

**Illinois Environmental Protection Agency  
Bureau of Water, Permit Section  
(IEPA)**

1021 North Grand Avenue East, Post Office Box 19276, Springfield, Illinois 62794-9276, 217/782-3362

The IEPA has issued a Public Notice of a request for a Clean Water Act Section 401 water quality certification that would allow the issuance of a federal permit for the discharge of pollutants to waters of the State.

**Public Notice Beginning Date:**

Wednesday, July 10, 2024

**Public Notice Ending Date:**

Wednesday, July 24, 2024

**Agency Log No.: C-0122-24**

**Federal Permit Information:** This civil works project is under the jurisdiction of Rock Island District, Regulatory Branch U.S. Army Corps of Engineers

**Name and Address of Discharger:** USACE, Rock Island District, Roger Perk - Clock Tower Building, P.O. Box 2004, Rock Island, IL 61204-2004

**Discharge Location:** In Section 9 of Township 14-North and Range 6-West of the West 4<sup>th</sup> Principal Meridian in Mercer County. Additional project location information includes the following: Bay Island Drainage and Levee District Levee, upstream and downstream of Lock and Dam 17, New Boston, IL 61272

**Name of Receiving Water:** Mississippi River, Pools 17, 18

**Project Name/Description:** Bay Island Drainage and Levee District 2023 Event PL84-99 Flood Repairs - proposed repairs to the Bay Island Drainage and Levee District including the placement of stone protection in scour holes and the shaping and grading of sand levee to restore authorized levee slopes and grades

**Construction Schedule:** Immediate (Planned project duration is approximately 365 days)

The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice. Interested persons are invited to submit written comments on the project to the IEPA at the above address. Commenters must provide their name and address along with comments on the certification request. The IEPA Log number must appear on each comment page. Commenters may include a request for public hearing. Only hearing requests and comments that pertain to Clean Water Act Section 401 authority will be considered. This authority provides consideration of whether the permit or license would be consistent with Sections 301, 302, 303, 306, or 307 of the CWA, as well as "any other appropriate requirement of State [or tribal] law". Requests for additional comment period must provide a demonstration of need. The final day of comment acceptance will be on the Public Notice Ending date shown above, unless the IEPA grants an extended notice period. The attached Fact Sheet provides a detailed description of the project and the findings of the IEPA's antidegradation assessment.

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 see the contact information below.

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Post Document. No. C-0122-24-07102024-PublicNoticeAndFactSheet.pdf

U.S. Army Corps of Engineers (“Applicant”) has applied for a 401 Water Quality Certification for impacts associated with repairs of damages to the Bay Island Drainage and Levee District (levee sustained during flooding in 2023). The project site is located in Mercer County on the left descending bank of the Mississippi River between river miles (RM) 434 and 444. The project area lies within Mississippi River Pools 17 and 18 with Lock and Dam in the middle of the project area in Township 14 North, Range 6 West, Section 26, near New Boston, Illinois. The levee system sustained damage from the 2023 flood event in which the levee sustained erosion damage along approximately 10,480 feet of its length.

The proposed project consists of repairs to four sections of the levee (Repair Areas 1, 3, 4 and 6) by use of approximately 31,670 cubic yards (CY) riprap placed along the damaged sections of the levee. Repair area 1 work will consist of riprap placement over 6” of bedding stone. The area has previously been repaired with riprap but has since degraded. Repair area 3 work will consist of riprap placement over 6” of bedding stone. This area is adjacent to existing riprap placed as part of a prior repair with the new rock becoming an extension of the existing rock. Repair area 4 is immediately downstream of the Lock and Dam and has almost no shoreline tree cover. The repair will consist of placing riprap over 6” of bedding stone from the levee crown to the river bottom. Repair area 6 consists of two sections of scour on the tieback levee. These areas have been repeatedly damaged by past flood events and repairs will consist of placing pervious fill to restore the levee design profile, then placing 12” of riprap over 6” of bedding stone. Pervious fill may be used to restore the levee profile as needed. The fill would be reclaimed from the adjacent foreshore where it was displaced during flooding with additional clean pervious fill coming from the Corps Keithsburg Dredged Material Management Program (DMMP) site and the Bass Island DMMP site. Approximately 4600 CY of the additional material are estimated to be needed from the DMMP sites. Some tree clearing may be required in repair areas 1 and 3. Because this project provides an improvement to the area, and no long-term adverse impacts are anticipated, no mitigation is proposed.

Information used in this review was obtained from the application documents dated June 2024 and June 13, 2024.

#### **Identification and Characterization of the Affected Water Body. M-02 and K-22**

The Mississippi River has 15,310 cfs of flow during critical 7Q10 low-flow conditions and is classified as General Use Water. The Mississippi River is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, nor is it given an integrity rating in that document.

- The Mississippi River ,Waterbody Segment IL\_M-02, is listed on the 2020/2022 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for fish consumption with potential causes given as aldrin, dieldrin, endrin, heptachlor, mercury, mirex, polychlorinated biphenyls (PCBs), and toxaphene. Aesthetic quality, aquatic life, primary contact, and public and food processing water supply uses are fully supported. This segment of the Mississippi River is not subject to enhanced dissolved oxygen standards.
- The Mississippi River ,Waterbody Segment IL\_K-22, is listed on the 2020/2022 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for fish consumption with potential causes given as aldrin, dieldrin, endrin, heptachlor, mercury, mirex, polychlorinated biphenyls (PCBs), and toxaphene and public and food processing water supply use with a potential cause given as iron. Aesthetic quality, aquatic life, and primary contact uses are fully supported. This segment of the Mississippi River is not subject to enhanced dissolved oxygen standards.

The scope of this project does not include dredging or associated water quality impacts therefore no field sampling or laboratory analysis was deemed necessary by the applicant.

#### **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 total suspended solids. These increases are a normal and unavoidable result of fill placement activities and are expected to be minor and temporary during riprap placement and return to ambient conditions once construction is completed.

Riprap stone to be used for repairs is physically stable and clean, reducing the chances for impacting the Mississippi River. All riprap stone would be clean and reasonably free from soil, quarry fines, and refuse.

Though final determinations for the source of material have not been made, materials would be obtained from approved pits/quarries in the project vicinity and would be free of chemical contaminants. Pervious earthen fill will be taken from the Keithsburg DMMP site, with the Bass Island DMMP site being available as a backup.

The use of clean quarry-run riprap and the methods of placement will not introduce contaminants into the aquatic system. Approximately 31,760 CY of rock and 4600 CY of pervious material is expected to be discharged as a result of the levee repair project. Neither the materials used, nor the placement method cause relocation or increases of contaminants in the aquatic system.

#### **Fate and Effect of Parameters Proposed for Increased Loading.**

Increases in suspended solids will be local and temporary for deposits of fill materials. Benthic organisms would be temporarily displaced due to construction activity but are expected to recolonize over time. All construction access would take place from the crown of the levee, and the toe of the levee (if necessary). The construction footprint was kept as small as possible in order to minimize impacts. No floating plant access dredging will be utilized and excavated material will be used to fill damaged areas or along the landside toe of the levee.

Riprap stone to be used for repairs is physically stable and clean, reducing the chances for impacting Mississippi River, Sturgeon Bay, and Boston Bay.

Pervious borrow material is to be placed via heavy equipment on the riverside slope of the existing levee after the top soil layer has been stripped of existing vegetation. Layer thickness and compaction is per the plans and specifications. Pervious fill in excess of the amount available for reshaping at each site will be taken from benching the levee to install the clay cap.

No long-term adverse impact to the overall water quality, water circulation, fluctuations and salinity determination are anticipated; therefore, no mitigation measures are proposed by the applicant.

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

The applicant has provided the following alternatives:

No Action: This option would not allow for federal assistance to be provided for emergency repairs under PL84-99 authority or funding sources. It would then be assumed that the sponsor would initiate repairs as local funding allows, however these repairs may not be to USACE standards or completed in a timely manner. This alternative is not acceptable as the LD&D could sustain further damages beginning at a 2.5% flood event. Damages sustained could include flooding and prevent land use, therefore resulting in severe economic hardship to land/property owners.

Non-Structural Alternatives: This alternative consists of non-structural approaches which involve changes in land use offered by other Federal and state programs. These tactics would include:

- acquisition, relocation, elevation, and flood proofing existing structures
- rural land easements and acquisitions
- wetland restoration

Non-structural Alternatives are not reasonable alternatives as the design flood risk management to the urban and agricultural areas protected by the levee is desired.

Structural Alternatives: This alternative consists of structural plans to protect the Levee System from further damage which typically consists of repairs to the levee system. The structural alternatives studied include:

- Repair Levee to Original Condition. This alternative would repair the damage to the levee with in-kind sand fill or reshaping the existing levee to the original slopes and grades of the embankment. This alternative was determined not to be the preferred alternative.
- Construction of a Setback levee. This alternative consists of degrading the existing levee and constructing a replacement setback further from the Mississippi River. Because it is likely that river currents and waves could remain high and ultimately damage a setback sand levee, this alternative was discarded as the preferred alternative.
- Place Clay Cap in Damaged Area. This alternative would utilize placement of a 2-foot thick clay cap on the levee slope to repair the slope erosion on the levee, maintaining the original levee grade.
- Place Riprap in Damaged Area. This alternative consists of placing riprap revetment materials and bedding to repair the levee slope erosion.

The structural and non-structural alternatives were not selected as they would not meet the purpose and need of the project.

Preferred Alternative. The preferred alternative is to repair the levee with a combination of repairing the levee to its original condition and placing riprap in damaged areas. The proposed project consists of placing fill along 11 different areas of the riverside slope and toe of the levee embankment of the Levee System. Repair Area 1 has approximately 500 LF of scour damage along the toe of the levee where the foreshore has washed away to receive bedding stone and riprap fill. Repair Area 2 has approximately 3,440 LF of wave wash damage along the toe of the levee where pervious fill will be placed to restore the degraded slope back to the original design grade. Repair Area 3a has approximately 180 LF of scour damage to receive bedding stone and riprap fill while repair area 3b consists of approximately 750 LF of wave wash damage along the toe of the levee where pervious fill will be placed to restore the degraded slope back to the original design grade. Repair Area 4 has approximately 3,100 LF of wave wash damage to receive bedding stone, and riprap fill. Repair Area 5 consists of 4 distinct wave wash damage areas, ranging from 125 to 350 LF in length where pervious fill will be placed to restore the degraded slope back to the original design grade. Repair Area 6 consists of 2 repair areas totaling 1,400 LF to receive bedding stone and riprap fill. See project plans for stationing at each repair area. The Project addresses the erosion of the levee slope due to wave wash and scour during a flood (high water) event and will protect the levee against future damages. The erosion protection stone (riprap) will be placed along the riverside slope of the levee as indicated in the plans to restore the original design section. The repair work is to be done from the land or floating plant based on access at each repair area. The placement of material will not increase the Project degree or level of protection.

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

Federally listed threatened, endangered, or candidate species that may occur in the project area include Indiana bat (*Myotis sodalis*), Northern long-eared bat; [NLEB] (*Myotis septentrionalis*), Tri-colored bat (*Perimyotis subflavus*), Whooping crane; [experimental population] (*Grus americana*), Higgins-eye pearl mussel (*Lampsilis higginsii*), sheepnose mussel (*Plethobasus cyphus*), spectacle mussel (*Cumberlandia monodonta*), Monarch butterfly (*Danaus plexippus*), and Eastern Prairie Fringed Orchid (*Platanthera leucophaea*). Listed bat species utilize large trees with loose or peeling bark, or among leaves of live or recently dead trees (as in the case of the tricolor bat) as roost sites during summer months and spend winter hibernating in caves and mines. The mussel species are often in shallow areas of large rivers with moderate to swift currents that flow over coarse sand or gravel. The eastern prairie fringed orchid occurs in a variety of habitats, from dry prairie to wetlands and bogs. The proposed repairs are not expected to disturb these types of habitats. Tree removal will be kept to a minimum and the trees proposed for removal are small stands of trees located near or at the levee and not in interior forested habitat. Mussel habitat is not expected to be adversely affected, as these repair areas are within the main channel and continual erosion due to navigation traffic and mooring as well as the recent flood damages create unstable habitat which is unsuitable for listed mussel species. For these reasons, the District has determined that the project will have no effect listed species.

On June 13, 2024, an IDNR EcoCAT consultation (Project # 2416608) was initiated for the proposed project site. The natural resource review provided by EcoCAT identified the following protected resources that may be in the vicinity of the proposed action: Butterfly mussel (*Ellipsaria lineolata*), Higgins Eye mussel (*Lampsilis higginsii*), Lake Sturgeon (*Acipenser fulvescens*), Monkeyface mussel (*Quadrula metanevra*), Western Sand Darter (*Ammocrypta clarum*). The consultation is currently under review by the Department.

**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 this assessment was written. We tentatively find that the proposed activity would result in the attainment of water quality standards; 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 would benefit the Bay Island Drainage and Levee District by providing an increased level of flood risk management to the area. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.

cc: Springfield Regional Office