

**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:

Thursday, March 23, 2023

Public Notice Ending Date:

Thursday, April 6, 2023

Agency Log No.: C-0274-22

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

Name and Address of Discharger: U.S. Army Corps of Engineers, Rock Island District, Roger Perk - Clock Tower Building, PO Box 2004, Rock Island, IL 61204

Discharge Location: In Sections 23 and 24 of Township 33-North and Range 2-East of the East 3rd Principal Meridian in LaSalle County. Additional project location information includes the following: Located 2.5 miles upstream of the Starved Rock Lock and Dam in vicinity of Delbridge Island between River Miles 233 and 234, Ottawa, IL 61350

Name of Receiving Water: Illinois River

Project Name/Description: NESP Starved Rock Breakwater - This project would create a 6147 linear foot breakwater along historic islands and would create backwater habitat to support fish, waterfowl, and other animals by improving habitat conditions through allowing native vegetation to establish.

Construction Schedule: Beginning Jul 2023 and ending Sep 2025

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-0274-22-03232023-PublicNoticeAndFactSheet.pdf

USACE Rock Island District (“Applicant”) has applied for a 401 Water Quality Certification for impacts associated with the placement of fill to create a breakwater, and discharge of dredged material side-cast along the breakwater alignment in Sections 23 and 24, Range 2E, Township 33N in LaSalle County Illinois. The project site is located in the area extending east from Delbridge Island in the Illinois River, Starved Rock Pool (river miles 233-234). The U.S. Army Corps of Engineers, Rock Island District (District) has resumed the Starved Rock Pool Critical Restoration Project under Navigation and Ecosystem Sustainability Program (NESP). The proposed action would a 6147 linear foot (LF) breakwater along historic islands and would create backwater habitat to support fish, waterfowl, and other animals by improving habitat conditions through allowing native vegetation to establish in lower Starved Rock Pool. Excessive sedimentation and island erosion is causing a dramatic loss in productive backwaters, side channels, and island areas in the Illinois River basin. This loss of habitat is limiting ecological health and altering the character of this unique floodplain river system. As a result of the increased sedimentation and erosion, the Illinois River has lost much of its backwater aquatic plant communities, critical spawning, nursery, and overwintering areas for fish, and habitat for diving ducks and other aquatic species.

The breakwater will be constructed of 24,000 cubic yards (CY) riprap placed on the riverbed. Access dredging would be necessary to facilitate construction of the breakwater. In-channel dredging would create an approximately six-foot-deep channel with 2H:1V side slopes, and place approximately 55,000 CY dredged material toward the interior of the structure beyond the width of the breakwater footprint along the entire alignment (30ft top width, 4H:1V sideslopes). The Applicant would employ in-channel dredging with side-cast of spoils along the interior of the breakwater. Rip rap placement for the barrier island would be barged to the site then placed mechanically. Material would be dredged and placed mechanically to facilitate site access. Breakwater fill is expected to fill approximately 4 acres (Ac) and dredged material is expected to fill approximately 18 Ac. All fill would stay below ordinary high water elevation 461.67 (NAVD88) and dredged material fill would be consistent with island/island tail habitat currently on-site.

There are no affected wetlands for this project therefore, mitigation is not required.

This project was originally proposed under Section 519 of the Water Resources Development Act (WRDA) of 2000. This reinitiation of the project is being considered under the Navigation and Ecosystem Sustainability Program (NESP). The reinitiated project remains consistent with the Final Illinois River Basin Restoration Section 519 Project Implementation Report (PIR) with Integrated Environmental Assessment for the Starved Rock Pool Critical Restoration Project (December 2013). The original project was never implemented due to funding constraints and has remained inactive since 2014.

Information used in this review was obtained from the application documents dated October 28, 2022, December 8, 2022, January 18, 2023, and the final Project Implementation Report (PIR) with Integrated Environmental Assessment (EA), dated December of 2013.

Identification and Characterization of the Affected Water Body.

The Illinois River has 3655 cfs of flow during critical 7Q10 low-flow conditions and is classified as General Use Water. The Illinois 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 Illinois River, Waterbody Segment IL_D-20, is listed on the 2020/2022 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for fish consumption use with potential causes given as aldrin, dieldrin, heptachlor, mercury, mirex, polychlorinated biphenyls (PCBs), and toxaphene, and primary contact with a potential cause given as fecal coliform. Aquatic life use is fully supported. This segment of the Illinois River is subject to enhanced dissolved oxygen standards.

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

Suspended solids and turbidity values would be expected to temporarily increase during dredging and rock placement. A return to ambient conditions should occur shortly after completion of construction. No long-term negative impacts to suspended solids and turbidity levels are anticipated and typical values throughout the year are expected to decrease in the project area following construction. As aquatic vegetation establishes, there should be a continued decrease in turbidity in the project area. Placement of rip rap should have no short- or long-term adverse impacts on dissolved oxygen levels. Aquatic features should help to maintain dissolved oxygen in the project area at levels suitable for year-round fish habitat. Establishment of aquatic vegetation would increase daytime dissolved oxygen levels during the growing season.

Minor disturbances to organisms present in the project area could occur during construction. No long-term adverse effects to biota would be anticipated to result from this action. The overall long-term impact of the project is expected to be beneficial to biota in the project area and the river system. Reduced turbidity post-construction would provide better spawning habitat for fishes and foraging for waterbirds and mammals. No significant impacts to benthos at the placement site are anticipated. Existing benthic fauna would be buried by the breakwater, but rip rap would provide abundant rock substrate that would promote macroinvertebrate communities not currently present in abundance. Benthos in the dredge cut and placement area would be impacted. Recolonization of benthic organisms should occur quickly and include a more diverse accumulation than the present community.

Elevated ammonia levels are anticipated during construction, up to 400 feet downstream, as demonstrated in modeling studies shown in the Illinois River Basin Restoration PIR with Integrated EA document. The increases will be short-term and temporary due to construction of the downstream segment of the breakwater. The design of this segment is a north-south orientation, perpendicular to flow providing a hook-like area that will trap sediment in place thereby reducing potential for sediment to leave the construction area. This segment would be constructed first to reduce sediment from the rest of the dredging to leave the construction area. Modeling studies suggest that discharged materials will not be evenly distributed across the river channel, but rather concentrated at the placement site and diluted downstream with no detection beyond 400 feet downstream. No increase in metals or organic contaminants in the aquatic environment would result from the placement of rip rap or dredging.

Cumulative impacts of the proposed action are not expected to be significant. The proposed project should have positive long-term benefits to the fish, wildlife, and other natural resources inhabiting the area.

A Finding of No Significant Impact (FONSI) was issued on December 5, 2013. The finding was based on the facts that the projects will increase submerged aquatic vegetation, fish spawning potential and fish spawning opportunities, and that no significant social, economic, environmental, or cultural impacts are anticipated as a result of this project.

Fate and Effect of Parameters Proposed for Increased Loading.

The Starved Rock Project area is subject to State of Illinois floodplain impact requirements (IDNR, Floodplain Study Group, July, 2007). The State of Illinois requires that any action in the floodplain that increases flood heights is not allowable or must be accompanied by mitigation of adverse effects. Mitigation actions include purchase of easements, land acquisition, etc. Due to the potential high cost associated with mitigation actions, one of the project constraints is to avoid increasing flood heights. In other words, the Project is restricted to “no rise” (equal to or less than 0.04’ of increase). Therefore, no mitigation is required for this project.

The alignment of the breakwater feature has been designed to provide the greatest area of benefit to aquatic habitat with the smallest footprint. Increasing the footprint of the breakwater to a size that would allow heavy

equipment access for construction and preclude access dredging would have adverse impacts water surface elevations during flood events. Placement of dredged material along the breakwater would reduce the chance for it to mobilize in subsequent high-water events. Dredging would occur mechanically and the cycle time between digging, and placement is slow enough that mobilized ammonia would not exceed water quality standards. Silt control fence would be placed during construction to help minimize mobilization of dredged material.

The contractor would monitor water quality during construction and respond to any elevated readings in accordance with a monitoring and response plan. Initial plan measures being considered include monitoring Total Available Nitrogen (TAN) throughout the water column upstream and downstream of the dredging and placement actions to detect any exceedances resulting from this project. Responses to exceedances could include temporarily pausing work, resuming at a slower pace to allow more dilution, making more measurements upstream and downstream of the mixing zone to ensure accurate data collection.

Placing the dredged material inside the breakwater could reduce rebound wave energy by softening the transition from open water to rock and provide a platform to establish vegetation along the project perimeter. Possible introduction of equipment or construction-related contaminants would be controlled by adherence to runoff monitoring plans during construction activity. Rock riprap would be clean, uncontaminated stone from an approved source.

The increase in total suspended solids would be local and temporary. Although the existing benthic habitat would be permanently removed by the dredging activities, it is anticipated to recover and improve over time due to the increase in pool and run habitat depths. These improvements to depth and velocity will also lead to improvements in dissolved oxygen levels. Spoil deposits are expected to consolidate and support vegetation very quickly which will help to stabilize the deposits. Erosion controls will be observed in the form of project procedures by dredging during low flow conditions. It should be noted that although some spoils will flow back into the channel during placement, turbidity will be localized and is expected to settle quickly.

Purpose and Social & Economic Benefits of the Proposed Activity.

The project goals are to protect a low-water and island area of the Starved Rock Pool by restoring submerged aquatic vegetation, increase area and quality of resting and feeding habitat for migratory waterfowl, and improve spawning and nursery habitat for native fish. This area encompasses seasonally submerged islands and a shallow backwater area. The projects objectives are to increase shallow, low current velocity habitat, reduce wind fetch lengths and provide areas that are sheltered from wind and wave action, and increase water clarity in the project area.

The project area is located within the floodway of the Illinois River. Because of this, access to the site will be by water from the public boat ramp located at the Starved Rock State Park. The staging area for temporary construction offices will be located at the Starved Rock L&D and will need to be coordinated with L&D personnel. No material storage will be allowed at the staging area.

The EA appendix outlines the feasibility level monitoring and Adaptive Management Plan for the Starved Rock Pool Critical Restoration Project. This plan identifies and describes the monitoring and adaptive management activities proposed for the Project and estimates associated costs and duration. This plan will be further developed in the preconstruction, engineering, and design (PED) phase as specific design details are made available.

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

The Applicant has provided the following alternatives:

Alternative 0 – No Action Alternative No Federal action will occur with this alternative. A no action alternative would not realize any net benefits to the area or address any project objectives. Environmental effects from No Action would likely be infrequent submersed aquatic vegetation (SAV) occurrence during drought or navigation closures, include current and boat waves that introduce flow into the project area, and infrequent SAV occurrence during drought or navigation closures.

Alternative 1 - Delbridge Island Riprap Breakwater involves protection in the form of riprap along the northern edge of former Delbridge Island. This measure is included to reduce waves, velocities and turbulence to allow for the growth of SAV. The breakwater would be approximately 6,100 feet long and constructed to a design elevation 461.85 feet with a 3-foot top width and 2.5H: 1V side slopes. Flat pool elevation is 458.52 feet. Based on the results of the Cost Effectiveness and Incremental Cost Analyses (CE/ICA), planning criteria, risk assessment and other essential criteria the PDT recommends Alternative 1, Delbridge Island riprap breakwater, as the Tentatively Selected Plan (TSP). It would result in less wave impact and lower current velocities to improve the habitat for spawning of centrarchids. It would also increase the potential for SAV growth and increase feeding opportunities for waterfowl. This measure is innovative for the Illinois River waterway. It has the potential to determine whether altering the physical parameters of an area has the potential to restore SAV or if it is necessary to account for herbivory as a key factor impacting SAV growth. This plan accounts for all necessary actions and investments and is considered complete, acceptable to Federal and state agencies, addresses all project objectives, is the most cost-effective plan, has potential to influence socioeconomic factors through public awareness, is environmentally significant, and does not have an impact on historic properties. These factors were considered when comparing the final array of alternatives. This alternative best meets the Project goals

Alternative 2 - Side Channel Riprap Breakwater involves protection in the form of riprap along the left descending side of the Delbridge Island side channel. This measure is included to reduce waves, velocities and turbulence to allow for the growth of submersed aquatic vegetation. The breakwater would be approximately 2,500 feet long and constructed to a design elevation 461.85 feet with a 3-foot top width and 2.5H: 1V side slopes. The overall height and bottom width of this breakwater will be greater due to deeper water at the location of Alternative 2. Flat pool elevation is 458.52 feet. This plan accounts for all necessary actions and investments and is considered complete, is acceptable to Federal and state agencies, addresses all project objectives, has potential to influence socioeconomic factors through public awareness, is environmentally significant, and does not have an impact on historic properties. Alternative 2 is not the most cost-effective plan and was not chosen as the preferred alternative. These factors were considered when comparing the final array of alternatives.

Alternative 3 - Delbridge Island and Side Channel Riprap Breakwaters involves protection in the form of riprap along the northern edge of former Delbridge Island as well as along the left descending side of the Delbridge Island side channel. This measure is included to reduce waves, velocities and turbulence to allow for the growth of submersed aquatic vegetation. The breakwater would be approximately 6,100 feet long and 2,500 feet long respectively. The breakwaters would be constructed to a design elevation 461.85 feet with a 3-foot top width and 2.5H: 1V side slopes. Flat pool elevation is 458.52 feet. This plan accounts for all necessary actions and investments and is considered complete, is acceptable to Federal and state agencies, addresses all project objectives, has potential to influence socioeconomic factors through public awareness, is environmentally significant, and does not have an impact on historic properties. Alternative 3 is not the most cost-effective plan and was not chosen as the preferred alternative. These factors were considered when comparing the final array of alternatives.

Alternative 4 - Delbridge Island Floating Island Breakwater involves protection in the form of floating islands along the northern edge of former Delbridge Island. This measure would be anchored into the Delbridge Island bedrock. This measure is included to reduce waves, velocities and turbulence to allow for the growth of submersed aquatic vegetation. The floating island breakwater would be approximately 25 feet wide and 6,100 feet long. The floating island is approximately 1 ft thick and designed to float on the water surface while anchored to the river bottom. Little slack is allowed for in the

anchoring and the project biologist indicated the preferred anchored elevation would be such that the island is functioning as designed at the 50 percent annual exceedance duration water surface elevation (458.9 ft at RM 233.5). It is assumed that 0.5 ft will sit below the water surface and 0.5 ft will sit above the water surface. Because this alternative did not decrease velocities enough to improve habitat or support SAV growth, it was not considered further in the final array of alternatives.

Alternative 5 - Delbridge Island Floating Breakwater involves protection in the form of floating barriers along the northern edge of former Delbridge Island. This would be anchored into the Delbridge Island bedrock however slack is provided to allow for the barrier to rise with increasing water levels. This alternative is expected to reduce waves, velocities, and turbulence to allow for the growth of submersed aquatic vegetation. The floating barrier breakwater would be approximately 5 feet in diameter and 6,100 feet long with approximately 2.5 ft floating above the water surface and 2.5 ft submerged below the water surface. It was assumed that the system would be allowed to float to an elevation of 461.85 ft. Because this alternative did not decrease velocities enough to improve habitat or support SAV growth, it was not considered further in the final array of alternatives.

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

A USFWS Section 7 consultation was reinitiated on December 13, 2022. The original consultation was initiated September 25, 2013. The reinitiated consultation took into consideration any project updates and new information. The original project was proposed under Section 519 of the Water Resources Development Act (WRDA) of 2000. This reinitiation of the project is being considered under the Navigation and Ecosystem Sustainability Program (NESP). The reinitiated project remains consistent with the Final Illinois River Basin Restoration Section 519 Project Implementation Report with Integrated Environmental Assessment for the Starved Rock Pool Critical Restoration Project (December 2013; hereafter referred to as PIR); therefore, this documentation has been carried forward under NESP, as described in the December 13, 2022, coordination letter.

In the May 16, 2008 report, the USFWS identified the Indiana bat (*Myotis sodalis*), prairie bush clover (*Lespedeza leptostachya*), eastern prairie fringed orchid (*Platanthera leucophaea*), decurrent false aster (*Boltonia decurrens*), and sheepsnose mussel (*Plethobasus cyphus*) as federally endangered, threatened, or candidate species in LaSalle County, Illinois. While these species have the potential to occur in LaSalle County, there is no suitable habitat for the Indiana bat, eastern prairie fringed orchid, and prairie bush clover. No presence of decurrent false aster was noted in the project area. The sheepsnose mussel was historically known to occur in the Illinois River however there are no known mussel beds within the project area. If new information becomes available or if project plans change, these determinations will be reviewed and revised as necessary.

Correspondence from the USFWS indicates no impacts are expected to threatened or endangered species or their habitats, provided construction activities are scheduled and monitored to avoid direct impacts, conservation measures described in the Biological Assessment and Biological Opinion are implemented, and conditions do not change significantly. In addition to federally listed species, the Illinois Department of Natural Resources identified state threatened or endangered species that have the potential to occur within LaSalle County, Illinois. The greater redhorse and river redhorse may indirectly benefit from the project, although the shallow aquatic habitat is not their preferred habitat type.

The EA determined that there will be no direct or indirect impacts to any endangered species caused by or resulting from the proposed action or any project alternative considered. Correspondence from the USFWS indicates no impacts are envisioned to threatened or endangered species or their habitats, provided construction activities are scheduled and monitored to avoid direct impacts, conservation measures described in the Biological Assessment and Biological Opinion are implemented, and conditions do not change significantly.

Due to the identified project modifications and length of time between the Section 519 and NESP planning, USFWS requests consideration by USACE of the updated recommendations. USFWS continues to support the TSP, Delbridge Island Riprap Breakwater and the associated monitoring and adaptive management plan provided the current project and project area conditions continue to address the project goals and are anticipated to achieve the ecosystem benefits identified in the PIR. The updated recommendations are outlined in the January 23, 2023 letter from USFWS.

An EcoCAT endangered species consultation was submitted to the Illinois Department of Natural Resources. Results of the consultation are expected to be available prior to the public notice period.

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 Illinois River and associated area by improving aquatic habitat in the channel. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.