

## COMPATIBILITY DETERMINATION

**Use:** Haying

**Refuge Name:** Swan Lake National Wildlife Refuge (NWR)

**Establishing and Acquisition Authorities:** Executive Order 7563 established Swan Lake National Wildlife Refuge on February 27, 1937.

### **Refuge Purposes:**

- "... as a refuge and breeding ground for migratory birds and other wildlife: ..." Executive Order 7563, dated Feb. 27, 1937
- "... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. 715d (Migratory Bird Conservation Act)
- "... particular value in carrying out the national migratory bird management program." 16 U.S.C. 667b (An Act Authorizing the Transfer of Certain Real Property for Wildlife)

**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:**

*Is the use a priority public use?*

No. Haying is not a priority public use of the National Wildlife Refuge System.

*Where would the use be conducted?*

Presently, haying occurs on up to 100 acres or about 1 percent of presently owned (11,473 acres as of 2008) Refuge lands annually.

*When would the use be conducted?*

Haying begins in July and takes approximately 7-10 days to complete.

*How would the use be conducted?*

The Refuge will allow haying by private individuals for the purpose of habitat management. Haying is the cutting and processing (typically baling) of grass and forbs, with subsequent removal to an off-Refuge location. Haying will be conducted by third parties on grassy openings owned by or managed as part of the Refuge by jurisdictional agreement. Administration of haying programs will be conducted in accordance with a Habitat Management Plan. Haying activities will be subject to the terms and conditions of a

Cooperative Farming Agreement or Special Use Permit issued by the Refuge Manager. The terms of the Agreement or Permit ensure compatibility through implementation of Service policy and Refuge specific stipulations.

The haying process typically requires 3-4 visits to each site with heavy equipment over a period of 7-10 days. Haying begins in July when standing grasses and forbs are cut and gathered into windrows using a tractor, mower, and rake; or a swather—a self-propelled mowing machine. The hay cures for 3-7 days to reduce moisture content, and is usually turned once with a tractor-drawn rake to speed and even drying. Once cured a tractor-drawn baler is used to package the windrows into bales of hay. A tractor-drawn wagon is used to collect the bales and remove them from the site.

*Why is this use being proposed?*

At Swan Lake NWR haying is used as a low-cost means to prevent encroachment of woody vegetation within grasslands and to provide stubble as a fall and winter food source for migrating waterfowl. Historically, grazing by native wildlife along with periodic fires were the primary disturbance agents that helped retard growth of woody vegetation and maintain plant vigor and diversity within grasslands. Although prescribed fire is in many cases the preferred method of disturbance, its use is not always practical or possible, and it does not produce the same response as disturbance from grazing. Today, native grazers are largely absent from grassland habitats. Haying is used to partially mimic the disturbance once created by grazing.

#### **Availability of Resources:**

*What resources are needed to properly (considering quality and compatibility) and safely administer use?*

A Refuge staff person is required to administer a special use permit and ensure that the haying is done to specifications identified within the permit with regard to safety and timing of haying operations.

*Are existing Refuge resources adequate to properly and safely administer the use?*

The needed staff time for development and administration of a cooperative haying program is available. Most of the needed work to prepare for this use would be done as part of routine management duties. The decision to use cooperative haying as a management tool will occur as part of strategies developed under specific unit or program habitat management planning. The additional time needed to administer and monitor the needed Special Use Permit or Agreements is relatively minor and within existing Refuge resources.

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

Haying can temporarily remove cover for birds but the long-term benefits of preserving habitats in a grassland state outweigh any short-term impacts. By haying after July 15 any negative impacts to nesting birds are significantly reduced.

*How does haying affect Refuge purposes, the NWRS mission, as well as fish, wildlife, plants, and their habitats; and the biological integrity, diversity, and environmental health of the Refuge/NWRS?*

#### Refuge Purposes and NWRS mission

Since its establishment, the Refuge has fulfilled its purposes by providing for the needs of migratory birds and other wildlife, with an emphasis on waterfowl. Haying is one tool used to accomplish this. It does this in two ways: 1) by preventing the encroachment of woody vegetation in grassland habitats attractive to migrating and wintering waterfowl, and by 2) providing green stubble used as a food source by waterfowl and other wildlife during spring and fall migration.

#### Fish, Wildlife, Plants, and their Habitats

On sites where haying occurs there would be periodic short-term disturbance and displacement typical of any noisy heavy equipment operation. These sites may be used by wildlife for feeding and resting at times equipment is not operating. The sites may also be used by nesting birds because in most years haying would be prohibited until July 15, a time when most birds have fledged young. Despite this it is likely that some nests and pre-fledglings would be destroyed during haying. National Wildlife Refuges are managed first and foremost for wildlife (USFWS 2001). But the focus is on wildlife populations not individuals (USFWS 1992). Haying is likely to cause mortality of some individual animals, but is not expected to affect the perpetuation of wildlife populations.

#### Biological Integrity, Diversity, and Environmental Health

Service policy calls for maintaining or restoring refuge habitats to historic conditions if doing so does not conflict with refuge purposes (U. S. Fish and Wildlife Service 2001). The Refuge is located in a transitional area between forest and prairie. Historically, the area was likely a shifting mosaic of prairie and forest driven by disturbance agents like fire and wind. Most native habitats in areas surrounding the Refuge have been converted to agriculture and do not contribute to this large mosaic that existed as part of historic conditions. In lieu of these large scale processes, the Refuge retains some areas in a permanently non-forested condition to maintain this habitat on the landscape. Restoring historic habitats contributes to biological integrity, diversity, and environmental health of the Refuge. Haying is one tool used to maintain these open habitats.

#### **Public Review and Comment:**

This compatibility determination was part of the Swan Lake NWR Draft Comprehensive Conservation Plan and Environmental Assessment. Public notification and review included a notice of availability published in the Federal Register, a 30-day comment period, local media announcements, and a public meeting near the Refuge. Comments received and agency responses are included in the final version of the Swan Lake NWR Comprehensive Conservation Plan.

**Determination:**

Use is Not Compatible

Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

1. Begin haying after July 15 to minimize disturbance to nesting migratory birds. In some years it may be necessary for haying to occur before July 15 to prevent seed dispersal of undesirable plant species.
2. Bales must be removed from the Refuge within 7 days of baling.
3. Windrowed grass left lying to dry should remain on the ground no more than 7 days prior to baling.
4. Haying must meet specific habitat and related wildlife objectives and contribute to the purposes of the Refuge.

**Justification:** Maintaining open habitats through cooperative farming contributes to the achievement of Refuge purposes and the National Wildlife Refuge System mission because it partially restores historic habitat conditions and provides habitat for migratory waterfowl and other wildlife. Haying is one low-cost method used to disturb these sites and temporarily diminish the amount of woody vegetation.

Refuge Manager: Steve Whitson 2-3-11  
(Signature and Date)

**Concurrence:**

Regional Chief: Rick Schults 2/15/11  
(Signature and Date)

**Mandatory 10- or 15-year Re-evaluation Date:** 2021

References:

U. S. Fish and Wildlife Service. 1992. Population Management at Field Stations: General. 701 FW 1. Department of Interior. Available URL: <http://www.fws.gov/policy/701fw1.html>

U. S. Fish and Wildlife Service. 2001. Biological integrity, diversity, and environmental health. 601 FW 3. National Wildlife Refuge System, Department of Interior. Available URL: <http://policy.fws.gov/601fw3.html>