

COMPATIBILITY DETERMINATION

Use: Tree Harvest by Third Parties for Habitat Management and Safety Purposes

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

Establishing and Acquisition Authorities: 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.

Goals of the National Wildlife Refuge System:

- a. To fulfill our statutory duty to achieve refuge purpose(s) and further the System mission.
- b. Conserve, restore where appropriate, and enhance all species of fish, wildlife, and plants that are endangered or threatened with becoming endangered.
- c. Perpetuate migratory bird, interjurisdictional fish, and marine mammal populations.
- d. Conserve a diversity of fish, wildlife, and plants.
- e. Conserve and restore, where appropriate, representative ecosystems of the United States, including the ecological processes characteristic of those ecosystems.
- f. To foster understanding and instill appreciation of fish, wildlife, and plants, and their conservation, by providing the public with safe, high-quality, and compatible wildlife-dependent public use. Such use includes hunting, fishing, wildlife observation and photography, and environmental education and interpretation.

Description of Use:

What is the use? Cutting of trees is an important tool for the purposes of maintaining safety and improving forest diversity and health through thinning, creating openings, or removal of invasive species. Cutting may include standing and fallen trees cut by Refuge staff, by the public for

personal-use firewood, by contractors, and by commercial timber harvesters. Cutting of trees that are a hazard to property and human safety will be limited to dead, dying, and hanging trees.

Where is the use conducted? Tree cutting for habitat management purposes will be permitted within most forested areas (51,000 acres) of the Refuge. The areas open to tree cutting will be specified in a Habitat and/or Forest Management Plan. Pending completion of that plan, cuttings will be handled on a case-by-case basis using principles established in the Upper Mississippi River Systemic Forest Stewardship Plan as a guide (Guyon et al. 2012).

When is the use conducted? Any large-scale commercial cutting will be delayed until the Forest Management Plan is completed, or only after consultation and planning with professional foresters. Because much of the Refuge is river floodplain, tree cuttings for habitat management typically occur during winter or early spring, when frozen river channels and ground surface allow equipment access and wildlife and cultural resource disturbance is minimized. Some small scale personal use tree cutting may be permitted during other periods depending on circumstances. Coordination with the Corps of Engineers will be an important part of cutting planning since Service-acquired and Corps-acquired lands are intermingled on the Refuge and the Corps retained forest management on lands they acquired.

How is the use conducted? The amount of tree cutting at any one time will vary, depending on storm damage, disease, planning and funding constraints, and resultant number of active management units. We estimate that up to five commercial or contracted tree cuttings may be active at one time. Interest in commercial tree cutting on the Refuge has always been tempered by market fluctuations and limited access.

Why is this use being proposed? Current floodplain forest habitat represents only a small portion of that which historically occurred on the Refuge (Guyon et al. 2012). Although the Refuge includes some of the largest contiguous areas of floodplain forest in the central United States, these forests often lack diversity and recruitment and are primarily limited to the upper reaches of navigation pools. The change in floodplain forest on the Refuge is illustrated by the decline or disappearance of mast producing species such as oaks and hickories, and corresponding increase in dominance by silver maple (Guyon et al. 2012). Diseases such as Dutch elm disease, proliferation of invasive plant species like reed canary grass, and outbreaks of the emerald ash borer and other insects also continue to have negative impacts on floodplain forests.

Availability of Resources: Each Refuge District currently uses existing staff to cut hazardous trees and to issue Special Use Permits and contracts for periodic tree cutting operations. Large-scale operations affecting many acres may be deferred until staff and funding is available due to the additional planning and permit administration and oversight required (bid process, bonding, permittee selection, inspection of field work, etc.). In some cases, resource partners like the Corps of Engineers and Minnesota Audubon, with staff foresters and/or technicians, will be able to assist with this extra workload. Any permit fees or timber sale receipts will not off-set costs since these funds are deposited in general accounts and not returned to the Refuge.

Anticipated Impacts of the Use: Because of the large area of the Refuge on which this activity will occur, most wildlife species may be affected by tree cutting activities. This includes the

northern long-eared bat, which is threatened with 4(d) Rule. Key waterfowl using tree cavities for nesting include wood duck and hooded merganser. Many other bird species use forested habitat for nesting, roosting, protective cover, or feeding. Examples of important species include: bald eagle, great blue heron, great egret, red-shouldered hawk, barred owl, prothonotary warbler, several woodpecker species, and many passerine bird species. The Upper Mississippi River corridor, 261 miles of which is encompassed by the Refuge, provides habitat critical to the successful migration of many bird species. The forests are also important to a variety of mammals, reptiles and amphibians, insects, and flowering plants.

Carefully managed tree cuttings will provide long-term benefits to wildlife and plants by improving overall forest diversity and health. During tree cutting activities, wildlife will be displaced to adjacent areas, although this disturbance is not likely to have a measurable impact and will be mitigated by timing and duration of the activity. Potential adverse impacts include: short-term loss of site-specific habitats; short-term fragmentation of the landscape with resulting impact to bird use and productivity; loss of dead whole trees on the ground; soil disturbance that may increase exotic plant invasion and erosion; damage to roads and wetlands from equipment; damage to cultural resources; reduced visual esthetics; and disturbance to wildlife and visitors from cutting operations. These impacts are generally short-term in nature and on relatively small areas, and can be controlled to a large extent by permit conditions and management oversight. Required cultural resource surveys and actions will be conducted as determined in consultation with the Service's Regional Historic Preservation Officer.

Potential positive impacts include: restoration, maintenance and enhancement of forest habitats; and increased or maintained forest habitat diversity (age, species, and structure).

Public Review and Comment: This Compatibility Determination is a re-evaluation of an existing determination which 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. A few comments were received specific to forest management and are included in Chapter 7 of the EIS, with a Service response. However, no comments specific to this use or determination were received.

A draft of this re-evaluation was released on August 5, 2016 for a 30-day comment period. Public notification of the availability of this CD included media announcements and posting on the Refuge's website. No comments specific to the draft re-evaluation were received.

Determination:

Use is Not Compatible

Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility:

1. Cutting of trees by Refuge staff that are a hazard to property and human safety will be limited to dead, dying, and hanging trees.
2. Cutting of trees by the public for personal-use firewood will be limited to dead wood on the ground.
3. Commercial tree cutting must meet specific habitat and related wildlife objectives and contribute to the purposes of the Refuge.
4. Special use permits and/or contracts will be issued by District Managers and list special conditions that must be met to avoid or minimize adverse impacts to habitat, fish and wildlife resources, cultural resources, and the visiting public.
5. Large-scale tree harvest deferred until completion of a Habitat and/or Forest Management Plan which will identify management units, desired habitat goals/objectives, and management strategies, thus ensuring the best management practices and predicted outcome. If opportunity or need warrants action prior to plan completion, the Refuge will consult professional foresters from other refuges, Corps of Engineers, or other agencies before proceeding.
6. A cultural resources review may be required to be compliant with the National Historic Preservation Act and/or Archaeological Resources Protection Act.

Justification: The series of dams and resultant impoundments created to accomplish the 9 foot navigation project within the Refuge has significantly changed the floodplain forest. The diverse forest community that existed when the Refuge was established has been adversely affected by increased surface and ground water levels, and frequent flooding. The pre-lock and dam forest has given way to a more monotypic forest, dominated by silver maple. The current forest is even aged, growing old, and in many cases not regenerating itself. Reed canary grass is replacing formerly forested areas. If current trends continue, there could be marked loss of forest within the Refuge and throughout the floodplain, and a marked decline in the diversity and abundance of species which depend on floodplain forest for all or part of their life-cycle requirements. Prescribed forest management practices, including tree cutting, are important elements of reversing this downward trend. Using commercial or contracted cuttings to accomplish habitat management objectives is efficient, and perhaps the only realistic way to accomplish prescriptions given the labor-intensive nature of tree cutting. Tree cutting will only be done to meet specific forest health and wildlife objectives, and thus will only be allowed when it meets the threshold of contributing to Refuge purposes. Adverse impacts from tree cutting will be short-term in nature and more than offset by the long-term gains in wildlife and plant benefits. Taken in this long-term context, cutting of trees will not materially interfere with the purposes of the Refuge or the mission of the Refuge System.

