

US Army Corps of Engineers® Rock Island District

# BRANDON ROAD



## The **PROJECT**

Brandon Road Lock and Dam near Joliet, Illinois, has been identified as the critical pinch point where layered technologies could be used to prevent movement of invasive carp populations into the Great Lakes.

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. Construction is planned in three increments:

#### Construction Increment I:

(A) Automated Barge Clearing
Deterrent, Leading Edge Bubble
Deterrent, Leading Edge Acoustic
Deterrent Array, Leading Edge
Support Facilities, and Upstream
Boat Launch (B) Site Prep, Channel
Rock Excavation

## **Construction Increment II:**

Electric Deterrent, Wide Acoustic Deterrent Array, Complete Control Building, Right Descending Bank Wall Connect to Lower Guidewall, Flushing Lock, Downstream Boat Launch

### Construction Increment III: Complete Engineered Channel

Non-structural measures, implemented in conjunction with other federal agencies, could include public education and outreach, monitoring, integrated pest management, manual or mechanical removal, and research and development.

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Contractors working to remove rock from the Illinois Waterway riverbed below the Brandon Road Lock.

# Project Construction Update

The Brandon Road Interbasin Project (BRIP) continues to move forward with significant construction progress and ongoing planning for future phases.

Site preparation got underway Jan. 6 for Increment I-B when Miami Marine Services and Michels Construction Inc. mobilized to the site and began tree removal and bedrock excavation. More than 85% of the 30,000 cubic yards of material has been excavated thus far, and work is anticipated to be completed by the end of April. Work in the channel below the lock chamber was coordinated to occur simultaneously with a closure at Lockport Lock upstream, to minimize disruption to navigation.

U.S. Army Corps of Engineers Mississippi Valley Division Commander Maj. Gen. Kimberly Peeples toured the construction site in early February with USACE Rock Island and Chicago District team members, construction contractor, and representatives from Michigan Department of Natural Resources to review progress and discuss project updates.

Contracting for Increment I-A, focusing on leadingedge deterrents, is planned for solicitation later this year, pending land rights acquisition coordinated by the State of Illinois. The Increment II Design contract is also progressing and expected to be awarded later this calendar year.

Design work on key components like the flushing lock, right descending bank wall, and electrical barrier continues, with a focus on innovative cost and time savings, and the team is working diligently to keep the project on track.





An underwater jackhammer called an "Xcentric Ripper" (the largest of its kind in the United States) was used by the contractors to break up and remove bedrock from within the river channel below the Brandon Road Lock to make way for the engineered channel for the Brandon Road Interbasin Project.



**Project Construction Update** 

High-Tech Sonar System Deployed

Smith Named New Project Lead

PROJECT UPDATE



Plan and cross-section views of Brandon Road Lock showing placement and zone of coverage areas projected from the transducers (yellow dots).



Representatives from the U.S. Geological Survey installing the Live Imaging Sonar Surveillance Array (LISSA) into a recessed ladder well in the lock wall.

# High-Tech Sonar System Deployed to Monitor Fish

A cutting-edge sonar surveillance system has been installed at the Brandon Road Lock & Dam as part of a major effort to prevent invasive carp and other aquatic nuisance species from reaching the Great Lakes. The system, a key component of the \$1.15 billion Brandon Road Interbasin Project (BRIP), will provide a 24/7 "eye underwater" in the often-turbid Illinois Waterway.

The Live Imaging Sonar Surveillance Array (LISSA) uses advanced sonar technology to create realtime images of fish activity within the lock and its approach channel, even in zero visibility conditions. Developed and installed by the U.S. Geological Survey (USGS), the system will employ automated software and machine learning to identify, count, and even characterize fish – including their size, speed, and behavior.

"This is a critical step in protecting the Great Lakes ecosystem," said a USACE representative. "The LISSA system will give us unprecedented insight into fish movement and allow us to assess the effectiveness of the layered deterrents being implemented as part of the BRIP." The data collected from April to September 2025 will establish a baseline for future monitoring and will be used to refine models predicting the risk of invasive carp movement. Later this fall, the USGS, uniquely positioned with the necessary expertise in sonar technology and data analysis, will deliver a technical report on initial findings, with a final report expected in September 2026. The open-source software developed for this project will also be made available to other researchers and agencies.



A screen recording of fish targets (bright areas) recorded with a live-image-sonar.

## Smith Named Brandon Road Interbasin Project Lead

Jason Smith, a Senior Project Manager with the U.S. Army Corps of Engineers, Rock Island District, was recently selected as the project lead for the Brandon Road Interbasin Project.

A seasoned project and program leader in the Rock Island District, Jason previously oversaw large-scale efforts in Des Moines and Cedar Rapids, Iowa, and served as the federal lead for the Iowa Silver Jackets team. His background includes experience in construction inspection and field engineering, bolstered by certifications as a Professional Engineer and Certified Floodplain Manager, and a degree in Environmental Engineering from Colorado State University.



## Submit Comments Online Anytime



The U.S. Army Corps of Engineers and its project partners invite public input. Comments regarding the Brandon Road Interbasin Project can be submitted online to the project team at anytime by visiting: https://www.mvr.usace.army. mil/Public-Comment-Form/ or scanning the QR code above with a mobile device

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