

## Draft Compatibility Determination

**Use:** Haying

**Refuge Name:** Port Louisa National Wildlife Refuge

### **Establishing and Acquisition Authority(ies):**

The Mark Twain National Wildlife Refuge (NWR), including the land area now managed as Port Louisa NWR, was established under the provisions of a Secretarial Order signed on August 1, 1958. Individual divisions of the Mark Twain NWR were designated as separate National Wildlife Refuges in a reorganization change as part of the Comprehensive Conservation Plan (CCP) in 2004. Much of the refuge consists of lands acquired in fee title by the U.S. Army Corps of Engineers that are managed as part of the refuge under a Cooperative Agreement between the Department of the Army and the Department of the Interior.

#### Establishing Authorities:

Refuge Recreation Act (16 U.S.C. 460k-1)

Migratory Bird Conservation Act (16 U.S.C. 715d)

Fish and Wildlife Coordination Act (16 U.S.C. -664)

Emergency Wetland Resources Act of 1986 (16 U.S.C. -3901(b) 100 Stat. 3583)

1985 Food Security Act

Refuge lands also include the Iowa River Corridor, acquired after the 1993 floods. These lands in Benton, Iowa, and Tama Counties were acquired under the Emergency Wetland Resources Act of 1986 (16 U.S.C. 3901). Most of the Iowa River Corridor lands also have underlying USDA easements. The lands are managed through a Memorandum of Understanding with Iowa Department of Natural Resources.

### **Refuge Purpose(s):**

- "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. -715d (Migratory Bird Conservation Act)
- "...shall be administered by (Secretary of the Interior) directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon,..." 16 U.S.C. -664 (Fish and Wildlife Coordination Act)
- "...suitable for - (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species..." 16 U.S.C. 460k-1 (Refuge Recreation Act)
- "... the conservation of the wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory

bird treaties and conventions ...” 16 U.S.C. -3901(b), 100 Stat. 3583 (Emergency Wetlands Resources Act of 1986)

- “... for conservation purposes”, (1985 Food Security Act in conjunction with the transfer of Farm Service Agency, formerly Farmers Home Administration, property)

### **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:**

*What is the use?* Haying is the cutting, baling, and removal of vegetation for purposes of reinvigorating established grassland habitat, controlling invasive species, or establishing and maintaining firebreaks. Haying is primarily conducted to create and maintain firebreaks for prescribed fire operations, to prepare areas for other habitat treatments, or used when prescribed fire is not possible. Haying is typically conducted with a cooperators through a Special Use Permit (SUP) issued by the refuge. Permits will be issued annually.

*Where is the use conducted?* Haying will occur on various grassland units throughout the refuge and along refuge boundaries. Units hayed each year vary in size from 10 to 80 acres and the total area hayed each year will vary from 100 to 500 acres depending on management needs and prescribed fire planning. Haying for fire breaks is primarily done in the Iowa River Corridor and most of these areas are dominated by reed canary grass. Haying to manage invasive species may be done to reduce the height of cool season grasses or control woody vegetation growth. It may also be used in grassland areas to prepare them for interseeding with native forbs and grasses or for grazing.

*When is the use conducted?* Haying for the purpose of fire break establishment and maintenance may occur anytime from July through early October, but typically occurs in the fall. Haying could occur during any time of the year depending on weather conditions and the specific habitat objectives for haying. The majority of the time, haying will be done after the nesting season after August 1. However, haying may also be used to control invasive species, remove competition by early cool season invasive grasses, and prepare areas for grazing to control woody species and reduce residual grass height. Haying for these purposes may be done in late fall or early spring.

*How is the use conducted?* Haying is carried out by permittees using standard agricultural tractors and implements. Special Conditions will apply with the SUP (see Stipulations below).

*Why is the use being proposed?* Haying is an effective tool for grassland management and restoration. Haying is a viable alternative for providing disturbance and removing litter to allow a more diverse plant community to grow and is used to maintain decadent grassland. The refuge area where haying is proposed is in the floodplain and flooding sometimes prevents management

with prescribed fire or other means. Haying provides another habitat management alternative. Haying is an efficient means of maintaining fire breaks to remove current and residual growth and duff that is essential to controlling prescribed fire operations, as well as to help control wildfires.

Haying is not a priority public use, as defined by the National Wildlife Refuge System Improvement Act of 1997, but rather serves as a management instrument for ensuring priority habitat objectives are being addressed. Haying is considered an economic use.

### **Availability of Resources:**

No additional fiscal resources are needed to conduct this use. Needed management staff time is already committed and available. Most of the work needed to prepare for this use would be done during habitat management planning. The bid process would require some additional staff time to develop and oversee Special Use Permits but would be relatively minor and within existing resources. Costs would be off-set by the benefits of grassland restoration and fire break maintenance without the use of staff time or equipment.

### **Anticipated Impacts of the Use:**

#### *Short term impacts:*

Short-term impacts from haying include disturbance and temporary displacement of wildlife caused by noisy heavy equipment, as well as the potential mortality to small mammals, insects, amphibians, reptiles, and birds from the mowing equipment. Haying can destroy eggs, nests, and cause mortality to animals. Timing and location of haying can reduce this impact. Another short term impact is the removal of vegetation and habitat. Nesting areas for grassland nesting birds, and cover for many grassland species, would be temporarily removed. Most haying would be done outside of the nesting season. The removal of vegetative cover can also increase the susceptibility of some species to predators. Other short term impacts might be rutting or impacts to soil from repeated equipment use. However, this impact is unexpected since areas will not be hayed if they are too wet. Most haying is for a specific purpose with limited duration.

Haying is used to maintain fire breaks on the refuge lands in the Iowa River Corridor and typically occurs in the fall once during the season. Haying for invasive species control, or to prepare areas for grazing, seeding, or other habitat management would target a specific species or plant group and would be done at a specific time on relatively small areas.

Whenever possible, particularly for fire breaks, timing of haying will avoid the nesting season to avoid impacts to ground nesting birds. Ring-necked pheasants, bobwhite quail, Eastern wild turkeys, some waterfowl, and various songbirds nest in grasslands on the refuge. The refuge is not an area of high nest density for waterfowl. Mowing during the nesting season would be rare and only on small areas for a very specific management reason. If areas are hayed in spring, it would likely be in March or early April to remove competition from cool season invasive grasses such as reed canary grass. Mowing in early spring could be done before birds nest, and would give any impacted birds time to re-nest. In general, haying will not be conducted on the refuge

between April 15 and August 1. However, there may be specific management reasons to mow during that time which would be done to improve habitat for grassland birds.

Short grass habitat as a result of mowing may benefit certain sparrow species (e.g. grasshopper sparrow) that have a preference for less dense vegetation, and other species such as some snakes and Blanding's turtles.

Mowing of firebreaks will have the benefit of providing more effective prescribed fire and wildfire control.

*Long term impacts:*

In these same areas, long term impacts will primarily be beneficial by helping to restore and reinvigorate grassland habitat used by songbirds, upland game birds, reptiles and amphibians, and mammals. Floodplain grassland is a limiting habitat type on the refuge and in the surrounding landscape. Units selected for haying will be for a specific purpose and limited time frame and, other than fire breaks, will not typically occur in the same unit consecutively year after year. Haying on the same areas year after year may negatively affect vegetation composition, cause erosion if grass is mowed too short, remove organic material, and introduce or spread invasive species. Stipulations of Special Use Permits will require clean equipment to be brought onto the refuge and will limit height and repetition of mowing to eliminate some of the potential long term impacts.

*Cumulative:*

Repeated haying may alter vegetation composition or introduce or spread invasive species. Mowed fire breaks may cause fragmentation of habitat for some species with small home ranges. However, maintenance of fire breaks is needed in order to use prescribed fire that ultimately improves habitat and benefits grassland species. Fire breaks are usually on refuge boundaries near roads or residential area and do not substantially add to fragmentation already on the landscape. Haying in combination with grazing, fire, and herbicide use may create more disturbed areas on the refuge. However, all of these activities are used on management units with specific habitat objectives and are not all conducted at the same time on large areas. Management techniques are used at different times of the year so that cumulative impacts are minimal.

**Public Review and Comment:**

Public notification and review includes a notice of availability through the local media and a 14-day comment period. Copies of this Draft Compatibility Determination will be available at the Port Louisa National Wildlife Refuge office in Wapello, IA, on the refuge website, and at the Wapello, Iowa Public Library.

Determination: Haying

Use is Not Compatible

Use is Compatible with Stipulations

**Stipulations Necessary to Ensure Compatibility:**

1. Permits are issued on an annual basis.
2. Equipment must be cleaned and be free of vegetation, seeds, mud, and soil before mowing/baling operations begin on the refuge. Notification must be given to the Refuge 24 hours before work begins. The refuge reserves the right to inspect equipment prior to the onset of work.
3. All equipment must be removed from the field directly after its use. Storage of equipment is not allowed on refuge property.
4. Hay bales must be removed from the refuge prior to September 15 each year.
5. Fields to be hayed will be delineated on a map by refuge staff and fields must be mowed at times specified in the SUP.
6. In case of rain or flooding, sufficient drying time must be allowed so that equipment does not leave ruts or disturb the soil.

**Justification:**

Haying will not materially interfere with or detract from the purpose of the National Wildlife Refuge System when carried out under the required stipulations. Haying is a valuable management tool that provides greater long-term habitat benefits for reestablished and existing grasslands. The productivity and abundance of grassland dependent birds and other wildlife species would slowly decline in the absence of haying or similar treatments on the refuge. Grasslands are a disturbance-dependent ecosystem that requires periodic haying, mowing or burning to maintain their vigor, diversity and the structure necessary for wildlife use. Haying is an effective alternative when other management methods are infeasible. Haying is an efficient method of maintaining required fire breaks.

Literature Cited: N/A

Mandatory 10-year Re-evaluation Date: 2024

Refuge Manager: \_\_\_\_\_  
Catherine J. Henry (Signature and Date)

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Tim Yager (Signature and Date)

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Charles Blair (Signature and Date)