U.S. Fish & Wildlife Service

Tamarac

National Wildlife Refuge

Summary

Draft Comprehensive Conservation Plan and Environmental Assessment

July 2010

Comments Sought on Draft CCP/EA for Tamarac NWR and Tamarac WMD

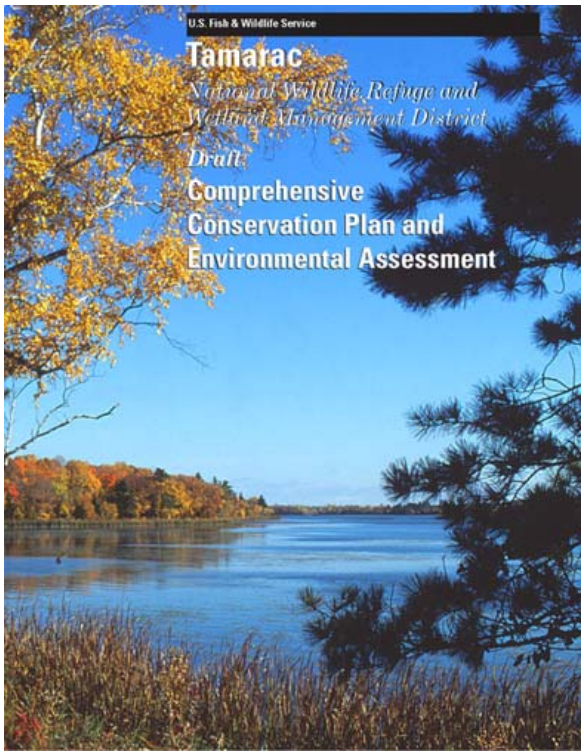
The U.S. Fish and Wildlife Service (Service) has completed a Draft Comprehensive Conservation Plan and Environmental Assessment (Draft CCP/EA) that describes the goals, objectives and strategies established to guide Tamarac National Wildlife Refuge and the Tamarac Wetland Management District for the next 15 years.

The Draft CCP/EA is currently available for public review and comment. The document is available on-line, and it is available on a compact disk in portable document format (pdf). A limited number of paper copies are available at the Refuge Headquarters.

The public review period is an opportunity for everyone who cares about the future of Tamarac NWR and the Tamarac WMD to review the proposed management direction and comment on it.

This summary describes the proposed Refuge management, describes the management alternatives considered in planning, and describes how people can submit comments on the Draft CCP.

Contents



See the CCP

You can view the full Draft CCP/EA on-line at:
http://www.fws.gov/midwest/planning/Tamarac

Paper copies of the CCP are available at several libraries, including:

- Detroit Lakes Public Library
- Bagley Public Library
- Park Rapids Public Library
- Moorhead Public Library
- Frazee Library
- Mahnomen Library
- Perham Area Public Library
- Lake Park Library
- Hawley Library
- Pelican Rapids Public Library

Copies of the plan are also available at the Refuge. You can request a copy in a variety of ways:

E-mail the Refuge at:
Tamarac@fws.gov

Call the Refuge at: 218/847-2641

Mail a request to:

Tamarac NWR
Attention: CCP Request
35704 County Road 26
Rochert, MN 56578

	Tamarac NWR	Tamarac WMD
Purpose	▪ "... as a refuge and breeding ground for migratory birds and other wildlife: ..." Executive Order 7902, dated May 31, 1938. ▪ "... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. 715d (Migratory Bird Conservation Act)	▪ "... as Waterfowl Production Areas" subject to "... all of the provisions of such Act [Migratory Bird Conservation Act]... except the inviolate sanctuary provisions..." 16 U.S.C. 718(c)
Vision	Tamarac National Wildlife Refuge is treasured as an ecologically and culturally rich landscape of rolling forested hills interspersed with shallow lakes, rivers and marshes that nurtures a unique and diverse assemblage of plants and animals. Towering red and white pine intermingle with aspens, majestic old growth forests, jack pine barrens and tamarack-spruce bogs. In the land where food grows on water, bountiful wild rice provides for future generations of wildlife and native people. From the vibrant emergence of spring woodland wildflowers to the rich colors of autumn to the quiet hush of winter, people come to revitalize their spirit and connect with a rich wildlife heritage. Tamarac NWR will remain resilient to human influences and provide an unbroken landscape of native plant communities to support healthy and productive native fish and wildlife populations.	Tamarac Wetland Management District is a picturesque canvas of a natural landscape transitioning from boreal peatlands to mixed forests of aspen, birch and pine. This diverse landscape affords the District unique opportunities to develop innovative partnerships centered on habitat restoration and water quality improvements. The District working with landowners and partners will strive to maintain healthy ecological systems providing habitat continuity beyond boundaries to support a diversity of wildlife. The District will serve as a model of land stewardship and restoration practices while providing demonstration sites for scientifically proven wildlife and natural resource conservation techniques.
Goals		
Wildlife	Protect, restore and maintain a diversity of wildlife species native to habitats naturally found on the Refuge with special emphasis on Service Regional Conservation Priority Species	Protect, restore and maintain a diversity of wildlife species native to habitats naturally occurring within the Tamarac WMD with special emphasis on Service Regional Conservation Priority Species
Habitat	Protect, restore and enhance the wetland and upland habitat on the Refuge to emulate naturally functioning, dynamic ecosystems emphasizing a variety of habitat conditions that were present prior to European settlement.	To protect, restore, and enhance wetland and upland habitats, mimicking natural ecological processes where possible, within the Tamarac WMD for the benefit of federal trust species.
People	Provide people with opportunities to experience quality wildlife-dependent activities and make a connection with a natural, functioning landscape.	Provide people with opportunities to experience quality wildlife-dependent recreation and promote ecologically sound land stewardship.

What the CCP Proposes

Tamarac NWR

The changes proposed in the Draft CCP/EA are intended to improve habitat, improve our understanding of the wildlife species that use the Refuge, and give visitors a personal experience with wildlife and native habitats.

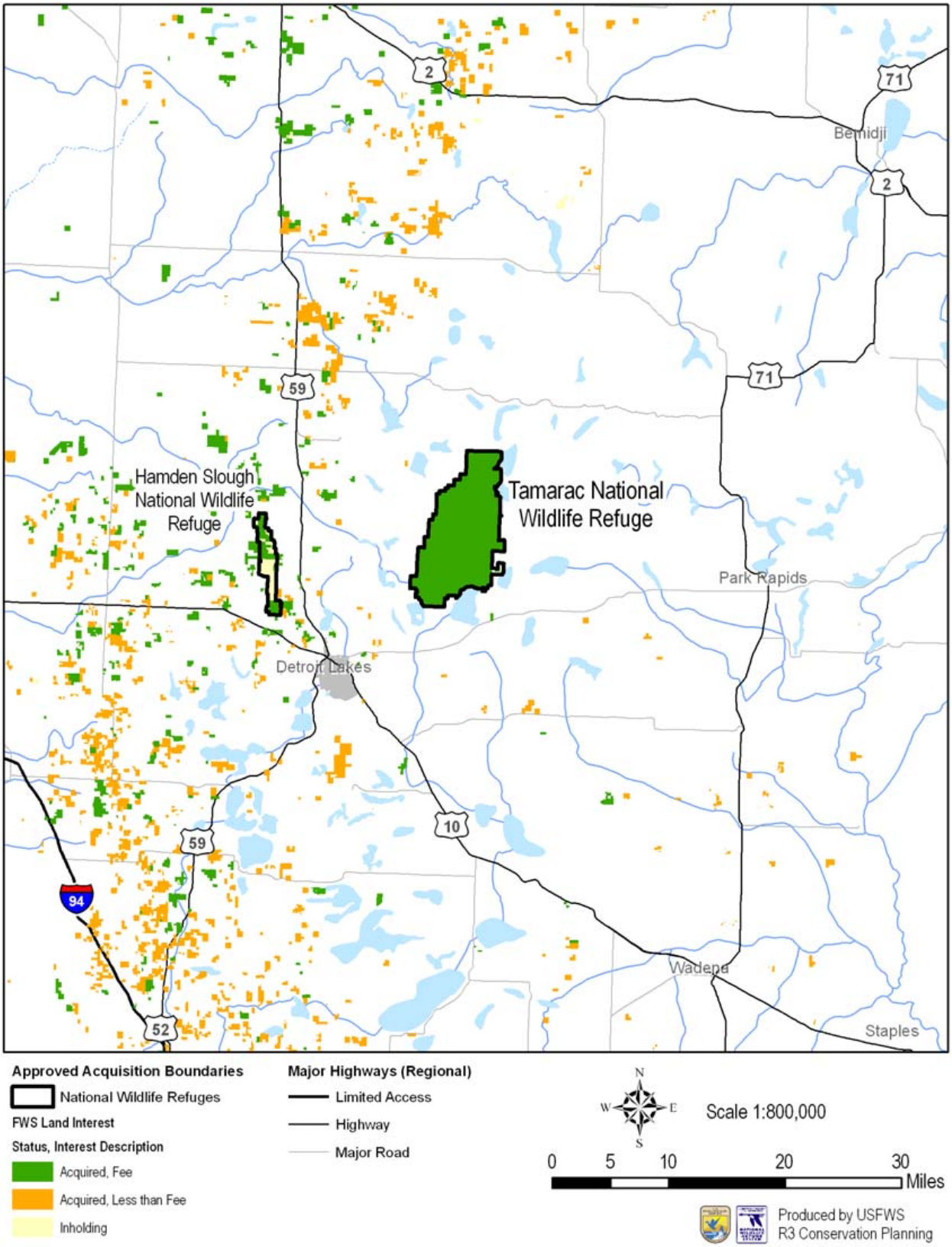
Over the next 15 years, the Refuge is proposing to emphasize natural ecological processes. This means that water control structures would be removed in some locations where natural hydrologic flow is feasible, that forest management would promote a range of natural variation but would also continue to allow the promotion of habitat for priority bird species, and that upland habitat that is essentially the result of clearing for farms or logging would be allowed to revert to forest. A map of potential future habitat is located on page 16.

Opportunities for people to use and learn at the Refuge would be expanded. Environmental education and interpretation programs both on and off the Refuge would focus on wildlife management activities on the Refuge. The Refuge would explore new partnership opportunities with local tribes to expand cultural interpretation on the Refuge.

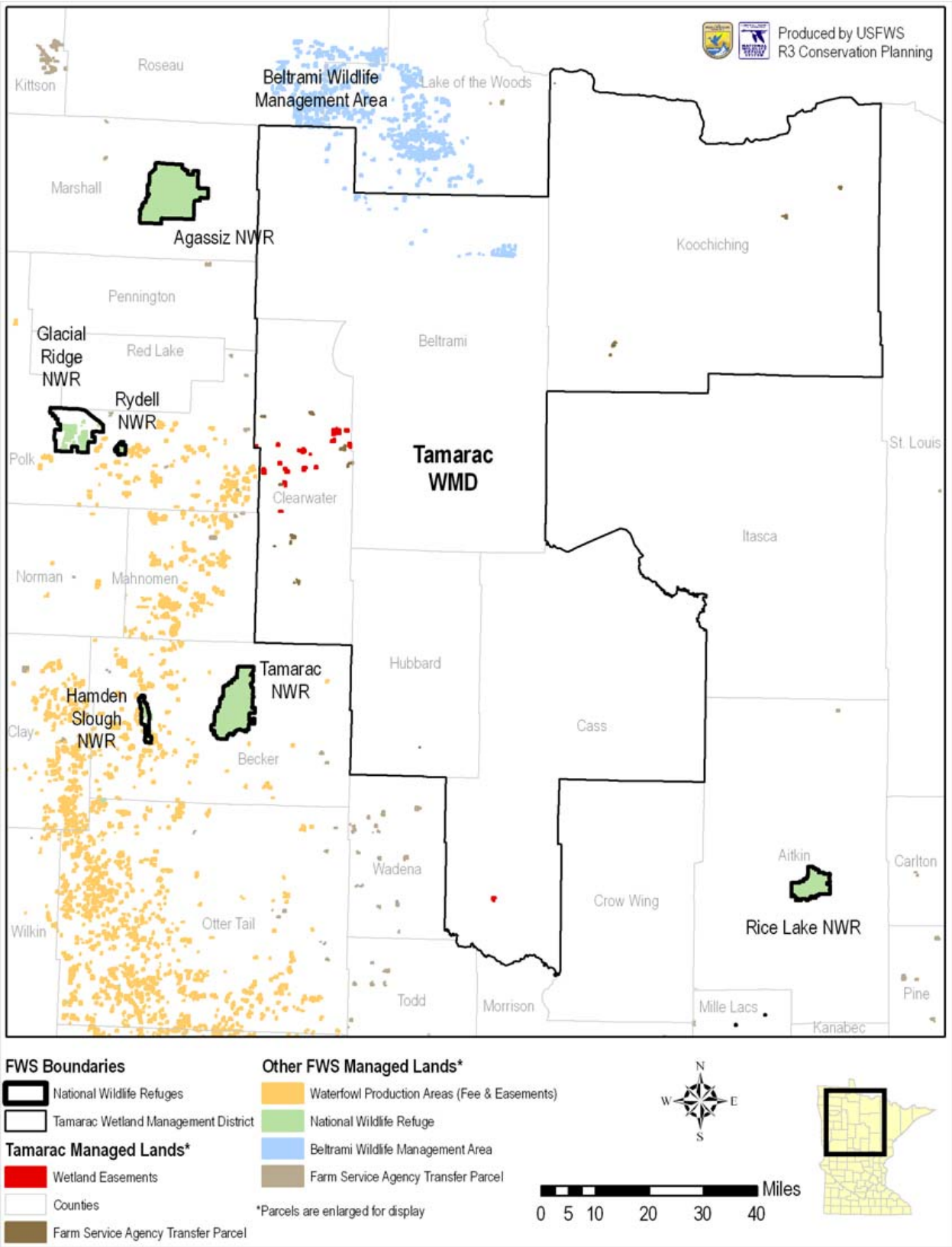
The Refuge's hunting program would be strengthened by clarifying rules, and new hunting opportunities for Wild Turkey would be considered. A map showing proposed changes to the hunting program is located on page 12.

A map showing the proposed visitor facilities in the fall/winter is located on page 18 and map showing the spring/summer facilities is located on page 19.

Location of Tamarac National Wildlife Refuge



Location of Tamarac Wetland Management District



Tamarac WMD

Currently, habitat management activities on the Tamarac WMD are limited to the terms of individual easements and the nature of surrounding lands. The proposed management direction would emphasize the acquisition of land within the five-county District.

All land acquisition would occur as funding is available, and all acquisition would be from willing sellers only. Priority would be given to core areas, corridors and critical sites.

Land management would focus on maintaining and using the ecological processes that shaped the land before European settlement, including fire and grazing.

Why a CCP?

Planning for national wildlife refuges has always occurred, but the planning process and products were not consistent throughout the Refuge System. This changed in 1997, when the National Wildlife Refuge System Improvement Act established the planning process refuges would use and specified the elements required in a CCP. The Improvement Act and Service policy now require the Refuge System to manage national wildlife refuges based on a comprehensive conservation plan.

Since the Improvement Act was enacted, the U.S. Fish and Wildlife Service has been working to complete a CCP for every refuge in the Refuge System. The plans outline how a refuge will fulfill its legal purpose and contribute to the Refuge System's wildlife, habitat, and public use goals. Comprehensive conservation plans articulate management goals for a 15-year period and specify the objectives and strategies needed to accomplish these goals. Comprehensive conservation plans give a refuge's neighbors, the local community, Friends groups, outdoor recreation enthusiasts and others a clear picture of how a refuge will be managed and the reasoning behind that management direction.

Many factors, such as funding and natural events like flooding or drought, will influence the Service's ability to fully implement the Tamarac NWR CCP/EA. Comprehensive conservation plans outline management direction, but they do not constitute a commitment for staffing increases, operational and maintenance increases, or funding for future land acquisition.

Hunting on Tamarac NWR. Photo Credit: FWS

Vital Statistics

Tamarac NWR

Located in Becker County, Tamarac NWR is located 18 miles northeast of Detroit Lakes, Minnesota, (population 7,400) and 60 miles east of Fargo, North Dakota. The Refuge covers 42,738 acres, which includes 21 lakes and several thousand marshes and wooded potholes. Three rivers flow through the Refuge. The Refuge was established in 1938 as a refuge and breeding ground for migratory birds and other wildlife.

The landscape is characterized by rolling forested hills interspersed with shallow lakes, rivers, marshes and shrub swamps. Sixty percent of the Refuge is forested with aspen, jack pine, red pine, balsam fir, paper birch, red and white oak, sugar maple and basswood tree types. Large and small wetland complexes comprise about 35 percent of the Refuge. Many Refuge lakes and rivers contain large native wild rice beds that produce abundant food for waterfowl and other wetland dependent species. Twenty-eight lakes lie within the Refuge and three rivers flow through the Refuge, while marshes and wooded potholes number several thousand. The remaining 5 percent of Tamarac NWR is grassland, mostly remnants of early settler clearings or small farms.

Refuge wildlife is as varied as the habitat with more than 258 species of birds and 50 species of mammals. Bald Eagles are common with up to 23 territories producing as many as 33 young in recent years. Moose and gray wolves are seen occasionally.

Tamarac WMD

The Tamarac WMD, established in 1987, stretches over 10,600 square miles in Beltrami, Cass, Clearwater, Hubbard and Koochiching Counties. The Tamarac WMD is responsible for administering 8,908 acres of wetland and conservation easements distributed throughout these five north-central Minnesota counties. The Tamarac WMD is one of eight wetland management districts within Minnesota. In addition to easement enforcement and management activities, Tamarac WMD personnel also perform consultation roles for Farm Service Agency (FSA) Farm Bill programs, restore wetlands on private lands, and render technical assistance to landowners who desire to enhance wildlife habitat on their property. As the Tamarac WMD possesses no land in fee title, it presents the paramount challenge of working effectively with private landowners to achieve Service and District goals.

Who We Are and What We Do

Tamarac NWR and Tamarac WMD are administered by the U.S. Fish and Wildlife Service, the primary federal agency responsible for conserving, protecting, and enhancing the nation's fish and wildlife populations and their habitats. The Service oversees the enforcement of federal wildlife laws,

Work with private landowners is an essential element in conserving habitat. Photo Credit: FWS

management and protection of migratory bird populations, restoration of nationally significant fisheries, administration of the Endangered Species Act, and the restoration of wildlife habitat such as wetlands. The Service also manages the National Wildlife Refuge System, which was founded in 1903 when President Theodore Roosevelt designated Pelican Island in Florida as a sanctuary for Brown Pelicans.

Today, the Refuge System is a network of more than 550 national wildlife refuges and other Refuge System units covering more than 150 million acres of public lands and waters. Most of these lands are in Alaska, with approximately 16 million acres located in the lower 48 states and several island territories. Overall, the Refuge System provides habitat for more than 5,000 species of birds, mammals, fish, and insects.

Refuges also provide unique opportunities for people. When activities are compatible with wildlife and habitat conservation, refuges are places where people can enjoy wildlife-dependent recreation such as hunting, fishing, wildlife observation, photography, environmental education, and environmental interpretation.

The Planning Process

The planning process for both the Refuge and the District began in late February 2007 with a kick-off meeting between Refuge staff and regional planners from the Service's office at Fort Snelling, Minnesota. The participants in this "internal scoping" exercise discussed a vision statement, goals, existing baseline resource data, planning documents and other pertinent information. In addition, the group identified a preliminary list of issues, concerns and opportunities facing the Refuge and Tamarac WMD that would need to be addressed in the CCP.

Public input was encouraged and obtained using several methods, including open house events, written comments during a public scoping period and personal contacts.

Initial public scoping for the Tamarac NWR and WMD CCP began in July 2007 with a series of open house events held in Detroit Lakes and at the Refuge Headquarters (Tamarac NWR) and in Bagley, Minnesota (WMD). Turn-out was light at all events despite widespread notification in area newspapers and local television. Comment forms were available at the events and were made available at the Refuge Headquarters and Visitor Center during the following weeks.

The Planning Team received eight written comment forms and several e-mail messages during public scoping and took numerous pages of notes from internal group discussions and conversations with individuals representing government agencies, NGOs and Refuge users.

March Wren singing. Photo Credit: Jim Williams

Refuge and District Issues

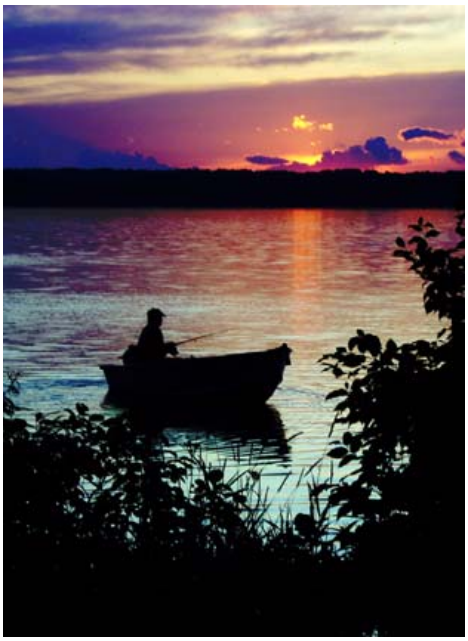
Issues play an important role in planning. Issues focus the planning effort on the most important topics and provide a base for considering alternative approaches to management while evaluating the consequences of managing under these alternative approaches. The issues, concerns, and opportunities expressed during the first phase of planning have been organized under the following headings:

Tamarac NWR

Wildlife Management

- *Waterfowl Focus Shift to Natural Diversity with Emphasis on Service Resource Conservation Priority Species*

When Tamarac NWR was established in 1938, the tail end of the Dirty Thirties, much of the land had been cleared, prairies were dry, forests were less dense, and lakes were shallower. The Refuge's original master plan emphasized getting water on the land and focusing on the production of Wood Ducks, Ring-necked Ducks, Blue-winged Teal, Mallards, and Canada Geese. The landscape has changed since the 1930s, both in terms of the environment and Service policy. By expanding Tamarac NWR's original specific focus on waterfowl to natural diversity of wildlife native to Minnesota, with an emphasis on Conservation Priority Species in Region 3, Tamarac NWR demonstrates a more holistic view of wildlife. This view continues to implement the broad mission of the National Wildlife Refuge System to conserve America's wildlife and enhance biodiversity, as well contribute to wildlife conservation at an appropriate regional scale by trying to assist those species in greatest need of attention. Identifying



Fishing on the Refuge. Photo Credit?

the direction of waterfowl management will dictate some habitat management decisions.

- *Establish Population Objectives For Eastern Gray Wolves, Bald Eagles and Trumpeter Swans*

Eastern gray wolves are federally listed as threatened in Minnesota under the Endangered Species Act. The Bald Eagle has been delisted from the Endangered Species Act but is protected by the Bald and Golden Eagle Protection Act and revisions (1994). The Trumpeter Swan is a Conservation Priority Species in Region 3 and considered by the state of Minnesota to be endangered. The Refuge has a legal responsibility to monitor the status of these species. Additionally, given the history of reintroduction of the Trumpeter Swans at Tamarac NWR and recovery from the brink of extinct of the Bald Eagle, there is tremendous visitor interest in these majestic bird species.

- *Stocking Fish Where Appropriate and Not in Conflict with Refuge Purposes*

Tamarac NWR is managed primarily for waterfowl, which means that lake levels are managed with the goal of producing aquatic vegetation and invertebrates for ducks. There is interest in to developing more fishing opportunities by stocking fish in Refuge lakes. Some of these include lakes where certain fish species did not naturally occur.

- *High White-tailed Deer Population is Damaging Refuge Habitats*

The recent high Refuge deer population has limited conifer regeneration by over browsing. Insects, amphibians, mammals and some migratory songbird populations can also be negatively impacted. The Refuge needs to establish a sustainable deer population objective that balances habitat concerns, hunting opportunities and eastern gray wolf population objectives. Deer are a major prey species for the resident wolf packs. Use state and tribal deer hunting framework/strategies to achieve this goal

- *Managing Invasive Wildlife Species*

Earth worms are an invasive species present on the Refuge. Carp have not yet entered Refuge waters, but are only held in check by a water control structure. Zebra mussels have recently infested a lake within the Refuge's watershed. The Refuge needs to better understand what impacts exotic earth worms are having on habitat and explore ways to ensure that carp, zebra mussels, and other invasive species do not infiltrate the Refuge.

- *Managing Beaver to Minimize Infrastructure Damage*

Beaver are very effective in blocking water flows, including through Refuge water control infrastructure. Beaver activity increases the costs of maintaining Refuge water control structures and road culverts. To date, beaver control has been primarily addressed by tribal recreational trapping, and to a lesser degree, removal by contract, permit, and Refuge staff. These efforts have been ineffectual in controlling the growth of Refuge beaver populations. An expansion of the Refuge's trapping program may help reduce the beaver population, however, fluctuating` fur markets dictate interest and other alternatives need exploration.

- *Invertebrate Numbers and Health*

Invertebrates are a critical food resource for waterfowl, particularly during migration, egg laying, and brood rearing. An initial investigative survey on Pine Lake suggested a general lack of aquatic invertebrates in the lake. The study underscores the need for more information regarding the abundance and diversity of Refuge invertebrate populations. Water quality monitoring may provide some answers to this concern.

Habitat Management

- *Manage Water Levels to Promote Wild Rice Production, Enhance Tribal Harvest Opportunities and Minimize Downstream Impacts*

Refuge waters have a long history of wild rice production and use by wildlife, particularly waterfowl, and Native American people. The basic purpose of water level management has been to enhance the area's natural ability to grow wild rice, and the other vegetation and associated invertebrates established within the aquatic ecosystem.

The Refuge has added stoplogs in August to enhance tribal rice harvesting opportunities in the past. This action was thought to have benign consequences for all parties involved, however the downstream lake shore owners complained of lowered water levels on Height of Land Lake. The resulting low water caused boat launching and docking problems and posed safety concerns for boaters and skiers that could potentially hit submerged dead head logs, now closer to the surface. The water management program needs to address this issue.

Additionally, there has been a request to maximize rice production on a yearly basis. However, recent research indicates that stable water levels will, over time, jeopardize the long-term viability of a wild rice-dominated lake. Wild rice systems require water

level fluctuations from year to year to insure a sustainable system.

■ *Water Quality Monitoring Needs*

A 2005 lake assessment by the Minnesota Pollution Control Agency indicated that North Tamarac Lake could possibly be listed as an Impaired Water due to high levels of phosphorus.

The Refuge needs to develop a comprehensive water quality monitoring program to establish a baseline for Refuge waters (not just North Tamarac Lake). Work with MPCA to determine the parameters, sites, timing, laboratory use, long-term objectives, etc., for this effort.

■ *Managing Invasive Plant Species*

Exotic and invasive plant species pose a threat to the maintenance and restoration of the Refuge's diverse habitats. Canada thistle, plumeless thistle, purple loosestrife, leafy spurge and spotted knapweed and several other invasive terrestrial plants are known to occur on the Refuge. The Refuge currently uses chemical, mechanical and biological methods of controlling invasive plant species.

Although Tamarac NWR believes, from general observation, the water bodies of the Refuge are fairly clear of aquatic invasive plants, the potential for infestation is high due to the large number of boating visitors.

More invasive plant species, both terrestrial and aquatic, are predicted to spread to the area. The Refuge needs to establish an invasive species monitoring program. Closer coordination with county weed task forces would help with the early detection monitoring, preventative measures development and removal strategies. Outreach with neighboring lake associations has been requested.

■ *Forest Management*

Forest habitat within the transitional zone was once characterized by upland conifer, upland deciduous, mixed upland, lowland conifer, mixed lowland forest, and lowland deciduous communities. These communities have been altered over the past 200 years by logging, agriculture and development. This has created grassland and forest openings that are costly to maintain and do not fully emulate a natural system of succession.

■ *Establishing Habitat Corridors With Other Conservation Lands*

Tamarac NWR is located near federal, state, tribal and county lands. Connectivity between the Refuge and other conservation units could benefit wildlife and habitats.

Visitor Services

■ *Inadequate Parking Facilities*

Inadequate parking areas raises safety concerns and does not invite use.

■ *Hunters with Disabilities Limited by Lack of Accessible Facilities*

Hunters with disabilities are limited to hunting on roads that are already open to vehicles. There is interest in the Refuge providing more access.

■ *Tribal and State Hunting Season Conflicts*

On the north half of the Refuge, the tribal seasons overlap with state seasons. The season for tribal primitive deer hunting overlaps with the state small game season, creating quality hunt conflicts for tribal members and safety issues for small game hunters. The tribal rifle season overlaps with state archery season, creating quality hunt conflicts for hunters and possible safety concerns. Additionally, many non-tribal hunters scout out locations for deer hunting during the state grouse season and are not wearing the required blaze orange, which creates safety concerns. All hunters should be aware of the different hunting seasons on the Refuge and use safe hunting practices. The Refuge needs to insure visitors are informed.

■ *Native American Cultural Practices*

The site of Tamarac NWR has a long, rich history of Native American Indian cultural traditions. The Refuge remains an important site for traditional practices of the local Ojibwe tribe. Wild rice is harvested by tribal members in concert with the rice abundance. Access to ricing lakes is balanced with wildlife management activities. Other activities such as plant collection and harvesting leeches have potential conflicts with wildlife management objectives. There are opportunities for incorporating traditional Ojibwe practices into the Refuge's interpretive programs, events and signage.

■ *Lake Access Regulations are Confusing*

The regulations related to lake access are confusing. One Refuge lake is open only for the winter, some are open only during the summer, some are open both winter and summer. Some lakes are open to fishing but not to other uses. In some instances, roads provide vehicle access to a boat landing, but walking on that road is prohibited. This complexity makes it difficult for the visiting public to follow the Refuge's regulations.

■ *Bank Fishing Access Regulations Are Unclear*

Bank fishing restrictions are unclear for the visiting public.

Wildlife observation, Tamarac NWR. Photo Credit: FWS

Bald Eagle eaglet. Photo Credit: D. Braud

- *Expanded Hunting Opportunities*

The Minnesota Department of Natural Resources has asked Tamarac NWR to consider opening bear and turkey hunting seasons.

- *Additional Public Use Activities Requested*

Visitors have expressed interest in uses not currently allowed or expanding some that are limited.

- Leaving ice houses overnight is currently prohibited in accordance with federal regulations.
- Motorized vehicles are not allowed on frozen lakes. This activity has been requested to access ice fishing locations.
- Horseback riding is currently allowed on county and township roads, auto tour route and Bruce Blvd. Increased spread of invasive plants through horseback riding activities on the Refuge is a threat to the maintenance and restoration of the Refuge's diverse habitats.
- The North Country National Scenic Trail is a footpath proposed to route through the Refuge in the public use area south of County Hwy 26.
- Canoeing and tubing on the Ottertail River is currently not allowed through the Refuge due to its location within the sanctuary area and disturbance to wildlife.

- *Fishing with Motorboats*

In some cases, motorboat use interferes with Refuge visitors engaged in wildlife observation. There is concern that boat trailering and motorized fishing activity is not compatible with other uses along the Refuge's auto tour route.

- *More Demand for Environmental Education Programming*

Tamarac NWR's environmental education program is growing and lacks the facilities and staffing to meet demand for environmental education programming. School groups, home school groups, colleges and others have expressed interest in Refuge-based environmental education opportunities.

- *Division of Outreach Workload Among FWS Offices*

Agassiz NWR, Glacial Ridge NWR, Rydell NWR, Hamden Slough NWR, Detroit Lakes Wetland Management District and Fergus Falls Wetland Management District are all less than a 2 hour drive of Tamarac NWR. There are many benefits to having other stations nearby, however this proximity also makes it confusing for Refuge staff to divide up the outreach workload and articulate the differing Refuge purposes to the public. Because the Refuges are so close and there is potential for audiences to overlap, there are opportunities for outreach efforts to have a broader perspective and impact.

Facilities/Roads

- *Volunteer/Intern Housing Needed*

The Refuge needs to provide housing for volunteers and interns who come to do extended projects. The nearest community with available housing is a long drive away from the Refuge, making it unfeasible to house people off-site. A bunkhouse would be suitable for students; Recreation Vehicle pads would be useful for volunteer Refuge hosts working on the Refuge.

- *Potential to Demonstrate Green Facilities*

Federal buildings, particularly U.S. Fish and Wildlife Service facilities, can play an important role in demonstrating practical and efficient "green" building technologies. There are opportunities on Tamarac NWR to demonstrate these technologies.

- *Speeding Creates Safety, Wildlife Mortality and Maintenance Problems*

Vehicle speed on all public roads needs to be kept to a minimum to improve visitor safety and to reduce dust, wildlife mortality, and long-term maintenance costs. Many of these public roads are administered by the county and townships. Tamarac NWR needs to continue to work with these local governmental agencies responsible for speed limits to insure safety and to maintain the character of a National Wildlife Refuge.

- *ATV and Snowmobile Uses*

County ordinances allow the operation of an ATV or snowmobile in the right-of-way of county roads. Local ATV and snowmobile enthusiasts have respected Tamarac's interest in prohibiting this activity, particularly in light of the numerous trails available around the Refuge. Additionally, most road right-of-ways within the Refuge include either steep or undeveloped ditches which are unsafe to operators, thus limiting the potential activity. Tamarac NWR plans to coordinate with the County to restrict this activity within the boundary of the Refuge in order to maintain the character of a National Wildlife Refuge, prevent habitat destruction and avoid law enforcement issues, such as trespass or illegal operation.

Tamarac WMD Issues

- *Land Acquisition*

Thousands of wetlands dot the District landscape, yet as of 2010, no fee-title lands have been acquired or additional easements procured within the

five-county Wetland Management District. Private lands work is a valuable component of habitat restoration and protection, however, perpetual protection, whether through the Service or other agency programs, assures long-term conservation benefits for wildlife and wildlife-dependent recreational opportunities.

■ *Partnerships*

Partnerships are an essential part of accomplishing the goals of the Tamarac WMD. Partnerships allow the Service to reach beyond social and political boundaries to achieve specific objectives and, through involvement of individuals and organizations, inspire future generations to care about conservation. Developing partnerships requires a commitment of people and funding.

■ *Direction of the WMD*

District activities have been primarily restricted to private land wetland restoration and easement enforcement. Many opportunities exist to broaden habitat restoration efforts. The role the District can play at addressing the needs of migratory birds, Conservations Priority Species and critical habitats across the landscape needs to be determined. A commitment of staff and funding is critical to achieving this goal.

Tamarac NWR. Photo Credit: FWS

■ *Easement Management Planning and Implementation*

Over 35 FmHA inventory property tracts were transferred to the District in the mid-1990s. Many of these tracts possess undeveloped, out-dated, or unfulfilled management plans, but could yield significant ecological benefits to the landscape. Service resources need to be allocated to develop and carry out up-to-date habitat management plans on these Refuge System lands.

■ *Invasive Plants*

Invasive plants are considered one of the greatest threats to natural ecosystems. Within the District, the Service is working with private landowners and partners to control existing and prevent additional spread of invasive species.

■ *Education and Outreach*

Opportunities exist for the Service to develop education and outreach tools for the Tamarac WMD that will promote private lands conservation and demonstrate wildlife conservation techniques.

Refuge and District Objectives

The Draft CCP/EA describes goals, objectives, and strategies for Tamarac NWR and WMD's proposed future management direction. Goals are descriptive broad statements of desired future conditions that convey a purpose. Goals are followed by objectives, which are specific statements describing management intent. Objectives provide detail and are supported by rationale statements that describe background, history, assumptions, and technical details to help clarify how the objective was formulated. Strategies are the specific actions, tools, and techniques required to fulfill the objective.

The objectives identified for both the Refuge and the District are provided in this section.

Tamarac NWR

Wildlife

Objective 1.1 Trust Resources: Waterfowl: Maintain a minimum annual population of 2,000 breeding pairs of dabbler ducks (i.e.: Mallards, Blue-winged Teal and Wood Ducks), 300 breeding pairs of diving ducks (primarily Ring-necked Ducks), 250 breeding pairs of Canada Geese and 25 breeding pairs of Trumpeter Swans on the Refuge by providing optimal breeding habitats. *Note: This is considered a threshold objective such that if the breeding pair estimate falls below the minimum specified objective for five consecutive years it will trigger further investigation and management action.*

Objective 1.2 Other Trust Resources – Non-waterfowl: Implement a monitoring and research program to track the presence, abundance, population trends, and/or habitat associations of Trust Resources, including but not limited to Region 3 Conservation Priority Species, habitats, communities and ecosystems. Priority for monitoring will be given to those species identified as Refuge resources of concern.

Objective 1.3: Gray Wolves: Maintain adequate habitat and prey base to support at least two packs of gray wolves on the Refuge.

Objective 1.4: Deer Management: Annually, maintain the Refuge deer population (Minnesota Deer Management Unit 251) at a density of 13-17 deer per square mile (pre-fawning density) based on annual winter surveys.

Objective 1.5: Fish: Maintain diverse, balanced and natural fish populations where compatible with Refuge goals and objectives, while maintaining all Refuge water-bodies free of invasive aquatic animal and plant species.

Habitat

Objective 2.1. Upland Grass: Reduce anthropogenic grassland habitat from 2009 levels (1,362 acres) by 947

Blackbird Lake at Tamarac NWR. Photo Credit: FWS

acres (minus 70 percent) and manage the remaining 415 acres for the diversity of species present, including Region 3 Conservation Priority Species.

Objective 2.2. Upland Brush (1000 Acre Tract): Decrease the dominance of upland brush habitats within the 1,000 Acre Tract by 75 percent by conversion to forest cover types initially dominated by early successional forest structure for the benefit of Region 3 Conservation Priority Species such as American Woodcock and Golden-winged Warblers, with long-term benefits to forest interior songbirds.

Objective 2.3. Forest Openings: Convert 32 anthropogenic forest openings (totaling 63 acres) to forest cover types through natural regeneration or tree planting by 2025 based upon site characteristics such as soil type, drainage, or surrounding habitat types. By conversion to forest cover types these areas will be initially dominated by early successional forest structure benefiting Region 3 Conservation Priority Species such as American woodcock and golden-winged warblers, with long-term benefits to forest interior songbirds once fully restored.

Objective 2.4. Food Plots: Convert remaining food plots (35 acres), with the exception of the plot adjacent the autotour trailhead, to forest cover types for the benefit of interior forest passerines.

Objective 2.5. Upland Conifer (Red, White and Jack Pine): Increase dominance of upland conifer (particularly red, white and jack pine but also white spruce and balsam fir to some extent), by increasing both acreage (plus 616 acres) of dominance at the Refuge scale and basal area at the stand level, to provide a diversity of seral stages while restoring historic composition and structure for the benefit of Region 3 Conservation Priority Species such as Bald Eagle, Cape May Warbler, Northern Flicker, Olive-sided Flycatcher, Whip-poor-will, and gray wolf along with a plethora of other more-common forest passerines such as Blackburnian Warbler, Black-throated Green Warbler, Pine Warbler, Red Crossbill, etc. Note: Overall changes of major habitat types will be reflected as an increase in acres for upland conifer (red, white, and jack pine) and mixed upland forest (i.e.: aspen/pine, forested broadleaf/coniferous mix, aspen/birch/fir/spruce, etc.) and a decrease in acres for upland deciduous (aspen, northern hardwoods, basswood, oak, forested broadleaf mix, etc.).

Objective 2.6. Upland Deciduous Forest: Over the next 15 years, increase upland deciduous forest by 319 acres while managing the remaining acreage (16,167) to maintain a diversity of seral stages and restore historic composition and structure for the benefit of Region 3 Conservation Priority Species using this habitat type on the Refuge such as American Woodcock, Golden-winged Warbler, Eastern Towhee, etc., as well as other forest interior species such as Red-eyed Vireo, Ovenbird, etc.

Objective 2.7. Mixed Upland Forest: Increase acreage (plus 195 acres) of mixed upland forest by increasing the dominance of upland conifer (particularly red pine, white pine, balsam fir and white spruce) within deciduous forest stands to provide a diversity of seral stages while restoring historic composition and structure for the benefit of Region 3 Conservation Priority Species such as Bald Eagle, Cape May Warbler, Northern Flicker, Olive-sided Flycatcher, Whip-poor-will, and gray wolf along with a plethora of other more-common forest passerines such as Blackburnian Warbler, Black-throated Green Warbler, Pine Warbler, Red Crossbill, etc.

Objective 2.8. Lowland Conifer: Maintain acreage of lowland conifer (1,863 acres) and restore historic composition and structure when and where possible, while providing a diversity of seral stages. Region 3 Conservation Priority Species using this habitat type on the Refuge include Long-eared Owl, Olive-sided Flycatcher, Cape May Warbler, Connecticut Warbler and gray wolf and numerous species in greatest concern need of Minnesota.

Objective 2.9. Lowland Deciduous: Maintain acreage of lowland deciduous (756 acres) and restore historic composition and structure when and where possible, while providing a diversity of seral stages. Region 3 Conservation Priority Species using this habitat type on the Refuge include Wood Duck, Mallard, Red-shouldered Hawk, American Woodcock, Wood Thrush, Golden-winged Warbler and numerous species in greatest concern need of Minnesota.

Objective 2.10. Mixed Lowland Forest: Maintain acreage of mixed lowland forest (462 acres) and restore historic composition and structure when and where possible, while providing a diversity of seral stages. Region 3 Conservation Priority Species using this habitat type on the Refuge include Wood Duck, Mallard, Red-shouldered Hawk, American Woodcock, Wood Thrush, Golden-winged Warbler and numerous species in greatest concern need of Minnesota.

White Earth tribal members harvest wild rice. Photo Credit: FWS

Objective 2.11. Lowland Brush: Reduce the lowland brush habitat type by 843 acres (32 percent) from 2009 levels through conversion to marsh/wetland habitat type (primarily open sedge meadows) and manage the resulting acreage (1,815 acres) for the benefit of shrub/shrub wetland dependent species, including Region 3 Conservation Priority Species such as the American Bittern, American Woodcock, Golden-winged Warbler and Black-billed Cuckoo as well as numerous species in greatest conservation need.

Objective 2.12. Marsh/Wetland: Increase this habitat type by 716 acres (11 percent) from 2009 levels (6,248 acres) by converting the lowland brush habitat type for the benefit of wetland dependent species, including Region 3 Conservation Priority Species such as the American Bittern, Northern Harrier, Forster's Tern, Black Tern Sedge Wren, Yellow Rail, Le Conte's Sparrow and Nelson's Sharp-tailed Sparrow.

Objective 2.13. Open Water: Maintain the open water (lacustrine) habitat type (7,116 acres) based on 2009 levels for the long-term sustainability of wild rice and other native aquatic plants by emulating natural hydrological regimes and maintaining and/or restoring water quality where feasible for the benefit Region 3 Conservation Priority Species such as the Bald Eagle, Common Loon, Trumpeter Swan, Mallard, Blue-winged Teal, Wood Duck and Lesser Scaup.

Objective 2.14. Invasive Species: By 2025, reduce the area infested with target invasive plants (e.g., purple loosestrife, leafy spurge, spotted knapweed, thistle species, etc.) and animals by 50 percent from the documented 2005 level and rapidly respond an where possible control new infestations of these and other highly invasive species as they occur.

People

Objective 3.1. Hunting: Annually, provide no less than 7,000 quality hunting experiences on the Refuge. Seventy-five percent of hunters will report no conflicts with other users, a reasonable harvest opportunity and satisfaction with the overall experience.

Objective 3.2. Fishing: Annually, provide for 5,000 quality fishing visits to the Refuge. Ninety percent of anglers will report no conflicts with other users and will know that they were fishing on a national wildlife Refuge.

Objective 3.3: Wildlife Observation and Photography: Provide year-round opportunities for at least 60,000 visits annually to observe and photograph wildlife and habitat.

Objective 3.4. Interpretation: Annually provide no fewer than 2,000 interpretive experiences per year to create connections between people and the rich mosaic of wildlife and habitats found within the forest-prairie transition zone of western Minnesota and an understanding of wildlife management activities on the Refuge.

Objective 3.5. Environmental Education: Annually provide no less than 6,000 environmental education experiences per year to create connections between students and the natural resources of the Refuge. The experiences will also promote an understanding of habitat diversity, natural processes and wildlife management.

Objective 3.6. Refuge Access and Secondary Uses: Throughout the life of the plan, evaluate opportunities for new access to the Refuge and recreational uses not defined by the NWRS Improvement Act of 1997. All public access and secondary uses must be compatible with the mission of the Refuge.

Objective 3.7 Outreach: Throughout the life of the plan, increase local community support and appreciation for fish and wildlife conservation and endorse the Refuge's role in conservation.

Objective 3.8. Archeological, Cultural, and Historic Protection: Over the life of the plan, avoid and protect or mitigate against disturbance of all known cultural, historic, or archeological sites.

Objective 3.9. American Indian Cultural Practices: Opportunities to engage in American Indian cultural practices will be available at the level offered in 2009.

Wetland Management District

Wildlife

Objective 1.1: Within 3 years of plan approval, assimilate available information on avian presence and abundance within Tamarac WMD and identify focal areas and strategies for habitat improvement projects and land and easement acquisition that delivers maximum benefits for waterfowl and other Resource Conservation Priority (RCP) species.

Habitat

Objective 2.1 Wetland Restoration: Restore or enhance on average at least 60 acres of degraded wetlands on private lands per year to benefit waterfowl and other wetland dependent wildlife.

Objective 2.2 Wetland Management: Maintain hydrological function of wetlands, currently totaling more than 4100 acres, under easement or PFW agreements. Acreage maintenance will increase annually as additional lands are restored and preserved.

Objective 2.3 Grassland Establishment and Management: Judiciously select sites sustaining dynamic wetland complexes for potential establishment of grassland communities. Strive to compose a grassland unit with a large patch size and diverse assembly of native grasses and forbs.

Objective 2.4 Forest Management: Identify, prioritize, and implement forest conservation projects based on land capabilities that yield the highest benefits for Regional and Tamarac WMD priority species.

Objective 2.5 FmHA Conservation Easement Planning and Management: Within 5 years of approval of this plan, develop or update and implement habitat management plans on 16 FmHA conservation easements to benefit RCP species of Regional and District priority.

Objective 2.6 Exotic Plant and Animal Control: Promote the eradication or control of invasive plants and animals impacting native habitats on easement lands by using a variety of methods including biological agents, chemical controls, burning, mowing, grazing, and re-establishing native vegetative communities. Target species include spotted knapweed, leafy spurge, purple loosestrife, Canada thistle, common tansy, wild parsnip, and common buckthorn.

Objective 2.7 Acquisition: Pursue opportunities to acquire critical habitat for Service trust resources through fee title or easement purchase, where PFW program agreements and other natural resource agency programs are insufficient to fulfill perpetual protection needs.

People

Objective 3.1: Environmental Education, Interpretation and Outreach: The majority of rural landowners and partners within the Tamarac WMD will be aware of the opportunities for habitat restoration and management offered by the Service.

Objective 3.2 Enforcement: The Tamarac WMD will inspect all easements as well as future acquired lands each year to ensure the perpetuation of entrusted wildlife resources and government property. Violations that involve theft, damage, alteration, or destruction of wildlife, habitat, or government property will be immediately addressed and resolved within one year from the date of detection.

Trumpeter Swans. Photo Credit: Greg Stetz

Objective 3.3 Partnerships: The Tamarac WMD will cooperate and partner with USDA, Minnesota DNR, tribal government, and conservation organization on initiatives that further Service goals for migratory birds and other Regional RCP Species.

Alternatives Considered

Tamarac NWR

Four alternatives are evaluated for Tamarac NWR in the Environmental Assessment conducted as part of the planning process. These alternatives include the preferred alternative, which forms the basis for the objectives and strategies and is detailed in Chapter 4 of the Draft CCP.

Alternative 1: Management of Habitat in Context of Providing Migratory Bird Benefits and Complemented with Priority Public Use (Preferred Alternative)

This alternative combines many of the habitat changes proposed in Alternatives 2 and 3. However, priority public use activities would be enhanced in nearly all aspects of Refuge management. Management of upland habitats would focus on maintaining and using ecological processes that shaped these communities prior to European settlement. Forest management would promote the range of natural variation but would allow for some emphasis of priority bird habitat. Water control structures would be removed at locations where natural hydrologic flow is feasible.

Environmental education and interpretation programs both on and off the Refuge would focus on wildlife management activities on the Refuge. Opportunities for hunting, fishing, wildlife observation, and wildlife photography would give visitors a personal experience with wildlife and native habitats. New Wild Turkey hunting opportunities would be considered. Refuge outreach and partnership activity would emphasize natural processes, and native habitat restoration and protec-

tion to form ecologically functioning connections to and from the Refuge.

Alternative 2: Pre-settlement Ecological Processes

Refuge management actions would approximate ecological processes that promoted the native communities present prior to European settlement, emphasizing the use of natural hydrological and fire regimes. Vegetative communities and wildlife diversity would then be expected to resemble pre-settlement conditions. This alternative would probably result in significant change in habitats from the present condition. Grassland remnants and forest openings would no longer be artificially maintained. Forest management would promote the range of natural variation. Water control structures would be removed at locations where natural hydrologic flow is feasible.

Opportunities for hunting, fishing, wildlife observation, and wildlife photography would give visitors a personal experience with wildlife and native habitats. New hunting experiences would be considered including black bear (without baiting and use of dogs), Wild Turkey, and Mourning Dove. Environmental interpretation and education programs would emphasize the role of ecological processes in creating natural pre-European settlement habitats and cultural history. Off-Refuge outreach and partnership activity would emphasize natural processes, corridors, and restoration.

Alternative 3: Focused Management for Priority Migratory Birds

The focus of this alternative would be management for U.S. Fish and Wildlife Service (Region 3) priority wetland and grassland birds. Wetland management for priority bird species would include a mixture of high water for emergent vegetation control and drawdowns that vary spatially and temporally to favor the seasonal occurrence of various bird groups.

Where possible, water management would mimic natural processes to provide for a diverse wetland bird community. Some grassland remnants and forest openings would continue to be maintained to promote diversity. Forest management, including active timber harvests, would be oriented toward priority migratory birds.

Environmental interpretation and education programs on and off the Refuge would focus on the importance of managing for Service priority wetland and forest birds and their habitats. Opportunities for hunting, fishing, wildlife observation, and wildlife photography give visitors a personal experience with wildlife and native habitats. Outreach activities would focus on habitat restoration and protection with an emphasis on on-site conservation actions.

Alternative 4: Current Management Direction of Conservation, Restoration, and Preservation (No Action)

The Council of Environmental Quality's regulations for implementing the National Environmental Policy Act require that all environmental assessments include the alternative of taking no action. In the case of a CCP, no action means that the Refuge will continue on the same path of management.

Current management is focused on providing a variety of upland and wetland habitats to benefit an array of migratory and resident species. Forest lands are harvested to maintain early and mid-successional stages. Wetlands are actively managed to benefit migratory birds, especially waterfowl.

Sixty percent of the Refuge is forested. Forested uplands currently include a mix of aspen stands, jack pine, red pine, balsam fir, paper birch, red and white oak, sugar maple and basswood. Thirty-five percent of the Refuge is comprised of large and small wetland complexes. About 1,500 acres, or five percent, of Tamarac NWR are grassland, mostly remnants of early settler clearings or small farms.

Public use under Alternative 4 is served by a variety of on-Refuge environmental education, an auto-tour route, annual open houses, foot trails, a visitor contact station, and observation platforms. The hunting program consists of a firearms and archery deer season and small game hunting. Fishing is a popular activity on several Refuge lakes. Off-Refuge outreach by Refuge staff includes school talks, radio programs, informational kits, displays at fairs, etc. All six wildlife-dependent public uses encouraged on the National Wildlife Refuge System take place at Tamarac NWR.

Tamarac WMD

Alternative 1: Restoration and Management of Habitat by Facilitating Natural Ecological Processes but also Providing for Migratory Bird Benefits.

This alternative will result in a more active and growing WMD. Wildlife resources of concern will be identified and targeted for protection and enhancement. Management of upland habitats will focus on maintaining and using ecological processes that shaped these communities prior to European settlement including fire and grazing. Growth of the WMD will include fee and easement acquisitions as funding is available. Priority will be given to core areas, corridors and critical sites.

Alternative 2: Pre-settlement Ecological Processes

Under Alternative 2, WMD actions will approximate ecological processes that promoted the native communities

Tamarac NWR scene. Photo Credit: Gale Kaas Frazee

Fox kits. Photo Credit: FWS

present prior to European settlement, emphasizing the use of natural hydrological and fire regimes. Vegetative communities and wildlife diversity will then be expected to resemble pre-settlement conditions. Actions on private lands, such as the use of prescribed fire and grazing, will be used if possible. The WMD will not grow as much as under Alternative 1 but landowner interaction will be similar.

Alternative 3: Current Management Direction (No Action)

Current management is focused on providing habitats to benefit migratory birds, especially nesting waterfowl. Landowners are primarily responsible for maintaining habitat and controlling invasive plant species. No growth in easement land holdings has occurred since the mid-1990s. Emphasis will be on maintaining relationships with existing landowners and enforcement issues. New acquisitions and partnerships will continue on an opportunistic basis.

Tell Us What You Think

Tamarac NWR, Tamarac WMD and the U.S. Fish and Wildlife Service want the comprehensive conservation plan to be a visionary and practical document that improves habitat for wildlife and connection to the environment for its visitors.

Your thoughts are an essential part of accomplishing this. Have we missed an issue? Have we overlooked an opportunity? Let us know during the 30-day public review period. In order for your comments to be considered during preparation of the Final CCP, we need to receive your comment by August 6, 2010.

You have a variety of opportunities to communicate your thoughts on the Draft CCP. First, you are welcome to write us a letter. Address written comments related to either the Refuge or the District to:

Tamarac NWR/WMD
Attention: CCP Request
35704 County Road 26
Rochert, MN 56578

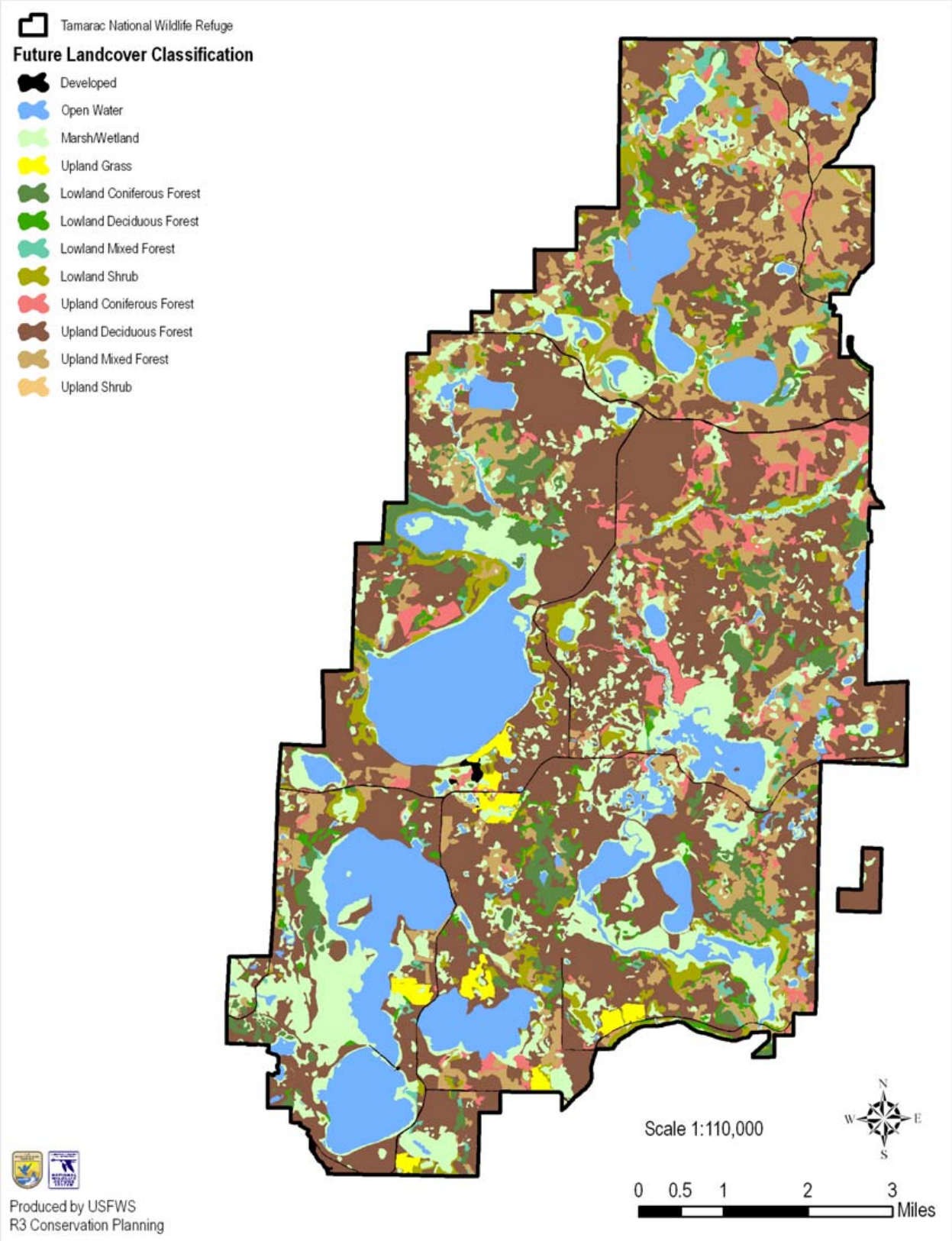
Comments are also welcome via e-mail: r3planning@fws.gov (please specify "Tamarac NWR/WMD CCP Comment" in the subject line).

If you are reading the Draft CCP/EA on-line, an e-mail link is provided.

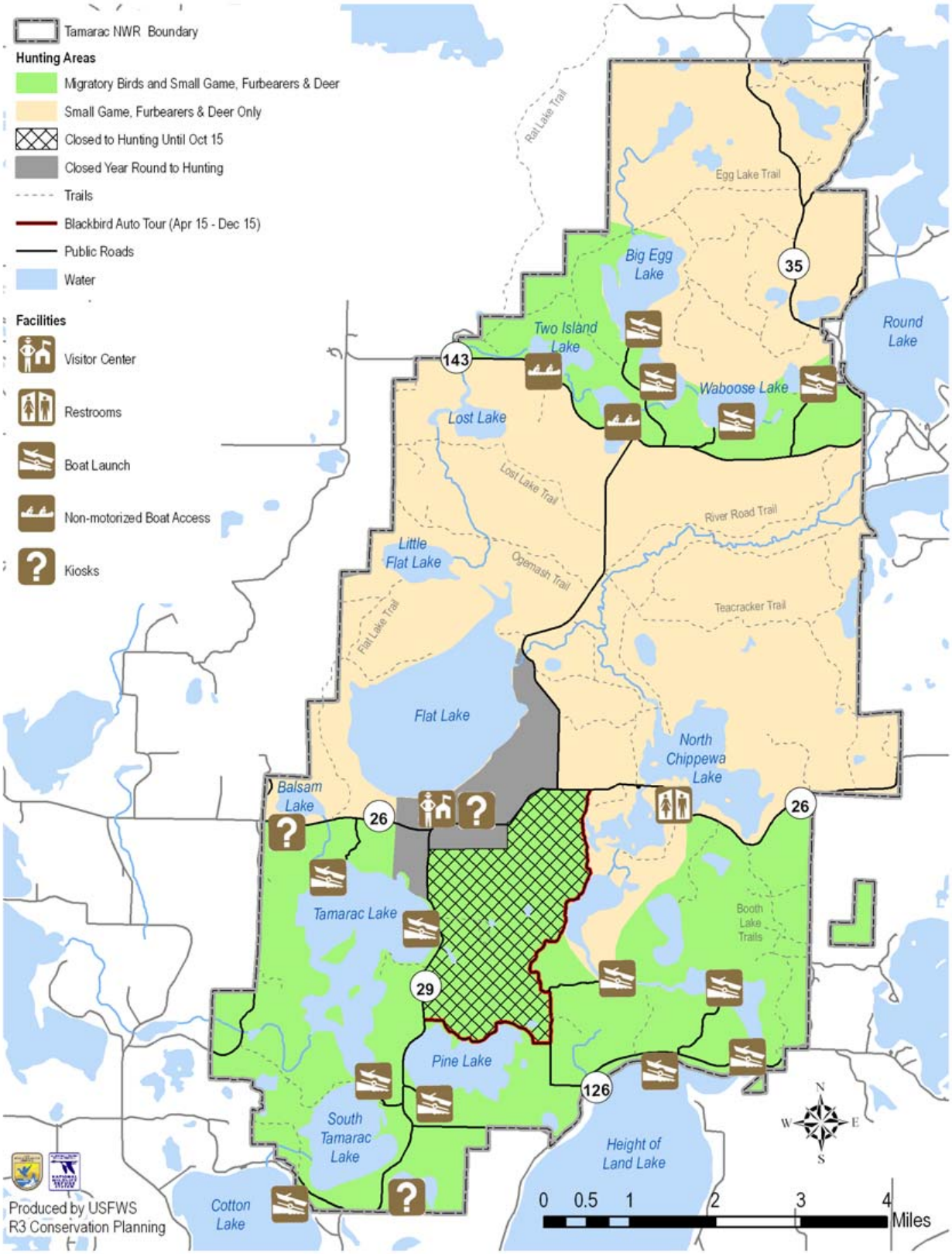
Open House Scheduled

The Refuge will host an open house during the Draft CCP comment period. The open house is scheduled from 6-8 p.m. on Tuesday, July 20, 2010, at the Refuge Visitor Center. Refuge staff will be available during the open house to discuss the Draft CCP/EA and future management direction for the Refuge.

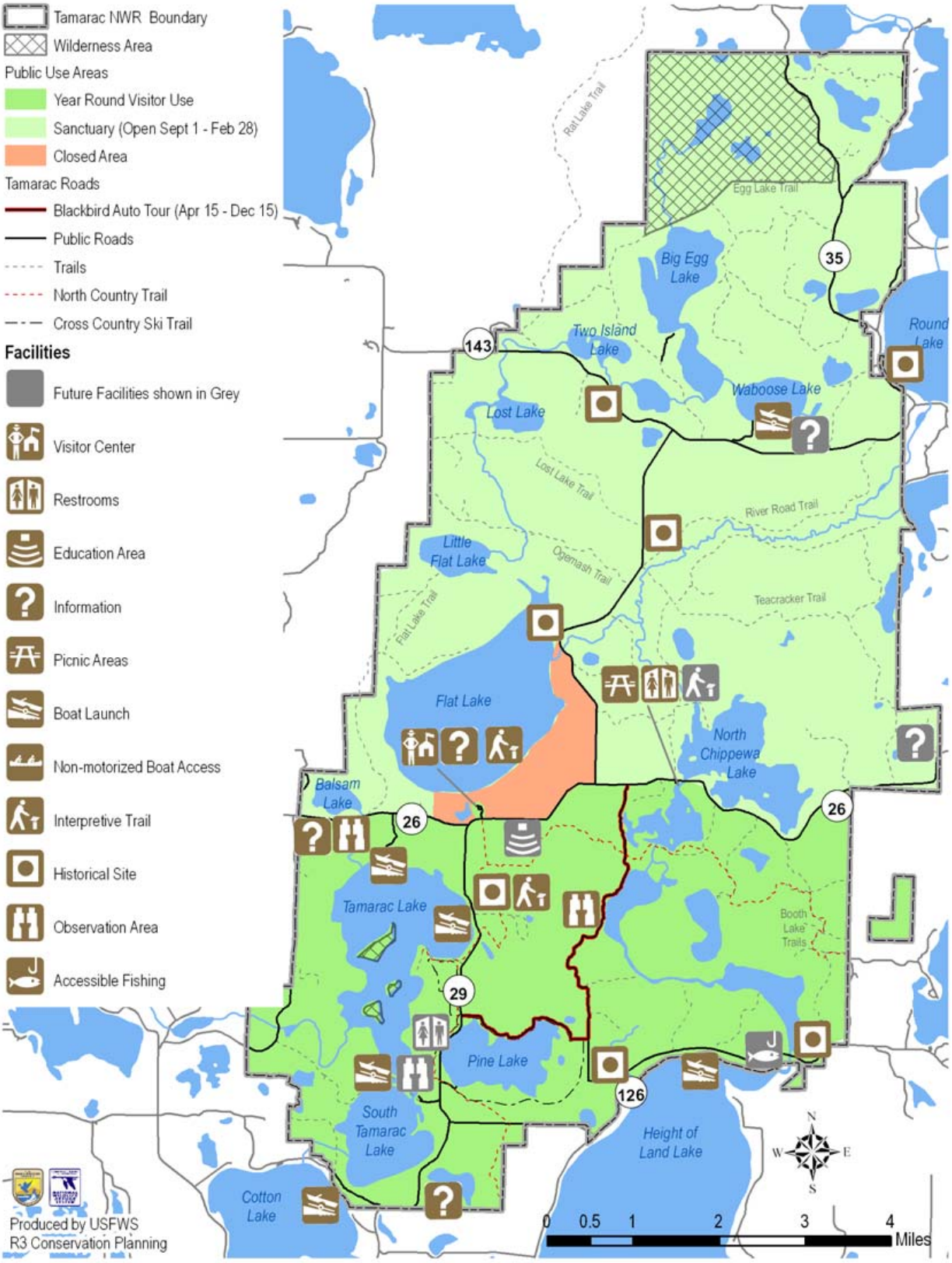
Land Cover Proposed in the Draft CCP



Hunting Zones, Tamarac NWR



Potential Future Visitor Facilities, Fall/Winter, Tamarac NWR



Potential Future Visitor Facilities, Spring/Summer, Tamarac NWR