The American Waterways Operators

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Justin L. Lampert
Manager – Midcontinent Office

February 28, 2022

Kirk Sunderman
Project Engineer – Brandon Road Interbasin Project
Inland Navigation Design Center
US Army Corps of Engineers
Clock Tower Building
Rock Island, Illinois 61204-2004

Re: Brandon Road Interbasin Project - Engineered Channel Layout - Final Draft Engineering Evaluation Report

Dear Mr. Sunderman,

On behalf of the American Waterways Operators (AWO), the tugboat, towboat and barge industry's advocate, resource, and united voice for safe, sustainable, and efficient transportation on America's waterways, oceans, and coasts, thank you for the opportunity to comment on the U.S. Army Corps of Engineers' Final Draft Engineering Report for the Brandon Road Interbasin Project.

AWO has previously expressed concerns with the construction of an engineered channel as part of the Brandon Road project in a letter submitted to the Illinois Department of Natural Resources (ILDNR) in June 2021. In the letter, AWO raised concerns that the construction of the engineered channel would drastically increase the cost of the project and could change the flow geometry of the channel, resulting in safety concerns for navigation. The letter also highlights invasive carp deterrent technologies in the Brandon Road Selected Plan that are supported by AWO, such as bubble and acoustic deterrents. A copy of our letter to ILDNR is attached to these comments.

If the design and construction of an engineered channel moves forward as part of the Brandon Road project, AWO tentatively and with caution supports the shorter engineered channel (SEC) design recommended by the Corps in the Engineering Report. As explained in the Engineering Report, the SEC is less costly and will have fewer negative impacts on navigation than a longer engineered channel.

AWO thanks the Corps for its outreach to the navigation community as the preconstruction engineering and design phase of the Brandon Road project continues. We urge the Corps to continue this outreach and allow ample time for industry to provide feedback on any future action related to the Brandon Road project. AWO will continue to support technologies and embrace actions that will reduce the risk of invasive carp movement without jeopardizing mariner safety or lock capacity at Brandon Road.

Sincerely,

Justin Lampert
Senior Manager – Midcontinent Office

Attachment: June 2021 Letter from AWO and UOJ to Illinois Department of Natural Resources.

The American Waterways Operators

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Lynn M. Muench
Senior Vice President – Regional Advocacy

June 29, 2021

TO: Loren A. Wobig, P.E., CFM
Director, Office of Water Resources

FROM: Lynn M. Muench

RE: IL Public Water Law & Brandon Road Selected Plan

The American Waterways Operators (AWO) and UnLock Our Jobs (UOJ) would like to take this opportunity to provide input to the state of Illinois, the non-federal co-sponsor for the Brandon Road project. Both AWO and UOJ are looking at the plan through five lenses, especially during the pre-design and engineering (PED) phase: 1) the impact of the technologies on navigation safety; 2) the impact of the technologies on navigation efficiency; 3) the impacts to the environment; 4) the cost-benefit ratio, and 5) changes to the risk profile of the invasive carps' ability to move from the Mississippi River Basin into the Great Lakes Basin.

AWO is the national trade association for the tugboat, towboat, and barge industry. AWO's more than 300 member companies own and operate towing vessels on the U.S. inland and intracoastal waterways; the Atlantic, Pacific, and Gulf coasts; and the Great Lakes. The tugboat, towboat, and barge industry provides family-wage jobs and long-term career opportunities for more than 50,000 Americans. Each year, our vessels safely, securely, and efficiently move more than 760 million tons of cargo critical to the U.S. economy. The industry supports more than 300,000 jobs nationwide. There are 19,500 domestic maritime industry jobs in Illinois and the industry has a $4.87 billion annual economic impact in the state. Related worker income in Illinois is $1.3 billion annually. Over 20 AWO companies rely on being able to pass through the Brandon Road Lock safely and efficiently.

UOJ is a coalition of shippers, carriers, passenger vessels, shipyards, contractors, trade associations, and others interested in maintaining and improving the most environmentally friendly form of transportation. The movement of cargo by barge through Brandon Road Lock is essential for transportation between the basins.

AWO and UOJ are pleased that the state of Illinois is collaborating with the U.S. Army Corps of Engineers, other federal agencies, other Great Lakes states, and stakeholders while taking

care to protect navigation as stated in the Illinois Public Water Law. Our goal is to support technologies and embrace actions that will safely reduce the risk of invasive carp movement while not allowing "obstruction to, or interference with, the navigability of a public body of water."[1] AWO and UOJ believe that the Corps should modify the Selected Plan to significantly reduce impacts to mariner safety, the environment, and the project's overall cost while ensuring lock capacity at Brandon Road is not decreased. This position is consistent with the comprehensive comments AWO and UOJ previously submitted to the Corps during the GLMRIS – Brandon Road process.

The Risk Profile Has Changed

- **Invasive Carp Population Trends:** As the IL DNR has continued to overfish, improve fishing methods, conduct exhaustive surveillance, increase enforcement, and provide new economic development support for commercial fishing, the risk profile of invasive carp movement into Lake Michigan has significantly decreased. In the Dresden Island pool alone overfishing has successfully reduced invasive carp density by nearly 97% since 2012.[2] According to a study conducted by the U.S. Fish & Wildlife Service, overfishing has significantly decreased the risk of invasive carp swimming towards the Great Lakes.[3] The study determined that increasing adult mortality by overfishing in both up- and downriver adult populations could lead to a zero percent chance of invasive carp advancing to Brandon Road Lock and Dam. As you are aware, according to the IDNR there have been only two invasive carp detected above the existing electric barrier since 2010.[4]

- **Electric Barriers on the Chicago Sanitary and Ship Canal:** With several electric arrays already in place or under construction in the CSSC, adding a redundant system as part of the Brandon Road project seems unlikely to decrease the risk of invasive carp upstream movement. The field strength will be significantly higher in three of the arrays, providing more protection from fish less than 3 inches. Another electric barrier (array) would increase safety risks, especially in a confined space, and be extremely costly as well as dangerous.

Technologies and Actions Endorsed by AWO and UOJ

- **Overfishing**: This established, proven, and low-cost activity must continue to be part of the ongoing work. Economic support for commercial fishing will further decrease the cost.

- **Bubble Curtains:** This technology purports to hydrologically break the "seal" that could keep small invasive carp in the spaces between rake-to-box barges. In the

[1] Illinois Public Water Law
[2] Asian Carp Management Update in Illinois Waterway. Illinois Department of Natural Resources. 2020 Update.
[3] Asian Carp Population Modeling to Support and Adaptive Management Framework, US Fish and Wildlife Service, 2019.
[4] IDNR. Asian Carp Management in Illinois Waterway, 2020 Update.

laboratory, this appears to be very effective. The disruption to the water may also prevent up to 50% of adult invasive carp from moving upriver. Further work is underway at the Corps' Engineer Research and Development Center (ERDC) to look for ways to increase the barriers' effectiveness. Bubble curtains appear to be safe and less expensive than several technologies, including the electric barrier. AWO and UOJ strongly support this research and technology.

- **Acoustic Deterrents:** New technologies that utilize acoustic deterrents, such as the bio-acoustic fish fence (BAFF) at Barkley Lock and the underwater Acoustic Deterrent System (uADS) at Lock 19, appear to be extremely effective at stopping a specific species without jeopardizing native species, mariner safety or the efficient movement of waterborne commerce. ERDC is further refining this promising technology. Additionally, these acoustic deterrents have a smaller carbon footprint and are much less costly to operate than other control measures being considered at Brandon Road such as the electric barrier. AWO and UOJ strongly support the acoustic fish deterrent.

- **Boat Launches:** Assuming the boat launches are positioned not to interfere with navigational safety or efficiency, AWO and UOJ support actions that will allow the federal and state agencies to perform work that will decrease the risk of invasive carp movement.

Technology That Needs Further Work During PED

- **Flushing Lock:** Currently, the flushing lock technology described in the Brandon Road Selected Plan has never been tested to ensure it will successfully mitigate the spread of invasive carp without impacting navigation. AWO and UOJ would be supportive of the flushing lock control measure if it is determined during PED that the deterrent successfully mitigates the spread of invasive carp and other aquatic nuisance species with minimal impacts to navigation and lock capacity. AWO and UOJ would be unable to support this measure if it is determined during PED that the flushing lock would cause safety issues or significantly decrease lock capacity at Brandon Road.

Technologies That Would Negatively Impact Navigation Safety and Efficiency

- **Electric Barrier**: AWO and UOJ remain concerned that adding an additional electric barrier would pose considerable safety risks to mariners operating through Brandon Road and would involve significant capital expenditures without meaningfully reducing the risk invasive carp pose to the Great Lakes. The current electric dispersal barrier system near Romeoville, Illinois is the only location on navigable waterways where the Coast Guard will not rescue individuals who fall overboard due to the unsafe conditions for its highly trained personnel. Currently, there are four electric arrays at two barrier locations on the CSSC. This summer, the fifth one will be installed. Installation, maintenance, and safety testing on the four arrays currently in place have caused several extended closures. Constructing and operating an additional electric barrier on the Chicago Area Waterway System would present a safety hazard, be

redundant, decrease navigation efficiency, and significantly increase the cost (~ $200 million for the electric barrier alone).

- **Engineered Channel**: AWO and UOJ oppose the construction of the engineered channel, as detailed in the Brandon Road Selected Plan. An engineered channel could result in changes to the flow geometry of the channel, reducing the safety of navigation. Also, the projected cost to construct the engineered channel is nearly half of the total projected cost of the entire Brandon Road project. Removing the engineered channel from the Brandon Road project would save the nation and Illinois substantial money while preserving navigational safety and efficiency at the Brandon Road Lock approach.

AWO and UOJ would greatly appreciate the state of Illinois' consideration of our positions on control measures in the Brandon Road project. As additional research and testing of invasive carp deterrents is conducted, AWO and UOJ will continue to provide feedback. We stand ready to work with you to ensure the project will effectively stop invasive carp in a safe, efficient, and cost-effective manner. We strongly support Illinois' and the Corps' adherence to WRDA 2020, which directs that new technologies be thoughtfully evaluated. We would be pleased to answer any questions or provide further information as needed.