

# Chapter 5: Plan Implementation



## New and Existing Projects

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.

#### **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.



*Refuge staff member measures slumping. 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.

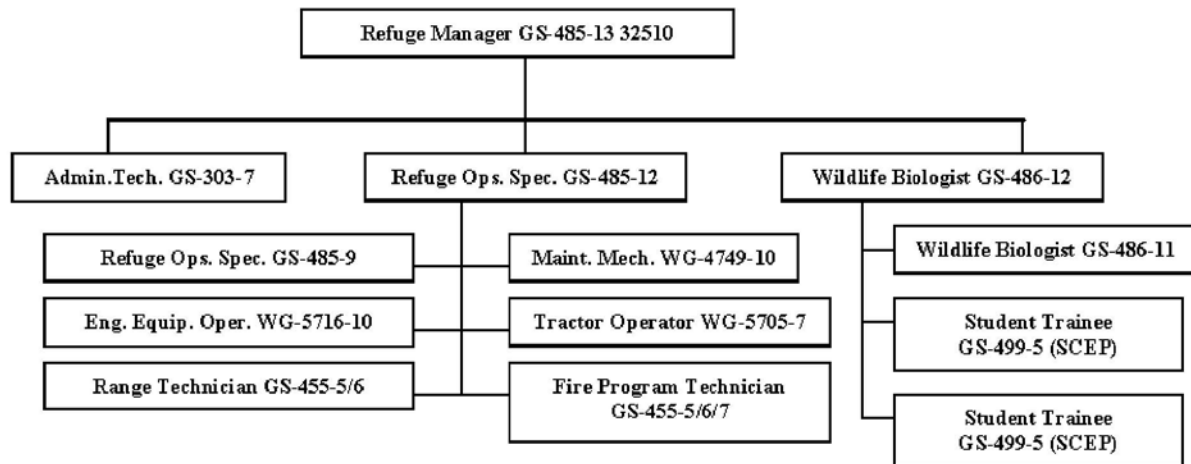
Implement an historical and hydrological study to determine the impacts of the Wilderness Area exclusionary

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 Farnes 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.*

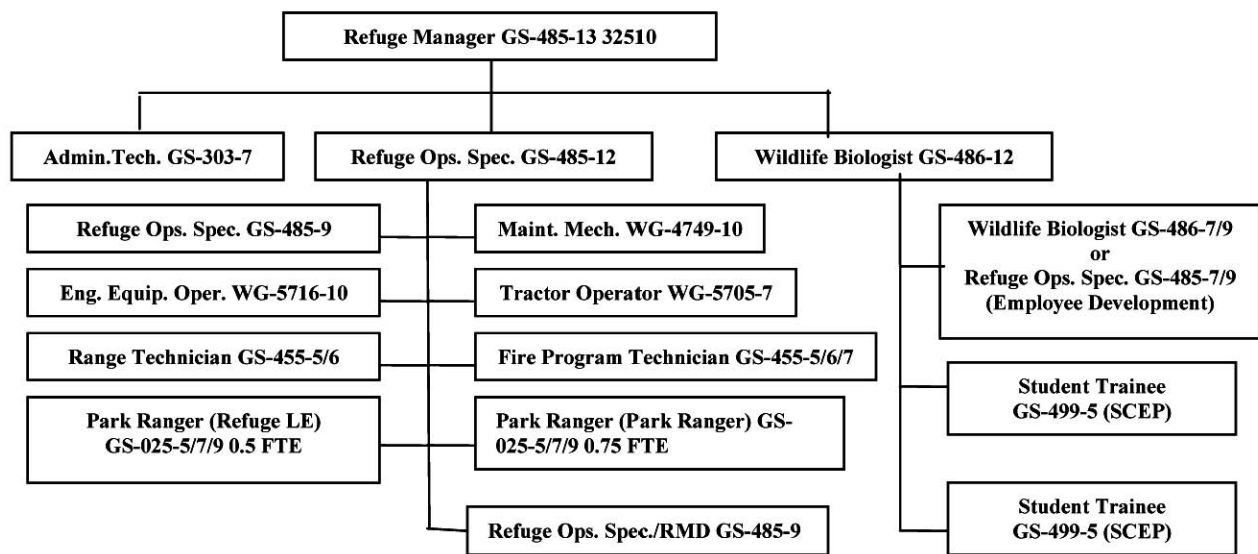
**Complete Research on the Ecology of the American Bittern.** Final report pending on the American Bittern study initiated 1994 by Agassiz NWR and cooperators. All field work for the three phases of this study was completed in 2003. The study dealt with capture techniques, summer home range and habitat 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.

# **Appendix A: Finding of No Significant Impact**

Finding of No Significant Impact  
Environmental Assessment and Comprehensive Conservation Plan  
for the Agassiz National Wildlife Refuge, Minnesota

An Environmental Assessment has been prepared to identify management strategies to meet the conservation goals of the Agassiz National Wildlife Refuge (Refuge). The Environmental Assessment examined the environmental consequences that each management alternative could have on the quality of the physical, biological, and human environment, as required by the National Environmental Policy Act of 1969 (NEPA). The Environmental Assessment presented and evaluated three alternatives for managing fish, wildlife and plant habitats, as well as visitor services, on the Refuge over the course of the next 15 years.

The EA identifies three possible alternatives primarily centered on habitat management. The Alternatives are A) Current Management Direction, B) Minimal Upland Habitat Management, and C) Open Landscape/Natural Watercourses. The three main differences between current and/or minimal management and the Open Landscape/Natural Watercourses Alternative are that under the latter, 1) there are larger areas of prairie grasslands and sedge meadow habitats, 2) winter wildlife observation opportunities will increase, and 3) deer hunting opportunities will be expanded and ruffed grouse hunting and a youth waterfowl hunt will occur.

The alternative selected for implementation is *Alternative C*. The strategies presented in the Comprehensive Conservation Plan (CCP) were developed as a direct result of the selection of this alternative. Restoration of grassland, sedge meadows, and mature forest habitat would benefit a variety of wildlife and plant species identified as Resource Conservation Priority species by the Service. Habitats would be managed for nesting and migrating songbirds, waterfowl, shorebirds and moose. Visitors to the refuge will also benefit through new hunting and winter wildlife observation opportunities including a designated, un-groomed cross country/snowshoe and walking trail. The new hunting opportunities are proposed during and after the deer/firearms season and include archery/deer, muzzleloader/deer, ruffed grouse and sharp-tailed grouse hunting. A "youth" waterfowl hunt will also be permitted in the Farnes Pool area in conjunction with the state youth waterfowl hunt season and regulations.

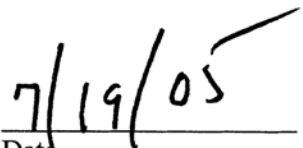
For reasons presented above and below, and based on an evaluation of the information contained in the Environmental Assessment, we have determined that the action of adopting Alternative C as the management alternative for the Refuge CCP is not a major federal action which would significantly affect the quality of the human environment, within the meaning of Section 102 (2)(c) of the National Environmental Policy Act of 1969.

Additional Reasons:

1. Future management actions will have a neutral or positive impact on the local economy.
2. A cultural resource inventory completed prior to this CCP included recommendations for the protection of cultural, archaeological and historical resources.
3. This action will not have an adverse impact on threatened or endangered species.

Supporting References:  
Environmental Assessment  
Comprehensive Conservation Plan

ACTING  Regional Director

  
Date



# Appendix B: Glossary

## Appendix B: Glossary

Alternative	A set of objectives and strategies needed to achieve refuge goals and the desired future condition.
Biological Diversity	The variety of life forms and its processes, including the variety of living organisms, the genetic differences among them, and the communities and ecosystems in which they occur.
Compatible Use	A wildlife-dependent recreational use, or any other use on a refuge that will not materially interfere with or detract from the fulfillment of the mission of the Service or the purposes of the refuge.
Comprehensive Conservation Plan (CCP)	A document that describes the desired future conditions of the refuge, and specifies management direction to achieve refuge goals and the mission of the National Wildlife Refuge System.
Community	A distinct assemblage of plants that develops on sites characterized by particular climates and soils, and the species and populations of wild animals that depend on the plants for food, cover and/or nesting.
Ecosystem	A dynamic and interrelated complex of plant and animal communities and their associated non-living environment.

Ecosystem Approach	A strategy or plan to protect and restore the natural function, structure, and species composition of an ecosystem, recognizing that all components are interrelated.
Ecosystem Management	Management of an ecosystem that includes all ecological, social and economic components that make up the whole of the system.
Ecotone	Edge or transition zone between two or more adjacent but different plant communities, ecosystems, or biomes.
Endangered Species	Any species of plant or animal defined through the Endangered Species Act as being in danger of extinction throughout all or a significant portion of its range, and published in the <i>Federal Register</i> .
Environmental Assessment (EA)	A systematic analysis to determine if proposed actions would result in a significant effect on the quality of the environment.
Extirpation	The localized extinction of a species that is no longer found in a locality or country, but still exists elsewhere in the world.
Goals Issue	<p>Descriptive statements of desired future conditions.</p> <p>Any unsettled matter that requires a management decision. For example, a resource management problem, concern, a threat to natural resources, a conflict in uses, or in the presence of an undesirable resource condition.</p>
National Wildlife Refuge System	All lands, waters, and interests therein administered by the U.S. Fish and Wildlife Service as wildlife refuges, wildlife ranges, wildlife management areas, waterfowl production areas, and other areas for the protection and conservation of fish, wildlife and plant resources.
Objectives	Actions to be accomplished to achieve a desired outcome or goal. Objectives are more specific, and generally more measurable, than goals.
Preferred Alternative	The Service's selected alternative identified in the Draft Comprehensive Conservation Plan.
Scoping	A process for determining the scope of issues to be addressed by a comprehensive conservation plan and for identifying the significant issues. Involved in the scoping process are federal, state and local agencies; private organizations; and individuals.

Species	A distinctive kind of plant or animal having distinguishable characteristics, and that can interbreed and produce young. In taxonomy, a category of biological classification that refers to one or more populations of similar organisms that can reproduce with each other but is reproductively isolated from – that is, incapable of interbreeding with – all other kinds of organisms.
Strategies	A general approach or specific actions to achieve objectives.
Wildlife-dependent Recreation	
Threatened Species	A use of refuge that involves hunting, fishing, wildlife observation and photography, or environmental education and interpretation, as identified in the National Wildlife Refuge System Improvement Act of 1997. Those plant or animal species likely to become endangered species throughout all of or a significant portion of their range within the foreseeable future. A plant or animal identified and defined in accordance with the 1973 Endangered Species Act and published in the <i>Federal Register</i> .
Vegetation	Plants in general, or the sum total of the plant life in an area.
Vegetation Type	A category of land based on potential or existing dominant plant species of a particular area.
Watershed	The entire land area that collects and drains water into a stream or stream system.
Wetland	Areas such as lakes, marshes, bogs, and streams that are inundated by surface or ground water for a long enough period of time each year to support, and that do support under natural conditions, plants and animals that require saturated or seasonally saturated soils.
Wildlife Diversity	A measure of the number of wildlife species in an area and their relative abundance.

## Appendix C: Species Lists

### Mammals Found on Agassiz NWR Mammals Found on Agassiz NWR (Continued) Mammals Found on Agassiz NWR (Continued)

Common Name	Scientific Name	Savanna/ Prairie	Conifer Bog	Aspen/ Lowland Shrub	Marsh and Open Water
Shrews					
Masked shrew	<i>Sorex cinereus</i>	s		s	
Water shrew	<i>Sorex palustris</i>				s

Arctic shrew	<i>Sorex arcticus</i>		r	r	
Pygmy shrew	<i>Microsorex hoyi</i>			r	
Short-tailed shrew	<i>Blarina brevicauda</i>	u	u	s	s
<b>Moles</b>					
Star-nosed mole	<i>Condylura cristata</i>			r	
<b>Bats</b>					
Little brown myotis	<i>Myotis lucifugus</i>	u		s	
Big brown bat	<i>Eptesicus fuscus</i>	u		s	
Red bat	<i>Lasiurus borealis</i>			s	c
Hoary bat	<i>Lasiurus cinereus</i>			s	
<b>Rabbits and Hares</b>					
Eastern cottontail	<i>Sylvilagus floridanus</i>	a		c	
Snowshoe hare	<i>Lepus americanus</i>		c	a	
White-tailed jackrabbit	<i>Lepus townsendii</i>	u			
<b>Rodents</b>					
Woodchuck	<i>Marmota monax</i>	c			
Thirteen-lined ground Squirrel	<i>Spermophilus tridecemlineatus</i>	c			
Franklin's ground squirrel	<i>Spermophilus franklini</i>	u			
Eastern chipmunk	<i>Tamias striatus</i>			c	
Gray squirrel	<i>Sciurus carolinensis</i>	u		u	
Fox squirrel	<i>Sciurus niger</i>			u	
Red squirrel	<i>Tamiasciurus hudsonicus</i>		c	u	

<b>Common Name</b>	<b>Scientific Name</b>	<b>Savanna/ Prairie</b>	<b>Conifer Bog</b>	<b>Aspen/ Lowland Shrub</b>	<b>Marsh and Open Water</b>
Northern flying squirrel	<i>Glaucomys sabrinus</i>	u	u	u	
Plains pocket gopher	<i>Geomys bursarius</i>	s			
Beaver	<i>Castor canadensis</i>		a	a	a
Deer mouse	<i>Peromyscus maniculatus</i>	u			
White-footed mouse	<i>Peromyscus leucopus</i>	s		s	
Gapper's red-backed vole	<i>Clethrionomys gapperi</i>	s	c	s	

Meadow vole	<i>Microtus pennsylvanicus</i>	u			
Muskrat	<i>Ondatra zibethica</i>		u	u	a
Norway rat #	<i>Rattus norvegicus</i>	u			
House mouse #	<i>Mus musculus</i>	u			
Meadow jumping mouse	<i>Zapus hudsonius</i>	s	u	s	
Porcupine	<i>Erethizon dorsatum</i>	u	u	u	
<b>Canines</b>					
Coyote	<i>Canis latrans</i>	r	r	r	
Gray wolf	<i>Canis lupus</i>	o	o	o	
Red fox	<i>Vulpes vulpes</i>	c	u	c	
Gray fox	<i>Urocyon cinereoargenteus</i>	r	r		
<b>Other Carnivores</b>					
Black bear	<i>Ursus americanus</i>	u	u	u	u
Raccoon*	<i>Procyon lotor</i>	c	c	c	c
Bobcat	<i>Lynx rufus</i>	u	u	c	o
<b>Weasel Family (Mustelidae)</b>					
Fisher	<i>Martes pennanti</i>	o	o	o	o
Ermine (Short-tailed weasel)	<i>Mustela erminea</i>		o	u	
Least weasel	<i>Mustela nivalis</i>	u			
Long-tailed weasel	<i>Mustela frenata</i>		s	s	
Mink	<i>Mustela vison</i>	o	u	c	a

<b>Common Name</b>	<b>Scientific Name</b>	<b>Savanna/ Prairie</b>	<b>Conifer Bog</b>	<b>Aspen/ Lowland Shrub</b>	<b>Marsh and Open Water</b>
Badger	<i>Taxidea taxus</i>	r			
Striped skunk	<i>Mephitis mephitis</i>	a		c	
River otter	<i>Lutra Canadensis</i>			u	c
<b>Deer Family</b>					
American Elk**	<i>Cervis elaphus</i>	r			
White-tailed deer	<i>Odocoileus virginianus</i>	a	a	a	c
Moose	<i>Alces alces</i>	u	u	c	c

# Exotic species \* Not native to area before colonial settlement \*\* Not a resident mammal of the refuge a – abundant: a common species that is very numerous c – common: certain to be seen or heard in suitable habitat, not in large numbers. u – uncommon: present but not always seen. o – occasional: seen only a few times during the season. r – rare: seen every 2 to 5 years. s – secretive: common to abundant but rarely observable.

## Bird Species Found on Agassiz NWR

### Definitions

Spring (March–May), Summer (June–July), Fall (August–November), Winter (December–February). a=abundant, common species that is very numerous c=Common, certain to be seen in suitable habitat u=Uncommon, present, but on certain to be seen o=Occasional, seen only a few times during season r=Rare, seen at intervals of 2 to 5 years. \*=Nesting #=State threatened and endangered species. .

## Birds Found on Agassiz NWR

Common Name	Sp	Su	Fa	Wi
<b>Loons</b>				
Common Loon	o	r	o	
<b>Grebes</b>				
Pied-billed Grebe*	a	a	a	
Horned Grebe**#	o	r	o	
Red-necked Grebe*	c	c	c	
Eared Grebe*	u	u	o	
Western Grebe*	o	o	o	
<b>Pelicans</b>				
American White Pelican	c	c	c	
<b>Cormorants</b>				
Double-crested Cormorant*	c	c	c	
<b>Hérons and Bitterns</b>				
American Bittern*	c	c	c	
Least Bittern*	u	u	u	
Great Blue Heron*	c	c	c	
Great Egret*	u	u	u	
Snowy Egret*	r	r		
Little Blue Heron	r			

Cattle Egret	r	r	r	
Green Heron*	u	u	u	
Black-crowned Night-Heron*	c	c	c	

**Birds Found on Agassiz NWR (Continued) Birds Found on  
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Common Name	Sp	Su	Fa	Wi
Vultures				
Turkey Vulture	o	o	o	
Swans, Geese and Ducks (Waterfowl)				
Trumpeter Swan#	r			
Tundra Swan	c	r	c	
Greater White-fronted Goose	o		r	
Snow Goose	u		c	
Canada Goose*	c	a	c	
Wood Duck*	u	u	u	
Gadwall*	c	c	a	
American Wigeon*	c	c	a	
American Black Duck*	o	r	u	
Mallard*	a	a	a	
Blue-winged Teal*	a	a	a	
Northern Shoveler*	c	c	c	
Northern Pintail*	c	u	c	
Green-winged Teal*	c	u	a	
Canvasback*	c	c	u	
Redhead*	c	c	c	
Ring-necked Duck*	c	c	c	
Greater Scaup	u		u	
Lesser Scaup*	c	u	c	
White-winged Scoter	o	r	o	

Long-tailed Duck	r		r	
Bufflehead*	c	u	u	
Common Goldeneye*	c	r	u	
Hooded Merganser*	c	u	u	
Common Merganser	u	r	o	
Red-breasted Merganser	o			
Ruddy Duck*	c	c	c	

Common Name	Sp	Su	Fa	Wi
<b>Hawks and Eagles</b>				
Osprey	r		r	
Bald Eagle*#	u	u	u	o
Northern Harrier*	c	c	c	
Sharp-shinned Hawk*	u	r	c	
Cooper's Hawk*	o	r	o	
Northern Goshawk*	o		o	u
Broad-winged Hawk*	u	r	u	
Swainson's Hawk			r	
Red-tailed Hawk*	c	c	c	
Rough-legged Hawk	c		c	u
Golden Eagle	r		r	r
<b>Falcons</b>				
American Kestrel*	u	u	u	
Merlin	o		o	
Peregrine Falcon#	o		o	
<b>Upland Game Birds</b>				
Gray Partridge*	o	o	o	o
Ring-necked Pheasant			o	o
Ruffed Grouse*	c	c	c	c
Sharp-tailed Grouse*	o	o	o	o
<b>Rails and Coots</b>				
Yellow Rail*	u	u		
Virginia Rail*	c	c	c	
Sora*	c	a	c	



American Coot*	a	a	a	
<b>Cranes</b>				
Sandhill Crane*	c	c	a	
<b>Shorebirds</b>				
Black-bellied Plover	o		o	
American Golden-Plover	o		o	

<b>Common Name</b>	<b>Sp</b>	<b>Su</b>	<b>Fa</b>	<b>Wi</b>
Semipalmated Plover	c	r	c	
Killdeer*	c	c	c	
American Avocet*	r	r		
Greater Yellowlegs	c	o	c	
Lesser Yellowlegs	c	u	c	
Solitary Sandpiper	u	o	u	
Willet	r		r	
Spotted Sandpiper*	c	c	c	
Upland Sandpiper*	o	o		
Hudsonian Godwit	u			
Marbled Godwit*	o	o		
Ruddy Turnstone	r		r	
Sanderling	o		o	
Semipalmated Sandpiper	c	o	u	
Least Sandpiper	c	c	c	
White-rumped Sandpiper	o		r	
Baird's Sandpiper	o		o	
Pectoral Sandpiper	c		c	
Dunlin	u		o	
Stilt Sandpiper	u		u	
Buff-breasted Sandpiper	r		r	
Short-billed Dowitcher	u	o	u	
Long-billed Dowitcher	c		c	
Common Snipe*	c	c	c	
American Woodcock*	u	u	u	
Wilson's Phalarope*#	u	r	o	
Red-necked Phalarope	o		o	

Gulls and Terns				
Franklin's Gull*	a	a	o	
Bonaparte's Gull	u	r	u	
Ring-billed Gull	c	r	c	

Common Name	Sp	Su	Fa	Wi
<b>Herring Gull</b>				
Herring Gull	u		u	
<b>Caspian Tern</b>				
Caspian Tern	o		o	
<b>Common Tern#</b>				
Common Tern#	o		r	
<b>Forster's Tern*</b>				
Forster's Tern*	c	c	c	
<b>Black Tern*</b>				
Black Tern*	c	c	c	
<b>Doves</b>				
<b>Rock Dove</b>				
Rock Dove	r	r	r	
<b>Mourning Dove*</b>				
Mourning Dove*	c	a	c	
<b>Cuckoos</b>				
<b>Black-billed Cuckoo*</b>				
Black-billed Cuckoo*	u	c	u	
<b>Yellow-billed Cuckoo</b>				
Yellow-billed Cuckoo		r		
<b>Owls</b>				
<b>Eastern Screech-Owl</b>				
Eastern Screech-Owl	r			
<b>Great Horned Owl*</b>				
Great Horned Owl*	c	c	c	c
<b>Snowy Owl</b>				
Snowy Owl	o		u	u
<b>Northern Hawk Owl</b>				
Northern Hawk Owl				r
<b>Barred Owl</b>				
Barred Owl	r		r	r
<b>Great Gray Owl</b>				
Great Gray Owl		r	r	r
<b>Long-eared Owl</b>				
Long-eared Owl	r	r		
<b>Short-eared Owl*</b>				
Short-eared Owl*	o	r	o	o
<b>Northern Saw-whet Owl*</b>				
Northern Saw-whet Owl*	r	r		r
<b>Nighthawks and Nightjars</b>				
<b>Common Nighthawk*</b>				
Common Nighthawk*	u	u	u	
<b>Whip-poor-will*</b>				
Whip-poor-will*	u	u	u	
<b>Swifts</b>				
<b>Chimney Swift</b>				
Chimney Swift	r	r		
<b>Hummingbirds</b>				
<b>Ruby-throated Hummingbird*</b>				
Ruby-throated Hummingbird*	u	u	u	

Kingfishers				
Belted Kingfisher*	o	o	o	

Common Name	Sp	Su	Fa	Wi
<b>Woodpeckers</b>				
Red-headed Woodpecker	o	o	o	
Yellow-bellied Sapsucker	u	u	u	
Downy Woodpecker*	c	c	c	c
Hairy Woodpecker*	c	c	c	c
Black-backed Woodpecker	r	r	r	r
Northern Flicker*	c	c	a	
Pileated Woodpecker*	u	u	u	u
<b>Flycatchers</b>				
Olive-sided Flycatcher	r	r		
Eastern Wood-Pewee*	c	c	c	
Yellow-bellied Flycatcher		o		
Alder Flycatcher*	u	c		
Willow Flycatcher	r	r		
Least Flycatcher*	c	c	u	
Eastern Phoebe*	o	o	o	
Great Crested Flycatcher*	u	c	o	
Western Kingbird	u	r	u	
Eastern Kingbird*	c	c	c	
<b>Shrikes</b>				
Northern Shrike	o		o	
<b>Vireos</b>				
Yellow-throated Vireo*	o	o	o	
Blue-headed Vireo	o		o	
Warbling Vireo*	u	c	u	
Philadelphia Vireo	o	r	o	
Red-eyed Vireo*	c	c	u	
<b>Jays, Magpies and Crows</b>				
Gray Jay*	r	r	r	o
Blue Jay*	c	c	c	

Black-billed Magpie*	o	o	o	o
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<b>Common Name</b>	<b>Sp</b>	<b>Su</b>	<b>Fa</b>	<b>Wi</b>
American Crow*	c	c	c	
Common Raven*	u	o	u	c
<b>Larks</b>				
Horned Lark*	o	o	o	r
<b>Swallows</b>				
Purple Martin*	o	r		
Tree Swallow*	c	c	c	
Northern Rough-winged Swallow	u	r	u	
Bank Swallow	o	o	o	
Cliff Swallow*	c	a	c	
Barn Swallow*	c	u	c	
<b>Chickadees and Titmice</b>				
Black-capped Chickadee*	c	c	c	c
Boreal Chickadee	o	o	o	o
<b>Nuthatch</b>				
Red-breasted Nuthatch	o	r	o	o
White-breasted Nuthatch*	c	c	c	c
<b>Creepers</b>				
Brown Creeper	o		o	
<b>Wrens</b>				
House Wren*	c	c	c	
Winter Wren	r	r	r	
Sedge Wren*	u	a	u	
Marsh Wren*	a	a	u	
<b>Kinglets</b>				
Golden-crowned Kinglet*	c	r	c	
Ruby-crowned Kinglet*	c	r	c	
<b>Bluebirds and Thrushes</b>				
Eastern Bluebird*	u	u	u	
Veery*	u	c	o	
Gray-cheeked Thrush	o		o	

<b>Common Name</b>	<b>Sp</b>	<b>Su</b>	<b>Fa</b>	<b>Wi</b>
Swainson's Thrush	u		o	
Hermit Thrush	u		u	
American Robin*	c	c	c	
<b>Mimics</b>				
Gray Catbird*	u	c	u	
Brown Thrasher*	u	u	u	
<b>Starlings</b>				
European Starling*	o	o	o	
<b>Pipits</b>				
American Pipit	o		u	
<b>Waxwings</b>				
Bohemian Waxwing	r		r	r
<b>Warblers</b>				
Golden-winged Warbler			r	
Tennessee Warbler	c		c	
Orange-crowned Warbler	u		u	
Nashville Warbler*	o	c	u	
Northern Parula	r		r	
Yellow Warbler*	c	a	c	
Chestnut-sided Warbler*	o	o		
Magnolia Warbler	u		u	
Cape May Warbler	u		u	
Yellow-rumped Warbler	a	o	a	
Black-throated Green Warbler	u	r	o	
Blackburnian Warbler*	o	u	o	
Pine Warbler	c		c	
Palm Warbler	c		c	
Bay-breasted Warbler	o		o	
Blackpoll Warbler	c		c	
Black-and-white Warbler	u	o	u	
American Redstart*	u	u	u	

<b>Common Name</b>	<b>Sp</b>	<b>Su</b>	<b>Fa</b>	<b>Wi</b>
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Ovenbird*	u	u	o	
Northern Waterthrush	u	r	u	
Connecticut Warbler*	r	r		
Mourning Warbler	o	o		
Common Yellowthroat*	c	a	c	
Wilson's Warbler	u		o	
Canada Warbler	o	r		
<b>Tanagers</b>				
Scarlet Tanager	r	r	r	
<b>Grosbeaks, Buntings and Sparrows</b>				
Eastern Towhee		o		
American Tree Sparrow	c		c	
Chipping Sparrow*	u	o	u	
Clay-colored Sparrow*	c	a	c	
Vesper Sparrow*	u	c	u	
Savannah Sparrow*	u	u	u	
Grasshopper Sparrow		r		
Le Conte's Sparrow*	u	c	u	
Nelson's Sharp-tailed Sparrow*	o	u		
Fox Sparrow	c		c	
Song Sparrow*	c	c	u	
Lincoln's Sparrow	o		o	
Swamp Sparrow*	u	c	u	
White-throated Sparrow*	c	c	c	
Harris's Sparrow	u		u	
White-crowned Sparrow	u		u	
Dark-eyed Junco	c		c	
Lapland Longspur	u		u	
Snow Bunting	u		u	o
<b>Grosbeaks and Buntings</b>				
Rose-breasted Grosbeak*	u	c	o	

<b>Common Name</b>	<b>Sp</b>	<b>Su</b>	<b>Fa</b>	<b>Wi</b>
Indigo Bunting	r	r	r	

Blackbirds and Orioles				
Bobolink*	o	o	o	
Red-winged Blackbird*	c	c	c	
Western Meadowlark*	o	o	o	
Rusty Blackbird	u		u	
Yellow-headed Blackbird*	c	c	c	
Brewer's Blackbird*	o	o	o	
Common Grackle*	c	o	c	
Brown-headed Cowbird*	c	a	c	
Baltimore Oriole*	c	c	o	
Finches				
Pine Grosbeak	o		o	u
Purple Finch*	u	o	u	
House Finch	r			r
Red Crossbill			o	o
White-winged Crossbill			o	o
Common Redpoll	c		u	c
Hoary Redpoll	r			r
Pine Siskin	u	r	u	o
American Goldfinch*	c	c	c	
Evening Grosbeak	u		u	u
Old World Sparrows				
House Sparrow*	o	o	o	

## Casual and Accidental Birds Casual and Accidental Birds (Continued)

Clark's Grebe	Western Sandpiper
Tri-colored Heron	Ruff
Yellow-crowned Night Heron	Laughing Gull
White-faced Ibis	California Gull

Brant	Ross' Gull
European Widgeon	Boreal Owl
Cinnamon Teal	Acadian Flycatcher
Surf Scoter	Loggerhead Shrike

Mississippi Kite	Mountain Bluebird
Red-shouldered Hawk	Wood Thrush
Ferruginous Hawk	Northern Mockingbird
Gyr Falcon	Sage Thrasher
Prairie Falcon	Sprague's Pipit
Greater Prairie Chicken	Yellow-throated Warbler
King Rail	Prothonotary Warbler
Common Moorhen	Field Sparrow
Snowy Plover	Lark Bunting
Piping Plover	Smith's Longspur
Whimbrel	Northern Cardinal
Red Knot	

## Amphibians

Common Name	Scientific Name	Savanna /Prairie	Conifer Bog	Aspen/ Lowland Shrub	Marsh and Open water
Wood Frog	<i>Rana sylvatica</i>		c	a	c
Western Chorus Frog	<i>Pseudacris triseriata</i>		c	a	
Spring Peeper	<i>Pseudacris crucifer</i>		u	u	u
Northern Leopard Frog	<i>Rana pipiens</i>			u	u
American Toad	<i>Bufo americanus</i>	c	c	c	c
Canadian Toad	<i>Bufo hemiophrys</i>	u	u	u	u
Great Plains Toad	<i>Bufo cognatus</i>	r			
Gray Treefrog	<i>Hyla versicolor</i>		c	c	
Copes Gray Treefrog	<i>Hyla chrysoscelis</i>		u	u	
Tiger Salamander	<i>Ambystoma tigrinum</i>		u	a	a

c – common: certain to be seen or heard in suitable habitat, not in large numbers.

u – uncommon: present but not always seen.

a – abundant: a common species that is numerous.

## Reptiles Found on Agassiz NWR



Common Name	Scientific Name	Savanna/ Prairie	Conifer Bog	Lowland Shrub	Marsh and Open Water
Prairie Skink	<i>Eumeces septentrionalis</i>	u			
Snapping Turtle	<i>Chelydra serpentina</i>				u
Painted Turtle	<i>Chrysemys picta</i>				c
Plains Garter Snake	<i>Thamnophis radix</i>	u			u
Red-sided Garter Snake	<i>Thamnophis sirtalis parietalis</i>	a	a	a	a
Eastern Garter Snake	<i>Thamnophis sirtalis sirtalis</i>	a	a	a	a
Smooth Green Snake	<i>Opheodrys vernalis</i>	r			r
Redbelly Snake	<i>Storeria occipitomaculata</i>			u	
a= abundant c= common u= uncommon r=rare					

## Fish Species Found on Agassiz NWR Fish Species Found on Agassiz NWR

Common Name	Scientific Name	Marsh & Open Water
<b>Minnnows</b>		
Brassy Minnow	<i>Hybognathus hankinsoni</i>	r
Common Shiner	<i>Luxilus cornutus</i>	u
Pearl Dace	<i>Margariscus margarita</i>	u
Golden Shiner	<i>Notemigonus crysoleucas</i>	r
Bigmouth Shiner	<i>Notropis dorsalis</i>	r
Blacknose Shiner	<i>Notropis heterolepis</i>	r
Spottail Shiner	<i>Notropis hudsonius</i>	r
Sand Shiner	<i>Notropis stramineus</i>	r
Northern Redbelly Dace	<i>Phoxinus Eos</i>	c
Finescale Dace	<i>Phoxinus neogaeus</i>	c
Fathead Minnow	<i>Pimephales promelas</i>	a
Creek Chub	<i>Semotilus atromaculatus</i>	r
<b>Suckers</b>		
Carp sucker	<i>Carpiodes species</i>	r
White Sucker	<i>Catostomus commersoni</i>	c

Shorthead Redhorse	<i>Moxostoma macrolepidotum</i>	u
Bullhead Catfish		
Black Bullhead	<i>Ameiurus melas</i>	r
Tadpole madtom	<i>Noturus gyrinus</i>	r
Pikes		
Northern Pike	<i>Esox lucius</i>	r
Mudminnows		
Central Mudminnow	<i>Umbra limi</i>	c

Common Name	Scientific Name	Marsh & Open Water
Sticklebacks		
Brook Stickleback	<i>Culaea inconstans</i>	a
Sculpins		
Slimy Sculpin	<i>Cottus cognatus</i>	r
Sunfish		
Bluegill	<i>Lepomis macrochirus</i>	r
Largemouth Bass	<i>Micropterus salmoides</i>	r
Black Crappie	<i>Pomoxis nigromaculatus</i>	r
Perch		
Iowa Darter	<i>Etheostoma exile</i>	u
Johnny Darter	<i>Etheostoma nigrum</i>	r
Blackside Darter	<i>Percina maculate</i>	r
River Darter	<i>Percina shumardi</i>	
Walleye	<i>Stizostedion vitreum</i>	r
Drums		

Freshwater Drum	<i>Aplodinotus grunniens</i>	r
Exotics		
European carp	<i>Cyprinus carpio</i>	

a – abundant c – common u – uncommon r – rare

## Appendix D: Compatibility Determinations

The following compatibility determinations were presented for public review in the Draft CCP/EA. Copies of the signed documents are available for viewing at the Agassiz NWR Headquarters.

- # Hunting
- # Firewood Cutting and Timber Harvest
- # Trapping of Furbearers
- # Environmental Education and Interpretation
- # Wildlife Observation and Photography
- # Haying
- # Research

## Appendix E: Compliance Requirements

### Appendix E: Compliance Requirements

***Rivers and Harbor Act (1899) (33 U.S.C. 403):*** Section 10 of this Act requires the authorization by the U.S. Army Corps of Engineers prior to any work in, on, over, or under a navigable water of the United States.

***Antiquities Act (1906):*** Authorizes the scientific investigation of antiquities on Federal land and provides penalties for unauthorized removal of objects taken or collected without a permit.

***Migratory Bird Treaty Act (1918):*** Designates the protection of migratory birds as a Federal responsibility. This Act enables the setting of seasons, and other regulations including the closing of areas, Federal or non-

Federal, to the hunting of migratory birds.

***Migratory Bird Conservation Act (1929)***: Establishes procedures for acquisition by purchase, rental, or gift of areas approved by the Migratory Bird Conservation Commission.

***Fish and Wildlife Coordination Act (1934), as amended***: Requires that the Fish and Wildlife Service and State fish and wildlife agencies be consulted whenever water is to be impounded, diverted or modified under a Federal permit or license. The Service and State agency recommend measures to prevent the loss of biological resources, or to mitigate or compensate for the damage. The project proponent must take biological resource values into account and adopt justifiable protection measures to obtain maximum overall project benefits. A 1958 amendment added provisions to recognize the vital contribution of wildlife resources to the Nation and to require equal consideration and coordination of wildlife conservation with other water resources development programs. It also authorized the Secretary of Interior to provide public fishing areas and accept donations of lands and funds.

***Migratory Bird Hunting and Conservation Stamp Act (1934)***: Authorized the opening of part of a refuge to waterfowl hunting.

***Historic Sites, Buildings and Antiquities Act (1935), as amended***: Declares it a national policy to preserve historic sites and objects of national significance, including those located on refuges. Provides procedures for designation, acquisition, administration, and protection of such sites.

***Refuge Revenue Sharing Act (1935), as amended***: Requires revenue sharing provisions to all fee-title ownerships that are administered solely or primarily by the Secretary through the Service.

***Transfer of Certain Real Property for Wildlife Conservation Purposes Act (1948)***: Provides that upon a determination by the Administrator of the General Services Administration, real property no longer needed by a Federal agency can be transferred without reimbursement to the Secretary of Interior if the land has particular value for migratory birds, or to a State agency for other wildlife conservation purposes.

***Federal Records Act (1950)***: Directs the preservation of evidence of the government's organization, functions, policies, decisions, operations, and activities, as well as basic historical and other information.

***Fish and Wildlife Act (1956)***: Established a comprehensive national fish and wildlife policy and broadened the authority for acquisition and development of refuges.

***Refuge Recreation Act (1962)***: Allows the use of refuges for recreation when such uses are compatible with the refuge's primary purposes and when sufficient funds are available to manage the uses.

***Wilderness Act (1964), as amended***: Directed the Secretary of Interior, within 10 years, to review every roadless area of 5,000 or more acres and every roadless island (regardless of size) within National Wildlife Refuge and National Park Systems and to recommend to the President the suitability of each such area or island for inclusion in the National Wilderness Preservation System, with final decisions made by Congress. The Secretary of Agriculture was directed to study and recommend suitable areas in the National Forest System.

***Land and Water Conservation Fund Act (1965)***: Uses the receipts from the sale of surplus Federal land, outer continental shelf oil and gas sales, and other sources for land acquisition under several authorities.

***National Wildlife Refuge System Administration Act (1966), as amended by the National Wildlife Refuge System Improvement Act (1997) 16 U.S.C. 668dd668ee. (Refuge Administration Act)***: Defines the National Wildlife Refuge System and authorizes the Secretary to permit any use of a refuge provided such use is compatible with the major purposes for which the refuge was established. The Refuge System Improvement Act clearly defines a unifying mission for the Refuge System; establishes the legitimacy and appropriateness of the six priority public uses (hunting, fishing, wildlife observation and photography, and environmental education and interpretation); establishes a formal process for determining compatibility; established the responsibilities of the Secretary of Interior for managing and protecting the System; and requires a Comprehensive Conservation Plan for each refuge by the year 2012. The 1997 Act amended portions of the

Refuge Recreation Act and National Wildlife Refuge System Administration Act of 1966.

***National Historic Preservation Act (1966), as amended:*** Establishes as policy that the Federal Government is to provide leadership in the preservation of the nation's prehistoric and historic resources.

***Architectural Barriers Act (1968):*** Requires federally owned, leased, or funded buildings and facilities to be accessible to persons with disabilities.

***National Environmental Policy Act (1969):*** Requires the disclosure of the environmental impacts of any major Federal action significantly affecting the quality of the human environment.

***Uniform Relocation and Assistance and Real Property Acquisition Policies Act (1970), as amended:*** Provides for uniform and equitable treatment of persons who sell their homes, businesses, or farms to the Service. The Act requires that any purchase offer be no less than the fair market value of the property.

***Endangered Species Act (1973):*** Requires all Federal agencies to carry out programs for the conservation of endangered and threatened species.

***Rehabilitation Act (1973):*** Requires programmatic accessibility in addition to physical accessibility for all facilities and programs funded by the Federal government to ensure that anybody can participate in any program.

***Archaeological and Historic Preservation Act (1974):*** Directs the preservation of historic and archaeological data in Federal construction projects.

***Clean Water Act (1977):*** Requires consultation with the Corps of Engineers (404 permits) for major wetland modifications.

***Surface Mining Control and Reclamation Act (1977) as amended (Public Law 95-87) (SMCRA):*** Regulates surface mining activities and reclamation of coal-mined lands. Further regulates the coal industry by designating certain areas as unsuitable for coal mining operations.

***Executive Order 11988 (1977):*** Each Federal agency shall provide leadership and take action to reduce the risk of flood loss and minimize the impact of floods on human safety, and preserve the natural and beneficial values served by the floodplains.

***Executive Order 11990 (1977):*** Executive Order 11990 directs Federal agencies to (1) minimize destruction, loss, or degradation of wetlands and (2) preserve and enhance the natural and beneficial values of wetlands when a practical alternative exists.

***Executive Order 12372 (Intergovernmental Review of Federal Programs):*** Directs the Service to send copies of the Environmental Assessment to State Planning Agencies for review.

***American Indian Religious Freedom Act (1978):*** Directs agencies to consult with native traditional religious leaders to determine appropriate policy changes necessary to protect and preserve Native American religious cultural rights and practices.

***Fish and Wildlife Improvement Act (1978):*** Improves the administration of fish and wildlife programs and amends several earlier laws including the Refuge Recreation Act, the National Wildlife Refuge System Administration Act, and the Fish and Wildlife Act of 1956. It authorizes the Secretary to accept gifts and bequests of real and personal property on behalf of the United States. It also authorizes the use of volunteers on Service projects and appropriations to carry out a volunteer program. ***Archaeological Resources Protection Act (1979), as amended:*** Protects materials of archaeological interest from unauthorized removal or destruction and requires Federal managers to develop plans and schedules to locate archaeological resources.

***Federal Farmland Protection Policy Act (1981), as amended:*** Minimizes the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses.

***Emergency Wetlands Resources Act (1986):*** Promotes the conservation of migratory waterfowl and offsets or prevents the serious loss of wetlands by the acquisition of wetlands and other essential habitats.

***Federal Noxious Weed Act (1990):*** Requires the use of integrated management systems to control or contain undesirable plant species, and an interdisciplinary approach with the cooperation of other Federal and State agencies.

***Native American Graves Protection and Repatriation Act (1990):*** Requires Federal agencies and museums to inventory, determine ownership of, and repatriate cultural items under their control or possession.

***Americans With Disabilities Act (1992):*** Prohibits discrimination in public accommodations and services.

***Executive Order 12898 (1994):*** Establishes environmental justice as a Federal government priority and directs all Federal agencies to make environmental justice part of their mission. Environmental justice calls for fair distribution of environmental hazards.

***Executive Order 12996 Management and General Public Use of the National Wildlife Refuge System (1996):*** Defines the mission, purpose, and priority public uses of the National Wildlife Refuge System. It also presents four principles to guide management of the System.

***Executive Order 13007 Indian Sacred Sites (1996):*** Directs Federal land management agencies to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, avoid adversely affecting the physical integrity of such sacred sites, and where appropriate, maintain the confidentiality of sacred sites.

***National Wildlife Refuge System Improvement Act (1997):*** Considered the “Organic Act of the National Wildlife Refuge System.” Defines the mission of the System, designates priority wildlife-dependent public uses, and calls for comprehensive refuge planning.

***National Wildlife Refuge System Volunteer and Community Partnership Enhancement Act (1998):*** Amends the Fish and Wildlife Act of 1956 to promote volunteer programs and community partnerships for the benefit of national wildlife refuges, and for other purposes.

***National Trails System Act:*** Mandates the Secretary of Interior and thus the Service to protect the historic and recreational values of congressionally designated National Historic Trail sites.

## **Appendix F: Priority Refuge and District Operational and Maintenance Needs**

### **Appendix F: Priority Refuge and District Operational and Maintenance Needs**

The CCP directs an ambitious course for the future management of Agassiz National Wildlife Refuge. The following provides a brief description of some of the second-highest priority Refuge projects, or Tier II. The highest priority, or Tier I, projects are described in Chapter 5 of the plan. Each project description also includes the number(s) of a corresponding objective or strategy; linking it to the Goals/Objectives/Strategies section of Chapter 4. Most of these projects are listed in the Refuge Operating Needs System (RONS); the Service’s national database of unfunded operational activities. The RONS was established in 1990 as a

planning, budgeting, and communication tool to enhance identification of funding and staffing needs for the National Wildlife Refuge System. RONS projects describe the need for new or expanded activities in order to implement plans, attain goals, or satisfy legal mandates. Data within RONS are used regularly in budget justifications presented to the Department of the Interior, the Office of Management and Budget, and Congress.

## Refuge Operating Needs System

Complete an Extensive Flora Inventory of Agassiz Refuge including the Wilderness Area. Contract a botanist to survey the refuge for rare or unique plant species; priority areas are wilderness, bog and oak savannah habitat. The Aspen Parkland Biome on Agassiz is essential habitat for northwestern Minnesota. This botanical information is needed so that refuge management activities do not adversely affect plants or plant communities. Voucher specimens would be prepared and added to the refuge herbarium. Herbarium storage facilities will be improved. This project will support a GIS database and provide needed botanical information. Objective 2.11. Estimated cost: \$42,000

Improve understanding of habitat management effects on grebes. Initiate a 3-year study on grebe ecology and the effects of refuge water management activities. The refuge will contract through a cooperative agreement to implement a study (3 years) that will provide techniques that can be used for grebe management at Agassiz NWR. Five species of grebes nest at the Agassiz NWR. Grebe populations have fluctuated greatly over the last 15 years. It has not been determined whether management techniques used to benefit waterfowl compliment grebe production. This project will supplement an independent study initiated in 1997 by a University of Nebraska professor on refuge grebes. Objective 1.7; Strategies 2.7.3 and 4. Estimated cost: \$36,000

Survey water gauges and pool capacities in 20 impoundments. Purchase a Total Station Survey unit and software to facilitate conservation of 61,500 acres of Agassiz and the 7,000 acres of easements by accurately documenting boundaries, impoundments, pool capacities, sedimentation effects, location of unique features with GPS locations. Changes in impoundment size and spillway levels over the years make this necessary to plan or implement water management. This equipment will be used to survey elevations and accurately place gauges to improve water management and storage analysis and document easement storage needs. The conservation of the refuge and 7,000 acres of easements is critical to migrating/nesting migratory birds. Refuge pools have the capacity to hold 61,432 acre feet at the spillways and 116,036 acre feet of ungated storage. This large storage capacity is constantly under demand for use as flood control. This project will provide the needed information to factually inform watershed districts, county commissioners, and the public about refuge management strategies. Objectives 1.4, 5, and 6; and 2.4, 7, and 12. Estimated cost: \$60,000  
Habitat restoration through brush reduction. The project will purchase a hydromower that will be used to implement a 5-year mowing rotation to set back woody vegetation. Due to the lack of natural fires, prairie habitat has been degraded by willow and other woody brush encroachment. Because of the number of years without intensive management, the old willows and trees need to be mowed with a heavy duty mower to assist with the recovery process. Refuge and easement areas provide essential aspen parkland habitat to many wildlife species in Northwestern Minnesota. Strategies 2.1 and 3; 2.3.2; 2.8.1; Estimated cost: \$300,000

Monitor species of emphasis. This project will implement monitoring /surveys for gray wolf, black terns, bitterns, marsh birds, point counts for neotropical migrants, amphibians, bio-control agents for invasive weeds, and quantitative vegetation response to prescribed burning, and water management. This will be done by a 4-year term appointment. The refuge has an active biological/ habitat management program that currently conducts 10 wildlife surveys and weekly migration counts for waterfowl and air photo interpretation for vegetation monitoring. Initial studies have been done by graduate students to obtain base line data. Capabilities to perform follow up monitoring, GIS data entry, and long-term response to management are not available. Strategies 1.3.2; 2.5.2; 2.6.6; 2.7.3 and 4; 2.10.3; Objectives 1.6; 1.7; 2.1  
Estimated cost: \$146,000

Increase aerial surveys. Annually acquire satellite imagery for ecosystem analysis of on refuge management activities and off refuge changes effecting the environment. Satellite imagery would aid with the surveillance of refuge easement, 7,000 acres, in a 7-county district. Illegal activities and threats to the integrity of the

easements and wildlife use and response to management will be assessed. Agassiz NWR is often described as an island surrounded by a sea of agriculture. This condition warrants not only a constant visual assessment of the integrity of the refuge, but also close monitoring of wildlife response to threats to their habitats. These threats exist both on the 61,500 acre Refuge and throughout the 4.5 million acre management district.

Strategies 2.2.4; 2.4.2; 2.6.6;  
2.7.3 and 4; 2.9.1; 2.10.3; 2.12.4 Estimated cost: \$48,000

Develop refuge video, TV clips, interactive computer display. Develop refuge videos that will enhance visitor’s enjoyment and understanding of the refuge. These videos will contribute to online visitors as well as on-site visitors. The Service has declared understanding the Refuge System, the Service mission, nature and its processes and the interaction with the public as major goals. Development of a refuge specific video, public service announcements, use of new technological devices in displays and improvement of the HomePage are efficient and effective methods to disseminate information to the general public and educational institutes. This would be developed through NCTC, regional public use experts and contracted vendors. Objectives 3.6, 7, 8, 9 and 10. \$135,000

Develop Station Health & Safety Plans to meet new standards. Develop and implement a variety of safety management plans i.e. Wellhead Protection Program, Sanitary survey, Hazardous Communications Plan, Contingency Plan for Hazardous Wastes, Spill Prevention Control and Counter Measure plan, Medical Waste Plan to protect the well being of 10 full time employees and 610 residential volunteers/students. This project would also complete Job Hazard Analysis forms for all activities and/or jobs conducted on the Refuge and/or Management District. 2-year term position will be hired- responsibilities include: asbestos survey, quarterly monitoring of water supplies, monthly interstitial fuel tank security, develop a computer accounting system. General Refuge Management – Employee and Public Safety. \$129,000.

Volunteer Program Enhancement. This project will fund a cooperative agreement with the University of Minnesota - Crookston to develop a program to recruit, train, and supervise refuge volunteers (including recruitment of a Senior Volunteers Corps) and for assisting partner organizations in developing , coordinating and executing projects and programs under cooperative agreements with partner organizations. Supports implementation of Sections 4(b) and (c), 5(d)(2) and 6(e) of the Volunteer and Community Partnership Enhancement Act of 1998. Objectives 1.7; 3.6, 7, and 8. Estimated cost: \$24,000

Provide Public Safety, Security and Resource Protection (Law Enforcement Officer). Provide a full time refuge law enforcement officer to increase resource protection and provide for public safety on the 61,500-acre Agassiz NWR. Visitation at the refuge exceeds 25,000 annually. There are no law enforcement personnel currently on staff, although the Detroit Lakes WMD does provide limited coverage. The refuge is dependent on the state for much of its law enforcement needs. Objectives 2.12; 3.1,4,5, and 6. Estimated cost: \$136,000

## Maintenance Management System

The Maintenance Management System (MMS) is a database used by the Service to document Equipment Replacement, Deferred Maintenance and New Construction projects. Maintenance projects are structured around property items where repair or replacement is less than \$750,000. New Construction is for constructing new facilities or repairing / replacing existing property where costs exceed \$750,000. The following is an example list of the 115 projects identified in the 2003 database.

Project	Estimated Cost
Replacement of Bunkhouse	\$451,000
Replace Madson Pool Water Control Structure	\$164,000
Replace damaged sheetpile weir – Mud River	\$ 81,000
Repair Madsen Dike/Ditch 11	\$492,000



Repair Parker Dike/Ditch 11 slopes	\$1,500,000
Replace underground electric cable at shop	\$95,000
Repair east Ditch 11/north dike	\$150,000
Rehabilitate Lab/Envt. Ed. Ctr/5 stall	\$ 30,000
Replace 5-stall storage garage	\$148,400
Replace 3-stall storage garage	\$67,200
Resurface road on Parker Dike	\$30,000
Replace deteriorated South Pool water control structure	\$185,000
Construct accessible hiking trails and wildlife interpretive facilities	\$500,000
Replace worn out International dump truck	\$74,000
Replace worn-out John Deere 2630 Ag. Tractor, 58 hp	\$91,000
Replace worn out Champion 715A Road Grader	\$168,000

# Appendix G: Mailing List

## Appendix G: Mailing List

The following is an initial list of government offices, private organizations, and individuals who will receive notice of the availability of this CCP. We continue to add to this list.

### Elected Officials

Senator Norm Coleman Senator Mark Dayton  
 Representative Bill Luther Representative Collin  
 Peterson Representative Mike Kennedy  
 Governor Tim Pawlenty Representative Betty  
 McCollum Representative Martin Sabo

### Tribal Government

Red Lake Band of the Chippewa Indians

### Local Government

City of Baudette City of Bemidji City of Hallock City of Roseau City of Red Lake Falls City of Thief River  
 Falls City of Warren City of Middle City City of Grygla City of Crookston City of Newfolden Beltrami  
 County Kittson County Lake of the Woods County Pennington County Red Lake County Roseau County  
 Marshall County Beltrami Co. Soil & Water Conservation District Kittson Co. Soil & Water Conservation  
 District Lake of the Woods Co. Soil & Water Conservation Dist. Pennington Co. Soil & Water Conservation  
 Dist. Red Lake Co. Soil & Water Conservation District Roseau Co. Soil & Water Conservation Dist. Marshall  
 Co. Soil & Water Conservation District Red River Watershed Management Board Red River Basin Flood  
 Damage Reduction Work Group Red Lake Watershed District Mediation Committee Snake River/Middle  
 River Watershed Mediation Committee Two Rivers Watershed District Roseau River Watershed District

### Federal Agencies

USDA, Natural Resources Conservation Service USFWS, Albuquerque, New Mexico; Anchorage, Alaska;  
 Atlanta, Georgia; Denver, Colorado; Fort Snelling, Minnesota; Hadley, Massachusetts; Portland, Oregon

### **State Agencies**

Minnesota Environmental Quality Board Minnesota Pollution Control Agency Minnesota Department of Natural Resources (MNDNR) Minnesota State Historic Preservation Officer (SHPO) Minnesota Environmental Education Association

### **Colleges and Universities**

University of Minnesota / Water Resources Center University of Minnesota – Crookston, Natural Resources Department Northland Community & Technical College, Biology Department University of North Dakota, Grand Forks, North Dakota St. Cloud State University Bemidji State University, Biology Department

### **Organizations**

The Nature Conservancy Minnesota Deer Hunters Association Minnesota Waterfowl Association Pheasants Forever Ducks Unlimited National Audubon Society Wildlife Management Institute PEER Refuge Keeper The Wilderness Society National Wildlife Federation Sierra Club, Midwest Office, Madison, WI The National Wildlife Refuge Association The Conservation Fund, Arlington, Virginia Native Plant Society Minnesota Nature Photography Trust for Public Land Minnesota Land Trust The Wildlife Society, Minnesota Chapter Minnesota Prairie Chicken Society Animal Protection Institute, California Thief River Falls Chamber of Commerce Ruffed Grouse Society, Minnesota Chapter Minnesota Bow Hunters Association The Fund for Animals, Maryland Minnesota Sharptailed Grouse Society Goodridge Area Historical Society

### **Individuals**

Individuals who have requested a copy of the draft CCP

### **Media**

Thief River Falls, *Times & Northern Watch* Grand Forks, North Dakota, *Grand Forks Herald Tribune* Grygla, *Grygla Eagle* Middle River, *Middle River Recorder* Roseau, *Roseau Times* Crookston, *Crookston Daily Times* Hallock, *Kittson County Enterprise* Bemidji, *The Pioneer*

## **Appendix H: List of Preparers**

### **Appendix H: List of Preparers**

#### *Refuge Staff:*

Margaret Anderson, Refuge Manager, Agassiz National Wildlife Refuge Gary Tischer, Refuge Operations Specialist, Agassiz National Wildlife Refuge Gary Huschle, Wildlife Biologist, Agassiz National Wildlife Refuge Socheata Lor, Wildlife Biologist, Agassiz National Wildlife Refuge

#### *Regional Office Staff:*

Gary Muehlenhardt, Wildlife Biologist/Refuge Planner, Region 3, USFWS Gabriel DeAlessio, Biologist-GIS, Region 3, USFWS John Dobrovolny, Regional Historian, Region 3, USFWS Jane Hodgins, Technical Writer/Editor, Region 3, USFWS

#### *Mangi Environmental Group*

Leon Kolankiewicz, Biologist/Environmental Planner/Consultant

## **Appendix I: Bibliography**

# Appendix I: Bibliography

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## Appendix J: Public Scoping Process

### Appendix J: Public Scoping Process

#### Open House

On the evening of December 5, 2002, the USFWS and Agassiz staff welcomed the public to an open house and CCP/EA scoping meeting at the Heritage Center in Thief River Falls. About 30 individuals attended the meeting, most of whom were from Marshall County and all of whom were Minnesota residents. Attendees listened to an overview of the CCP and NEPA processes and then were given the chance to address the gathering. Rather than provide information, cite concerns, or list issues they would like to be addressed in the CCP and NEPA documents, most of the speakers took the opportunity to acquaint fellow stakeholders and the USFWS with their own ideas as to how Agassiz should be managed in the future. The following comments were made in the order shown:

- # Refuge should allow bow-hunting.
- # Refuge should give flood control higher priority.
- # Refuge should carry out better weed control (e.g. Canadian thistle).
- # Refuge allows for adequate public use – it's open to a sufficient extent to see and appreciate resources.

- # Refuge should open more areas to public visitation.
- # Refuge should strive for better appearance around headquarters; mow more often.
- # Refuge should have more food plots for game like ducks, geese and deer.
- # Refuge should improve maintenance of legal drainage ditches, which are clogged with weeds and/or vegetation on banks.
- # Refuge should lower pool level elevations; there should be less water and more upland habitat to benefit upland game in general.
- # Refuge should seek better cooperation with neighbors and work with surrounding landowners (e.g. road maintenance, water release, infrastructure).
- # Refuge should seek better cooperation and coordination with local governments, including counties, townships, and ditching authorities, in such matters as repair and works in legal drainage ditches.
- # Refuge should construct more control structures on upper reaches of the refuge and diversion ditches upstream of the refuge to the south side in the WMA, so as to reduce summer flooding.
- # Refuge should manage wildlife using biology/science instead of politics, to the maximum extent feasible.
- # Refuge should allow for cross-country skiing trails.
- # Refuge should increase payment in lieu of taxes to local government(s).
- # Refuge should allow fishing.
- # Refuge should modify dams or other water control structures to facilitate fish migration.
- # Bookstore in visitor center is asset for refuge.
- # Refuge should conduct more prescribed burning to enhance wildlife habitat.

Meeting attendees were also provided with a comment form or questionnaire, and encouraged to fill it out and submit it that evening or mail at a later date. The comment form contained the following questions:

*What do you think are the most important issues facing the refuge?*

*How do you think these issues can be resolved?*

*Should refuge habitats be managed any differently than they are today?*

*Are the types of use and visitation permitted and encouraged by the refuge appropriate?*

*Any other comments you would like to make?*

Those interested in making comments had until January 18, 2003 to submit this form. Any member of the public who wished to comment in writing also had until that date to send a letter. Comments could be sent by U.S. mail, e-mail, or via the Agassiz website on the Internet. Approximately 40 comment forms and other written comments were submitted to the refuge during the scoping process.

Comments, concerns, and suggestions received from the public and stakeholders during scoping included the following (the number in parentheses is the number of comments making essentially the same point):

### **What do you think are the most important issues facing the refuge?**

- # Water management, hydrology, flood control and water rights (15)
- # Too much water held in pools, interfering with deer hunting
- # Too much water held in pools, reducing their flood control value
- # Local pressure to use Agassiz as a reservoir
- # Managing refuge



water resources for wildlife while surrounded by private agricultural lands # Need for larger outlets on impoundments to make drawdown faster and reduce downstream

flooding Off-site waters problematic

# Work with ditch authority to keep ditches clean and in repair

# Invasive species and weed control (2)

# Public outreach resources

# Resource utilization

# Refuge expansion

# Public use/involvement

# Loss of moose population (2)

# Management of deer, moose, and other brushland wildlife populations

# Pressures to graze or farm the refuge

# Perceived conflicts between some wildlife species given sanctuary on the refuge and

surrounding agricultural communities # Public access is too restrictive # Mistrust between the USFWS and local government authorities and taxpayers (2) # To function more as a natural ecosystem # Determine if the refuge is managing people or resources # Lack of exposure to or awareness of refuge on the part of the public # Agassiz should be more accountable to the people of Minnesota, especially neighbors who are

directly affected by its operations

# Too much “upstream ditching” east and southeast of refuge

# Public use and proper management

# Keeping “wildlife first” on a national wildlife refuge

# Diversion ditch would offer more flexibility for water management

# Managing for wildlife areas, with emphasis on threatened and endangered species and

habitats/species unique to Agassiz and region # Funding # Management of healthy wolf/moose populations # Showing the public that the USFWS is not anti-sportsman # Maintaining and restoring native plant and animal communities # Balancing needs of surrounding landowners with wildlife conservation on refuge # Opening up part of refuge for duck hunting # Conflicts between different uses – managing people while maintaining commitment to wildlife

and other resources

# Allowing knowledgeable, experienced staff to manage refuge without interference

# Declining quality of refuge wetlands from silt and sedimentation, agricultural runoff, and

excessive winter drawdowns for purpose of spring runoff storage that does not meet refuge objectives # Loss of forest openings and

grasslands due to undesirable vegetative encroachment

### **How do you think these issues can be resolved?**

# Stand firmly behind the original mission of the NWR system and preserve remaining natural environments for future generations # Increase research funding and funding and programs for public outreach # Long-range studies of hydrology # Draw water down earlier # Local and nationwide education to increase support for NWR system (2) # Work with local interests, perhaps through a board or cooperative # Manage brushlands with mechanical treatment, prescribed fire, and, when compatible with waterfowl habitat goals, water level management # Employing local young people, students, and teachers in wildlife monitoring and management projects on refuge # Assist local residents to initiate wildlife watching tours that could be a source of local income while putting residents in touch with visitors # Open some mowed roads to foot traffic and cross-country skiing in winter # Better communication between all people involved # Achieve trust by keeping public involved as at present and with new ways # Make progress on water issues by upper basin storage, flood easements, buyouts, diversion, etc. # Close refuge to the public # Allow no hunting or harvesting of refuge resources # Restrict runoff water from agricultural lands from entering refuge # Enforce current county and state regulations # Open more of refuge to hunting, especially south of Rte. 7 to duck hunting

# Off-site management is essential # Drain holding ponds in fall when ditches are empty # Avoid excessive water in Ditch 83 and associated flooding by supporting diversion (2) # Protect critical habitat # Study and research plants and wildlife # Greater lobbying and grant-writing for donations to secure more funds # Mow and spray weeds along township boundaries # Involve township or county in fall water level reduction and opening of gates in spring # Obtain space or building where public can view videotape of what USFWS does # Open refuge south of County Rte. 7, Northwest Pool and Pool 8. # Replicate natural water systems as closely as possible # Keep restoring private land wetlands in vicinity and acquire land to expand refuge # You can't please everybody (2) # Public input, agency coordination, and hard decisions # With water control structures already in place, it would be feasible for Agassiz to become a

designated flood control facility

# Maximize winter habitat manipulations like mowing, selective logging of aged aspen; also

manipulate cattail and phragmites-dominated habitats with follow-up prescribed burning

**Should refuge habitats be managed any differently than they are today?**

# No (3)

# No, management is perfect, right on target (2)

# No, focus of refuge should remain on providing high quality wetland and associated upland

habitats for migratory birds (particularly waterfowl), but also for non-game species (2)

# Not necessarily; remain flexible, but why change a program that many feel is successful? # Staff is doing a great job managing the refuge; especially noteworthy are the efforts to provide

shorebird habitat

# Lower summer pool elevations and emptying all pools in the fall for the benefit of upland

game, infrastructure on and off the refuge, and neighboring farmland

# Most of Agassiz uplands could be managed in brush landscapes

# Increase prescribed burning and allow for “let-burn” wildfires (i.e. wildland fire use for

resource benefits) (2) # Controlled burns are effective in maintaining current habitat #

Allow the natural ecosystem to function on its own, in which wildlife populations would be self-

regulating

# Incoming water should be let in more slowly to allow for agricultural and industrial

contaminants to be filtered out # No; perhaps open trapping on a limited basis for fisher, bobcat, marten and weasel (2) # Aspen woodlots should be left to grow old and not be burned; some ridges should be mowed

and kept as prairie # Conduct more prescribed burning to improve habitats, but not in the spring # Very aggressive habitat treatments, particularly prescribed burning, recognizing limitations

like funding, manpower and weather

# More food plots should be planted (2)

# Maintain food plots for farmer and the birds

# More grain fields – ducks, geese, and cranes need to eat

# Continue prescribed burns to maintain prairies and keep fuel loads low in forests

# Keep pool water levels more constant to establish more wetland than open water

# More native plant gardens

**Are the types of use and visitation permitted and encouraged by the refuge appropriate?**

# Yes (13)

# There is a strong pressure to expand uses, but remember that it is a “wildlife” refuge

# Expand all kinds of appropriate public use; conduct economic study laying out benefits of

refuge # Uses are entirely appropriate but public waterfowl hunting opportunities can be expanded (2) # Logging, bow and arrow hunting, waterfowl hunting, and cross-country skiing should all be

permitted # Gates on roads should be opened to allow public to view and enjoy more wildlife # There is interest in visitation to the wilderness area # Consider allowing small game/upland gamebird hunting # Incorporate more local history (e.g. homesteading, Civilian Conservation Corps, University of

Minnesota Experiment Station) into visitation program, such as with a video # Provide for a true wilderness camping experience via canoe # The opportunity for wildlife and natural resource-related research on the refuge is important

and should continue, as should birding, deer hunting, and moose observation opportunities # It is pleasing that refuge is managed for non-game as well as game species # Major portion of refuge is inaccessible; thus, there is greater traffic on portion that is open;

experience of viewing birds from car is diminished by other passing cars # Limited hours of visitor center on weekends restrict opportunity for locals to ever get inside # Existing facilities and activities like tower, visitor center, viewing ducks and public

involvement are very good but bicycling, cross-country skiing, and snowshoeing areas should be promoted (2) # A true refuge would be closed to the public, and some places, even to refuge personnel; public could use nearby state parks that are now underused and in danger of being closed # Motorized off-road vehicles should not have increased access # Given declining numbers of deer hunters, new concepts for future herd management may be required # Spend less money on research and more on refuge appearance # Refuge is not a park and public use of refuge should be compatible with wildlife # Keep visitor restrictions in place; public has adequate access to all areas # Some refuges are open more and others are almost in a lockdown status # Need to open gates to allow motor vehicles access to more of refuge; one road is not enough # Native flowers and grasses would attract more people; wildflower/ native plants landscaping around headquarters is good demonstration to public (2)

**Any other comments you would like to make?**

# As a landowner in the area, I am interested in the process and hope to participate in it #

Some refuges are open more and others are almost in a lockdown status # Less water equals earlier ice equals thicker ice equals safer ice equals more deer hunting area # How much longer will the refuge allow hunting? # Agassiz is unique and needs to be preserved and managed; due to its remote location, it will

never have a lot of visitors compared to other refuges # The working relationship between Agassiz NWR and Minnesota DNR's Division of Wildlife is highly treasured; MNDNR looks forward to continuing this cooperative relationship # We appreciate the large wild landscapes that Agassiz NWR contains and it is one of the most important features that attracted us to buy and maintain property in this part of the country # Are there any volunteer programs available? Perhaps visitor center could have more weekend

programs in the summer thereby allowing for more access by locals # Would like to see better cooperation between USFWS and local government authorities # During times of devastating floods, Agassiz NWR worked cooperatively with the Red Lake

Water District (RLWD) to provide floodwater retention; every effort was made to reduce downstream flooding and still be able to maintain the refuge's infrastructure

# The refuge should not be expected to be the holding reservoir to prevent flooding on farmland and in towns; government should pay each landowner to set aside a number of acres on their land to act as a sponge to hold excess water

# In conversations with other people, most would like to see more foot access to more areas, i.e. walking trails and cross-country skiing # Allow use of electric trolling motors for duck hunting # As a public taxpayer I feel the refuge is paying their share of taxes # A township supervisor from each surrounding township should be on an advisory committee to help with public relations but not control refuge management # For sake of public safety, the policy of checking in and off the refuge should be continued # Another motorized trail should be established to Elm Lake or to the west # Weed control around headquarters would make it more attractive # Past and present managers and biologists dictate local programs in each federal refuge better than a "high priced" consulting firm located out of the refuge area

# The 12-sq. mile block of habitat including Eckvoll and Elm Lake WMA is extremely diverse and valuable, providing benefits to the area, particularly flood control, wildlife viewing, waterfowl production and overall wildlife diversity

# More area needs to be used for the sportsman # Agassiz is a wonderful paradise for wildlife and should continue being managed for maximum wildlife use # Allow a limited amount of hunting for ducks and geese; also bow hunting and black powder hunting for deer; allow county and township officials on CCP process to be on the committee # Agassiz should start buying up more marginal land that is being federally supported now by

such programs as the CRP (Conservation Reserve Program) # Keep up the good work  
(2) # Environmental education is important for people to support and understand what the refuge

does; inviting school and community groups to the refuge for tours is a good way to provide

this

# Stay with primary goal of wildlife enhancement; all other goals are secondary

# One or two pools should be stocked with fish to benefit neighbors who would like to fish refuge # Image would be improved if refuge told public all the things it is doing, like helping save certain species; it would also be good to have a native flower garden open to the public to encourage them to plant wildflowers; this year I planted 50 kinds of wildflowers and have many kinds of butterflies and semi-rare birds; # I think you are doing a great job

# Refuge staff should be active in environmental issues surrounding the refuge such as flood management issues

# It would be useful to have a table and a portable toilet at each of the kiosks; many visitors stop for leaflets along the road; perhaps a notebook for sightings should be placed there to record birds seen when the refuge office is closed

# The Red Lake Department of Natural Resources has had an excellent working relationship with Agassiz Refuge and looks forward to continued to continued cooperative projects; refuge personnel have always gone out of their way to involve the Red Lake DNR in state-of-the-art education and research efforts, and their outreach efforts have contribute to the growth and development of Red Lake's Wildlife Program; Red Lake DNR is confident the refuge is in good hands

# Keep up the good work!

## **Other General Written Comments Received During Scoping:**

# There needs to be a way for more access to the refuge.

# There should be an outdoor toilet available when the visitor center is locked. (Note: A portable

toilet has been available on-site for several years.) # Please ban hunting and trapping on your National Wildlife Refuge # Minnesota law requires control of noxious weeds and Agassiz should do its share # The Thief River Falls Chamber of Commerce & Visitor's Bureau is supportive of the various amenities at the refuge, especially additional interpretive programming for visitors to the community; the refuge is a primary attraction for visitors to the Thief River Falls area.

# **Appendix K: Response to Comments**

## **Appendix K: Response to Comments**

The following is a summary of the comments received on the Draft CCP and how the issues are addressed

in the CCP.

**Comment 1:** Two organizations wrote opposing the use of “thrillcraft” or personal watercraft, snowmobiles, all-terrain vehicles and two-stroke outboard motors on national wildlife refuges. One organization indicated that off-highway vehicle use needs to be addressed in the CCP to avoid possible future misunderstandings and controversies.

**Response:** We added the following statement to Chapter 4 in the Public Education and Recreation section: “The use of off-road vehicles such as snowmobiles, ATVs, motorized boats, etc. by the public for recreational purposes has never been permitted on Agassiz Refuge’s lands and waters. The CCP would maintain this policy over the next 15 years.”

**Comment 2:** One organization stated that emissions from two-stroke engines adversely impact air, water, and biological resources.

**Response:** The Service acknowledges this information and the general conclusion that two-stroke engines generate adverse environmental impacts.

**Comment 3:** One organization commended the Service for taking seriously the potential impacts of climate change, including potential impacts on Agassiz NWR itself.

**Response:** Comment acknowledged. A consensus of climatologists (Intergovernmental Panel on Climate Change) predicts substantial rises in global temperatures by the end of the 21st century, with far-reaching implications for natural ecosystems, including national wildlife refuges. Agassiz NWR would indeed be subjected to these forces, which could bring about profound changes in the Refuge’s hydrology, vegetation, wildlife, and non-native species. Most of these impacts would be likely to occur after the 15-year planning horizon of the current CCP. However, there are indications from a moose study and preliminary indications from a Wilderness Area study that climate warming is already having effects on wildlife and habitat in the area. Moose research in northwestern Minnesota from 1995-2000, (Cox, et. al., in press), that investigated the declining moose population implicated warmer summers as the probable cause of additional stress in moose by allowing parasites to have lethal effects on moose. Additionally, hydrological investigations are currently being analyzed for plant relationship to the documented increase in temperature over the past 40 years.

**Comment 4:** One organization expressed concern that formal partnership agreements with private entities may circumvent or prevent necessary management actions on the Refuge.

**Response:** As discussed in Coordination Activities section in Chapter 4, Agassiz NWR cooperates with partners on a number of activities and projects on and off the Refuge. These partners include private citizens serving as volunteers on the Refuge, cooperative farmers, watershed associations, state and federal agencies, and non-governmental conservation organizations. By and large, this cooperation not only enhances goodwill among neighbors and institutions in the surrounding community, but augments Service habitat and wildlife management efforts on and off-Refuge. The Service has not and will not enter into formal agreements that hinder its ability to realize Agassiz’s goals and objectives.

**Comment 5:** One organization opposes the inclusion of hunting and trapping in each of the management alternatives presented in the CCP/EA.

**Response:** Hunting is one of the six wildlife-dependent public uses of national wildlife refuges specifically encouraged by the National Wildlife Refuge System Management Act of 1997 (the “Organic Act” of the Refuge System). Whenever a particular type of hunting is compatible with the Refuge’s purposes, goals and objectives, and can be conducted in a sustainable manner, it may be permitted. Wildlife populations are monitored, and where, as in the case of moose at present, the population is below the population objective, hunting is suspended or reduced until the population recovers.

Limited trapping is conducted at Agassiz of furbearers that damage infrastructure, like muskrat and beavers, and other mammalian predators and carnivores. The trapping by several permittees is on a sustainable, relatively small scale. Trapping data indicate that there is no adverse direct effect on the long-term populations of target species or indirect effect on related prey species. As with hunting, trapping is suspended when the

populations of target species appear to be low; for example, no trapping of river otters was permitted in 1993 and 1994 because of low numbers and trapping of muskrats was closed in 2004/2005 due to low numbers. Low numbers of muskrats were due to a combination of drawdown and flooding events during the peak of litter production and not as a result of trapping.

**Comment 6:** One organization asserts that the Draft CCP for Agassiz does not meet the requirements of the National Wildlife Refuge System Improvement Act of 1997 because insufficient investigation of biological integrity, diversity and environmental health were undertaken prior to plan preparation. They state that rigorous biological analyses need to be conducted of wildlife populations to ensure that there is a surplus, before making any compatibility determinations about the killing of wildlife.

**Response:** The Draft CCP listed a number of wildlife surveys and censuses that are conducted at Agassiz, such as of moose, deer, waterfowl, and scent stations which in sum provide an adequate basis for making informed decisions on the compatibility of hunting and trapping. Beginning in 2004 an annual spotlight count of predators was initiated on a 22 mile route to alleviate any deficiencies in predator population data. In addition, the year-to-year trapping records themselves, and long-term trends in these numbers, furnish valuable information that can be used in opening or closing seasons. Recognizing that it does not have limitless budgetary and personnel resources to conduct ideal surveys that would yield perfect information on wildlife population sizes, the Refuge and Service use adaptive resource management, several features of which are monitoring, feedback, flexibility, and making adjustments in midcourse whenever the data point in that direction.

**Comment 7:** One commenter favors Alternative C (the Service's Preferred Alternative and basis for the proposed plan) because of the additional hunting opportunities it would furnish.

**Response:** Comment acknowledged. The commenter is correct that this alternative would indeed expand hunting opportunities at Agassiz.

**Comment 8:** One commenter favors Alternative C because of its partial restoration of natural flows in certain wetlands.

**Response:** Comment acknowledged. This alternative does indeed restore more natural hydrology on an experimental, adaptive management basis in part of the Refuge.

**Comment 9:** One commenter opposes opening the Refuge to waterfowl hunting because waterfowl need sanctuary in a region with many areas open to hunting and because non-hunters deserve a spot where they can see waterfowl unmolested by hunters.

**Response:** The proposed opening for a youth waterfowl hunt would be at Farmed Pool on the southern edge of the Refuge south of Rte. 7. This is limited to one weekend and adjoins a State Area which is open to waterfowl hunting. Opening this area would reduce crippling losses and spread hunters out on an area easily accessible by youth. The Service supports this type of wildlife-dependent activity. The great majority of the Refuge would remain closed to waterfowl hunting and would therefore continue to constitute a sanctuary for ducks and geese and those humans who appreciate observing and photographing them.

**Comment 10:** One organization supports implementation of the Preferred Alternative (C) because it integrates effective wildlife and habitat management with expanded public use opportunities.

**Response:** Comment acknowledged. The Service appreciates this statement of support from a partnering organization.

**Comment 11:** One national organization supports the Service's Preferred Alternative and commends the ambitious and ecologically sound management objectives outlined in the CCP.

**Response:** Comment acknowledged. The Service appreciates this endorsement of its proposed plan.

**Comment 12:** One national organization commends the Service for its proposed phase-out of croplands on Agassiz National Wildlife Refuge.



**Response:** Comment acknowledged. The Service appreciates this statement of support for its comprehensive efforts to restore native biodiversity and vegetative communities on the Refuge.

**Comment 13:** One national organization indicated that it is pleased to see that spruce and tamarack die-off in the Wilderness Area is being studied and that the conclusions of this study will be published and used in making future management decisions.

**Response:** Refuge management is hopeful that scientific research may explain the cause of this die-off and perhaps suggest solutions to the problem.

**Comment 14:** A concerned citizen expressed dissatisfaction with the way DNR [sic] originally obtained the land that now constitutes the Refuge from farmers 60-70 years ago and its general mismanagement of wildlife and wildlands in the region.

**Response:** Comment noted. As explained on pages 3 and 4 of the Draft CCP (under “History and Establishment”), the Minnesota Conservation Department (a predecessor agency to Minnesota’s Department of Natural Resources) was involved in the original acquisition of Mud Lake Refuge (now Agassiz National Wildlife) in the 1930’s. A poorly-conceived, federally-subsidized drainage project on an inherently wet, flood-prone site that should probably never have been farmed proved a terrible burden for struggling homesteaders and nearly plunged Marshall County into bankruptcy. The State Legislature stepped in and forgave the county its debt on the condition that the State would then appropriate the lands in the drainage district for conservation purposes.

In the decades since, the U.S. Fish and Wildlife Service (known as the Bureau of Sport Fisheries and Wildlife in the 1930’s) has managed habitats on the Refuge to the overall benefit, not detriment, of waterfowl in particular and wildlife in general.

**Comment 15:** Two commenters strongly support Alternative C (Preferred Alternative – Open Landscape/Natural Watercourses) because it would aim to maintain and restore native grasslandshrubland wildlife species, like the sharp-tailed grouse, and their open habitats. One commenter further recommends the use of prescribed fire as a key management tool in maintaining open landscapes.

**Response:** Refuge management appreciates this expression of support for its Preferred Alternative and concurs with the commenter’s view of the critical role prescribed fire use will play in maintaining open landscapes on the Refuge.

**Comment 16:** One commenter suggests that Appendix C, Species Lists, identify all exotic species documented on the Refuge, as was done with mammals. The commenter further observes that the house mouse should be identified as an exotic (non-native) mammal.

**Response:** Refuge management thanks the commenter for this suggestion and correction. We will adopt the suggestion to identify non-native species in the other vertebrate taxa listed in Appendix C, that is, birds, amphibians, reptiles and fish. The commenter is correct that the house mouse is indeed an exotic species and should have been tagged as such; the correction has been made in the Final CCP.

The following is a list of other exotic species that have been observed on the Refuge: Gray Partridge, Ring-necked Pheasant, Rock Dove, House Sparrow, European Starling, and European Widgeon.

**Comment 17:** Minnesota DNR supports Preferred Alternative C, which will support and enhance DNR’s own habitat management efforts on Elm Lake State Wildlife Management Area. DNR specifically supports the increased use of prescribed fire to set back succession and increase the acreage of open lands on the Refuge.

**Response:** The Service welcomes this expression of support for its Preferred Alternative from a partnering state agency.

**Comment 18:** The DNR supports the continued use of firearms deer hunting on the Refuge during the state season as well as the proposed archery deer hunting season. However, The DNR contends that as proposed,

(walk-in hunts only, during and following the firearms season), these hunts would elicit only limited interest and participation by prospective hunters. The DNR thus encourages the consideration of additional archery hunting opportunities on the Refuge prior to the firearms season and suggests that disturbance to migratory waterfowl could be minimized by limiting the area open to archery deer hunting prior to freeze-up.

**Response:** The DNR may be correct in its assessment that the deer archery season as proposed would elicit only limited interest and participation by prospective hunters. However, an early archery season would be a safety concern placing hunters in the field during the Refuge's fall burning season. Fall burning is an important habitat management tool in the transition zone and on the refuge. Recent studies indicate that a more frequent cycle of burning than is currently practiced is needed to effectively control shrublands.

Annually, Agassiz NWR plans to burn between 10,000 to 15,000 acres during spring and fall. Burn units are large with several encompassing 3,000 to 5,000 acres. Adaptive management indicates that fall burning is an important habitat management tool occurring primarily during September and October. Recently during two seasons, fall burning conditions were perfect throughout November both during the deer firearms hunt and afterward. Prescribed burns were not conducted during the deer firearms season, but they were carried out later. However, since these conditions were atypical, refuge staff focused on providing additional hunting opportunities during and after the deer firearms season. It is important to note that local DNR land managers are unable to conduct necessary fall burning due to hunter safety concerns and staff commitment to managing hunts.

Limited access, primarily walk-in access after the deer firearms season may limit interest. During the deer firearms season, archery hunters would have access to the same system of interior roads (20 miles) and parking lots (7) that are available to the firearms hunters. After the firearms hunt there are several parking lots (3), and associated roads (4 miles) within the interior of the refuge that could be left open until snow inhibits safe travel. Also, we plan to open the North Boundary Road (5 miles) after the deer firearms season. In the past, this road has been closed during all state hunting seasons. The details will be worked out in the Step-down Hunting Plan. It should be noted that limited access and OHV prohibitions on the refuge during the deer firearms season attracts hunters that are looking for this kind of experience, this would also be true for a segment of the archery deer hunter population.

**Comment 19:** The DNR states that the grouse hunt as proposed (walk-in hunts only, during and following the firearms deer season), would also draw limited interest and participation by prospective hunters. The DNR thus encourages consideration of opening portions of the Refuge to grouse hunting at other times as well. Disturbance to migratory waterfowl could be minimized by limiting the area open to grouse hunting to un-utilized areas prior to freeze-up. Moreover, hunting should be authorized for Sharp-tailed Grouse as well as Ruffed Grouse, since this would have very little anticipated impact to Sharp-tail numbers on the Refuge.

**Response:** The response to Comment 18 would apply here. The refuge agrees to Sharp-tailed Grouse hunting at the same time as Ruffed Grouse hunting.

**Comment 20:** The DNR thinks the proposed youth waterfowl hunt at Farnes Pool is a logical and reasonable addition to the existing youth hunt on the state side of the pool (in Elm Lake WMA).

**Response:** Comment acknowledged.

**Comment 21:** The DNR states that an earlier draft of the plan included a youth firearms deer hunt and encourages the Refuge to consider offering youth hunting opportunities.

**Response:** Objective 3.1 of the Draft CCP, second strategy states: "...Contact and work with Minnesota DNR, schools, ...to explore possible youth hunt for deer on the refuge". The refuge agrees with conducting a special youth deer hunt in conjunction with adjacent State lands under the current parameters of the hunt (one weekend in October) and we have changed the wording of the strategy. The area that will be open to the youth hunt on the refuge will need to be identified in the Step-down Hunting Plan. It will not include the entire area opened during the deer firearms season. If the State decides to extend the season for the youth deer hunt, the refuge will not participate beyond one weekend, as this could affect fall burning activities.

**Comment 22:** One commenter wanted to know if the Refuge would participate in future efforts of the State mandated flood reduction mitigation process that was addressed under current Habitat Management (page 52, last paragraph) since the past flood reduction mitigation team recommendation is not part of this CCP.

**Response:** The paragraph did not intend to infer that the Refuge would not participate in future planning efforts. That portion of the flood reduction plan that affected the Refuge is not being incorporated into this CCP, because the plan that was developed by the mitigation team is not moving forward at this time, nor does it appear that it will happen in the immediate future. The Refuge would like to see further comprehensive, basin wide watershed planning that would reduce flooding and improve water quality and would be very willing to participate in these planning efforts. Wording has been added to the final CCP to make this intention clear.

**Comment 23:** One person questioned current coordination activities regarding compromises to accommodate flood waters during extreme flooding events. Who makes the decision and with what criteria?

**Response:** These decisions are made on a case by case basis using biological parameters regarding nesting cover conditions, time of year, anticipated inflows and length of inundation, downstream implications, and infrastructure integrity. This has been clarified in the Final CCP. Also, during the decision making process during flooding events daily communications and coordination occur with the MnDNR and Red Lake Watershed District.

**Comment 24:** One commenter suggested placing some emphasis on water quality improvements that can be gained by habitat work in wildlife corridors in the Refuge Management District and suggested that actions for water quality improvements can be justified by responsibilities under the Clean Water Act (1977) and Executive Order 11988 (1977).

**Response:** The suggestion is well taken and wording has been added to show this concern in Goal 2.13.

**Comment 25:** One agency and an individual commenter addressed issues on the importance of water quality issues in the Thief River downstream from the Refuge, since it is part of the water supply for the town of Thief River Falls. Both provided supporting documents from past studies and dredging activities in the Thief River Falls impoundment. Seasonal problems with hydrogen sulfide, high sediment loads, high organic material loads, high phosphorus and low oxygen are some of the concerns.

**Response:** The Refuge would like to participate in comprehensive, basin wide watershed planning that would reduce flooding and improve water quality. The Refuge participated in a cooperative sediment study in 1995-97 that showed the importance of the Refuge in reducing sediment loads by 66% ( Total Suspended Sediment Loadings Red Lake, Thief, Mud and Moose Rivers. Houston Engineering, June 6, 2003). The Refuge also recognizes that some sediment and nutrient load is part of the natural process. Butler (Reservoir Renovation and Sedimentation Study for Thief River Falls, Phase II) states that the sedimentation rates reflect the normal geologic sediment yield in the Thief River Falls impoundment. Past studies indicate that bank erosion may be the most important factor in sediment and Phosphorus loads. The Thief River was dredged to become Ditch 83 in the early 1900's and has the same 1:1 side slopes that are characteristic of the Ditches that deliver water to the Refuge. The Refuge impoundments have the same process of sediment build up that is of concern with the Thief River Falls impoundment.

Evaluation of data cannot just focus on extreme events such as floods and drawdowns and must address inflows to the Refuge as well as outflows. Participation by the Refuge in watershed planning will be guided by biological parameters that guide Refuge management for waterfowl and other marsh birds. These include maintaining stable water levels during the nesting season, minimizing water elevation bounces from run off events during the nesting season, over winter water depths that maintain adequate numbers of prey fish to provide a food base for piscivorous birds without creating large populations of fish that compete for invertebrates with waterfowl and other invertebrate eating birds, over winter muskrat populations to maintain a population that contributes to providing nest sites and open water areas for waterfowl and other birds. One area that may provide opportunity to coordinate activities for better water quality are water releases prior to nesting season on years without major spring runoff events. Water quality concerns are now

reflected in Objective 2.7.

**Comment 26:** One agency suggested that a Refuge representative participate in the Marshall County water planning process to keep informed about water management and water quality issues.

**Response:** The Refuge has a staff person participating in Marshall County's 10-year revision of their watershed plan.