COMPATIBILITY DETERMINATION

**Use:** Trapping

**Refuge Name:** Clarence Cannon National Wildlife Refuge

**Establishing and Acquisition Authority (ies):** 16 U.S.C.715d (Migratory Bird Conservation Act); 16 U.S.C. 644 (Fish and Wildlife Coordination Act); and 16 U.S.C 460K-1 (Refuge Recreation Act).

**Refuge Purpose(s):** "…for uses as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. 715d (Migratory Bird Conservation 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 "…the Secretary…may accept and use…property. Such acceptance may be accomplished under the term and conditions of restrictive covenants imposed by donors…" 16 U.S.C. 460k-2 (Refuge Recreation Act (16 U.S.C. sec. 460k-4), as amended).

**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:** Trapping will be conducted on the Refuge to reduce populations of muskrat, beaver and raccoon. These species impact refuge resources in the following ways:

Muskrats burrow into roads, ditch slopes, and dikes causing holes and cave-ins along refuge roadways and dikes, thus increasing road/dike maintenance needs and costs, creating safety hazards to visitors and staff, and compromising the refuge's ability to regulate water levels.

Both muskrats and beaver can plug water control regulatory devices (water control structures and water delivery ditches) with vegetation. Being able to quickly and efficiently deliver or remove water from Refuge impoundments is critical for providing high quality migratory bird habitat. The loss of water control capabilities compromises the Refuge's ability to accomplish its primary mission. Drainage restrictions caused by beaver and/or muskrat activity can also cause problems to neighboring private landowners by impounding water on adjacent property, resulting in the possible violation of state laws.

Raccoon are considered overpopulated on the refuge. A 2011 report entitled "Raccoon Abundance Inventory Report" identified a density of 90.79 raccoons per square mile at Clarence Cannon NWR and was used to produce abundance estimates at Great River NWR. The overabundance of raccoons is a concern for the refuge due to the increased probability of

diseases (ie. distemper, parvo virus, mange, rabies, etc.) and impacts to ground nesting birds (Chodachek 2003; Barding and Nelson 2008). Specifically, diseased mammals can readily transmit the illness to other mammals and are unpredictable in their actions, thus creating a safety issue for the visiting public. A reduction of no less than 50% and no more than 90% of the current density is desired to maintain a healthy population.

Trapping may occur on an annual basis, but will be assessed through a case by case basis by the refuge manager or their representative, Assistant Manager or Wildlife Biologist, upon review of the trapping reports. When instituted, trapping will be restrictive and only conducted by refuge personnel or authorized through the issuance of a Special Use Permit (SUP), which will offer the refuge manager the opportunity to specifically target offensive individuals (beaver and/or muskrat) and/or regulate trapping techniques and methods more restrictively than state regulations.

**Availability of Resources:** Existing funds and personnel are available to conduct the limited program.

**Anticipated Impacts of the Use:** Trappers may disturb resting waterfowl however the disturbance would be temporary in nature. Waterfowl quickly acclimate to limited human activity and will simply move to nearby habitats when disturbed. They generally do not leave the refuge when disturbed and quickly return soon after the disturbance has ended.

The capture of non-targeted animals exists. Non-target captures will be minimized through proper education and implementation of "best management" techniques including limiting the types of traps allowed (body catch and/or "dog-proof" vs. foothold), placement of traps to avoid non-target animals, prohibiting the use of exposed baits, and permitting the use of target specific bait/scent (e.g. fish for raccoons, apples or carrots for muskrats, castor for beaver, etc.).

No negative physical impacts on refuge lands or interest are expected to occur. The ability to effectively manage/improve habitat for migratory birds will be enhanced. Water management capabilities will be enhanced as water delivery improves, and mast producing trees and bottomland hardwoods would be protected from beavers.

Visitor and staff safety will be improved by the minimization of damage to refuge roadways and dikes. The refuge's relationship with neighboring landowners will also improve as the refuge's efforts to reduce flooding on adjacent private lands are recognized.

**References:**

Chodachek, K. D., 2003. Evaluation of Repeated Removal of Mammalian Predators on Waterfowl Nest Success and Density. Delta Waterfowl.

Barding, E. E. and T. A. Nelson, 2008. Raccoons Use Habitat Edges in Northern Illinois. The American Midland Naturalist.

**Public Review and Comment:** The original Compatibility Determination for trapping on Great River NWR was issued in 2004 allowing for the take of muskrat and beaver. A Finding of No Significant Impact for the Mark Twain Complex Comprehensive Conservation Plan dated July 27, 2004 was completed for all activities addressed in the document, including trapping. Take of raccoon was added to the existing Compatibility Determination, therefore a public review of the proposed changes was completed. . Public notice of the Compatibility Determination was provided to local public offices, including libraries and post offices (locations listed below), as well as posted on the refuge website and at the refuge headquarters a two week period from September 28 through October 12, 2011. No comments were received during the comment period.

Public Libraries

Elsberry Public Library, 502 Broadway, Elsberry, MO 63343
Louisiana Public Library, 121 N. Third St., Louisiana, MO 63353
Bowling Green Public Library, 201 W. Locust St., Bowling Green, MO 63334
Pittsfield Public Library, 205 N. Memorial St., Pittsfield, IL 62363
Hannibal Public Library, 200 S. Fifth St., Hannibal, MO 63401
Quincy Public Library, 526 Jersey St., Quincy, IL 62301
LaGrange Public Library, 114 N. Main St., LaGrange, MO 63448
Canton Public Library, 403 Lewis St., Canton, MO 63435
Keokuk Public Library, 210 N. Fifth St., Keokuk, IA 52632

Post Offices

Elsberry Post Office, 110 N. Third St., Elsberry, MO 63343
Clarksville Post Office, 309 S. First St., Clarksville, MO 63336
Louisiana Post Office, 522 Georgia St., Louisiana, MO 63353
Bowling Green Post Office, 17 W. Church St., Bowling Green, MO 63334
Pittsfield Post Office, 129 S. Madison St., Pittsfield, IL 62363
Hannibal Post Office, 801 Broadway, Hannibal, MO 63401
Quincy Post Office, 200 N. Eighth St., STE 1, Quincy, IL 62301
Ursa Post Office, 107 N. Warsaw St., Ursa, IL 62376
LaGrange Post Office, 202 N. Main St., LaGrange, MO 63448
Canton Post Office, 500 Lewis St., Canton, MO 63435
Alexandria Post Office, 303 Market St., Alexandria, MO 63430
Keokuk Post Office, 214 S. Second St., Keokuk, IA 52632

**Determination:**

_____ Use is Not Compatible

__X__ Use is Compatible with the following stipulations

**Stipulations Necessary to Ensure Compatibility:** The following stipulations are required to ensure compatibility:

1. Trapping program will be reviewed annually by the refuge manager or their designee to determine whether refuge goals and objectives for target furbearers have been attained.
2. Trapping will only occur by refuge personnel or conducted by an outside individual through the use of a SUP.
3. Compliance with the conditions of the SUP will be closely monitored by refuge staff.
4. Trapping will not occur if the population is at such low numbers that trapping may jeopardize the ability of the local population to sustain itself.
5. Trapping shall be targeted only to the species of concern.

**Justification:** Trapping is a viable management tool in reducing numbers of furbearing species to levels consistent with achieving sustainable populations and addressing impacts to refuge infrastructure and resources. When the stipulations listed above are fulfilled, little or no adverse effects to other refuge programs or wildlife species will occur.

**Signature:**
Refuge Manager: 12/21/11
(Signature and Date)

**Concurrence:**
Area 1 Refuge Supervisor: 12/29/11
(Signature and Date)

Regional Refuge Chief: Rick Schultz 01/04/2012
(Signature and Date)

**Mandatory ~~15-~~year re-evaluation date: ~~2026~~**
10 year 2021