

THE GREAT LAKES AND MISSISSIPPI RIVER INTERBASIN STUDY NEWSLETTER

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If you have questions or comments about the GLMRIS Newsletter or have suggestions for future topics you would like to see addressed, please contact the Chicago District Public Affairs Office at ChicagoDistrict.PAO @usace.army.mil, or call us at 312-846-5330.

Additional information about GLMRIS, including previous issues of the newsletter, press releases and Interim Products are available online at glmris.anl.gov.

The purpose of GLMRIS is to evaluate a range of options and technologies to prevent aquatic nuisance species transfer via aquatic pathways between the Great Lakes and Mississippi River basins by aquatic pathways.

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Meet Program Manager Jack Drolet

"I hope to bring a great deal of experience on the issue of invasive species," said retired Army Col. Jack Drolet, who assumed the role of GLMRIS program manager Sept. 4, 2012.

Drolet has over 30 years of military leadership in evaluating complex problems and developing team solutions. Among many key assignments, Drolet's last was as the deputy commander at the U.S. Army Corps of Engineers (USACE), Great Lakes and Ohio River Division in Cincinnati, Ohio. He also served as the Gulf Region Division South District commander and district engineer responsible for providing engineering and construction management services in the nine southern provinces of Iraq from 2008 to 2009. From 2006 to 2008, he commanded the USACE Chicago District, where he



oversaw water resource development in the Chicago metropolitan area, an area of about 5,000 square miles with a population of over 9 million.

During his tenure as Chicago district commander, Drolet played a major role in the development and progression of the electric barriers in the Chicago Sanitary and Ship Canal. He was also a member of the regional interagency Asian Carp Advisory Committee, a predecessor to the Asian Carp Regional Coordinating Committee. Throughout his assignment as deputy division commander, Drolet stayed closely involved as the entire invasive species effort matured and evolved.

Drolet was also involved with research on sea lamprey control and trap effectiveness efforts as part of his work with the International Joint Commission - Lake Superior International Board of Control.

"Though GLMRIS is probably one of the most complex and non-traditional projects in the Corps' portfolio, with an inter-basin boundary extending over 1,500 miles and numerous invasive species on either side, I am confident our motivated interdisciplinary team will inform national decision makers on how to effectively deal with the issue," said Drolet.

A native of Pennsylvania, Drolet graduated from Penn State University in 1983 with a Bachelor of Science in business management and a Master of Business Administration in defense comptrollership from Syracuse University in 1991. In 2006, he received his Master of Science in strategic studies from the U.S. Army War College.



"My direct connection with the Great Lakes began with my time as district commander in Chicago. Since then, I have fully realized the Great Lakes are a priceless resource," said Drolet.

GLMRIS Program Manager Jack Drolet speaks to about 50 attendees at the Eagle Marsh Aquatic Nuisance Species Controls Report Public Meeting, Fort Wayne, Ind., Dec. 4, 2012. Page 2 Volume 2, Issue 4

GLMRIS path forward

Focus Area 2

The GLMRIS Focus Area 2 Team has been releasing draft aquatic assessment pathway reports by state for the 18 potential aquatic connections outside of the Chicago Area Waterway System (CAWS), or Focus Area 1. The reports are released by state for a 30-day comment period and also include a follow-up stakeholder call. The U.S. Army Corps of Engineers (USACE) will review and address public input before finalizing and re-issuing the reports in early 2013.

The purpose of each report is to evaluate key evidence to estimate the likelihood of an aquatic pathway forming and the possibility of aquatic nuisance species (ANS) using it to reach the adjacent basin. Each report includes study methodology; aquatic pathway characterization; aquatic pathway viability for ANS of Concern; overall aquatic pathway viability and some potential opportunities that, if implemented, could prevent or reduce the probability of ANS transferring between the basins.

In an effort to be efficient with public resources, the interagency Focus Area 2 Team determined further efforts (more extensive studies and/or possibly implementable actions) will be concentrated on pathways that have an overall rating of medium or high for the potential inter-basin transfer of ANS. However, results from all of the pathway assessments, regardless of their overall rating, should be evaluated and taken into consideration by the appropriate resource agencies. These pathway reports are tools to assist prioritization of future study funding decisions and to assist states in updating their comprehensive ANS management plans.

"One of the reasons we released these interim reports was to get this information out there, so that state or local parties may be able to take faster action on their own at a particular location. We have been working with the local departments of natural resources throughout the process to get their input and to allow them to be intimately familiar with the reports' contents to help them," said Other Pathways Project Manager Marty Wargo.

Eagle Marsh was the only potential pathway with a high rating after USACE completed its Other Pathways Preliminary Risk Characterization Report in 2010. In response, the Indiana Department of Natural Resources built a temporary barrier the same year to prevent adult Asian carp from transferring into the Great Lakes Basin through Eagle Marsh. However, additional assessment of Eagle Marsh in 2011 and 2012 confirmed the high rating of this aquatic pathway, due largely to the potential for viral hemorrhagic septicemia virus (VHSv) to spread into the Mississippi River Basin. Other aquatic species, including Asian carp, were rated medium at Eagle Marsh. Therefore, a specific ANS Controls Report for Eagle Marsh was released in November for a 60-day public comment period, along with a public meeting held Dec. 4 in Fort Wayne, Ind., to identify a permanent means of prevention as efficiently and effectively as possible. On Dec. 5, the GLMRIS Team met with White House Council on Environmental Quality Asian Carp Director John Goss and representatives from the Natural Resources Conservation Service, the Nature Conservancy, Little River Wetlands Association, the U.S. Geological Survey and the Indiana Department of Natural Resources to discuss the way ahead for Eagle Marsh.

GLMRIS Report

A GLMRIS Report presenting a range of options and technologies to prevent the transfer of aquatic nuisance species between the Great Lakes and Mississippi River basins at the CAWS and other potential locations along the divide will be submitted to Congress in December 2013. The purpose of the GLMRIS Report is to meet the intent of the Moving Ahead for Progress in the 21st Century Act (MAP-21) legislation, which requires expedited completion of the report initially scheduled for completion in 2015, as identified in Section 3061 of the Water Resources Development Act of 2007.

The 90-Day Report, released in October, outlines a plan for the completion of the GLMRIS Report, including anticipated milestones and resource requirements.

The GLMRIS Report will provide Congress and other stakeholders with an analysis of potential alternatives, as well as additional pertinent information for decision makers and will also identify additional analyses and requirements that must be completed after December 2013 but prior to initiating preconstruction engineering and design. These items include detailed design analyses, completion of the environmental compliance, required internal reviews and public state and agency reviews.

Calendar of events -- 2013 --

January 2013

January 15-16 – GLMRIS Executive Steering Committee and ACRCC Executive meetings, Chicago, Ill.

February 2013

February 12-13 – Great Lakes Waterways Conference, Cleveland, Ohio, www.greatlakeswaterwaysconference.com/

February 12 – Wisconsin Wetlands Association, 18th Annual Wetlands Conference, Sheboygan, Wis., www.wisconsinwetlands.org

February 12 – Great Lakes Navigation Stakeholder Meeting, Cleveland, Ohio

March 2013

March 5-7 – Great Lakes Commission Semiannual Meeting and Great Lakes Day, Washington D.C., <u>www.glc.org</u>

April 2013

April 15-19 – International Joint Commission Spring Semi-Annual Meeting, Washington D.C., www.ijc.org

May 2013

May 29-30 – Annual Meeting of Great Lakes Fishery Commission, Montreal, www.glfc.org

June 2013

June 2-6 - Annual Conference Great Lakes Research, West Lafayette, Ind., www.iaglr.org/iaglr2013/

June 19-21 – Annual Meeting of Great Lakes-St. Lawrence Cities Initiative, Marquette, Mich., <u>www.glslcities.org</u>

July 2013

July 29-August 2 – 5th National Conference on Ecosystem Restoration (NCER), Chicago, Ill.,

www.conference.ifas.ufl.edu/ncer2013/

September 2013

TBD – Great Lakes Commission Semi-Annual Meeting, Milwaukee, Wis., www.glc.org

TBD – Healing Our Waters' 9th Annual Great Lakes Restoration Conference, http://healthylakes.org/

October 2013

TBD – Great Lakes Wind Collaborative 6th Annual Meeting, www.glc.org/energy/wind/ Page 3 Volume 2, Issue 4

GLMRIS charrette

The U.S. Army Corps of Engineers, Chicago District hosted a charrette from Nov. 14-16, 2012 that focused on screening criteria and application of screening criteria for the over 90 potential Aquatic Nuisance Species Controls documented in the ANS Controls Paper, released April 2012. Over the three days of rigorous breakout sessions, attendees working with the GLMRIS Team refined the list of controls that may be the most effective for each ANS of Concern for the Chicago Area Waterway System (CAWS).

"The wealth of expertise and diversity of perspectives the participants brought to the breakout sessions made them successful," said GLMRIS Program Manager Jack Drolet.



Risk assessment expert and charrette facilitator Charlie Yoe speaks to participants, Chicago, Ill., Nov. 16, 2012. "There are risk managers everywhere. If you're a boat owner, you're a risk manager," said Yoe, pertaining to shared responsibility. (U.S. Army Photo by Sarah Gross)





U.S. Army Corps of Engineers Great Lakes and Ohio River Division Commander Brig. Gen. Margaret Burcham joins the charrette discussion, Chicago, Ill., Nov. 16, 2012. Burcham speaks to the importance of USACE processes to ensure we're getting things done the right way. Deliberate, careful and thoughtful processes are necessary to do the job well, said Burcham. Also included at head table, from the left, White House Council on Environmental Quality Assistant Asian Carp Director Jim Bredin; U.S. Army Corps of Engineers, Chicago District Commander Col. Frederic A. Drummond Jr. and Deputy Commander Lt. Col. Jim Schreiner. (U.S. Army Photo by Sarah Gross)

From left and around the table, Ken Westlake, U.S. Environmental Protection Agency; Rich Carter, Ohio Department of Natural Resources; Margaret Jones, U.S. Environmental Protection Agency; Brook Herman, U.S. Army Corps of Engineers; Kevin Fitzpatrick, Metropolitan Water Reclamation District of Greater Chicago; Jeremy Crossland, U.S. Army Corps of Engineers; Kevin Irons, Illinois Department of Natural Resources and GLMRIS Project Manager Nicole Roach, U.S. Army Corps of Engineers during breakout sessions, GLMRIS charrette, Chicago, Ill., Nov. 15, 2012. (U.S. Army Photo by Sarah Gross)

The revised set of measures was based on the availability and effectiveness of the 90+ Controls and the probability and consequence of potential transfer for the ANS of Concern. The screened list of controls will be available for informal comment on the GLMRIS website in early 2013.

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Updates on interagency Asian carp efforts

Although the adult population front of Asian carp has remained around 55 miles from Lake Michigan since 2006, GLMRIS Program Manager Jack Drolet states that "active prevention projects are ongoing and effective, such as operation of the electric barriers in the Chicago Sanitary and Ship Canal and partnering with other members of the Asian Carp Regional Coordinating Committee to aggressively monitor the canal to determine location and abundance of fish."

Site preparation for permanent Barrier I is scheduled to begin in spring 2013. This barrier was authorized by Congress as an upgrade of the Demonstration Barrier, which began operating in 2002. The barriers deter the inter-basin passage of Asian carp and other swimming aquatic nuisance species via the Chicago Sanitary and Ship Canal through the use of pulsed direct current in the water from steel electrodes secured to the bottom of the canal that discourages fish from crossing.

These barriers are the largest of their kind in the world and are located on a highly-trafficked, commercially-navigable waterway, though they do not block the flow of water or the movement of vessels. Therefore, the canal continues to serve its intended purposes for wastewater and storm-water management and navigation.

"As novel as this technology is, lab and telemetry results show that it is an effective fish deterrent, and we will continue our rigorous interagency efforts to monitor the canal and work with our stakeholders to make any necessary adjustments to the operations. Barrier I is the culminating technology based on lessons learned from our other permanent Barriers IIA and IIB," said U.S. Army Corps of Engineers, Chicago District Deputy Commander Lt. Col. Jim Schreiner.

As of fall 2012, individually coded transmitters have been surgically implanted into 201 fish, as far downstream as the Marseilles Pool. Stationary receivers collect tracking data, supplemented by monthly mobile tracking. There have been over 6 million detec-



Chicago District Deputy Commander Lt. Col. Jim Schreiner (first row, far right), White House Council on Environmental Quality Assistant Asian Carp Director Jim Bredin (first row, second from right) and Great Lakes & Mississippi River Interbasin Study (GLMRIS) Program Manager Jack Drolet (second row, second from left) join other panel speakers and bi-national Asian Carp Regional Coordinating Committee partners at an Asian Carp Public Forum, Toronto, Nov. 8, 2012. The Federal Department of Fisheries and Oceans Canada and the Ontario Ministry of Natural Resources joined the ACRCC in August 2012. (Ontario Ministry of Natural Resources photo by David Hiltz)

tions from tagged fish with a 75 percent detection rate. No tagged fish have crossed any of the electric barriers in the upstream direction. USACE plans to deploy 32 receivers in spring 2013. Southern Illinois University, Carbondale and the U.S. Fish and Wildlife Service (USFWS) also have receivers in the waterway.

"Monitoring data are used to characterize and understand fish populations around the barrier," said USFWS Fish Biologist Sam Finney.

Dual-Frequency Identification Sonar (DIDSON) is another monitoring method used by USFWS. Each week during the monitoring season (generally May through October), this underwater acoustic camera captures around 80 10-minute recordings of fish behavior in and around the barriers. There are currently eight DIDSON devices in the barriers' region that are able to capture 7 frames per second of video footage.

On Nov. 13, the ACRCC Monitoring and Rapid Response Work Group (MRRWG) met at the USACE Chicago District to review 2012 activities and to set a path forward for the 2013 Asian Carp Control Framework monitoring plan.

"For the Chicago Area Waterway System, alone, we participated in 194 hours or 774 runs of electrofishing for both random and fixed-site sampling in 2012, not to include additional agency efforts, commercial fishing or the rapid response actions that took place," said Kevin Irons, aquatic nuisance species program manager, Illinois Department of Natural Resources.

To put the vast amount of effort spent on monitoring approximately 70 miles of the CAWS into perspective, as part of another effort in 2012, the well-respected Long Term Resource Monitoring Program participated in 123 hours or 492 runs of only fixed-site electrofishing throughout the Upper Mississippi River System. This monitoring occurs in six reaches of the UMRS comprising

of approximately 272 river miles from Minnesota to the open river below St. Louis Missouri and 78 miles of Illinois River. Moreover, this program monitors for all fish and not specific or rare species.

The ACRCC 2012 Monitoring and Rapid Response Plan (MRRP) initiates an extensive netting and fishing rapid response operation after three consecutive positive Asian carp environmental DNA (eDNA) samples are collected in a specific area. Of the over 30,000 fish sampled during all five rapid responses in 2012, no Asian carp were found.

"We continue to do a ton of work to better interpret Asian carp environmental DNA results that will inform future monitoring and analysis," said USACE eDNA Program Manager Dave Schulenberg.

Current eDNA work includes identifying potential sources for Asian carp DNA to enter the CAWS beyond a live fish, developing new genetic markers to aid researchers in their ability to estimate Asian carp populations and movement and increasing the efficiency of eDNA processing.

Visit asiancarp.us for a detailed interim summary report of 2011 actions, as well as the complete 2012 MRRP and other interagency detection, surveillance and down-river removal efforts.