

## How the Lock System Came To Be

The world's rivers have long been our pathways. Rapids, strong currents, and the seasonal rise and fall of water levels often made the journey difficult. But by the time Fr. Jacques Marquette and Louis Joliet traveled up the Fox and down the Wisconsin to the Mississippi River in 1673, that water route had been in use for many thousands of years.

As settlement grew in what is now Wisconsin, government and private interests began to dream of a more efficient river highway that would open up trade and settlement to the West. The first attempt, an 1829 plan to dig a canal to join the Fox and Wisconsin Rivers at Portage, ended in failure.

With Wisconsin about to be organized as a separate territory, officials revisited the plan for the Fox-Wisconsin Waterway, and in 1826, the federal government began its survey. A system of locks, canals and dams would fulfill the growing needs of commerce and industry along the rivers. In 1848, with Wisconsin about to be admitted to statehood, Congress approved the project – construction could begin. State workers opened the first lock in De Pere in 1850, and completed the Portage Canal in 1851.

The Fox and Wisconsin Improvement Company, charged by the state of Wisconsin with the task of completing the waterway in 1853, welcomed the first boat through the full system in June of 1856. The steamboat *Aquila* was greeted joyfully at all her ports of call. For the next few years, hundreds of sternwheelers carried passengers and cargo – mainly wheat, lumber, coal – up and down the waterway. But by 1862, the railroad had come to the Fox Valley, competing with the river to meet the region's growing transportation needs. Cost overruns and competition soon led to bankruptcy for the developers of the system.



Little Chute, 1856. Morgan L. Martin, Wisconsin's Territorial delegate to Congress, commissioned the artists Samuel M. Brooks & Thomas H. Stevenson to create paintings of each of the locks on the Lower Fox. He was a major advocate for the development of the system on the Lower Fox.

A new group of developers, the Green Bay and Mississippi Canal Company, took over in 1866, but their focus on water power for industries along the river resulted in the navigational system being turned over to the federal government. The U.S. Army Corps of Engineers accepted the transfer in 1872, and operated the full system until 1886, when they conceded that the sand bars on the lower Wisconsin were too great an obstacle to efficient navigation. The focus shifted to the Fox until 1951, when all but the Lower Fox locks were closed to traffic. Finally, only three locks remained in operation: Menasha, Little Rapids, and De Pere. In 1984, with industrial and commercial use in sharp decline, the Corps of Engineers was prepared to shut down the system entirely.



## The Lock Tenders

Historically, boats traveled on the system day and night. To provide 24-hour service, the Corps of Engineers built a simple home close by each lock for the lockmaster and his family. The lockmaster worked year-round, maintaining and operating the lock and its grounds. In summer, he supervised lock tenders brought in to help with the heavier seasonal traffic.

The lockmaster and his helpers opened and closed the lock gates and controlled the valves that filled and emptied the lock chamber. They were responsible for the bookkeeping, too – every boat was carefully recorded, along with its cargo, destination, number of passengers, and the amount of lockage fee collected. In the freezing winter, many a lockmaster risked and even lost his life as he balanced on the lock gates to chip away the ice.



Lockmaster Jacob Wittman, left, worked at Combined Locks until 1945. The little boy on the steps, Harlan Wittman, would take over the post from his dad.



The nine original lock tender houses still standing are being prepared for new roles in the life of the Fox River Valley. This house, at De Pere, is home to a coffee shop. The house at Little Chute Lock is under development by the Fox-Wisconsin Heritage Parkway as a vacation rental. Go to [www.heritageparkway.org](http://www.heritageparkway.org) for more details.

## The System At Risk

Officials of the state of Wisconsin and residents of the Fox Valley were deeply concerned at the prospect that the locks would be abandoned. The state created the Fox River Management Commission to operate the system as negotiations continued between the state and federal government. But the future of the system remained in doubt. It was desperately in need of a champion.

That champion appeared in 1982 when a small group of boaters formed a volunteer group to support the efforts of the Fox River Management Commission. They advocated for a responsible conclusion to the negotiations that would protect the future of the system. In 1985, another advocacy group, the Friends of the Fox, formed in an attempt to stop the U.S. Army Corps of Engineers from abandoning the system forever. Working with Governors Tony Earl and later Tommy Thompson and Wisconsin's congressional representatives, the Friends created the concept of a plan for the entire system – The Fox-Wisconsin Heritage Parkway ([www.heritageparkway.org](http://www.heritageparkway.org)).



Kaukauna Lock #2 before rehabilitation

The parkway concept helped to bring attention to the historical, economic and recreational value of the locks as negotiations continued over their fate. In 2001, the Wisconsin Legislature disbanded the Fox River Management Commission and created the Fox River Navigational System Authority (FRNSA). Finally, in 2004, the navigational system was transferred from the federal government to the State of Wisconsin. The locks had deteriorated badly during the years that negotiations continued. FRNSA accepted the responsibility to rehabilitate the locks and operate the system. The project was to be funded through a combination of federal and state monies, along with funds raised locally by volunteers.



Kaukauna Lock #3 before rehabilitation



Cedar Lock before rehabilitation

## To the Rescue: The Fox River Navigational System Authority

There was a great deal of work to be done. Locks gates were in danger of collapse. Stones were popping out of the limestone walls. Sink holes on the lock properties created safety hazards. Canals and dikes would need to be rebuilt. The daunting task began in 2005 with stabilization of the locks at Kaukauna and Little Chute, the most seriously at risk. The rebuilding of the four Appleton locks was joyfully celebrated in 2006. Cedars, Little Chute and Combined Locks followed. Complete renovation of the five locks at Kaukauna, the most complicated task of all, came last. The project will be complete in 2017. With the completion of a boat transfer station, the entire system will be operable and boaters will have full access to the route between Green Bay and Lake Winnebago.



Cedar Lock after rehabilitation

## Aquatic Invasive Species (AIS) and Rapide Croche Lock

One of the locks – at Rapide Croche – will remain permanently closed. The Great Lakes have been infested with sea lampreys, spiny water fleas, and other aquatic invasive species. The Rapide Croche Lock will continue to provide a barrier that will prevent the spread of these ugly invaders upstream into the Lake Winnebago system.

Sea lampreys have no natural enemies in the Great Lakes. They attach to the bodies of game fish, bite through their skin, and suck their blood, usually killing the host fish. Spiny water fleas – they look like tiny, bristly globs of jelly – gobble up vast quantities of the microscopic organisms upon which native fish depend. No wonder the managers of the lock system are eager to keep these destructive creatures at bay.

Still, if the system is to be fully operational, boaters will need a way to pass through Rapide Croche on their way between Lakes Michigan and Winnebago. Studies have been completed that will lead to a boat transfer and cleaning process: a boat lift that will not only carry upstream-bound boats over the sea lamprey barrier, but will employ cleaning sprays and a hot-water bath to cleanse them of all unwanted stowaways at the same time. Go to [www.foxlocks.org](http://www.foxlocks.org), boat transfer station for more information.



Sea lamprey

## Paddling the Fox River Locks

Yes, you can paddle the Navigational System. Each lock includes a well-marked portage, and many paddlers have enjoyed the unusual experience of paddling an accessible, industrialized river. You will paddle a spectacular urban setting with a rich history of manufacturing and commerce. Locking through in a canoe or kayak is an experience not to be missed!

The route, with its dams, locks, and canals, is not without its hazards, and should be attempted only by experienced paddlers. Detailed water trail maps are available at [www.heritageparkway.org/land-and-water-trails](http://www.heritageparkway.org/land-and-water-trails). Or join one of the annual Heritage Paddles to enjoy the river in the company of an armada of experienced, modern-day Lower Fox River voyageurs. More information at [www.wisconsinpaddlers.org](http://www.wisconsinpaddlers.org).



Annual Heritage Paddles sponsored by the North East Wisconsin Paddlers and the Fox-Wisconsin Heritage Parkway on the Lower Fox are among the largest recreational paddle events in all of Wisconsin.

## For More Information Contact:

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