



Frequently Asked Questions about the Boat Transfer and Cleaning station at the Rapide Croche Lock
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For additional information, please contact the Fox River Navigational System Authority at 920.759.9833

Why is the boat transfer station needed?

Planned for operation in 2018, the boat transfer station keeps FRNSA in compliance with Wisconsin State Statute 237 which states:

If the authority decides to construct a means to transport watercraft around the Rapide Croche lock, the authority shall develop a plan for the construction that includes steps to be taken to control sea lampreys and other aquatic nuisance species. The authority shall submit the plan to the department of natural resources and may not implement the plan unless it has been approved by the department. ([Approval was received in January of 2017](#))

It also enables FRNSA to be compliant with Wisconsin DNR NR40 that makes it illegal to possess, transport, transfer, or introduce certain invasive species in the state.

What is the cost of the boat transfer station and how will it be funded?

The cost to build the station is estimated at \$3.8 million and will require an estimated \$80,000 annually to operate and maintain the facility. It is important to note that the amount of energy required for water heating is difficult to assess and will be strongly influenced by factors such as frequency of boat transfers, weather conditions, and practices related to covering the hot water chamber when not in use (i.e. control of heat losses). Financial assistance may be available from the EPA Great Lakes Restoration Initiative, the WDNR Lake and Aquatic Invasive Species Grants Program and/or the Wisconsin Recreational Boating Facilities Program supervised by the Wisconsin Waterways Commission. Grant programs are generally based on cost sharing with the recipient. Grants from the Environmental Protection Agency have been awarded for up to \$600,000 to control AIS-related projects.

How does the process work?

Boats will be lifted out of the water and transported in slings by a bridge crane. Boats arriving at the transfer site from the downstream side will be positioned between docks and passengers will depart. The station operators will then lift the boat vertically from the river and move it to the transfer platform where a hull inspection and a high pressure pre-spray wash will be used to remove any spiny waterfleas from the hull. The boat will then be lowered into a 112 degree F hot water cleansing chamber for up to 10 minutes. As necessary, propulsion systems, intakes, and exhaust ports will be flushed with 112 degree F water to kill AIS. The owner will start and idle the engine briefly to flush the engine and also operate all sea water exchange equipment such as live and bait wells, air conditioners, wash-down pumps, etc. Onboard equipment such as anchors, ropes and skis will also need to be immersed in hot water. Anchor lockers will be flushed with hot water. Based on inspection, bilges and bilge compartments may need to be flushed with hot water. The station operators will then lift the boat from the chamber and move it to the upstream side of the station to be lowered into the river. Passengers can then re-board. The transfer time with cleansing should take approximately 20-60 minutes. Boats arriving at the upstream side that are traveling downstream will follow the same lift process but will not undergo the cleansing process. This transfer time should be approximately 20 minutes.

What is the cleansing process?

- Boaters utilizing the transfer station will have to prepare their boats for transfer. This may involve cleaning of hulls, bilge, and other equipment prior to approaching the station. Live wells and bait buckets must be emptied; no bait will be allowed to pass the cleaning station. Boats with hulls heavily encrusted with algae or organisms will be turned away.
- Once boats are adequately prepared, the boat will be lifted from the water and moved through the cleaning process.

- The boat lift system must completely separate the boat from the water and allow inspection and treatment of the hull so that organisms attached to the hull or lifting equipment may be noticed. Water draining from the boat while it is being cleaned will not be allowed to flow to the upstream side of the transfer station.
- The hull exterior will be sprayed with 1500 psi high pressure water to remove AIS that may be adhering to surfaces of the boat. (pre-wash process)
- The boat will be floated in a 112 degree F water bath for at least 10 minutes to kill target AIS.
- Propulsion systems, intakes, and exhaust ports must be cleaned/flushed with 112 degree F water (depending on the type of boat, raw water systems will be operated in the bath to ensure flushing. This includes live and bait wells and anchor compartments).
- Onboard equipment, including ropes, anchors, chains, skis, and fishing equipment must be washed and immersed in 112 degree F water (Note: no live bait or fish will be permitted to move upstream through the station). Depending on the condition of the bilges and bilge compartments, they may need to be flooded with 112 degree F hot water and pumped dry again.
- Boat lifting devices (i.e. hoist straps and truck forks) will be treated with 112 degree F water for ten minutes along with the boat before making contact with upstream water.
- Boats containing ballast bags will be turned away.

If heating the water at 140 degrees is ideally recommended to be safe, why not heat the water to that temperature?

The 112-degree water temperature and longer contact time determined by research done by Dr. DeStasio and others is lethal to target AIS. In addition to killing the target AIS, this lower temperature saves money in water heating cost and is somewhat safer for humans. Some of the boat manufacturers contacted early in the project evaluations indicated that immersion in a water bath of 145 degrees for even a relatively short duration (2 minutes) could adversely affect gaskets, hull finish and may violate the warranty. However, one area manufacturer stated their hulls and equipment are routinely tested in water at this temperature with no negative effect (see documentation in Preliminary Engineering Study Report).

Will there be a fee for transferring boats?

Yes. The proposed fee is estimated at \$25 for boats shorter than 26'. Boats 26' and larger would pay an estimated fee of \$50.

Is there a size limit for boats going through the transfer station?

Yes. The transfer station will accommodate boats as large as 65 feet in length, 18-foot beam and 36 tons. Drafts can be no greater than 6 feet with propellers. Masts and superstructures may be no greater than 23 feet above the waterline. Boats will be lifted in slings and moved by a bridge crane. The transfer station cleansing system can easily serve small boats down to canoe and kayak size.

How long will it take for boats to go through the boat transfer station?

Boat transfer cycle times are anticipated to be in the range of 20 to 60 minutes depending upon the type and size of the boat. The waiting time can be easily influenced by boat traffic. We are also considering a reservation system to expedite use of the transfer & cleaning station.

Do boaters stay in their boats during the transfer?

No. Safety concerns would require boaters to leave their vessel during the cleansing process. The owner/operator along with the station inspector/operator would board the vessel to operate systems while in the hot water bath portion of the cleansing cycle.

What do the boaters do while they are waiting for their boat to be transferred?

Boat passengers will exit their boats on docks installed at the upstream and downstream launching pier locations. Stairs and an ADA lift and walking paths will route passengers around the operational area of the transfer station. Restroom and rest area facilities (i.e. pavilion and picnic tables) for passenger and visitor use will be available.

How safe is the cleansing system on boat finishes?

Some of the boat manufacturers contacted early in the project evaluations indicated that the planned immersion in a water bath of 112 degrees for ten minutes should not affect the hull finishes. One area manufacturer stated their

hulls and equipment are routinely tested in water heated to 140 degrees F with no negative effect (see documentation in Preliminary Engineering Study Report).

Is there any risk of structural damage to the boats? What happens if there is damage?

Use of the transfer is at the owners' risk. Operators are trained to safely lift and transport vessels using station equipment and will consult manufacturers' data for proper handling. The Authority maintains willful negligence liability insurance for all its operations and operators.

Are there plans to have more boat transfer stations built and where would they go?

At this time, the Authority does not plan to build additional boat transfer and cleansing sites. The authority believes the system at Rapide Croche can serve as a prototype for other installations on the Winnebago System and elsewhere and will share knowledge where requested.

What happens to the contaminated water and debris that is cleaned off of boats traveling upstream?

The water and residue used during the pre-wash process drains back to the downstream side of the facility. Contaminants removed while in the hot water bath are separated from the water by an air flotation treatment process. The solids are decanted off and stored in a waste tank for regular transport to a local disposal site.

Has a boat transfer station like this been built anywhere else?

No. That is why many years of scientific research and study have gone into developing the Preliminary Engineering Study Report to develop plans for the Rapide Croche Boat Transfer and Cleansing Station and to serve as a model for others.

Is the process effective against AIS?

Hot water studies completed by Dr. Bart De Stasio, at Lawrence University, and Dr. Titus Seilheimer of University of Wisconsin Sea Grant Institute concluded that the Rapide Croche boat cleansing process meets performance standards, can cleanse watercraft in a minimum amount of time, and is an efficient, effective and safe way to keep AIS out of the Lower Fox River.

When will the station be completed?

The station is planned for completion in 2018

What kind of aquatic invasive species (AIS) threaten the waterway and how dangerous are they to the waters?

Sampling surveys from Dr. Bart De Stasio of Lawrence University, and University of Wisconsin Sea Grant Institute for AIS in the lower Fox River have confirmed that some invasive species are present upstream and downstream of the Rapide Croche dam. Both **zebra mussels** and **rusty crayfish** were common above and below the dam in all years examined.

A recent invader of the Great Lakes, the amphipod **Echinogammarus ischnus**, has also established populations above and below the Rapide Croche dam. Common **carp** occurs both above and below this point, while **round goby** has been found in all sites below the current invasive species barrier at Rapide Croche. In 2015 the round goby was discovered below the Neenah Dam and the Fritze Park areas. **White perch** has been found below the Rapide Croche dam and also below the De Pere dam. Three other invasive species have only been found above Rapide Croche during a single season, including the zooplankton groups **spiny waterflea**, as well as the amphipod **Gammarus fasciatus**.

These species do not appear to have established themselves yet, but could be transported inadvertently by boaters who have not properly cleaned their equipment in accordance with NR 40 standards, according to Dr. Bart De Stasio.

Our data does not show the presence of **sea lamprey** (*Petromyzon marinus*), which has been observed below the De Pere Dam previously. Based on the results to date, it is apparent that continued monitoring efforts should provide an early warning of additional AIS that may become established in the lower Fox River upstream and downstream of the Rapide Croche dam. Monitoring efforts to date have provided a solid baseline against which we can compare future changes in the composition of fish and invertebrates in the river.

Why not just keep the Rapide Croche lock closed?

It will be closed. We will fill the existing lock chamber and remove the four large locks gates to provide a construction footprint for the transfer facility.

What assurances are there that the boat transfer station will keep the AIS from getting through?

The process to prevent the transfer of any AIS at Rapide Croche has been reviewed and approved by the Wisconsin DNR. Hot water cleansing is the method the Aquatic Nuisance Species Task Force has researched for effectiveness.

Additionally, the Recreational Boating Guidelines for AIS removal recommends that boaters:

- Inspect and remove aquatic plants, animals and mud from the boat, trailer and equipment.
- Drain all water from the equipment. (boat, motor, bilges, transom wells, live wells, etc.)
- Dispose of unwanted bait in the trash, not in the water.
- Rinse the boat and equipment with hot water. (greater than 104 degrees) and/or high pressure water, OR
- Let the boat dry in the sun for five days.

Monthly monitoring at sample stations upstream/downstream of Rapide Croche for AIS is being carried out by Lawrence University during the summer months. Periodic reports of the monitoring results are being posted on our website and will be shared with the DNR.

If boaters can currently trailer their boats to the Winnebago Pool Lakes, what is to stop them from continuing to do so?

Unguarded and unmonitored trailered boat access ramps represent the most significant threat for AIS introductions through other access points. There are over 60 access points for boats on the Lake Winnebago system alone with numerous additional end-of-farm-road and private property access points that are unguarded and unregulated with absolutely no enforcement. Additionally there is the possibility for wildlife transporting AIS as well as other carriers such as aircraft entering the Winnebago system waters from around the world. Based on the number of available parking spaces at just the primary launch sites within the Winnebago system and assuming only 30% capacity weekdays and double that on weekends, more than 23,000 unregulated boats may be launched within the Winnebago system in a given season. This number greatly exceeds the 1300 boats expected to pass through the proposed boat transfer at Rapide Croche during an annual period of operation. Unless all boaters including fishermen and women take precautions to prevent the spread of AIS from lake to lake via trailered boats, bait buckets, and other illegal transportation, this vector will remain the most serious threat to the Lake Winnebago system. History has shown that the introduction of new AIS into the Lake Winnebago system will occur regardless of the proposed Boat Cleaning and Transfer Project at Rapide Croche or its level of use.