

Waterways

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River opening delayed a bit by Pepin ice

UMWA members are hoping for an earlier open to the shipping season than last year's April 16, but thickening ice on Lake Pepin has ensured that it will not happen before March 20, which has been the average opening date over the past 30 years.

The Corps of Engineers had wanted to reopen Lock and Dam 5A to navigation on March 9, but revised the schedule because of thick ice conditions on Lake Pepin. Thursday March 11 measurements showed 24 inches of ice at two locations on the lower end of the lake.

A Corps release says 5A will now reopen no later than March 23.

The U.S. Department of Agriculture (USDA) [Transportation Report](#) last week reported that floods on the Ohio River caused by rapid snow melt will also affect

Mississippi River operations. A crest of 46 feet - six feet over flood stage - is expected at the confluence at Cairo, Ill., by the 19th.

Even though 2014's shipping season was severely truncated, St. Paul District Mississippi River Program

one location to perform emergency dredging after the June floods, the cargo tonnage was up more than 10 percent at the mainline locks from Hastings to Lock and Dam 10 in Guttenberg, Iowa," Peterson said.

He said figures showed that shippers saved more than \$300 million dollars using waterborne transport. And all indications are that demand for the efficiencies of river transportation will continue to grow in the near future. After the 2014 work slowdowns at West Coast ports, Mike Steenhoek, Executive Director of the

Soy Transportation Coalition says some foreign shipping companies have announced that they will leave the West Coast and [are looking at ports on the U.S. Gulf Coast](#) as a more reliable alternative.

The soon to be completed expanded Panama Canal is

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Above: Chinese importers watch a barge on the Minnesota River being filled with soybeans for movement to the Gulf and eventually to Asian markets .

Manager Bryan Peterson noted late last year that [the river still carried more tonnage than the previous year and saved shippers money.](#)

"Despite the late start and needing to close the 9-foot channel for 26 days in a least

From the Executive Director...

Of all things: A Waterless Fish Passage

Just over a century ago, a Corps of Engineer's webpage reminds us, construction was complete on the first dam between Keokuk, Iowa and Hamilton, Illinois, at what is now Mississippi River Lock and Dam 19. Legislation passed in 1905 authorized the construction of what was then described as an engineering marvel. With a head of just over 38 feet, L&D 19 held promise to produce a constant stream of electricity and provide safe navigation over the Keokuk rapids, which it has unfailingly done since its completion in 1913.

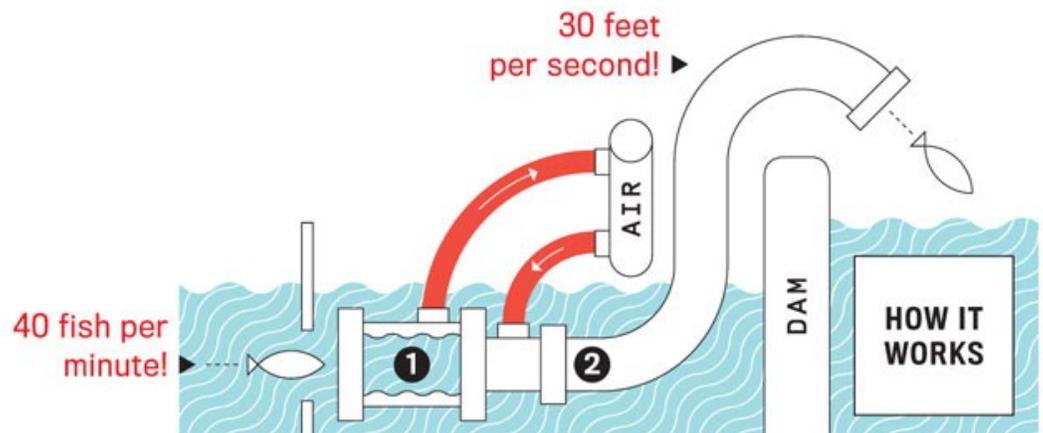
Less than a year after construction, Dr. Robert E. Coker, a noted biologist, stood on the newly completed dam and observed a large number of herring trapped and un-

would pass before anything was done about it.

A system for dams that don't currently have fish ladders

The Corps' webpage goes on to explain that it wasn't until early 2000 that river biologists identified fish passages as a specific goal for habitat restoration. In "*A River that Works and a Working River*", a publication of the Upper Mississippi River Conservation Committee, biologists realized that sufficient spawning habitat may not be available in every pool. Or that certain species may be able to successfully reproduce only in years where floods put the dams out of operation during spawning periods. That one piece of obscure 1905 legislation seems to have set into play the need to find a fish-obstacle

"..It wasn't until early 2000 that river biologists identified fish passages as a specific goal for habitat restoration."



able to negotiate the structure. It's quite

possible the Doctor may have wondered that this might be the first batch of migratory fish unable to pass into upriver primal spawning grounds since retreat of the Wisconsin glacier, some 12,000 years earlier.

Dr. Coker, and others generations before him, recognized the potential harm of this and similar structures; but more dams would be built and another nine decades

Illustration by Michael Hoeweler, courtesy Popular Mechanics.com

work-around and elevated that need into the national

spotlight – fish ladders or fish passages.

In addition to the five basic designs of fish passages, all of which have the objective of facilitating the movement by fish and other riverine critters around a dam or other obstacle, a relatively new up-start method has made the scene in state of Washington: the WHOOSHH Fish Transport System www.whooshh.com is touted

as a low-cost solution for dams that don't currently have fish ladders.

Originally developed to harvest soft fruit, it works like a vacuum using low pressure in front of the fish and a higher atmospheric pressure behind to suck it through a tube.

According to Whooshh, the system can handle fish of over 33 pounds at a rate of 40 per minute and that it doesn't damage the fish's scales or eyes. Because the system uses air rather than water pressure, the company says there's no theoretical limit to the height it can reach. It has only three moving parts and the 9 gallons of water used for lubricant won't freeze significantly, so the unit can be used year round.

The Salmon Cannon

Around the office

Whooshh executives call the unit the Salmon Cannon, but the transport system offers a cheap, clever and lucrative solution to a serious problem. According to Whooshh, there are about 80,000 dams across the U.S., many of which block spawning salmon and steelhead trout far from the birthplace they struggle to return to. Fewer than 10 percent of these dams have built-in fish ladders. Conservation crews have tried all sorts of expensive measures over the years to help salmon migrate across the dams without these ladders including barges, tankers and even helicopters, but never a cannon.

Chief Engineer Jim Otten explains how it works: "A fish swims near an entrance, where a small blower of the sort that drives fans and belts, sucks

it into a flexible sleeve, whose rubbery shape creates a seal. Off goes the fish."

A win-win solution

After nearly five years of investment in research, development and testing, CEO Vincent Bryan said, "We are now at the most exciting part of our journey – that of launching a truly innovative product . . . that has positively begun to impact the major challenges of the century: food, energy, water and the environment . . . with a win-win solution, with a better, more flexible and cost-effective system that can be deployed quickly and economically."

"Originally developed to harvest fruit, it works like a vacuum..."

Other items of interest:

- It may be preaching to the choir, but the COE's latest *Crosscurrents* carries some graphic reminders of the [advantages of waterway navigation](#) and also a graphics page detailing St. Paul District navigation statistics from 2014.
- Local columnist and radio host Joe Soucheray recently took a poke at St. Paul's failure to, "take advantage of the river for entertainment." He says if [better facilities for cruise boats](#) which will soon visit could be arranged, "Some of the tourists might actually want to make a return visit. As it stands now, they will be dropped off and hope they make it across Shepard Road on a green light."
- Elsewhere in this issue, the imminent completion of [the Panama Canal expansion](#) is mentioned. If you'd like to see the work in progress, the Canal Authority has a new video available on *YouTube*.
- Iowa's 2015 overall [infrastructure grade](#) from the American Society of Civil Engineers (ASCE) is C-. However the engineers give the inland waterways infrastructure a D.

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also factoring into those decisions.

“If we want to remain the preeminent exporter of agricultural products, you have to have a transportation system in general, but one that includes a strong port system,” Steenhoek says.

Canal could benefit

Jorge Quijan, Panama Canal Administrator says that [the canal expects to win an additional four to five weekly container-shipping services](#) from Asia to the U.S. East Coast after bigger ships begin floating through the canal next year. He says he thinks that the slowdowns on the West Coast in 2014 might cause an additional two shipping services to shift to the Canal and other ports.

USDA’s February 19

Outlook for U.S. Agricultural Trade shows what it calls, “An astonishing trend for American farm exports that began in 2009. Figures show that exports have increased 47% in value and overall support 1 million American jobs.

And, President of the Waterways Council, Mike Toohey, says estimates are that [an estimated 9 billion people around the world will rely on the U.S. for food](#) by 2050, and efficient transportation infrastructure will be vital to keeping agricultural exports moving to them.

“We need to make investments both in rail, both in highway, and in water and in air to be ready for this explosion of 4 billion tons of new freight,” Toohey says.

Key to maintaining and improving that infrastructure, Toohey says, is implementation of the Water Resources

Reform and Development Act (WRRDA) and [wise use of the new money coming into the Inland Waterways Trust Fund](#) from the 9-cent a gallon tax increase that was supported by the waterway industry and passed last year.

Quincy celebrates river

As important as the river is to the economic future of the country, a down-river celebration this year shows that it’s been a factor for a long time. [Quincy, Ill., is celebrating 175 years](#) since incorporation. The *Herald-Whig* newspaper says, “River has driven city’s economy, culture.”

The report says a planned international port south of Lock and Dam 21 will mean an even bigger role for the Mississippi River in the area’s economy in years to come.

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