. Scrub-Shrub**

Reduce this habitat type by 3,419 acres (-12 percent) from 2007 levels (28,954 acres). Manage remaining 25,535 acres for the diversity of species present, including Region 3 Conservation Priority Species American Woodcock and Black-billed Cuckoo.

*Rationale:* This dominant habitat type of the Refuge has been increasing due to the lack of an ecological disturbance and the natural succession of the Open Wetland habitat type (see below). Plant species currently dominant in this habitat type include willow, bog birch, and tag alder. These species can form dense stands that alter hydrology and limit fire as the primary natural ecological disturbance. The rate and extent of the secondary succession, in

this habitat type, has likely increased relative to pre-European times due to altered hydrology and lack of fire.

Historically, Seney NWR had large expanses of open fens that were dominated by *Carex* and other graminoid species. This is clearly evident from aerial photographs taken in the 1930s. However, many years of fire suppression and altered hydrology (Walsh Ditch) have resulted in the encroachment of trees and shrubs into these open fens and bogs, altering vegetation structure and community (White 1965, Middleton 2002, Brisson et al. 2006). Open fens are important habitat for Yellow Rail, LeConte's Sparrow and Sedge Wren, which are considered priority species for Bird Conservation Area 20 (Partners In Flight) and are listed as species of special concern by the U.S. Fish and Wildlife Service – Region 3. There have been documented positive responses by rails to prescribed burning to reduce woody vegetation in the open fens from previous studies at Seney NWR (Burkman 1993) and from current research (Dr. Jane Austin pers. comm.). Figure 15 depicts future landcover conditions and Table 10 on page 63 describes the changes in vegetative cover with implementation of the CCP.

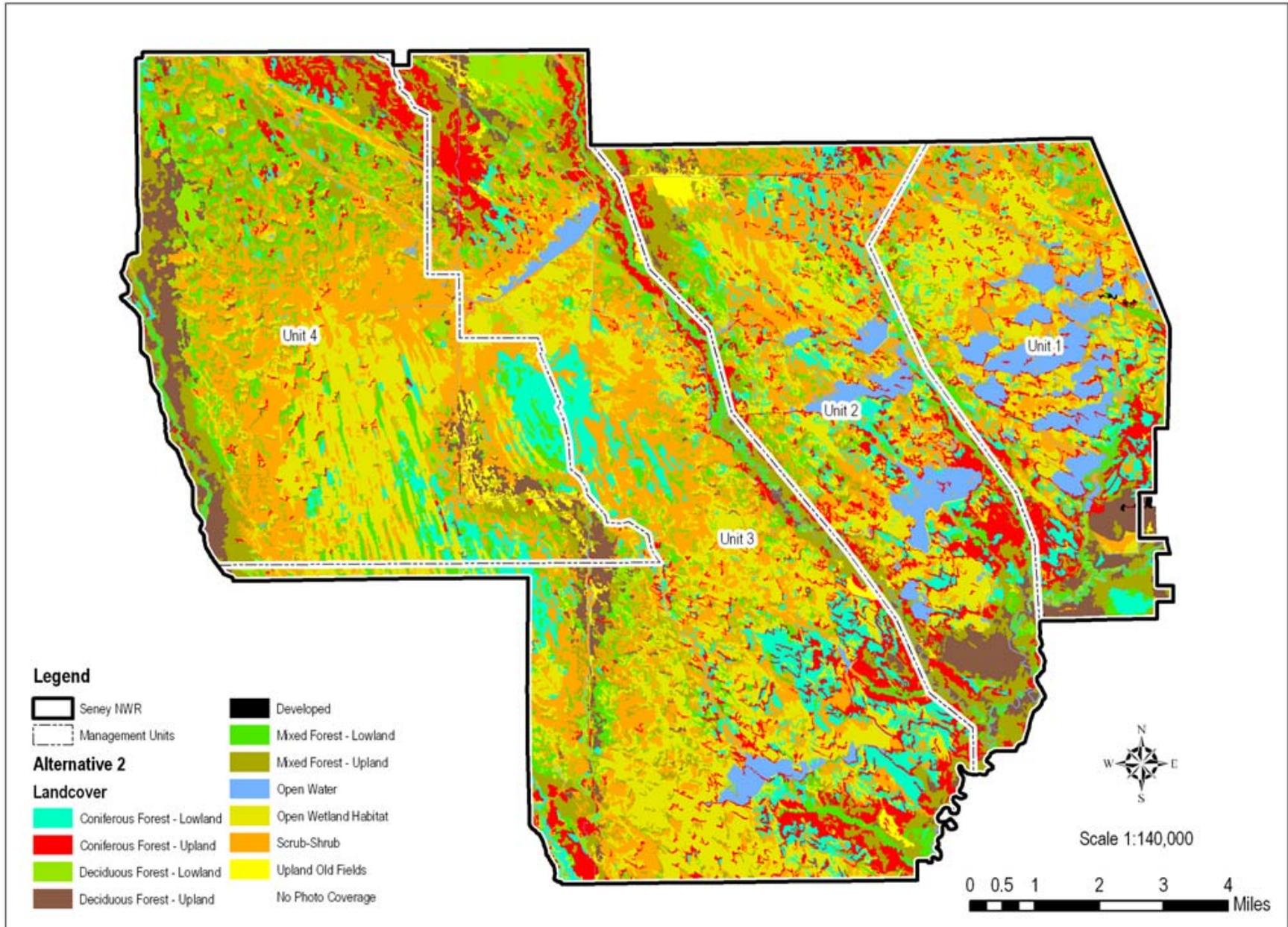
### Strategies

1. Modify annual burn plans to delineate target areas and target acres.
2. Add 122 acres by eliminating Spur Pools and Delta Creek Pool.



*Cattails, Seney NWR. USFWS photo.*

Figure 15: Future Landcover, Seney NWR



**Table 10: Changes in Vegetative Cover Types, Seney NWR**

Habitat Type	Current Management Direction (Acres)	Future Goal (Acres)	Acres and % Change
Scrub-Shrub	28,954	25,534	-3,551 (-12)
Open Wetlands	16,616	20,464	3,848 (+23)
Mixed Forest – Uplands	11,396	11,396	(0)
Coniferous Forest – Uplands	8,857	8,952	95 (+1)
Mixed Forest – Lowlands	8,221	8,221	(0)
Coniferous Forest – Lowlands	7,825	7,825	(0)
Open Water (Pools, Rivers, etc.)	5,104	4,676	-428 (-8)
Deciduous Forest – Uplands	4,372	4,600	232 (+5)
Deciduous Forest – Lowlands	2,515	2,515	(0)
Upland Old Fields and Openland	1,302	979	-327 (-25)
Total	95,162	95,162	

- In Unit 1, reduce acreage by 1,002 (north end of Unit).
- In Unit 2, reduce acreage by 886 (A-2 Pool area).
- In Unit 3, reduce acreage by 1,653 (Marsh Creek Pool and C-3 Pool areas).

### Objective 2.2. Open Wetlands

Increase this habitat type by 23 percent or 3,847 acres from 2007 levels (16,617 acres). Manage the resulting 20,464 acres through prescribed fire for the diversity of species present, including Region 3 Conservation Priority Species American Bittern, Le Conte's Sparrow, Northern Harrier, Sedge Wren, and Yellow Rail.

*Rationale:* Sedge-bluejoint grasses and sphagnum-leatherleaf make up the greatest amount of acreage of this habitat type. These areas are dominated by 13 known species of the genus *Carex*. Included within these vast stands of sedges are smaller stands and or pockets of bluejoint grass, cattail, and leather leaf. Also occurring within these vast stands are sphagnum hummocks that protrude on the landscape. Continued active management is necessary to maintain this important habitat type and prevent it from succeeding into scrub shrub.

### Strategies

- Continue research that promotes the understanding of how this habitat type functions. Parameters to be measured should include hydrology (surface and subsurface water flow), soils, and vegetation response to management actions.
- Use prescribed and natural fire, where and when appropriate (3,541 acres).
- In Unit 2, add 306 acres in T-2 East Pool.
- Continue monitoring Region 3 Conservation Priority Species response before, during and after management actions.

### Objective 2.3. Mixed Forest – Uplands

Maintain 2007 acreage (11,396 acres), diversity of seral stages, and (where and when possible) restore historic composition and structure for the diversity of species present, including Region 3 Conservation Priority Species American Woodcock, Black-throated Blue Warbler, Canada Warbler, Connecticut Warbler, gray wolf, and Northern Goshawk.

*Rationale:* This broad habitat type contains a wide range of forest conditions, from those composed primarily of early successional species such as aspen and jack pine to forest dominated by sugar maple, yellow birch, white pine, and eastern hemlock. Much of this habitat type, both on the Refuge and throughout the eastern Upper Peninsula, has undergone considerable alteration relative to pre-European times. Its composition has been shifted to more early successional species, with a relatively uniform age structure. This is markedly different than benchmark conditions, which contain greater tree species and structural diversity. Future management should focus on promoting ecological integrity of these stands by promoting compositional and structural diversity, and (in most instances) move succession forward to emulate later seral stage characteristics.

#### Strategies

1. Understand the natural disturbance regime inherent to the forest types within this broad habitat and work within the confines of seral pathways dictated by soil, climate, and hydrology.
2. Promote stands dominated by early seral stages of mixed forest at the Refuge periphery.
3. Promote stands dominated of later seral stages of mixed forest in the Refuge interior.
4. In managed stands, promote increased compositional and structural heterogeneity, including large-diameter coarse woody debris and snags.
5. Use management techniques that emulate natural ecological disturbances (e.g., single tree mortality for multi-aged stands, stand (cohort) replacement for even-aged stands).
6. Use commercial and non-commercial mechanical treatments, where and when appropriate.
7. Use prescribed and natural fire, where and when appropriate.
8. Ensure white-tailed deer populations do not negatively affect the habitat.
9. Manage invasive species aggressively (see below).

#### **Objective 2.4. Coniferous Forest – Uplands**

Increase acreage from 2007 levels (8,857 acres) by 95 acres to 8,952 acres (+1 percent), maintain diversity of seral stages, and restore historic composition and structure when and where possible. Region 3 Conservation Priority Species using this habitat type on the Refuge include Cape May Warbler; gray wolf, Northern Flicker, Olive-sided Flycatcher, and Whip-poor-will.

*Rationale:* Of the upland habitat types on the Refuge, upland coniferous forest has undergone the greatest alteration and has the greatest potential for restoration. Pre-European settlement, most forest stands in this habitat type consisted primarily of long lived red and white pine, with a minor component of jack pine, aspen, and other overstory species. Exploitive and utilitarian forest management practices and subsequent wildfires fed by logging slash converted thousands of acres to second growth aspen and jack pine in the region, including the Refuge. By some estimates, less than 1 percent of the area formerly covered by the late successional stage of this habitat type still exists in the eastern Upper Peninsula. Fortunately, the Refuge has remote pine islands that were never harvested and these serve as benchmarks for restoration of this habitat type. Per the station's Biological Review, future management should focus on promoting ecological integrity of these stands and (where and when possible) restore composition and structure to benchmark conditions.



*American beech with black bear claw marks, Seney NWR. USFWS photo.*

Strategies

1. Understand and emulate the natural disturbance regime inherent to the forest types within this broad habitat type and work within the confines of seral pathways dictated by soil, climate, and hydrology.
2. Increase 95 acres from West Walsh Farm and East Walsh Farm.
3. Promote stands dominated by early seral stages at the Refuge periphery.
4. Promote stands dominated by later seral stages in the Refuge interior.
5. In managed stands, promote increased compositional and structural heterogeneity, including large-diameter coarse woody debris and snags.
6. Use management techniques that emulate natural ecological disturbances (e.g., single tree mortality for multi-aged stands, stand (cohort) replacement for even-aged stands in other instances).
7. Use commercial and non-commercial mechanical treatments, where and when appropriate.
8. Use prescribed and natural fire, where and when appropriate.
9. Ensure white-tailed deer populations do not negatively affect the habitat
10. Manage invasive species aggressively (see below).

**Objective 2.5. Mixed Forest – Lowlands**

Maintain 2007 acreage (8,221), diversity of seral stages, and (where and when possible) restore historic composition and structure for the diversity of species present, including Region 3 Conservation Priority Species American Woodcock, Cape May Warbler, Canada Warbler, gray wolf, and Olive-sided Flycatcher.

*Rationale:* It is unknown how altered this habitat type is at the Refuge relative to its historic condition. Since Refuge establishment, relatively little active management has occurred in this habitat type. Future management should focus on assessing the condition of this habitat type and promote ecological integrity of these stands.

Strategies

1. Understand and emulate the natural disturbance regime inherent to the forest types within this broad habitat type and work within the confines of seral pathways dictated by soil, climate, and hydrology.
2. In managed stands, promote increased compositional and structural heterogeneity, including large-diameter coarse woody debris and snags.
3. Use management techniques that emulate natural ecological disturbances (e.g., single tree mortality in some instances and stand replacement in other instances).
4. Use commercial and non-commercial mechanical treatments, where and when appropriate.
5. Use prescribed and natural fire, where and when appropriate.
6. Ensure white-tailed deer populations do not negatively affect the habitat .
7. Manage invasive species aggressively (see below).

**Objective 2.6. Coniferous Forest-Lowlands**

Maintain 2007 acreage (7,825 acres), diversity of seral stages, and (where and when possible) restore historic composition and structure for the diversity of species present, including Region 3 priorities Cape May Warbler, gray wolf, Northern Flicker, and Olive-sided Flycatcher.

*Rationale:* Relative to pre-European benchmark conditions, this habitat type is thought to be relatively unaltered at the Refuge. Other than the cutting of white cedar trees for boundary posts, relatively little active forest management has occurred in this habitat type. Changes, however, to the hydrology at the Refuge have likely adversely impacted this habitat type in some areas. Tamarack, for instance, is likely less of a component of some forest stands due to hydrologic alterations. Restoring the hydrology of some areas may help restore this species. Future management should focus on promoting ecological integrity of these stands.

### Strategies

1. Understand and emulate the natural disturbance regime inherent to the forest types within this broad habitat type and work within the confines of seral pathways dictated by soil, climate, and hydrology.
2. In managed stands, promote increased compositional and structural heterogeneity, including large-diameter coarse woody debris and snags.
3. Use management techniques that emulate natural ecological disturbances (e.g., single tree mortality in some instances and stand replacement in other instances).
4. Use commercial and non-commercial mechanical treatments, where and when appropriate.
5. Use prescribed and natural fire, where and when appropriate.
6. Restore hydrology, where adversely impacted.
7. Ensure white-tailed deer populations do not negatively affect the habitat
8. Manage invasive species aggressively (see below).

### **Objective 2.7. Open Water**

Reduce acreage from 2007 level (5,104 acres) by 428 acres (-8 percent), and manage remaining 4,676 acres for the diversity of species present, including Region 3 Conservation Priority Species Bald Eagle, Common Loon, Trumpeter Swan, and Wood Duck.

*Rationale:* Except for beaver ponds, open water was not very prominent on the landscape prior to Refuge establishment. According to Refuge notes, there was only one named body of water on the Refuge, which was located near M-2 Pool. The majority of area in this habitat type is mainly confined to the Refuge's 27 pools, of which 21 have water control capability. Other sources of open water consist of beaver ponds and the creeks, ditches and rivers that fill the pools. Submerged aquatic vegetation and associated invertebrates provide essential food for waterbirds. Submergents are present throughout the marsh but reach their greatest densities in open bays free of emergents. The Refuge has documented over 35 species of submergents, including 16

species of pondweed. The pools should continue to be managed for the Region 3 Conservation Priority Species listed above. Any pool that is not contributing to the life history strategies of the Region 3 Conservation Priority Species list or inhibits the natural function and processes of wetlands on a landscape scale will be considered for removal.

### Strategies

1. Continue managing the pools in accordance with the 1993 Long Range Marsh and Water Management Plan until CCP has been implemented.
2. Upon CCP implementation, develop new Marsh and Water Management Plan with new goals and objectives that support the CCP and mission of the Refuge.
3. Continue yearly monitoring of waterbird use of the pools.
4. Continue monitoring fisheries of the pools every 3 to 5 years.
5. Develop fish population data (species, age class, etc) for each pool
6. Continue monitoring aquatic vegetation every 5 years.
7. Remove the dikes at Spur Pools, Delta Creek and T-2 (East). Conduct appropriate biotic and abiotic monitoring, before, during and after these projects.
8. Maintain all remaining water control infrastructure.

### **Objective 2.8. Deciduous Forest – Uplands**

Increase deciduous forest acreage from 2007 levels (4,372 acres) by 232 acres (+5 percent) and manage the resulting 4,600 acres to maintain the diversity of seral stages and (where and when possible) restore historic composition and structure for the diversity of species present, including Region 3 Conservation Priority Species American Woodcock, Black-throated Blue Warbler, gray wolf, and Northern Goshawk.

*Rationale:* Throughout the eastern Upper Peninsula and at the Refuge, this habitat type (with a small conifer component) is considerably altered relative to pre-European benchmark conditions. Now, more so in times past, this broad habitat type



*Lady's slipper, Seney NWR. USFWS photo.*

is characterized by forests in earlier seral stages and with a considerable aspen component. Late successional stages of this habitat type have in particular undergone considerable alteration relative to pre-European benchmark conditions, both within the eastern Upper Peninsula of Michigan and at the Refuge. In most late successional stands, composition has been shifted from a mixed forest community to one primarily dominated by shade-tolerant maple species. Fewer individuals of species such as yellow birch (not to mention the minor conifer component of white pine, eastern hemlock and white spruce) are now found. At the Refuge, this habitat type is found in scattered stands, usually on the most nutrient-rich soils. In many of these forest stands, prior logging for exploitive and utilitarian reasons has degraded stand composition and structure relative to pre-European benchmark conditions, and Beech Bark Disease has further exacerbated these problems by causing mortality in one of the few native hard mast-producing species at the Refuge (American beech). Future management should focus on promoting ecological integrity of these stands by emulating gap dynamics, promoting composition and structural diversity, and (in most instances) move succession forward to emulate later seral stage characteristics.

#### Strategies

1. Understand the natural disturbance regime inherent to the forest types within this broad habitat type and work within the confines of seral pathways dictated by soil, climate, and hydrology.
2. Eliminate the following old fields, either passively by allowing forest succession to occur or promote forest succession by plantings:

Smith Field (22 acres), Sub-Headquarters Field (64 acres), Conlon Farm (39 acres), Chicago Farm (97 acres), and miscellaneous forest openings (10 acres).

3. In managed stands, promote increased compositional and structural heterogeneity, including large-diameter coarse woody debris and snags.
4. Promote early seral stages dominated by aspen at the Refuge perimeter.
5. Stands with late seral characteristics should be conserved wherever they exist, and restored in the interior of the Refuge.
6. Enhance representation of more uncommon species such as yellow birch and eastern hemlock, and conserve as much American beech as possible.
7. Use management techniques that emulate natural ecological disturbances (e.g., single tree mortality in late seral stands).
8. Use commercial and non-commercial mechanical treatments, where and when appropriate.
9. Ensure white-tailed deer populations do not negatively affect the habitat
10. Manage invasive species aggressively (see below).

#### **Objective 2.9. Deciduous Forest-Lowlands**

Maintain acreage at 2007 levels (2,515 acres), diversity of seral stages, and (where and when possible) restore historic composition and structure for the diversity of species present for the diversity of species present, including Region 3 Conservation Priority Species American Woodcock, Black-throated Blue Warbler, gray wolf, and Northern Goshawk.

*Rationale:* This habitat type has seen relatively little management in the past at the Refuge and is not considered drastically altered relative to pre-European benchmark conditions. Future management should focus on gap dynamics and promoting composition and structural diversity while moving succession forward in most areas.

No active management is called for in this habitat type.

### Strategies

1. Understand and emulate the natural disturbance regime and work within the confines of seral pathways dictated by soil, climate, and hydrology.
2. Ensure white-tailed deer populations do not negatively affect the habitat.
3. Manage invasive species aggressively (see below).

### **Objective 2.10. Upland Old Fields and Openland**

Reduce openland habitat from 2007 levels (1,302 acres) by 327 acres (-25 percent) and manage the remaining 979 acres for the diversity of species present, including Region 3 Conservation Priority Species American Woodcock, Bobolink, Upland Sandpiper, and Northern Harrier.

*Rationale:* This habitat type consists of primarily anthropogenic habitats created prior to the Refuge establishment in 1935. Many non-native grass species, such as Kentucky bluegrass and several brome species, characterize these areas. Other than Diversion Farm (which because of its size and location offers habitat for a number of species of Regional Conservation Priority), most fields should be either allowed to naturally succeed to forests or be actively managed to do so.



*Severe forest burn site, Seney NWR. USFWS photo.*

### Strategies

1. Conserve Diversion Farm using a combination of tools, including prescribed fire and mowing.
2. Elsewhere, restore fields to upland deciduous forest stands either passively through natural secondary succession or through active management that could include planting of seedlings (see above).
3. Ensure white-tailed deer populations do not negatively affect the habitat
4. Manage invasive species aggressively (see below).

### **Objective 2.11. Invasive Species Management**

By 2020, reduce the area infested with target invasive plant species (e.g., glossy buckthorn, tartarian honeysuckle, multi-flora rose) by 50 percent from the documented 2007 level and eliminate new infestations of these and other highly invasive species as they occur.

*Rationale:* Many exotic plants and pathogens have been identified at the Refuge, with many being invasive. Moreover, more invasive species are expected to arrive in the area in the future. Management should strive to assess the threat these species have on native ecosystem/habitat structure and function and (for those species that constitute the greatest threats) an active management and monitoring program should ensue.

### Strategies

1. When available, use biological control as a preferred strategy.
2. Use chemical, mechanical, prescribed and natural fire (where appropriate) as means to manage infestations in cases where biological control techniques have not been developed.
3. Monitor the infestations and effectiveness of management measures.
4. Document the locations and sizes of targeted populations.

**Goal 3: People**

Provide visitors and the community with opportunities to experience quality, wildlife-dependent activities and to understand and appreciate the rich mosaic of wildlife and habitats found within the Eastern Upper Peninsula of Michigan.

**Objective 3.1: Hunting**

Provide 200 days of quality upland hunting experiences per year with fewer than 10 complaints annually.

To evaluate improvements across the entire visitor services program and summarize progress, the Refuge will use the evaluation standards of RAPP (Refuge Annual Performance Plan). RAPP measures act as a general indicator of how successful management is in satisfying the criteria for quality of recreation use as described in the Service Manual Chapter 605 FW1.6. RAPP identifies 11 criteria for evaluating the quality of the priority wildlife-dependent recreational activities. By applying the 11 criteria to each use, a quality ranking factor can be assigned. The Refuge program for the specific use is considered “good” if you meet eight to 11 of the criteria; “fair” if you meet five to seven; and “poor” if you meet zero to four. One example of a criterion is “promotes safety of participants, other visitors and facilities.” Some improvements are clearly needed and inferred from the criteria in the Service manual.

These improvements are identified in the following paragraphs in the strategies and under the strategies of the wildlife dependent activities listed in the next objectives. As the visitor services program of the Refuge matures and more details are specified in a visitor services plan, the Refuge will be able to move to more direct and specific measures of recreation quality. These direct measures will include a survey of visitors.

Strategies

1. Continue annual small game hunting opportunities (grouse, woodcock, hare) within framework of MDNR and Refuge restrictions.
2. Continue annual firearms and archery white-tailed deer and black bear hunting opportunities (within framework of Michigan DNR and Refuge restrictions).



*Refuge exhibit at a local art festival, Seney NWR. USFWS photo.*

3. Continue to provide camping opportunities and open roads during white-tailed deer firearms season.
4. Eliminate toxic shot for all species except white-tailed deer and black bear.
5. Conduct counts to determine numbers of Ruffed Grouse, American Woodcock and snowshoe hare hunters.
6. Develop operational definition of success and measures for hunting through a survey of hunter satisfaction.

**Objective 3.2: Fishing**

Provide 125 days of quality fishing experiences per year with fewer than 10 complaints annually.

Strategies

1. Maintain an accessible fishing platform.
2. Maintain roads for fishing route.
3. Maintain fish line disposal containers.
4. Continue the Children's Fishing Day event.
5. Provide a fishing platform at the Wigwam access area.
6. Conduct a count to determine the number of anglers.
7. Develop an operational definition of success and measures for fishing through a survey of angler satisfaction.

### **Objective 3.3: Wildlife Observation and photography**

Provide year-round opportunities for at least 25,000 visitors annually to observe and photograph wildlife and habitat.

#### Strategies

1. Continue annual amateur photo contest.
2. Maintain 7-mile Marshland Wildlife Drive.
3. Maintain 1.4-mile hiking trail.
4. Maintain 10 miles of groomed ski trails.
5. Maintain six viewing platforms with scopes and interpretive panels.
6. Provide viewing platform at Wigwams access area.
7. Provide guided photo opportunities and/or workshops.
8. Increase facilities (i.e. trails, observation platforms) at Whitefish Point.
9. Develop operational definition of success and measures for wildlife observation and photography through a survey of visitor satisfaction.

### **Objective 3.4: Environmental Education and Interpretation**

Annually provide no fewer than 400 quality environmental education experiences and 700 quality interpretive experiences per year to promote an understanding of the rich mosaic of wildlife and habitats found within the eastern Upper Peninsula.

#### Strategies

1. Provide facilities and programs for area schools, universities, community groups, and other Refuge visitors, with a message that emphasizes the importance of habitat diversity, natural patterns and processes, and wildlife management.
2. Increase use of education trunks.
3. Continue to provide interpretive programs, events, festivals, tours for Refuge visitors, with a message that emphasizes habitat diversity, natural patterns and processes, and wildlife management.

4. Conduct at least two special events, 12-24 auto tours, and 12-24 programs on-site to interpret the Refuge, its habitat diversity, natural patterns and processes, and wildlife management.
5. Maintain interpretive signs/panels on nature trail and viewing platforms.
6. Provide and maintain 14 kiosks that orient visitors and help interpret habitats, wildlife, management, and regulations (Figure 16).
7. Increase programming and use of facilities for environmental education activities for area schools, universities, community groups, and other Refuge visitors, with a curriculum-based message that emphasizes habitat diversity, natural patterns and processes, and wildlife management.
8. Develop an operational definition of success and measures for environmental education.
9. Encourage partnerships with local schools, community groups and surrounding agencies.
10. Provide teacher workshops with partner schools.
11. Increase environmental education and interpretation presence at Whitefish Point.
12. Develop operational definition of success and measures for interpretation through a survey of visitor satisfaction.
13. Update the Refuge orientation slide show using new DVD technology.
14. Hire a full-time visitor services manager.
15. Replace the Refuge Visitor Center and office (see Chapter 5).
16. Improve parking site to accommodate trailers used by Refuge volunteers.

### **Objective 3.5: Protection of Cultural Resources**

Ensure archeological and cultural values are described, identified, and taken into consideration prior to implementing undertakings. (The intent of this objective is to cover Section 106 of the National Historic Preservation Act and Section 7(e)(2) of the FWS Improvement Act.)



Educational display, Seney NWR. USFWS photo.

*Rationale:* The historic and pre-historic artifacts on the Refuge are limited and irreplaceable national treasures. Many of the sites have been identified but not researched.

#### Strategies

1. Initiate a Cultural Resources Management Plan within 3 years of CCP approval that incorporates all existing surveys and investigations and identifies future needs. Develop a step-down plan for surveying lands to identify archeological resources and for developing a preservation program. (The intent of this statement is to meet the requirements of Section 14 of the Archaeological Resources Protection Act and Section 110(a)(2) of the National Historic Preservation Act.)
2. Prepare a museum property Scope of Collections Statement for the Refuge. (The intent of this statement is to meet the requirements of the DOI Departmental Manual, Part 411.)
3. Develop an oral cultural history to preserve the “community memory” about the area.
4. Explore the idea of converting the CCC cabin into an historic/cultural museum.

### **Objective 3.6: Cultural Resources Appreciation**

Seventy percent of visitors will understand and appreciate the cultural history of the Refuge.

#### Strategy

1. Incorporate cultural history messages into programs, exhibits and other media with an emphasis on use of the Refuge landscape throughout time.

### **Objective 3.7: Whitefish Point Unit**

Within 5 years of CCP completion, implement the Service’s provisions of the 2002 Human Use/ Natural Resource Management Plan for Whitefish Point.

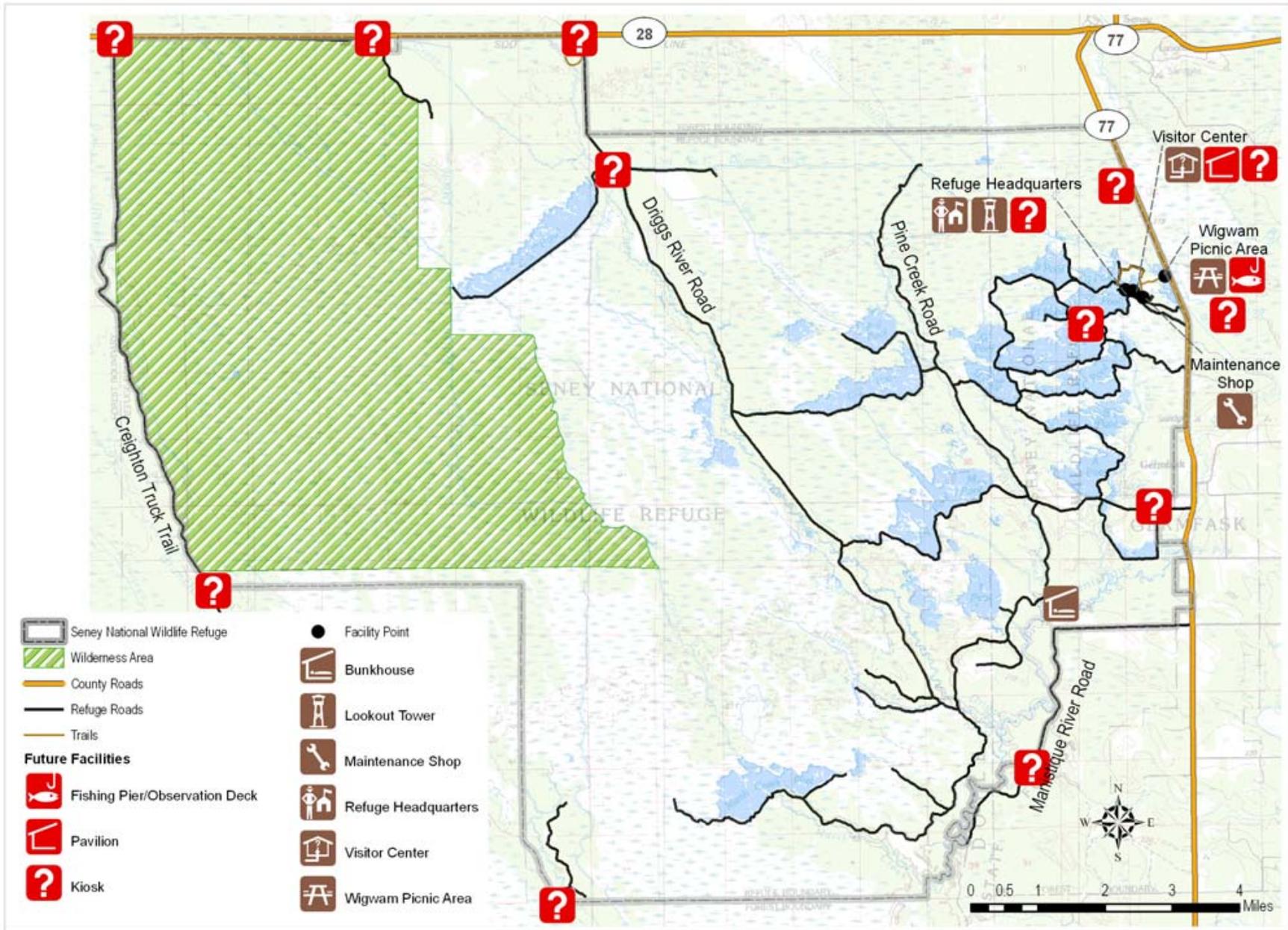
*Rationale:* As mentioned in Chapter 1, Seney NWR manages 33 acres of the former Coast Guard Station at Whitefish Point. Currently there are no permanent buildings or designated trails on the property and the USFWS does not administer any programs on site. However, Human Use Plan obligates the USFWS to provide some minor facilities at the site. As of 2008, no funds have been designated to implement these provisions.

The Refuge will work with a Joint Committee, which consists of Michigan Audubon Society, Great Lakes Shipwreck Historical Society and the Service, to implement provisions of the Human Use Natural Resource Management Plan for Whitefish Point. Specifically the Refuge shall take the following actions on its lands to protect the fragile habitat at the Point for the wildlife that depend upon it.

#### Strategies

1. Designate trails to allow public access while protecting environmentally sensitive areas. One trail will lead from the parking lot to the tip of the Point. The second will run along an old cobble road in a southeasterly direction.
2. Close the southeast beach from April to August to promote nesting of Piping Plovers.
3. Work with the GLSHS to route visitors to the beach via their boardwalk and revegetate the cut-through from the parking lot to the beach.
4. Hire a Refuge Manager trainee with a major responsibility for on-site work, mitigation approvals and coordination with partners.

**Figure 16: Future Visitor Facilities and Seney NWR**



5. Occupy a portion of a second keeper's quarters if the building is re-constructed. The building will also be used by other partners to the Whitefish Point plan.

*Strategy*

1. Consider recreational access requests on a case-by-case basis.

### 3.8 Other Recreational Access

Provide additional access opportunities upon request on a case-by-case basis if compatible with Refuge purposes.

*Rationale:* Occasionally, the Refuge receives requests for access to portions of the refuge for events or activities. The access requests may not be solely for a wildlife-dependent activity. Two activities, horseback riding and snowmobile riding (on the Refuge perimeter) were mentioned during public scoping for the CCP.

*Horseback Riding:* Several members of the community have requested access to Refuge roads for horseback riding. They desire an area to ride where disturbance by motor vehicles is minimal. This is particularly important for young riders or young horses. Currently the nearest dedicated horseback trail is 50 miles away. While horseback riding is not a wildlife dependent activity, it could be permitted on a limited basis provided riders are willing to clean up manure after each ride. The concern is that horses may deposit seeds of invasive species on the Refuge. Permission would be granted under a Special Use Permit and riders would be restricted to designated roads.

*Snowmobiling:* The Seney Snowmobile Club and Michigan Snowmobile Association are planning to construct a snowmobile along State Highway 77, which is the Refuge's eastern boundary. There intent is to connect the towns of Seney and Germfask to existing trails south of the Refuge. The existing trail bypasses the town of Germfask and its safety is often compromised by winter logging activities. Most of the trail would be in the highway right-of-way, however there are several areas where the trail may impinge on Refuge property. Given that snowmobiling occurs in the winter when most wildlife have migrated from the Refuge and proposed trail will be along a state highway on the edge of the Refuge, consideration of the plan should be given when a proposal is completed. A concern is the potential use of the proposed trail by ATV traffic during the non-winter months when wildlife is abundant.