

**U. S. ARMY CORPS OF ENGINEERS
NASHVILLE DISTRICT
JULY 2003**

**STATEMENT OF FINDINGS
FOR THE 2003 EXPERIMENT
TENNESSEE RIVER MILES 194.0-195.0
HARDIN COUNTY, TENNESSEE
AND
FINDINGS OF NO SIGNIFICANT IMPACT
AND
FINDINGS OF 404 (b) (1) GUIDELINES COMPLIANCE**

1. The U.S. Army Corps of Engineers, Nashville District, and Cooperating Agency, the Tennessee Valley Authority, propose to perform an experimental mussel relocation method employing a clamshell dredge and split-hulled scow to move freshwater mussels. The proposed experimental site would be located between Tennessee River Miles 194.0 and 195.0, upstream of Crump, Tennessee in Hardin County. This would be the same site that was used during the 2002 experiment that employed the same experimental method. The proposed work for the 2003 experiment consists of removing approximately 100 cubic yards of gravel and sand that would be placed in an open water disposal site. Approximately one-quarter acre of river substrate would be disturbed by this action. All proposed work would take place within a river segment that has been recently disturbed and is currently permitted for commercial sand and gravel extraction and mussel harvesting. Two treatments have been proposed. Treatment 1 would remove the top 1-foot of substrate. Treatment 2 would remove the top 3 feet of river substrate. For both treatments, substrate would be placed in a split-hulled dump scow one layer deep and transported to a selected disposal site. The bottom of dump scow would open slowly and while moving, spread the material in a thin layer. Both Treatments 1 and 2 would be evaluated for mussel damage and survival during specific phases in the dredging operation. Commercial mussels would be the targeted test organisms in this experiment. The purpose of the experimental mussel relocation is to develop a method for safely removing mussel communities prior to unavoidable maintenance dredging. A safe, efficient, timely, and holistic mussel relocation method is needed because mussel communities have been occasionally found at proposed maintenance dredging sites. Maintenance dredging is required to maintain a safe and open authorized navigation channel.

2. An Environmental Assessment (EA) has been prepared by Ms. Joy Broach, on July 18, 2003. This document followed the National Environmental Policy Act (NEPA), Council for Environmental Quality (CEQ) Regulations Implementing NEPA (40 CFR, 1500-1517), and Corps of Engineers Regulations ER 200-2-2 Policy and Procedures for Implementing NEPA (33 CFR, 230). The EA describes existing conditions and evaluates potential impacts associated with the Proposed Action and No Action alternatives. The "No Action" alternative has been defined as no federal action at this time, and no implementation of the experimental mussel relocation method. The "No Action" alternative would maintain the current situation of limited mussel relocation methods that incur great expense, time, handling, and excessive mussel stress during mussel relocation. The EA also considered cumulative effects of the Proposed Action. The experimental mussel relocation method has been proposed as a possible procedure to safely relocate large and unavoidable mussel communities prior to required maintenance dredging activities. If successful, this method has the potential to protect large mussel communities by relocating as many as possible of all size classes to selected placement areas. Cultivating new beds would expand the mussel resource including potential listed species living in these communities. The expected cumulative effect of the experimental mussel relocation method would be maximized survival of mussels relocated by dredging equipment using modified dredging procedures. This effort would minimize community burial at appropriate disposal sites resulting in sustainable benthic communities.

3. On July 31, 2003, Public Notice No. PM-P 03-02 describing the proposed 2003 experimental mussel removal and relocation activities was circulated to members of the public and to agencies with jurisdiction by law or special expertise. Issuance of this Joint Public Notice - the U.S. Army Corps of Engineers, the Tennessee Valley Authority, and the State of Tennessee, satisfied coordination under Section 401 and 404 of the Clean Water Act and scoping requirements under NEPA. The U.S. Fish and Wildlife Service (USFWS), Tennessee Wildlife Resources Agency (TWRA), Tennessee Department of Environment and Conservation (TDEC), U.S Geological Survey (USGS), and Tennessee Valley Authority (TVA) have been involved in planning the 2003 experiment. Through meetings, telecommunications, and consultation, the proposed protocols were redesigned to address data gaps and quality assurance issues identified during review of the 2002 experiment. In addition, the 2003 experiment would affect half the surface area and one-tenth the volume of the river bottom substrate as compared to the 2002 experiment.

4. The 2003 experiment has been coordinated through consultation with the U.S. Fish and Wildlife Service and the Tennessee Wildlife Resources Agency. During the 2002 experiment, four Pink mucketts (*Lampsilis abrupta*) and one Fanshell (*Cyprogenia stegaria*) were collected. These listed species were unharmed and handed over to the Tennessee Wildlife Resources Agency for further care. Takings of listed species was not exceeded and remained within the parameters outlined in the 2002 Biological Opinion dated September 9, 2002. The surface area and volume of river bottom affected by the 2003 experiment has been reduced, therefore it would be expected that encounters with listed species would also be lessened. It would be anticipated that the requirements issued in the Biological Opinion for the 2002 experiment, would be issued for the 2003 experiment and therefore, no substantial change would be expected. The 2002 Biological Opinion concluded that the 2002 experiment was not likely to jeopardize the continued existence of federally listed species nor destroy or adversely modify any critical habitat. Concurrence for the 2003 experiment is expected from the U.S. Fish and Wildlife Service under the Fish and Wildlife Coordination Act (FWCA) and the Endangered Species Act.

5. The 2003 EA does not reveal significant onsite impacts resulting from the 2003 experiment. There would be a short-term impact to water quality due to increased turbidity at both the dredge and disposal sites. However, this increase would not be expected to exceed Tennessee Water Quality Standards. The State of Tennessee issues Water Quality Certification pursuant to Section 401 of the Clean Water Act. The 2002 experiment was certified on September 13, 2002. Given the smaller scope, it is expected that the 2003 experiment would also receive certification. At this point in time, all issues have been resolved.

6. Section 106 of the National Historic Preservation Act of 1966 requires that Federal agencies take into account the effects of its undertakings on historic properties included in or eligible for listing in the National Register of Historic Places. No significant cultural resources were found within the proposed experimental site used for the 2002 experiment. The 2003 experiment would also be conducted in the same proposed experimental site. It is expected that the Tennessee State Historic Preservation Officer would issue the same findings. In accordance with 36 CFR 800.16(y), the proposed activity is an undertaking with no potential to affect historic properties.

7. Additional agency coordination and environmental compliance has been met under the following laws, regulations, and Executive Orders: Clean Air Act and Clean Air Act Conformity Rule, Hazardous, Toxic and Radiological Wastes (HTRW), TVA Act, Floodplain Executive Order, Wetlands Executive Order, and Environmental Justice Executive Order.

8. The proposed 2003 experiment would not result in significant adverse effects on human health and welfare, including municipal and private water supplies, recreation, commercial fishing and musseling, plankton, fish, shellfish, wildlife, and special aquatic sites. The life stages of aquatic life and other wildlife would not be adversely affected. Significant adverse effects on aquatic ecosystem diversity, productivity, and stability, and recreational, aesthetic and economic values would not occur.

9. I have reviewed the EA for the proposed 2003 experiment, and responses to Public Notice No. PM-P 03-02. In addition, I have evaluated the proposed disposal of dredged material in accordance with the guidelines promulgated by the Administrator of the Environmental Protection Agency pursuant to Section 404(b)(1) of the Clean Water Act. Based on that evaluation, I have determined that the discharge of dredged material, and placement of the dredged material associated with the proposed 2003 experiment is specified as complying with the Guidelines. Also, I have determined that the work would not constitute a major federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act of 1969. Accordingly, I have concluded that an Environmental Impact Statement covering the proposed work is not required. Finally, having weighed the potential benefits that may be accrued as a result of implementing the 2003 experiment against the reasonably foreseeable detrimental effects, I conclude that the proposed 2003 experiment as set forth in the EA would be in the public interest.

Date

Byron G. Jorns
Lieutenant Colonel
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