

Chapter 5: Plan Implementation

New and Existing Projects



Thief Bay Pool drawdown (foreground); spruce/tamarack trees in Wilderness Area (background). USFWS

This CCP outlines an ambitious course of action for the future management of Agassiz NWR. The ability to enhance wildlife habitats on the Refuge and to maintain existing and develop additional quality public use facilities will require a significant commitment of staff and funding from the Service. The Refuge will continually need appropriate operational and maintenance funding to implement the objectives in this plan.

The following provides a brief description of the highest priority Refuge projects (Tier 1), as chosen by the Refuge staff and listed in the Refuge Operating Needs System (RONS). A full listing of unfunded Refuge projects and operational needs can be found in Appendix F.

Refuge Operating Needs (Highest Priority)

Ditch 11 Dike Rehabilitation (East & West of Agassiz Pool). Water management is the most important tool used to control wetland vegetation, providing critical habitat for birds and mammals at Agassiz NWR. In 1909, the Judicial Ditch No. 11 Drainage System was excavated, disrupting the natural flowage pattern of 609 square miles of the Thief River Subwatershed. Even today, this 455-mile ditch system is the largest single human-made impact on habitats within the Refuge. Waters entering the 61,500-acre Refuge from this system directly affect every wetland acre and the associated infrastructure. During a spring flood in 1996, waters from this system contributed over 12,000 acre-feet of water daily for 9 consecutive days.

In 1937, the establishment of the Agassiz NWR voided the easements for all roads, except County Road 7, and ditches and placed the responsibility for management and maintenance of these facilities on the Service. Ditch 11, both the ditch and associated dikes formed from the original spoil banks, affect wetland management in two basic ways. The ditch facilitates water flow into, within and out of the Refuge, all of which can contribute to the success and failure of management goals. The dikes form the foundational infrastructure for pool definition and wetland characteristics. Despite the historical or any futuristic effects the ditch system has had or could have on Refuge habitats, current management of the Refuge is based on it continuing to function. Human failure to complement natural hydrologic water physics has resulted in continuous maintenance of ditches and dikes, especially those associated with Ditch 11 within the Refuge boundary. Although there are signs where natural hydrologic forces are trying to reclaim landscapes along a majority of Ditch 11, the area that appears to be closest to catastrophic failure due to slumping of dike slopes is downstream (west) from the main Agassiz Pool control structure. This 2.5-mile segment affects dikes associated with two pools (Parker and Madsen) totaling 5.0 miles of dike. Test borings indicate that the

foundation of the dikes shows signs of deep pivoting, which could result in total loss of the dikes. This would be devastating to the habitats of both pools. The rehabilitation of the dikes is needed to preserve traditional wildlife goals of the Refuge. Without needed repairs both the capability of manipulating pool elevation and ability to isolate the pools from major floods will be lost. The cost of thousands of acres of destroyed prime wetlands habitat is incalculable.

Efforts to find cost effective solutions yet keep existing dikes within the current footprint began in 1999. In 2001, nearly \$400,000 was spent to repair seven of 14 major slumps. Some of the slumps cost nearly \$400/foot when pilings were installed based on soil compaction tests. The June 2002 flood event caused further extensive damage to both dikes. The estimated cost to repair the 5 miles of dikes west of Agassiz Pool using the piling method is \$10,000,000. Currently we plan to complete soil compaction surveys of the entire dike and based on results seek a more cost effective solution – such as moving the dikes and ditch, lowering the dikes, etc.

Strategies 1.4.3, 1.5.2, 2.7.1. Estimated cost: Unknown at this time.

Complete Hydrological Data on Refuge Pools. Acquire hydrological data (i.e. acre-feet, flow pattern regimes, inlet flows, ditch capacity tables, pool storage, and sediment) that will be used to calculate accurate storage capacities on Refuge wetlands when flood conditions require management. The 49,000 acres of wetlands and willow shrublands on the Refuge not only support a wide variety of wildlife species but are critical to flood management within the Red Lake River Watershed during extreme events. Information from this project will provide data for the Refuge's Geographic Information System (GIS) and will be used in the implementation of the CCP. This project, which supports the Red Lake Watershed Districts mediation process, will be completed through a contract. *Strategy 1.4.2. Estimated cost: \$103,000.*



Refuge staff member measures slumping. USFWS

Improve Habitat Management Assessments and Monitoring.

Acquire and interpret aerial photos and other information to expand the GIS layers for all of Agassiz NWR, adjoining State Wildlife Management Areas and easement management areas. GIS is a computer-based system that will allow the Refuge improve its management capabilities by readily accessing and analyzing large amounts of data. GIS will link physical items such as ditches and roads with wildlife studies, vegetation changes and nesting sites. Up-to-date and accurate maps are essential. The process will include yearly infrared photos and interpretation that delineates roads, water features, and vegetation. Special emphasis will be placed on areas that have been intensively managed by fire, water level manipulation and mechanical means to monitor effectiveness of management. Work will be completed by contract in partnership with the Minnesota DNR. *Strategies 1.1.5, 1.2.3, 1.4.2, 1.5.2, 1.6.3; Goal 2: Habitat – All strategies. Estimated cost: \$51,000.*



Headquarters trail on Agassiz NWR.
USFWS

Increase Easement Management (Refuge Operations Specialist).

Provide a Refuge operations specialist to develop and implement management plans and provide oversight for the 5,400 acres of easements within the Refuge's seven-county Management District. This position will also coordinate watershed management planning within five sub-watersheds of the Red River of the North to facilitate ecosystem management in northwestern Minnesota. The project directly supports the Tall Grass Prairie Initiative and includes Partners for Fish and Wildlife, LCMR Wildlife Corridor and Conservation Reserve Enhancement Program (CREP) initiatives, Watershed Districts, NRCS, and Red River Mediation Board. Northwestern Minnesota provides habitat for hundreds of species of wildlife that are the responsibility of the federal government. *Strategies 2.12.5-7. Estimated cost: \$139,000.*

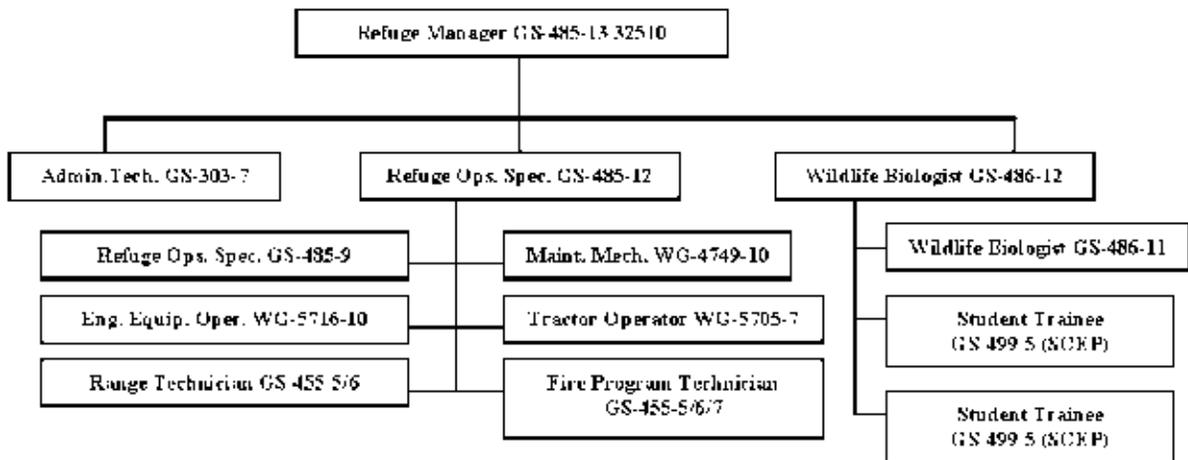
Assess Impacts and Need of Wilderness Area Exclusionary Road. A 2.25-mile road, which was an excluded right-of-way from the wilderness designation for water management purposes, bisects the 4,000-acre Wilderness Area that was established in 1976. The black spruce and tamarack trees on the west side of the Wilderness Area have been dying since 1994. Several factors could be causing this: raised water levels in Thief Bay Pool, unusually wet years with historic flooding, the excluded road that bisects the Wilderness Area into a north and south half providing an anchor system for beaver dams and maybe slowing drainage during floods, or the trees becoming so large and heavy that they sink in the bog and then drown.

Implement an historical and hydrological study to determine the impacts of the Wilderness Area exclusionary road and the impacts of water level management of adjacent pools on the black spruce/tamarack bog. The study report will include a fire history model and recommendations for habitat restoration, if required. The dominant vegetation and hydrology of the area is black spruce/tamarack bog. A pilot study was initiated in the fall of 2002 to begin investigating the effects of high water levels of managed impoundments on tree mortality. Work will be completed 2004. Based on the results of the pilot study recommendations, subsequent work will be completed through a contract with a university. *Strategy 2.11.1. Estimated cost: \$84,000.*

Improve Refuge Exhibits. Expand the public use contact station and newly developed exhibits at Agassiz NWR to increase public use opportunities and improve the quality of the experience at the Refuge visitor contact area. This project also addresses the issue of safety as it applies to public office accessibility and is necessary to stay in compliance with federal accessibility standards. This project would accomplish the "priority public uses" of the NWRS Improvement Act of 1997, as it relates to Agassiz NWR. The Refuge is known for its resident wolf packs, moose herd, waterfowl, and 287 bird species that inhabit it. Improved opportunities will enhance visitor experience and their knowledge of nature. *Strategies 3.7.8, 3.9.10. Estimated cost: \$114,000.*

Improve Customer Service (Park Ranger). Provide a permanent seasonal park ranger to coordinate visitor services programming and facilities development on Agassiz NWR. This person will implement a Visitor Services Plan that consists of development around the main administrative building (landscaping, interpretive trail, outdoor facility), and the construction of County Road 7 corridor and the Farmes Pool observation areas. The project will provide improved services to the 25,000 visitors who enjoy wildlife viewing on the Refuge's self-guiding auto tour route and hiking trails. The Plan will be completed in accordance with Service policy as outlined in the General Recreational chapter of the FWS Service Manual. *Strategy 3.7.9. Estimated cost: \$64,000.*

Figure 15: Current Staffing Chart, Agassiz NWR



*An additional full-time position, Prescribed Fire Specialist GS-65-401-9, is located at Agassiz NWR but is supervised from outside the station.

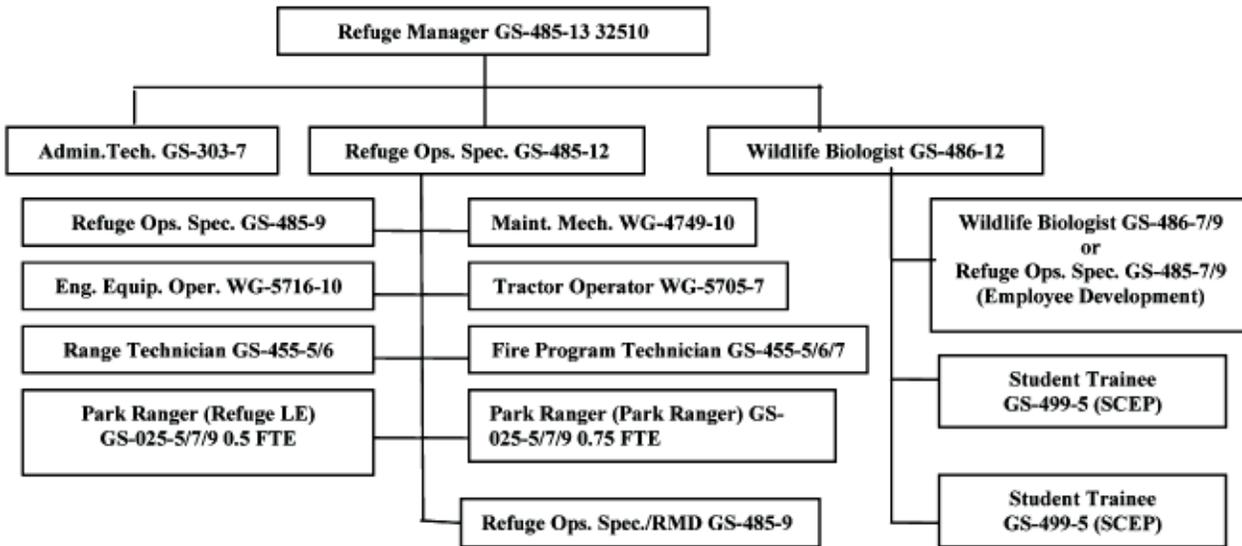
Restore Oak Savanna Plant Communities. Restore oak savanna habitat through a contract to girdle aspen and chemically treat invasive plant species. A majority of this critical habitat, which is beneficial to neotropical migrant birds, has been severely invaded by aspen and balsam popular trees. Agassiz NWR has nearly 120 acres of potential oak savanna, a transitional habitat zone between tall grass prairie and forest. This northern extension of the oak savanna habitat is very important to 100 species of birds and nine species of mammals. The project will be incorporated within a GIS database. *Strategy 2.8.1. Estimated cost: \$52,000.*

Complete Research on the Ecology of the American Bittern. Final report pending on the American Bittern study initiated 1994 by Agassiz NWR and cooperators. All field work for the three phases of this study was completed in 2003. The study dealt with capture techniques, summer home range and habitat use, response to water/grassland management, census techniques, migration patterns, wintering habitat and juvenile dispersal. The study was initiated because the American Bittern is in a nationwide decline with the greatest declines of 48 percent over the last 20 years in the Midwest. This species' position in the food chain, wide distribution, and territorial call make it an ideal indicator species. Additional information is needed to develop survey methods. Partners included Agassiz Audubon, Eyes on Wildlife High School Curriculum, Minnesota DNR, University of Missouri-Columbia, Red Lake Band of the Chippewa, Big Stone NWR and Dr. John Toepfer, research consultant. *Strategy 1.6.3.*

Future Staffing Requirements

Implementing the vision set forth in this CCP will require changes in the organizational structure of the Refuge and District. Existing staff will direct their time and energy in new directions and new staff members will be added to assist in these efforts. The following are organizational charts and tables of the current staff of the Refuge and District, Fiscal Year 2004, as well as staff needed to fully implement this plan by Fiscal Year 2020 (Figure 15 and Figure 16 and Table 4.

Figure 16: Future Staffing Needs, Agassiz NWR



*An additional full-time position, Prescribed Fire Specialist GS-401-9, is located at Agassiz NWR but is supervised from outside the station.

Table 4: Staffing Required to Fully Implement the CCP by 2020, Agassiz NWR

Position	FTEs
Refuge Operations Specialist	1.0
Park Ranger (Refuge LE)	0.5
Park Ranger Outdoor Recreation Specialist	0.75
Total	2.25

Partnership Opportunities

Partnerships have become an essential element for the successful accomplishment of Agassiz NWR goals, objectives, and strategies. The objectives outlined in this draft CCP need the support and the partnerships of federal, state and local agencies, non-governmental organizations and individual citizens. This broad-based approach to managing fish and wildlife resources extends beyond social and political boundaries and requires a foundation of support from many. Agassiz NWR will continue to seek creative partnership opportunities to achieve its vision for the future.

Many national wildlife refuges have partner non-profit organizations, often called Friends groups, which serve as advocates for the refuge. These associations have the ability to reach out to the community for support and assistance for refuge projects and conservation issues. The remoteness of the Agassiz NWR has hindered the formation of a Friends group. However, Refuge staff would welcome the assistance from a Friends group or Association if one should form during the life of this plan.

Other notable partners include the Minnesota Department of Natural Resources; Natural Resources Conservation Service; Red Lake Band of the Chippewa Indians; The Nature Conservancy, Red Lake Watershed District; Agassiz Audubon; Northwest Services Cooperatives; Wildlife Forever; Northland Community and Technical College, Thief River Falls, Minnesota; Bemidji State University, Bemidji, Minnesota; University of Minnesota, Crookston, Minnesota; University of North Dakota, Grand Forks, North Dakota; University of Missouri and Gaylord Institute, Columbia, Missouri; South Dakota State University, Brookings, South Dakota; Minnesota Pine to Prairie Birding Trail Committee and Tamarack Interpretive Association.

Step-down Management Plans

Step-down management plans describe specific actions that support the accomplishment of Refuge objectives. The management plans identified in Table 5 will be reviewed, revised, or developed as necessary to achieve the results anticipated in this draft CCP.

Table 5: Step-down Management Plan Schedule, Agassiz NWR

Step-down Management Plan	Plan Date Completed/ Updated	Anticipated Revision
Wilderness Management Plan	1981	2006
Visitor Services Plan	X	2007
Hunting Plan	1983	2006
Law Enforcement Plan	1985	2007
Furbearer Management & Trapping Plans	1985	2007
Marsh & Water Management Plan	Annual	Annual
Habitat Management Plan	X	2005/06
Wildlife Inventory Plan	1989	2006
Resource Inventory Plan	1991	2008
Fire Management Plan	2001	2011
Cultural Resources Management Plan	2002	2012
Accessibility Plan	X	

Monitoring and Evaluation

The direction set forth in this CCP and specifically identified strategies and projects will be monitored throughout the life of this plan. On a periodic basis, the Regional Office will assemble a station review team whose purpose will be to visit Agassiz NWR and evaluate current Refuge activities in light of this plan. The team will review all aspects of Refuge and District management, including direction, accomplishments and funding. The goals and objectives presented in this CCP will provide the baseline from which this field station will be evaluated.

Plan Review and Revision

The CCP for Agassiz NWR is meant to provide guidance to Refuge managers and staff over the next 15 years. However, the CCP is also a dynamic and flexible document and several of these strategies contained in this plan are subject to such things as drought, floods, windstorms and other uncontrollable events. Likewise, many of the strategies are dependent upon Service funding for staff and projects. Because of all these factors, the recommendations in the CCP will be reviewed periodically and, if necessary, revised to meet new circumstances.

