

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

2520 West Iles, 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, April 22, 2026

Public Notice Ending Date: Tuesday, May 12, 2026

Agency Log No.: C-0010-26

Federal Permit Information: Federal permit/license no. CEMVR-RD-2024-0685 is under the jurisdiction of Rock Island District, Regulatory Branch U.S. Army Corps of Engineers

Name and Address of Discharger: US Army Corps of Engineers, Roger Perk - 1211 Brandon Road, PO Box 2004, Rockdale, IL 60433

Discharge Location: In Section 20 of Township 35-North and Range 10-East of the East 3rd Principal Meridian in Will County. Additional project location information includes the following: 1211 Brandon Road, Rockdale, IL 60433

Name of Receiving Water: Des Plaines River

Project Name/Description: Brandon Road Interbasin Project Increments II - proposed construction of a layered system of structural and non-structural measures to prevent the movement of invasive carp and other nuisance species into the Great Lakes

Construction Schedule: Beginning Jan 2025 and ending Dec 2028

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.

Name: Oyetunde Tinuoye Email: Oyetunde.Tinuoye@illinois.gov Phone: 217/782-3362

Post Document. No. C-0010-26-04222026-PublicNoticeAndFactSheet.pdf

401 Water Quality Certification Fact Sheet for Brandon Road Interbasin Project Increment II

IEPA Log No. C-0010-26

Contact: Angie Sutton 217-782-9864

The USACE has applied for a 401 Water Quality Certification for impacts associated with Construction Increment II of a proposed multi-layered deterrent system aimed at restricting the movement of Asian carp and other invasive species upstream beyond the Brandon Road Lock and Dam (L&D). The proposed project area is located in Township 35 North, Range 10 East, Section 20, Will County, Illinois. The project will consist of construction/modification/extension of the right descending bank (RDB) guide wall, lock upgrades for a flushing system, adding dewatering features to the left descending bank (LDB) (cutoff wall, embankment, protection cells, concrete sill, and closure monolith), channel excavation, and a storm sewer relocation.

There are no wetlands within the project area, however 1.8 acres (Ac) of water will be permanently filled as a result of construction of the RDB guide wall and LDB dewatering enabling features. The RDB guide wall will be extended by 1550 feet to the previously permitted (Construction Increment I) bubble curtain and acoustic features. Approximately 50,000 cubic yards (CY) of concrete will be placed for the RDB guide wall. The flushing lock will reduce risk of upstream transfer of aquatic nuisance species and will require modification of the existing lock to accommodate new plumbing. A total of 5000 CY of concrete will be placed in the dewatered lock chamber to create a solid floor. The LDB dewatering enabling features will enable a stop log to be installed for future dewatering operations. For the LDB dewatering features, 5000 CY of fill materials will be placed for the embankment, along with 600 CY of rip-rap for protection. 4500 CY of concrete will be placed for the protection cells and monolith, with an additional 1000 CY for the sill across the engineered channel. Channel excavation will require removal of bedrock in the engineered channel (15,000 CY) and lock chamber (5000 CY). The storm sewer relocation will be completed during construction, and no changes will occur to the nature of the discharge. Compensatory mitigation will involve the addition of a trap and transport measure to assist with native fish and mussel recovery, an implementation of project performance monitoring.

Information used in this review was obtained from the application documents dated September 13, 2018, November 2018, April 2019, February 13, 2026, and documents available at the USACE website as follows: <https://www.mvr.usace.army.mil/brip/>

Identification and Characterization of the Affected Water Body.

The subject facility discharges to the Des Plaines River at a point where 1493 cfs of flow exists upstream of the outfall during critical 7Q10 low-flow conditions. The Des Plaines River is classified as Upper Dresden Island Pool Aquatic Life Use Waters. The Des Plaines 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*; however, it is given an integrity rating of “D” in that document. The Des Plaines River, Waterbody Segment IL_G-12, is listed on the 2024

Illinois Integrated Water Quality Report and Section 303(d) List as impaired for fish consumption with potential causes given as mercury and polychlorinated biphenyls (PCBs). Indigenous aquatic life uses are fully supported. The Des Plaines River is not subject to enhanced dissolved oxygen standards.

The downstream approach channel is an open river area, but with little habitat value since the current approach channel as well as the proposed updated approach channel are manmade features. The sediment staging site is a previously disturbed upland area that is adjacent to the river at Brandon Road Lock. The habitat within the project area is characteristic of an urban/industrial area that has been modified by the addition of large-scale hydrologic features.

A wetland delineation was conducted on May 11, 2023. It was determined that the surrounding area is highly urbanized with low-lying areas abutting the river that consisted primarily of reed canary grass. Data points were taken in the low-lying areas recording vegetation, soils, and hydrology. None of the wetland criteria were identified and therefore no wetlands were found in 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 local increases in total suspended solids. These increases are a normal and unavoidable result of construction and placement of fill that may occur in the waterway and in and around the area of construction. The fill will consist of concrete, rip rap and clean fill that will be sourced from either processed material from on site, or clean material from off site. Placement of fill will be permanent, however, water quality impact are expected to be minor and short-term.

Concrete fill for the RDB wall extension will result from placement along 1550 LF in the amount of 40,000 CY in the water, and 10,000 CY above the water. The LDB monolith and protection cells will require 3000 CY of concrete in the water and 1500 CY above the water. The concrete sill will require 1000 CY of concrete in the water and the flushing lock will require 5000 CY of concrete placement which will be done when the lock is dewatered.

Rip rap placement will occur during construction of the LDB embankment in the amount of 600 CY as well as clean fill in the amount of 5000 CY.

Fate and Effect of Parameters Proposed for Increased Loading.

Best Management Practices will be implemented for Increment II. For placement of concrete in the wet, use of an anti-washout concrete admixture will be applied and full immersion of the tremie tube within the placed concrete will be used to limit the mixing of the concrete with site water and limit possible effects to site water pH.

A special mitigation exemption waiver was obtained during the planning phase to address the impacts on native species. This waiver allows for stocking native species above the lock to mitigate for the disruption of connectivity caused by the lock. The plan is currently being development and

will be implemented when the Project transitions to the construction phase. It will be upheld throughout the 50-year lifespan of the Project.

Purpose and Social & Economic Benefits of the Proposed Activity.

The Brandon Road Interbasin Project is a complex ecosystem protection effort designed to prevent upstream movement of Invasive carp and other aquatic nuisance species into the Great Lakes from the Illinois Waterway. While an environmentally funded project, project features are designed to serve and improve navigation. If invasive carp were to establish within the Great Lakes, significant and irreversible impacts will occur to the existing food web and dependent species. Brandon Road Lock and Dam near Joliet, Illinois, has been identified as the critical pinch point where layered technologies are to be installed to prevent movement of invasive carp populations into the Great Lakes.

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

The Applicant evaluated design alternatives, as well as assessed working in-the-dry versus out-of-the-dry. In-the-dry construction was eliminated as an option due to a lack of real estate that would be required to dewater the site. In-the-wet construction is intended and will include channel excavation with excavated material transported by barge to the shoreline for further processing and temporary storage.

For the design alternatives, each level of design was evaluated separately. Those designs considered were the flushing lock, engineered channel design, permanent lock closure, electric barrier and water jet, complex noise, and boat launches, as well as operation and maintenance.

Flushing Lock: Five flushing lock design types were studied. The flushing lock measure was developed to reduce the risk of the upstream transfer of floaters by displacing the (Aquatic Nuisance Species) ANS contaminated tailwater with pool water within the lock chamber. The flushing lock design was constrained by navigation safety, water supply, and navigation delays due to operational duration.

Type 1 – This option looked at existing filling and emptying system with operational changes to facilitate flushing. This alternative is the existing conditions scenario and is not efficient in flushing. This alternative was not chosen.

Type 2 – This option looked at a lateral flushing manifold downstream of the upper gates. A second valve would be needed with tight configuration and moderate closure time for construction. Due to these factors, this alternative was not chosen.

Type 3 – This option looked at a secondary system of pipes and valves that would be constructed through the upper miter gate sill to discharge into the lock chamber. It was determined that this alternative did not have sufficient room to construct the necessary features. Coupled with construction costs and lock closure times, this alternative was screened from further consideration.

Type 4– This option looked at flushing manifold added downstream of the lower miter gates to flush ANS out of the engineered channel or during barge entrance to the lock chamber. An extra system of pipes and valve would be needed. This alternative was screened early in the study because it does not provide ANS risk reduction in the lock chamber.

Type 5– This option looked at redesign of the filling and emptying system by reconfiguring the port size and spacing and adding an additional port upstream near the upper miter gate, to

facilitate mixing and flushing of ANS in the upper part of the chamber. This alternative has

straightforward construction methods and a relatively short closure period. This alternative results in a more efficient and less turbulent lockage producing a time savings in the lock process which helps to offset the delays as a result of lock flushing. This alternative has been selected as the preferred design.

Engineered Channel Design: This measure creates an engineered structure that completely lines the lower approach channel with concrete. Reinforced concrete walls will be constructed along the existing channel bank, along with a concrete floor. The structure would house various ANS barrier measures identified in the selected plan and provide opportunities for future adaptive management such as the electric barrier, water jets, and complex noise. The construction method assumed is in-the-wet construction; however, channel dewatering methods were evaluated and included the following:

1. Closure to provide for the dewatering capabilities of the channel.
2. Closure to provide for water separation between the channel and the rest of the river with no head differential between the bodies of water.

Permanent Lock Closure: This measure removes the upper gates from the Brandon Road Lock and replaces them with a permanent concrete wall that ties into the existing concrete gate sill and existing lock walls. This structurally separates the upper pool from the lower pool which would terminate navigation below Brandon Road and ultimately to and from the Gulf of Mexico. Operation of the lock would end but gate operation throughout the dam would continue. This would require navigation mission changes by congress. The mission requires maintenance of a 9-foot-deep channel throughout the waterway.

Electric Barrier and Water Jet: The Electric Barrier measure will be incorporated with the engineered channel and water guns. The design is based off of Permanent Barrier I (PB1), located in Romeoville, IL. The Brandon Road Barrier differs from PB1 in that it will have three narrow arrays instead of two in order to have the ability to run two narrow arrays concurrently while the third one is for redundancy. The purpose of running two narrow arrays concurrently is to better fortify the electric field, specifically to better deter fish that are three inches or smaller. Operations and support buildings will be constructed on land adjacent to the engineered channel walls. This engineering measure considered channel depth, water conductivity, operating parameters, and channel insulation.

Water jets will be incorporated along with the electric barrier to help remove fish entrained between the barges. Multiple longitudinal rows of jets will be installed in the engineered channel, each with approximately 8 to 10, 12-inch diameter jets evenly spaced. There will be several of these rows across the bottom of engineered channel, to cover all flotillas crossing through the electrical barrier. The jets will face towards the lock end of the channel, at an approximately 22-degree angle from the vertical. Trials were performed using forward facing, rear facing, and vertical jets. The most effective at removing fish were the forward-facing jets placed at a slight 22.5 angle off of the vertical.

Jets and their associated piping will be constructed of non-conductive material, due to their proximity to the electric barrier. Water intakes for the jets will be placed in the downstream pool, either across the peninsula from the approach channel or further downriver, pending outcomes of hydraulic modeling. Pumps will be installed in a pump station at the intake. Several alternatives for running the pumps have been considered, such as including a water tank adjacent to the engineered channel to store water for jets. These options will be considered further in more detailed design, to optimize the operation of the water jet system.

Complex Noise: This measure will be installed within the engineered channel and require an incoming power system and a control building on the west bank of the channel. Power requirements are conventional as the speakers are off-the-shelf items already in use in other aquatic environments with standard power systems. The speakers would be installed “in the wet” after the engineered channel is constructed.

Boat Launches: In order to facilitate effective monitoring and emergency response in the area of Brandon Road, new boat launches are proposed near the Lock in Brandon Road and Dresden Island Pools. The upstream launch into Brandon Road pool will be built on the land owned by USACE for lock operations and will include a new roadway up to the water’s edge, as the current slope is not easily traversable. The launch itself will be a gravel ramp into the water with a floating wooden dock. The downstream launch into Dresden Island pool will be built at one of two locations, depending on the alternative.

1. Non-Structural - The launch will be constructed on the strip of land adjacent to the approach channel. A gravel road with secure gate access will lead from Brandon Road to a parking area, and a boat launch into the approach channel.
2. Technology Alternative - The boat launch will be built further downstream, just south of the approach channel outlet. The access road to the electric barrier and/or complex noise control buildings will extend to a parking and launch area.

Concerning the project in its entirety, the Recommended Plan includes the following measures: (1) nonstructural activities, (2) acoustic fish deterrent, (3) air bubble curtain, (4) engineered channel, (5) electric barrier, (6) flushing lock, and (7) boat launches. Based on the results of a field demonstration conducted in the summer of 2017, the water jets have been replaced with an air bubble curtain. The combination of air bubble curtain and strobe lights was screened out as a potential measure to deter

the passage of swimming ANS. In the Tentatively Selected Plan (TSP), water jets were the ANS control measure to address fish entrainment between barges, not to deter swimming ANS.

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

On December 18, 2024 (Project #2507735), the IDNR EcoCAT review was initiated for the project area. The consultation is currently under review.

The Final Fish and Wildlife Coordination Act Report on the GLMRIS – Brandon Road Project dated September 13, 2018, is included in Appendix A of the application documents available online at: <https://www.mvr.usace.army.mil/Missions/Environmental-Stewardship/BR-Interbasin-Project/Documents/>. The report concluded that “The Service, ILDNR, Corps, and other Great Lakes states agree there are losses of fish and mussel resources as a result of the selected GLMRIS-BR Project alternative. Preliminary results from a recent U.S. Geological Survey and Southern Illinois University study using microchemical signatures of fish confirms the loss exists, and that it may be substantial with the project, even for non-migratory fish. Therefore, some level and form of mitigation is warranted. Policy/permitting, biological, and other uncertainties that will be addressed in the future will help to identify which is the most appropriate and practicable form of mitigation. This may include consideration of additional GLMRIS-BR Project elements, outside of “mitigation,” if it is a more appropriate path forward for the project. Given the development of multiple approaches that are currently irreconcilable and the outstanding issues that cannot be fully addressed at this time, the Service provides the above assessment (including perspectives from affected states) along with the TF-FWCAR. Together, they provide as much information as possible for the Corps to consider fish and wildlife resources along with other project purposes, as directed in the FWCA.”

The Revised April 2019 Final Integrated Feasibility Study and Environmental Impact Statement found that the GLMRIS-BR project (Recommended Plan) would result in loss of longitudinal connectivity between the upper and lower Des Plaines River for native fish and mussel species and change the original fabric of the BRLD Historic District, which is listed in the *National Register of Historic Places*. In regard to loss of longitudinal connectivity and mitigation for this unavoidable adverse impact, USACE would trap and transport native fish species around the Brandon Road Dam and monitor to ensure that fish are responding as expected after the first year of transfer.

The Recommended Plan reduces the risk of Mississippi River Basin ANS establishment in the Great Lakes Basin to the maximum extent possible, while minimizing navigational impacts. Additionally, it addresses both swimming and floating ANS transport modes and creates a second structural control point downstream of the Chicago Sanitary and Ship Canal Electric Barriers within the Illinois Waterway.

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 waterway by prevention of upstream movement of Invasive carp and other aquatic nuisance species into the Great Lakes from the Illinois Waterway. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.