

Waterways

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Report card out soon, grades likely to continue low

Many UMWA members have book marked the web site of the American Society of Civil Engineers (ASCE) which will release its [2013 Report Card on America's infrastructure](#) next week. Pre-

vious report cards have given U.S. infrastructure a grade of "D" and it's unlikely the 2013 version will show any improvement. Supporting evidence for the ASCE assessments is contained in the Society's ["Failure to Act"](#) economic reports, the latest of which was recently released.

\$ Trillions in GDP

In that document, ASCE says the gains in 2020 dollars that would come with adequate infrastructure investments include: a \$3.1 trillion hike in GDP, \$1.1 trillion in U.S. trade value, 3.5 million jobs, \$2.4 trillion in consumer

spending and an additional \$3,100 in annual personal disposable income.

Rick Calhoun, marine and terminal division president for UMWA member Cargo Carriers, Inc., talked with the *Star-*

extended period of time, doing severe economic harm," Calhoun says.

That same article quoted Upper River Services President Lee Nelson.

"The infrastructure is in dire straits... If a similar situation (an Ohio lock gate falling off its hinges) were to happen at the majority of locks on the Upper Mississippi, there is no auxiliary."

Focus is elsewhere

However, as anyone who's listened to a newscast or read a newspaper recently knows, lawmakers are focused on se-

questration and another funding deadline when the current continuing resolution runs out near the end of this month. Leaders in both parties have said they will not let the government shut down and will try to give departments more flexibility on making the cuts.

But as it stands now the military, which is absorbing half of the funding reductions

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Above: Maintenance alone will not keep the river system viable.

Tribune recently about [what continued underfunding of Mississippi River infrastructure could mean](#). Calhoun says a lock failure on the upper river would make last year's drought look like a "comparatively minor problem."

"It's our fear that at some point in time we could have a failure, and actually shut down a lock or dam for an

From the Executive Director...

Facebook Postings and Mirrors

Earlier this month we learned from a Facebook posting that an Asian carp story aired on Minneapolis television was said to have ended “with Corps of Engineers propaganda about how carp eDNA might not be from live fish unreal xxxxxxxx [barnyard expletive] and shameful lies from an agency that has become the ultimate Asian carp barrier to forward progress on this issue. Sickening!”

We understand this posting was taken down shortly after the incident but not before the author’s words unnecessarily tarnished his reputation.

DNA and eDNA are different

The Asian carp report that sparked the posting is “Environmental DNA Calibration Study Interim Technical Review Report, February 2013”(ECALS) which sprang from an earlier study initiated by the Obama Administration to ensure that sustainable Asian carp populations do not exist within the Great Lakes. It involved collaboration between the U.S. Army Corps of Engineers, the U.S. Geological Survey, and the U.S. Fish and Wildlife Service.

For clarity, this report emphasizes the difference between DNA and eDNA as follows:

“For example, if we took a water sample from an experimental trial Asian carp tank, we are sampling for eDNA. If we sample tissue directly from an Asian carp carcass, we are sampling for DNA”.

While specific to the Chicago Area Waterway System (CAWS), the 2013 report addresses three major issues developed in the earlier study, but focuses on vectors, that is, agents – natural or manmade – which might transport Asian carp eDNA. Investigation into the other two issues – marker development and calibration experiments – will be studied further in 2013.

Three year study

As stated in the Executive Summary, ECALS is a three-year study to improve the detection, understanding and interpretation of Asian carp eDNA in environmental samples. Ongoing programs seek to detect the presence of genetic material, that is, DNA in cells sloughed off in slime, feces, urine, etc., extracted from water samples that, if present,

may point to the actual presence of Asian carp.

The 2013 interim report reviewed seven individual vectors: storm sewers, fisheries sampling gear, fish-eating birds, dead fish carcasses, barges and sediments as possible contributors of positive eDNA without a live fish being present. DNA can stay on these sources for a number of days.

According to the report:

Storm sewers are a likely vector in the CAWS as ice-laden Asian carp carcasses are transported to area fish markets. Ice and fish body fluids are then dumped into storm utters and street drains, eventually flowing into the storm sewer system. ECALS trials in fall of 2011 and summer 2012, demonstrated that ice from chests holding Asian carp carcasses could be a source of eDNA, but that it dissipated within a day. Whether the eDNA signal was lost due to degradation, dilution or downstream flow is unclear.

Fisheries sampling gear (boats, nets) used by agencies such as DNR, contract fishermen or recreational anglers may be exposed to Asian carp DNA in waters where carp are present, then moved into CAWS where some Asian carp eDNA could be sloughed off into the water. As DNA may adhere to boat hulls for several days, is not removed by overland transport and is not washed off moving through water, vessel hulls can be vectors for DNA movement. Nets appear to be a source of very large amounts of eDNA, but require additional study.

Birds can be ‘vector’

Fishing-eating birds can be a direct vector of Asian carp DNA or can contaminate barges and boats with DNA via fecal deposits. Silver carp DNA was detected in fecal samples from fish-eating birds offered one to three meals of silver carp and can be present in samples collected up to one week following a meal. Silver carp DNA in fecal material on metal sheets persist for 30 days under temperatures not exceeding 140 degrees F.

Fish carcasses have been found on decks of barges above the COE electric dispersal barrier in the Chicago Shipping Canal along with slime from decaying carp trailing down the sides of barges to the water line. Samples from Asian carp slime-coat on metal surfaces

“This report emphasizes the difference between DNA and eDNA...”

show intact Asian carp DNA that disappeared by day 18. Trials indicate that carcasses, rain or other run-off from carp contaminated surfaces can be a source of eDNA entering the system.

Barge transport of carcasses is subject to a May 2012 protocol requiring lock staff to document such occurrences, verify the species, and ensure removal before the vessel continues.

Sediments:

The potential for sediments, both within the CAWS and beyond, to transport eDNA was investigated. Five of 13 stream bank samples from 63 miles downstream of Lockport on the Illinois River tested positive for silver carp DNA; bighead carp DNA was not detected.

Sediment samples (28) collected from Lake Peoria dredged materials being offloaded to a site had 11 samples that tested positive for silver carp DNA, and one for bighead DNA. Further studies are in progress.

Implicit, but not stated, is that findings relating to eDNA and the CAWS are applicable to similar bodies of water.

That summarizes the essence of the February 2013 report. The entire 112 page report is available at http://www.asiancarp.us/documents/ECALS_INTERIM.pdf

Surveys resume on Lake Pepin

The Army Corps of Engineers skipped one of its weekly measurements of Lake Pepin ice last month because the cold weather was likely to thicken, rather than thin the ice. A check of the [Corps' latest survey](#) seems to bear that out.

Surveyors first went out on the lake ice February 13. This year the Corps has posted a video on YouTube to give the public more information about the measurements, which usually give waterway users an indication of when season open may occur.

Because of lock maintenance work downriver at Lock and Dam 6, shippers already knew that open would not occur before mid-March.

The lake is 21 miles long, and actually a wide spot in the river. Most tows have waited until ice on the preferred channel is less than a foot thick to venture north to Lock and Dam 2, which is generally regarded as the opening of the season.

The first tow last year was the Deanna Ann which inaugurated the season on March 17.

“The Army Corps of Engineers skipped one of its weekly measurements of Lake Pepin ice last month...”

Other river related items:

- The Army Corps of Engineers is planning a [“normal” 2013 navigation season on the Missouri River](#). Engineer Bill Doan at the Corps Omaha, Neb., office says river levels will be down, but navigable. He predicts an eight month navigation season with eight foot depths and a 200-foot wide navigation channel. He also says that hydro power generation will be curtailed by the lower flow levels.
- The National Weather Service says recent snowfalls have increased the risk of flooding to “normal” on parts of the Upper Minnesota and Mississippi River basins. Areas included are Montevideo, Granite Falls, Long Prairie and St. Cloud. NOAA says parts of southern and eastern Minnesota and west-central Wisconsin are at risk for flooding due to “concrete frost,” which occurs when ice in the soil doesn’t thaw and allow melted snow or rain to soak in.
- Even as U.S. decision makers remain deadlocked on just about everything, work continues on the Panama Canal expansion. [Reports say the Panama Canal Authority](#) recently completed dredging to deepen and widen the navigation channels along Culebra Cut, a major milestone for the Panama Canal expansion. Most American ports are currently unable to handle the larger vessels that will be able to use the renovated canal.

MN Senator co-sponsors “RIVER” Bill in U.S. Senate

In Washington, Senator Barbara Boxer (D-CA) is telling staffers to expect to begin marking up a new Water Resources Development Act (WRDA) around March 20. That’s a week before the current CR or continuing resolution funding the federal government is set to expire.

And Minnesota’s Senator Amy Klobuchar is co-sponsoring a Senate bill to advance Upper Mississippi River infrastructure projects. The bill is titled “[The Reinvesting in Vital Economic Rivers and Waterways \(RIVER\) Act of 2013](#)” and directs would help move forward major construction projects, including much-needed rehabilitation of the locks and dams along the Mississippi River.

Klobuchar says the bill would ensure that the Inland Waterways Trust Fund remains viable, increases fuel fees paid by users and would order procedures to make sure that projects are completed in a timely manner and don’t exceed initial estimates.

“Our waterways play a vital role in Minnesota’s economy. Investing in our waterways, including rehabilitating the locks and dams along the Mississippi River is critical to ensuring that barge traffic can continue so businesses can get their goods to market,” Sen. Klobuchar says.

The web service www.govtrack.us gives the bill about a 10% chance of getting out of committee and a 2% chance of being enacted into law.

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mandated by the sequester, must make some hard choices. The [Associated General Contractors of American estimates](#) that sequestration means an almost 10% decrease in dollars for the Corps’ construction program.

In his last couple of CO’s columns, Col. Michael Price, Commander of the St. Paul District, says, “We will get through this,” but cautions his people that furlough days are likely ahead.

Some Corps employees - not in the St. Paul District - have responded to the planned days off with a rap video called “[Furlough Friday.](#)” The group says the video was made and sent out to Corps members as a way of easing anxiety about the coming furloughs.

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