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

**Use:** Tree harvest by third parties for habitat management purposes

**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:**

The Refuge includes one of the largest contiguous areas of floodplain forest in the central United States. Forest inventories completed in recent years show a forest community dominated (> 80%) by silver maple. Other common tree species include: cottonwood, green ash, black willow, river birch, American elm, swamp white oak, bitternut hickory, and black walnut. The average tree age is between 50 and 70 years (UMRCC, 2002).

The Refuge will allow cutting and removal of trees (tree harvest) from the Refuge by third parties for the purpose of improving forest diversity and health through thinning, creating openings, or removal of invasive tree species. Harvest may include standing and fallen trees for personal-use firewood, and commercial timber harvest. Removal of trees

that are a hazard to property and human safety will be permitted in specific circumstances. Tree harvest will be considered and may be permitted within most forested areas (51,000 acres) of the Refuge. The areas open to tree harvest and management strategies will be specified in a Forest Management Plan, or, handled on a case-by-case basis if needed pending plan completion. Any large-scale commercial harvest will be delayed until the Forest Management Plan is completed, or only after consultation and planning with professional foresters. Coordination with the Corps of Engineers will be an important part of harvest planning since Service-acquired and Corps-acquired lands are intermingled on the Refuge and the Corps retained forest management on lands they acquired.

The number of permittees during any one time period will vary, depending on planning and funding constraints, and resultant number of active management units, and to some extent, market interest. We estimate that up to five commercial permits (sales) may be active at one time. Interest in personal-use firewood is expected to increase in general, but interest in harvesting on the Refuge will be tempered by permit requirements, species available, and often difficult access.

Because much of the Refuge is river floodplain, access and working conditions are generally limited by river channels and hydric soils. Tree harvest will typically occur during winter or early spring, when frozen river channels and ground surface allow equipment access and wildlife and cultural resource disturbance will be minimized. Some small scale personal use tree harvest may be permitted during other periods depending on circumstances.

**Availability of Resources:**

Periodic and small-scale harvest operations can be adequately administered with existing staff resources. Large-scale operations affecting many acres will have to 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, with their staff of foresters and 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 harvest activities. 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, prothonotory 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 harvest will provide long-term benefits to wildlife and plants by improving overall forest diversity and health. During harvest 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 harvest.

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:**

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. 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.

**Determination:**

____ Use is Not Compatible

_xx_ Use is Compatible With Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

1. Any tree cutting must meet specific habitat and related wildlife objectives and contribute to the purposes of the Refuge.

2. Special use permits 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.

3. In most cases, large-scale tree harvest will be deferred until completion of a 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.

**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 harvest, are important elements of reversing this downward trend. Using third parties to accomplish harvest is efficient, and perhaps the only realistic way to accomplish prescriptions given the labor-intensive nature of tree harvest. Harvest 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 harvest will be short-term in nature and more than off set by the long-term gains in wildlife and plant benefits. Taken in this long-term context, harvest of trees will not materially interfere with the purposes of the Refuge or the mission of the Refuge System.

**Signature:** **Refuge Manager:** _____ 8/17/04
**(signature and date)**

**Concurrence:** **Regional Chief:** _____ 8/21/2006
**(signature and date)**

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