

IEPA Log No.: **C-0416-11**
CoE appl. #: **N/A**

Public Notice Beginning Date: **September 2, 2011**
Public Notice Ending Date: **September 19, 2011**

Section 401 of the Federal Water Pollution Control Act
Amendments of 1972

Section 401 Water Quality Certification to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois Environmental Protection Agency
Bureau of Water
Facility Evaluation Unit
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-3362

Name and Address of Discharger: U.S. Army Corps of Engineers, Memphis District, 167 N. Main St., Room B-202, Memphis, TN 38103-1894

Discharge Location: Sections 30 and 32, T16S, R1W of the 3rd P.M and Sections 4, 5, 9, 10, 11, 14, 15, 23, 24 and 26, T17S, R1W of the 3rd P.M. and Sections 26, 35 and 36, T27N, R17E near Cairo in Alexander County

Name of Receiving Water: Wetlands along the Mississippi River and Ohio River

Project Description: Seepage control project along the Mississippi River mainline levee and the Ohio River levee.

The Illinois Environmental Protection Agency (IEPA) has received an application for a Section 401 water quality certification to discharge into the waters of the state. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice. The last day comments will be received will be on the Public Notice period ending date unless a commenter demonstrating the need for additional time requests an extension to this comment period and the request is granted by the IEPA. Interested persons are invited to submit written comments on the project to the IEPA at the above address. Commenters shall provide their names and addresses along with comments on the certification application. Commenters may include a request for public hearing. The certification and notice number(s) must appear on each comment page.

The attached Fact Sheet provides a description of the project and the antidegradation assessment.

The application, Public Notice/Fact Sheet, comments received, and other documents are available for inspection and may be copied at the IEPA at the address shown above between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the certification application, the IEPA may, at its discretion, hold a public hearing. Public notice will be given 30 days before any public hearing. If a Section 401 water quality certification is issued, response to relevant comments will be provided at the time of the certification. For further information, please call Thaddeus Faught at 217/782-3362.

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Fact Sheet for Antidegradation Assessment

U.S. Army Corps of Engineers, Memphis District – Cairo Levees – Wetlands along the Mississippi River and Ohio River – Alexander County

IEPA Log No. C-0416-11

CoE Log No. N/A

Contact: Mark Books at 217/558-2012

The U.S. Army Corps of Engineers – Memphis District (“Applicant”) has applied for 401 water quality certification for work associated with levee repair in and around the City of Cairo. The proposed project involves seepage control measures along the Mississippi River mainline levee (“MRL”) and the Ohio River levee (“ORL”). Specific work includes installing relief wells and clearing existing drainage ditches, replacing culverts as needed along roadways to ensure adequate drainage of the water flow from the relief wells, constructing riverside slurry trenches along the levee of both rivers, slope flattening only along the MRL, and constructing landside berms only along the ORL. The total length of levees that will receive some type of repair work during this project is approximately 6.5 miles at a total estimated cost of \$21.9 million. The Applicant anticipates that the proposed work will impact a total of 58.2 acres of forested wetland. The Applicant will mitigate for the forested wetland impacts at a 3:1 ratio (174.9 acres). Some of the mitigation credits will be obtained by purchasing credit from mitigation banks and additional credit will be obtained by acquiring and restoring prior converted cropland back to forested wetlands.

Identification and Characterization of the Affected Water Body.

The wetlands within the project site have zero 7Q10 flow and are General Use waters. The wetlands are not found on the 2008 Illinois 303(d) List nor are they rated under the Agency’s Biological Stream Characterization (BSC) system. The wetlands are not listed as a biologically significant water body in the Illinois Natural History Survey publication Biologically Significant Illinois Streams. The wetlands are forested wetlands that are located around the existing levees and drainage ditches. Concerning existing conditions the following description describes the forested wetlands:

“Tree species found within the proposed project areas consist of American sycamore, American elm, silver maple, hackberry, bitter pecan, cottonwood, willow, overcup oak, and water oak along the MRL, and willow, cottonwood, silver maple, and American sycamore along the ORL. Understory species found included immature trees, wild grape, greenbrier, blackberry, poison ivy, ragweed, and smartweed.”

The Applicant conducted a habitat evaluation procedure survey of the project area on July 27, 2011, with representatives of the USFWS and Illinois Department of Natural Resources. Five animal species were selected at this time for use in a *habitat suitability index* (“HSI”) modeling. The five species that was chosen were the fox squirrel, gray squirrel, mink, pileated woodpecker and barred owl. Results of the HSI analysis had a low total score of 1.29 for the five species selected for the survey. The HSI values were then annualized over a 100-year period by the Applicant which provided *average annual habitat units* (“AAHUs”) for each of the modeled species. A total value of 75.1 AAHUs was estimated by the Applicant for the 58.2 acres of forested wetlands. The Applicant has stated that the low AAHUs for the 58.2 acres is primarily due to the low numbers and lower diversity of trees than typical bottomland hardwoods habitat would have, such as oak, pecan, hickory, beech, tupelo, and cypress.

The 58.2 acres of wooded impacts represents the total wetland impacts for the approximate 3.22 miles of levee work on the MRL and for the approximate 3.27 miles of levee work on the ORL. The Applicant separated all the levee repair work into five sections. The amount of forested wetland impacts for each of the five different sections is identified below:

<u>Sections</u>	<u>Impacted Acres</u>
Cairo #5 Area	16.4
City of Cairo Area	0.0
Above Cairo Area	4.3
Cairo Slope Flattening Area	8.1
Cairo Slurry Trench Area	29.4
Total	58.2 acres

The IDNR WIRT System did not list any state threatened or endangered aquatic species possible residing within the project area.

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.

The pollutant load increases that would occur from this project include some possible increases in suspended solids during the construction of the project. Erosion control measures will need to be utilized to minimize any increase in suspended solids. The proposed impact of the wetlands will eliminate the current habitat.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in suspended solids will be local and temporary. Erosion control measures will be utilized to minimize any increase in suspended solids and prevent further impact to the remaining resources. The Applicant will mitigate for the 58.2 acres of forested wetland impacts at a 3:1 ratio ($58.2 \times 3 = 174.9$ acres). The Applicant has stated the following concerning mitigation:

“The U.S. Army Corps of Engineers, Memphis District, proposes to mitigate the 58.2 acres of total forested wetland impacts with 175 acres of bottomland hardwood restoration. The Corps will purchase 50 acres of forested wetland mitigation from either the Little Muddy Mitigation Bank or the Indian Creek Mitigation Bank (both located near Carbondale, Illinois) prior to completing the first two items of work, Above Cairo Parcel #2 and Above Cairo Slurry Trench. The Corps would then obtain the remaining 125 acres of mitigation through one or a combination of the following two options: (1) purchasing credits through another approved Illinois mitigation bank(s) and/or (2) acquiring and restoring prior converted cropland to bottomland hardwoods. The second option would include restoring micro-topography and hydrology as well as planting the land in appropriate bottomland hardwood tree species. Any mitigation land purchased by the Corps outside of a mitigation bank would be located adjacent to or in close proximity to federally or state managed lands such as a U.S. Fish and Wildlife Service refuge or state wildlife management area or state natural area. These lands would then be turned over to either the U.S. Fish and Wildlife Service or State of Illinois for management.”

Purpose and Social & Economic Benefits of the Proposed Activity.

The Applicant has stated the following concerning the purpose for this project:

“Seepage occurring during flood conditions within the Mississippi and Ohio rivers needs 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.”

Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation.

The construction of the proposed project will follow guidelines set forth by the Agency and USACE. Erosion control measures need to be implemented to prevent additional impacts to the remaining resources. Applicant will use best management practices (“BMPs”) throughout construction to minimize silt and runoff impacts. Storm Water Pollution Prevention Plans (“SWPPPs”) will also be used during this project.

“The SWPPP will describe and ensure the implementation of practices which are to be used to reduce pollutants in storm water discharges associated with the construction activity and to assure compliance with the terms and conditions of this permit.”

To minimize any environmental impact of this proposed project the Applicant has agreed to the following conditions:

- Construction for the proposed project will occur during times of low flows in the rivers.
- To avoid impacting the Indiana bat the Applicant will conduct any necessary vegetation removal outside the bat’s normal roosting season of April 1st thru September 30th.

Concerning alternatives to this proposed project the Applicant has stated the following:

“Four alternatives were considered for the proposed action: 1) no-action; 2) seepage berm construction and slope flattening; 3) install relief wells with associated drainage work, slope flattening, and renovation of the Cottonwood Slough Pumping Station; and 4) install relief wells with associated drainage work, construct slurry trenches, slope flattening, and construct landside berms.

Alternative 1-Future without Project Condition. In the future without project condition (a.k.a. no-action), the proposed action would not be constructed. The no-action alternative would result in continued seepage during flood conditions... This would likely lead to a levee failure during a major flood event which would result in property damage and could cause human injuries and/or loss of life. This alternative was determined to be unacceptable because of these risks.

Alternative 2- Seepage Berm Construction and Slope Flattening. This alternative would involve construction of seepage berms along the Mississippi and Ohio River levees, and flattening the levee slope along the MRL. Seepage berms were designed in 1980 for the MRL, but were never constructed due to limited borrow sources within the project area and problems acquiring rights-of way within the berm footprint. Due to these problems noted, this alternative was rejected.

Alternative 3- Install Relief Wells with Associated Drainage Work, Slope Flattening, and Renovation of the Cottonwood Slough Pumping Station. The well design to install relief wells along the MRL was finished in 1999, but was never constructed due to local concern of increased surface water flooding landside areas and pumping required due to the seepage flows from the wells... Due to the increased total seepage between stations, additional work on the existing Cottonwood Slough pumping station would be required to evacuate seepage in the drainage basin. Locals requested that the existing Cottonwood Slough pumping station be renovated to increase pumping capacity and capture the flow from the relief wells. However, the pumping station capacity was not increased and no wells were constructed because the USACE does not have Congressional authority or funding to renovate the pumping station. Due to increased landside flooding and lack of authority to renovate the pumping station, this alternative was rejected.

Alternative 4-Install Relief Wells with Associated Drainage Work, Construct Slurry Trench, Slope Flattening, and Seepage Berm Construction. The proposed action for this alternative combines various seepage control measures along the Mississippi and Ohio River levees...

Constructing the slurry trench would stop water flow under the levee, thus provide greater stability for the levee and would reduce interior flooding as fewer relief wells would be required...All factors considered, Alternative 4 is the most practical solution for seepage control and is the preferred alternative.”

Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities.

The U.S. Army Corps of Engineers, Memphis District released a draft environmental assessment, 404(b) (1) Evaluation, and a draft finding of no significant impact (FONSI) for the proposed project on August 5, 2011.

In a report generated through IDNR’s EcoCAT system dated August 26, 2011, the Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species in the vicinity of the project location; therefore, consultation is terminated.

Agency Conclusion.

This preliminary assessment was conducted pursuant to the Illinois Pollution Control Board regulation for Antidegradation found at 35 Ill. Adm. Code 302.105 (antidegradation standard) and was based on the information available to the Agency at the time the assessment was written. We tentatively find that the proposed activity will result in the attainment of water quality standards; that all existing uses of the receiving stream will be maintained; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that this activity will benefit the community at large by providing seepage control for the Mississippi River and the Ohio River mainline levee system in and around the City of Cairo. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.