

## **DRAFT COMPATIBILITY DETERMINATION**

**Use:** Right-of-way for City of Madison Raw Water Intake and Pumping Station at Triana

**Refuge Name:** Wheeler National Wildlife Refuge

**County:** Madison, Alabama

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

Wheeler National Wildlife Refuge located in Madison, Morgan, and Limestone counties of Alabama was established by Executive Order 7926 by President Franklin D. Roosevelt on July 7, 1938. The Refuge is overlaid on the middle third of the Tennessee Valley Authority's Wheeler Reservoir.

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

"... as a refuge and breeding ground for migratory birds and other wild life: ..." Executive Order 7926, dated July 7, 1938

"... for use 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 ... real ... 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 (16 U.S.C. § 460k-460k4), as amended).

### **National Wildlife Refuge System Mission:**

"The mission of the 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 project would involve the construction of a raw water intake, pump station and stand-by power generator and temporary sediment retention pond near Triana Landing at approximate Tennessee River Mile 320.9. The intake pipe would be placed across Indian Creek and the pump station would be constructed on the right descending bank of the Tennessee River near the mouth of Indian Creek. Since sediments in Indian Creek and its overbank areas are known to contain significant concentrations of DDT and its degradation products, measures to contain DDT-laden sediments and limit re-suspension of DDT products would be included.

The intake would consist of two (2) submerged passive, stainless steel screens located approximately 550 feet from the north bank of the river. A submerged and buried 48-inch ductile iron pipe would transport raw water from the screens to a new water pumping station located on the north bank of the river. Trench excavation using Best Management Practices (BMP) would be used to install the intake piping and would be accomplished using pontoon-mounted excavators and clamshells. Material excavated from the trench would be removed from the site and tested for DDT and its degradation products. Any contaminated sediments would be handled and disposed of according to Alabama Department of Environmental Management and Environmental Protection Agency requirements. Other sediments would be placed off-refuge in approved disposal areas.

An approximate 55' x 70' station housing a raw water pump would be constructed on the right descending bank of the Tennessee River. It would consist of a cast-in-place concrete wet well for the pumps and a building to house the pumps and electrical equipment. Material excavated during construction would be removed from the site and tested for DDT and its degradation products. Any contaminated sediments would be handled and disposed of according to Alabama Department of Environmental Management and Environmental Protection Agency requirements. Other sediments would be placed off-refuge in approved disposal areas.

Pump motors, pump starters, controls, electrical disconnect switches and other electrical equipment would be located on the second floor of the pump station, above the 500-year floodplain. The first floor would be submerged during flood events. A stand-by power generator would be located off-refuge to provide emergency power for the pumping station.

Prior to construction of the pump station and excavation of the pipe trench across Indian Creek, a two-phase trench sheet pile cofferdam system would be installed in order to maintain creek flow and navigation. During Phase 1, the trench sheet pile cofferdam system would be connected to the pump station sheet pile cofferdam system. After installation of the cofferdam system, the pipe trench would be excavated and the 48-inch diameter piping installed. A transition collar and/or trench seal would be required to seal the opening between the pipe and the end section of the sheet pile cofferdam system. The transition collar would remain in place temporarily for use during Phase 2. After installation of the pipe, the pipe trench would be backfilled with clean material and capped with concrete to the normal bottom elevation of Indian Creek.

During Phase 2, the remaining trench sheet pile cofferdam system would be installed and connected to the transition collar end wall from Phase 1. The pipe trench would be excavated and the 48-inch pipe installed across the eastern half of Indian Creek. After installation of the pipe, the trench would be backfilled with clean material and capped with concrete to the normal bottom elevation of Indian Creek.

A 0.77-acre permanent right-of-way would be required for construction and maintenance of the raw water pump station and the 36-inch raw water piping extending from the pump station to a water treatment facility located off-refuge. Five temporary construction areas, totaling approximately 0.6 acres, would be required to support construction of the raw water pump station and piping. All temporary construction areas would be restored to natural contours and native vegetation would be planted.

Interpretive signage would be installed near the water pump station to educate the public on native species of plants and animals and the importance of protecting their habitat.

**Availability of Resources:**

No additional resources would be required to administer this use. Monitoring and compliance could be handled within existing resources, programs, and staff time.

**Anticipated Impacts of the Use:**

The following anticipated impacts were identified and evaluated based on professional judgment.

Short-term Impacts: Short-term impacts resulting from construction of the water intake and pipe could involve temporary downstream sediment transport and could result in re-suspension of DDT in the water column. Construction of the pumping station and piping could involve soil erosion, sedimentation in adjacent waters, access road disturbance and wildlife disturbance. Construction of temporary use areas could result in vegetation disturbance, soil erosion, sedimentation in adjacent waters and wildlife disturbance. The use of Best Management Practices and sheet pile cofferdams during construction would significantly limit these short-term impacts.

Long-term Impacts: Long-term impacts would be minimal with the restoration of natural contours and elevations and re-vegetation of areas disturbed during construction of the pumping station and piping.

Cumulative Impacts: Cumulative impacts to refuge resources resulting from this use would be expected due to the number of like uses permitted in the past.

**Public Review and Comment:**

Pending.

**Determination (check one below):**

Use is Not Compatible

Use is Compatible with the Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

The use of Best Management Practices during construction would be required to limit soil erosion, sediment transport to adjacent areas and re-suspension and transport of any contaminants to downstream areas. Pre-construction natural land and stream bottom contours would be re-established. Native vegetation would be re-established in areas affected by construction activities. Public use access would be maintained during construction and operation of the pumping station.

**Justification:**

The location of Wheeler National Wildlife Refuge within a rapidly expanding urban area results in a significant number of right-of-way requests. Each right-of-way request is evaluated on a case-by-case basis. Concern that ROW developments were threatening the integrity of the Refuge through habitat fragmentation led to the development and approval of a Refuge Right-of-Way Policy in 2000. That policy, approved by the Regional Director, was circulated to all county and municipal governments in the three counties surrounding the Refuge. The policy generally provides that a ROW permit will be considered only when: no other reasonable alternative is available other than to cross Refuge lands and/or waters; the need for the ROW is clearly in the public interest; and, existing ROW corridors can be used.

Wheeler National Wildlife Refuge extends along both sides of the Tennessee River for approximately 19 river miles. Municipalities adjacent to the Refuge that require access to the Tennessee River for water intake are limited to crossing Refuge lands. In this instance, there are no other reasonable alternatives, the need is clearly in the public interest, and an existing ROW corridor is being used. Consequently, the right-of-way would not diminish the primary purpose of the Refuge or the conservation and management of natural resources, nor would it interfere with the National Wildlife Refuge System mission.

**NEPA Compliance for Refuge Use Description:**

- Categorical Exclusion without Environmental Action Statement
- Categorical Exclusion and Environmental Action Statement
- Environmental Assessment and Finding of No Significant Impact
- Environmental Impact Statement and Record of Decision

**Prepared by:** \_\_\_\_\_  
Date

**Submitted:** \_\_\_\_\_  
Project Leader/Refuge Manager Date

**Review:** \_\_\_\_\_  
Regional Compatibility Coordinator Date

**Review:** \_\_\_\_\_  
Refuge Supervisor Date

**Concurrence:** \_\_\_\_\_  
Regional Chief Date  
National Wildlife Refuge System  
Southeast Region

**Mandatory 10 or 15-year Re-Evaluation Date:** \_\_\_\_\_