

Waterways

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In Washington and elsewhere...

Infrastructure Pressure Building

The 2008 season on the Upper Mississippi is history and ice is forming on Lake Pepin and other river stretches because of the recent cold weather.

That means Dick Lambert of the Minnesota Department of Transportation will soon be sending out his annual survey on tonnage shipped from the ports of Minneapolis, St. Paul, Savage, Red Wing and Winona. When he was interviewed by *Wisconsin Public Radio* early this month, UMWA member Kent Pehler of Brennan Marine in LaCrosse, Wis., said of the season, "It was not a bad year, all things considered."

Reasons for optimism

And the New Year brings with it several reasons for optimism about the river system's future and a much needed infrastructure renewal. For example, President elect Barak Obama and his transition team have made it clear that "large direct government spending on infrastructure" will be part of a massive stimulus package to help the economy.

"We will create millions of jobs by making the single largest new investment in our national infrastructure since the creation of the federal highway system in the 1950s," Obama says. He told the National Governor's Conference that there are \$136 billion in identified road, bridge and water projects ready to begin as soon as funding is available.



(above) Last year's project at Lock and Dam 3 demonstrated the labor intensive work needed to maintain an aging system.

Campaign pledge

During the campaign, the "Obama-Biden Farm Plan" was released and it specifically called for water projects to help the country. In the section titled, "Improve Rural Quality of Life," the farm plan called for the country to, "Invest in the core infrastructure – roads, bridges, locks and dams, water

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From the Executive Director...

Carp barriers and barge safety

After more than \$11 million and almost a decade of planning, construction and studies, the permanent barrier to protect the Great Lakes from Asian carp is ready to be activated, or is it?!

“I think it’s probably ready to go” said Chuck Shea, barrier project manager for the Corps of Engineers. “We’ve done a lot of tests, and recent results appear fairly promising.”

Using ‘I think’ and ‘probably’ in the same sentence, along with ‘fairly promising’ in the next, does not make a forceful statement. But then the barrier is a complex project intended to solve an equally complex issue.

Two projects – one temporary, one permanent

The Chicago Sanitary and Ship Canal, site of the barrier project, connects the Mississippi River to the Great lakes via the Illinois River. According to the EPA, carp are in the Illinois River within 50 miles of Lake Michigan – too close for comfort.

In 2002, the Corps constructed a \$2.2 million temporary “electronic dispersal barrier”, the only such barrier currently operating on the Ship Canal.

According to the Illinois Natural History Survey, tagging and tracking the movements of 100 native carp revealed that only one radio-tagged carp breached the barrier – most likely the result of turbulence caused by a passing barge. [Obviously nothing could be said about untagged intruders, as they cannot be followed.] Further tests have shown that the 1-volt per inch current causes fish to turn back rather than swim through the barrier into Lake Michigan. After correcting designs to address various shortcomings, construction on a second and permanent barrier was started in 2004.

The second barrier, according to an EPA website, cost \$9 million and consists of two rows of electrodes across the bottom of the Canal, about 200 feet apart. The electrodes have the capacity to pulse 4-volts per inch of DC current into the water, 4 times more than the currently operating temporary barrier.

Barge freight and operators at risk

According to sources, the permanent barrier

was completed in 2006, but opening was, and continues to be delayed by concern that barge freight, barge operators or pleasure boaters would be damaged or electrified while crossing the barrier. This was followed by more than two years of additional testing and other work to make the barrier safe.

Finally, in October 2008, responding to a query by governors of the eight Great Lakes states, the federal government said they cannot predict when – or even if – the barrier would be activated. Then, in November, the Corps says it “looks like it’s ready to finally flip the switch”.

How much of a jolt - 1 volt or 4

Scientists contend that the planned 1-volt pulse *should* keep the 100 pound, 5-foot monsters in check, however juvenile fish are less affected by electric currents and need a larger shock to turn them away.

Responding, the Corps’ Shea said the new barrier was always designed to operate at a base of 1 volt that would be increased to 4 volts only “...if smaller fish became a concern in the future.” However, a Milwaukee *Journal Sentinel* article stated that, in a 2006 document, the Corps would allow only 1 volt of power as this is the level it promised the barge industry it would not exceed.

Corps charged with rewriting history

This issue prompted members of an advisory panel of scientists that has been helping get the barrier built to charge that the Corps is involved in ‘revisionist history’ by saying that the new barrier’s normal operating level [1 volt] was never intended to be any higher than the temporary barrier [also 1 volt]. To make the point, one panel member said “...increasing the voltage [to 4 volts] was a major reason to build the new barrier in the first place.”

Higher voltage is dangerous to barges

According to the *Journal Sentinel* report, barge industry leaders fear that operating the barrier higher than 1-volt per inch presents too much of a risk for sparking between barges, or for anyone who might fall overboard.

Planners say the new upstream barrier will be

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turned up above 1 volt if small carp are found in the area, but that should happen only for a brief period each year after the annual spawn.

Biologists say this is nonsense since carp spawn throughout the warm months and their growth rate can vary widely depending on how much food is available. And, if fish are smaller than five inches, tests have shown that 1 volt will not repel them.

Corps passed off to Coast Guard

The same article indicated that the Corps may be able to activate the new barrier at the 1-volt level in the coming weeks or months, but that it will "...not be operated at higher voltages until ... tests are completed, reviewed and approved by the Corps or the Coast Guard."

For its part, Coast Guard personnel in charge of safety say they are dealing with complex issues: carp must not reach Lake Michigan, but the health and life of recreational and commercial users who regularly transit the barriers must not be compromised.

Fundamentals overlooked

Also about the time the Corps announced it was ready to flip the switch, the Alliance For The Great Lakes released its 106-page feasibility study [funded by the sport-fishing industry] arguing that *separating* the watersheds in the only way to stop the transfer of invasive species. "If you want to protect the Great Lakes, this is what you have to do . . . you've got to remove their pathway", said Joel Brammeier, Alliance president and lead study author.

Interestingly, the study also offered alternatives including increasing the number of locks necessary to gain access to the Great Lakes.

While electric-shock barriers, separation of waterways and other chemical and physical obstacles are promising, they all overlook a basic and fundamental issue. All are temporary deterrents to protect native ecosystems against prolific and fast-growing invasives at a time when long-term solutions are more in order.

Negative population growth appears to be the obvious albeit unpopular next step. Anything short of that will produce the same undesirable results as forcing ever-increasing amounts of air into a very small balloon.

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systems and essential air service – that rural communities need."

Not sexy - vital

And there have been several recent calls for waterway funding. Among them an editorial in the *Pittsburg Post Gazette* that pointed out, "Infrastructure isn't sexy, it's just vital."

Post Gazette writers pointed to the early 2008 study by the Texas Transportation Institute's Center for Ports and Waterways at Texas A&M. That study highlighted the environmental, energy and safety advantages of waterborne transportation.

"During the presidential campaign, Mr. Obama proposed creating a National Infrastructure Reinvestment Bank that would have \$60 billion over 10 years to spend on a wide range of infrastructure projects in general. Inland barge transportation and its needs must be part of any future discussion," the paper said.

When a group of regional public and private officials gathered in Chicago last month to talk about the economy, Robert Yaro, Regional Plan Association president said, "I believe in this crisis there is an opportunity to increase rather than decrease infrastructure spending. It could be the opportunity of a lifetime, so let's not miss it."

And early last month, the Waterways Council, the Nature Conservancy, the Upper Mississippi River Basin Association and the National Audubon Society all signed a letter to the heads of the U.S. House and Senate and their appropriations committees asking for fast action on funding for the Navigation and Ecosystem Sustainability Program (NESP).

Silver carp in Mississippi

Several newspapers reported this month that a silver carp has been found in the Mississippi near LaCrosse, Wis., the first recorded appearance in Wisconsin or Minnesota. Silver carp have been known to cause injury to boaters and the environment. Biologists are working to find out how widespread the carp problem is.