US Army Corps of Engineers ®
Memphis District

ISSUE DATE: **May 8, 2012**
EXPIRATION DATE: **June 8, 2012**

PUBLIC NOTICE
U.S. ARMY CORPS OF ENGINEERS

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

REPLY TO:
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TITLE: Mississippi River Mainline Levees, Island 8 Seepage Control Project, Fulton County, Kentucky.

AUTHORITY: The proposed action is authorized as part of the Flood Control Act of 1928, as amended.

LOCATION: The proposed seepage control project is located along the Mississippi River mainline river levee at Island 8, west of the town of Hickman, in Fulton County, Kentucky (Attachment, Figures 1-3).

TO WHOM IT MAY CONCERN: Pursuant to the National Environmental Policy Act of 1969 as amended, the U.S. Army Corps of Engineers, Memphis District (CEMVM), is issuing this notice with the intention of constructing seepage control measures along the Mississippi River mainline levee (MRL) at Island 8 in Fulton County, Kentucky.

PURPOSE: The proposed project is needed to address additional seepage control measures not included in the July 1998 final Supplemental EIS, *Mississippi River Mainline Levees Enlargement and Seepage Control*. Seepage that occurs during flood conditions within the Mississippi River need to be controlled in order to assure that the levee system does not fail

during a flood event. Continued seepage could eventually lead to a levee failure, which would result in property damage and cause human injuries and/or loss of life.

PROPOSED ACTION. The eastern limits of the proposed project are approximately 0.5 miles past the junction with Fish Pond Road along the MRL at Island 8 (Figure 1). The proposed work extends approximately 8.7 miles westerly along the levee (Figure 2), ending approximately 2.5 miles north of the Tennessee-Kentucky state line (Figure 3). The proposed project action includes installing 121 relief wells landside of the MRL, constructing new drainage ditches, clearing existing drainage ditches, and installing/replacing culverts as needed along roadways to ensure adequate drainage of the water from the relief wells.

Installation of relief wells in a portion of land currently enrolled in the Natural Resources Conservation Service (NRCS) Wetlands Reserve Program (WRP) permanent easement and shown in Figure 1 would require a 50-foot easement from the toe of the levee, extending for approximately 4,000 feet. This area would be cleared of trees; however, native grasses and forbs would be established once the proposed project construction is complete. This easement would impact approximately 4.6 acres of the WRP land, requiring appropriate compensatory mitigation. Maintaining (mowing) the easement strip is necessary to prevent tree roots from growing into the relief wells and levee and for monitoring of the wells and adjacent areas, as the area between the wells is where problems would occur if the wells do not capture the seepage adequately. A bulldozer or excavator would be used to construct new drainage ditches, clean out existing ditches, and to install/replace culverts as needed. Specialized drill rigs would be used to drill the holes along the levee, and cranes would be used to install the relief wells. Silt fences would be utilized to contain any potential runoff. Vegetation cleared from existing ditches would be removed from the area. Earthen material would be spread on non-wet agricultural fields within a 300-foot right-of-way; no ditches or earthen material would be placed within the WRP acreage.

A total of approximately 73.1 acres would be impacted by the proposed project, including 45.9 acres of non-wet agricultural lands, 1.6 acres of existing ditches that are not classified as wetlands, 10.5 acres of farmed wetlands, 10.5 acres of wooded wetlands, and 4.6 acres of wetlands within the WRP easement. The 4.6 acres of wetlands within the WRP easement currently consist of bottomland hardwood (BLH) tree saplings and various wetland grasses and sedges. The permanent loss of the wetland vegetation from the 4.6-acre easement would be mitigated according to guidance from NRCS.

ALTERNATIVES TO THE PROPOSED ACTION: Four alternatives were considered for the proposed action: 1) no-action; 2) construct landside seepage berms, 3) construct riverside slurry trenches, and 4) install relief wells with associated drainage work.

2.1 Alternative 1 – Future without Project Condition. In the future without project condition (no-action alternative), the proposed project would not be constructed. The no-action alternative would result in continued seepage during flood conditions. Sands and silts would be carried under the levee from underseepage resulting in sand boils. This could lead to a levee failure during a major flood event, resulting in property damage and could cause human injuries and/or

loss of life. Flood events also cause scouring that removes topsoil and existing vegetation such as agricultural crops. The Corps determined that this alternative is not practicable or reasonable because of the risks to the human environment. If the seepage problem is not addressed, levee failure resulting in catastrophic impacts could ultimately result.

2.2 Alternative 2 – Construct Landside Seepage Berms. This alternative would involve construction of landside berms along the toe of the MRL to control seepage. Sutton Road parallels the landside toe of the levee throughout the project area. To construct a landside berm along the toe of the levee, Sutton Road and some existing residential buildings/houses would have to be relocated. Construction of berms landside of the road would impact a large percentage of the existing wetlands within the WRP, resulting in a permanent loss of the wetlands impacted. This action would also impact existing farmlands which would remove valuable acreage from production and cause monetary loss for landowners. In addition, the existing pumping station at Ditch 1 would be negatively impacted, as the pumping station would need to be relocated or replaced. Due to the negative impacts that would result from constructing landside berms, the Corps determined this alternative is not practicable or reasonable.

2.3 Alternative 3 – Construct Riverside Slurry Trenches: This alternative would involve constructing slurry trenches along the riverside toe of the MRL where seepage occurs. To adequately form a seepage barrier, a typical slurry trench in this area is constructed 90-feet deep and 3-feet wide. As part of site preparation, all vegetation would be cleared from 200 to 300 feet from the levee toe to allow sufficient room to construct the trench and to spread out the excavated material in preparation for mixing the soil with bentonite. Site preparation would remove an estimated 100 to 150 acres of BLH and associated wetlands and wildlife habitat. A slurry trench would also effectively cut off water flow to landside wetlands and water bodies within the project area, including the WRP area, Lake No. 9, Elbow Slough, Pond Slough, No. 8 Slough, and Fish Pond. Due to the extensive negative environmental impacts, the Corps determined this alternative is not practicable or reasonable.

2.4 Alternative 4 – Install Relief Wells and Associated Drainage Work. This alternative would involve installing 121 relief wells landside of the MRL, constructing new drainage ditches, clearing existing drainage ditches, and installing/replacing culverts as needed along roadways to ensure adequate drainage of the water from the relief wells. Installation of relief wells along the WRP easement shown in Figure 1 would require an approximate 50-foot easement from the toe of the levee that would be cleared of trees and maintained (mowed) to prevent tree roots from growing into the relief wells and levee and for monitoring the wells and adjacent areas, to determine the effectiveness of the wells in adequately capturing the seepage water. Therefore, NRCS would need to subordinate their WRP easement interest and modify the warranty easement deed on 4.6 acres to allow the relief wells to be placed and maintained in this area and for this mowing to take place. Currently, natural flooding and overland flow from the Mississippi River is excluded from the WRP easement area by the existing levee. The objective of the WRP is to restore hydrology, and restore altered wetlands and associated habitat to the fullest extent practical. While unstable sand boils currently exist on the WRP easement as a

natural occurrence (the flood levels in the Mississippi river seek a route under the levee system via a sand vein), temporary sandbagging reduces the flow volume during flood events. Seepage via the relief wells would improve hydrology to the WRP by providing sheet-flow of water along the 4,000-foot boundary with the levee. NRCS has stated that increased flow onto the WRP easement area is desirable in that this discharge would better mimic flood flows that would have occurred if the levee was not in place and would help improve restoration of hydrology on the easement area.

A bulldozer or excavator would be used to construct new drainage ditches, clean out existing ditches, and to install/replace culverts as needed. Specialized drill rigs would be used to drill the holes along the levee, and cranes would be used to install the relief wells. Silt fences would be utilized to contain any potential runoff. Vegetation cleared from existing ditches would be removed from the area. Earthen material would be spread on non-wet agricultural fields within a 300-foot right-of-way; however, no ditches or earthen material would be placed within the WRP acreage.

A total of approximately 73.1 acres would be impacted by the proposed project, including 45.9 acres of non-wet agricultural lands, 1.6 acres of existing drainage ditches overgrown with grass and weeds, and 25.6 acres of wetlands. The 1.6 acres of existing drainage ditches are not classified as wetlands, but are instead non-jurisdictional, as per Section 404 of the Clean Water Act. The 25.6 acres of wetlands impacted by the proposed project include 4.6 acres of mixed wetland habitat within the WRP easement, 10.5 acres of wooded wetlands, and 10.5 acres of farmed wetlands.

Mitigation for impacts in the easement through the WRP land would occur within the existing WRP boundaries. Mitigation would include planting BLH and/or cypress tree species on up to 13.8 acres of existing WRP land adjacent to the project footprint at project expense and as per a restoration plan developed in cooperation with, and approved by NRCS. To mitigate for the loss of the 10.5 acres of wetlands and wildlife habitat within the wooded wetlands, approximately 31.5 acres of prior converted cropland would be restored to BLH, or a comparable amount of forested wetland mitigation credits would be purchased from an approved mitigation bank. To mitigate for the loss of the 10.5 acres of farmed wetlands, approximately 10.5 acres of prior converted cropland would be restored to BLH, or a comparable amount of forested wetland mitigation credits would be purchased from an approved mitigation bank. Although a total of approximately 25.6 acres of wetland habitat would be impacted by Alternative 4, no significant adverse environmental impacts are associated with this alternative. All factors considered, Alternative 4 is the most practical solution for seepage control and is the preferred alternative for the proposed project.

WATER QUALITY CERTIFICATION: The Kentucky Division of Water, Water Quality Certification Section, issued a waiver (#2012-012-W) for state water quality certification for the proposed project on April 9, 2012. Coordination is currently ongoing with the Kentucky Floodplain Management Section, Surface Water Permits Branch, to obtain a permit to construct across or along a stream. In addition, a Notice of Intent will be submitted to the Surface Water

Permits Branch in order to obtain a general permit for stormwater discharges associated with construction activities.

SECTION 404(b)(1) EVALUATION: A Section 404(b)(1) evaluation for the proposed project action was completed on April 9, 2012, in accordance to Environmental Protection Agency guidelines in pursuant to Section 404 of the Clean Water Act, as amended.

THREATENED AND ENDANGERED SPECIES: Coordination with the U.S. Fish and Wildlife Service (USFWS) indicated that six federally listed species are known to be found within Fulton County, Kentucky and within the adjacent Mississippi River. These species are the Indiana bat, grey bat, least tern, pallid sturgeon, rabbitsfoot mussel, and sheepnose mussel. Of these six species, only the endangered Indiana bat would potentially utilize the forested habitat within the project areas. Grey bats are cave-dependant species, and caves are not found within the project area. Least terns nest and roost along isolated river sandbars, and the sturgeon and mussels are fisheries that would be found within the river, not landside within the project area. The USFWS has documented three bald eagle nests riverside of the levee along Island 8, and stated that new or previously unidentified nests may be located in closer proximity. The bald eagle was removed from the List of Endangered and Threatened Species, but they are still protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

To avoid impacting the endangered Indiana bat, tree clearing activities would be avoided during the summer roosting season of April 1 to October 14. To avoid disturbance to potential nesting eagles, no overstory tree clearing or use of a chainsaw would be conducted with 660 feet of a bald eagle nest during the nesting season from January to July, as per the National Bald Eagle Management Guidelines published by the USFWS in May 2007. In addition, a survey for eagle nests would be conducted prior to the start of project activities and during the construction. Should a nest be found within 660 feet of the project area, the USFWS, Ecological Services, Frankfort, Kentucky Field Office would be immediately notified for further guidance. With the implementation of the aforementioned restrictions, the proposed project is not likely to adversely affect any federally listed threatened or endangered species. By letter dated December 20, 2011, the USFWS concurred with this determination, provided the restrictions to avoid impacting the Indiana bat and bald eagle are followed.

CULTURAL RESOURCES: The proposed project would have no effect to significant cultural resources. The Kentucky State Historical Preservation Officer determined that the proposed project would have no effect on historical properties by letter dated June 20, 2011. By e-mail on May 4, 2012, an archaeologist representing NRCS concurred with the findings concerning the archeological resources located within the WRP easement; therefore, no further archeological work is recommended for those locations.

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. This notice is being circulated to federal, state and

local environmental agencies. The decision to proceed with the proposed modifications 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 of the activity must be balanced against its reasonably foreseeable detriments. Potential direct, indirect, and cumulative effects of the activity on the human environment will be considered.

CEMVM 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 CEMVM to determine whether to proceed with the proposed action. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and other public interest factors. 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 Environmental Assessment, Draft Finding of No Significant Impact, and Section 404(b)(1) Evaluation have been completed and will be circulated to agencies and any other party that responds to this notice requesting a copy. Copies have been placed on the District's website at:**
http://www.mvm.usace.army.mil/regulatory/public-notices/pn.htm

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 action. Requests for a public hearing should 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. Failure of any agency or individual to comment on this notice will be interpreted to mean that there is no objection to the proposed work.

COMMENTS OR REQUEST FOR ADDITIONAL INFORMATION: If you wish to obtain additional information or to submit comments on this proposal, please contact Mr. Alan Bennett at the U.S. Army Corps of Engineers, Environmental Compliance Branch, 167 North Main Street RM B-202, Memphis, Tennessee 38103-1894, at 901-544-4313. **Comments should be forwarded to this office by June 8, 2012.**

Sincerely,

for

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

ATTACHMENTS – FIGURES 1-3

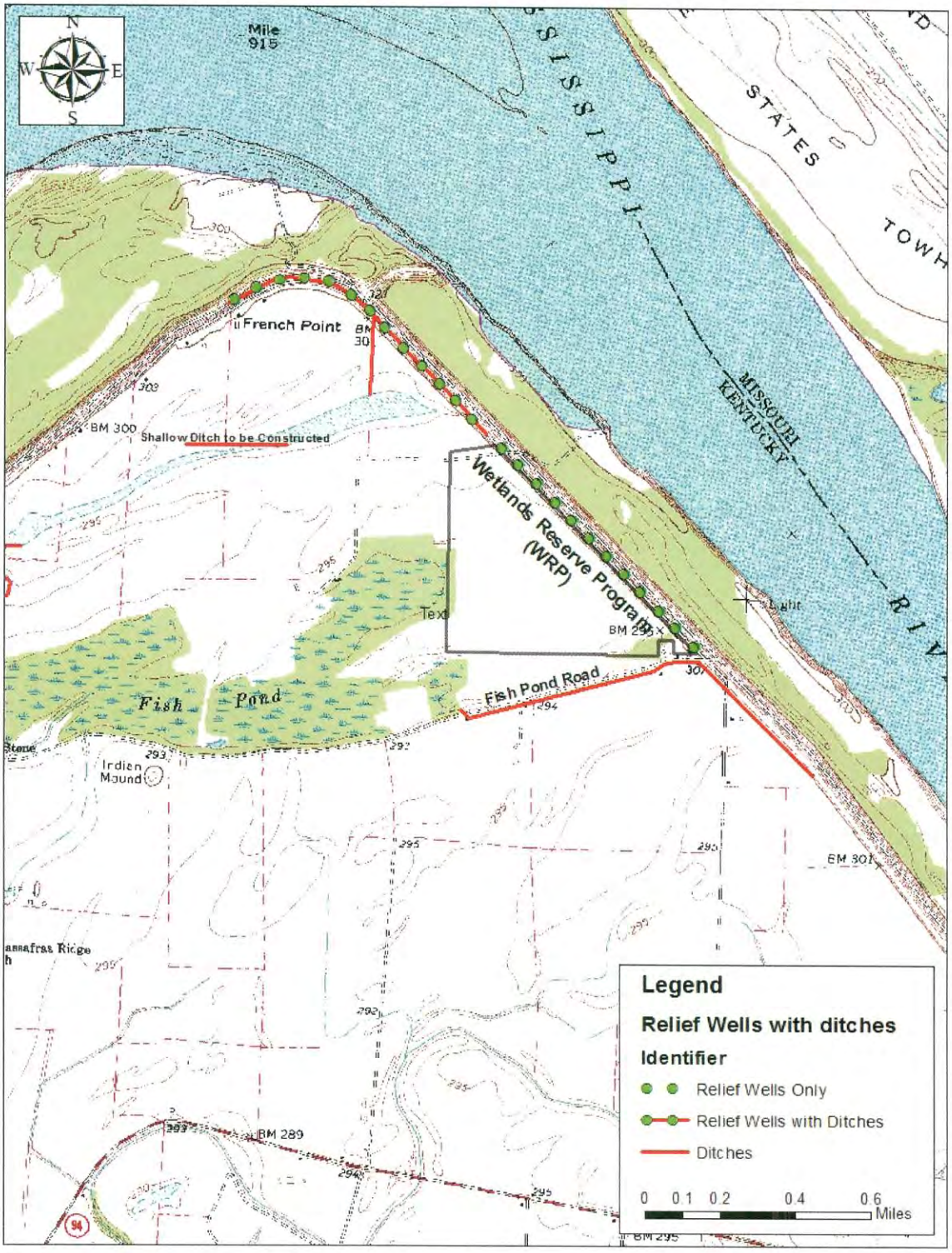

Figure 1. Project Location, Eastern End, Island 8 Seepage Control, Fulton County, Kentucky.

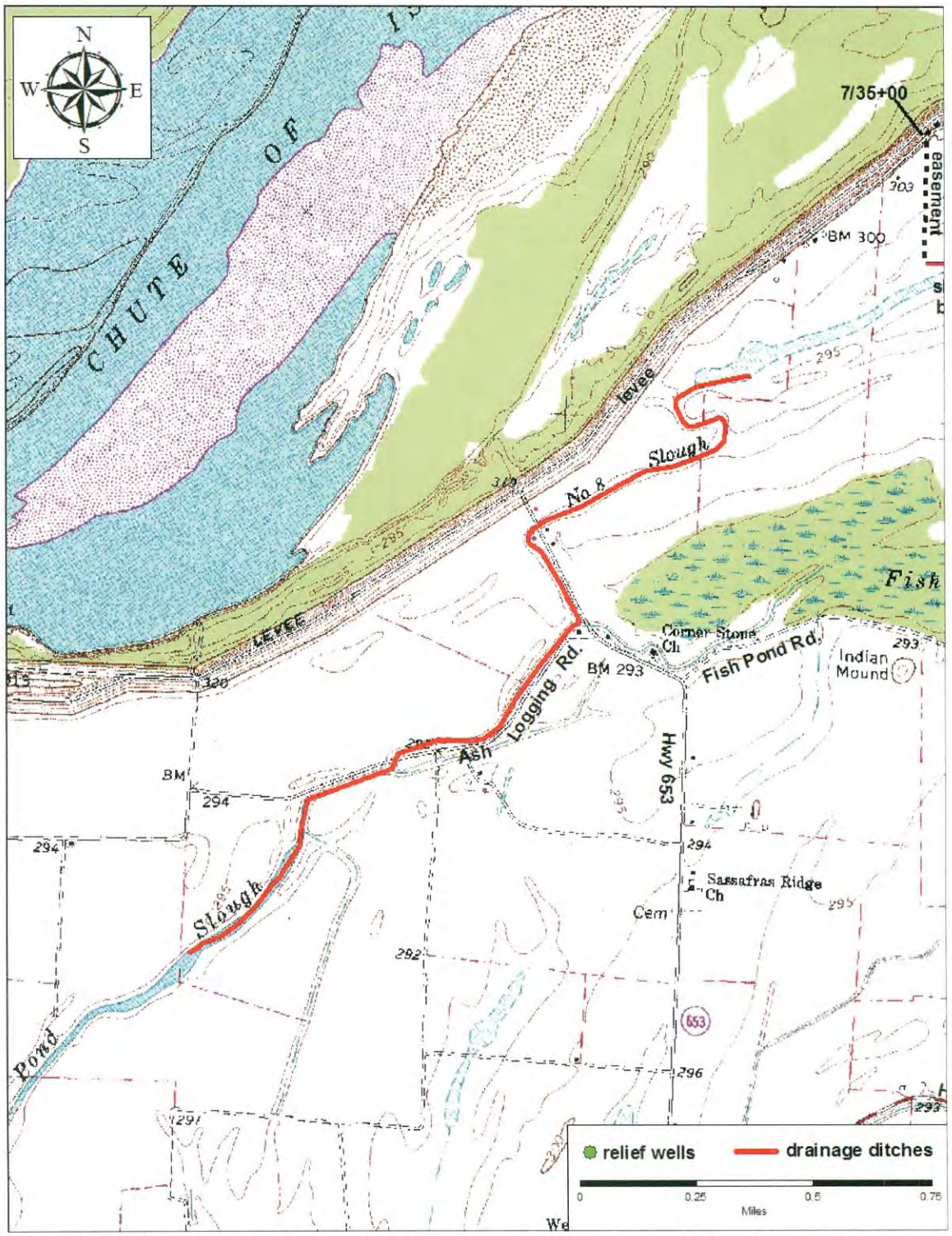

Figure 2. Project Location, Middle Area, Island 8 Seepage Control, Fulton County, Kentucky.

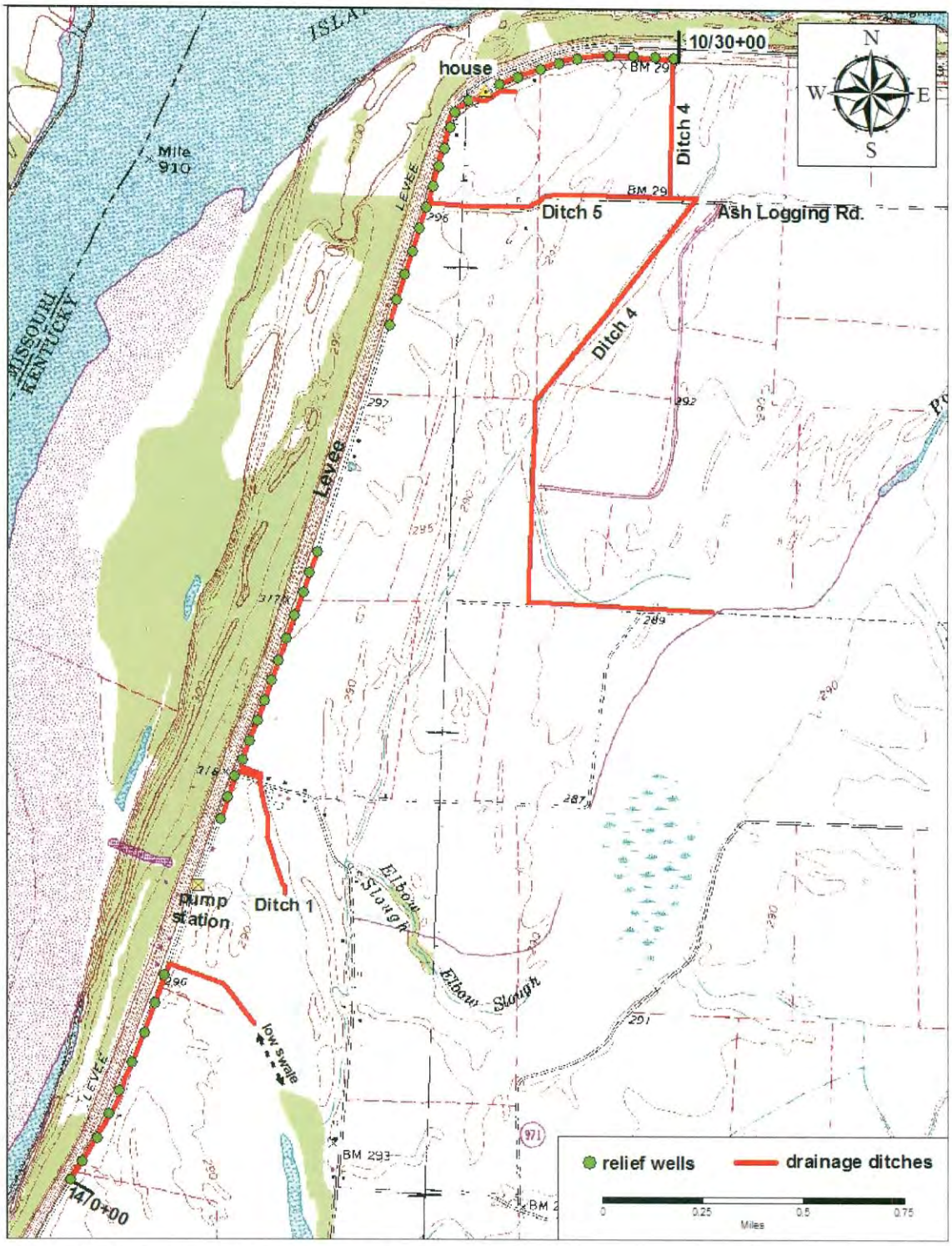

Figure 3. Project Location, Western End, Island 8 Seepage Control, Fulton County, Kentucky.