

Phragmites Collaborative Produces Positive Results

By Katherine Hollins, Heather Braun and Elizabeth Lillard, Great Lakes Commission

Wetland invasion by non-native *Phragmites australis* (common reed) is a threat recognized throughout the Great Lakes basin. In recent years, professional land managers, road commissions, homeowners, lake associations and others have used a variety of management tactics in an effort to limit the impact of *Phragmites*. A significant amount of this work is supported by grants under the Great Lakes Restoration Initiative (GLRI).

Until recently, many of these efforts were uncoordinated and conducted without identifying specific desired outcomes. A set of best management practices has not been institutionalized, and stakeholders may be unaware of the long-term, integrated approach required to successfully manage this species. Efforts may or may not include monitoring or opportunities for adaptive management, and monitoring data is rarely communicated regionally, resulting in missed opportunities to learn and improve management practices. Similarly, updates on the development of new, more-sustainable management strategies, such as biocontrol or gene silencing, are not readily available to local decision makers. A lack of open communication and limited access to resources result in disjointed work, inefficient management, duplicative research efforts, uninformed policy and a breakdown of the adaptive management loop.

In 2012, with GLRI funding, the USGS-Great Lakes Science Center partnered with the Great Lakes Commission (GLC) to develop the Great Lakes *Phragmites* Collaborative (GLPC), which serves as a regional, interactive, communication initiative dedicated to technology transfer, information sharing and network building. The GLPC works to close the adaptive management loop and fill the regional communication gap to improve collaboration and lead to more coordinated, strategic approaches to *Phragmites* management and research in the region. The work of the GLPC is supported by staff at GLC and USGS, and is vetted through an Advisory Committee comprised of representatives from stakeholder groups across the basin.

Since its inception, the GLPC has made significant progress. Stakeholder needs were assessed through a survey and a symposium. Based on this input, the GLPC developed a website (greatlakesphragmites.net) that has reached almost 9,000 stakeholders. It serves as a one-stop-shop for *Phragmites* resources and links current scientific research with on-the-ground land management. Visitors to the website can learn information about *Phragmites* that ranges from basic identification and why they might care, to the latest research on alternative control strategies. The Advisory Committee helps ensure the accuracy of the resources, provides updated information and helps guide the activities of the GLPC.

Stakeholders have a variety of opportunities to communicate with the GLPC and each other. The GLPC listserv and social media presence function as announcement systems for the GLPC, as well as forums for discussion about *Phragmites* issues and new science. These networks help maintain open lines of communication, allowing individuals to ask questions of the group or connect with each other. Additionally, over 25 project leaders have shared their own *Phragmites* management efforts on the website's Programs and Projects page. These project descriptions include information about the type of management, successes seen and lessons learned. Other stakeholders are then able to use this resource to learn about different projects and build on each other's successes and experiences.

The GLPC has also hosted 12 public webinars spanning a wide range of topics that encourage adaptive management and habitat restoration, including information on mapping procedures, emerging management techniques and stakeholder engagement. The webinars are recorded and available online, and continue to receive positive feedback from stakeholders.

Additionally, the GLPC contributed to the formation of the Collaborative for Microbial Symbiosis and *Phragmites* Management, an international group of researchers following the Collective Impact model. Members, individually studying microbial symbiosis, are brought together to focus on *Phragmites* management using a microbial symbiosis lens. The collaborative is working to fill knowledge gaps by advancing research associated with endophytes and invasive species, and exploring the potential to use symbiotic relationships to manage *Phragmites* invasions. The collaborative is able to build on the successes of individual members, provide input on future research and management strategies, and use the expertise of individual members to collectively attack a significant issue. This GLPC offshoot has successfully developed a science agenda to guide research in the field as well as an article that will be submitted for journal publication.

In addition to creating opportunities, a key success of the GLPC is in the continued interactions of stakeholders and the growth of the network. The GLPC hopes to take on new projects to serve stakeholders, including developing monitoring protocols and best practices guidelines. Anyone who manages, researches or wants to learn more about *Phragmites* should join the collaborative, take advantage of the resources available, and share their own knowledge and expertise. Ideally, the GLPC will continue to provide resources and opportunities throughout the region, as well as serve as a model for the development of other collaboratives to help stakeholders work more efficiently on large, regional issues.

Washington Watch

The U.S. Army Corps of Engineers released the Great Lakes and Mississippi River Interbasin Study (GLMRIS) Report in January. The report outlines eight alternatives to control the transfer of a variety of AIS. The options concentrate on the Chicago Area Waterway System (CAWS) and range from the continuation of current activities to the complete separation of the Great Lakes and Mississippi River basins. The Senate Committee on Commerce, Science, and Transportation passed S. 2094, the Vessel Incidental Discharge Act, in July. The bill requires the Secretary of the department in which the Coast Guard is operating, in consultation with the Environmental Protection Agency Administrator, to establish and implement uniform national standards and requirements governing ballast water discharges. This legislation would also preempt state authority to adopt or enforce new ballast water regulatory programs and requires existing state programs to be approved by the Coast Guard. Rep. Louise Slaughter (D-NY) and Sen. Kirsten Gillibrand (D-NY) introduced the Invasive Fish and Wildlife Prevention Act (H.R. 996 and S. 1153) to strengthen the screening of non-native fish and wildlife proposed for importation to prevent the introduction of harmful invasive species. **Contact:** Erika Jensen, Great Lakes Commission, 734-971-9135, ejensen@glc.org.

Around the Basin

ILLINOIS: Illinois Department of Natural Resources (DNR) remains fully engaged with Asian carp. Contracted commercial fishers with DNR biologists have removed over 2.5 million pounds of Asian carp below the electric dispersal barrier since 2010. These and other efforts across the basin are reported online regularly at www.asiancarp.us. Illinois debuted a new Aquatic Invasive Species (AIS) campaign, Be A Hero, Transport Zero! This has been broadcast statewide on radio, TV and signs to prevent the movement of harmful plants and animals. The accepted and fresh message of REMOVE, DRAIN, DRY has been well received by the public. Additionally, a host of mainly aquatic plants were added to the injurious species list to further prevent some of the most harmful plants in trade from establishing in Illinois. A multi-state effort in Calumet Harbor, supported by a Mutual Aid Agreement developed with support from the Council of Great Lakes Governors (CGLG), was a success with no Eurasian Ruffe detected. **Contact:** Kevin Irons, IL DNR, 217-557-0719, kevin.iron@illinois.gov.

INDIANA: Indiana DNR continues to utilize state and federal funding, including Great Lakes Restoration Initiative funding, to understand and stop Asian carp movements and combat a variety of invasive plants. This is the eighth consecutive year of sonar treatment to eradicate Hydrilla at Lake Manitou, and the first year no plants have been located. Funding acquisition, engineering, permitting and planning efforts to permanently sever the watershed connection that occurs during floods at Eagle Marsh continue to move forward. The project involves replacing the currently deteriorating berm along the Graham-McCulloch Ditch with an earthen berm to permanently remove this invasive pathway. In an effort led by Illinois and Indiana DNR, crews from many state and federal agencies were deployed on Chicago's Calumet Harbor on May 28. Partnerships and varied resources through a new CGLG Mutual Aid Agreement are being used to gather information on the presence of Eurasian Ruffe in the Indiana/Illinois waters within Calumet Harbor. **Contact:** Eric Fischer, IN DNR, 317-234-3883, efischer@dnr.in.gov.

MICHIGAN: Michigan's AIS State Management Plan was revised and approved by the Aquatic Nuisance Species (ANS) Task Force in 2013. An inter-departmental Response Plan for AIS in Michigan was finalized in February 2014. The response plan will be tested during mock exercises planned for 2014, and any actual responses, as necessary. Michigan completed an Asian carp response exercise on the St. Joseph River in September 2013 and is currently working with Ohio to plan a response exercise in Lake Erie in September 2014. Responses to manage infestations of Parrot Feather, European Frog-bit and other priority aquatic plants are ongoing. Over 1,500 lbs. of European Frog-bit was removed by hand from two locations in 2013. Education and outreach efforts continue to increase with a collaborative public service announcement with Minnesota and Wisconsin, spots on *Michigan Out of Doors TV*, a mobile boat wash unit, and a "Landing Blitz" in June 2014, to raise awareness about preventing the spread of AIS through recreational boating. **Contact:** Sarah LeSage, MI Department of Environmental Quality, 517-284-5472, lesages@michigan.gov.

MINNESOTA: The Minnesota DNR applauded the passage of the Water Resources Reform and Development Act in 2014 that will lead to the closure of the St. Anthony Falls lock on the Mississippi River in Minneapolis. This will prevent invasive carp species from swimming upstream beyond this barrier and reduce the likelihood that these carp will invade the upper reaches of the Mississippi River. State legislation was also passed to provide additional funding to counties' efforts in AIS prevention. A total of \$4.5 million in 2014 and \$10 million in future years will be allocated among Minnesota's counties, based on a formula. The DNR continues to work with local government units and tribes to provide watercraft inspection training around the state. The MN DNR's enforcement efforts have also been enhanced by the 2013 addition of dogs trained to detect zebra mussels. **Contact:** Heidi Wolf, MN DNR, 651-259-5152, Heidi.Wolf@state.mn.us.

NEW YORK: Work continues on updating the state's 1993 ANS Plan, which is expected to be released for public comment in 2014. The Department of Environmental Conservation (DEC) is finalizing invasive species regulations released in draft form for public comment. Boat launch regulations for state lands now require boaters to clean and drain equipment. A new white paper is available, titled *Boat Inspection and Decontamination for Aquatic Invasive Species Prevention: Recommendations for the Adirondack Region*. The Lake George Park Commission finalized their *Lake George Aquatic Invasive Species Prevention Plan and Generic Environmental Impact Statement*. A mandatory boat inspection program is being implemented this season. Initial findings for Northern Snakehead surveillance in Catlin Creek using environmental DNA technology were negative. All eight Partnerships for Regional Invasive Species Management now have fully funded coordinators. A Hydrilla rapid response workshop was held in the Adirondack region. A Statewide invasive species awareness week was held July 6-12, 2014. **Contact:** David Adams, NY DEC, 518-402-9149, djadams@gw.dec.state.ny.us.

OHIO: Monitoring work continues for Asian carp in the Ohio River and Lake Erie watersheds, including an assessment of the recent collection of naturally produced Grass Carp in Lake Erie. Ohio is developing closure options at four GLMRIS connections that were identified by the U.S. Army Corps of Engineers.

Ohio continues to work with several partners to combat Phragmites and Hydrilla in the Lake Erie basin. The Ohio Asian Carp Tactical Plan was completed and the state is currently working to develop a Rapid Response Plan. Work continues with the U.S. Fish and Wildlife Service (FWS) and the Ohio River Fisheries Management Team on an Ohio River Asian Carp Action Plan. Ohio Sea Grant, Ohio State University Extension and the Ohio DNR divisions of Watercraft and Wildlife have collaborated to post "Stop Aquatic Hitchhikers" signs at state-owned boat launches throughout Ohio. **Contact:** John Navarro, OH DNR Division of Wildlife, 614-265-6346, john.navarro@dnr.state.oh.us.

ONTARIO: The Ontario Ministry of Natural Resources and Forestry (MNRF) continues to deliver a variety of AIS outreach, early detection and control programs in the province. An example of a key MNRF initiative includes launching the Early Detection and Distribution Mapping System for Ontario (EDDMapS) in partnership with the Ontario Federation of Anglers and Hunters (OFAH) and Invasive Species Centre. EDDMapS provides invasive species reporting tools to the public both online as well as through a smartphone app (www.eddmaps.org/ontario). MNRF is also conducting Asian carp surveillance in the Canadian waters of the Great Lakes in coordination with Fisheries and Oceans Canada. No Asian carp have been detected in Ontario waters in 2014. Other MNRF initiatives include an eradication program for European Water Chestnut in the Ottawa River at Voyageur Provincial Park and a partnership with Ducks Unlimited Canada to control this plant at Wolfe Island in Lake Ontario. MNRF is also working with partners including the OFAH, Trent University and Parks Canada to develop a control/eradication strategy for water soldier in the Trent Severn Waterway. **Contact:** Francine MacDonald, ON MNR, 705-755-5136, francine.macdonald@ontario.ca.

PENNSYLVANIA: Non-native Rusty Crayfish (*Orconectes rusticus*) were collected in the Pennsylvania waters of Lake Erie and were verified by Dave Lieb of the Pennsylvania Fish and Boat Commission. What appear to be White River Crayfish (*Procambarus acutus*) have also been collected, but have yet to be verified. Pennsylvania Sea Grant has published the *Pennsylvania Field Guide to Aquatic Invasive Species* covering over 60 species of plants, fish, invertebrates, pathogens, algae and reptiles. **Contact:** Jim Grazio, PA Department of Environmental Protection, 814-217-9636, jagrazio@pa.gov.

QUÉBEC: Last March, the Ministère des Forêts, de la Faune et des Parcs (MFFP), joined the Asian Carp Regional Coordinating Committee (ACRCC). This reinforces the province's actions in the fight against these invasive species. A scientific committee on Asian carp was also formed within the MFFP. This committee's priorities are to identify and characterize the Québec regions that are most at risk of invasion and to create action and rapid response plans. **Contact:** Isabelle Desjardins, QC MFFP, 418-627-8694 x7461, Isabelle.Desjardins@mrnf.gouv.qc.ca.

WISCONSIN: Wisconsin is involved in a number of coordination and collaboration activities, and encourages collaboration among neighboring states and various agencies. Because many of the pathways for the movement and spread of AIS go between states, it is important for states to work together to close them down. Wisconsin, Michigan and Minnesota produced a public service announcement that alerted boaters to the importance of AIS prevention steps. Illinois, Indiana and other states completed a rapid response exercise to practice monitoring and communication skills. All of the Great Lake states have applied to the U.S. FWS for a grant to develop an early detection and rapid response plan. States or individuals that have ideas for projects are encouraged to enlist a neighboring state to help broaden the impact of the effort. **Contact:** Bob Wakeman, WI DNR, 262-574-2149, robert.wakeman@wisconsin.gov.

Great Lakes Panel Update

The spring 2014 meeting of the Great Lakes Panel on ANS was held in April in South Bend, Ind., at the University of Notre Dame. The meeting featured sessions on next steps for preventing AIS movement through the Chicago waterways, as well as advancements in surveillance methods, early detection and rapid response. The fall Great Lakes Panel meeting is scheduled for Nov. 19-20, 2014, and will be held in Ann Arbor, Mich. Meeting information is available online at www.glc.org/projects/invasive/panel. **Contact:** Erika Jensen, Great Lakes Panel Coordinator, Great Lakes Commission, 734-971-9135, ejensen@glc.org.

ANS Task Force Update

The ANS Task Force published final Voluntary Guidelines for Recreation, Water Gardening and Classrooms in the Federal Register in June. The guidelines are available online at www.anstaskforce.gov/documents.php. The fall task force meeting will be held November 5-6, 2014, in Falls Church, Va. Meeting information is available at www.anstaskforce.gov. **Contact:** Laura Norcutt, Acting ANS Task Force Executive Secretary, U.S. Fish and Wildlife Service, 703-358-2398, Laura_Norcutt@fws.gov.