U.S. Fish and Wildlife Service

Upper Mississippi River

National Wildlife and Fish Refuge

Furbearer Management Plan and Environmental Assessment

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Furbearer Management Plan Approval

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Upper Mississippi River

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Chapter 1: Introduction and Planning Background

Introduction

This document contains the Furbearer Management Plan and Environmental Assessment (EA) for the Upper Mississippi River National Wildlife and Fish Refuge (Refuge). The EA (Appendix A) evaluates three alternatives, including the preferred alternative, being considered to direct furbearer management on the Refuge for the next 10 years.

This document is available on the Refuge website:

www.fws.gov/midwest/UpperMississippiRiver

The Furbearer Management Plan (Plan) is one of several "step-down" plans identified for completion in the Refuge's 2006 Comprehensive Conservation Plan (CCP) (USFWS, 2006). Step-down plans provide management details not developed in the CCP. The entire CCP and the accompanying Final Environmental Impact Statement (FEIS) are available for viewing at Refuge offices and online at:

http://www.fws.gov/midwest/planning/uppermiss

Readers are invited to refer to the CCP for detailed descriptions of the Refuge, including, legislation establishing the Refuge, legal policy and framework, working relationships with the Corps of Engineers and the States, Refuge environment, acquisition maps, public use regulations, animal and plant species lists, management plan maps, and management features of the Refuge.

The Refuge was established by an Act of Congress on June 7, 1924, as a refuge and breeding place for migratory birds, fish, fur-bearing animals, other wildlife, and plants. The Refuge encompasses approximately 240,000 acres of Mississippi River

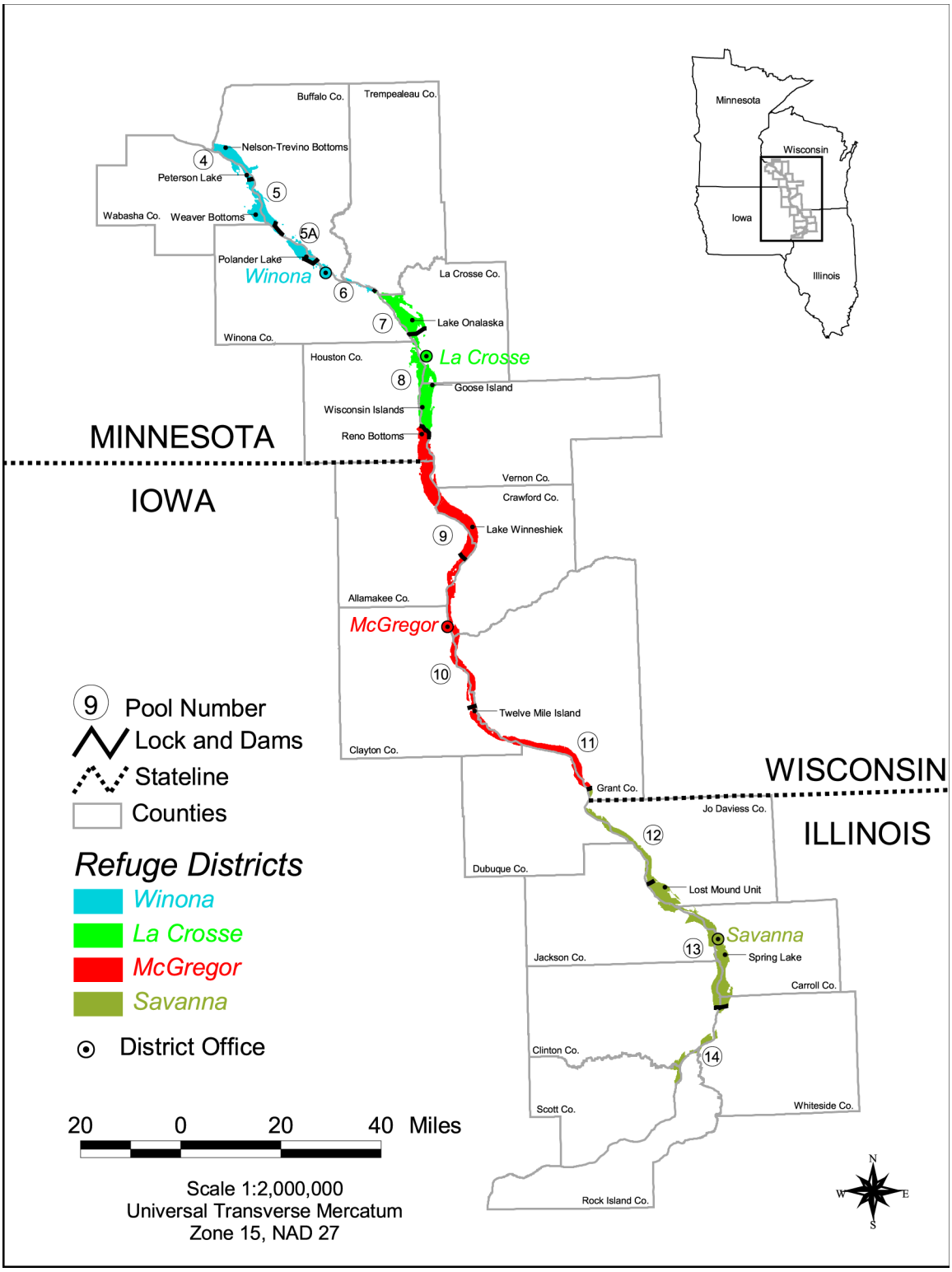
floodplain in a more-or-less continuous stretch of 261 river-miles from near Wabasha, Minnesota to near Rock Island, Illinois.

The location and surrounding area of the Refuge are shown in Figure 1.

The Refuge is a part of the National Wildlife Refuge System, which includes more than 545 refuges and more than 3,000 waterfowl production areas, a total of 95 million acres of lands set aside for wildlife habitat. The Refuge System is administered by the U.S. Fish and Wildlife Service, Department of the Interior.

The Refuge is divided into four districts for management, administrative, and public service effectiveness and efficiency. The Refuge is also divided geographically by river pools that correspond with the navigation pools created by the series of locks and dams on the Upper Mississippi River. District offices are located in Winona, Minnesota (Pools 4-6),

Figure 1: Location and Surrounding Area of Upper Mississippi River National Wildlife and Fish Refuge



La Crosse, Wisconsin (Pools 7-8), McGregor, Iowa (Pools 9-11) and Savanna, Illinois (Pools 12-14). The Refuge currently has 37 permanent employees and an annual base operations and maintenance budget of $3.1 million.

The Refuge has an overall Headquarters in Winona, Minnesota which provides administrative, biological, mapping, visitor services, planning, and policy support to the districts. District managers are supervised by the refuge manager located in Winona.

Planning Background

The Upper Mississippi River National Wildlife and Fish Refuge is managed and administered as part of the National Wildlife Refuge System, U.S. Fish and Wildlife Service, Department of the Interior. The administration, management, and growth of the Refuge System are guided by goals and policies issued June 26, 2006. Further, the Improvement Act of 1997 amended the National Wildlife Refuge System Administrative Act of 1966 and became a true organic act for the System by providing a mission, policy direction, and management standards. A thorough summary of these management directives and authorities is in Chapter 1 of the EIS and Appendix G of the CCP.

Refuge management is directly linked to the Corps of Engineers, Department of the Army through cooperative agreements (1945, 1954, 1963, and 2001) to manage Corps acquired land in the floodplain of the Mississippi River as part of the Refuge. The Corps retained the rights to manage the navigation project, forestry, Corps recreation sites, and other programs. The Refuge has a strong, on-going process of coordinating habitat management on the Refuge.

The same spirit of coordination is shared with the four States bordering the Refuge: Minnesota, Wisconsin, Iowa, and Illinois. There are often overlapping and shared responsibilities for fish and wildlife resources between the States and the Refuge in terms of regulations, law enforcement, habitat improvement projects, and coordination of Refuge management plans and activities.

Refuge Vision and Goals

Refuge vision and goals are in the EIS/CCP.

Refuge Vision:

The Upper Mississippi River National Wildlife and Fish Refuge is beautiful, healthy, and supports abundant and diverse native fish, wildlife, and plants for the enjoyment and thoughtful use of current and future generations.

Refuge Goals:

Landscape: We will strive to maintain and improve the scenic qualities and wild character of the Upper Mississippi River National Wildlife and Fish Refuge.

Environmental Health: We will strive to improve the environmental health of the Refuge by working with others.

Wildlife and Habitat: Our habitat management will support diverse and abundant native fish, wildlife, and plants.

Wildlife-Dependent Recreation: We will manage programs and facilities to ensure abundant and sustainable hunting, fishing, wildlife observation, wildlife photography, interpretation, and environmental education opportunities for a broad cross-section of the public.

Other Recreational Use: We will provide opportunities for the public to use and enjoy the Refuge for traditional and appropriate non-wildlife-dependent recreation that is compatible with the purpose for which the Refuge was established and the mission of the Refuge System.

Administration and Operations: We will seek adequate funding, staffing, and facilities, and improve public awareness and support, to carry out the purposes, vision, goals, and objectives of the Refuge.

The furbearer management program directly supports the environmental health, wildlife and habitat, and other recreational use goals of the Refuge.

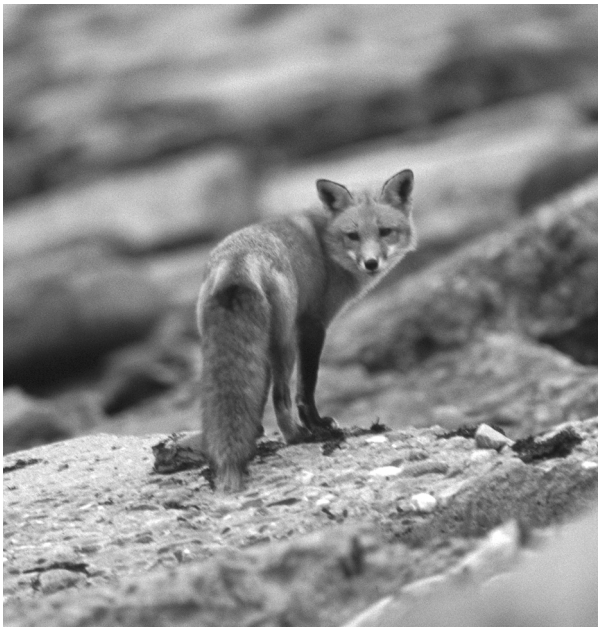
Chapter 2: Consultation and Coordination With the Public and Others

Issues and objectives addressed in this Furbearer Management Plan were derived from scoping meetings with the public and Refuge staff and interagency coordination meetings held in conjunction with the development of the CCP. During that process, a total of 46 public meetings, attended by 4,500 citizens were held between 2002 and 2006. Furbearer management issues, trapping in particular, were often discussed.

One of the CCP strategies for revising the current Furbearer Management Plan is "to seek input from State furbearer biologists, current Refuge furbearer trappers, and trapping organizations to assess effectiveness and/or needed changes in [the] trapping program administration and management." Conference calls were held with State and National Trapping Association representatives in July of 2005 and July of 2006. A conference call was also held with State furbearer biologists in August 2006. In addition, a questionnaire was mailed to these participants and all Refuge-permitted trappers in January 2006. The questionnaire and summary of the responses are in Appendices B and C.

Listed below are 11 objectives or issues that are addressed in the Refuge Furbearer Management Plan and Environmental Assessment.

1. Otter Trapping Season.
2. Trapping Special Use Permit fee.
3. Number of Permits Issued.
4. Number of Trap Tags per Permit.
5. Special Furbearer Management Areas, including Youth Trapping Areas.
6. Beaver Season.



7. Trap Placement Near Beaver Lodges/Dams.
8. Trap Check Frequency.
9. Handling Incidental Take.
10. Monitoring and Evaluation of Populations.
11. Law Enforcement Reporting/Revoking Privileges.

Chapter 3: Refuge Environment

The Refuge encompasses one of the largest blocks of floodplain habitat in the lower 48 States. Bordered by steep wooded bluffs that rise 100 to 600 feet above the river valley, the Mississippi River corridor and Refuge offer scenic beauty, a wild character, and productive fish and wildlife habitat unmatched in mid-America. The Refuge covers 240,220 acres and extends 261 river miles from north to south at the confluence of the Chippewa River in Wisconsin to near Rock Island Illinois.

While extensive wetland habitat losses have occurred well beyond its boundaries in neighboring States, the Refuge has retained much of its biological integrity and is a stronghold of bottomland forests and wetlands vital to breeding and migrating fish and wildlife. Nonetheless, Refuge wetland habitat has degraded significantly over the past 40 years due to human influence and natural processes.

The Refuge is one of several management entities on the Mississippi River. The U.S. Army Corps of Engineers operates the 9-foot navigation project within the Upper Mississippi River System (Public Law 99-662), and overlays the entire Refuge. The navigation project provides a continuous channel for barge traffic through a series of reservoirs created by 29 locks and dams on the Mississippi River and eight on the Illinois River. These reservoirs (pools) create and maintain most of the Refuge's floodplain habitat. The Refuge occurs in Pools 4 through 14.

In addition to Corps and Refuge ownership, the adjoining States of Iowa, Illinois, Minnesota, and Wisconsin own wildlife management units within the floodplain. Many of the 70 counties, towns and other municipalities adjacent to the Refuge have property within the floodplain as well. With all these entities having divergent roles and interests in River management, Congress declared in the Upper Mississippi River Management Act of 1986 that the Upper Mississippi River is both a nationally significant ecosystem and nationally significant commercial navigation system.

A full description of the physical, biological, and human environment of the Refuge may be found in the 2006 FEIS/CCP for the Refuge at Refuge offices and the website:

http://www.fws.gov/midwest/planning/uppermiss

The 51 species of mammals that occur on the Refuge play an important role in Upper Mississippi River System ecology and some are the object of furbearer management on the Refuge. Accounts of the prominent Refuge furbearing species and the commercial aspect of trapping on the Refuge appear in Appendix A, Chapter 3, beginning on page 50.

Chapter 4: Management Direction

Introduction

Management of furbearer trapping on the Refuge over the next 10 years will continue to follow the existing trapping program, as described below, with modifications. This plan adopts management actions presented in Alternative C, the preferred alternative, of the accompanying EA (Appendix A). Table 1 on page 13 compares how 11 objectives/issues are treated under the existing program (current direction) with those proposed in this plan. This plan makes changes to only six of the 11 objectives/issues addressed in the EA, and thereby entails few changes to the existing trapping program. The 11 objectives/issues were identified for consideration during the scoping process described in Chapter 2.

Current Furbearer Trapping Program

Furbearer trapping on the Refuge has a longstanding tradition and has been a useful tool in maintaining balance between furbearers and habitat, and safeguarding Refuge infrastructure. The opening of trapping seasons, trapping methods, and other regulations on the Refuge generally follow those established by each of the four States in which the Refuge occurs: Iowa, Illinois, Minnesota and Wisconsin. The final day of trapping on the Refuge is no later than March 15. Trapping seasons generally run from late October or early November until late January to March 15. There is variability among States in regards to season length (trapping for some species are continuously open, others have established dates), trapping zones, and species open to trapping.

Furbearer trapping is allowed throughout the Refuge, however, no trapping is allowed in Waterfowl Hunting Closed Areas and Sanctuaries, and in one Administrative No Hunting Zone until 9:00 a.m. the day after the last day of the regular State duck hunting season. The closed area restriction reduces the extent of disturbance to waterfowl by human activities during the hunting season, thus enhancing the ability of the Refuge to provide secure resting and feeding areas for migrating waterfowl. An additional 2,467-acre area (Crooked Slough Backwater in Pool 13) is closed to all entry, including trapping, year round due to contaminants and unexploded ordinance (former Savanna Army Depot).

The Refuge has regulated trapping within its boundaries since 1929 and administers trapping by issuing Trapping Special Use Permits (Appendix D) to State-licensed individuals. These permits are issued for a fee of $20. Between the 1990-91 and 2005-06 trapping seasons the Refuge has issued an average of 337 Trapping Special Use Permits per year. The recent 2006-07 season had the highest number of permits issued (517) since 1990-91(Figure 2, Appendix A, page 25).

Some people who obtain permits do not actively trap for various reasons. Our harvest data is based upon the number of active trappers on the Refuge. Active trappers are defined as those who trap at least one day per season. During 17 years between 1990-91 to 2006-07, an average of 84 percent of the trappers with Refuge permits were active trappers (range 77 to 88 percent) (Figure 2, Appendix A, page 25).

Trappers may use a maximum of 40 traps (all marked with Refuge tags) per day. The use of snares and multiple-catch traps, allowed in some States, is prohibited on the Refuge. Trappers may use leghold traps and body-gripping ("conibear" type)

traps for the purpose of trapping various furbearers and unprotected species of wildlife. Each method is standardized under State regulations as to trap size and types of allowable sets in order to protect non-target species and to provide for the safe use of the Refuge by others. The use of exposed flesh or carcass baits, including fish, is prohibited on the Refuge.

The Refuge has other restrictions regarding tending traps, set types, use of vegetation, disturbance, etc. that appear in the Special Conditions (Appendix E) attached to the trapping special use permits.

All trappers must submit a Fur Catch Report (Appendix F) following the season or they will not be eligible for a permit to trap on the Refuge the subsequent season. These reports provide data on the number and distribution of animals harvested, distribution of trappers, and rudimentary catch per unit effort (efficiency) estimates on the Refuge.

Factors affecting furbearer harvest on the Refuge include length of the trapping season, population size, fur prices, weather conditions, habitat changes, extent of aquatic vegetation coverage, and trapping effort.

Access for trapping on the Refuge is by foot, boats, all-terrain vehicles and snowmachines. Use of the latter two vehicles on, over, or across Refuge lands at any time is prohibited, including while trapping. Off-road vehicles are allowed only on the ice over navigable waters, accessed from boat landings.

Trapping Program Goals

The goals of the trapping program will enhance natural resources and guide related public use activities within the Refuge.

The goals are:

- Sustain healthy furbearer populations and their habitats through a science-based harvest program.
- Safeguard Refuge infrastructure critical to habitat for fish and wildlife.
- Continue traditional recreational use of Refuge resources while meeting the purposes of the Refuge and mission of the Refuge System.

Plan Objectives

Objective 1: Otter Trapping

Allow otter trapping in States that have a season, but implement a conservative harvest limit of one otter per trapper, in accordance with State seasons and licensing.

Rationale: State Furbearer Biologists from Wisconsin and Iowa have been assessing otter populations for years. Their science-based management is intended to sustain viable population levels while allowing a limited harvest on a zone or state-wide basis. The take of otter from the Refuge is relatively low, ranging from 5 to 46 animals per season, 1990-91 to 2005-06. However, over the past few years the number of incidental otter catches has increased throughout the Refuge, as reported on mandatory Fur Catch Reports (Table 3 in Appendix A, page 44). A limit of one otter would allow trappers to retain otter incidentally killed in traps.

Seventy-six percent of the trappers who responded to the 2006 Refuge Trapping Questionnaire were in favor of having an otter season. See Appendices B and C for a copy of the questionnaire and a summary of responses.

A Refuge-wide harvest limit of one otter per trapper in States that allow otter trapping has additional advantages. First, the consistent regulation will provide simplicity, clarity, and administrative ease for implementation. Law enforcement officers and the public will also benefit from the single regulation by avoiding confusion, particularly near state-to-state boundaries.

Second, Refuge-specific otter population data is limited, therefore a conservative limit is reasonable. Aerial winter surveys conducted in 2001 and 2006-07 by Minnesota DNR from the Iowa line to the Twin Cities indicate otter sign has remained constant along the Mississippi River, but increased on the lower portions of three tributaries, the Cannon, Zumbro, and Whitewater rivers (John Erb, MDNR personal communication).

Third, a limit of one rather than two or four should improve year-to-year viewing opportunities for the Refuge visitor, an extremely high-valued experience for most Refuge users.

Strategies:

1. Refuge Officers will continue to offer assistance in registering otters, including incidental take.

2. Continue to coordinate efforts with State Furbearer Biologists in gathering otter harvest/population data.
3. Modify Special Conditions of Trapping Special Use Permit to limit one otter/trapper in States with an open otter season.
4. Continue mandatory Fur Catch Reports that include otter harvest.
5. Modify current Minnesota regulations (page 117, Hunting and Trapping Regulations Handbook) to state that "The Upper Mississippi River National Wildlife and Fish Refuge would be the exception to the prohibition of otter trapping on National Wildlife Refuges."

Objective 2: Trapping Special Use Permit Fee

Increase Trapping Special Use Permit fee to $30 beginning with the 2008/2009 trapping season. Trapping Special Use Permits for youth under the age of 18 will remain at $20. Initiate efforts to have some or all of the fee returned to the Refuge. Re-evaluate fee 5 years after implementation.

Rationale: It is necessary to increase Trapping Special Use Permit fees due to inflation rates that occur every year. Since the permit fee has not been adjusted since 2000, the Refuge finds it important to make an increase in the permit fee to cover the costs that include: printing permits, procuring trap tags, issuing permits, maintaining databases, receiving and processing fur catch reports, and distributing annual reports. In addition to these costs, the fees collected may be used to fund monitoring and research on furbearers. Currently, funds from permits are deposited in a nationwide revenue sharing fund for in-lieu-of-taxes payments to local governments. The Refuge will request that a major portion of the fee be returned directly to the Refuge to cover these costs.

Very few youth (ages 12-18) participate in trapping on the Refuge. The results of the 2006 Refuge Trapping Questionnaire (Appendix C) showed that only two out of 193 respondents were under the age of 20. An increase in fees may further discourage youth participation, therefore, the Refuge permit fee for youth under 18 will remain at $20.

Strategies:

1. Proceed with the process necessary to modify the existing fee collection activity to allow the retention of fees at the station.
2. Issue news release in the fall of 2008 stating fee changes and how to obtain Trapping Special Use Permits.

Objective 3: Number of Trapping Special Use Permits Issued

Trapping Special Use Permits will continue to be issued to all trappers that present a State trapping license and pay a fee. There is no limit to the total number of permits issued per season.

Rationale: The Refuge has never limited the number of trappers in any one season. Refuge staffing levels have generally been adequate in recent years to handle public demand for trapping special use permits and dealing with trapping issues in the field.

The number of trappers issued permits over the last 16 years has been below 400 in all but three years (Table 6 on page 59 in Appendix A). There was an average of 337 permits issued over the 15-year period beginning 1990-91 ending 2005-06. The number increased dramatically during the 2006-07 season when 517 permits were issued, increasing the 16-year average to 348 permits.

Strategy:

1. Licensed trappers will be issued permits following Refuge procedures.

Objective 4: Number of Trap Tags Issued per Permit

Forty trap tags will be issued with each Trapping Special Use Permit.

Rationale: Prior to the 1979-80 season, 50 tags were issued with each permit. Beginning that year, the number of tags was reduced to 40 in response to increased conflicts between competing trappers, whose numbers increased with the rise in fur prices. These conflicts included overcrowding and the resultant friction between trappers due to loss of "traditional territories," increased theft of traps and fur from traps, and a general breakdown of traditional trapping ethics (USFWS report, 1976).

Since 1998-99, Refuge trappers have reported using an average of 30 traps per day through the season, significantly less than the maximum of 40 tags (Table 8 on page 61 in Appendix A).

Strategies:

1. District Offices will issue trap tags to individuals that present a State Trapping License and pay the Trapping Special Use Permit fee.

2. Licensed trappers who possess a Resident and Non-resident License from two States are only allowed 40 tags Refuge-wide.
3. Trappers who want to replace lost and/or stolen trap tags must sign an affadavit to document the loss (see Appendix G).
4. Forty trap tags will be issued with each Trapping Special Use Permit.
5. Additionally, if approved in the final plan, the Refuge Manager will have the option to control local predator populations, where justified, through designation of Special Furbearer Management Areas (see next section).

Objective 5: Special Furbearer Management Areas

Adopt Guidelines for establishing Special Furbearer Management Areas.

Rationale: Special Furbearer Management Areas would be established on localized portions of the Refuge where furbearer harvest may be enhanced or restricted depending on management objectives. These special areas would address concerns related to public safety; opportunity for youth trapping; damage to Refuge infrastructure lands, or resources; and/or enhancement of aquatic habitat.

One or more of the following criteria must be met for the establishment of Special Furbearer Management Areas:

- Area has fish and wildlife habitat qualities that can be enhanced through furbearer management.
- Area has a clearly definable boundary.
- Area has unacceptable levels of damage to Refuge infrastructure by furbearers.
- Area has public safety issues (proximity to hiking trails, observation areas, boat landings).
- Area is suitable for a Youth Trapping Area (see below).

An example of a Special Furbearer Management Area exists in the Spring Lake Closed Area of Pool 13 where muskrats have tunneled into earthen dikes causing extensive erosion that will require major funding to repair. In this case, trapping regulations would be temporarily liberalized to maximize the harvest and reduce the muskrat population.

Another example of a Special Furbearer Management Area would be to locally restrict harvest of beaver in order to gain habitat created by beaver lodges, dams, and channels or runs. This is considered a possibility in a portion of the Reno Bottoms area of Pool 9 and Hay Meadow Lake area of Pool 11.

Youth Trapping Areas for youth under the age of 18 will also be considered as a type of Special Furbearer Management Area. The purpose would be to provide youth an opportunity to learn and appreciate the art of trapping without direct competition from experienced trappers.

Criteria for the establishment of Youth Trapping Areas may include:

- area has clearly defined boundaries
- area is accessible by foot
- area is less than 200 acres in size
- no more than one active Youth Trapping area per pool per State will be established
- area would be in effect for the first two weeks of the muskrat trapping season only, then open to general trapping.
- State Trapping Associations, along with State Departments of Natural Resources and area trappers, could assist with a trapper education program.

Some examples of possible Youth Trapping Areas include John Deere Marsh in Pool 11, the McGregor Lake area of Pool 10, and the small area of northern Reno Bottoms in Pool 9 (ponds between road and railroad track) where there are easily defined boundaries.

Youth Trapping Area regulations will apply only to the first 14 days of the Refuge muskrat trapping season. In Refuge closed areas this may be the first 14 days after the State duck hunting season closes. After that date these areas will be available to all trappers beginning at 9:00 a.m. on the day following the close of the youth season.

Additional Youth Trapping Area regulations include:

1. Youth trappers must be State licensed and under the age 18 at the time of issuance of Trapping Special Use Permit.
2. Youth trappers must obtain a Refuge Trapping Special Use Permit before trapping on the Refuge.
3. All applicable State and Federal trapping regulations will apply.

4. Youth trappers may be accompanied by an adult (over 18 years of age) but the following restrictions apply.
   - All traps entering or within the Special Youth Trapping Area will be carried or transported by the youth trapper only.
   - All animals taken within the Special Youth Trapping Area will be handled and transported by the youth trapper only.
   - Accompanying adults may assist in the mechanical setting or arming of the trap, but may not place the actual set.
   - Accompanying adults are not required to obtain a Trapping Special Use Permit.

Strategies:

1. Establishment of these areas will be initiated by the District Manager and approved by the Refuge Manager.
2. District Managers will consult with the appropriate State agencies, prior to the establishment of these areas.
3. Special Furbearer Management Areas will be properly signed and the public informed via media and brochures.
4. The Refuge will monitor and evaluate youth trapping activities in these areas.

Objective 6: Beaver Trapping Season

Continue to follow current State and Refuge beaver trapping seasons. (Table 5 on page 58 in Appendix A).

Rationale: Trappers and both State and Refuge Law Enforcement Officers are familiar with current beaver seasons. In response to the 2006 Refuge Trapping Questionnaire, 84 percent of the trappers said they would like the Refuge to continue to follow State season dates.

Strategy:

1. Refuge trappers are informed about the Special Conditions of the Trapping Permit, which state that "Permittee must comply with all State and local game laws and regulations, in addition to all federal regulations and Refuge permit conditions." (See Appendix E.)
2. If District Managers believe further management of beavers is necessary they may develop Special Furbearer Management Areas (see above).

Objective 7: Trap Placement Near Beaver Lodges/Dams and Muskrat Houses.

Maintain current regulation but clarify that the placement of traps is prohibited within six (6) feet of where the lodge or dam meets the water. The 6-foot setback restriction does not apply to bank dens that do not have an associated lodge structure/cache. Also, #110 conibear traps and dog-proof traps are exempt from these regulations.

Rationale: Most Refuge trappers and State and Refuge Law Enforcement Officers are familiar with current regulations but to some, the definition of legal placement is unclear. This definition will alleviate that concern.

Muskrats and mink are targeted with the use of #110 conibear traps. Both furbearers are commonly found on or near beaver dams. The use of these traps poses minimal threat to beaver because of the small trap size. Dog proof traps are species specific and address hunter concerns for dog safety.

Strategies:

1. Modified definitions will be printed on Trapping Special Use Permits or supplements to inform trappers of the changes.
2. State and Refuge Law Enforcement Officers will be notified of regulation clarification.

Objective 8: Trap Check Frequency

Continue current requirement of the Refuge Trapping Special Use Permit which states "Permittee shall tend each trap/set on the Refuge at least once every calendar day, except for beaver sets which must be tended at least once every two calendar days. However, the permittee must also comply with all State and local game laws and regulations, in addition to all federal regulations and Refuge permit conditions. In cases where any of these regulations differ, the most restrictive regulations shall apply." Illinois requires trappers to check traps every 24 hours. The other States allow 48 hours or more on beaver sets.

Rationale: Fifty-five percent of the trappers who responded to the 2006 Refuge Trapping Questionnaire were opposed to a 24-hour check on beaver sets. A longer time interval is favored by some trappers to minimize disturbance (chopping of ice) near their sets so the animals will move more frequently. Trappers also noted that pelt quality will not

degrade if animals are left in under water sets more than 24 hours.

Strategy:

1. When trappers are issued a Trapping Special Use Permit they are made aware of the Special Conditions of the Trapping Special Use Permit. (See Appendix E)

Objective 9: Handling Incidental Take

Continue to use existing procedure outlined in Item 9 of the "Special Conditions of Trapping Permit" section of the Trapping Special Use Permit (Appendix E), as follows:

> Disposition of Unauthorized Animals – Birds and mammals other than those authorized to be trapped under permit and found alive in the traps of the permittee shall be immediately liberated. Such birds and mammals found dead or mortally injured in traps shall be immediately disposed of in accordance with State law. If any threatened or endangered species are caught, a Refuge employee or State warden must be notified immediately.

Rationale: Trappers and both State and Refuge Law Enforcement Officers are familiar with this current policy on how to handle incident take.

Strategies:

1. Refuge trappers are informed about the Special Conditions of the Trapping Permit. (See Appendix E.)
2. Add contact information for State and Refuge Law Enforcement Officers on the existing Permit.

Objective 10: Monitoring and Evaluation of Furbearer Populations

Continue current system of mandatory Fur Catch Reports and increase monitoring and research of Refuge furbearer populations in conjunction with State furbearer biologists, universities, other organizations and trappers.

Rationale: Assessments of furbearer populations may be necessary when evaluating furbearer damage to Refuge infrastructure and furbearer impacts to Refuge lands or resources. Population data will be used to adjust furbearer harvest if needed. Monitoring will be required to assess the impacts of Special Furbearer Management Areas that might be implemented under this Plan.

Forty-nine percent of trappers who responded to the Refuge Trapping Questionnaire wanted to have more research and monitoring of furbearers take place on the Refuge, particularly for muskrats, beaver and otter.

Strategies:

1. Coordinate research efforts through help with agencies and interested parties in monitoring site specific areas such as Closed Areas, habitat enhancement project areas, or Pools that have had or are scheduled for water level drawdowns.
2. Obtain Refuge specific population data on furbearers such as river otter. Mandatory Fur Catch Reports (Appendix F) are included in the information packet that trappers receive when they are issued a Trapping Special Use Permit. Add "Age of Permittee" fill-in-the-blank box to Fur Catch Report to determine demographic structure of Refuge trappers.
3. Continue to share annual Refuge fur harvest report with agencies and interested parties.
4. Continue to coordinate efforts with State Furbearer Biologists to obtain State furbearer population information.

Objective 11: Law Enforcement Reporting and Revocation of Privileges

Allow more discretion to the Refuge Manager in determining revocation options for violations by modifying policy and procedure (see below). Establish review committee.

Rationale: This modification will give Refuge Law Enforcement Officers and District Managers discretion in evaluating the violation committed and make an appropriate judgement.

Strategies:

1. Modify Special Conditions of Trapping Special Use Permit and *Policy and Procedures for Revocation of Trapping Privileges on the Upper Mississippi River National Wildlife and Fish Refuge, 1988 Fur Management Plan.*
   - This includes changing the word "shall" to the word "may" in the following paragraph:

     > Failure of a permittee to comply with any of the refuge trapping permit conditions or violation of any of the regulations issued under the authority

of the Upper Mississippi Wildlife and Fish Refuge Act of June 7, 1924 or of any federal or State law or regulation related to trapping on the Upper Mississippi River Refuge may be sufficient cause for:

a. Revocation of existing permits.
b. Refusal of future trapping special use permits.
c. Refusal of other privileges requiring a permit.

- Revise the heading in the violation revocation table from "Term (from date of revocation) to "Revocation (up to a maximum of)."
- Add the following text to the revocation document:

  Violations involving potential revocation outcomes will be reviewed by a committee consisting of the Refuge Manager, District Managers, and Refuge Officers. Final decisions will be made by the Refuge Manager. The Refuge Manager will use the following guidance in determining the length of revocation. Permanent suspension of privileges will be considered based on the severity or frequency of violation.

2. Notify Refuge Law Enforcement Officers about change in policy.

Violation	Revocation (up to a maximum of:)
Trapping during closed season	3 years
Reserving territory or stakes without traps	1 year
Taking with multiple catch box, basket, wire traps or other unauthorized means	3 years
Trap theft	5 years
Checking, setting or tending traps of another	3 years
Possess fur during closed season	3 years
Trapping while under refuge or State revocation	3 additional years
Tending untagged traps	1 year
Setting untagged trap(s) (including State tagging requirements)	3 years
Failure to check traps every calendar day (except for beaver, every two calendar days)	1 year (1st violation)
Failure to check traps every calendar day (except for beaver, every two calendar days)	3 years (2nd violation)
Trapping during prohibited hours	1 year
Failure to send in Fur Catch Report	1 year

Table 1: Objective Comparison: Current Direction (Existing Conditions) and Furbearer Management Plan

Issue/Objective	Current Direction (Existing Conditions)	Furbearer Management Plan
1) Otter trapping	Allowed in States where open in accordance with State regulations.	Allowed in States where open but with a maximum harvest of 1 otter/trapper in accordance with State seasons and licensing.
2) Permit fee	$20 annual	$30 annual, review in 5 years when plan reviewed. Establish $20 annual, for trappers under 18 years old.
3) Number of Permits Issued	Unlimited.	Same as Existing Conditions.
4) Number of trap tags per permit	40	Same as Existing Conditions.
5) Special Furbearer Management Areas	None	Establish option, including Youth Trapping Areas, develop criteria and regulations in plan.
6) Beaver season	Follow State seasons	Same as Existing Conditions.
7) Trap Placement Near Beaver Lodges	Prohibited within 6 feet of lodge and dam.	Same as Existing Conditions, but clarify definition: "Prohibited within 6 feet of where lodge or dam meets the water."
8) Trap Check Frequency	Refuge regulations State that traps must be checked at least once every calendar day except for beaver sets, which must be checked every two calendar days.	Same as Existing Conditions.
9) Handling Incidental Take	Follow Special Conditions in Trapping Special Use Permit: release live, if dead follow State regulations, if T&E contact Refuge employee or State warden immediately.	Same as Existing Conditions.
10) Monitoring/Evaluation of Populations	Continue Mandatory Fur Catch Report.	Same as Existing Conditions, plus increase monitoring in cooperation with States and others.
11) Law Enforcement: Reporting Violations and Revoking Privileges	May revoke privileges and future permits for violations.	May revoke privileges and future permits for violations. Violations will be reviewed by Refuge committee using standards identified in Plan; final decision by Refuge Manager.

Chapter 5: Plan Implementation

Introduction

This chapter summarizes the actions, funding, and coordination necessary to implement the Furbearer Management Plan.

Actions

Monitoring and Evaluation

Objectives and strategies implemented will be continually monitored and evaluated during the 10-year life of the plan. Some actions, including the option to establish Special Furbearer Management Areas will be monitored to help understand the effects of the actions on habitat, fish and wildlife populations, and public use patterns and levels.

Land use changes, habitat conditions, management objectives, invasive species, floods, disease outbreaks, and climate may alter expected outcomes, and monitoring will be critical to detecting and reacting to such change.

Plan Review and Revision

As noted above, environmental change and unforeseen effects may call for changes in the plan. The Refuge will practice adaptive management, using monitoring, evaluation, and experimentation to learn and change aspects of the plan as needed.

At least every 5 years, representatives from the State DNR's will be invited to comment on the effectivement of the Plan and to offer revisions. The Trapping Special Use Permit fee will be reviewed at that time; see Objective 2, page 8. The annual furcatch report will also provide year-to-year feedback from trappers on plan effectiveness and any emerging issues.

Funding

Total funding needs for the 10-year life of the Plan equals recurring annual costs times 10 years, plus one-time project costs of items such as special studies and establishment of special furbearer management areas. A summary follows:

Reoccuring Annual Costs	
Supplies and materials	$1,900
Administrative	$6,300
Law Enforcement	$5,600
Total Annual Costs	$13,800
Total Furbearer Management Plan Costs over the Life of the Plan	
Life of Plan, 10 years	$138,000
Studies $40,000 for 3 years	$120,000
Establish up to 4 special management areas @ $2,000 each	$8,000
Grand Total	$266,000

All fees collected with issuance of Trapping Special Use Permits ($20 per permit) are currently deposited in the U.S. Fish and Wildlife Service general fund and not returned directly to the Refuge. We will seek to modify the existing process to allow retention of fees at the station. This would yield an average of about $6,800 per year to be applied to administrative and project costs. Additional funding would be required for studies.

Coordination and Partnerships

Refuge staff works closely with the departments of natural resources of Minnesota, Wisconsin, Iowa, and Illinois in monitoring harvest of furbearers and conducting research. The Refuge follows State trapping seasons and limits with a few exceptions.

The Corps of Engineers is a critical partner due to its dominant role in water level management, forestry, and the planning and construction of environmental restoration projects. Much of the habitat restoration and enhancement work is done through the Environmental Management Program administered by the Corps, and this work could accelerate should Congress approve and fund the Navigation and Environmental Sustainability Program (NESP). Water level management and available habitat are two key factors that affect the abundance of furbearer populations.

Appendix A: Environmental Assessment

UNITED STATES FISH & WILDLIFE SERVICE

ENVIRONMENTAL ACTION STATEMENT

Within the spirit and intent of the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record and have determined that the action of (describe action):

Continuing furbearer trapping on the Upper Mississippi River NW&FR described in the August 2007 Furbearer Management Plan which requires Refuge trappers to possess Trapping Special Use Permits, and trap in accordance with State regulations, Federal regulations contained in Title 50 Code of Federal Regulations, and conditions prescribed within the Trapping Special Use Permit.

____ is a categorical exclusion as provided by 516 DM 6, Appendix 1 and 516 DM 2, Appendix 1. No further documentation will therefore be made.

__X__ is found not to have significant environmental effects as determined by the attached Environmental Assessment and Finding of No Significant Impact.

____ is covered under an existing Environmental Assessment entitled _____ as described in sub-section _____ which was approved on _____.

____ is found to have significant effects, and therefore further consideration of this action will require a notice of intent to be published in the Federal Register announcing the decision to prepare an EIS.

____ is not approved because of unacceptable environmental damage, or violation of Fish and Wildlife Service mandates, policy, regulations, or procedures.

____ is an emergency action within the context of 40 CFR 1506.11. Only those actions necessary to control the immediate impacts of the emergency will be taken. Other related actions remain subject to NEPA review.

Other supporting documents (list):

__X__ Environmental Assessment and FONSI

__X__ Public comments

__X__ Section 7 Form

__X__ Compatibility Determination

(1) Initiator	9/26/07 Date	(2) RHPO	10-3-07 Date
(3) Regional Chief, NWRS	10.5.2007 Date	(4) RD Acting Regional Director	10/12/07 Date

Facility: Upper Mississippi River National Wildlife and Fish Refuge
Title: Furbearer Management Plan, dated September 2007

FINDING OF NO SIGNIFICANT IMPACT

For the reasons briefly presented below and based on an evaluation of the information contained in the supporting references enumerated below, I have determined that

continuing furbearer management, including trapping, on the Upper Mississippi River NW&FR, as directed by the Furbearer Management Plan (September 2007),

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. An Environmental Impact Statement will, accordingly, not be prepared.

Reasons:

The impacts of furbearer management to physical, biological, and socioeconomic aspects of Refuge resources, as described in the supporting references, are negligible (referring to wildlife resources, historic preservation, threatened and endangered species, and human health).

The Furbearer Management Plan promotes management of furbearer populations at sustainable and healthy levels, while at the same time safeguards Refuge infrastructure that is critical to maintaining habitat for a diversity of fish and wildlife.

The Plan allows for the continuation of a traditional and appropriate recreational use of Refuge resources.

Supporting References:
1. Environmental Assessment Checklist
2. Environmental Assessment
3. Section 7 Consultation

ACTING David R Dowell
Regional Director, FWS, Region 3

Date: 10/12/07

Distribution:
Wash., DC (OEC)
State Clearinghouse

Intra-Service Section 7 Biological Evaluation Form
Region 3

Originating Person: Eric Nelson Date Submitted: July 11, 2007

Telephone Number: 507/494-6214

I. Service Program and Geographic Area or Station Name:
National Wildlife Refuge System
Upper Mississippi River National Wildlife and Fish Refuge

II. Location: Location of the project including County, State and TSR (township, section & range):
19 Counties in four states (IA, IL, MN, WI)

III. Species/Critical Habitat: List federally-listed, proposed, and candidate species or designated or proposed critical habitat that may occur within the action area:
Threatened: Bald eagle (*Haliaeetus leucocephalus*); delisting took effect Aug. 8, 2007.
Endangered: Higgins eye pearlymussel (*Lampsilis higginsii*).
Candidate: Sheepnose mussel (*Plethobasus cyphyus*) , Spectaclecase mussel (*Cumberlandia monodonta*) , and Eastern massasauga rattlesnake (*Sistrurus canenatus catenatus*).

IV. Project Description: Describe the proposed project or action, including all conservation elements. If referencing other documents, prepare an executive summary. Include map and photos of site, if possible. (Attach additional pages as needed):

The Refuge proposes to implement a Furbearer Management Plan selected from three alternatives described in an Environmental Assessment (executive summary attached). The plan will direct the Refuge's furbearer trapping program over the next ten years. Features addressed include: requirements for refuge trappers to obtain a trapping special use permit; trapping regulations and enforcement procedures; special furbearer management areas; enhancement of habitat; protection of infrastructure; and furbearer population monitoring and research needs.

V. Determination of Effects:

A. Description of Effects: Describe how the action(s) will affect the species and critical habitats listed in item III, including how Part IV conservation elements benefit or avoid adverse effects. Your rationale for the Section 7 determinations made below (VB.) should be fully described here.

Trapping activities proposed in all alternatives will have negligible impacts on the bald eagle, which was delisted August 8, 2007, and no effect on other species listed in Section III above. Over the past 20 years or more, there have been no reports of bald eagles caught in furbearer traps on the Refuge. Trapping regulations prohibit the use of exposed baits that could attract bald eagles and result in unintended catches. Bald eagles initiate nesting activates on the Refuge in February when trapping is allowed (trapping closes no later than March 15), but there is no evidence that trapping activities have impacted bald eagle nest success. Between 1986 and 2006, the number of active bald eagle nests on the Refuge jumped from 9 to 165 active nests, a 18-fold increase. The endangered and candidate species identified in Part III above are not impacted by trapping activities.

B. Determination: Determine the anticipated effects of the proposed project on species and critical habitats

listed in item III. Check all applicable boxes and list the species (or attach a list) associated with each determination.

	Determination
No Effect: This determination is appropriate when the proposed project will not directly or indirectly affect (neither negatively nor beneficially) individuals of listed/proposed/candidate species or designated/proposed critical habitat of such species. No concurrence from ESFO required.	✓
May Affect but Not Likely to Adversely Affect: This determination is appropriate when the proposed project is likely to cause insignificant, discountable, or wholly beneficial effects to individuals and designated critical habitat. Concurrence from ESFO required.	____
May Affect and Likely to Adversely Affect: This determination is appropriate when the proposed project is likely to adversely impact individuals of listed species or designated critical habitat of such species. Concurrence from ESFO required.	____
Not Likely to Jeopardize candidate or proposed species/critical habitat: This determination is appropriate when the proposed project is not expected to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat. Concurrence from ESFO required.	____
Likely to Jeopardize candidate or proposed species/critical habitat: This determination is appropriate when the proposed project is reasonably expected to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat. Concurrence from ESFO required.	____

Signature _____ Date 9/26/07
[Supervisor at originating station]

Upper Mississippi River

National Wildlife and Fish Refuge

Appendix A: Environmental Assessment

Furbearer Management Plan

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Chapter 1: Introduction and Background

1.1 Introduction

This document is an Environmental Assessment (EA) of the Furbearer Management Plan for Upper Mississippi River National Wildlife and Fish Refuge (Refuge). The EA evaluates three alternatives, including the preferred alternative, being considered to direct furbearer management on the Refuge for the next 10 years.

The Furbearer Management Plan (Plan) is one of several "step-down" plans identified for completion in the Refuge's 2006 Comprehensive Conservation Plan (CCP) (USFWS, 2006). Step-down plans provide management details not developed in the Comprehensive Conservation Plan. The entire CCP and accompanying Final Environmental Impact Statement (FEIS) are available for viewing at Refuge offices and online at:

http://www.fws.gov/midwest/planning/uppermiss

Readers are invited to refer to the CCP for detailed descriptions of the Refuge, including, legislation establishing the Refuge, legal policy and framework, working relationships to the Corps of Engineers and the States, Refuge environment, acquisition maps, public use regulations, animal and plant species lists, management plan maps, and management features of the Refuge.

1.2 Proposed Action

The Refuge proposes to update its current furbearer management plan (USFWS, 1988) to reflect new knowledge in furbearer ecology and new policies governing compatibility of uses and commercial uses on national wildlife refuges. The Refuge proposes to continue furbearer trapping through the issuance of Trapping Special Use Permits in accordance with State regulations, federal regulations contained in Title 50 of the Code of Federal Regulations, and conditions prescribed within the Trapping Special Use Permits.

1.3 Purpose and Need for Action

The purpose of this EA is to evaluate three alternatives being considered for a Furbearer Management Plan for the Refuge. The Plan will guide management of furbearer populations and trapping regulations on the Refuge for the next 10 years. A review will be completed after 5 years.

This EA follows National Environmental Policy Act requirements to consider environmental consequences of all proposed actions, involve the public in the decision-making process, use a systematic approach to decision-making, and consider a reasonable range of alternatives. The EA will also be used to determine if the action of a new Furbearer Management Plan will have a significant impact on the environment.

The Plan is needed to meet the furbearer management objective (Obj. 3.5) identified in the Refuge's CCP (quoted below).

> Objective 3.5 (Final CCP, page 117)
>
> "Furbearer Trapping. Update the Refuge trapping plan by June 2007, continuing the existing trapping program until the update is completed and ready for implementation.
>
> *Rationale:* Furbearer trapping has a long history on the Refuge and can be an important management tool in reducing furbearer disease and habitat impacts, and in safeguarding

certain Refuge infrastructure such as dikes, islands, and water control structures. Trapping is also important from a recreational and cultural standpoint, providing hundreds of trappers thousands of hours of wildlife-related and outdoor-dependent enjoyment. Trappers also provide valuable information on habitat conditions and wildlife population and use trends due to their frequent, first-hand experiences and annual reporting. The current trapping plan is dated by time (1988), by new furbearer ecology and population information, and by new policies governing compatibility of uses and commercial uses on national wildlife refuges.

Strategies:

- Seek input from State furbearer biologists, current Refuge furbearer trappers, and trapping organizations to assess effectiveness and/or needed changes in trapping program administration and management.
- The Refuge wildlife biologists, in consultation with Refuge District managers, State furbearer biologists, and the Refuge Manager, will develop a draft trapping plan.
- Afford the public an opportunity for review and comment on a draft plan and accompanying environmental assessment and compatibility determination.
- Following public review and revision, submit a final plan to the Regional Director of the Service, Twin Cities, Minnesota, for approval (required).
- Conduct appropriate information and education effort on any changes reflected in the plan."

1.4 Decision to Be Made

This EA will be used by the Regional Director (Midwest Region, U.S. Fish and Wildlife Service, Twin Cities, Minnesota) to determine whether or not there is a Finding of No Significant Impact (FONSI). Following this documentation a decision will be made by the Regional Director on whether or not to approve the proposed action.

1.5 Background

The Refuge was established by an Act of Congress on June 7, 1924, as a refuge and breeding place for migratory birds, fish, fur-bearing animals, other wildlife, and plants. The Refuge encompasses approximately 240,000 acres of Mississippi River floodplain in a more-or-less continuous stretch of 261 river-miles from near Wabasha, Minnesota to near Rock Island, Illinois.

The location and surrounding area of the Refuge is shown in Figure 1.

The Refuge is a part of the National Wildlife Refuge System, which includes more than 545 refuges and more than 3,000 waterfowl production areas, a total of 95 million acres of lands set aside for wildlife habitat. The Refuge System is administered by the U.S. Fish and Wildlife Service, Department of the Interior.

The Refuge is divided into four districts for management, administrative, and public service effectiveness and efficiency. The Refuge is also divided geographically by river pools that correspond with the navigation pools created by the series of locks and dams on the Upper Mississippi River. District offices are located in Winona, Minnesota (Pools 4-6), La Crosse, Wisconsin (Pools 7-8), McGregor, Iowa (Pools 9-11) and Savanna, Illinois (Pools 12-14). The Refuge currently has 37 permanent employees and an annual base operations and maintenance budget of $3.1 million.

The Refuge has an overall Headquarters in Winona, Minnesota which provides administrative, biological, mapping, visitor services, planning, and policy support to the districts. District managers are supervised by the Refuge Manager located in Winona.

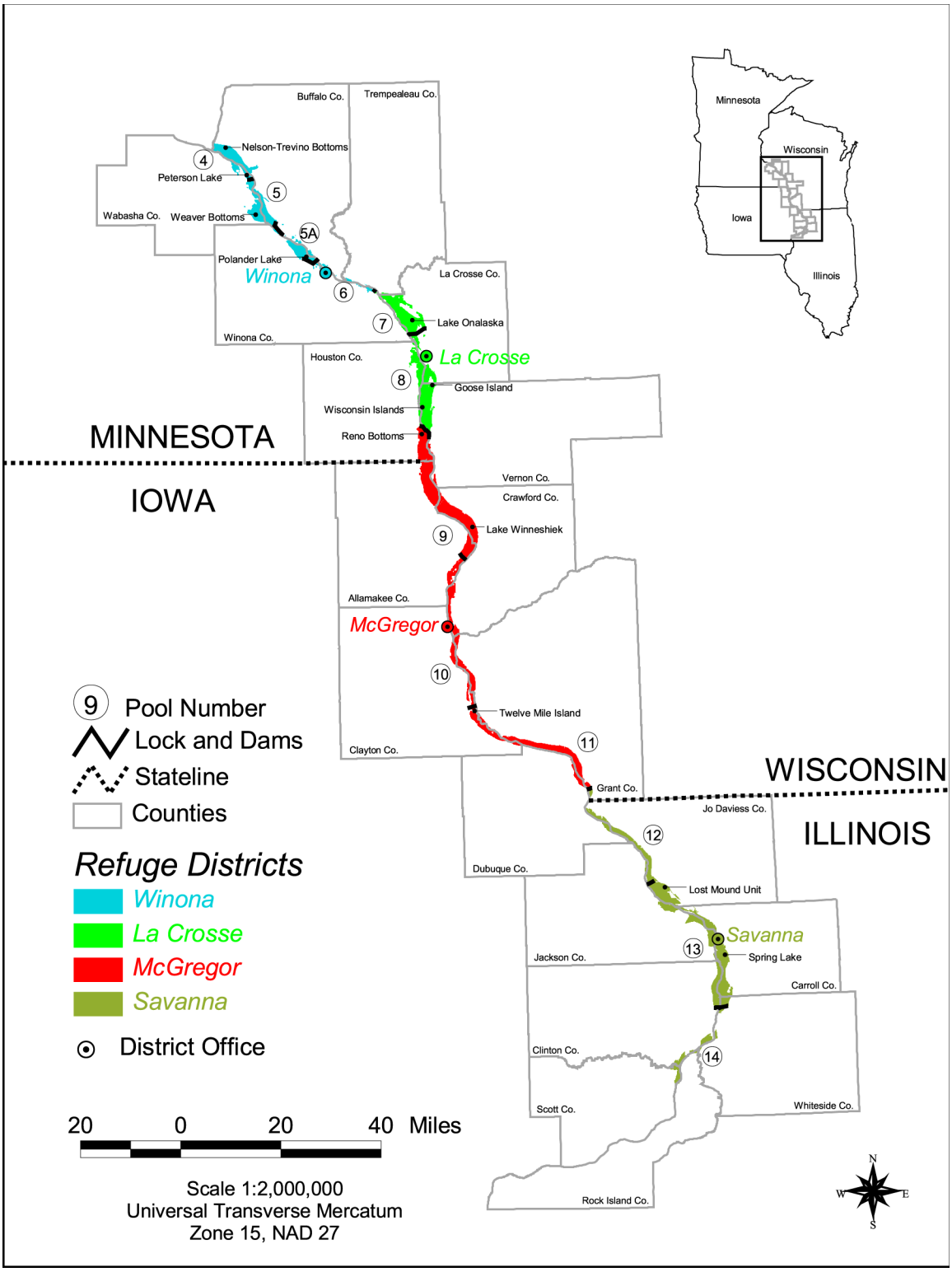
1.6 Refuge Vision and Goals

Refuge vision and goals are in the CCP.

1.6.1 Refuge Vision

The Upper Mississippi River National Wildlife and Fish Refuge is beautiful, healthy, and supports abundant and diverse native fish, wildlife, and plants for the enjoyment and thoughtful use of current and future generations.

Figure 1: Location of Upper Mississippi River National Wildlife and Fish Refuge



1.6.2 Refuge Goals

Landscape: We will strive to maintain and improve the scenic qualities and wild character of the Upper Mississippi River National Wildlife and Fish Refuge.

Environmental Health: We will strive to improve the environmental health of the Refuge by working with others.

Wildlife and Habitat: Our habitat management will support diverse and abundant native fish, wildlife, and plants.

Wildlife-Dependent Recreation: We will manage programs and facilities to ensure abundant and sustainable hunting, fishing, wildlife observation, wildlife photography, interpretation, and environmental education opportunities for a broad cross-section of the public.

Other Recreational Use: We will provide opportunities for the public to use and enjoy the Refuge for traditional and appropriate nonwildlife-dependent recreation that is compatible with the purpose for which the Refuge was established and the mission of the Refuge System.

Administration and Operations: We will seek adequate funding, staffing, and facilities, and improve public awareness and support, to carry out the purposes, vision, goals, and objectives of the Refuge.

The furbearer management program directly supports the environmental health, wildlife and habitat, and other recreational use goals of the Refuge.

1.7 Planning Background

The Upper Mississippi River National Wildlife and Fish Refuge is managed and administered as part of the National Wildlife Refuge System, U.S. Fish and Wildlife Service, Department of the Interior. The administration, management, and growth of the Refuge System are guided by policies outlined in Director's Order, January 18, 2001. New goals for the System, and new policies for hunting and other recreational uses on refuges were issued June 26, 2006. Further, the Improvement Act of 1997 amended the National Wildlife Refuge System Administrative Act of 1966 and became a true organic act for the System by providing a mission, policy direction, and management standards. A thorough summary of these management directives and authorities is in Chapter 1 of the CCP.

Refuge management is directly linked to the Corps of Engineers, Department of the Army through cooperative agreements (1945, 1954, 1963, and 2001) to manage Corps- acquired land in the floodplain of the Mississippi River as part of the Refuge. The Corps retained the rights to manage the navigation project, forestry, Corps recreation sites, and other rights. The Refuge has a strong, ongoing process of coordinating habitat management on the Refuge with the Corps.

The same spirit of coordination is shared with the four States bordering the Refuge: Minnesota, Wisconsin, Iowa, and Illinois. There are often overlapping and shared responsibilities for fish and wildlife resources between the States and the Refuge in terms of regulations, law enforcement, habitat improvement projects, and coordination of Refuge management plans and activities.

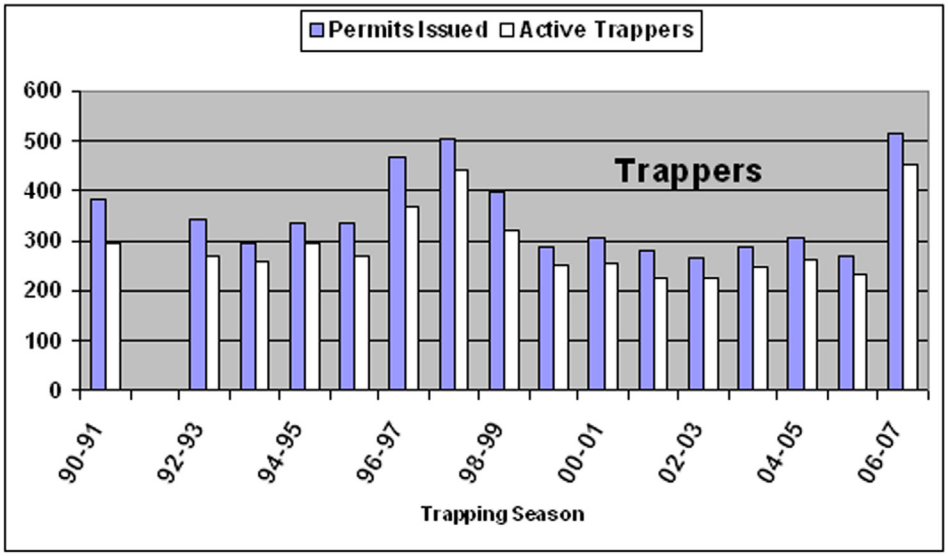
1.8 Management Issues

Issues and objectives addressed in this EA were derived from scoping meetings with the public, Refuge staff, and interagency coordination meetings (see Chapter 6). In addition, a questionnaire was mailed to agency and trapping association representatives and all Refuge-permitted trappers in January 2006. The questionnaire and summary of the responses is in Appendix B and C. These issues do not represent every issue which faces the Refuge furbearer management program, but are those that can reasonably be addressed during the ten years of plan implementation.

Listed below are 11 objectives or issues addressed in the Refuge Furbearer Management Plan and Environmental Assessment.

1. Otter Trapping Season.
2. Trapping Special Use Permit fee.
3. Number of Permits Issued.
4. Number of Trap Tags per Permit.
5. Special Furbearer Management Areas, including Youth Trapping Areas.
6. Beaver Season.
7. Trap Placement Near Beaver Lodges/Dams.
8. Trap Check Frequency.
9. Handling Incidental Take.

Figure 2: Number of Trapping Special Use Permits Issued and Number of Active Trappers, 1990-91 through the 2006-07 Seasons, Upper Mississippi River National Wildlife and Fish Refuge (1991-92 data missing. Active trappers are defined as those who trap at least one day per season.)



10. Monitoring and Evaluation of Populations.
11. Law Enforcement Reporting/Revoking Privileges.

1.9 Current Furbearer Trapping Program

Furbearer trapping on the Refuge has a long-standing tradition and has been a useful tool in maintaining balance between furbearers and habitat, and safeguarding Refuge infrastructure. The opening of trapping seasons, trapping methods, and other regulations on the Refuge generally follow those established by each of the four States in which the Refuge occurs: Iowa, Illinois, Minnesota and Wisconsin. The final day of trapping on the Refuge is no later than March 15. Trapping seasons generally run from late October or early November until late January to March 15. There is variability among States in regards to season length (trapping for some species are continuously open, others have established dates), trapping zones, and species open to trapping.

Furbearer trapping is allowed throughout the Refuge, however, no trapping is allowed in Waterfowl Hunting Closed Areas and Sanctuaries and one Administrative No Hunting Zone until 9:00 a.m. the day after the last day of the regular State duck hunting season. The closed area restriction reduces the extent of disturbance to waterfowl by human activities during the hunting season, thus enhancing the ability of the Refuge to provide secure resting and feeding areas for migrating waterfowl. An additional area (Crooked Slough Backwater, former Savanna Army Depot land, in Pool 13) is closed to all trapping and other forms of entry year round due to the presence of contaminants and unexploded ordinance.

The Refuge has regulated trapping within its boundaries since 1929 and administers trapping by issuing Trapping Special Use Permits to State-licensed individuals. Between the 1990-91 and 2005-06 trapping seasons the Refuge issued an average of 337 Trapping Special Use Permits per year. The recent 2006-07 season had the highest number of permits issued (517) since 1990-91 (Figure 2).

Some people who obtain permits do not actively trap during the trapping season for various reasons. Our harvest data summaries are based upon the number of active trappers on the Refuge. Active trappers are defined as those who trap at least one day per season. During 17 years between 1990-91 to 2006-07, an average of 84 percent of the trappers with Refuge permits were active trappers (range 77 to 88 percent) (Figure 2).

Trappers may use a maximum of 40 traps (all marked with Refuge tags) per day. The use of snares and multiple-catch traps, allowed in some States, is prohibited on the Refuge. Trappers may use leg-hold traps and body-gripping ("conibear" type) traps for the purpose of trapping various furbearers and unprotected species of wildlife. Each method is standardized under State regulations as to trap size and types of allowable sets in order to protect non-target species and to provide for the safe use of the Refuge by others. The use of exposed flesh or carcass baits, including fish, is prohibited on the Refuge.

All trappers must submit a Fur Catch Report (Appendix F) following the season or they will not be eligible for a permit to trap on the Refuge the subsequent season. These reports provide data on the number and distribution of animals harvested, distribution of trappers, and rudimentary catch per unit effort (efficiency) estimates on the Refuge.

Factors affecting furbearer harvest on the Refuge include length of the trapping season, population size, fur prices, weather conditions, habitat changes, extent of aquatic vegetation coverage, and trapping effort.

Access for trapping on the Refuge is by foot, boats, all-terrain vehicles and snow machines. Use of the latter two vehicles on, over, or across Refuge lands at any time is prohibited, including while trapping. Off-road vehicles are allowed only on the ice over navigable waters, accessed from boat landings. The Refuge has other restrictions regarding tending traps, set types, use of vegetation, disturbance, etc., as outlined in the trapping special use permit (Appendix D) and/or the Furbearer Management Plan.

Most furbearer trapping targets the following species: muskrat, mink, beaver, raccoon, and red fox. Other species taken include river otter, coyote, skunk, and opossum. The vast majority of trapping occurs within wetland habitats.

Chapter 2: Alternatives, Including the Proposed Action

2.1 Introduction

The Refuge proposes to adopt and implement a revised Furbearer Management Plan that will guide furbearer management for the next ten years. The Refuge proposes to continue the existing trapping program (see Section 1.9 on page 25 for a description of the existing program), with modifications of fees, seasons, bag limits, and special furbearer management areas. This chapter presents and compares a range of alternatives for the proposed action. It also provides components considered but dropped from further analysis. A description of scoping and development of alternatives appears in Chapter 6.

Three alternatives are presented:

- Alternative A (Current Direction)
- Alternative B
- Alternative C (Preferred Alternative)

A comparison of the Alternatives is presented for each of 11 objectives/issues being addressed in the proposed plan. They are listed by issue below. A table (matrix) is provided at the end of this chapter for quick comparison of how each issue is addressed in the alternatives (Table 2 on page 49).

2.2 Components Not Considered for Detailed Analysis

During the scoping process, agency representatives, citizens, and staff raised various issues for consideration in this EA. The following components were considered but not selected for further analysis in this Draft Furbearer Management Plan and EA for the reason(s) described.

Establish Trapping Units or Zones: The delineation of 67 trapping zones Refuge-wide was made in the 1988 Fur Management Plan for management purposes which included: youth trapping opportunities, habitat enhancement, and infrastructure protection. None of the zones were activated because specific needs did not arise. Continued use of predetermined units is not feasible because physical, biological, and social conditions are constantly changing. The option of creating special management areas, as needs arise, is being proposed in Alternatives B and C of this EA.

Allow the Use of Snares: Snaring impacts nontarget animals. It also poses a conflict with various user groups (for example, duck hunters with retrieving dogs) on the Refuge during the fall. Fifty-six percent of trappers that responded to the 2006 Refuge Trapping Questionnaire (Appendix C) thought that snaring should not be permitted.

Allow the Use of Colony Traps: Colony traps are a cage type trap that is typically set in the entrance to a muskrat house. These traps can catch multiple number of muskrats at one time without resetting. Colony traps are not allowed in some States or on public management areas. Their use will continue to be banned for general trapping on the Refuge. Their use could be allowed in Special Furbearer Management Areas (see Section 2.3.5 on page 41) where high harvest levels are needed to reduce damage by muskrats to Refuge infrastructure.

Eliminate Trapping on Refuge: Trapping is an effective tool to manage populations of furbearers that can impact Refuge infrastructure and some

wildlife populations. Trapping has a long tradition in the area and has provided many hours of recreation to many citizens. Relative to trapping, Service policy for Appropriate Refuge Uses 603 FW 1 (Chapter 1.3, B) is:

> "*Take of fish and wildlife under State regulations*. States have regulations concerning take of wildlife that includes hunting, fishing, and trapping. We consider take of wildlife under such regulations appropriate. However, the refuge manager must determine if the activity is compatible before allowing it on a refuge."

The Compatibility Determination allowing trapping on the Refuge is bound in this document and can also be viewed on the Refuge's website:

http://www.fws.gov/midwest/UpperMississippiRiver

Adjust the Muskrat Season Length: There is little evidence that late-season harvest impacts the muskrat population. However, it is recognized that 25 percent of the trappers responding to the 2006 Refuge Trapping Questionnaire stated that the muskrat season was too long and should close at the end of December or January.

Allow Early Trapping in Closed Areas: It is necessary to restrict trapping in these areas to minimize disturbance of feeding or resting waterfowl during the fall migration and hunting season. However, Alternatives B and C of this Environmental Assessment would give District Managers the option, with Refuge Manager approval, to allow trapping in these areas by developing an individual Special Furbearer Management Area. Such cases would be approved on a limited basis in accordance with criteria.

Allow Firearms to Dispatch Animals in No Hunting Zones: It is necessary to retain current regulations prohibiting this activity in order to protect other Refuge users who generally assume that a No Hunting Zone will be free of firearms. Also, the need for firearms is not critical as other effective means to dispatch animals are available.

2.3 Comparison of Alternatives for Each Issue

2.3.1 Otter Trapping

Alternative A (Current Direction)

Continue to adopt current and proposed State trapping seasons (see Table 5 on page 58) and limits for otter :

- Iowa: Up to two per trapper
- Illinois: No season on Refuge.
- Minnesota: Up to two per trapper.
- Wisconsin: One per trapper with lottery tag, Mississippi Zone.

Rationale: State Furbearer biologists from Wisconsin, Iowa and Minnesota have been assessing otter populations for years. Their science-based management is intended to sustain viable population levels while allowing a limited harvest of surplus animals on a zone or state-wide basis. Otter harvest from Refuge lands in the six Wisconsin counties that border the Refuge has averaged only 12 animals per season (range of 1 to 27) since 1990 (see Table 4 on page 54). The Refuge portion of the county harvest has been about 20 percent. The Wisconsin harvest is allocated by a lottery system.

The Iowa harvest began in 2006 with a state-wide quota of 400 otter. A total of 469 otter were taken within 10 days of the season opener. This included 69 animals taken during a 72-hour grace period at the end of the season. A total of 67 otter were taken from the six Iowa counties bordering the Refuge. Ten (15 percent) of the 67 otter were taken from the Refuge, as reported by trappers in mandatory fur catch reports.

Minnesota Department of Natural Resources will initiate an otter season in 2007-08 in the State's southeast zone, which includes the Refuge. Minnesota has established a limit of 2 otter per trapper in this zone, compared to 4 in the State's northern zone. The decision to have a season relied partially on results from the Department's aerial surveys conducted along the Mississippi River from the Iowa border to the Twin Cities. Initial comparisons of surveys conducted in 2001 and 2006-07 indicate otter sign has remained constant along the Mississippi River and increased on the lower portions of three tributaries, the Cannon, Zumbro, and Whitewater rivers (John Erb, MDNR personal communication). Current Minnesota regulations (page 117,

Hunting and Trapping Regulations Handbook) state that, "The trapping of otter is prohibited on all NWRs [National Wildlife Refuges] in Minnesota, except the Upper Mississippi NWR."

There is no otter season in Illinois.

Sometimes otter are trapped incidentally to beaver trapping. The number of these catches have increased since 1990, as reported by trappers on Mandatory Fur Catch Reports (see Table 3 on page 52 in Chapter 3). As otter populations remain constant or increase, incidental take will increase. A season on otter would allow trappers to retain otter incidentally killed in traps.

Seventy-six percent of trappers who responded to the 2006 Refuge Trapping Questionnaire were in favor of having an otter season (Appendix C).

Strategies:

1. Refuge Officers will continue to offer assistance in registering otters, including incidental take.
2. Continue to coordinate efforts with State Furbearer Biologists in gathering otter harvest/population data.
3. Continue mandatory Fur Catch Reports that include otter harvest. (Appendix F)

Alternative B

Close the Refuge to Otter Trapping

Rationale: An otter season is not essential to fulfillment of the purposes of the Refuge stated below:

Purposes of the Upper Mississippi River National Wildlife and Fish Refuge are to provide "a refuge and breeding place for [migratory birds] other wild birds, game animals, fur-bearing animals, and for the conservation of wild flowers and aquatic plants, and to such extent as the Secretary of the Interior may, by regulations, prescribe a refuge and breeding place for fish and other aquatic animal life."

River otter do not significantly impact fish, breeding or migrating waterfowl and other wild birds, game animals, and fur-bearing animals on the Refuge. Although otter occasionally prey on nesting migratory birds and other wildlife, this level of predation is not deemed significant and has no bearing on the overall health of wildlife populations on the Refuge. River otter are opportunistic carnivores and biologists have documented isolated instances of otter destroying duck nests concentrated on man-made islands located in Refuge backwaters. The Refuge has considered, but not approved, otter and other predator removal activities on these islands.

Specific predator management goes beyond the purposes of the Refuge, unlike, for example, on Waterfowl Production Areas in the "duck factories" of the prairie pothole region in the Dakotas, Minnesota, and Iowa. In these areas, raccoon, skunk, fox, and ground squirrels have been removed from selected areas just prior to and during the duck nesting season.

Fish make up a large portion of otters' food base, but there is no information to suggest that predation by otter threatens the well-being of fish or other aquatic species on the Refuge. It is recognized, however, that river otter can severely depredate confined fish populations at hatcheries and fish rearing ponds. It is also recognized that State agencies and private organizations may be restoring streams and tributaries for trout, and the concern with the possible depredation of those fish due to a population of otter on the river. It should be noted that the Refuge Boundary for the most part is located in between the RR tracks and that most of these tributaries will still be open to otter trapping following State regulations.

River otter are often associated with beaver flowages, side channels and tributaries of the River. Studies show their diet is predominantly fish, but amphibians (mostly frogs) and crustaceans (mainly crayfish) may constitute an important part of the diet, while small mammals, mollusks, reptiles, birds, and fruits are consumed opportunistically (Lariviere and Walton, 1998).

Otter do not cause harm to Refuge infrastructure such as dikes and water control structures.

Information available does not suggest that trapping of otter benefits the species.

Otter are a relatively uncommon species and the viewing of otter by the general public is welcomed and considered an exceptional experience by many observers. Reducing otter populations through harvest would likely reduce the population seasonally and thus viewing opportunities.

Lariviere and Walton (1998) note from the literature that otter harvests are positively correlated with beaver harvests and with the average beaver pelt price from the previous year; otters are incidentally harvested by traps set for beavers; and management plans should consider both species. (Note below in Section 2.3.6, this Plan recognizes the importance of beaver for enhancing

wetland habitat for wildlife on the Refuge and that otter may benefit from beaver activity as well.)

Strategies:

1. Refuge field staff will register incidental otter catches. See Section 2.3.9.
2. Continue to coordinate efforts with State Furbearer Biologists in gathering otter harvest/population data.
3. Modify Special Conditions of Trapping Special Use Permit to address the closure of otter harvest on the Refuge and procedures for handling incidental catch.

Alternative C (Preferred Alternative)

Allow otter trapping in States that have a season, but implement a conservative harvest limit of one otter per trapper, in accordance with State regulations.

Rationale: State Furbearer Biologists from Wisconsin, Iowa and Minnesota have been assessing otter populations for years. Their science-based management is intended to sustain viable population levels while allowing a limited harvest on a zone or state-wide basis. The take of otter from the Refuge is relatively low, ranging from 5 to 46 animals per season, 1990-91 to 2005-06. However, over the past few years the number of incidental otter catches has increased throughout the Refuge, as reported on mandatory Fur Catch Reports (Table 3 on page 52 and Figure 5 on page 45). A limit of one otter would allow trappers to retain otter incidentally killed in traps.

Seventy-six percent of the trappers that responded to the 2006 Refuge Trapping Questionnaire were in favor of having an otter season (Appendix C).

A Refuge-wide harvest limit of one otter per trapper in States that allow otter trapping has additional advantages. First, the consistent regulation will provide simplicity, clarity, and administrative ease for implementation. Law enforcement officers and the public will also benefit from the single regulation by avoiding confusion, particularly near State line boundaries.

Second, Refuge-specific otter population data is limited, therefore a conservative limit is reasonable. Aerial winter surveys conducted in 2001 and 2006-07 by Minnesota DNR from the Iowa line to the Twin Cities indicate otter sign has remained constant along the Mississippi River, but increased on the lower portions of three tributaries, the Cannon, Zumbro, and Whitewater rivers (John Erb, MDNR personal communication).

Third, a limit of one rather than two or four should improve seasonal viewing opportunities for the Refuge visitor, an extremely high-valued experience for most Refuge users.

Strategies:

1. Refuge Officers will continue to offer assistance in registering otters, including incidental take.
2. Continue to coordinate efforts with State Furbearer Biologists in gathering otter harvest/population data.
3. Modify Special Conditions of Trapping Special Use Permit to limit one otter/trapper in States with an open otter season.
4. Continue mandatory Fur Catch Reports that include otter harvest.
5. Modify current Minnesota regulations (page 117, Hunting and Trapping Regulations Handbook) to state that "The Upper Mississippi River National Wildlife and Fish Refuge would be the exception to the prohibition of otter trapping on National Wildlife Refuges." (Statement is included in the 2007 Regulations Handbook.)

2.3.2 Trapping Special Use Permit Fee

Alternative A (Current Direction)

Continue current fee of $20 for a Trapping Special Use Permit to trap on the Refuge.

Rationale: Revenue generated from permit fees is intended to cover costs of administering the Refuge trapping program. Fees collected are deposited into the Fish and Wildlife Service's General Fund but not returned directly to the Refuge's budget. Refuge trappers are required to possess appropriate State Licenses and Stamps (Table 7 on page 60, Chapter 3), in addition to the Refuge Permit in order to trap on the Refuge. Continuing with the current fee will keep these costs constant, whereas higher fees may deter individuals from this experience and may limit the opportunity for low-income trappers.

Strategies:

1. News release will continue to be made in the fall stating where and when Permits are available.

2. District Offices will issue permits and collect fees.
3. Fees collected will be deposited into the Fish and Wildlife Service's General Fund.

Alternative B

Increase Trapping Special Use Permit fee to $50 by the 2010/2011 trapping season. Beginning with the 2008/2009 trapping season, raise the current fee to $30, then add $10 the following two years to reach the $50 limit. Trapping Special Use Permits for youth under the age of 18 will remain at $20. Initiate efforts to have some or all of the fee returned to the Refuge to be used for furbearer management and to cover trapping-related administrative costs.

Rationale: The current fee of $20 has been in effect since 2000. Since that time, administrative costs have increased. Costs include: issuing permits, maintaining databases, receiving and processing fur catch reports, and distributing annual reports. The Refuge will request that a major portion of the fee be returned directly to the Refuge to cover these costs. Permits issued at refuges for other uses (for instance, photography, and firewood cutting) have cost $50 since the late 1980's.

Very few youth (ages 12-18) participate in trapping on the Refuge. The results of the 2006 Refuge Trapping Questionnaire show that only 2 out of the 193 trappers who replied were under the age of 20. An increase in fees may further discourage youth participation, therefore, the Refuge permit for youth under 18 will remain at $20.

Strategies:

1. Proceed with the process necessary to modify the existing fee collection activity to allow the retention of fees at the station.
2. News release will be made in the fall of 2008 stating fee changes and how to obtain Permits.

Alternative C (Preferred Alternative)

Increase Trapping Special Use Permit fee to $30 beginning with the 2008/2009 trapping season. Trapping Special Use Permits for youth under the age of 18 will remain at $20. Initiate efforts to have some or all of the fee returned to the Refuge. Re-evaluate fee in 5 years when plan is reviewed.

Rationale: It is necessary to increase Trapping Special Use Permit fees due to inflation rates that occur every year. Since the permit fee has not been adjusted since 2000, the Refuge finds it important to make an increase in the permit fee to cover the costs that include: printing permits, procuring trap tags, issuing permits, maintaining databases, receiving and processing fur catch reports, and distributing annual reports. In addition to these costs, the fees collected may be used to fund monitoring and research on furbearers. The Refuge will request that a major portion of the fee be returned directly to the Refuge to cover these costs.

Strategies:

1. Same as Alternative B

2.3.3 Number of Trapping Special Use Permits Issued

Alternative A (Current Direction)

Trapping Special Use Permits will continue to be issued to all eligible trappers who present a State trapping license and pay a fee. There is no limit to the total number of permits issued per season.

Rationale: The Refuge has never limited the number of trappers in any one season. Refuge staffing levels have generally been adequate in recent years to handle public demand for trapping special use permits and dealing with trapping issues in the field.

The number of trappers issued permits over the last 16 years has been below 400 in all but three years (Table 6 on page 59). There was an average of 337 permits issued over the 15-year period between the 1990-91 season and the 2005-06 season. The number increased dramatically in 2006-07 when 516 permits were issued, increasing the 16-year average to 348 permits.

Strategy:

1. Licensed trappers will be issued permits following District procedures.

Alternative B

Issue no more than 400 Trapping Special Use Permits per season, Refuge-wide.

Rationale: The number of trappers issued permits over the last 16 years has been below 400 in all but three years (Table 6 on page 59). There was an average of 337 permits issued over the 15-year period between the 1990-91 season and the 2005-06

season. The number increased dramatically in 2006-07 when 516 permits were issued, increasing the 16-year average to 348 permits.

The observed abundance of muskrats and increases in fur prices in the 2006-07 season led to a dramatic increase in trapping special use permits issued this past season. With more permits have come increases in administrative costs to issue permits, obtain additional trap tags, handle complaints, and maintain records. There will also be more time involved in data management and compiling summary reports associated with data obtained from mandatory Fur Catch Reports. Refuge staff have reported more trapper-related incidents related to increased crowding and competition. More staff time has been used than in the past, thereby raising concerns with costs and loss of time to complete other duties.

Strategies:

1. District offices will be allotted the following number of permits for issue each trapping season: Winona (85), La Crosse (120), McGregor (115), Savanna (80).
2. If a District issues all its allotted permits before the end of the season, trappers will be required to go to another District to obtain a permit if available.
3. Permits will be available on a first-come, first-served basis and issued according to District procedures.

Alternative C (Preferred Alternative)

Same as Alternative A.

Rationale: Same as Alternative A.

Strategy:

1. Same as Alternative A.

2.3.4 Number of Trap Tags Issued Per Permit

Alternative A (Current Direction)

Forty trap tags are issued with each Trapping Special Use Permit.

Rationale: Prior to the 1979-80 season, 50 tags were issued with each permit. Beginning that year, the number of tags was reduced to 40 in response to increased conflicts between competing trappers, whose numbers increased with the rise in fur prices. These conflicts included overcrowding and the resultant friction between trappers due to loss of "traditional territories," increased theft of traps and fur from traps, and a general breakdown of traditional trapping ethics (USFWS report, 1976).

Since 1998-99, Refuge trappers have reported using an average of 30 traps per day through the season, significantly less than the maximum of 40 tags (Table 8 on page 61 in Chapter 3).

Strategies:

1. District Offices will issue trap tags to individuals that present a State Trapping License and pay the Trapping Special Use Permit fee.
2. Licensed trappers that possess a Resident and Non-resident License from two States are only allowed 40 tags Refuge-wide.
3. Provide District Offices with guidance on how to replace lost and/or stolen trap tags. Affidavit is in Appendix G.

Alternative B

Same as Alternative A. Continue to issue 40 trap tags with each Trapping Special Use Permit.

Rationale: Results from the 2006 Refuge Trapping Questionnaire show that 53 percent of the trappers would like to receive more trap tags with their permit, the majority of those requested an extra ten tags (Appendix C). The concern over increased predator populations and a need to harvest those furbearers was mentioned as reasoning for the extra tags. Forty-seven percent of the trappers would like the number of trap tags to remain at 40.

Additional trap tags would not benefit furbearer management on the Refuge because, 1) State DNRs do not have Refuge specific population data on the abundance of raccoon and other predators, 2) intensified production of ground-nesting birds (waterfowl) through added predator removal is not effective on a primarily migration refuge, 3) research has shown that fall trapping is ineffective in benefiting ground nesting birds, 4) species specific tags would present added law enforcement and administrative workloads, 5) trappers may choose to not use the extra tags to target predators when muskrat fur prices are high, and 6) possible conflicts between waterfowl hunters (dog safety) and trappers (use of 220 conibear traps) could occur during the fall if more tags were issued specifically for raccoon and other predators. If approved in the final plan, Special Furbearer Management Areas could be approved by the Refuge Manager, where justified, to control local predator populations.

Strategies:

1. Same as Alternative A.

Alternative C (Preferred Alternative)

Same as Alternative A.

Rationale: Same as Alternative A.

Strategies:

1. Same as Alternative A. Additionally, if approved in the final plan, the Refuge Manager will have the option to control local predator populations, where justified, through designation of Special Furbearer Management Areas.

2.3.5 Special Furbearer Management Areas

Alternative A (Current Direction)

Continue to not implement or activate "Trapping Units" delineated in the 1988 Fur Management Plan. These units could be activated to control furbearer populations, protect infrastructure or establish Youth Trapping Areas.

Rationale: The current trapping program does not have any activated Fur Trapping Units because the need has not been identified.

Strategy:

1. Not applicable.

Alternative B

Adopt Guidelines for establishing Special Furbearer Management Areas.

Rationale: Special Furbearer Management Areas would be established on localized portions of the refuge where furbearer harvest may be enhanced or restricted depending on management objectives. These special areas would address concerns related to public safety, opportunity for youth trapping, damage to Refuge infrastructure, lands, or resources, and/or enhancement of aquatic habitat.

One or more of the following criteria must be met for the establishment of Special Furbearer Management Areas:

- Area has fish and wildlife habitat qualities that can be enhanced through furbearer management.
- Area has a clearly definable boundary.
- Area has unacceptable levels of damage to Refuge infrastructure by furbearers.
- Area has public safety issues (proximity to hiking trails, observation areas, boat landings).
- Area is suitable for a Youth Trapping Area (see below).

An example of a Special Furbearer Management Area exists in the Spring Lake Closed Area of Pool 13 where muskrats have tunneled into earthen dikes causing extensive erosion that will require major funding to repair. In this case, trapping regulations would be temporarily liberalized to maximize the harvest and reduce the muskrat population.

Another example of a Special Furbearer Management Area would be to locally restrict harvest of beaver in order to gain habitat created by beaver lodges, dams, and channels or runs. This is considered a possibility in portions of the Reno Bottoms area of Pool 9 and Hay Meadow Lake area of Pool 11.

Youth Trapping Areas for youth under the age of 18 will also be considered as a type of Special Furbearer Management Area. The purpose would be to provide youth an opportunity to learn and appreciate the art of trapping without direct competition from experienced trappers.

Criteria for the establishment of Youth Trapping Areas may include:

- area has clearly defined boundaries
- area is accessible by foot
- area is less than 200 acres in size
- no more than one active Youth Trapping area per pool per State will be established
- area would be in effect for the first two weeks of the muskrat trapping season only, then open to general trapping.
- State Trapping Associations along with State Departments of Natural Resources and area trappers to help in administrating and providing Trapper Education.

Some examples of possible Youth Trapping Areas include John Deere Marsh in Pool 11, the McGregor Lake area of Pool 10, and the north Reno Bottoms area of Pool 9 (ponds between road and railroad track) where there are easily defined boundaries.

Youth Trapping Area regulations apply only to those specially designated areas for the first 14 days of the Refuge muskrat trapping season. In Refuge

closed areas this may be the first 14 days after the State duck hunting season closes. After that date these areas will be available to all trappers beginning at 9:00 a.m. on the day following the close of the youth season.

Additional Youth Trapping Area regulations include:

1. Youth trappers must be State licensed and under the age 18 at the time of issuance of Trapping Special Use Permit.
2. Youth trappers must obtain a Refuge Trapping Special Use Permit before trapping on the Refuge.
3. All applicable State and Federal trapping regulations will apply.
4. Youth trappers may be accompanied by an adult (over 18 years of age) but the following restrictions apply.
   - All traps entering or within the Special Youth Trapping Area will be carried or transported by the youth trapper only.
   - All animals taken within the Special Youth Trapping Area will be handled and transported by the youth trapper only.
   - Accompanying adults may assist in the mechanical setting or arming of the trap, but may not place the actual set.
   - Accompanying adults are not required to obtain a Trapping Special Use Permit.

Strategies:

1. Establishment of these areas will be initiated by the District Manager and approved by the Refuge Manager.
2. District Managers will consult with the appropriate State agencies, prior to the establishment of these areas.
3. Special Furbearer Management Areas will be properly signed and the public informed via media and brochures.
4. Refuge will monitor and evaluate youth trapping activities in these areas.

Alternative C (Preferred Alternative)

Same as Alternative B.

Rationale: Same as Alternative B.

Strategies:

1. Same as Alternative B.

2.3.6 Beaver Trapping Season

Alternative A (Current Direction)

Continue to follow current State and Refuge beaver trapping seasons. (Table 5 on page 58 in Chapter 3).

Rationale: Trappers and both State and Refuge Law Enforcement Officers are familiar with current beaver seasons. In response to the 2006 Refuge Trapping Questionnaire, 84 percent of the trappers said they would like the Refuge to continue to follow State season dates.

Strategy:

1. Refuge trappers are informed about the Special Conditions of the Trapping Permit, which state that "Permittee must comply with all State and local game laws and regulations, in addition to all federal regulations and refuge permit conditions" (Appendix E).

Alternative B

Beaver trapping on the Refuge will begin the day after the State duck hunting season and close Refuge-wide on March 15 (Table 1).

Rationale: Delaying the season opener for beaver will minimize conflicts between trappers and waterfowl hunters and their dogs. A delayed season opener may decrease annual harvest in some areas and benefit Refuge fish and wildlife habitat as beaver build more dams, lodges, and runs. Although pelt quality is not a major factor in setting beaver seasons, it is recognized that pelt quality is generally at a higher grade after December 1. A few respondents to the 2006 Refuge Trapping Questionnaire indicated that beaver are being subject to over harvest and suggested opening the beaver trapping season at a later date.

Strategies:

1. Trappers will be informed of changes in the Refuge beaver trapping dates in the Trapping Special Use Permit.
2. Incidental take: see Section 2.3.9 on page 45 for description of how incidental take will be handled on the Refuge.

Alternative C (Preferred Alternative)

Same as Alternative A.

Rationale: Same as Alternative A.

Strategies:

1. Same as Alternative A.

Table 1: Dates for Proposed Beaver Trapping, using the 2006 Duck Hunting Season Dates as a Reference, on the Upper Mississippi River National Wildlife and Fish Refuge

Beaver Trapping Season	Minnesota	Wisconsin (Mississippi Zone)	Iowa	Illinois
Start Date	Day after State Duck Hunting Season 29-Nov-06	Day after State Duck Hunting Season 06-Dec-06	Day after State Duck Hunting Season 08-Dec-06	Day after State Duck Hunting Season 20-Dec-06
End Date	15-Mar-07	15-Mar-07	15-Mar-07	15-Mar-07
Number of Days	107	100	98	86

If District Managers believe further management of beavers is necessary they may develop Special Furbearer Management Areas (see above) if adopted in the final furbearer management plan.

2.3.7 Trap Placement Near Beaver Lodges/Dams and Muskrat Houses

Alternative A (Current Direction)

Continue to use the existing definition on trap placement, as written in the Special Conditions (Appendix E) of the Trapping Special Use Permit.

> "It is unlawful to: set a trap within 3 feet of the waterline of any muskrat house or feeding house."
>
> "It is unlawful to: set a trap closer to a beaver house or dam than permitted by State law, and in no case shall be set closer than 6 feet to any beaver house or dam."

Rationale: Most Refuge trappers and State and Refuge Law Enforcement Officers are familiar with current regulations. Interpretation of legal placement site is left to the discretion of the Law Enforcement Officers.

Strategy:

1. When trappers are issued a Trapping Special Use Permit they are made aware of the Special Conditions of the Trapping Permit (Appendix E).

Alternative B

Maintain current regulation but clarify the definition of a beaver lodge/dam and muskrat house with the following definition:

> A beaver lodge is typically a dome-shaped structure constructed of interwoven sticks, branches and mud with underwater tunnel entrances. Lodges associated with bank dens may be irregularly shaped rather than dome-shaped. Lodges typically have associated feed piles or "caches", consisting of branches, sticks and other vegetation (corn stalks), upon which the beaver feeds during the winter. For the purposes of this regulation, any sticks, branches or logs which are directly attached to or associated with the lodge structure, including the cache, are considered a part of the lodge. Traps may not be placed within 6 feet of the outermost edge of the lodge. The 6-foot setback restriction does not apply to bank dens that do not have an associated lodge structure/cache.
>
> A beaver dam is typically a curvilinear structure, constructed of interwoven sticks, branches and logs and the upper surfaces may be reinforced with stones and mud. For the purposes of this regulation, any sticks, branches or logs which are directly attached to the dam structure, are considered a part of the dam. Traps may not be placed within 6 feet of the outermost edge of the dam. The 6-foot setback restriction does not apply to beaver castor mounds and mud "pushups."
>
> A muskrat lodge is typically a dome-shaped structure constructed of interwoven reeds, sticks and aquatic vegetation with underwater tunnel entrances. Lodges located on banks may be irregularly shaped rather than dome-shaped. For the purposes of this regulation, vegetation which is directly attached to the lodge structure, is considered a part of the lodge. Traps may not be placed within 3 feet of the outermost edge of the lodge. The 3-foot setback restriction does not

apply to bank dens, feeding platforms or vegetation "pushups."

Rationale: These updated definitions will clarify where trappers may place traps near these structures. Both Refuge Law Enforcement Officers and Refuge trappers will benefit from this clarification, leaving less to interpretation. This regulation is also intended to reduce trapping of non-target animals.

It is recognized that beaver dams are used as travel corridors by many wildlife species, both furbearers and other mammals. In order to discourage disturbance and incidental take the 6 foot regulation is necessary for all traps.

Strategies:

1. Modified definitions will be printed on Trapping Special Use Permits or supplements to inform trappers of the changes.
2. State and Refuge Law Enforcement Officers will be notified of changes in placement of traps near these structures.

Alternative C (Preferred Alternative)

Maintain current regulation but clarify that the placement of traps is prohibited within six (6) feet of where the lodge or dam meets the water. The 6-foot setback restriction does not apply to bank dens that do not have an associated lodge structure/cache. Also, # 110 conibear traps and dog-proof traps are exempt from these regulations.

Rationale: Most Refuge trappers and State and Refuge Law Enforcement Officers are familiar with current regulations but to some, the definition of legal placement is unclear. This definition will alleviate that concern.

Muskrats and mink are targeted with the use of #110 conibear traps. Both furbearers are commonly found on or near beaver dams. The use of these traps poses minimal threat to beaver because of the small trap size. Dog proof traps are species specific and address hunter concerns for dog safety.

Strategies:

1. Modified definitions will be printed on Trapping Special Use Permits or supplements to inform trappers of the changes.
2. State and Refuge Law Enforcement Officers will be notified of regulation clarification.

2.3.8 Trap Check Frequency

Alternative A (Current Direction)

Continue current requirement of the Refuge Trapping Special Use Permit which states:

"Permittee shall tend each trap/set on the refuge at least once every calendar day, except for beaver sets which must be tended at least once every two calendar days. However the permittee must also comply with all State and local game laws and regulations, in addition to all federal regulations and refuge permit conditions. In cases where any of these regulations differ, the most restrictive regulations shall apply." Illinois requires trappers to check traps every 24 hours. The other States allow 48 hours or more on beaver sets.

Rationale: Fifty-five percent of the trappers who responded to the 2006 Refuge Trapping Questionnaire were opposed to a 24-hour check on beaver sets. A longer time interval is favored by some trappers to minimize disturbance (chopping of ice) near their sets so the animals will move more frequently. Trappers also noted that pelt quality will not degrade if animals are left in under water sets more than 24 hours.

Strategy:

When trappers are issued a Trapping Special Use Permit they are made aware of the Special Conditions of the Trapping Special Use Permit (Appendix E)

Alternative B

Permittee shall tend each trap/set on the Refuge at least once every calendar day, including beaver sets.

Rationale: The once-per-calendar-day requirement may enhance survival of live, non-target animals (e.g. otter) released by the trapper when taken incidentally to beaver trapping if not a drowning set.

Strategies:

1. Modify Special Conditions of Trapping Special Use Permit to state that all traps/sets on the Refuge must be checked once each calendar day.
2. Notify State and Refuge Law Enforcement Officers on change in Refuge regulation.

Alternative C (Preferred Alternative)

Same as Alternative A.

Rationale: Same as Alternative A.

Strategies:

1. Same as Alternative A.

2.3.9 Handling Incidental Take

Alternative A (Current Direction)

Continue procedure outlined in Item 9 of the "Special Conditions of Trapping Permit" section of the Trapping Special Use Permit, as follows:

> Disposition of Unauthorized Animals – Birds and mammals other than those authorized to be trapped under permit and found alive in the traps of the permittee shall be immediately liberated. Such birds and mammals found dead or mortally injured in traps shall be immediately disposed of in accordance with State law. If any threatened or endangered species are caught, a refuge employee or State warden must be notified immediately.

Rationale: Trappers and both State and Refuge Law Enforcement Officers are familiar with this current policy on how to handle incident take.

Strategies:

1. Refuge trappers are informed about the Special Conditions of the Trapping Permit (Appendix E)
2. Add contact information for State and Refuge Law Enforcement Officers on the existing Permit.

Alternative B

Amend Item 9 of the "Special Conditions" section of the Trapping Special Use Permit to read as follows:

> Disposition of Unauthorized Animals - Birds and mammals other than those authorized to be trapped under permit and found alive in the traps of the permittee shall be immediately liberated. Such birds and mammals found dead or mortally injured in traps shall be immediately disposed of in accordance with State law. *Otter caught in traps and found alive are to be immediately liberated. If trapped otter are found dead or mortally injured, the animal shall be dispatched and left in the trap. A Refuge employee must then be notified immediately.* If any threatened or endangered species are caught, a Refuge employee or State warden must be notified immediately.

Rationale: Modification of this item is necessary due to the proposed beaver seasons and Refuge-wide otter closure in Alternative B.

Strategies:

1. Refuge trappers will be informed about the modification in the Special Conditions of the Trapping Permit.
2. Add contact information for State and Refuge Law Enforcement Officers and field staff on the existing Permit.
3. Refuge Field staff will assist Law Enforcement Officers due to potential increase in the number of incidental catches.

Alternative C (Preferred Alternative)

Same as Alternative A

Rationale: Same as Alternative A.

Strategies:

1. Same as Alternative A.

2.3.10 Monitoring and Evaluation of Furbearer populations

Alternative A (Current Direction)

Continue current monitoring program that includes mandatory Fur Catch Reports and contacts with State Furbearer Biologists. Change due date for submission of Fur Catch Report from May 15 to April 15 and add "Age of Permittee" fill-in-the-blank box to the Fur Catch Report (Appendix F).

Rationale: Mandatory Fur Catch Reports are necessary to monitor Refuge harvest of furbearers. Sharing of Refuge and river specific population and harvest data will help agencies better manage and understand furbearer populations. Knowledge of trapping permittee age ranges will provide demographic data, of interest and concern, as the age of trappers increases and few young trappers are entering the population. Moving the due date up one month will allow the Refuge to compile and disseminate trapping data in a more timely manner. All trapping on the Refuge ends after March 15 so trappers will still have one month to complete the Fur Catch Report.

Fifty-one percent of the trappers that responded to the 2006 Refuge Trapping Questionnaire said that the current monitoring and research is adequate.

Strategies

1. Mandatory Fur Catch Reports are included in the information packet that trappers receive when they are issued a Trapping Special Use Permit. Add "Age of Permittee" fill-in-the-blank box to Fur Catch Report. Inform permittees of due date when permit is issued and include due date on Fur Catch Report (Appendix F).
2. Continue to share annual Refuge fur harvest report with agencies and interested parties.
3. Continue to coordinate efforts with State Furbearer Biologists to obtain State furbearer population information.

Alternative B

Continue current system of mandatory Fur Catch Reports and increase monitoring and research of Refuge furbearer populations in conjunction with State furbearer biologists, universities, other organizations and trappers.

Rationale: Assessments of furbearer populations may be necessary when evaluating furbearer damage to Refuge infrastructure and furbearer impacts to Refuge lands or resources. Population data will be used to adjust furbearer harvest if needed. Monitoring will be required to assess the impacts of Special Furbearer Management Areas that might be implemented under this Plan.

Forty-nine percent of trappers that responded to the Refuge Trapping Questionnaire wanted to have more research and monitoring of furbearers take place on the Refuge, particularly for muskrats, beaver and otter.

Strategies:

1. Use strategies listed in Alternative A.
2. Coordinate research efforts through help with agencies and interested parties in monitoring site specific areas such as Closed Areas, habitat enhancement project areas, or Pools that have had or are scheduled for water level drawdowns.
3. Obtain Refuge specific population data on specific furbearers such as river otter.

Alternative C (Preferred Alternative)

Same as Alternative B.

Rationale: Same as Alternative B.

Strategies:

1. Same as Alternative B.

2.3.11 Law Enforcement Reporting and Revocation of Privileges

Alternative A (Current Direction)

Continue with revocation of privileges as addressed in Item Number 10 – Penalties of the Special Conditions in the Trapping Special Use Permit, which states:

> "Failure to comply with any conditions specified herein, or violation of any regulations issued under authority of the Act of June 7, 1924, establishing the refuge, or any federal or State laws or regulations applicable to trapping on said refuge, *shall* not only render permittee subject to prosecution under said laws and regulations, but is sufficient cause for immediate suspension of current permit and for refusal of future permits to trap on the refuge, or for the refusal of any other use or privilege on the refuge for which a permit may be required.
>
> Trapping violations may result in revocation of trapping privileges on the Refuge for periods of one to five years. Repeat violations may result in lifetime revocation of refuge trapping privileges.
>
> All traps and equipment used as instruments of any violation, and all animals or furs illegally taken, shall be subject to immediate seizure, and subsequent forfeiture."

The Refuge uses criteria in the 1988 Fur Management Plan for guidance to District Managers to revoke existing trapping and/or refuse issuance of future trapping privileges in accordance with the following standards:

Source: 1988 Fur Management Plan

POLICY AND PROCEDURE FOR REVOCATION OF TRAPPING PRIVILEGES ON THE UPPER MISSISSIPPI RIVER NATIONAL WILDLIFE AND FISH REFUGE

Pursuant to 50 CFR 31.16, specific conditions are prescribed by the Director of the U.S. Fish and Wildlife Service for trapping of

furbearing animals on the Upper Mississippi River National Wildlife and Fish Refuge.

Failure of a permittee to comply with any of the refuge trapping permit conditions or violation of any of the regulations issued under the authority of the Upper Mississippi Wildlife and Fish Refuge Act of June 7, 1924 or of any federal or State law or regulation related to trapping on the Upper Mississippi River Refuge is sufficient cause for:

- Revocation of existing permits
- Refusal of future permits
- Refusal of other permitted privileges

District Managers will revoke the existing trapping and/or refuse issuance of future trapping privileges in accordance with the following standards.

All revocation procedures shall be as specified in the 50 CFR 25.43.

Upon a determination to revoke an existing permit or refusal of future privileges, the permittee (affected individual) shall be notified in writing (certified mail or hand delivered). The individual shall also be notified of the appeals procedure as established in 50 CFR 25.45.

All other violations will subject the permittee to court prosecution only. However, if a permittee is convicted of a second offense of any trapping related law or regulation (federal or State) during a three year period, the permittee's trapping privilege shall be revoked for up to one year.

All traps and equipment used in a violation or seized as instruments of a violation, and animals or fur taken in violation, shall be forfeited as provided by federal law.

Juveniles – by policy juveniles are not prosecuted in federal court. Upon detecting a violation committed by a juvenile (17 years or younger) traps, furs, and other equipment may be seized as provided by law. The parents or guardians of the juvenile shall be contacted by phone or in writing concerning the violation and arrangement shall be made for the parent (guardian), accompanied by the juvenile, to meet with the appropriate refuge officer to discuss the violation.

Violation	**Term (from date of revocation)**
Trapping during closed season	3 years
Reserving territory or stakes without traps	1 year
Taking with multiple catch box, basket, wire traps or other unauthorized means	3 years
Trap theft	5 years
Checking, setting or tending traps of another	3 years
Possess fur during closed season	3 years
Trapping while under refuge or State revocation	3 additional years
Tending untagged traps	1 year
Setting untagged trap(s) (including State tagging requirements)	3 years
Failure to check traps every calendar day (except two calendar days for beaver).	1 year (1st violation) 3 years (2nd violation)
Trapping during prohibited hours	1 year
Failure to send in Fur Catch Report	1 year

The District Manager shall have the option of seeking prosecution of juveniles under applicable State law. Forfeiture of furs, traps and equipment shall be at the discretion of the appropriate courts and/or as provided by State law.

A juvenile that commits a second violation of any other trapping related law or regulation during a three year period, shall be subject to revocation of trapping privileges for one year from date of revocation, subject to the provisions 50 CFR 25.43 and 25.45.

A juvenile convicted under State law of any regulation for which an adult is subject to revocation shall be subject to the same revocation period as prescribed by adults.

Rationale: The results of the 2006 Refuge Trapping Questionnaire show that 88 percent of the trappers thought that loss of future privileges was a greater deterrent to violations than were fines.

Strategies:

1. Refuge trappers are informed about the Special Conditions of the Trapping Special Use Permit upon issuance (Appendix E).
2. Refuge Law Enforcement Officers are familiar with this current policy and procedure for revocation of trapping privileges.

Alternative B

Same as A. Allow more discretion to the Refuge Manager in determining revocation options for violations by modifying policy and procedure (see below).

Rationale: This modification will give Refuge Law Enforcement Officers and District Managers discretion in evaluating the violation committed and make an appropriate judgment.

Strategies:

1. Modify Special Conditions of Trapping Special Use Permit and *Policy and Procedures for Revocation of Trapping Privileges on the Upper Mississippi River National Wildlife and Fish Refuge, 1988 Fur Management Plan.*
   - This includes changing the word "shall" to the word "may" in the following paragraph:

     Failure of a permittee to comply with any of the refuge trapping permit conditions or violation of any of the regulations issued under the authority of the Upper Mississippi Wildlife and Fish Refuge Act of June 7, 1924 or of any federal or State law or regulation related to trapping on the Upper Mississippi River Refuge may be sufficient cause for:

     d. Revocation of existing permits.
     e. Refusal of future trapping special use permits.
     f. Refusal of other privileges requiring a permit.
   - Revise the heading in the violation revocation table from "Term (from date of revocation) to "Revocation (up to a maximum of)."
   - Add the following text to the revocation document:

     Violations involving potential revocation outcomes will be reviewed by a committee consisting of the Refuge Manager, District Managers, and Refuge Officers. Final decisions will be made by the Refuge Manager. The Refuge Manager will use the following guidance in determining the length of revocation. Permanent suspension of privileges will be considered based on the severity or frequency of violation.
2. Notify Refuge Law Enforcement Officers about change in policy.

Alternative C (Preferred Alternative)

Same as Alternative B.

Rationale: Same as Alternative B

Strategies:

1. Same as Alternative B

Table 2: Alternative Comparison by Issue/Objective, Furbearer Management Plan, Upper Mississippi River National Wildlife and Fish Refuge, 2007

Issue or Objective	Alternative A (Current Direction)	Alternative B	Alternative C (Preferred Alternative)
Otter trapping	Allowed in States where open in accordance with State regulations.	Close Refuge to otter trapping.	Allow otter trapping in States that have a season, but implement a conservative harvest limit of one otter per trapper, in accordance with State seasons and licensing.
Permit fee	$20 annual	Increase $10/year to $50 annual by 2010. Establish $20 annual, for trappers under 18 years of age.	$30 annual, review in 5 years when plan reviewed. Establish $20 annual, for trappers under 18 years of age.
Number of Permits Issued	Unlimited	Limit to 400, Refuge-wide.	Same as Alternative A
Number of trap tags per permit	40	Same as Alternative A	Same as Alternative A
Special Furbearer Management Areas	None	Establish option	Establish option, develop criteria in plan
Establish Youth Trapping Areas	None	Establish option	Include this option under the Special Furbearer Management Area, develop criteria and regulations in plan
Beaver season	Follow State seasons	Open beaver season the day after the respective State duck hunting season	Same as Alternative A
Trap Placement Near Beaver Lodges	Prohibited within 6 feet of lodge and dam.	Prohibited within 6 feet of lodge, dam, and food cache.	Same as Alternative A but clarify definition: "Prohibited within 6 feet of where lodge or dam meets the water." Exceptions are #110 conibear traps and dog-proof traps.
Trap Check Frequency	Traps must be checked at least once every calendar day, except beaver sets must be checked at least once every two calendar days.	All traps must be checked once every calendar day.	Same as Alternative A
Handling Incidental Take	Special Conditions in permit address (release live, if dead follow State regulations, if T&E contact Refuge employee or State warden immediately).	Modify Special Conditions to address the season changes for otter and beaver. Refuge employees will handle incidental take.	Same as Alternative A
Monitoring/Evaluation of Populations	Continue Mandatory Fur Catch Report; change due date from May 15 to April 15.	Same as Alternative A, and increase monitoring in cooperation with States.	Same as Alternative B.
Law Enforcement: Reporting Violations and Revoking Privileges	May revoke privileges and future permits for violations.	May revoke privileges and future permits for violations. Violations will be reviewed by Refuge committee using standards identified in Plan.	Same as Alternative B

Chapter 3: Affected Environment

The Upper Mississippi River National Wildlife and Fish Refuge (Refuge) encompasses one of the largest blocks of floodplain habitat in the lower 48 States. Bordered by steep wooded bluffs that rise 100 to 600 feet above the river valley, the Mississippi River corridor and Refuge offer scenic beauty, a wild character, and productive fish and wildlife habitat unmatched in mid-America. The Refuge covers 240,220 acres and extends 261 river miles from north to south at the confluence of the Chippewa River in Wisconsin to near Rock Island Illinois.

While extensive wetland habitat losses have occurred well beyond its boundaries in neighboring States, the Refuge has retained much of its biological integrity and is a stronghold of bottomland forests and wetlands vital to breeding and migrating fish and wildlife. Nonetheless, Refuge wetland habitat has degraded significantly over the past 40 years due to human influence and natural processes.

The Refuge is one of several management entities on the Mississippi River. The U.S. Army Corps of Engineers operates the 9-foot navigation project within the Upper Mississippi River System (Public Law 99-662), and overlays the entire Refuge. The navigation project provides a continuous channel for barge traffic through a series of reservoirs created by 29 locks and dams on the Mississippi River and eight on the Illinois River. These reservoirs (pools) create and maintain most of the Refuge's floodplain habitat. The Refuge occurs in Pools 4 through 14.

In addition to Corps and Refuge ownership, the adjoining States of Iowa, Illinois, Minnesota, and Wisconsin own wildlife management units within the floodplain. Many of the 70 counties, towns and other municipalities adjacent to the Refuge have property within the floodplain as well. With all these entities having divergent roles and interests in River management, Congress declared in the Upper Mississippi River Management Act of 1986 that the Upper Mississippi River is both a nationally significant ecosystem and nationally significant commercial navigation system.

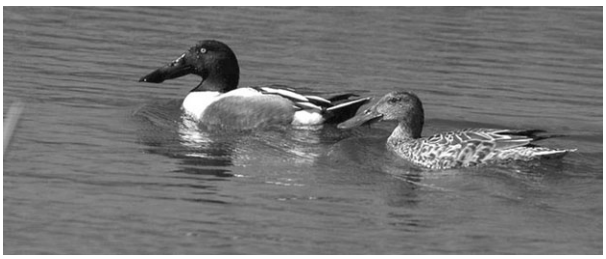
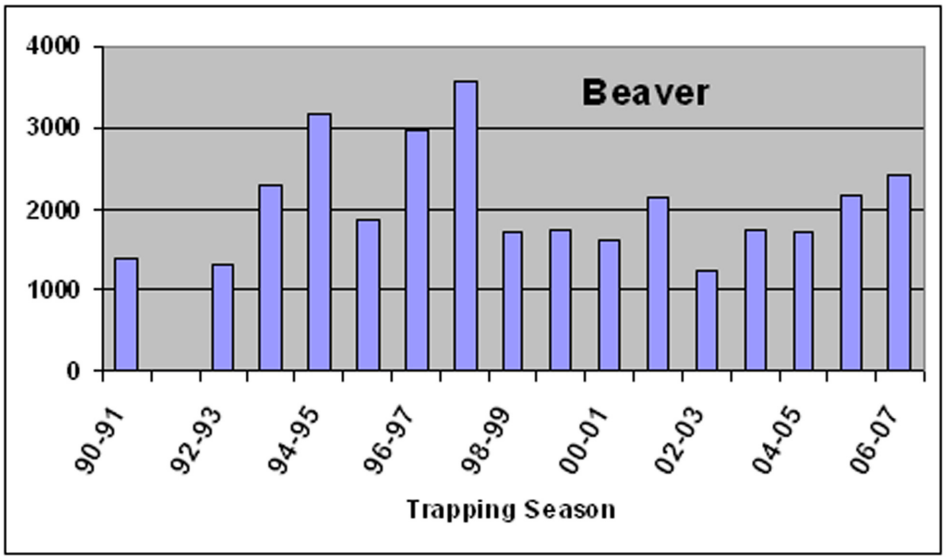


Photo by Stan Bousson

A full description of the physical, biological, and human environment of the Refuge may be found in the 2006 Final Environmental Impact Statement and Comprehensive Conservation Plan for the Upper Mississippi River National Wildlife and Fish Refuge at Refuge offices and the website: http://www.fws.gov/midwest/planning/uppermiss

The 51 species of mammals that occur on the Refuge play an important role in Upper Mississippi River System ecology and some are the object of furbearer management on the Refuge. Prior to locks and dams, the high, semi-dry river bottoms held higher populations of skunk, badger, foxes, and rabbits than occur at present. The marsh conditions of today now support higher numbers of muskrat, mink, and especially raccoon, than in the past. Accounts of the prominent furbearing species on the Refuge follows. Additional data on furbearer population status and harvest is presented in the Trapping compatibility determination (page 93).

Figure 3: Annual Harvest of Beaver on the Upper Mississippi River National Wildlife and Fish Refuge, 1990-91 to 2006-07, As Reported by Trappers Through Mandatory Fur Catch Reports. 1991-92 Data Are Missing.



3.1 Beaver

Furbearing mammals (especially beaver) were key elements in the development and exploitation of the Mississippi River Basin. Early explorers and trappers established settlements (Prairie du Chien, Wisconsin, for example) to carry on the fur trade. Over-exploitation nearly extirpated beaver from the Upper Mississippi River by the mid-1800s. They made a comeback in the 20th century with reintroductions (1927 and 1928), control of the harvest, and new habitat created by the lock and dams in the 1930s. Beaver lodges and cuttings are now a moderately common sight on the Refuge. Beaver lodge surveys conducted in Pools 12-14 from 1993 to 2002 revealed an average of 41 lodges per year along established survey routes. Numbers ranged from a high of 62 in 1993 to a low of 20 in 2002.

An average of 2,069 beaver are harvested each year on the Refuge (1990-91 to 2007-07) (Figure 3).

3.2 River Otter

River otter were trapped extensively at the time of early European settlement. These predators probably maintained small populations in tributaries of the UMR. Today they are an uncommon sight, but occupy most areas of the Refuge, as evidenced by trapping records, local observations, and radio-tracking studies.

Currently, Wisconsin and Iowa allow the take of river otter on the Refuge, one per season per trapper via lottery in Wisconsin (Mississippi Zone) and up to two otter per season per trapper in Iowa. In 2006, Iowa had its first otter season in many years with a quota of 400 otter state-wide. Ten (15 percent) of the 67 otter taken in Iowa counties bordering the Refuge were actually trapped on the Refuge, the rest were taken elsewhere within the counties.

There has been no open season on otter in the southern part of Minnesota, which includes the Refuge. However, the State will open a season in the southeast zone in 2007. Minnesota has established a limit of two otter per trapper per season, half the limit allowed in Minnesota's northern zone. Within the Refuge, the limit of two will be in effect for the 2007-08 season, but will be lowered to one beginning with the 2008-09 season, when the Refuge's Furbearer Management Plan is implemented. Results of investigations into home range characteristics, habitat selection and survival of river otters in southeast Minnesota were influential in Minnesota's decision to open an otter season (T. Gorman, student at Mankato State University, personal communication). Preliminary reports indicate four of 24 radio-

Figure 4: Annual Harvest of River Otter on the Upper Mississippi River National Wildlife and Fish Refuge, and Number Caught on the Refuge in Wisconsin Border Counties, 1990-91 to 2006-07, as Reported by Trappers Through Mandatory Fur Catch Reports. 1991-92 Data Are Missing.

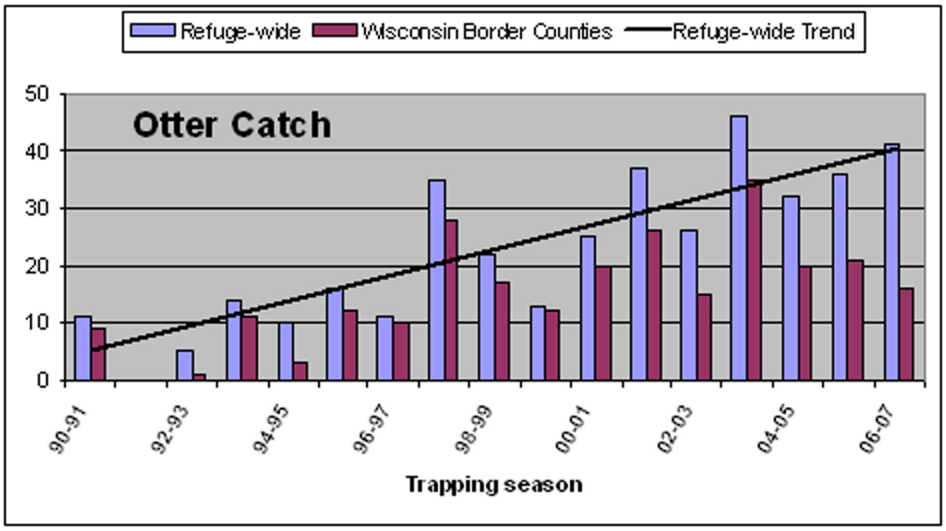
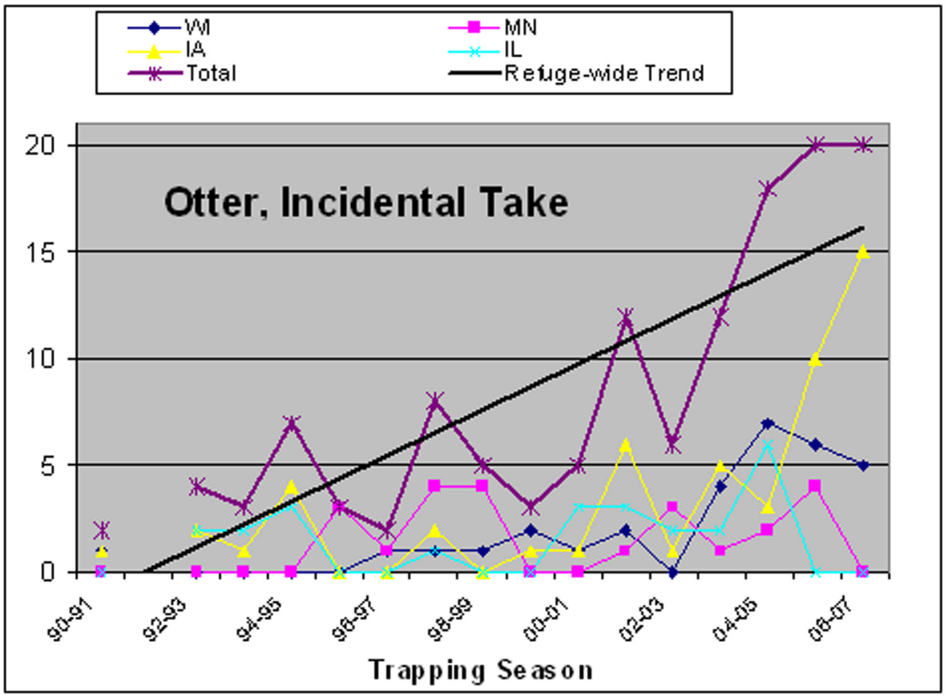


Table 3: Possession Status of Otter Caught in Four States Bordering the Upper Mississippi River National Wildlife and Fish Refuge as reported by trappers through mandatory fur catch reports, 1990-91 to 2006-07 trapping seasons. 1991-92 data are missing.[1]

Trapping Season	Otter Caught Refuge-wide	Otter Caught from Refuge Lands in:									
		Wisconsin			Minnesota		Iowa		Illinois		
		L	T	R	T	R	L	T	R	T	R
06-07	41	11	4	1			10	1	14		
05-06	36	15	6	-	4			10	1		
04-05	32	11	7	2	2			3	1	6	
03-04	46	21	4	10	1			5	3	2	
02-03	26	12		3	3			1	5	2	
01-02	37	24	2		1	1		6		3	
00-01	25	9	1	10		1		1		3	
99-00	13	10	2					1			
98-99	22	15	1	1	4				1		
97-98	35	27	1		4			2		1	
96-97	11	9	1		1						
95-96	16	10		2	3				1		
94-95	10	3						4		3	
93-94	14	6		5				1		2	
92-93	5	1						2		2	
91-92	Data Missing										
90-91	11	7	1	1				1			1

1. *L = Otter legally tagged by Wisconsin and Iowa trappers; T = Otter turned over to a Conservation Officer; R = Otter released alive; T+R= Incidental take.*

Figure 5: Annual Incidental Take of Otter in States Bordering the Upper Mississippi River National Wildlife and Fish Refuge, 1990-01 to 2006-07. 1991-92 Data Are Missing.



marked otters died of incidental take; one of 24 died from a vehicle impact on a roadway. Otters established natal dens along fence rows up to several miles away from streams. Initial comparisons of aerial surveys conducted in 2001 and 2006-07 indicate otter sign has remained constant along the Mississippi River and increased on the lower portions of three tributaries, the Cannon, Zumbro, and Whitewater Rivers (John Erb, MDNR personal communication).

Since 1990, there has been an increasing trend in the number of otter taken on the Refuge (Figure 4 and Table 3). The number caught includes otter legally tagged and incidentally taken (animals released alive or turned over to a Conservation Officer). During the 17-year period of 1990 to 2006, the total refuge otter catch averaged 24 animals per year, ranging from 5 to 46 per season. In eight of the first 10 years of this period, at least 75 percent of the otter trapped on the Refuge were taken in Wisconsin, the only State with an open season during that time period (Figure 4).

In more recent years, the Wisconsin percentage has been lower, within a range of 55 to 70 percent, indicating that other States have contributred more to the number caught. This trend is illustrated by the increase in number of otter taken incidentally in States where no otter seasons were in place (Table 3 and Figure 5).

On a county basis, the Refuge does not contribute a major portion of the otter harvest in Wisconsin. Since 1990, the Refuge contributed an average of 12 otter or about 20 percent of the otter legally tagged and harvested in the six Wisconsin counties bordering the Refuge (Table 4).

Iowa's first otter season took place in 2006; the state-wide quota of 400 otter (actual number taken: 469) was met within 10 days of the season opener. A total of 67 otter were taken from the six Iowa counties bordering the Refuge. Of those, only 15 percent (10 otter) were from the Refuge, as reported by trappers. This percentage is similar to Wisconsin's otter harvest in counties bordering the Refuge where about 20 percent of the harvest is from the Refuge.

Table 4: Otter Harvested from Six Wisconsin Counties Bordering the Upper Mississippi River National Wildlife and Fish Refuge, 1990-91 to 2006-07 Trapping Seasons.[1]

Trapping Season	Otter Harvested in 6 Wisconsin Counties that Border Refuge	Refuge Portion of Otter Harvested in 6 Wisconsin Counties that Border the Refuge	
		Number	Percent
06-07	72	11	15
05-06	100	15	15
04-05	82	7	9
03-04	75	21	28
02-03	51	12	24
01-02	105	24	23
00-01	68	9	13
99-00	62	10	16
98-99	76	15	20
97-98	106	27	25
96-97	66	9	14
95-96	52	10	19
94-95	43	3	7
93-94	20	6	30
92-93	16	1	6
91-92	25	Data Missing	
90-91	15	7	47
AVERAGE	**60**	**12**	**20**

1. *The six counties are: Buffalo, Trempealeau, LaCrosse, Vernon, Crawford and Grant*

3.3 Muskrats

Prior to locks and dams, muskrats were widespread, but not abundant on the Upper Mississippi River System. At that time the shallow lakes and marshes often dried up each fall, forcing muskrats to dig bank dens, rather than build typical "rat houses". Muskrats flourished after the 1930s when permanent shallow wetlands were created by installation of the locks and dams. High muskrat numbers coincided with those of puddle ducks, bitterns and rails, and sunfish and bass in the hey-day of shallow wetland productivity witnessed in the 1935-65 period.

Between 1965 and 2000, habitats throughout the Refuge experienced a general decline of emergent vegetation, including cattail, burreed, arrowhead, and bulrush; muskrat numbers followed that trend. Recent habitat gains brought on by natural processes, habitat enhancement projects, and water level reductions in Pools 5 and 8, have enhanced wetland plants for muskrat. Higher muskrat numbers combined with high pelt prices resulted in an increased harvest during the 2006-07 season. Muskrats reproduce prolifically and changes in their populations generally reflect ebb and flow of habitat, rather than the extent of harvest.

Trappers have harvested millions of muskrats from the Refuge since the 1940s. Between 1940 and 1970, over 2.25 million rats were harvested (average of 83,000 per year) by an average of 750 Refuge-permitted trappers per year. Recent annual harvest reports (1990-91 to 2005-06) show about 40,000 animals taken by 281 trappers per year (Figure 6 and Figure 7). In the 2006-07 season, there were 517 Trapper Special Use Permits issued to trappers on the Refuge, of which 454 active trappers harvested over 104,000 muskrats, more than double the average.

Population status and distribution data are available from studies and inventories, as well as fur catch reports submitted by trapping permittees. Muskrats were studied in the early 1980s in Pool 9 to determine density, survival and harvest rates

Figure 6: Annual Harvest of Muskrats on the Upper Mississippi River National Wildlife and Fish Refuge, 1990-91 to 2006-07, as Reported by Trappers Through Mandatory Fur Catch Reports. 1991-92 Data Are Missing.

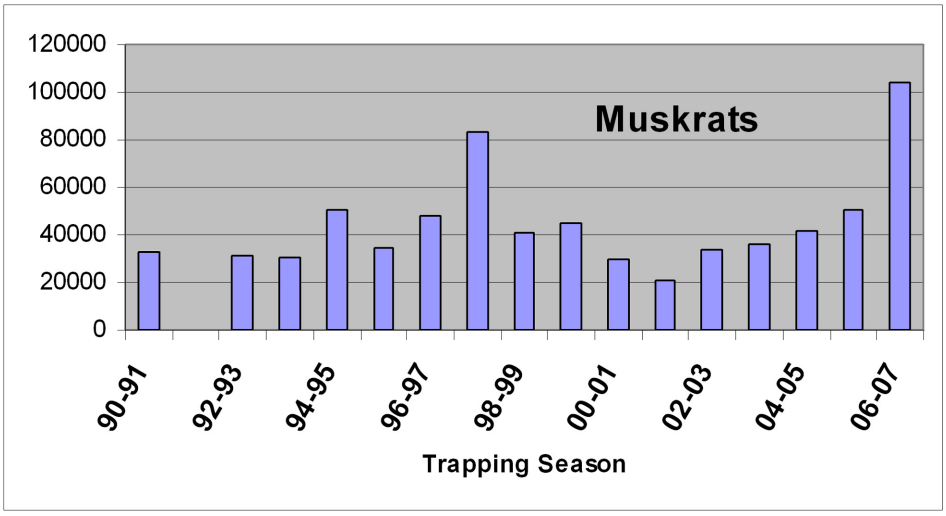
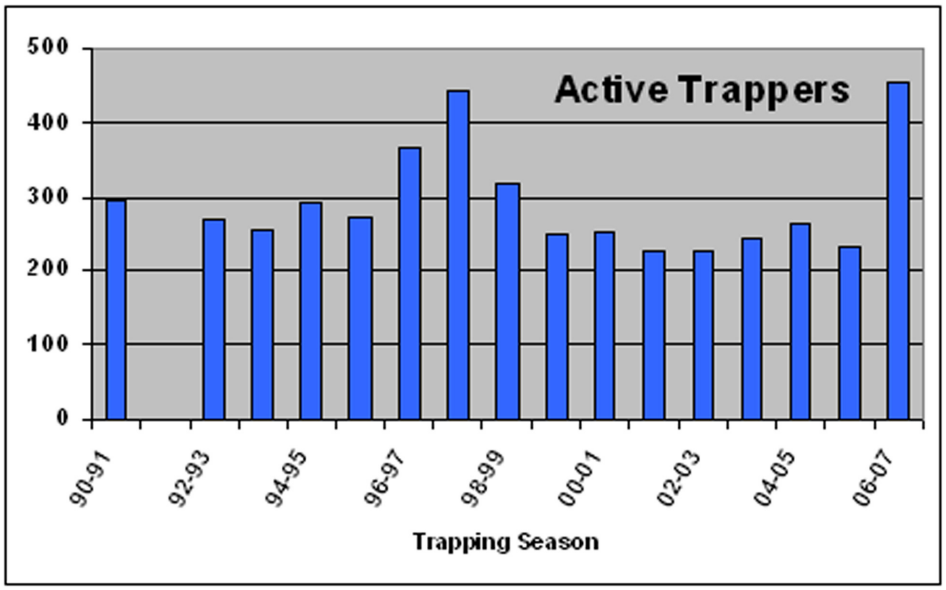


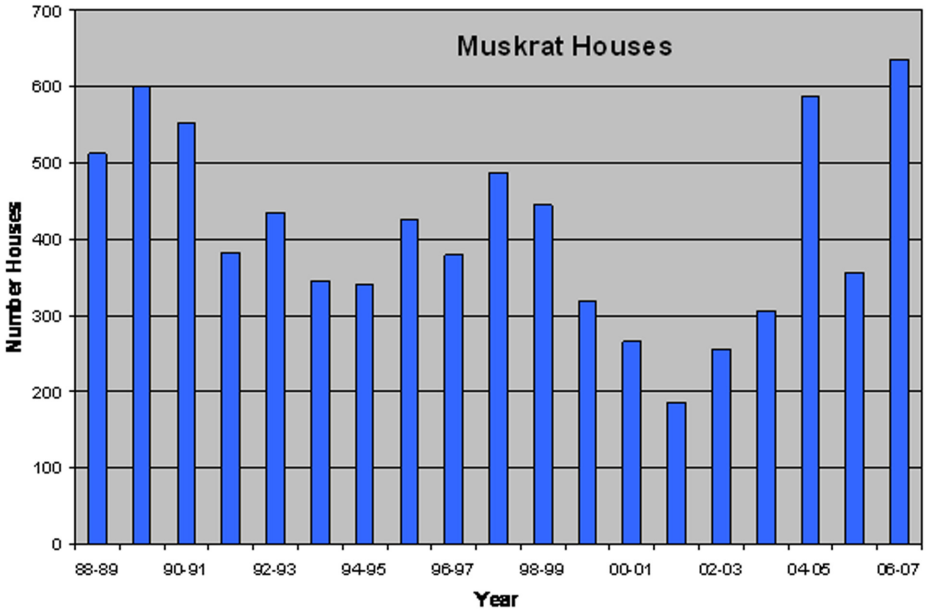
Figure 7: Number of Active Trappers on the Upper Mississippi River National Wildlife and Fish Refuge, 1990-91 to 2006-07. 1991-92 Data Are Missing.[1]



1.Active trappers are defined as those who trap at least one day per season.

(Clay and Clark, 1985). The authors reported that muskrat populations on Pool 9 "showed the characteristic resiliency for the species with great reproductive capability and consistent survival." They also found that distribution and harvest was not uniform, which supported the idea of management by zones to provide sustained harvest. Trapping zones were identified in the 1988 Fur Management Plan, but never implemented.

Figure 8: Muskrat House Counts, in Selected Areas of Pools 4-11, Upper Mississippi River, 1989-2007 (WDNR, J. Nelson, personal communication).



Muskrat harvests are not affected by water level fluctuations. This was determined from regression analyses that compared water levels (at tailwaters and headwaters) in Refuge Pools 4 through 14 to muskrat harvest for the period 1990 and 1992 to 1996 (Wlosinski and Wlosinski, 1998). The authors concluded that water levels did not affect muskrat harvest on the Refuge, but noted that numerous other studies showed that muskrat populations are affected by water levels. Other factors affecting harvest include length of trapping season, fur prices, weather conditions, habitat changes, and trapping effort. The authors concluded that "although sometimes used as a surrogate for population estimates, harvest may not be a good estimator for muskrat populations." The same authors reported that the average number of muskrats trapped is positively correlated to differences in aquatic vegetation coverage estimates (1989 emergent vegetation and floating leaved aquatic vegetation).

In 1988, the Wisconsin Department of Natural Resources began making annual muskrat house counts at specific backwater wetland locations within Pools 4-11. The first three years of the survey yielded over 550 houses annually, then declined to less than 200 in 2001-02 (Figure 8). Since then there has been a recovery, with nearly 600 in 2004-05 and a record 635 houses in 2006-07. These data generally correspond to the muskrat harvest since the 1996-97 season (Figure 6).

3.4 Raccoon

Since the 1990-91 season, the average annual raccoon harvest on the Refuge has averaged 1,788 animals, ranging from 800 to over 3,000 per year (Figure 9). Raccoon numbers have increased dramatically since the early 1990s in each of the four states in which the Refuge occurs. For example, scientists estimate that there are more raccoons in Illinois today than when the first European settlers arrived there.

3.5 Mink

The annual Refuge mink harvest averaged 323 animals, ranging from about 175 to 450 per year for the period 1990-91 to 2005-06 (Figure 10). In 2006-07, 773 mink were harvested, the highest number since 1990. This probably reflects high prices, populations, and number of active trappers afield primarily for muskrats, which were bringing high prices early in the season.

Minnesota, Wisconsin, and Illinois report that mink populations are stable in areas with adequate wetland resources.

Figure 9: Number of Raccoon Harvested on the Upper Mississippi River National Wildlife and Fish Refuge, 1990-91 to 2006-07, as Reported by Trappers Through Mandatory Fur Catch Reports. 1991-92 data are missing.

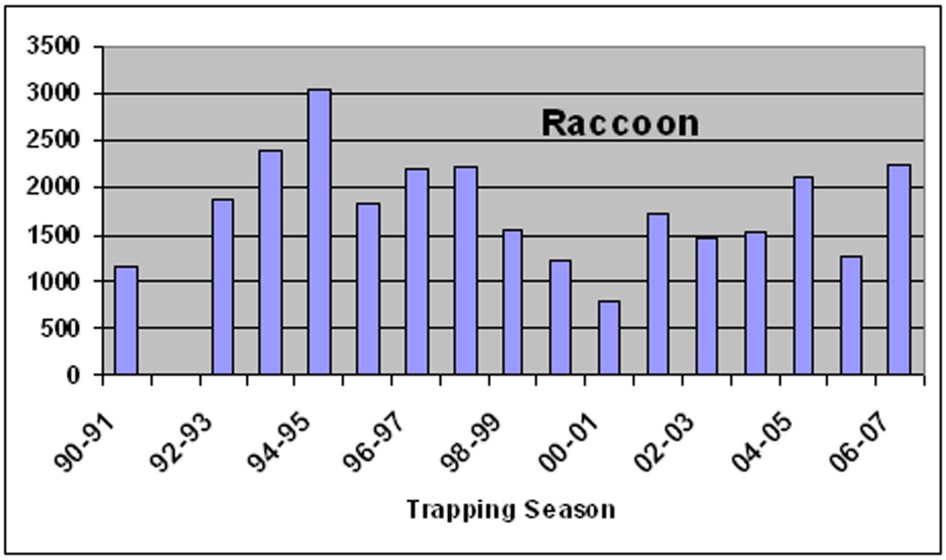


Figure 10: Number of Mink Harvested on the Upper Mississippi River National Wildlife and Fish Refuge, 1990-91 to 2006-07, as Reported by Trappers through Mandatory Fur Catch Reports. 1991-92 Data Are Missing.

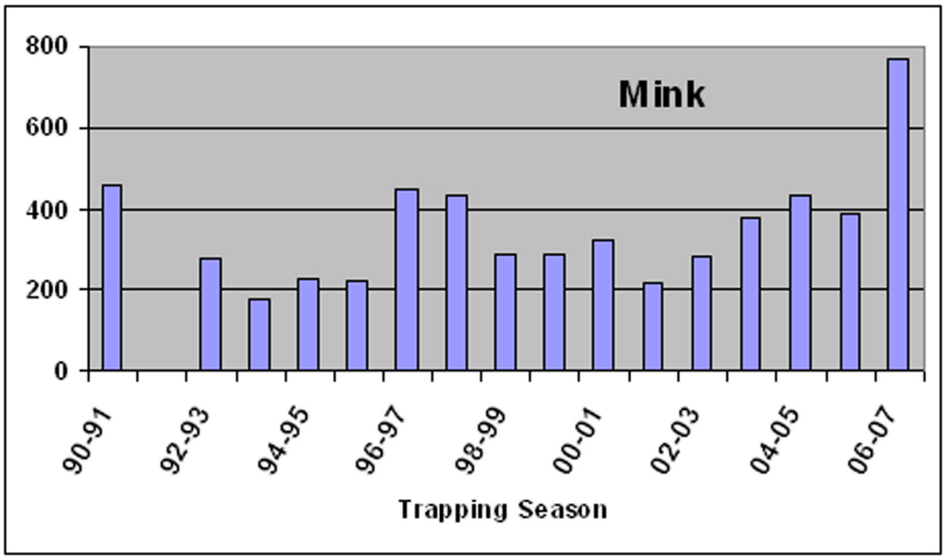


Table 5: Comparison of Trapping Seasons (2006-07) in States Bordering the Upper Mississippi River National Wildlife and Fish Refuge.

Furbearer	Days	Minnesota	Wisconsin (Mississippi Zone)	Iowa	Illinois
Muskrat	Start	28-Oct-06	13-Nov-06	4-Nov-06	5-Nov-06
	End	28-Feb-07	28-Feb-07	31-Jan-07	20-Jan-07
	# of Days	124	108	89	77
Beaver	Start	28-Oct-06	6-Dec-06	4-Nov-06	5-Nov-06
	End	15-Mar-07	15-Mar-07	15-Mar-07	15-Mar-07
	# of Days	139	100	132	131
Otter	Start	No Season	4-Nov-06	4-Nov-06	No Season
	End		15-Mar-07	31-Jan-07, or until quota of 400 is reached	
	# of Days		132	Season Closed in 10 days	

3.6 Commercial Use of the Refuge

Commercial use of the Refuge consists of hunting, wildlife observation and fishing guides; commercial trappers; recreational fish float operators; and commercial fishing. Farming, grazing and timber harvesting occur occasionally on the Refuge for habitat management purposes. Commercial navigation passes through the Refuge. For detailed analysis of these uses refer to the 2006 EIS/CCP.

3.6.1 Commercial Trapping

Muskrat, beaver, raccoon, river otter, red fox, and mink are the primary furbearing species harvested on the Refuge. Over 75 percent of the animals trapped are muskrats. Four States overlap the Refuge, each with their own trapping regulations and seasons (Table 5). This is a source of confusion for some trappers, who must be well aware of what State they are in when trapping on the Refuge.

Trappers must have a Trapping Special Use Permit and pay an annual fee of $20 (since 2000) to trap on the Refuge. An average of 348 trappers have obtained permits each year on the Refuge since the 1990-91 season (Table 6). The La Crosse and McGregor Districts generally have the most permitted trappers on the Refuge. La Crosse District is close to a high population center and both Districts have an abundance of wetland habitat.

In addition to the Refuge Trapping Special Use Permit all trappers must have the appropriate State Trapping Licenses and Stamps necessary to trap in their State (Table 7).

Refuge trappers report they use an average of 30 traps per day and trap an average of 21 days per season (Table 8).

Annual Fish and Wildlife Service revenue averaged $5,720 from trapping fees ($20 per trapping Special use permit) over the six-year period 2000-01 to 2005-06.

During the 11-year period of 1995 to 2005, the estimated average annual revenue earned by all active Refuge trappers combined was $151,066 (Table 10) (average number of trappers = 281). Active trappers are defined as those who trap at least one day per season. Average pelt prices are estimated by State agencies. The muskrat harvest usually accounts for 60-80 percent of the annual revenue. Revenues for the 2006-2007 trapping season far exceeded the recent average, when an estimated $783,702.00 was earned by 454 active trappers (Table 9). The muskrat harvest was over 104,000 animals, well above annual harvests since 1990 (Figure 6). A combination of high pelt prices, numbers of trappers, and apparent muskrat populations contributed to the high revenue.

Pelt prices vary considerably between years, for example, muskrat prices were $6.50 per pelt in 1979, $4 in 1987, $1 in 1990, $1.44 in 1998-99, $2-2.50 in

Table 6: Number of Refuge Trapping Permits Issued, by Refuge District, on the Upper Mississippi River National Wildlife and Fish Refuge, 1990-91 to 2006-07

Trapping Season	District				Refuge-wide Total
	Winona	La Crosse	McGregor	Savanna	
06-07	100	171	142	104	517
05-06	60	87	73	50	270
04-05	67	92	77	68	304
03-04	62	95	77	54	288
02-03	60	93	67	48	268
01-02	60	84	79	58	281
00-01	60	89	96	59	304
99-00	59	87	88	55	289
98-99	87	115	100	94	396
97-98	103	148	155	101	507
96-97	94	131	145	96	466
95-96	66	96	97	74	333
94-95	65	103	91	75	334
93-94	70	82	75	67	294
92-93	75	90	100	75	340
91-92	DATA MISSING				
90-91	87	120	125	52	384
16-Year Average (90/91-06/07)	73	105	99	71	348

2004, and over $8 during some of 2007. Beaver sales at the North American Fur Auctions varied between $16 and $21 from 2000 to 2004.

Table 7: Required State Trapping Licenses and Stamps in Four States Bordering the Upper Mississippi River National Wildlife and Fish Refuge, 2006-07.

State	Education Requirement	Small Game License Requirement	Cost of Trapping License	Otter Fee
Minnesota	After March 1, 2007, person born after December 31, 1989, who has not been issued a trapping license is required to have.	Required of Residents age 16 and over. Small Game License for a Resident is $19.	Junior Trapping License (age 13 to 18) is $6. Trapping (age 18 and older) is $20. Non-resident trapping is only allowed if they are a landowner in MN, and only allowed to trap that land.	0
Wisconsin	All first-time trappers must complete the Wisconsin Trapper Education course prior to purchasing a trapping license.	Residents are required to have a Small Game Hunting License that is $18.	No age restrictions apply to trapping. All trappers must obtain a trapping license regardless of age. Resident License is $20. Non-resident License is $150.	$3 application fee
Iowa	None	No, But a Habitat fee is required of both non-residents and residents. The fee is $8.50. Residents under 16 or over 65 are exempt fro the habitat fee.	Resident Furharvester License (under age of 16) is $6. Resident Furharvester License (Age 16 and older) is $21. Non-resident Furharvester License is $200.50.	0
Illinois	Trappers under 18 years of age must show they have successfully completed a Trapper Education Course provided by IL DNR or their resident State or must show a previous year's trapping license.	No, But a State Habitat Stamp is required of both Residents and Non-residents (Age 16 or older) for $5.50.	Resident Trapping License is $10.50. Non-resident Trapping License is $175.50 or $250.50.	N/A

Table 8: Average Number of Traps Used and Days Trapped by Refuge Trappers on the Upper Mississippi River National Wildlife and Fish Refuge, 1992-93 through 2006-07 trapping seasons.

Trapping Season	Average # of Traps Used	Average # of Days Trapped
06-07	35	26
05-06	34	26
04-05	30	21
03-04	31	24
02-03	31	23
01-02	26	21
00-01	28	19
99-00	28	23
98-99	29	18
97-98	N/A prior to 1998	23
96-97	N/A prior to 1998	21
95-96	N/A prior to 1998	23
94-95	N/A prior to 1998	22
93-94	N/A prior to 1998	15
92-93	N/A prior to 1998	14
AVERAGE	30	21

Table 9: Estimated Gross Revenue from Furbearers Harvested by 454 Active Refuge Trappers During the 2006-07 Trapping Season, Upper Mississippi River National Wildlife and Fish Refuge. Source: average fur prices reported by Illinois and Wisconsin Departments of Natural Resources (Iowa and Minnesota data not available at time of writing).

Species	Average Fur Prices reported by 4 States				Average Price	Trapper-Reported Harvest on Refuge	Gross Revenue
	Minnesota	Illinois	Iowa	Wisconsin			
Beaver	N/A	$14.00	N/A	$20.30	$17.15	2,428	$41,640
Mink	N/A	$13.00	N/A	$16.03	$14.52	773	$11,224
Muskrat	N/A	$6.65	N/A	$6.91	$6.78	104,179	$706,334
Otter	N/A	N/A	N/A	$44.28	$44.28	21 for WI/IA	$930
Raccoon	N/A	$8.45	N/A	$12.56	$10.51	2,243	$23,574
Total							$783,702

Table 10: Estimated gross revenue by active trappers from the harvest of four furbearer species, 1995-96 to 2006-07 seasons, Upper Mississippi River National Wildlife and Fish Refuge

Trapping Season	Number of Active Trappers	Estimated Revenue by Species				Total Estimated Revenue of Four Species
		Muskrats	Raccoon	Beaver	Mink	
06-07	454	$706,334	$23,574	$41,640	$11,224	$782,772
05-06	233	$208,699	$11,699	$34,983	$4,870	$260,251
04-05	264	$90,841	$16,151	$27,081	$4,513	$138,586
03-04	245	$84,493	$18,498	$19,208	$4,514	$126,713
02-03	225	$76,525	$12,578	$15,075	$2,803	$106,981
01-02	226	$54,583	$20,785	$19,831	$2,279	$97,478
00-01	252	$66,416	$13,385	$10,504	$3,443	$93,748
99-00	249	$82,960	$10,179	$13,172	$3,485	$109,796
98-99	319	$59,208	$11,402	$15,712	$2,767	$89,089
97-98	443	$202,605	$41,887	$34,745	$5,590	$284,827
96-97	368	$161,185	$37,550	$38,949	$7,898	$245,582
95-96	271	$66,303	$15,270	$24,435	$2,668	$108,676

Chapter 4: Environmental Consequences

This chapter evaluates three alternatives to furbearer management on the basis of consequences to physical, biological, and socio-economic aspects of the environment described in Chapter 3.

4.1 Environmental Justice

All the alternatives will have negligible impacts on human health conditions for minority and low-income populations adjacent to the Refuge. Proposed increases in fees for trapping special use permits in Alternatives B and C could exclude some low-income trappers, although the fee is a small portion of trapping costs and is offest by the potential economic gain through commercial trapping. In the case of otter, trapping opportunities and associated commercial gain will vary slightly by limiting the take to one or two otter in Alternative A and a limit of one in Alternative C. Under Alternative B, no otter season would be in effect.

4.2 Cultural and Historic Preservation

No historic properties will be impacted by existing or proposed furbearer management activities.

4.3 Threatened and Endangered Species

Trapping activities proposed in all alternatives will have negligible impacts on federally listed and candidate species that occur on the Refuge. Species include the Higgins eye pearlymussel (E) and three candidate species: massasauga rattlesnake, spectaclecase mussel and sheepnose mussel. The Bald eagle was delisted August 9, 2007. Trapping regulations prohibit the use of exposed baits that could attract bald eagles and result in unintended trapping. Bald eagles initiate nesting activates on the Refuge in February, but there is no evidence that trapping has impacted bald eagle nest success. Between 1986 and 2006, the number of active bald eagle nests jumped from 9 to 165 active nests on the Refuge, a 18-fold increase. The threatened and endangered species are not impacted by trapping activities.

4.4 Migratory Birds

Direct impacts of furbearer trapping may include displacing migratory birds during the pair bonding and pre-nesting season. Indirect impacts may include catch of target and non-target species that are predators on migratory birds and/or nests, or removal of species that induce habitat change (i.e. beaver).

Because of the temporal separation of trapping activities and breeding wildlife using the Refuge, direct impacts to these resources by trappers is negligible. Trappers using the Refuge in early March, may disturb individual early nesting waterfowl on occasion, and cause temporary displacement from specific and limited areas. However, these impacts are occasional, temporary, and isolated to small geographic areas.

Research demonstrates that effective predator removal to enhance waterfowl production must coincide with nesting in spring and summer. To the contrary, Refuge trapping seasons are in fall and winter, thereby less effective in promoting nest success of birds.

4.5 Habitat Conditions

There are potential impacts on habitat by trappers using Go-devil ™ and similar shallow water propulsion since props can tear up rooted plants as boats make their way through aquatic vegetation beds. The significance of these cuttings has not been determined. Where aquatic vegetation cover has decreased in the Refuge due to sedimentation, wind and wave action, herbivores (fish and mammals), and continual inundation, additional vegetative losses due to trapping activities would have a negative impact on Refuge habitat. Any habitat change as a result of trappers walking through vegetation or using willow cuttings to mark their traps is undetectable and insignificant.

The removal of plant-eating species (herbivores) such as beaver and muskrat can have both positive and negative impacts on Refuge resources. Muskrats will dig bank dens into dikes of water management facilities and other infrastructure causing considerable damage and add costs to operations of the Refuge. Beaver will sometimes plug water control structures causing damage, limiting access and compromising Refuge habitat management capabilities. The reduction of beaver and muskrat populations can be achieved at local levels within Special Furbearer Management Areas proposed in Alternatives B and C. This should reduce Refuge costs in wildlife management activities and maintaining Refuge infrastructure.

Habitat management can be enhanced, however, by these same animals. Muskrats use aquatic vegetation to build houses, creating openings available for fish, waterfowl, and other migratory birds. The houses provide loafing and nesting sites for wildlife. Beaver dams create ponded habitat, and their lodges are also associated with openings in aquatic vegetation beds. Reduced beaver harvest in Special Furbearer Management Areas, as proposed in Alternatives B and C could minimize the need to commit Refuge resources to achieve these same habitat conditions.

4.6 Furbearer Populations

When considering impacts to Refuge purposes, impacts of the trapping program obviously include those to the furbearer populations themselves. Individual animals are harvested and removed, yet State Departments of Natural Resources indicate furbearer populations, with exceptions, are stable to increasing (see Chapter 2). Also, Refuge harvest data derived from mandatory trapper Fur Catch Reports indicate that trapper efficiency in muskrat trapping has remained fairly constant despite fewer total animals trapped in certain years. Total harvest numbers best reflect the number of trappers, trapping conditions, and fur prices, with additional influence from habitat conditions and furbearer populations.

The States manage furbearer populations at sustainable levels that allow a harvest. This is achieved through a science-based process of analysis that includes survey counts, harvest data, and reproductive and biological condition data obtained from animal carcass collections. All Alternatives will establish a trapping program that achieves sustainable furbearer populations within the Refuge. This program relies on State regulations and management practices to provide the framework for Refuge furbearer management.

4.7 Socioeconomic Impacts

The Refuge trapping program, as described in all three alternatives, receives citizen support because it provides abundant recreational opportunities and maintains a long-standing tradition for many people using the Refuge. On the other hand, people who are opposed to trapping may not be satisfied with any of the alternatives.

The economic impact of the three alternatives is quite similar, driven mostly by muskrat and beaver pelt prices. Differences come in the form of how the program is administered and differences in trapping seasons and bag limits, all implemented within frameworks and regulations established by the States. Season limits and the use of Special Furbearer Management Areas for muskrats and beaver would have minor impacts on the Refuge-wide harvest, but may influence local revenues.

Gross revenues of Refuge trappers can exceed $200,000 on muskrats alone in years with high pelt prices and abundant muskrat populations. Muskrat revenues would not vary appreciably between the three alternatives.

Otter harvest revenues will be similar in Alternatives A and C, but would be lower in Alternative B because of there would be no season on otter. In addition, revenues would be lower under Alternative B because a limit of 400 Trapping Special Use Permits would be issued on a Refuge-wide basis. However, limits on permit numbers would reduce

trapper conflicts and Refuge administrative staff time. If special Furbearer Management Areas are temporarily established to maximize muskrat harvest and thereby reduce damage to infrastructure, revenues would increase for some trappers.

Advantage will be provided to "Youth Trappers" (licensed trappers under age 18), under Alternatives B and C, because they will not be subject to proposed increases in fees and will have enhanced learning opportunities through the potential establishment of Youth Trapping Areas.

4.8 Cumulative Impacts

Alternatives B and C will provide better opportunities than Alternative A to enhance habitat for furbearers and other wildlife, and to protect Refuge infrastructure. The primary route for these actions will be through the establishment of Special Furbearer Management Areas where local furbearer populations would be enhanced or removed, depending on management objectives.

Socioeconomic conditions for trappers and local economies under all alternatives will continue to reflect furbearer harvests which are influenced by fur prices, animal populations, habitat conditions, and trapper numbers. The alternatives will have a limited impact on the nationwide, long term decline in the number of trappers and recruitment of younger-aged trappers. The potential establishment of Youth Trapping Areas under Alternatives B and C is intended to promote recruitment. The Refuge will increase yearly efforts in furbearer management, monitoring, and research with additional funding obtained from increases in fees for Trapping Special Use Permits proposed in Alternatives B and C.

Alternatives B and C will result increased cooperation between the Refuge and partner State agencies by placing more emphasis on cooperatively monitoring furbearer populations, harvest levels, and furbearer habitat.. The interested public will also be more engaged in furbearer management issues on the Refuge as described in Alternative B and C.

Chapter 5: Document Preparers

This Draft Environmental Assessment was prepared by:

Refuge Biologist Eric Nelson wrote and edited the document. Nelson has M.S. and B.S. degrees from the University of Wisconsin, Stevens Point, in Natural Resources and Wildlife Management. He has 28 years of service with the U.S. Fish and Wildlife Service and two years with Bureau of Land Management.

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Don Hultman, Refuge Manager for the Upper Mississippi River NW&FR, wrote portions of the document and edited the Draft Furbearer Management Plan and Draft EA. He has an M.A. from the Univ. of Minnesota, Mpls./ St. Paul, in Environmental Education and a B.S., Univ. of Minnesota, Communications/Wildlife. He has 27 years of experience with the U.S. Fish & Wildlife Service and 1 year of experience with the Wyoming Game and Fish Dept.

This document was formatted and edited by Jane Hodgins, Technical Writer/Editor with the U.S. Fish & Wildlife Service, Division of Conservation Planning, Ft. Snelling, Minnesota. She holds a B.A. from the College of St. Thomas in St. Paul, Minnesota. She has worked with the Service for 8 years, and has 14 years previous experience as a senior editor, editor and reporter.

Chapter 6: Scoping and Public Involvement

Issues and objectives addressed in this EA were derived from scoping meetings with the public and Refuge staff and interagency coordination meetings held in conjunction with the development of the EIS/CCP. During that process, a total of 46 public meetings, attended by 4,500 citizens were held between 2002 and 2006. Furbearer management issues, trapping in particular, were often discussed.

Written comments (21) on the Draft and Supplemental EIS/CCP were also received. Concerns were raised that beaver and muskrat seasons were too long; some wanted an otter season in Minnesota; some wanted more trap tags and extra tags to trap predators; some wanted to ban hunting and trapping on the Refuge, while others were concerned about non-target wildlife being caught in conibear traps; comments suggested that anyone who makes a profit on the Refuge should be required to have a Special Use Permit and be charged accordingly; finally, a comment relayed concerns that the Service was using State data not independently confirmed by the Service and also believed that beaver and red fox populations are declining but trapping limits are unchanged.

One of the EIS/CCP strategies for revising the current Furbearer Management Plan is "to seek input from State furbearer biologists, current Refuge furbearer trappers, and trapping organizations to assess effectiveness and/or needed changes in [the] trapping program administration and management." Conference calls were held with these representatives in July and August of 2006. In addition, a questionnaire was mailed to these participants and all Refuge-permitted trappers in January 2006. The questionnaire and summary of the responses is in Appendix B and C.

Chapter 7: Comments on the Draft Plan and Environmental Assessment and Response

The Draft Furbearer Management Plan and Environmental Assessment for the Upper Mississippi River National Wildlife and Fish Refuge (Refuge) generated 15 comments during a formal comment period between June 1, 2007 and July 2, 2007. Comments were received via telephone calls, emails, faxes and regular mail from various sources, as follows:

- Departments of natural resources of four States: Illinois, Iowa, Minnesota, and Wisconsin.
- Clubs and Organizations (3 comments)
- Citizens (8 comments)

Each comment received was assigned a log number, summarized and recorded on a master electronic file, and then placed in a three-ring binder. A standard acknowledgement letter or e-mail was sent to each person or group who submitted a comment. All written comments are available for public review at the Refuge headquarters in Winona, Minnesota. Arrangements for viewing can be made by calling the Refuge at (507) 452-4232.

Given the Refuge's close working relationship and shared responsibility for natural resource management, summaries of State comments and our responses are presented in the first part of this chapter. The reader will find copies of all State comments and our written responses (in their entirety) at the end of this chapter.

Comments from individuals and organizations are combined under the 11 issues/objectives addressed in each alternative in Chapter 2. The number in parenthesis ( ) following each comment represents the number of people and/or organizations who provided a similar comment. Finally, comments, which are general in nature and do not match a particular objective are summarized followed by a response, as appropriate.

7.1 State Comments

Illinois Department of Natural Resources; letter dated June 6, 2007:

Comment: Supports objectives, actions, and rationale of the Draft Plan and Environmental Assessment.

Response: The Refuge greatly appreciates the support from Illinois Department of Natural Resources.

Iowa Department of Natural Resources; letter dated July 2, 2007:

Comment: Iowa provided comments on one item, the otter bag limit, as follows:

Under objective 2.3.1 [otter trapping], the State believes that Alternative A should be the preferred alternative [this would allow otter trapping in accordance to State regulations; Iowa allows two in possession while the refuge would allow one]. The State believes that changing limits on the refuge would be "confusing to constituent groups and a blow against scientific wildlife management."

Response: Refer to page 67 for the Refuge's entire response

Minnesota Department of Natural Resources; letter dated June 29, 2007

Comment: Minnesota provided comment on one item, the otter bag limit, as follows:

Minnesota is proceeding with a fall season for otter in southeastern Minnesota, including the refuge, with a limit of two otter per trapper. This is based on sound survey data and population modeling, and the fact that science-based, managed trapping of river otters in Minnesota is sustainable. "Our understanding is that refuge specific regulations may be done only to conserve the resources, assist in managing the resource, or for safety reasons." The State continues, "The draft plan does not indicate how any of those criteria apply to warrant a proposed otter limit that is more restrictive than State regulations." Minnesota recommends that we continue a policy of managing resident wildlife consistent with State regulations and "allow for a harvest limit of two otters on the refuge, which is consistent with both Minnesota's and Iowa's regulations."

Response: Refer to page 70 for the Refuge's entire response

Wisconsin Department of Natural Resources, email from Mark Andersen, dated June 22, 2007

Comments: The State appreciates that we incorporated previous recommendations from the State agencies. The WDNR "would like to be certain that otter trapping regulations on the Refuge would not be more liberal than regulations in Wisconsin." The State manages the otter population based on their population model and does not believe that limiting the otter season further than at present will noticeably improve otter viewing. The State believes that otter populations benefit from trapping since a season creates awareness and concern in trappers and a desire to perpetuate the population, and trapping provides agencies with the data necessary to construct valid population models. The State also recommends that required trap check intervals remain as they presently are, once per calendar day for all species and once every two calendar days for beaver, rather than a fixed number of hours proposed in the draft. The State supports youth trapping on the refuge and suggests that a mentor be allowed to assist the youth trapper.

Response: Appreciation noted. Regarding season limits on otter, the refuge will not propose a more liberal limit than Wisconsin or any other State. We propose a more restrictive season than other States propose for reasons given above.

We concur that trap check intervals should remain as currently required, once every calendar day for all trap sets, except once every two calendar days for beaver sets. We have changed the plan text to reflect this.

We concur that a mentor could be allowed to assist a youth trapper. We will consult with the States prior to finalizing details about mentor participation.

7.2 Otter Trapping

Comment: Against otter trapping, there is not enough otter population data on the river (1).

Response: Regulations governing the National Wildlife Refuge System require that the economic use of natural resources, including trapping, on refuges must contribute to the achievement of the refuge's purpose or the mission of the system. In this case, otter trapping helps achieve the mission of the system because part of the mission of the system is to contribute to the conservation and management of fish and wildlife resources. This is achieved because, 1) the harvest of furbearers is a modern scientific program, 2) the harvest of furbearers helps sustain healthy populations, and 3) the harvest of furbearers is highly regulated or managed. For a more in depth discussion of this topic, please refer to the Compatibility Determination (page 93).

We concur that there is a lack of specific otter population data for the Refuge and therefore, we are not certain of the refuge's carrying capacity for otter, nor do we know if a harvest limit of two otter would ensure sustaining healthy and viable populations on the refuge. A conservative approach that establishes a limit of one otter per trapper, in accordance with State regulations, allows us to make a positive determination of compatibility and to meet the threshold established for economic uses on national wildlife refuges. The one otter limit also takes into account the occurrence of incidental otter catches, something that will occur with or without a season on otter. Incidental take of otter has increased on the Refuge in recent years.

Comment: Wants an otter season, limit of one (1) or two (1) per trapper per season.

Response: We concur that there should be an otter season on the Refuge.

We have chosen a conservative limit of one otter per trapper per season. This limit is established because: 1) there is no pressing biological or management need for a harvest larger than one on the Refuge, 2) there is a lack of refuge-specific population data for otter, thus, we are not certain of the refuge carrying capacity for otter nor do we know if a harvest limit of two otter would ensure sustaining healthy and viable populations on the refuge, and 3) we have established the limit refuge-wide in order to have consistent harvest levels between adjacent States for a species of high commercial and intrinsic value.

Comment: Wants to ensure otter trapping decisions follow the science-based program managed by the State and that Wisconsin trappers having the appropriate license and tags should be able to harvest [on the Refuge] whatever quantity of otter the State allows. There is confusion whether all Refuge-permitted trappers in Wisconsin are allowed to take one otter per year (2).

Response: We believe that States have established otter seasons based on sound science. The Refuge has chosen to set a conservative limit of one otter per season per trapper (in accordance to State regulations) for reasons provided in responses to the two comments listed above. Regarding the confusion, only Wisconsin trappers with a Refuge permit who possess a State-issued tag for the southern otter trapping zone may take an otter on the Refuge. We will do a formal review of the plan in five years, and at that time, make adjustments and revisions as needed based on population and harvest data from both the States and Refuge.

7.3 Permit Fee

Comment: Establish the new trapping special use permit fee at $25.00 instead of $30.00 as proposed (1).

Response: We believe the increase to $30.00, as proposed, is a reasonable increase to help cover administrative costs. Portions of the fee may also be used for studying furbearer populations and habitat needs if the fees are returned to the Refuge, as proposed, instead of being deposited in the Fish and Wildlife Service's general fund.

Comment: understands need to increase fee; wants 5-yr review; supports $20.00 youth fee (1).

Response: There will be a five-year review of the refuge trapping program. Concurrence noted.

7.4 Number of Permits Issued

No comments

7.5 Number of Trap Tags per Permit

Comment: Increase the number of trap tags to 50 because "you are raising the price of permit" (1).

Response: Refuge trappers report that they use an average of 30 traps per day during the season. The Refuge established the 40-trap per day regulation in the 1979-80 season to reduce conflicts between trappers. There is a continued need to address potential trapper conflicts, particularly in years of high fur prices and associated trapping activity. Thus, we will continue to issue 40 trap tags per permit. The purpose of the fee is to cover increasing administrative costs and potentially conduct furbearer studies on the Refuge; the fee is not used to limit trapping efforts.

Comment: Increase to 50 tags with possible use of species specific tags or extra tags as an incentive to remove predators "that are having an impact on nesting birds and waterfowl" (2).

Response: Additional trap tags would not benefit furbearer management on the Refuge because, 1) State DNRs do not have Refuge specific population data on the abundance of raccoon and other predators, 2) intensified production of ground-nesting birds (waterfowl) through added predator removal is not effective on a primarily migration refuge, 3) research has shown that fall trapping, as opposed to special spring season trapping programs, is ineffective in benefiting ground nesting birds, 4) species-specific tags would present added law enforcement and administrative workloads, 5) trappers may choose to not use the extra tags to target predators when muskrat fur prices are high, and 6) possible conflicts between waterfowl hunters (dog safety) and trappers (use of 220 conibear traps) could occur during the fall if more tags were issued specifi-

cally for raccoon and other predators. Special Furbearer Management Areas (see below) could be approved by the Refuge Manager, where justified, to control local predator populations.

7.6 Special Furbearer Management Areas

Comment: Concerned that special furbearer management areas could be established in waterfowl hunting closed areas to promote wildlife observation and prohibit trapping after the duck hunting season. Existing trapping regulations allow trapping to occur in closed areas after the duck hunting season. These commentators realize the Refuge would not establish these areas without careful consideration and communication with partners (2).

Response: Special Furbearer Management Areas will be developed and proposed by District Managers and approved or disapproved by the Refuge Manager. Refuge partners will be consulted throughout the process. Concerns about trapping near wildlife viewing areas, within closed areas, and after duck hunting season will be addressed on a case-by-case basis. No trapping zones have been established previously to avoid user conflicts along trails.

Comment: Concerned with statement that a site might be selected if the "Area has public safety issues (proximity to hiking trails, observation areas, boat landings);" wants definition of "proximity." Signs to mark areas would detract from refuge experience. "Youth Special Furbearer Management Areas is a good concept," but should be established in areas that are currently not open to trapping by "non-youth trappers." Needs clarification of opening dates for youth areas; assumes it will be the muskrat/mink opener (1).

Response: Proximity is determined on a case-by-case basis and takes into account vegetation, shape of the land, public use patterns, and extent of facility development. Signs are necessary to keep the public and Refuge personnel informed of the site location. Refuge signs are designed and placed in a sensitive manner. Trapping is currently allowed throughout the Refuge except in areas closed to waterfowl hunting during the regular State duck hunting season, some administrative no hunting areas, and any area that prohibits entry for resource or safety (contaminants) reasons. Youth trappers will be no exception. If they were allowed in those areas, the function of those areas to protect natural resources and/or public safety would be compromised. The opening date for youth areas will be the muskrat opener.

Comment: establish "special management infrastructure for no trapping at all" (1).

Response: The Refuge could possibly establish such areas if justified for specific purposes to enhance habitat, wildlife populations, scientific study, or other purposes of the Refuge, on a case-by-case basis, and with involvement of Refuge partner agencies.

7.7 Beaver Season

Comment: concur with proposed plan to retain State beaver seasons (3).

Response: Concurrence noted.

7.8 Trap Placement Near Beaver Lodges/Dams

Comment: wants clarification on placement rules (4).

Response: The Refuge will maintain the current regulation but we have clarified in the definition in the plan as follows: "the placement of traps is prohibited within six (6) feet of where the lodge or dam meets the water. The 6-foot setback restriction does not apply to bank dens that do not have an associated lodge structure/cache. Also, #110 conibear traps and dog-proof traps are exempt from these regulations."

Comment: Manufacturers are developing #150 and #160 traps that are larger than #110; therefore, should the Refuge put a size limit of a 6-inch jaw to be used only in a submerged set at beaver lodges/dams? (1)

Response: As noted in the previous comment, the Refuge has modified the placement restriction so that "#110 conibear traps and dog-proof traps are exempt from these regulations" [regarding trap placement on beaver lodges]. This exemption allows more flexibility for trappers, but using traps with a larger jaw spread than #110 conibears would increase the probability of incidental take of non-target animals.

7.9 Trap frequency

Comment: prefers calendar day requirements vs. 24 or 48-hour time limit (5).

Response: The Refuge agrees that trap check requirements should be in calendar day increments, rather than 24 or 48-hour increments. It was our intent to retain the calendar day requirement, but it was inadvertently transcribed to an hourly interpretation in the draft. We have changed the plan accordingly.

7.10 Handling incidental take

Comment: concur with objective as written (4).

Response: Concurrence noted.

7.11 Monitoring and Evaluation of Furbearer Populations

Comment: historically the Refuge has been heavily reliant on State information, this should continue (4).

Response: The refuge will continue to rely on State data and we intend to expand data collection about Refuge furbearers and their habitats when funding is available.

Comment: Before making changes in the Refuge trapping program affecting the next ten years, it is suggested that the refuge investigate the sharp decrease in the wild fur industry, both in number of animals trapped and number of trappers. It is nearing time to end all commercial fur trapping to support a dying wild fur market (1).

Response: Furbearer trapping on the Refuge has a long-standing tradition and has been a useful tool in maintaining balance between furbearers and habitat, and safeguarding Refuge infrastructure. The Refuge has regulated trapping within its boundaries since 1929. This plan updates the 1988 Trapping Plan to reflect recent national policy and regulation changes governing compatibility of uses, commercial uses on Refuges, the latest furbearer population and Refuge habitat information, and new management needs.

Furbearer trapping contributes to the conservation and management of fish and wildlife resources on the Refuge and, therefore, helps achieve an important element of the mission of the national wildlife refuge system. This is met because, 1) the harvest of furbearers is a modern scientific program, 2) the harvest of furbearers helps sustain healthy populations, and 3) the harvest of furbearers is highly regulated or managed. For a more in depth discussion of this topic, please refer to the Compatibility Determination (page 93).

7.12 Law Enforcement

Comment: concur with Plan's process for handling violations, terms of revocation, and being consistent Refuge-wide (4).

Response: Concurrence noted.

7.13 Comments not directly applicable to the 11 issues listed above.

Comment: the Refuge had special meetings with State furbearer biologist, trappers, and trapper organizations: do they have vested interests?

Response: It is normal and customary to involve specific groups for planning impacts as called for in the CCP for the Refuge. However, public review and comment was done broadly and final recommendations and decisions were done by the Service.

Comment: What does this mean? "…the annual harvest levels are generally no greater than the loss of individuals due to natural causes and accidents."

*Response: B*iologists who study wildlife population dynamics use this principle. Scientific management establishes harvest goals that do not exceed those levels, as measured by population surveys, population indicator (sign) surveys, harvest data, reproductive data, and habitat analysis.

Comment: What are the actual costs of muskrats digging dens into dikes and beaver plugging water control structures?

Response: The Refuge does not have a total number, but in 2007 alone, the Savanna District of the Refuge is spending $240,000.00 to repair muskrat damage to water control dikes in the Spring Lake area of Pool 13. In addition, Refuge staff must clean out beaver cuttings from a water control

structure every two to three days just to keep the water levels low enough to complete the project. Nationally, refuges have spent millions of dollars over many years in repairing muskrat damage to refuge infrastructure.

15-M

Fields of Opportunities

STATE OF IOWA

CHESTER J. CULVER, GOVERNOR
PATTY JUDGE, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
RICHARD A. LEOPOLD, DIRECTOR

Don Hultman
Refuge Manager
Upper Mississippi River Wildlife and Fish Refuge
51 East Fourth Street
Room 101
Winona, MN 55987

7/02/2007

Mr. Hultman;

These are the field biologist, and Law Enforcement comments on the Draft Furbearer Management Plan, dated June 2007.

Under section 2.3.1, the Iowa DNR believes that alternative A is the preferred alternative. We believe that changing limits on the Refuge would be confusing to the constituent groups and be a blow against scientific wildlife management. The Iowa DNR has extensive data and a system to monitor otter populations and harvest. Based on our data and science based conservation plan, we can see NO reason the Refuge should change the otter possession limit on the Upper Mississippi River Wildlife and Fish Refuge within the state of Iowa.

Thank you for the opportunity to comment on the plan.

Sincerely;

Michael K. Griffin
IA DNR
Mississippi River Wildlife Biologist

WALLACE STATE OFFICE BUILDING / 502 EAST 9th STREET / DES MOINES, IOWA 50319-0034
515-281-5918 TDD 515-242-5967 FAX 515-281-6794 www.iowadnr.gov

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Upper Mississippi River National Wildlife and Fish Refuge
51 E. Fourth Street - Room 101
Winona, Minnesota 55987

IN REPLY REFER TO:

July 27, 2007

Mr. Michael Griffin
Mississippi River Wildlife Biologist
Iowa Department of Natural Resources
206 Rose Street
Bellevue, Iowa 52031

Dear Mike:

Thank you for your comments dated July 2, 2007 on the Draft Furbearer Management Plan for the Upper Mississippi River National Wildlife and Fish Refuge. We appreciate and value the continued partnership for this great resource.

Your comments specifically asked that we reconsider the proposed one-otter refuge limit and adopt the two-otter limit now in effect for Iowa since the 2006-07 season. We have carefully considered your request and discussed it at length with our regional office. We believe a conservative harvest limit of one river otter is warranted in our final plan for several reasons.

First, one of the specific purposes of the Upper Miss Refuge in its establishing legislation is to provide a "refuge and breeding place ... for fur-bearing animals ...." Although we have latitude to harvest these and all species of wildlife through regulations, there has to be a compelling reason to harvest natural resources with economic value beyond the often-applied rationale citing wise use of a sustainable resource. Unlike the harvest of many predatory species linked to the well-being of ground-nesting birds, or the harvest of herbivores like muskrat and beaver to meet habitat objectives and protect infrastructure, there is no pressing biological or management need for a larger harvest of river otter on the refuge.

Second, there is a lack of refuge-specific population data for otter. Without refuge-specific data, which we acknowledge is both difficult and costly to obtain, we cannot be certain of the refuge carrying capacity for otter nor know with a degree of certainty if a harvest limit of two otter would ensure sustaining a healthy and viable otter population on the refuge. We opted for the one-otter limit after a review of population and harvest data from each state, a review of incidental take that occurs on the refuge with or without an otter season, and a desire to address state comments on the preliminary draft plan. A conservative approach also allows us to make a positive determination of compatibility and to meet the threshold established for economic uses on national wildlife refuges. These requirements, stemming from laws and regulations governing national wildlife refuges, are often more stringent than those governing the states.

Third, we believe it important to have consistent harvest levels between adjacent states for a species of high commercial and intrinsic value. As you know, Wisconsin has had an otter season for many years with a limit of one otter for those trappers selected by drawing. In reviewing Wisconsin's long-term data, the quantity and quality of refuge habitat within Wisconsin, and our own harvest reports, we see no compelling biological reason to provide a higher otter harvest on the refuge in adjacent states. This consistency is also practical since trappers on the refuge would have one otter limit to follow versus state-by-state limits, and because state boundaries are often ill-defined on the refuge.

We are proceeding with preparation of the final Furbearer Management Plan and expect to send it to our regional office for review and approval in August. We will do a formal review of the plan in five years, and at that time make adjustments and revisions as needed based on population and harvest data from both the states and refuge.

Again, thank you for your input and concerns and we look forward to working with your staff as we move forward with implementing the plan. In the meantime, if you have any questions or further comments, please do not hesitate to contact me at (507) 494-6218 or via e-mail at don_hultman@fws.gov.

Sincerely,

Don Hultman
Refuge Manager

cc: Nita Fuller, Regional Refuge Chief

14-M

Minnesota Department of Natural Resources

500 Lafayette Road
St. Paul, Minnesota 55155-40

June 29, 2007

Mr. Don Hultman, Refuge Manager
Upper Mississippi River Wildlife and Fish Refuge
51 East Fourth Street – Room 101
Winona, Minnesota 55987

Dear ~~Mr. Hultman~~: Don

We appreciate the opportunity to comment further on the refuge's Draft Furbearer Management Plan, and the fact that you reconsidered your previous position of eliminating otter trapping entirely on the refuge. As you know from our previous comment letter, the Minnesota Department of Natural Resources is proceeding with an expansion of our otter zone to include southeastern Minnesota. This is based on sound survey data and population modeling, and the fact that science-based, managed trapping of river otters in Minnesota is sustainable. It is the State's assessment that this population can thrive and expand with regulated harvest and that state fish and wildlife agencies are in the best position to set seasons and bag limits. We understand that the Service can determine compatibility of otter trapping, but question the appropriateness of the Service setting refuge specific bag limits.

The Draft Upper Mississippi River Refuge Furbearer Management Plan proposes to allow otter trapping, but with a refuge-specific harvest limit of one. Our understanding is that refuge specific regulations may be done only to conserve the resource, assist in managing the resource, or for safety reasons. The draft plan does not indicate how any of those criteria apply to warrant a proposed otter limit that is more restrictive than state regulations.

Minnesota's limit for this fall in southeastern Minnesota is two otters, as is also the case in Iowa. Historically the Service has deferred to state regulations for the management of furbearers under the authority of the state. We recommend that you continue with the policy of managing resident wildlife consistent with state regulations. This would allow for a harvest limit of two otters on the refuge, which is consistent with both Minnesota's and Iowa's regulations.

Sincerely

DRS

David R. Schad, Director
Division of Fish and Wildlife
DNR Building – 500 Lafayette Road
Saint Paul, Minnesota 55155-4020

DRS/SSM/jls

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Upper Mississippi River National Wildlife and Fish Refuge
51 E. Fourth Street - Room 101
Winona, Minnesota 55987

IN REPLY REFER TO:

July 27, 2007

Mr. David R. Schad, Director
Division of Fish and Wildlife
Minnesota Department of Natural Resources
DNR Building – 500 Lafayette Road
St. Paul, Minnesota 55155-4020

Dear Dave:

Thank you for your comments dated June 29, 2007 on the Draft Furbearer Management Plan for the Upper Mississippi River National Wildlife and Fish Refuge. We appreciate and value the continued partnership for this great resource.

Your comments specifically asked that we reconsider the proposed one-otter refuge limit and adopt the two-otter limit being considered for the new Minnesota southern zone season starting this fall. We have carefully considered your request and discussed it at length with our regional office. We believe a conservative harvest limit of one river otter is warranted in our final plan for several reasons.

First, one of the specific purposes of the Upper Miss Refuge in its establishing legislation is to provide a "refuge and breeding place … for fur-bearing animals …." Although we have latitude to harvest these and all species of wildlife through regulations, there has to be a compelling reason to harvest natural resources with economic value beyond the often-applied rationale citing wise use of a sustainable resource. Unlike the harvest of many predatory species linked to the well-being of ground-nesting birds, or the harvest of herbivores like muskrat and beaver to meet habitat objectives and protect infrastructure, there is no pressing biological or management need for a larger harvest of river otter on the refuge.

Second, there is a lack of refuge-specific population data for otter. Without refuge-specific data, which we acknowledge is both difficult and costly to obtain, we cannot be certain of the refuge carrying capacity for otter nor know with a degree of certainty if a harvest limit of two otter would ensure sustaining a healthy and viable otter population on the refuge. We opted for the one-otter limit after a review of population and harvest data from each state, a review of incidental take that occurs on the refuge with or without an otter season, and a desire to address state comments on the preliminary draft plan. A conservative approach also allows us to make a positive determination of compatibility and to meet the threshold established for economic uses on national wildlife refuges. These requirements, stemming from laws and regulations governing national wildlife refuges, are often more stringent than those governing the states.

Third, we believe it important to have consistent harvest levels between adjacent states for a species of high commercial and intrinsic value. As you know, Wisconsin has had an otter season for many years with a limit of one otter for those trappers selected by drawing. In reviewing Wisconsin's long-term data, the quantity and quality of refuge habitat within Wisconsin, and our own harvest reports, we see no compelling biological reason to provide a higher otter harvest on the refuge in adjacent states. This consistency is also practical since trappers on the refuge would have one otter limit to follow versus state-by-state limits, and because state boundaries are often ill-defined on the refuge.

You are correct in stating that our hunting policy encourages refuges to adopt state harvest limits rather than formulate refuge-specific limits. However, trapping has not been considered hunting by the Fish and Wildlife Service and has always been treated as a unique consumptive use. Never the less, we generally try to abide by state harvest limits for trapping since we agree that deviations can lead to confusion and layering of regulations.

The Refuge Manual provides policy guidance to managers for trapping programs and states that "refuge trapping requirements may be more restrictive than State requirements for biological or management reasons or for humane or safety considerations" (Refuge Manual, Part 7, Chapter 15). For example, Agassiz National Wildlife Refuge has had a limit of two otter per trapper since 1994 compared to Minnesota's northern zone limit of four otter, while other refuges in Minnesota may allow no take of otter.

At Upper Miss Refuge, we believe we have biological and management reasons for a more restrictive otter harvest as noted earlier. We have enclosed more detailed information and references related to the points above.

We are proceeding with preparation of the final Furbearer Management Plan and expect to send it to our regional office for review and approval in August. We will do a formal review of the plan in five years, and at that time make adjustments and revisions as needed based on population and harvest data from both the states and refuge.

Again, thank you for your input and concerns. We look forward to working with your staff as we move forward with implementing the plan. In the meantime, if you have any questions or further comments, please do not hesitate to contact me at (507) 494-6218 or via e-mail at don_hultman@fws.gov.

Sincerely,

Don Hultman
Refuge Manager

Enclosures
cc: Nita Fuller, Regional Refuge Chief

4

Illinois Department of
Natural Resources
One Natural Resources Way • Springfield, Illinois 62702-1271
http://dnr.state.il.us

Rod R. Blagojevich, Governor
Sam Flood, Acting Director

June 6, 2007

Upper Miss Refuge
US Fish and Wildlife Service
51 East 4th Street, Room 101
Winona, MN 55987

RE: Furbearer Plan

Dear Sir or Madam:

Our agency supports objectives, actions, and supporting rationale of the June, 2007 "Draft Furbearer Management Plan and Draft Environmental Assessment" for the Upper Mississippi River National Fish and Wildlife Refuge. We commend USFWS for supporting regulated trapping as a tool for maintaining healthy furbearer populations and alleviating damage while providing reasonable recreational and economic opportunities.

Sincerely,

John Buhnerkempe, Chief
Division of Wildlife Resources

JB:BB:bb

8

Don Hultman/R3/FWS/DOI
06/22/2007 01:13 PM

To Brian Stemper/R3/FWS/DOI@FWS
cc Lee Donahue/R3/FWS/DOI@FWS
bcc
Subject Fw: Furbearer Management Plan for Upper Miss. NWR

----- Forwarded by Don Hultman/R3/FWS/DOI on 06/22/2007 02:13 PM -----

"Andersen, Mark L - DNR" <Mark.Andersen@Wisconsin.gov>
06/22/2007 12:32 PM

To <Don_Hultman@fws.gov>, <Eric_Nelson@fws.gov>
cc "Hauge, Tom M - DNR" <Tom.Hauge@wisconsin.gov>, "Andryk, Tim A - DNR" <Tim.Andryk@wisconsin.gov>, "Benjamin, Gretchen L - DNR" <Gretchen.Benjamin@wisconsin.gov>, "Olson, John F - DNR" <JohnF.Olson@wisconsin.gov>, "Belling, Kristin M - DNR" <Kristin.Belling@wisconsin.gov>, "Dewald, Steven M - DNR" <Steven.Dewald@wisconsin.gov>, "Andersen, Mark L - DNR" <Mark.Andersen@wisconsin.gov>, "Vander Zouwen, Jr, William - DNR" <William.VanderZouwenJr@wisconsin.gov>
Subject FW: Furbearer Management Plan for Upper Miss. NWR

Thank you for the opportunity to review drafts of the furbearer management plan for the Upper Mississippi National Wildlife and Fish Refuge. In reading the present draft of this plan it is apparent the Fish and Wildlife Service seriously considered all the recommendations from the state agencies and state trapper associations. We appreciate that consideration, since melding input from many sources is not easy. We still have a few points we would like to clarify.

Although it does not seem likely that FWS will move in that direction, we would like to be certain that otter trapping regulations on the Refuge will not be more liberal than regulations in Wisconsin. We manage statewide otter harvest via a zoned permit system based on our population model. Conversely, we do not believe that limiting the otter season further than at present will noticeably improve otter viewing opportunities due to their normal activity patterns and fairly secretive nature. We also believe that otter populations actually do benefit from regulated harvest, since a season creates awareness and concern in trappers and a desire to perpetuate the population. It also provides management agencies with the data necessary to construct valid population models.

We also recommend that required trap checking intervals remain as they presently are: once per day for most species and once every 2 days for beaver, rather than a fixed number of hours as proposed in this draft.

We support your proposal to create youth trapping areas on the Upper Miss. Refuge and suggest that a mentor be allowed to assist the youth trapper.

Chapter 8: Literature Cited

Note: citations marked with * are from the Furbearer Trapping Compatibility Determination, (page 93) and also available on the Refuge's web page at:

http://www.fws.gov/midwest/UpperMississippiRiver/

*Bluett, R. D., C. K. Nielsen, R. W. Gottfried, C. A. Miller, and A. Woolf. 2004. Status of the river otter (*Lontra canadensis*) in Illinois, 1998-2004. Transactions of the Illinois State Academy of Science 97:209-217.

*Bluett, R. D., A. C. Hulin, P. D. Hubert, and W. L. Anderson. 2006. Monitoring the status of mink (*Mustela vison*) in Illinois. Transactions of the Illinois State Academy of Science 99:51-61.

Clay, R. and W. Clark. 1985. Demography of muskrats on the Upper Mississippi River. J. Wildlife Manage. 49(4): 883-890.

*Gehrt, S. D., G. F. Hubert, Jr., and J. A. Ellis. 2002. Long-term population trends of raccoons in Illinois. Wildlife Society Bulletin 30:457-463.

*Gehrt, S. D., G. F. Hubert, Jr., and J. A. Ellis. 2006. Extrinsic effects on long-term population trends of Virginia opossums and striped skunks at a large spatial scale. American Midland Naturalist 155:169-180.

*Hoffmeister, D. F. 1989. Mammals of Illinois. University of Illinois Press, Urbana, Illinois, USA.

Lariviere, S. and L. Walton, 1998. Lontra canadensis. Mammalian Species Account Number 587. American Society of Mammalogists, 8 pp. Note: These authors recognize that the genus name *Lontra* is now used to distinguish the North and South American genus from its European counterparts *Lutra*, although *Lutra* continues to be the most common usage in North America.

*Thommes, J. R. 1994. Population characteristics of muskrats in drainage ditches in northwestern Illinois. Thesis, Southern Illinois University at Carbondale, Carbondale, Illinois, USA.

U.S. Fish and Wildlife Service. 1976. Special recommendations for trapping program. Refuge Memo: La Crosse District Manager to Refuge Manager. 6 pp.

U.S. Fish and Wildlife Service. 1988. Upper Mississippi River National Wildlife and Fish Refuge, Fur Management Plan. Winona MN. 11 pages, plus exhibits and maps.

U.S. Fish and Wildlife Service. 2006. Final Environmental Impact Statement and Comprehensive Conservation Plan. Upper Mississippi River National Wildlife and Fish Refuge, Winona MN. 791 pp.

*Van Deelen, T. R., and T. E. Gosselink. 2006. Coyote survival in a row-crop agricultural landscape. Canadian Journal of Zoology 84:1630-1636.

Wlosinski, J. and L. Wlosinski. 1998. Muskrat harvests, water levels, and aquatic vegetation on the Upper Mississippi River National Wildlife and Fish Refuge. Project status report, PSR 98-06, Upper Mississippi River Long Term Resource Monitoring Program, US Geological Survey, Onalaska WI. 2 pp.

*Woolf, A., and G. F. Hubert, Jr. 1998. Status and management of bobcats in the United States over three decades: 1970s-1990s. Wildlife Society Bulletin 36:287-293.

*Woolf, A., C. K. Nielsen, and T. Gibbs Kieninger. 2000. Status and distribution of the bobcat (Lynx rufus) in Illinois. Transactions of the Illinois State Academy of Science 93:165-173.

Appendix B: Trapping Questionnaire

January 27, 2006

The Upper Mississippi River National Wildlife and Fish Refuge is interested in your opinions about our trapping program. We value your ideas and want to include them in our evaluation of the trapping program. Please be aware that there may be many factors that dictate our regulations, and in some cases, we may not be able to make the changes that you as an individual request.

Please take a few minutes to read this questionnaire and fill in the answers that most closely represent your view. Please return by March 1st to: Upper Mississippi River National Wildlife and Fish Refuge, ATTN: Biologist, 51 East 4th Street, Room 101, Winona, Minnesota 55987. Enclosed is an envelope for your convenience.

General Background

- What species do you actively trap: Muskrat_____ Beaver_____ Raccoon_____ Mink_____ Fox_____ Coyote_____ Other_____

- How many years have you been trapping? Less than 5 years_____ 5 to 10 years_____ More than 10 years_____

- Your age is: Under 20_____ 20 to 30_____ 30 to 40_____ 40 to 50_____ Over 50_____

- How many days a year do you usually trap on: Privately owned land_____ State owned land_____ Upper Mississippi River NW&FR_____

- If you use a boat to trap, what type do you use most often: Row boat or canoe_____ Motor boat with 20hp. or less_____ Motor boat with over 20 hp._____ Hover craft_____ Airboat with less than 60 hp._____ Airboat with over 60 hp._____

- Do you trap for muskrats on the river after ice up? Yes_____ No_____

Trapping Method

Some refuge regulations are more restrictive than state regulations. The four states (MN, WI, IA, IL) within the refuge have regulations that are often different from one another. When possible, the refuge has attempted to be consistent with state regulations.

- Trapping is prohibited within three feet of a muskrat house on the refuge. Should this restriction be changed? Yes_____ No_____ If yes, what distance, if any, would you like to see enforced?_____

- Trapping is prohibited within six feet of a beaver house or dam. Should this restriction be changed? Yes_____ No_____ If yes, what distance would, if any, would you like to see enforced?_____

- Should beaver trappers be required to check their traps at least once every 24 hours? Yes_____ No_____

- Currently snaring is not permitted on the refuge. Should snaring be allowed? Yes_____ No_____ If so during what part of the season should it begin_____ and end_____. What other restrictions should be included if snaring were to be allowed (deer locks, water sets only, etc…)?_____

- Multiple-Catch (Colony type) traps are not permitted on the refuge. Should they be allowed? Yes_____ No_____

Trapping Hours

Refuge trapping begins at 9:00 a.m. on the first day of the season. Trapping hours for all other times are one-half hour before sunrise to one-half hour after sunset. These hours are established refuge-wide and may or may not be later that the hours that your state allows.

- Should the starting time on opening day be kept at 9:00 a.m.? Yes_____ No_____ If no, what time would you like to see trapping begin?_____

- Should the trapping hours remain at one-half hour before sunrise to one-half hour after sunset? Yes_____ No_____ If no, what times would you like to see trapping begin_____ and end_____ each day?

Seasons/Limits

The refuge trapping season dates are generally consistent with the appropriate states. Trapping is not allowed in the waterfowl "closed areas" until the day after the state duck hunting season. Refuge trapping also ends on March 15.

- Should the refuge continue to follow the state season dates? Yes_____ No_____

- Is the refuge trapping season: Too long_____ Too short_____ Just right_____

- If so when would you like the season to open_____ and when would you like to see it close_____ and for which species of furbearers_____.

- Should there be a season for otters in your area if your state doesn't currently allow it? Yes_____ No_____

Permit Administration

A limit of 40 tags are issued to each trapper with their permit. Refuge tags must be attached to traps as well as any other tags required by your state.

- Should the refuge keep the number of traps permitted at 40 per trapper? Yes_____ No_____ If no, what number should each trapper be allowed?_____

- Have you ever had traps stolen while they were set on the refuge? Yes_____ No_____ If yes, how many traps of yours have been stolen in the past three years? 0_____ 1 to 5_____ 6 to 15_____ 16 or more_____

- Violations of the conditions of the trapping permit result in a suspension of trapping privileges for 1 to 3 years. Do you feel that the loss of future privileges is a greater deterrent to violations than are fines? Yes_____ No_____

Biological/Harvest Reports

Refuge trapping reports are generated from harvest information that trappers submit on a mandatory fur catch report. The report is due by May 15, following the trapping season. Trappers failing to complete and return the report by the deadline lose their trapping privileges for the following season. Refuge trapping reports are distributed to state and federal agencies following completion.

- Do you feel that the mandatory fur catch report is an effective way to submit your harvest results and address your concerns? Yes_____ No_____ If not, how can we modify the form or receive the most accurate harvest information from trappers?_____
  _____

- Should it be required to submit a fur catch report at regular intervals throughout the season? Yes_____ No_____ Is so, how often?_____

- Should more research and monitoring of furbearers take place on the refuge? Yes_____ No_____ If so, for which species of furbearers?_____

- What are your other concerns about specific furbearer populations (muskrat, beaver, raccoon, etc…)?
  _____
  _____

- What are your concerns about habitat conditions (increased sedimentation, changes in water levels, loss of emergent vegetation and other habitat types in general, etc…)?
  _____
  _____

Other Concerns and Comments Date:_____

Signature (optional) _____
Address (optional) _____

Appendix C: Summary of Responses to the 2006 Trapping Questionnaire, Upper Mississippi River National Wildlife and Fish Refuge

In February 2006, the Upper Mississippi River National Wildlife and Fish Refuge sent a questionnaire to the Refuge trappers (299 permittees from the 2004-05 season), state furbearer biologists, state and federal conservation officers, and state and national trapper associations. The purpose was to obtain input on issues and concerns regarding the Refuge trapping program for use in preparing a revised Furbearer Management Plan for the Refuge. We received 193 completed surveys from the 299 trappers on our mailing list as well as several responses from trapping organizations. Below is a summary of the submitted surveys.

General Background

2 trappers left the following question blank

- What species do you actively trap: Muskrat *175 trappers (92%)* Beaver *146 trappers (76%)* Raccoon *144 trappers (75%)* Mink *126 trappers (66%)* Fox *41 trappers (21%)* Coyote *36 trappers (19%)* Other *16 trappers (8%) of which 9 trappers specifically stated otter*

4 trappers left the following question blank

- How many years have you been trapping? Less than 5 years *9 trappers (5%)* 5 to 10 years *13 trappers (7%)* More than 10 years *167 trappers (88%)*

2 trappers left the following question blank

- Your age is: Under 20 *2 trappers (1%)* 20 to 30 *6 trappers (3%)* 30 to 40 *23 trappers (12%)* 40 to 50 *49 trappers (26%)* Over 50 *111 trappers (58%)*

5 trappers left the following question blank

- How many days a year do you usually trap on: Privately owned land *107 trappers with an average of 36 days* State owned land *89 trappers with an average of 30 days* Upper Mississippi River NW&FR *188 trappers with an average of 33 days*

14 trappers left the following question blank

- If you use a boat to trap, what type do you use most often: Row boat or canoe *50 trappers (28%)* Motor boat with 20hp. or less *59 trappers (33%)* Motor boat

with over 20 hp. *84 trappers (47%)* Hover craft *1 trapper (1%)* Airboat with less than 60 hp. *5 trappers (3%)* Airboat with over 60 hp. *19 trappers (11%)*

Note: %'s don't total 100% because some trappers chose multiple boat types

3 trappers left the following question blank

- Do you trap for muskrats on the river after ice up? Yes *137 trappers (72%)* No *53 trappers (28%)*

Trapping Method

Some refuge regulations are more restrictive than state regulations. The four states (MN, WI, IA, IL) within the refuge have regulations that are often different from one another. When possible, the refuge has attempted to be consistent with state regulations.

3 trappers left the following question blank

- Trapping is prohibited within three feet of a muskrat house on the refuge. Should this restriction be changed? Yes *64 trappers (34%)* No *126 trappers (66%)* If yes, what distance, if any, would you like to see enforced? *62 trappers made suggestions as follows:*

No distance restriction (0 feet)	*41 trappers (66% of the suggestions)*
1 foot restriction	*10 trappers (16% of the suggestions)*
2 foot restriction	*7 trappers (11% of the suggestions)*
6 foot restriction	*1 trapper (2% of the suggestions)*
Same as state restriction (Which may or may not be the same as some of the aforementioned)	*3 trappers (5% of the suggestions)*

6 trappers left the following question blank

- Trapping is prohibited within six feet of a beaver house or dam. Should this restriction be changed? Yes *58 trappers (31%)* No *129 trappers (69%)* If yes, what distance would, if any, would you like to see enforced? *51 trappers made suggestions as follows:*

No distance restriction (0 feet)	*24 trappers (47% of the suggestions)*
1 foot restriction	*3 trappers (6% of the suggestions)*
2 foot restriction	*5 trappers (10% of the suggestions)*
3 foot restriction	*8 trappers (16% of the suggestions)*
4 foot restriction	*1 trapper (2% of the suggestions)*
10 foot restriction	*3 trappers (6% of the suggestions)*

15 foot restriction	*1 trapper (2% of the suggestions)*
50 foot restriction	*1 trapper (2% of the suggestions)*
Same as state restriction (Which may or may not be the same as some of the aforementioned)	*5 trappers (10% of the suggestions)*

Note: Comment was made a few times about the need to clarify in the regulations whether all kinds of traps and trap sets are prohibited near a beaver lodge or dam, or if this should just be beaver traps and beaver sets.

8 trappers left the following question blank

- Should beaver trappers be required to check their traps at least once every 24 hours? Yes *84 trappers (45%)* No *101 trappers (55%)*

  Note: Comment was made numerous times that checking beaver traps every 24 hours shouldn't be necessary as long as the set is under ice or when using drowner rigs.

13 trappers left the following question blank

- Currently snaring is not permitted on the refuge. Should snaring be allowed? Yes *80 trappers (44%)* No *100 trappers (56%)* If so during what part of the season should it begin *62 trappers made suggestions as follows:*

Open first day of season	*22 trappers (35% of the suggestions)*
Open October 1	*1 trapper (2% of the suggestions)*
Open November 1	*4 trappers (6% of the suggestions)*
Open November 5	*3 trappers (5% of the suggestions)*
Open November 10	*1 trapper (2% of the suggestions)*
Open December 1	*6 trappers (10% of the suggestions)*
Open December 5	*1 trapper (2% of the suggestions)*
Open the Day after the Duck Season	*10 trappers (16% of the suggestions)*
Open January 1	*10 trappers (16% of the suggestions)*
Open January 15	*1 trapper (2% of the suggestions)*
Open with the Beaver Season	*1 trapper (2% of the suggestions)*
Open after ice up	*2 trappers (3% of the suggestions)*

and end *55 trappers made suggestions as follows:*

Close last day of season	*26 trappers (47% of the suggestions)*
Close November 30	*2 trappers (4% of the suggestions)*
Close December 5	*1 trapper (2% of the suggestions)*
Close January 1	*1 trapper (2% of the suggestions)*
Close January 31	*7 trappers (13% of the suggestions)*
Close February 15	*3 trappers (5% of the suggestions)*
Close February 28	*7 trappers (13% of the suggestions)*
Close March 1	*1 trapper (2% of the suggestions)*
Close March 15	*3 trappers (5% of the suggestions)*
Close March 31	*1 trapper (2% of the suggestions)*
Close after ice out	*1 trapper (2% of the suggestions)*
Close April 15	*1 trapper (2% of the suggestions)*
Close April 31	*1 trapper (2% of the suggestions)*

What other restrictions should be included if snaring were to be allowed (deer locks, water sets only, etc…)? *The following suggestions were made:*

30 trappers suggested deer locks
26 trappers suggested water sets only
1 trapper suggested minimum distance from established places
3 trappers suggested WI breakaway device
1 trapper suggested proper swivels

5 trappers left the following question blank

- Multiple-Catch (Colony type) traps are not permitted on the refuge. Should they be allowed? Yes *23 trappers (12%)* No *165 trappers (88%)*

Trapping Hours

Refuge trapping begins at 9:00 a.m. on the first day of the season. Trapping hours for all other times are one-half hour before sunrise to one-half hour after sunset. These hours are established refuge-wide and may or may not be later that the hours that your state allows.

4 trappers left the following question blank

- Should the starting time on opening day be kept at 9:00 a.m.? Yes *150 trappers (79%)* No *39 trappers (21%)* If no, what time would you like to see trapping begin? *37 trappers made suggestions as follows:*

12:01 a.m.	*1 trapper (3% of the suggestions)*
Half hour before sunrise	*5 trappers (14% of the suggestions)*

Sunrise	*13 trappers (35% of the suggestions)*
6:00 a.m.	*1 trapper (3% of the suggestions)*
7:00 a.m.	*8 trappers (24% of the suggestions)*
8:00 a.m.	*7 trappers (19% of the suggestions)*
12 noon	*1 trapper (3% of the suggestions)*
Same as state (Which may or may not be the same as some of the aforementioned)	*1 trapper (3% of the suggestions)*

2 trappers left the following question blank

- Should the trapping hours remain at one-half hour before sunrise to one-half hour after sunset? Yes *156 trappers (82%)* No *35 trappers (18%)* If no, what times would you like to see trapping begin_____ and end_____ each day? *34 trappers made suggestions as follows:*

Begin All day	*6 trappers (18% of the suggestions)*
Begin 4:00 a.m.	*8 trappers (24% of the suggestions)*
Begin 5:00 a.m.	*3 trappers (9% of the suggestions)*
Begin 6:00 a.m.	*3 trappers (9% of the suggestions)*
Begin the same as it is now	*9 trappers (26% of the suggestions)*
Begin one hour before sunrise	*1 trapper (3% of the suggestions)*
Begin sunrise	*3 trappers (9% of the suggestions)*
Begin 9:00 a.m.	*1 trapper (3% of the suggestions)*

Close All night	*7 trappers (21% of the suggestions)*
Close sunset	*4 trappers (12% of the suggestions)*
Close the same as it is now	*1 trapper (3% of the suggestions)*
Close 1 hour after sunset	*5 trappers (15% of the suggestions)*
Close 1 ½ hours after sunset	*1 trapper (3% of the suggestions)*
Close 2 hours after sunset	*1 trapper (3% of the suggestions)*
Close 2 p.m.	*1 trapper (3% of the suggestions)*
Close 6:00 p.m.	*3 trappers (9% of the suggestions)*
Close 7:00 p.m.	*1 trapper (3% of the suggestions)*
Close 8:00 p.m.	*6 trappers (18% of the suggestions)*
Close 9:00 p.m.	*1 trapper (3% of the suggestions)*
Close 10:00 p.m.	*3 trappers (9% of the suggestions)*

Seasons/Limits

The refuge trapping season dates are generally consistent with the appropriate states. Trapping is not allowed in the waterfowl "closed areas" until the day after the state duck hunting season. Refuge trapping also ends on March 15.

8 trappers left the following question blank

- Should the refuge continue to follow the state season dates? Yes *155 trappers (84%)* No *30 trappers (16%)*

183 trappers replied to the season length question below.

- Is the refuge trapping season: Too long *46 trappers (25%)* Too short *17 trappers (9%)* Just right *120 trappers (66%)*

- If so when would you like the season to open_____ and when would you like to see it close_____ and for which species of furbearers_____.

73 trappers made suggestions about when the season should open and close and for which species of furbearer. There were too many variations in specific dates to list every one.

Many of the suggestions made in regard to muskrats were to open the season sometime in November and close it at the end of December or January.

Some of the beaver season suggestions including open the season later into December or January. But comments were also made to keep the opening dates consistent with the muskrat season.

19 trappers left the following question blank

- Should there be a season for otters in your area if your state doesn't currently allow it? Yes *133 trappers (76%)* No *41 trappers (24%)*

Permit Administration

A limit of 40 tags are issued to each trapper with their permit. Refuge tags must be attached to traps as well as any other tags required by your state.

5 trappers left the following question blank

- Should the refuge keep the number of traps permitted at 40 per trapper? Yes *89 trappers (47%)* No *99 trappers (53%)* If no, what number should each trapper be allowed? *97 trappers made the following suggestions:*

30 tags	*1 trapper (1% of the suggestions)*
50 tags	*77 trappers (79% of the suggestions)*
55 tags	*1 trapper (1% of the suggestions)*
60 tags	*6 trappers (6% of the suggestions)*
70 tags	*1 trapper (1% of the suggestions)*
75 tags	*4 trappers (4% of the suggestions)*
80 tags	*1 trapper (1% of the suggestions)*
100 tags	*2 trappers (2% of the suggestions)*
No limit	*4 trappers (4% of the suggestions)*

Note: Many trappers mentioned throughout this survey the concern over increased predator populations and a need to be able to harvest those furbearers with additional tags.

4 trappers left the following question blank

- Have you ever had traps stolen while they were set on the refuge? Yes *116 trappers (61%)* No *73 trappers (39%)* If yes, how many traps of yours have been stolen in the past three years? *110 trappers reported the following:*
  0 *42 trappers (38%)* 1 to 5 *31 trappers (28%)* 6 to 15 *22 trappers (20%)*
  16 or more *15 trappers (14%)*

7 trappers left the following question blank

- Violations of the conditions of the trapping permit result in a suspension of trapping privileges for 1 to 3 years. Do you feel that the loss of future privileges is a greater deterrent to violations than are fines? Yes *163 trappers (88%)*
  No *23 trappers (12%)*

Biological/Harvest Reports

Refuge trapping reports are generated from harvest information that trappers submit on a mandatory fur catch report. The report is due by May 15, following the trapping season. Trappers failing to complete and return the report by the deadline lose their trapping privileges for the following season. Refuge trapping reports are distributed to state and federal agencies following completion.

5 trappers left the following question blank

- Do you feel that the mandatory fur catch report is an effective way to submit your harvest results and address your concerns? Yes *184 trappers (98%)*
  No *4 trappers (2%)* If not, how can we modify the form or receive the most accurate harvest information from trappers?
  7 trappers made following suggestions/comments:

  3 trappers suggested being able to submit fur catch report online/internet
  1 trapper suggested trappers carry daily reports on them while trapping
  1 trapper suggested contacting furbuyers for information sheets, prices, qty, etc…
  1 trapper suggested specifying # of trap day efforts for different species
  1 trapper stated that the report is only as good as the honesty of the person submitting it

  6 trappers left the following question blank

- Should it be required to submit a fur catch report at regular intervals throughout the season? Yes *3 trappers (2%)* No *184 trappers (98%)* Is so, how often?
  1 trapper made a suggestions of monthly

  16 trappers left the following question blank

- Should more research and monitoring of furbearers take place on the refuge? Yes *87 trappers (49%)* No *90 trappers (51%)* If so, for which species of furbearers? *The following suggestions were made:*

  46 trappers suggested more research/monitoring of muskrats
  37 trappers suggested more research/monitoring of beaver
  12 trappers suggested more research/monitoring of raccoon
  13 trappers suggested more research/monitoring of mink
  30 trappers suggested more research/monitoring of otter
  9 trappers suggested more research/monitoring on all furbearers

- What are your other concerns about specific furbearer populations (muskrat, beaver, raccoon, etc…)?

  The following concerns/comments were made specifically to certain furbearers:

  MUSKRAT

  42 trappers said the muskrat population is declining
  15 trappers said the muskrat season is too long
  2 trappers said muskrat were overharvested
  1 trapper said water fluctuations were killing young muskrats

BEAVER

4 trappers said the beaver season is too long
10 trappers said beaver were overharvested
1 trapper said to close the beaver season for 1 year
5 trappers said the beaver season opens too early
1 trapper said to close the beaver season March 31
4 trappers said the beaver population is declining
2 trappers said there is a healthy beaver population
4 trappers said the beaver are destroying too much habitat
1 trapper said there should be limits on beaver

RACCOON

10 trappers said the raccoon population was increasing
1 trapper said the raccoon population was declining

OTHER

24 trappers said there was an overabundance or increasing population of otter
1 trapper said there were too many opossum
1 trapper said to protect otters
1 trapper said there was a lack of red fox

- What are your concerns about habitat conditions (increased sedimentation, changes in water levels, loss of emergent vegetation and other habitat types in general, etc…)?

  The following concerns were made about habitat conditions:

  74 trappers said they were concerned with the increased amount of sedimentation
  65 trappers said they were concerned with the fluctuating water levels
  35 trappers said they were concerned with the loss of vegetation
  6 trappers said they were concerned with the increase or potential problems with invasives
  43 trappers said they were concerned with the general loss of habitat on the refuge
  8 trappers said they were concerned with pollution

Other Concerns and Comments

<u>The following are other concerns and comments trappers made that were not stated previously:</u>

12 trappers were concerned with the increased predation from Bald Eagles and hawks
8 trappers were concerned with the overall increasing predator population
25 trappers were opposed to the use of airboats when trapping
12 trappers stated that they would like to continue to use airboats when trapping
5 trappers were opposed to the use of go-devils when trapping
3 trappers were opposed to the use of ATV's
1 trapper stated that they would like to use ATV's
6 trappers supported drawdowns, and said we should continue to do more of them
4 trappers supported island construction and EMP work
2 trappers stated the need for more law enforcement
1 trapper mentioned a possible universal license for all states
3 trappers stated that bordering states should seek same seasons and limits
8 trappers said they would like to see more otter tags issued
3 trappers offered assistance in doing research and being part of a committee
4 trappers suggested using dog proof tags early on during the duck season
4 trappers were concerned that changing the regulations/tags could lead to more conflict/competition
1 trapper expressed the need to define the meaning of a push up vs. rat house
2 trappers expressed the need to define the regulation pertaining to trapping near beaver dams and lodges
4 trappers suggested opening seasons after the duck season closes to avoid user conflicts
1 trapper suggested releasing more otter and bobcat
1 trapper suggested having a separate Mississippi River otter zone (own season and limits)
1 trapper said they would like to see bigger fines for violations
2 trappers expressed the need for better monitoring programs (tagging furbearers)
1 trapper mentioned logging as another management tool
5 trappers expressed a desire to be able to trap in Closed Areas earlier

Appendix D: TRAPPING SPECIAL USE PERMIT

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

Upper Miss. River NW&FR
51 E. 4th Street, Room 101, Winona, MN 55987

TRAPPING - (state) _____

SPECIAL USE PERMIT

Station No. to be Credited _____ Permit No. - tag#_____

Date

Period of Use (inclusive)

From

To March 15, _____

Permittee Name

Name: _____

DOB: _____

State License: _____

Permittee Address

_____

_____

Telephone: _____

Purpose (specify in detail privilege requested, or units of products involved)

Subject to the conditions attached, permission is given to the permittee to enter and/or be upon lands of the Upper Mississippi River National Wildlife and Fish Refuge (Refuge) to trap furbearing animals within the ***State***, and during the ***Period of Use***, as specified above. Trapping seasons shall be in accordance with State regulations, except the final day of trapping on the Refuge is **no later than March 15**. The first day of any trapping season on the Refuge **begins at 9:00am.** Trapping is not permitted within Refuge areas posted "Area Closed" or "No Hunting Zone" until 9:00am on the day following the close of the State duck hunting season.

Description (specify unit numbers: metes and bounds, or other recognizable designations)

This permit is valid only when the permittee is using traps properly tagged with trap tags issued by the Refuge as part of this Special Use/Trapping permit. This permit authorizes the use of up to 40 traps. This permit may be terminated for failure to comply with all permit terms and conditions, and applicable Federal, State and local laws and regulations. No refunds shall be due to the permittee in the event of such termination. This permit is accepted by the undersigned or his/her representative, subject to the terms and conditions expressed or implied herein.

Amount of fee $_____

☐ Payment Exempt - Justification:
☐ Full Payment

Record of Payments

Paid in full at the time of issue.

Special Conditions

Special Conditions of Trapping Permit are attached.

Completion and submittal of attached ***Fur Catch Report*** is **MANDATORY,** even if you do not trap this season.

This permit is issued by the U.S. Fish and Wildlife Service and accepted by the undersigned, subject to the terms, covenants, obligations, and reservations, expressed or implied herein, and to the conditions and requirements appearing on the reverse side.

Permittee Signature

Issuing Officer Signature and Title

Form 3-1383 (Rev. 5/97)

Appendix E: SPECIAL CONDITIONS OF TRAPPING PERMIT (07/01)

Pursuant to Code of Federal Regulations, Title 50, Chapter 1, Subchapter C, Part 31, Subpart B, Section 31.16, the following conditions are prescribed by the Director U.S. Fish and Wildlife Service for the trapping of furbearers on the Upper Mississippi River National Wildlife and Fish Refuge (refuge) situated in the states of Minnesota, Wisconsin, Iowa, and Illinois.

1. State Laws – Permittee must comply with all state and local game laws and regulations, in addition to all federal regulations and refuge permit conditions. In cases where any of these regulations differ, the most restrictive regulations shall apply.

2. Trapping Permits – Any person exercising the privilege of trapping furbearing animals on the refuge shall possess a valid trapping license issued by the state where trapping is performed and a valid special use permit for trapping issued by the refuge. Permittee shall carry both the state trapping license and refuge special use permit on their person at all times while trapping, and upon request, shall exhibit them to any federal, state, or local law enforcement officer.

3. Trap Tags and Fees; Limitations – In addition to tags required by state regulations, each permittee authorized to trap furbearing animals on the refuge shall obtain from the refuge manager, or an authorized representative, appropriate refuge tags for all traps used. A tag for the current trap year shall be securely attached to each trap in a manner that will allow convenient examination. Traps displaying current tags assigned to multiple permittees may be tended by any of the permitted tag owners. The Service is required to collect a fee which will be used to recover the cost of administering the issuance of permits.

4. Approved Traps; Trap Inspection and Removal; Plant Life – Furbearers may be taken on the refuge using traps allowed under state law, except no snares or multiple-catch (colony type) traps are allowed. Permittee shall tend each trap/set on the refuge at least once every calendar day, except for beaver sets which must be tended at least once every two calendar days. Traps shall only be tended between one-half hour before sunrise to one-half hour after sunset, or during hours set by state law if more restrictive. Permittee shall not cut any vegetation on the refuge, except willow for use as trap stakes or drags.

5. Bag Limit – The bag limit for each furbearer shall be that limit prescribed by applicable state law or refuge regulation, whichever is more restrictive. All animals taken on the refuge shall be included as a part of any state bag limit.

6. Fur Catch Report – It is mandatory that the Fur Catch Report be submitted by May 15, following the trapping season. Failure to accurately complete and return the report by the deadline is sufficient cause for refusal of future permits.

7. Closed Areas/No Hunting Zones – All areas of the refuge which are closed to hunting of migratory birds shall be closed to trapping during the duck hunting season for that state. Trapping in areas posted **"Area Closed"** or **"No Hunting Zone"** will be allowed beginning at 9:00 a.m. on the day following the close of the state duck hunting season, except as otherwise specified on this permit or prescribed by the refuge.

8. Prohibited Methods and Acts

It Is Unlawful To:

***Trap** before 9:00 a.m. on opening day of any refuge trapping season.
* **Mark** or stake traps sites or animal runs or paths, or chop holes in the ice for trap sets in advance of the applicable season.
* **Place** traps, stakes, or other equipment in more than one location before 9:00 a.m. on the opening day of any trapping season.
***Place**, without a tagged trap attached, any stake, pole, rod, or stick capable of holding or anchoring any kind of animal trap.
* **Set** or tend more traps than the number authorized on the permit.
***Set** or trap within 3 feet of the waterline of any muskrat house or feeding house.
* **Set** a trap closer to a beaver house or dam than permitted by state law, and in no case shall a trap be set closer than 6 feet to any beaver house or dam.
***Set** a trap within 30 feet of an otter den.
***Disturb** or molest any muskrat house, mink or otter den, or beaver house or dam.
***Use** exposed flesh or carcass baits, including fish.
***Use** snowmobiles or wheeled or tracked all-terrain vehicles on, over, or across refuge lands at any time, including while trapping. Off-road vehicles are allowed only on the ice over navigable waters, accessed from boat landings.
***Tend**, disturb, or molest another person's traps, fur catch, or trapline. **(It is unlawful to set or tend any trap/set on the refuge that does not have your current refuge trap tag attached. Any trap/set which is tended by multiple persons must display a current tag assigned to EACH permittee checking the trap. The sole exception is that someone may ASSIST with checking tagged traps, provided that the permittee is physically present at the trap site).**

9. Disposition of Unauthorized Animals – Birds and mammals other than those authorized to be trapped under permit and found alive in the traps of the permittee shall be immediately liberated. Such birds and mammals found dead or mortally injured in traps shall be immediately disposed of in accordance with state law.
If any threatened or endangered species are caught, a refuge employee or state warden must be notified immediately.

10. Penalities – Failure to comply with any conditions spedified herin, or violation of any regulations issued under authority of the Act of June 7, 1924, establishing the refuge, or of any federal or state laws or regulations applicable to trapping on said refuge, shall not only render permittee subject to prosecution under said laws and regulations, but is sufficient cause **for immediate suspension of the current permit and for refusal of future permits to trap on the refuge, or for refusal of any other use or privilege on the refuge for which a permit may be required.**

Trapping violations may result in revocation of trapping privileges on the refuge for periods of one to five years. Repeat violations may result in lifetime revocation of refuge trapping privileges.

All traps and equipment used as instruments of any violation, and all animals or furs illegally taken, shall be subject to immediate seizure, and subsequent forfeiture.

11. Additional Conditions -

Appendix F: Fur Catch Report

Upper Mississippi River National Wildlife and Fish Refuge

Permit No._____ State_____

Fill in this report completely, and mail **by April 15** to: Biologist, Upper Mississippi River National Wildlife and Fish Refuge, 51 East 4th Street., Room 101, Winona, Minnesota 55987**.**

This report is MANDATORY even if you did not trap this season.

NO SIGNATURE OR OTHER IDENTIFICATION IS REQUIRED. This information is used only by wildlife managers to estimate furbearer populations and manage the trapping program to help protect the furbearer resources. It is important that you ACCURATELY and COMPLETELY report for each river Pool how many days you trapped and what you caught. **Failure to accurately complete and return this information by April 15 could prevent you from obtaining a Refuge trapping permit the next trapping season.**

Did you trap on **Refuge** lands and waters this season?_____Yes _____No.

If you answered No, stop here and return the form. If you answered Yes, complete the rest of the form before mailing. Your comments on the Refuge Trapping Program are also welcome at the above address.

Please list your fur catch here: Use one column for each Pool that you trapped. If you only trapped in one Pool use the first column. Enter the number of days that you trapped and any fur taken in each Pool. **List only information from trapping on <u>Refuge</u> lands and waters.**

	Pool No._____	Pool No._____	Pool No._____
# Days Trapped	_____	_____	_____
Ave. # Traps Set/Day	_____	_____	_____
Muskrat	_____	_____	_____
Raccoon	_____	_____	_____
Beaver	_____	_____	_____
Mink	_____	_____	_____

List type, number, State and Pool Number of all other furbearers caught:

_____

List type, number, State and Pool Number of all other animals caught:

_____

Comments:_____

_____

_____

Appendix G: AFFIDAVIT INDICATING TRAP LOSS

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Upper Mississippi River National Wildlife and Fish Refuge
51 E. Fourth Street - Room 101
Winona, Minnesota 55987

AFFIDAVIT INDICATING TRAP TAG LOSS

I, _____, have lost the trap tags bearing the numbers listed below and request a replacement set. I am returning all remaining tags of the Set Number: _____. I understand that if any of the below listed tags are found, they are to be turned in to the Refuge Office and not used. I also understand that use of such tags is a violation of my permit; and if found using these trap tags, I may be suspended from trapping on the refuge.

Trap tag numbers: _____

_____

_____

I state under penalty of perjury that the foregoing is true and correct.

Executed this _____ day of _____ in 20 _____.

_____	_____
Signature	Date
_____	_____
Witnessed: (Refuge Officer/employee)	Date
_____	_____
Witnessed:	Date

Compatibility Determination

Upper Mississippi River National Wildlife and Fish Refuge
Established 1924
Compatibility Determination

Use: Trapping of furbearers

Refuge Name: Upper Mississippi River National Wildlife and Fish Refuge (Refuge)

Establishing and Acquisition Authority(ies):

The Upper Mississippi River National Wildlife and Fish Refuge was established by Public Law No. 268, 68th Congress on June 7, 1924. This act authorized acquisition of lands for Refuge purposes. Additional lands acquired in fee title by the U.S. Army Corps of Engineers are managed as part of the Refuge under a 1963 Cooperative Agreement between the Department of the Army and the Department of the Interior.

Refuge Purpose(s):

"The Refuge shall be established and maintained (a) as a refuge and breeding place for migratory birds included in the terms of the convention between the United States and Great Britain for the protection of migratory birds, concluded August 16, 1916, and (b) to such extent as the Secretary of the Interior by regulations, prescribe, as a refuge and breeding place for other wild birds, game animals, fur-bearing animals, and for the conservation of wild flowers and aquatic plants, and (c) to such extent as the Secretary of the Interior may, by regulations, prescribe a refuge and breeding place for fish and other aquatic animal life."

National Wildlife Refuge System Mission:

"The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans."

Description of Use:

This use is the trapping of resident furbearer animals (muskrat, beaver, raccoon, etc.) on the Refuge in accordance with state and Refuge regulations. The Refuge's current furbearer trapping program is guided by the 1988 Fur Management Plan, however a new Furbearer Management Plan is scheduled for approval in 2007. This Compatibility Determination is based on the 2007 Furbearer Management Plan which will go into effect upon approval.

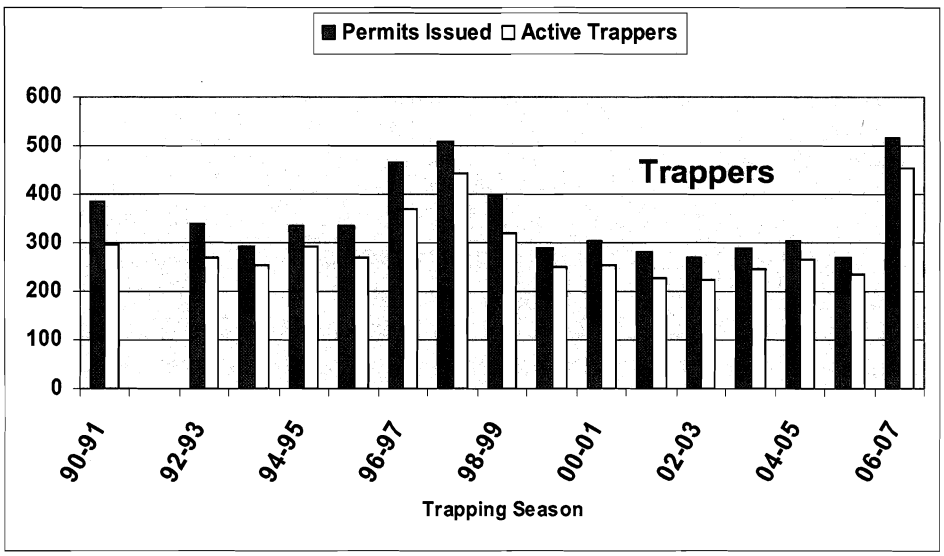
The Trapping Program

Furbearer trapping on the Refuge has a long-standing tradition and has been a useful tool in maintaining balance between furbearers and habitat, and safeguarding Refuge infrastructure. The opening of trapping seasons, trapping methods, and other regulations on the Refuge generally follow those established by each of the four States in which the Refuge occurs: Iowa, Illinois, Minnesota and Wisconsin. The final day of trapping on the Refuge is no later than March 15. Trapping seasons generally run from late October or early November until late January to March 15. There is variability among states in regards to season length (trapping for some species are continuously open, others have established dates), trapping zones, and species open to trapping.

Furbearer trapping is allowed throughout the Refuge, however, no trapping is allowed in Waterfowl Hunting Closed Areas and Sanctuaries and one Administrative No Hunting Zone until 9:00 am the day after the last day of the regular state duck hunting season. The closed area restriction reduces the extent of disturbance to waterfowl by human activities during the hunting season, thus enhancing the ability of the Refuge to provide secure resting and feeding areas for migrating waterfowl. An additional area (Crooked Slough Backwater, former Savanna Army Depot land, in Pool 13) is closed to all trapping and other forms of entry year round due to the presence of contaminants and unexploded ordinance.

The Refuge has regulated trapping within its boundaries since 1929 and administers trapping by issuing Trapping Special Use Permits to state-licensed individuals. Between the 1990-91 and 2005-06 trapping seasons the Refuge issued an average of 337 Trapping Special Use Permits per year. The recent 2006-07 season had the highest number of permits issued (517) in the 17 years since 1990-91(Figure 1).

Figure 1. Number of Trapping Special Use Permits Issued and Number of Active Trappers, 1990-91 through the 2006-07 Seasons, Upper Mississippi River NW&FR (1991-92 data missing). Active trappers are defined as those who trap at least one day per season.



Some people who obtain permits do not actively trap during the trapping season for various reasons. Our harvest data summaries are based upon the number of active trappers on the Refuge. Active trappers are defined as those who trap at least one day per season. During 17 years between 1990-91 to 2006-07, an average of 84 percent of the trappers with Refuge permits were active trappers (range 77 to 88%) (Figure 1).

Trappers may use a maximum of 40 traps (all marked with Refuge tags) per day. The use of snares and multiple-catch traps, allowed in some states, is prohibited on the Refuge. Trappers may use leghold traps and body-gripping ("conibear" type) traps for the purpose of trapping various furbearers and unprotected species of wildlife. Each method is standardized under State regulations as to trap size and types of allowable sets in order to protect non-target species and to provide for the safe use of the Refuge by others. The use of exposed flesh or carcass baits, including fish, is prohibited on the Refuge.

All trappers must submit a Fur Catch Report following the season or they will not be eligible for a permit to trap on the Refuge the subsequent season. These reports provide data on the number and distribution of animals harvested, distribution of trappers, and rudimentary catch per unit effort (efficiency) estimates on the Refuge.

Factors affecting furbearer harvest on the Refuge include length of the trapping season, population size, fur prices, weather conditions, habitat changes, extent of aquatic vegetation coverage, and trapping effort.

Access for trapping on the Refuge is by foot, boats, all-terrain vehicles and snow machines. Use of the latter two vehicles on, over, or across Refuge lands at any time is prohibited, including while trapping. Off-road vehicles are allowed only on the ice over navigable waters, accessed from boat landings. The Refuge has other restrictions regarding tending traps, set types, use of vegetation, disturbance, etc., as outlined in the trapping special use permit and/or the Furbearer Management Plan.

Most furbearer trapping targets the following species: muskrat, mink, beaver, raccoon, and red fox. Other species taken include river otter, coyote, skunk, and opossum. The vast majority of trapping occurs within wetland habitats.

Furbearer Status and Harvest

Wisconsin, Illinois, and Minnesota publish various types of wildlife population status reports that include furbearers. Similar data are available from the Iowa Furbearer Biologist. These States manage furbearer populations at sustainable levels that include allowable harvests. Population management is achieved through a science-based process of analysis that utilizes survey counts, harvest data, and reproductive and biological condition data obtained from animal carcass collections. Accounts of the prominent furbearing species on the Refuge follow. Literature citations for references described below are located in Chapter 8 of the Environmental Assessment (Appendix A) of the Furbearer Management Plan.

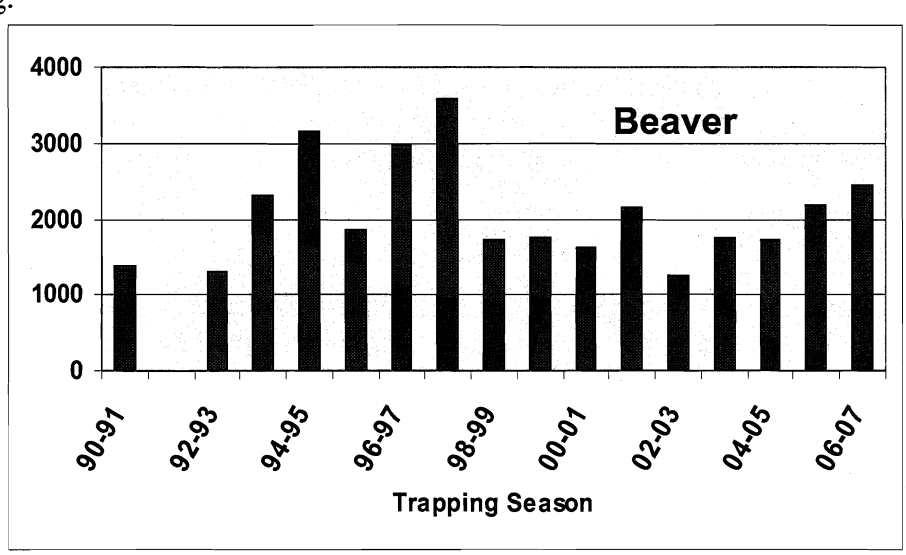
Beaver

Furbearing mammals (especially beaver) were key elements in the development and exploitation of the Mississippi River Basin. Early explorers and trappers established settlements (Prairie du Chien, Wisconsin, for example) to carry on the fur trade. Over-exploitation nearly extirpated beaver from the Upper Mississippi River by the mid-1800s. They made a comeback in the 20th century with reintroductions (1927 and 1928), control of the harvest, and new habitat created by the locks and dams in the 1930s. Beaver lodges and cuttings are now a moderately common sight on the Refuge.

In Wisconsin, beaver populations along the Mississippi River management zone peaked in 1995 with 31,700 animals, declined to 19,900 in 2001 and rebounded to 23,300 in 2005. However, the State has made no changes in beaver trapping regulations, presumably as part of a state-wide effort to reduce beaver numbers in response to nuisance beaver complaints. In Illinois, beaver are common state-wide (Woolf et al. 2003). There are 0.6 beaver colonies per river mile in beaver range of Minnesota. While Minnesota has a regulated beaver trapping season, the State indicates that there are not enough trappers to keep some beaver populations small enough to prevent problems. Iowa does not issue a beaver population status report, but harvest numbers were 6,200 to 8,600 between 2003 and 2005, down from 10,000 to 11,000 during the previous ten years.

An average of 2,069 beaver are harvested each year on the Refuge (1990-91 to 2006-07) (Figure 2). Beaver lodge surveys conducted in Pools 12-14 from 1993 to 2002 revealed an average of 41 lodges per year along established survey routes. Numbers ranged from a high of 62 in 1993 to a low of 20 in 2002.

Figure 2. Annual harvest of Beaver on the Upper Mississippi River NW&FR, 1990-91 to 2006-07, as Reported by Trappers in Mandatory Fur Catch Reports. 1991-92 Data Are Missing.



River Otter

River otter were trapped extensively at the time of early European settlement. These predators probably maintained small populations in tributaries of the Mississippi River. Today they occupy most areas of the Refuge, as evidenced by trapping records, local observations, aerial surveys, and radio-tracking studies. However, otter are still an uncommon sight due to their secretive habits, low densities, and large territories.

River otters are common in Illinois (Bluett et al. 2004). They were listed as a state threatened species in 1977, but with further population declines, they were listed state endangered in 1989 when fewer than 100 otters existed in Illinois. Otters recovered and were de-listed in 1999. Many of them live along the Mississippi River and its backwaters.

Early in the twentieth century, otter range was greatly reduced in Minnesota as a result of over harvest and wetland drainage and pollution which reduced habitat quality and productivity. Today, a restricted harvest and improved habitat has resulted in otters being common in all of northern Minnesota, and due to wetland restoration, are becoming more common again in southern parts of the state. Because the river otter has valuable fur and is relatively easy to trap, it is classed as a registered furbearer in Minnesota, where its trapping season is carefully controlled. Presently, there is only a season for otter in the northern part of the state. About 2,000 otters are trapped each year out of a total population of 10-12,000.

There has been no open season on otter in the southern part of Minnesota, which includes the Refuge. However, the State will open a season in the Southeast zone in 2007. Results of investigations into home range characteristics, habitat selection and survival of river otters in southeast Minnesota have influenced that decision (T. Gorman, student at Mankato State University, personal communication). Preliminary reports indicate four of 24 radio-marked otters died of incidental take; one of 24 died from a vehicle impact on a roadway. Otters established natal dens along fence rows up to several miles away from streams. Initial comparisons of aerial surveys conducted in 2001 and 2006-07 indicate otter sign has remained constant along the Mississippi River and increased on the lower portions of three tributaries, the Cannon, Zumbro, and Whitewater Rivers (John Erb, MDNR personal communication). Minnesota is considering a limit of two otter per trapper per season, half the limit allowed in Minnesota's northern zone.

Minnesota DNR "Registered Furbearer Population Modeling, 2007 Report" indicates that in 2006, an estimated 22% of the fall [otter] population was harvested." The report further states that the otter "population has declined in each of the past 4 years (mean annual decline ~ 5%). No independent otter survey data are currently available for comparison. The current estimated spring population is ~ 10,300, down 4% from last year."

Wisconsin's aerial otter surveys between 2003 and 2005 indicate that 4 to 7% of the stream/river crossings surveyed in the southern zone had otter tracks present, compared to 19-23% in the northern survey zone. Wisconsin sets otter harvest quotas in these zones that reflect population differences. In Wisconsin DNR's 2004 and 2005 trapper

surveys, 61% of respondents indicated otter numbers were increasing in the southern zone.

Below is a quote from the WDNR 2006 "Otter Population Analyses:"

> "Population estimates calculated by the computer model suggested that the statewide otter population increased rather steadily from approximately 12,600 animals in 1982 to 15,800 in 1994, and then declined down to 12,500 otters in 2003. It appeared that the population declined substantially when harvest rates exceeded 15% of the prehunt population. Harvests have exceeded that level during 5 years between 1996 and 2002. As a result, the estimates of statewide fall otter populations, 2002-2005 were at, or slightly below, the population goal of "a minimum of 13,000 otters in the State". The population model suggests that lower harvest rates during 2003-05 (10-12%) of the fall population) should allow for slight growth of the population. The WDNR Furbearer Advisory Committee recommended a harvest goal of 1,400 otters for the 2006-07 trapping season. This includes 700 otters in the North Zone, 420 in the Central Zone, and 280 in the South Zone. The population model suggested that that level of harvest would result in a slight increase in the statewide population."

Of the four states bordering the Refuge, Wisconsin and Iowa allow the take of river otter on the Refuge, one per season per trapper via lottery in Wisconsin (South Zone) and up to two otter per season per trapper, until a quota of 440 is reached, in Iowa. Wisconsin first began an otter season within the Refuge (referred to as the Mississippi Zone) in 1983. Iowa had its first otter season in 2006-07.

Since 1990, there has been an increasing trend in the number of otter caught on the Refuge, as determined from trapper's mandatory fur catch reports (Figure 3 and Table 1). The number caught includes otter legally tagged and incidentally taken (animals released alive or turned over to a Conservation Officer). During the 17-year period of 1990 to 2006, the total refuge otter catch averaged 24 animals per year, ranging from 5 to 46 per season. In eight of the first ten years of this period, at least 75 percent of the otter trapped on the Refuge were taken in Wisconsin, the only state with an open season during that time period (Figure 3).

In more recent years, the Wisconsin percentage has been lower, within a range of 55 to 70 percent, indicating that other states have contributed more to the number caught. This trend is illustrated by the increase in number of otter taken incidentally in states where no otter seasons were in place (Table 1 and Figure 4).

On a county basis, the Refuge does not contribute a major portion of the otter harvest in Wisconsin. Since 1990, the Refuge contributed an average of 12 otter or about 20 percent of the otter legally tagged and harvested in the six Wisconsin counties bordering the Refuge (Table 2).

Figure 3. Annual Harvest of River Otter on the Upper Mississippi River NW&FR, and Number Caught on the Refuge in Wisconsin Border Counties, 1990-91 to 2006-07, as Reported by Trappers in Mandatory Fur Catch Reports. 1991-92 Data Are Missing.

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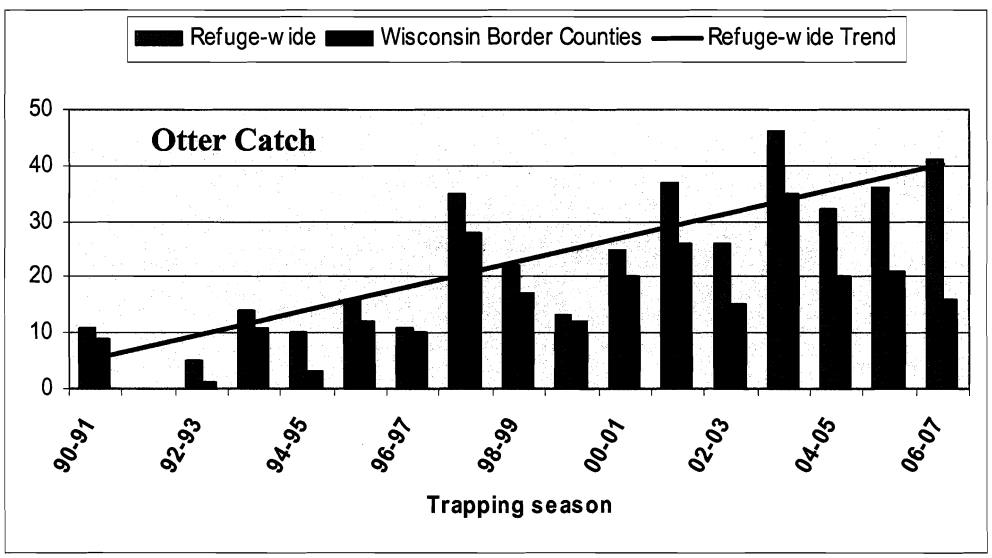
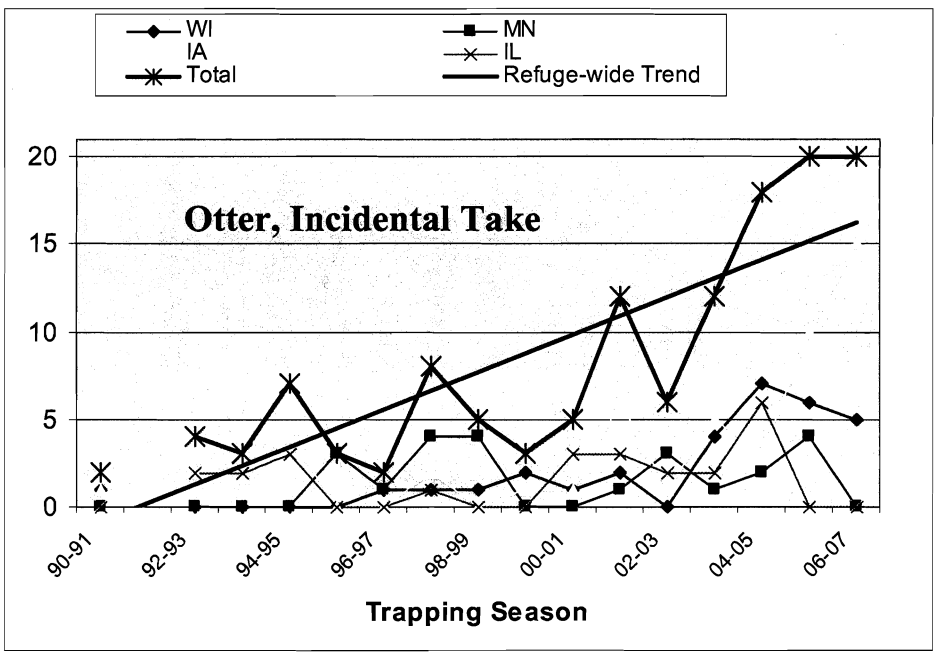


Table 1. Possession Status of Otter Caught in Four States Bordering the Upper Mississippi River NW&FR, During the 1990-91 to 2006-07 Trapping Seasons, as Reported by Trappers in Mandatory Fur Catch Reports. 1991-92 Data Are Missing. L = Otter legally tagged by Wisconsin and Iowa trappers; T = Otter turned over to a Conservation Officer, R = Otter released alive; T+R= Incidental take.

Trapping Season	**Otter Caught Refuge-wide**	**Otter Caught from Refuge Lands in:**									
		Wisconsin			**Minnesota**		**Iowa**			**Illinois**	
		L	T	R	T	R	L	T	R	T	R
06-07	41	11	4	1			10	1	14		
05-06	36	15	6	-	4			10	1		
04-05	32	11	7	2	2			3	1	6	
03-04	46	21	4	10	1			5	3	2	
02-03	26	12		3	3			1	5	2	
01-02	37	24	2		1	1		6		3	
00-01	25	9	1	10		1		1		3	
99-00	13	10	2					1			
98-99	22	15	1	1	4				1		
97-98	35	27	1		4			2		1	
96-97	11	9	1		1						
95-96	16	10		2	3				1		
94-95	10	3						4		3	
93-94	14	6		5				1		2	
92-93	5	1						2		2	
91-92	Data Missing										
90-91	11	7	1	1				1			1

Figure 4. Annual Incidental Take of Otter in States Bordering the Upper Mississippi River NW&FR, 1990-01 to 2006-07, as Reported by Trappers in Mandatory Fur Catch Reports. 1991-92 Data Are Missing.[1]



[1] See Table 1 for definition of incidental take. Iowa's first otter season began in 2006-07, thus providing incentive to trap otter.

Iowa's first otter season took place in the 2006-07 season when the state's estimated otter population was 7000 animals (Ron Andrews, IDNR furbearer biologist, personal communication). In that first year, Iowa established a conservative state-wide harvest quota of 400 otter (actual number taken, 469) which was met within 10 days of the season opener. A total of 67 otter were taken from the six Iowa counties bordering the Refuge (Allamakee, Clayton, Dubuque, Jackson, Clinton, and Scott). Of those, only 15% (10 otter) were harvested from the Refuge, as reported by trappers. This percentage is similar to Wisconsin's otter harvest in counties bordering the Refuge where about 20% of the harvest is from the Refuge (Table 2).

Table 2. Otter Harvested from Six Wisconsin Counties Bordering the Upper Mississippi River NW&FR, 1990-91 through 2006-07 Seasons, as Reported by Trappers in Mandatory Fur Catch Reports. 1991-92 Data Are Missing.[1]

Trapping Season	**Otter Harvested in 6 Wisconsin Counties that Border Refuge**	**Refuge Portion of Otter Harvested in 6 Wisconsin Counties that Border the Refuge**	
		Number	Percent
06-07	72	11	15
05-06	100	15	15
04-05	82	7	9
03-04	75	21	28
02-03	51	12	24
01-02	105	24	23
00-01	68	9	13
99-00	62	10	16
98-99	76	15	20
97-98	106	27	25
96-97	66	9	14
95-96	52	10	19
94-95	43	3	7
93-94	20	6	30
92-93	16	1	6
91-92	25	Data Missing	
90-91	15	7	47
AVERAGE	**60**	**12**	**20**

[1] The six counties are Buffalo, Trempealeau, La Crosse, Vernon, Crawford, and Grant.

Muskrats

In Illinois, the abundance of muskrats declined after a drought in 1989-1990, but recovered with normal levels of precipitation (Thommes 1994). Minnesota Department of Natural Resources reports that trappers sometimes harvest 100,000 muskrats in a single autumn season without harming the population.

Prior to locks and dams, muskrats were wide-spread, but not abundant on the Upper Mississippi River System. At that time the shallow lakes and marshes often dried up each fall, forcing muskrats to dig bank dens, rather than build typical "rat houses." Muskrats flourished after the 1930s when permanent shallow wetlands were created by installation of the locks and dams. High muskrat numbers coincided with those of puddle ducks,

bitterns and rails, and sunfish and bass during the 1935-65 period when shallow wetland productivity was high.

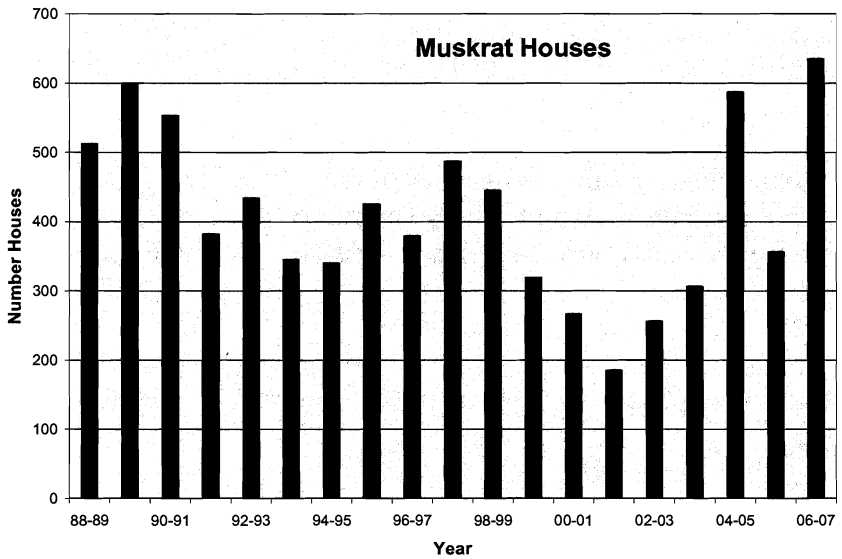
Between 1965 and 2000, habitats throughout the Refuge experienced a general decline of emergent vegetation, including cattail, burreed, arrowhead, and bulrush; muskrat numbers followed that trend. Recent habitat gains brought on by natural processes, habitat enhancement projects, and water level reductions in Pools 5 and 8, have enhanced wetland plants for muskrat. Higher muskrat numbers combined with high pelt prices resulted in an increased harvest in the 2006-07 season (Figure 5). Muskrats reproduce prolifically and changes in their populations generally reflect ebb and flow of habitat, rather than the extent of harvest.

Population status and distribution data are available from studies and inventories, as well as fur catch reports submitted by trapping permittees. Muskrats were studied in the early 1980s in Pool 9 to determine density, survival and harvest rates (Clay and Clark, 1985). The authors reported that muskrat populations on Pool 9 "showed the characteristic resiliency for the species with great reproductive capability and consistent survival." They also found that distribution and harvest was not uniform, which supported the idea of management by zones to provide sustained harvest. Trapping zones were identified in the 1988 Furbearer Management Plan, but never implemented due to administrative costs of a zone system and lack of interest from trappers and the States.

Muskrat harvests are not affected by water level fluctuations. This was determined from regression analyses that compared water levels (at tailwaters and headwaters) in Refuge Pools 4 through 14 to muskrat harvest for the period 1990 and 1992 to 1996 (Wlosinski and Wlosinski, 1998). The authors concluded that water levels did not affect muskrat harvest on the Refuge, but noted that numerous other studies showed that muskrat populations are affected by water levels. Other factors affecting harvest include length of trapping season, fur prices, weather conditions, habitat changes, and trapping effort. The authors concluded that "although sometimes used as a surrogate for population estimates, harvest may not be a good estimator for muskrat populations." The same authors reported that the average number of muskrats trapped is positively correlated to differences in aquatic vegetation coverage estimates (1989 emergent vegetation and floating leaved aquatic vegetation).

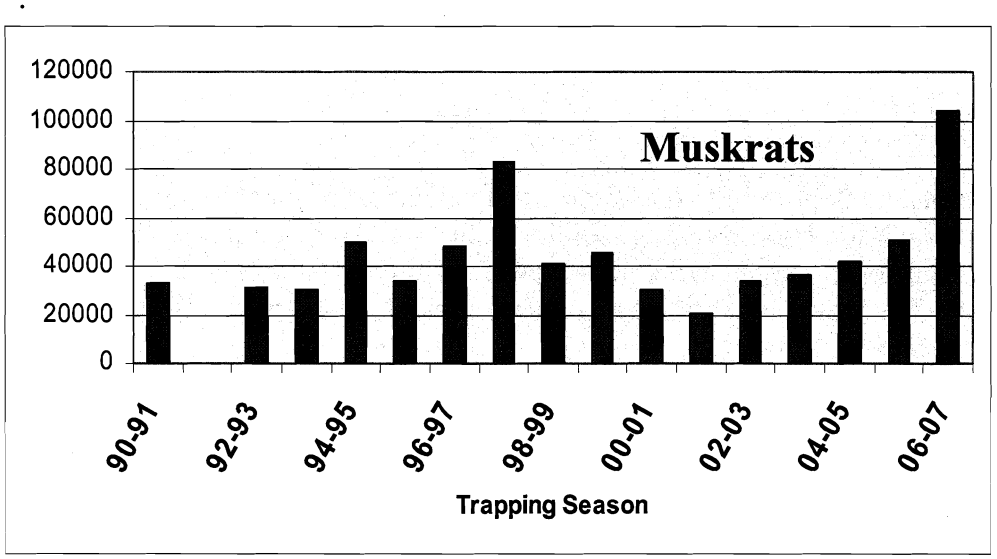
In 1988, the Wisconsin Department of Natural Resources began making annual muskrat house counts at specific backwater wetland locations within Pools 4 -11. The first three years of the survey yielded over 550 houses annually, then declined to less than 200 in 2001-02 (Figure 6). Since then there has been a recovery, with nearly 600 in 2004-05 and a record 635 houses in 2006-07. These data generally correspond to the muskrat harvest since the 1996-97 season (Figure 4).

Figure 6. Muskrat House Counts, in Selected Areas of Pools 4 -11, Upper Mississippi River, 1989-2007 (WDNR, J. Nelson, personal communication).



Trappers have harvested millions of muskrats from the Refuge since the 1940s. Between 1940 and 1970, over 2.25 million rats were harvested (average of 83,000 per year) by an average of 750 Refuge-permitted trappers per year. Recent harvest reports (1990-91 to 2005-06) show about 40,000 muskrats are taken annually by an average of 281 active trappers per year (Figure 5 and Figure 1). In the 2006-07 season, there were 517 Trapper Special Use Permits issued on the Refuge, of which 454 active trappers harvested over 104,000 muskrats, more than double the average.

Figure 5. Annual Harvest of Muskrats on the Upper Mississippi River NW&FR, 1990-91 to 2006-07, as Reported by Trappers in Mandatory Fur Catch Reports. 1991-92 Data Are Missing.

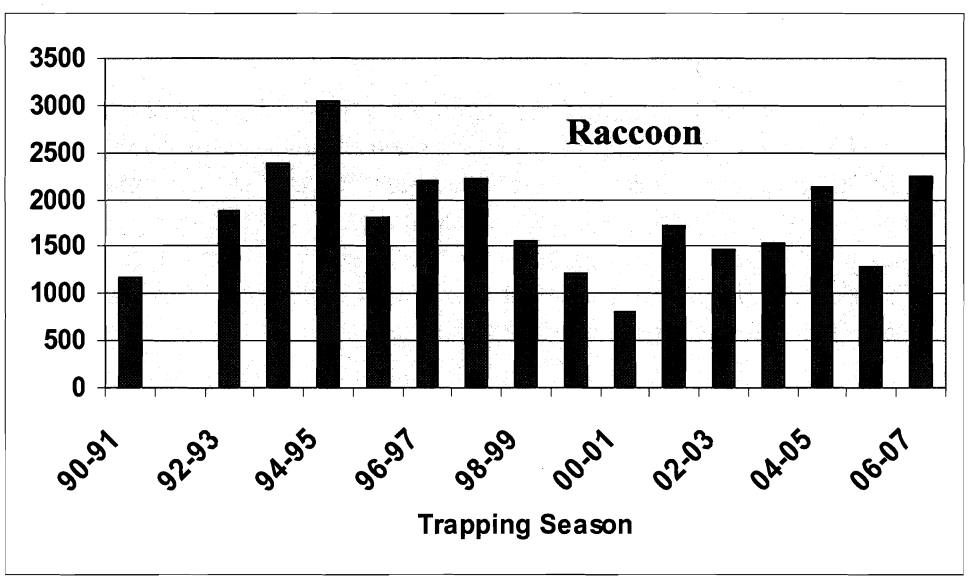


Raccoon

Raccoons are common and found statewide in Illinois (Gehrt et al. 2002). The Minnesota DNR estimates that 800,000 to one million raccoons live throughout the state. Each year Minnesota hunters harvest 100,000 to 150,000 raccoons and trappers take another 40,000 to 75,000.

Since the 1990-91 season, the average annual raccoon harvest on the Refuge has averaged 1,788 animals, ranging from 800 to over 3,000 per year (Figure 7). Raccoon numbers have increased dramatically since the early 1990s in each of the four states bordering the Refuge.

Figure 7. Number of Raccoon Harvested on the Upper Mississippi River NW&FR, 1990-91 to 2006-07, as Reported by Trappers in Mandatory Fur Catch Reports. 1991-92 Data Are Missing.

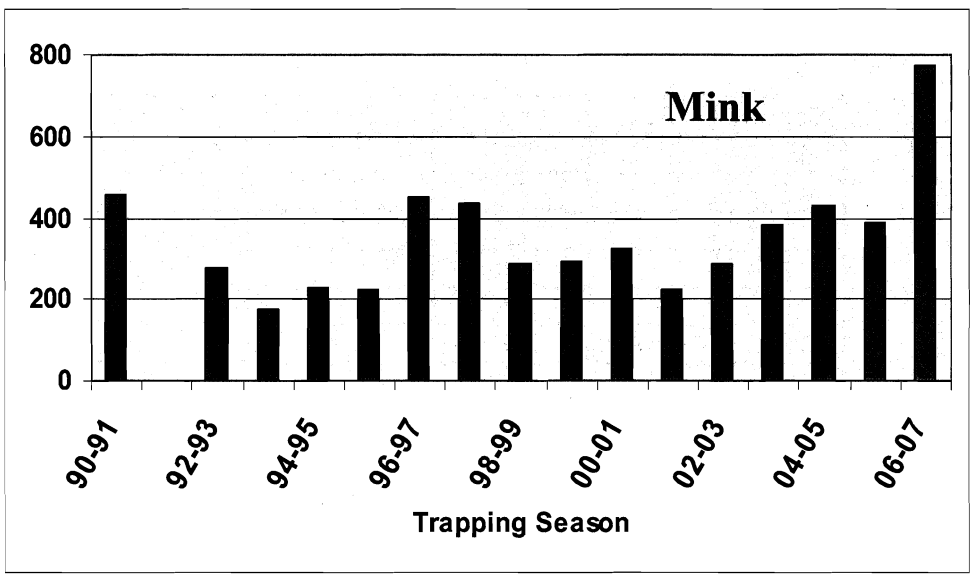


Mink

In Minnesota, mink have been one of the most valued furbearers for two centuries, and while thousands are trapped throughout the State each autumn, mink populations remain healthy. Mink are common and found statewide in Illinois (Bluett et al. 2006). Minnesota, Wisconsin, and Illinois report that mink populations are stable in areas with adequate wetland resources.

The annual Refuge mink harvest averaged 351 animals, ranging from about 175 to 450 per year for the period 1990-91 to 2005-06 (Figure 8). In 2006-07, 773 mink were harvested, the highest number in the 17 years since 1990. This probably reflects high prices, populations, and number of active trappers afield primarily for muskrats which were bringing high prices early in the season.

Figure 8. Number of Mink Harvested on the Upper Mississippi River NW&FR, 1990-91 to 2006-07, as Reported by Trappers in Mandatory Fur Catch Reports. 1991-92 Data Are Missing.



Other Furbearers

Southern Wisconsin populations of red fox have recently been reduced by mange (a density dependent disease that becomes prevalent in high populations) and competition from coyotes. Population trends are declining in Illinois for red fox and gray fox (Robert D. Bluett, Illinois Department of Natural Resources, personal communication). Minnesota reports that the red fox population has shown a slight decline in the western and southern portions of the state between 1992 and 2000. Concurrently, the red fox estimated trapping harvest has declined from over 20,000 annually in the mid-1990s, to less than 10,000 from 1998 to 2003. Minnesota DNR still considers the red fox population healthy, and views slowly declining populations in the south and west as an effect of a slowly increasing coyote population in this same area (as indicated by predator scent post surveys) and not a result of trapping. Iowa harvest of red fox declined in 2004 and 2005, but no population status report is available.

In Illinois, fourteen species are classified as furbearing mammals (Illinois Department of Natural Resources website; http://www.dnr.state.il.us/orc/wildlife). Based on their ranges, all occur on the Refuge (Hoffmeister 1989). In addition to the species described above, other Illinois furbearers that are common and found statewide include opossums and striped skunks (Gehrt et al. 2006), coyotes (Van Deelen and Gosselink 2006), bobcats (Woolf and Hubert 1998, Woolf et al. 2000) and other furbearers (Hoffmeister 1989).

Over the past ten years the Refuge-wide harvest of fox (red and gray), opossum, coyote, and skunk has remained fairly constant (Table 3). The exception is opossum in 2006-07

when the harvest was high, perhaps reflecting the high number of active trappers that year.

Table 3. Harvest of Fox, Opossum, Coyote, and Skunk Through 10 Seasons, 1997-98 to 2006-07, Upper Mississippi River NW&FR, as Reported by Trappers in Mandatory Fur Catch Reports.

Season	Fox	Opossum	Coyote	Skunk
06-07	13	609	20	15
05-06	6	227	3	7
04-05	22	439	3	16
03-04	4	395	1	17
02-03	17	320	0	4
01-02	10	108	3	12
00-01	9	153	10	2
99-00	10	264	4	10
98-99	9	375	4	15
97-98	9	300	2	15

Availability of Resources:

The Refuge has adequate staff and other resources to administer the trapping program. Each Refuge District issues Trapping Special Use Permits to trappers who must apply in person and pay a fee of $20.00. This permit fee will rise to $30.00 for the 2008-09 season and will be reviewed every 5 years thereafter. However, those funds go to the U.S. Fish and Wildlife Service general fund, not directly back to the Refuge. The new furbearer management plan proposes that these funds be returned to the Refuge to help offset administrative costs. Permits were first issued for a fee of 10 cents per tag, with a 50 tag limit in 1941 and continued as such through 1978. In 1979, a standard 40 tags was issued for a fee of $5.00 per permit. This reduction in the number of trap tags was designed to decrease intense competition among trappers when muskrat pelts were selling at high prices ($4-6.00). The fee was increased to $10.00 in 1990, $15.00 in 1991, and to $20.00 in 2000 to the present. The standard of 40 tags per permit has remained the same throughout the period. Trapping permits were replaced by a Refuge Trapping Special Use Permit in 2000.

Access trails, parking lots, boat landings, signs, and other facilities as well as staff to enforce regulations and maintain these facilities have been provided by the Refuge. These facilities have been maintained for many years primarily to meet needs of the public engaged in fishing, hunting, trapping and boating-related activities.

Anticipated Impacts of the Use:

Impacts of public trapping on the purposes of the Refuge and mission of the refuge system can be either direct or indirect and may have negative, neutral, or positive impacts on Refuge resources.

Direct impacts (late winter trapping seasons) may include displacing migratory birds during the pair bonding and pre-nesting season. Indirect impacts may include catch of target and non-target species that are predators on migratory birds and/or nests, or removal of species that induce habitat change (i.e. beaver). These indirect impacts could be either positive or negative depending on species, area, and habitat conditions.

Because of the temporal separation of trapping activities and breeding wildlife using the Refuge, direct impacts to these resources by trappers is negligible. Trappers using the Refuge in early March may disturb individual early nesting waterfowl on occasion, and cause temporary displacement from specific and limited areas. These impacts are occasional, temporary, and isolated to small geographic areas. Bald eagles initiate nesting activity on the Refuge in February, but there is no evidence that trapping has impacted bald eagle nest success or the population. Between 1986 and 2006, the number of active bald eagle nests jumped from 9 to 165 active nests on the Refuge, an 18-fold increase. Over the past 20 years or more, there have been no reports of bald eagles caught in furbearer traps on the Refuge. While such events could occur, the Refuge has addressed the possibility with a regulation that prohibits the use of exposed baits.

There are potential impacts on habitat by trappers using boats equipped with shallow water, surface drive propulsion props that can tear-up rooted plants as boats make their way through aquatic vegetation beds. The significance of these impacts has not been determined, but is believed to be minor since most impact occurs after the growing season. Where aquatic vegetation cover has decreased in the Refuge due to sedimentation, wind and wave action, herbivores (fish and mammals), and continual inundation, additional vegetative losses due to trapping activities would have a negative impact on Refuge habitat. Any habitat change as a result of trappers walking through vegetation or using willow cuttings to mark their traps is undetectable and insignificant. On the other hand, the creation of openings in heavy stands of aquatic vegetation by disturbance can enhance habitat use by fish and wildlife.

Indirect impacts to wildlife nesting and breeding success can result from the removal of animals under a trapping program. In many instances, these impacts are positive. Reductions in populations of nest predators such as raccoon, fox, skunk, and mink have a limited positive impact on nesting birds. The degree to which predator management, through a public trapping program, benefits migratory bird production can vary widely depending on the timing of the removal of predators, size of the habitat block, habitat isolation (for example islands) and adjacent land use.

The removal of plant-eating species such as beaver and muskrat can have both positive and negative impacts on Refuge resources. Muskrats will dig bank dens into dikes of

water management facilities causing considerable damage and add costs to operations of the Refuge. For example, the Refuge spent nearly $200,000 in 2007 to repair the dike system at Spring Lake, Savanna District, weakened by muskrat dens and wave action. Beaver will sometimes plug water control structures causing damage, limiting access and compromising Refuge habitat management capabilities. Managing beaver and muskrat populations at reasonable levels through a public trapping program can reduce costs to the Refuge in wildlife management activities.

Habitat management can be enhanced, however, by these same animals. Muskrats build houses and dens using aquatic vegetation, thus creating openings available for fish, waterfowl, and other migratory birds. Beaver dams create ponded habitat, and their lodges are also associated with openings in aquatic vegetation beds. These benefits minimize the need to commit Refuge resources to achieve these habitat conditions.

When considering impacts to Refuge purposes, impacts of the trapping program obviously include those to the furbearer populations themselves. Individual animals are harvested and removed, yet State Departments of Natural Resources indicate furbearer populations, with exceptions, are stable to increasing (see above). Harvest data derived from trapper Fur Catch Reports indicate that trapper efficiency has remained fairly constant despite fewer total animals trapped in some years. Harvest data best reflect the number of trappers fur prices, trapping conditions, habitat, and population levels.

Other public use of the Refuge during the trapping season is predominantly by waterfowl hunters. Conflicts between users vary throughout the Refuge. Encounters between trappers and hunters competing for the best sites most often occur early in the trapping season, prior to extensive ice cover, after which trappers are the predominant user.

There has been a history of hunter/trapper conflict occurring in the Wisconsin portion of the Refuge; it was intense enough that between 1977 and 1998, the State had not opened trapping along the Mississippi River until after the close of the state duck hunting season. Change occurred following input from citizens, especially hunters and trappers, when the Refuge and Wisconsin Department of Natural Resources agreed to implement an earlier opening for trapping in the "Mississippi River Zone." Regulations in this area now allow mink and muskrat trapping to begin the day after the duck season closes or the second Monday in November, whichever occurs first, and goes through the last day of February. However, beaver trapping in that zone continues to begin the day after the final closure of the duck season and goes through March 15.

The success of this new trapping program rests with the hunter and trapper community. User conflicts can be avoided by trappers setting and checking traps on weekdays and during mid-day, checking with hunters before setting trap lines, and approaching hunters when ducks are not flying. Hunters need to be aware of the presence of trappers and encourage mid-day trap checks.

Public Review and Comment:

A draft Compatibility Determination was included with the Refuge's Draft Furbearer Management Plan released in June, 2007 for a 30-day public comment period. Public notification included a summary mailing to Refuge trappers and other interested parties, a mailing to State agencies, media announcements, and posting at the Refuge District Offices and on the Refuge website: uppermississippiriver@fws.gov.

No comments were received that specified items within the draft compatibility determination.

This Compatibility Determination updates an interim Compatibility Determination that accompanied the 2006 Final Comprehensive Conservation Plan and Environmental Impact Statement (EIS/CCP). Draft Compatibility Determinations were made available with drafts of the EIS/CCP that were released May 1, 2005 for a 120-day comment period and during a subsequent 90-day review period on a supplement to the EIS released December 3, 2005. Public notification included notices in the Federal Register, media announcements, and 31 public meetings and workshops attended by more than 3,700 persons. Several comments on trapping of furbearers were received and are found in Chapter 7 of the EIS, with a Service response. However, no comments specific to the interim compatibility determination were received.

Determination:

____ Use is Not Compatible

_xx_ Use is Compatible with Following Stipulations

Stipulations Necessary to Ensure Compatibility:

1. Trapping activity must be conducted in compliance with existing State regulations.

2. Trappers must obtain a Trapping Special Use Permit to trap on the Refuge and comply with existing Refuge trapping, access, and public use regulations.

3. There must be a harvest limit of no more than one otter per trapper per season, in accordance to state regulations.

4. Special furbearer management areas may be established to provide managers the flexibility needed to meet site-specific habitat needs, address population objectives, protect Refuge infrastructure, and promote education of young trappers.

Justification:

Furbearer trapping on the Refuge is a useful tool in maintaining balance between furbearers and habitat, and safeguarding Refuge infrastructure. High predator (raccoon

and red fox) populations can decrease nest success of ground-nesting migratory birds, thus compromising a purpose of the Refuge. Other furbearers damage Refuge infrastructure, especially muskrats that excavate their dens in earthen dikes, and beaver that plug water control structures. Costs of repair require the Refuge to divert resources away from other management activities that otherwise meet the purposes of the Refuge.

Furbearer populations, with local exceptions, are stable or increasing in the four States in which the Refuge occurs. The Refuge's Furbearer Management Plan concludes that the trapping program does not have any appreciable negative impacts on furbearer populations. A study of muskrat populations of Pool 9 Reno, Minnesota to 2 miles above Harpers Ferry, Iowa) in the early 1980s, "showed the characteristic resiliency for the species with great reproductive capability and consistent survival." The authors also found that muskrat distribution and harvest was not uniform, a conclusion since matched by mandatory trapper fur catch reports.

The stipulations listed above protect furbearer populations. The Refuge relies on State regulations to sustain furbearer populations but will establish a limit of one otter per trapper per season to help ensure a higher population on the refuge to meet needs of all recreationists. The trapping special use permit conditions ensure equity of harvest and commercial use of refuge resources; they reduce conflicts between refuge users; and reduce impacts to habitat (vehicular use).

In view of the above, trapping of furbearers, with the stipulations previously described, will not materially interfere with or detract from the purposes of the Refuge and the mission of the Refuge System. Overall, managed furbearer trapping contributes to the goals of the Refuge by maintaining vigor and health of furbearer populations and by safeguarding Refuge infrastructure critical to habitat for scores of fish and wildlife species.

This Compatibility Determination is based on the actions adopted under the 2007 Furbearer Management Plan.

Compliance with Regulations Governing Economic Uses on Refuges (50 CFR 29.1)

Regulations governing the National Wildlife Refuge System require that the economic use of natural resources on refuges must contribute to the achievement of the refuge's purpose or the mission of the system.

The contribute standard or threshold, as written in the regulation, is an either/or threshold, meaning that a use can be allowed if it contributes to both or just one of these elements. This either/or distinction is critical, for a use may not always contribute to a purpose, but can contribute to the mission and thus be allowed, if appropriate and compatible.

The Refuge Improvement Act of 1997 states that the "....mission of the National Wildlife Refuge System is to administer a national network of lands for the <u>conservation, management</u> and, where appropriate, restoration of the fish, wildlife and plant resources

and their habitats with the United States for the benefit of present and future generations of Americans" (emphasis added).

Conservation and management is further defined in the Act as follows: "The terms 'conserving,' 'conservation,' 'manage,' 'managing,' and 'management' mean to sustain and, where appropriate, restore and enhance, healthy populations of fish, wildlife, and plants utilizing, in accordance with applicable Federal and State laws, methods and procedures associated with modern scientific resource programs. Such methods and procedures include, consistent with the provisions of this Act, protection, research, census, law enforcement, habitat management, propagation, live trapping and transplantation, and regulated taking" (emphasis added). These definitions denote active management and is in keeping with the House report on the Act which stated that the "Refuge System should stand as a monument to the science and practice of wildlife management."

It thus follows, that if an economic use of a natural resource is shown to be conservation and management as defined in the Act, it does contribute to the mission by the very definition of terms used. If a use contributes to the mission, it thus meets the standard or threshold established in 50 CFR 29.1, regardless if it contributes to the purpose.

There are three affirmative tests stemming from the definition of terms in the Act which help gauge whether an economic use of natural resources contributes to the mission. These are:

1. Is the program a modern scientific resource program?
2. Does the harvest help sustain healthy populations?
3. Is the harvest a form of regulated taking?

The Refuge's furbearer management program, as directed by the Furbearer Management Plan with stipulations in this compatibility determination, is in compliance with the economic use regulation for the following reasons:

1. The harvest of furbearers is a modern scientific resource program. The states, along with the refuge, have population monitoring protocols that either guide or dictate harvest through regulations and, for certain species like otter, quotas. There is also an extensive body of peer-reviewed research on furbearer population dynamics that guides season-setting and take regulations. The data show that populations of furbearers on the refuge remain healthy with long-term trends of either stable or increasing populations depending on species. The furbearer management program relies on population monitoring, research, reporting, and other methods, all the hallmarks of a modern scientific program.

2. The harvest of furbearers helps sustain healthy populations. As reflected in peer-reviewed research, population monitoring, and harvest reporting, trapping is deemed compensatory over the long-term, meaning that harvest levels are generally no greater than the loss of individuals due to weather, drought, flooding, disease, age, or accidents over time. Thus, with or without trapping, populations will ebb and flow, and a certain

portion of the population, or "surplus" relative to habitat carrying capacity, is always lost to natural causes. Harvest of this surplus is a keystone of wildlife management and allows regulated harvest of game animals while ensuring sustainable, viable long-term populations. Refuge and state data confirm that the refuge is sustaining viable populations of furbearers. The harvest of furbearers can also reduce serious disease outbreaks or habitat imbalances that can devastate populations in the short-term. Indirectly, harvest helps maintain a balance between herbivore furbearers and their habitat (muskrat and beaver), and may help ensure a balance between predatory furbearers (e.g. mink, raccoon, and otter) and a multitude of other fish and wildlife species on the refuge.

3. Harvest of furbearers is highly regulated or managed. Trapping is a highly regulated consumptive use. Trappers need to have a state license and a refuge special use permit. They are also required to follow state regulations and an extensive list of refuge-specific stipulations in the refuge permit. Both licenses and permits require that a fee be paid.

In the case of the furbearer management program on the Upper Mississippi River National Wildlife and Fish Refuge, it clearly is a science-based regulated taking that helps ensure viable and healthy populations of furbearers and other wildlife. Thus, it contributes to the mission as defined and meets the threshold in 50 CFR 29.1.

Signature: **Refuge Manager:** Dan Dutton 9/27/07
(signature and date)

Concurrence: **Regional Chief:** Nita M. Fuller 10.5.2007
(signature and date)

Mandatory 10- or 15 year Re-evaluations Date: 10/5/2017