# First NESP navigation improvement readies for use

There's a new cell going in downstream of Lock and Dam 14 near LeClaire, Iowa. This structure to which barges will tie up while waiting for a lock to be open is the first of what's known as small-scale measures to help navigation barges traverse the Mississippi River more efficiently. The goal is to save time and thus money for those producing and hauling goods from this fertile Midwestern farmland region—and money too for those who will eventually purchase these goods.

Small-scale measures are one key component of the Navigation and Ecosystem Sustainability Program. They denote projects and processes that can be implemented relatively quickly to help with river congestion as teams move through the design and construction of larger, more complicated new locks. There are nine of these mooring facilities in the works, one nearing completion and use by barges navigating the river. Eight others are in the planning stage.

Despite the name, the impact of mooring facilities isn't necessarily small, says Andrew Goodall, project manager for NESP. While early time estimates predict a savings of five to 10 minutes per each barge that "locks through," the time varies by how big the bottleneck is and how close barges are (or aren't) waiting for locks now.

"One is almost built, and we'll be able to see pretty quickly with that one what a difference these can make," Goodall said.

At the most extreme location, barges wait for the lock about four miles from the lock itself while the mooring facility proposed there would be just a quarter mile upstream. That, team members estimate, could save almost the 1½-hour time it takes for a waiting barge to enter the cleared lock. Benefits increase even more when multiple barges are waiting.

As soon as the first mooring facility is complete and in use, NESP teams will work with the U.S. Army

Engineer Research Center in Vicksburg, Miss., to track the exact time savings through monitors on individual barges and equate that to eventual savings. A time savings of just five minutes per lockage still translates to a significant annual savings to the economy, team members say.

Congress first authorized construction of the mooring facilities in the 2007 Water Resources Development Act. There, mooring facilities are described as structures to which a vessel might temporarily anchor. They'll vary between circular cells filled with earth and concrete and "dolphins" made up of steel pilings. Which is used depends on the structure of the river bottom at a given location.

Navigation industry leaders worked with the Corps to identify the locks that might most benefit from mooring facilities to reduce commercial traffic delays. The initial list of 20 locations was pared down and prioritized, in part through use of heat maps that show the unofficial mooring areas barges are using now.

In addition to saving time on each lockage, the mooring structures will help to reduce unintended consequences to the environment, notes team member Breann Popkin. Barge operators often ground their boats as they wait along a shoreline that's often significant in terms of endangered habitat or cultural resources.

NESP is the first Corps program in the nation to have a dual purpose, in this case one that mirrors Congress's declaration of the Mississippi River system as both a nationally significant ecosystem and nationally significant commercial navigation system. This system is used to transport more than 60 percent of America's corn and soybeans through these often congested locks; it's also a globally important flyway for some 300 bird species and is comprised of some 2.7 million acres of bottomland forest, islands, backwaters and side channels that are home to multiple mammal and fish species and some 50 types of mussels.

Having the waiting barges tied off in the water, along specifically designated spots, will reduce shoreline erosion and will protect trees to which they may anchor and shoreline mussel beds that often contain rare and endangered species.

"These will give barges a designated place to wait that will have no impacts to things like mussel species as far as prop wash," Popkin said. "They won't be bumping up against those natural resources causing degradation." —K.S.

PHOTOS: U.S. ARMY CORPS OF ENGINEERS.

## My MISSISSIPPI

**Brad Eldridge,
owner of Parish Waterfowl Company,
Vicksburg, Mississippi**

"I grew up 30 minutes west of Vicksburg in Delhi, Louisiana. I did spend a lot of time outdoors, duck hunting around the Mississippi River.

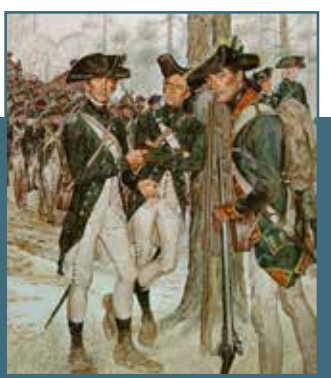
"The predominant amount of my hunting before my adolescence was in the Tensas National Wildlife Refuge south of Tallulah, Louisiana. Then as I got older, I started traveling out more and using some of the oxbows and backwater of the Mississippi River. It's a treasure out there.

"I've been an avid duck hunter since I was about 13. When I was about 30, I moved back to this area. I started hunting with a couple of younger guys that were into duck call collecting, which is something I had never been into.

"I ended up putting on a benefit for my friend's daughter to raise some money for a liver transplant. In doing that, we put on a two-day duck hunt. The initial reason for making the calls was just to be able to put together experiences for people, and then it kind of took off on me and turned into more of a full-time job.

"I wanted to display what I was doing with my custom duck-call making. When I found this Reconstruction Era-Freedman's Savings Bank, it was really a blank canvas. It had a lot of natural light. The vaults in the back and everything were really cool too. Just the history of that building.

"I think locally, people understand that there's a lot of habitat out there along the river. A lot of tourists that we get at least, are coming from Europe and sometimes the West coast, and they just really have no concept of what makes good hunting property or where we hunt." —C.E.



## DID YOU KNOW?

The U.S. Army, established by the Continental Congress in June 14, 1775, is a year older than the Declaration of Independence and thirteen years older than the Constitution.