

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 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 Fur Management Plan (1988) provides policy, strategies, and regulations on furbearer trapping. An objective of the Refuge’s Final Environmental Impact Statement and Comprehensive Conservation Plan (EIS/CCP) is to update the Trapping Plan (Fur Management Plan) in 2007, and to continue the existing trapping program until the update is completed.

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.

Between the 1990-01 and 2003-04 trapping seasons, the average annual number of permitted trappers on the Refuge was 290, ranging from a low of 225 in 2002 to a high 443 in 1997 (Table 1). The average number of permitted trappers per State, 1990-01 to 2003-04 was: Iowa = 80; Illinois = 38; Minnesota = 61; and Wisconsin = 171 (Figure 1).

Table 1. A summary of thirteen years of trapper and harvest data from for the 1990-91 to 2003-04 seasons (data are missing for 1991-92) on the Upper Mississippi River National Wildlife and Fish Refuge.

Trappers		Muskrats		Beaver		Raccoon		Mink	
Average	Range	Average	Range	Average	Range	Average	Range	Average	Range
290	225 to 443	39,923	20,520 to 83,035	2,085	1,245 to 3,077	1,768	791 to 3046	310	176 to 458

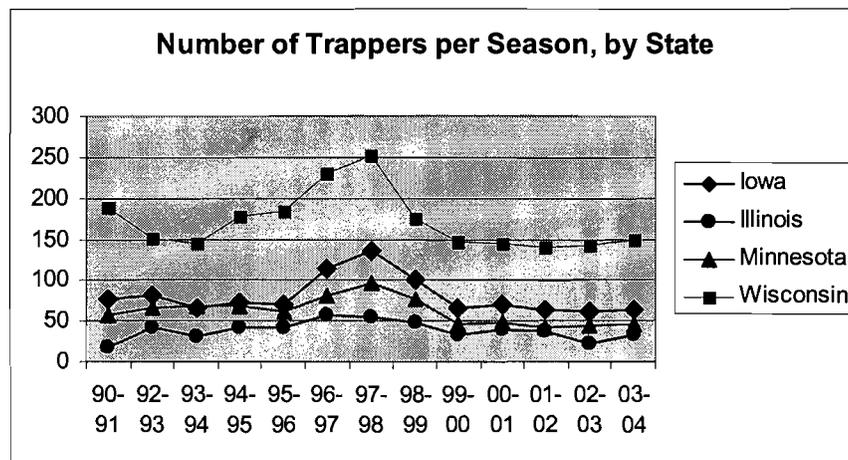


Figure 1. Number of trapping permits issued per State, Upper Mississippi River National Wildlife and Fish Refuge, 1990-91 through 2003-04 trapping seasons.

These trappers reported an average annual muskrat harvest of 39,630, ranging from 20,520 in 2001 to 83,035 muskrats in 1997. Beaver harvest averaged 2059 animals, ranging from 1254 in 2002 to 3077 in 1997. The trends in number of trappers and number of animals harvested are similar, showing a gradual increase from 1990 to 1997 and gradual decline from 1997 to 2003. For further detail on trapping harvest on the Refuge refer to the Refuge's Draft Comprehensive Conservation Plan and Environmental Impact Statement.

On a Refuge District basis, most of the trappers and most of the furbearer harvest occurs in the McGregor District (Pools 9-11), followed by La Crosse (Pools 7 and 8), Winona (Pools 4-6) and Savanna (Pools 12-14).

The trapping efficiency (catch per unit effort) for muskrats, estimated as the average number of muskrats caught per trap deployed each night by trappers who targeted muskrats, was derived from fur catch reports for the years 1998 to 2003. Efficiency was

close to 0.28 muskrats per trap between 1998 and 2000, but since then, efficiency has ranged from 0.22 to 0.26 muskrats per trap night. The 0.22 rate occurred in 2001, matching the lowest muskrat harvest during the 1998-2003 period.

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, except in 15 Waterfowl Hunting Closed Areas and Sanctuaries (44,544 acres or 18% of the Refuge; EIS/CCP Alternative A) and in one Administrative No Hunting Zone (66 acres of Upper Halfway Creek adjacent to Pool 7) beginning the first day of the regular state duck hunting season 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 2,467-acre area (Crooked Slough Backwater in Pool 13) is closed to all trapping and other forms of entry year round because this area of the former Savanna Army Depot is closed due to contaminants and unexploded ordinance.

The Refuge has regulated trapping within its boundaries since 1929 and administers trapping by issuing Special Use Permits to state-licensed individuals who 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 qualified 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 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, fur prices, weather conditions, habitat changes, extent of aquatic vegetation coverage, and trapping effort.

Access for trapping on the Refuge is by foot, boats, tracked vehicles and snowmachines. Use of the later 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.

Availability of Resources:

There are costs to administering the trapping program on the Refuge. Each Refuge District issues permits to trappers who intend to trap in their respective States and pools. Trappers must apply in person at the respective District Office. Trappers pay a fee that recovers the government's cost of administering the trapping program. 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 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:

Wisconsin, Illinois, and Minnesota publish various types of wildlife population status reports that include furbearers. The 2002-2003 Wisconsin Furbearer Status Report indicates that statewide populations of muskrat, mink, raccoon, and beaver are doing well. However, there has been a recent decline in beaver populations along the Mississippi River management zone, but no changes in beaver trapping regulations have been made by the State. River otter are increasing in the southern portion of Wisconsin. The Wisconsin portion of the Refuge has an open season on otter while there is no otter season on the Illinois, Iowa, and Minnesota portions of the Refuge. 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.

The Illinois Department of Natural Resources web site indicates that beaver, muskrat, raccoon, red fox and mink are common and occur in every county in Illinois. Mink "are most abundant in the glacial lakes area of northeastern Illinois, counties bordering the lower Mississippi River, and the southern third of the state." Some of the highest muskrat numbers are found in the northeastern and northwestern parts of the state, which includes the Refuge. Raccoons are abundant and have increased dramatically since the early 1900s. Scientists believe there are more raccoons in Illinois today than when the first

European settlers arrived there. Red fox are most common in the northern two thirds of Illinois.

River otters can be found nearly anywhere in Illinois. They were listed as a state threatened species in 1977. Their status was downgraded to state endangered in 1989 when fewer than 100 otters existed in Illinois. Many of them lived along the Mississippi River and its backwaters. Today, otter numbers are still fairly low but Illinois upgraded their status from state endangered to state threatened. Otter trapping is closed in Illinois.

Minnesota Department of Natural Resources reports that muskrats are a valuable wetland animal. Minnesota trappers sometimes harvest 100,000 muskrats in a single autumn season without harming the population. The thick fur is used for warm coats and hats.

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.

There are 0.6 beaver colonies per river mile in beaver range of Minnesota. During the winter, a beaver colony will include the two adults, their spring youngsters, and often year-old beavers. 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.

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. 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.

Early in the twentieth century, otter range was greatly reduced in Minnesota as a result of wetland drainage and pollution which destroyed habitat. Today, otters are 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. About 2,000 otters are trapped each year out of a total population of 12,000. There is no open season on otter in the southern part of Minnesota, which includes the Refuge.

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 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. These impacts are occasional, temporary, and isolated to small geographic areas. Bald eagles initiate nesting activities on the Refuge in February, but there is no evidence that trapping has impacted bald eagle nest success. Between 1986 and 2004, the number of active bald eagle nests jumped from 9 to 136 active nests on the Refuge, a 15-fold increase.

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 creation of openings in heavy stands of aquatic vegetation 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. 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. Harvest data best reflect the number of trappers, trapping conditions, and fur prices.

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 of this Compatibility Determination was included in the Draft Comprehensive Conservation Plan and Environmental Impact Statement (EIS) released May 1, 2005 for a 120-day comment period. It was also available 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 this 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 Special Use Permit to trap on the Refuge and comply with existing Refuge trapping, access, and public use regulations.
3. The Furbearer Trapping Plan must be revised by 2007, as called for the in the Refuge Comprehensive Conservation Plan.

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 Fur Management Plan (1988) 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.

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 purposes 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 will be considered an interim document until the Refuge updates its existing Fur Management Plan of 1988, as called for in the Final EIS/CCP. The update process will invite public and agency comment on draft plans and will be accompanied by a new Compatibility Determination.

Signature: **Refuge Manager:** Alm Kaulta 8/17/06
(signature and date)

Concurrence: **Regional Chief:** Nita M. Zully 8/21/2006
(signature and date)

Mandatory 10- or 15 year Re-evaluations Date: 2016