



**US Army Corps
of Engineers** ®
Memphis District

ISSUE DATE: February 17, 2017

PUBLIC NOTICE

EXPIRATION DATE: March 20, 2017

PUBLIC NOTICE
U.S. ARMY CORPS OF ENGINEERS

**Availability of Draft Environmental Assessment (EA), Draft Finding
of No Significant Impact (FONSI), and 404 (b)(1) Evaluation**

REPLY TO:

ATTN: Mike Thron

Environmental Compliance Branch

U.S. ARMY CORPS OF ENGINEERS

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Memphis, Tennessee 38103-1894

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TITLE: Dyer County Little Levee Scour PL 84-99 Project

AUTHORITY: This project is authorized by Public Law 84-99 (PL 84-99), Flood Control and Coastal Emergencies (FCCE) (33 U.S.C. 701n) (69 Stat. 186) for emergency management activities. Under PL 84-99, the Chief of Engineers, acting for the Secretary of the Army, is authorized to undertake activities, including rehabilitation of flood control works threatened or destroyed by flood.

LOCATION: The proposed project location is an actively caving riverbank within the Chute of Island No. 21 between River Miles 828.5 and 823 above head of passes (AHP) (Figure 1).



Figure 1. Project map of the proposed Dyer County Little Levee Scour PL 84-99 Project in northwestern Tennessee.

TO WHOM IT MAY CONCERN: Pursuant to Section 10 of the Rivers and Harbors Act, Section 404 of the Clean Water Act (CWA), and the National Environmental Policy Act of 1969, as amended, the U.S. Army Corps of Engineers (USACE), Memphis District, is issuing this notice of the intention to protect the riverbank and reconstruct the Dyer County Little Levee to pre-flood section and grade using Graded Stone C and 250 LB Riprap in the Chute of Island No. 21 of the Mississippi River.

PURPOSE: The Dyer County Little Levee sustained significant damage as a result of flooding during the period of December 28, 2015 to January 18, 2016. During the high water event, river stages remained above 30 feet for over 24 days. Damage sustained during the high water event consisted of stream bank erosion/bank caving that is threatening the stability and integrity of the levee. The purpose of the proposed activities is to reconstruct the levee to the pre-flood section and grade and stabilize the active scour using stone protection.

ALTERNATIVES: Three alternatives were investigated for the proposed scour at the Dyer County Little Levee. For the purposes of NEPA, the no-action alternative serves as the baseline against which impacts and benefits of the action alternatives are evaluated. A description of each alternative is included below. Diagrams of alternatives are shown in the draft environmental assessment.

Alternative 1 – No Action. This alternative consists of providing no emergency levee repairs under PL84-99 authority or funding sources. Under this alternative, the likelihood of levee failure occurring is very high due to the failure progression observed. Currently, the levee has height sufficient to provide protection from a 4 percent chance of exceedance flood (25-year level of protection) without freeboard. The levee is threatened by riverside scour which has encroached on the toe of the levee. If the scouring is allowed to continue the levee will be beached. When the breach occurs, water would enter the area at a 50 percent chance exceedance flood (2-year level of protection). Increased flooding frequency would reduce the availability of the land for agricultural use, cause property loss, displace residents, and could potentially cause human injuries and/or loss of life. Due to the significant negative consequences of the “No Action” alternative, it was deemed unacceptable.

Alternative 2 – Stone Protection. This alternative consists of reconstructing the levee to the pre-flood section and grade and associated bank stabilization using stone protection. Stone would be delivered by barge, and the work would be performed by floating plant using barge mounted draglines or hydraulic excavators. A river stage of ≥ 28 feet on the Caruthersville gage is needed to allow for sufficient flotation of barge mounted equipment and material at the upstream entrance to the chute. The recommended work is separated into 3 areas based on the progression of bank failure (Figure 1). Area 1 is the most critical area extending for approximately 1,000 feet in length where active caving has progressed into the toe of the levee. Within Area 1, the levee would be reconstructed to pre-flood section and grade using Graded Stone C. Approximately 40,109 tons of Graded Stone C would be placed down to the channel bottom with a minimum thickness of 4 feet establishing a slope of 1V:1.5H. Approximately 3,300 tons of 250 LB Riprap would also be placed to a thickness of 2 feet along the riverside slope of the levee. Area 2 is the next highest priority area extending approximately 1,500 feet downstream of Area 1. Within Area 2, approximately 45,821 tons of Graded Stone C would be placed from top

bank down to the channel bottom with a minimum thickness of 4 feet establishing a slope of 1V:1.5H. Area 3 extends approximately 1,500 feet upstream of Area 1. Within Area 3, approximately 47,333 tons of Graded Stone C would be placed from top bank down to the channel bottom with a minimum thickness of 3 feet establishing a slope of 1V:1.5H. Prior to stone placement, some minor grading (approximately 900 cubic yards) will be required in the upstream portion of Area 3 where eddy currents are causing a vertical and actively caving, unstable bank. Any large woody debris encountered in the channel from the recent scour would be removed from the work area prior to stone placement and placed in the deeper portions of the Chute of Island No. 21.

A total of approximately 900 cubic yards of grading, 133,263 tons of Graded Stone C, and 3,300 tons of 250 LB riprap would be required for this alternative.

Alternative 3 – Levee Setback. This alternative consists of setting the levee back for a distance of approximately 150 feet. The levee would be constructed to the same dimensions (approximate 20-ft crown width and 1V:3H side slopes). Approximately 162,800 cubic yards of borrow material would come from the existing levee, and an additional 40,000 cubic yards of borrow would be needed from an unidentified borrow area. It is assumed that this borrow area would be located in prior-converted cropland between the mainline Mississippi River Levee and the Dyer County Little Levee. The levee crown would be covered with approximately 3,000 tons of aggregate surfacing to allow for transportation. These proposed repairs would require more than one construction season and could not be started until the flood hazards are greatly reduced in summer and early fall.

The no action alternative was determined to be unacceptable because of the risks and extent of projected flood damages (including \$1,047,000 annually for crops and \$178,000 for farm property other than crops). Alternative 3 would require more than one construction season, could not be started until the flood hazards are greatly reduced in summer and early fall, would result in the loss of prime farmland, and would be slightly more expensive than Alternative 2. With the levee in its current condition, a prolonged high water event is likely to cause the continued erosion of the levee and increased risks of a levee breach this flood season. Alternative 2 is more likely to be completed prior to a potential spring flood event, is the least costly structural alternative, and is economically justified with a benefit-to-cost ratio of 1.9 to 1. Alternative 2 offered the best compromise of environmental impacts and project costs, and thus was selected as the proposed action.

DESCRIPTION OF WORK: The proposed levee rehabilitation consists of bank protection and reconstruction of the levee to pre-flood section and grade using Graded Stone C and 250 LB Riprap placed along the bank and riverside toe of the levee in the Chute of Island 21 of the Mississippi River. Stone would be delivered by barge, and the work would be performed by floating plant using barge mounted draglines or hydraulic excavators. A river stage of ≥ 28 feet on the Caruthersville gage is needed to allow for sufficient flotation of barge mounted equipment and material at the upstream entrance to the chute. The recommended work is separated into 3 areas based on the progression of bank failure (Figure 1). Area 1 is the most critical area extending for approximately 1,000 feet in length where active caving has progressed into the toe of the levee. Within Area 1, the levee would be reconstructed to pre-flood section and grade

using Graded Stone C. Approximately 40,109 tons of Graded Stone C would be placed down to the channel bottom with a minimum thickness of 4 feet establishing a slope of 1V:1.5H. Approximately 3,300 tons of 250 LB Riprap would also be placed to a thickness of 2 feet along the riverside slope of the levee. Area 2 is the next highest priority area extending approximately 1,500 feet downstream of Area 1. Within Area 2, approximately 45,821 tons of Graded Stone C would be placed from top bank down to the channel bottom with a minimum thickness of 4 feet establishing a slope of 1V:1.5H. Area 3 extends approximately 1,500 feet upstream of Area 1. Within Area 3, approximately 47,333 tons of Graded Stone C would be placed from top bank down to the channel bottom with a minimum thickness of 3 feet establishing a slope of 1V:1.5H. Prior to stone placement, some minor grading (approximately 900 cubic yards) will be required in the upstream portion of Area 3 where eddy currents are causing a vertical and actively caving, unstable bank. Any large woody debris encountered in the channel from the recent scour would be removed from the work areas prior to stone placement and placed in the deeper portions of the Chute of Island No. 21.

WATER QUALITY CERTIFICATION: An Aquatic Resource Alteration Permit, or Section 401 water quality certification, was requested from the State of Tennessee on January 18, 2017. The public notice for the ARAP (#NRS17.008) was posted on the Tennessee Department of Environment and Conservation website (<http://tn.gov/environment/topic/ppo-water>) on February 6, 2017 seeking public comments.

SECTION 404 (b)(1) EVALUATION AND SECTION 10 OF THE RIVERS AND HARBORS ACT: The impact of the activity on the public interest is being evaluated in accordance with the Environmental Protection Agency guidelines pursuant to Section 404(b)(1) of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. The Section 404(b)(1) Evaluation is included in the appendix of the draft EA.

THREATENED AND ENDANGERED SPECIES: Five federally listed species may occur in the vicinity of the proposed project areas: the endangered interior least tern (*Sterna antillarum athalassos*), endangered pallid sturgeon (*Scaphirhynchus albus*), endangered fat pocketbook mussel (*Potamilus capax*), endangered Indiana bat (*Myotis sodalis*), and threatened northern long-eared bat (*Myotis septentrionalis*). Pursuant to Section 7 of the Endangered Species Act, USACE has requested concurrence with the U.S. Fish and Wildlife Service, Cookeville, TN Office, for a not likely to adversely affect determination for federally listed species and critical habitat. No action will be taken until receipt of their determination and any special conditions required as part of that consultation.

CULTURAL RESOURCES: Pursuant to 36 CFR 800.3(a)(1), the District Archaeologist has determined that this project has no potential to cause effects to historic properties eligible for the National Register of Historic Places. Thus, no further Section 106 National Historic Preservation Act consultation is required. However, if prehistoric or historic artifacts, human bones, or other archaeological materials subject to the Native American Graves Protection and Repatriation Act (NAGPRA) are found during construction, all activities are to cease immediately in that area and the Memphis District Archaeologist, shall be contacted. State Historic Preservation Officer and

tribal NAGPRA representatives, the local sheriff, etc., will be contacted as required by state and federal law.

PUBLIC INTEREST REVIEW: The purpose of this public notice is to advise all interested parties of the proposed activities and to solicit comments and information necessary to evaluate the probable impact on the public interest.

The decision to proceed with this project will be based on an evaluation of the probable impact, including cumulative impacts, of the activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The potential benefits that reasonably may be expected to accrue from the activity must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the activity will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; federal, state and local agencies and officials; Indian Tribes, and other interested parties in order to consider and evaluate the impacts of the proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to modify or condition the project. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in preparation of the final environmental assessment and/or draft environmental impact statement pursuant to the National Environmental Policy Act and are also used to determine the overall public interest of the proposed activity. **The draft EA, draft FONSI, and Section 404(b)(1) Evaluation will be circulated to agencies and any other parties that respond to this notice requesting copies. Copies of these documents have been placed on the District's website under Memphis District Civil Works Projects at:**

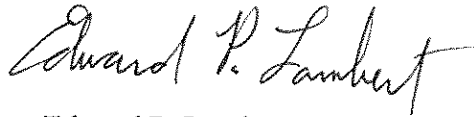
<http://www.mvm.usace.army.mil/About/Offices/Regulatory/PublicNotices.aspx>

PUBLIC HEARING: Any person may request in writing, within the comment period specified in this notice, that a public hearing be held to consider this proposed project. Requests for a public hearing shall clearly state the reason for holding a public hearing. The District Engineer will determine if the issues raised are substantial and whether a hearing is needed in order to reach a decision on the project.

COMMENTS OR REQUEST FOR ADDITIONAL INFORMATION: If you wish to obtain additional information or to submit comments on this proposal, contact Mike Thron at the U.S. Army Corps of Engineers, Environmental Compliance Branch, 167 North Main

Street, Room B-202, Memphis, Tennessee 38103-1894, telephone 901/544-0708. **Comments should be forwarded to this office by March 20, 2017.**

Sincerely,

A handwritten signature in cursive script that reads "Edward P. Lambert". The signature is written in black ink and is positioned above the typed name.

Edward P. Lambert
Chief, Environmental Compliance Branch,
Regional Planning and Environmental Division South