

## COMPATIBILITY DETERMINATION

**Use:** Research

**Refuge Name:** Middle Mississippi River National Wildlife Refuge

**Establishing and Acquisition Authority (ies):** 16 U.S.C. 460k-1 16U.S.C. 715d; 16 U.S.C. 644

**Refuge Established:** May 31, 2000

**Refuge Authorities:** 16 U.S.C. § 715d (Migratory Bird Conservation Act); 16 U.S.C. § 664 (Fish and Wildlife Coordination Act); 16 U.S.C. § 460K-1 (Refuge Recreation Act); 16 U.S.C. § 460K-2 (Refuge Recreation Act (16 U.S.C. § 460K-4), as amended); 16 U.S.C. § 3901b, 100 Stat. 3583 (Emergency Wetlands Resources Act, 1986); 16 U.S.C. § 668dd(a)(2) (National Wildlife Refuge System Administration Act)

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

"...for uses as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16U.S.C. 715d (Migratory Bird Conservation Act).

"...shall be administered by him (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...' 16U.S.C. 460k-1 "...the Secretary...may accept and use... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors..." 16 U.S.C. 460k-2 (Refuge Recreation Act (16U.S.C. 460k-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:** To provide for legitimate research needs and studies on lands and waters of Middle Mississippi River NWR. The Refuge allows research investigations on a variety of biological, physical, archeological, and social components to address refuge management information needs or other issues not related to refuge management. Studies are or may be conducted by federal, state, and private entities, including the U.S. Geological Survey, state departments of natural resources, state and private universities, and independent researchers and contractors.

Research proposals are, typically, developed by area universities and colleges in support of refuge special needs or with refuge staff input into larger scale proposals that may utilize refuge lands and waters as a base of study. Other than staff review time, these research proposals and resultant studies are the responsibility and expense of the sponsoring school or group unless otherwise negotiated by contract.

Studies vary from a few weeks to several months in duration (limited ones may develop over two or three years but these are exceptions), are quite labor intensive with several months after the field seasons devoted to refining data and publishing results. All of this accomplished with little or no direct involvement of refuge staff, or at most, modest staff times to review a manuscript.

Research studies, to be conducted on the refuge, must meet the criteria found in the refuge manual and the research outline/proposal must conform to FWS guidelines. Only those studies that provide practical management data or can be used to further the science of wildlife management are screened and approved. This is not a wildlife dependent use.

**Where would the use be conducted:** Sites for this use would depend on the particular study being conducted and could occur in a variety of habitat types. Access would be restricted by Special Use Permit to only the study sites needed to meet the objectives of the research.

**When would the use be conducted:** The timing of research activities would depend on the individual project. The entire Refuge is open for allowed research activities throughout the year in conjunction with the issuance of a Special Use Permit. The timing and number of visits by researchers may be restricted by the Special Use Permit.

**How would the use be conducted:** Any research study sites, sampling locations, and transects can be temporarily marked by highly visible wooden or metal posts and must be removed when research ceases. Access to study sites is by foot, truck, all-terrain vehicle, boat, canoe, and other watercraft. Vehicle use is allowed on Refuge roads, trails, and parking lots normally open to the public.

**Why is this use being proposed:** Most research by third parties is done to address refuge management information needs or to contribute to a larger knowledge base about resources of concern to the Refuge.

**Availability of Resources:** Facilities and staff are currently available to provide access, maintain roads, parking lots, secondary access roads, as well as to issue Special Use Permits for research projects. Staff resources are deemed adequate to manage this use at anticipated use levels.

Access points, boats, vehicles, miscellaneous equipment, and limited logistical support are available on the Refuge. Housing is not available.

**Anticipated Impacts of the Use:** Disturbance is expected with some research activities, especially where researchers are entering sensitive habitats and/or working with species of concern. Researcher disturbance would include altering wildlife behavior, temporarily displacing wildlife, collecting soil and plant samples, or trapping and handling wildlife. However, most of these effects would be short-term, and only the minimum number of samples (e.g., water, soils, vegetative litter, plants, and wildlife) required for identification, experimentation, and statistical analysis would be permitted; captured and marked wildlife would be released. It is possible that direct or indirect mortality could result as a by-product of research activities. Mist netting, for example, can cause mortality directly through the capture method, in trap predation, and indirectly through capture injury or stress caused to the organism. Overall, allowing well designed and properly reviewed research is likely to have very little impact on refuge wildlife populations. The refuge does not anticipate adverse impacts on non-target species or other resources from research activities as these activities are typically geared towards benefiting refuge management of trust resources.

Negative impacts to public use activities are not expected, and no adverse socioeconomic impacts are anticipated. The proposed use will cause only minor and short-term disturbances to some wildlife and little or no disturbance to refuge visitors. The continuance of research projects is an important management tool that can have considerable beneficial effects on refuge lands and waters. Research findings will assist refuge staff in providing quality wildlife and habitat management and enhance the primary purposes for which this refuge was acquired. Furthermore, research can allow refuge staff to meet management goals at a modest cost to the refuge. This use should not result in short-term or long-term impacts that adversely affect the purpose for this refuge or the mission of the Refuge System. The cumulative impacts are minor, as evidenced by the durability of the terrain, the resiliency of vegetation, and the number and diversity of wildlife that remains in the area throughout years of high public use.

**Public Review and Comment:** Determination prepared and reviewed in conjunction with Refuge Complex Comprehensive Conservation Plan (CCP) and Environmental Assessment. (Minimum 2-week notice in newspaper(s) unless use is very minor with no impacts on Refuge purpose)

**Determination:**

Use is Not Compatible

Use is Compatible with Following Stipulations

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

1. Studies proposed by outside agencies/institutions will be reviewed and approved by the Refuge Manager and researchers will submit annual status reports and a final report concerning Refuge research to the Refuge Manager.
2. All proposals must conform to FWS guidelines and be applicable to Middle Mississippi River NWR management needs and of the needs of the larger scientific community.
3. Special Use Permits (SUP) will be issued for each non-Service conducted project to control timing for minimal disturbance to wildlife or other Refuge uses.
4. Researchers must possess all applicable state and federal permits for the capture and possession of protected species, for conducting regulated activities in wetlands, and for other regulated activities. Researchers must demonstrate they have approval from the Animal Care and Use Committee, if such approval is required by their research institution.
5. Archeological researchers must obtain an Archeological Resource Protection Act permit from the Regional Director prior to obtaining a special use permit from the Refuge Manager.

**Justification:** This use is in compliance with the Refuge Administration Act. It furthers the goals of the National Wildlife Refuge System and the Mark Twain Complex Comprehensive Conservation Plan. It will add to the base of knowledge in the field of wildlife management and will create no adverse effects on other refuge programs or wildlife populations. Research activities are noted in the Mark Twain National Wildlife Refuge Complex Comprehensive Conservation Plan as being needed to develop and refine management strategies.

**Signature:**

**Refuge Manager:** \_\_\_\_\_  
Jason Wilson, Refuge Manager Date

**Concurrence:** \_\_\_\_\_  
Charles W. Blair, Regional Chief Date

**Mandatory 10-year Re-evaluation Date:** \_\_\_\_\_