

Great Lakes Panel Member Updates Spring 2015

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Federal

U.S. EPA

EPA Awards 15 Great Lakes Restoration Initiative Grants Totaling Over \$8 Million to Combat Invasive Species

The U.S. Environmental Protection Agency today announced the award of 15 Great Lakes Restoration Initiative grants totaling more than \$8 million for projects to combat invasive species in the Great Lakes basin. "These Great Lakes Restoration Initiative grants will be used to target aquatic and terrestrial invasive species in the Great Lakes basin," said Region 5 Administrator/ Great Lakes National Program Manager Susan Hedman. "The projects will also help to prevent the introduction of new invasive species that pose significant risks to the Great Lakes ecosystem." Since 2010, EPA has funded more than 80 GLRI projects totaling over \$50 million to combat invasive species. The latest EPA invasive species grant recipients are:

- Illinois Department of Natural Resources (\$999,725) will work with partners (Forest Preserves of Cook County, Chicago Park District, Illinois Nature Preserve Commission and The Nature Conservancy) to control invasive plants in the Millennium Reserve which is located along the southeastern shore of Lake Michigan. Twelve sites -- totaling almost 300 acres of wetlands, prairies and savannas -- will be restored. The project will also provide work experience through the city's Greencorps program.
- Bay-Lake Regional Planning Commission (\$999,648) will work with public and private landowners to remove at least 1,500 acres of phragmites along the shores of Green Bay on Lake Michigan. The project will identify and prioritize removal sites and provide training to landowners on methods to control phragmites.
- Upper Peninsula Resource Conservation and Development Council (\$964,922) will collaborate with local and regional partners to restore 800 acres of coastal shoreline and wetlands in Michigan's Upper Peninsula (in the Lake Michigan, Lake Huron, and Lake Superior watersheds) by treating invasive phragmites. The council will also train local groups to detect new infestations and assume stewardship for long-term control efforts.
- Milwaukee County Department of Parks, Recreation and Culture (\$635,000) will collaborate with the Milwaukee Conservation Leadership Corps/Student Conservation Association, the Great Lakes Community Conservation Corps, the Alliance for the Great Lakes and the University of Wisconsin Sea Grant Institute to remove plant invasive species from 32 ecologically diverse natural areas encompassing 1,300 acres of critical wildlife habitat in the Lake Michigan basin. The project will also provide educational opportunities for students in grades 6-12 and for college students.
- Lorain County, Ohio, (\$634,889) will implement a project to control at least 30 acres of invasive plant species (particularly phragmites) and to restore habitat in the Black River Watershed and two smaller tributaries to Lake Erie. About 10 seasonal employees will be hired for this project through the Black River Civilian Conservation Corps.
- Wayne County Department of Public Services (\$634,756) and partners which include a student conservation corps will implement an integrated pest management program for invasive species along the Rouge River and on county property in the Detroit River watershed. The project will control phragmites, Eurasian milfoil, buckthorn, garlic mustard and other invasive species on 250 acres in the Lake Erie basin.
- The Nature Conservancy (\$622,594) will deploy work crews to eliminate invasive species (including phragmites, Japanese stiltgrass, glossy buckthorn and wild carrot) from about 400 acres of priority lands in Michigan's Oak Openings Region and Ohio's western Lake Erie watershed. Removing invasive species from this globally rare ecosystem will benefit plants, animals and natural communities.
- Cuyahoga River Community Planning Organization (\$534,230) will work with the Crooked River Cooperative Weed Management Area Partnership to identify and remove invasive plants (including phragmites, cattails, purple loosestrife, Japanese stiltgrass and hydrilla) from about 1,800 acres in the Cuyahoga River watershed, which drains into Lake Erie. A regional team will work with local partners to improve public awareness of invasive plants in this watershed.
- Paul Smith's College of Arts and Sciences (\$491,090) and the Lake Ontario Headwaters Integrated Control Program will coordinate activities in western Adirondack Park to protect the headwaters of Lake Ontario from aquatic invasive species.

Teams will remove invasive plants from 200 acres along four Adirondack waterways. In addition, five boat launch sites will be staffed with boat inspectors.

- Wisconsin Tribal Conservation Advisory Council (\$472,920) will use a conservation corps model to control numerous invasive plant species at several sites, spanning about 640 acres over 100 river miles in the Lake Michigan and Lake Superior basins. The project also provides education to tribal youths and adults on preventing the spread of invasive species.
- The Nature Conservancy (\$364,630) will work with private landowners in the Lake Erie basin to control invasive plants on 500 acres of land adjacent to the Grand River and its tributaries (including wetlands). This project will control invasive species such as phragmites and Japanese knotweed, and will create five seasonal jobs.
- The Nature Conservancy (\$254,517) will provide assistance to private landowners in the western Lake Erie basin to manage invasive plant species on their property. This project will promote the transition from government's wide-scale approach to treating and controlling invasive species to an approach that is landowner-led and property-based.
- Friends of the Cedarburg Bog (\$197,119) will implement a project to control buckthorn in over 600 acres of the Cedarburg Bog near Milwaukee. The bog is an example of the high-quality wetland communities -- once common to the southern Lake Michigan watershed -- which are now threatened by a growing population of invasive glossy buckthorn.
- Alger Conservation District (\$187,462) will use chemical, biological and manual methods to control invasive species (including purple loosestrife, Japanese knotweed and garlic mustard) on 130 acres of land in the central portion of Michigan's Upper Peninsula in the Lake Michigan and the Lake Superior basins. The project will also provide outreach to landowners on long-term strategies to control invasive species.
- West Michigan Shoreline Regional Development Commission (\$153,314) and local partners will implement a project to control phragmites and purple loosestrife on about 50 acres shoreline wetlands near Muskegon Lake and Bear Lake in the Lake Michigan basin. Residents and landowners will also be trained on methods to control invasive plants.

GLRI funding is also used to support efforts to prevent Asian Carp from establishing populations in the Great Lakes. To date, GLRI has contributed \$115 million to the Asian Carp Regional Coordinating Committee and Great Lakes states for this work. For more information about the Great Lakes Restoration Initiative, visit www.glri.us.

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U.S. Coast Guard

Ballast Water Regulation

The Coast Guard published its ballast water discharge standard regulation in the Spring of 2012. It adopts the IMO standard and will require the installation of type-approved BW management systems on "salties". The use of approved ballast water management methods are required on those new ships constructed after 1 DEC 2013 and will be implemented on existing ships during the vessel's first scheduled drydock after 2014 or 2016 depending on the vessel's BW tank capacity. Initially, these requirements will not apply to Lakers but after additional analysis and development of more capable BW treatment systems, the Coast Guard may include more stringent requirements in a future rulemaking.

CG Type Approval

The multi-faceted type approval process consists of land-based and shipboard-based testing (by independent labs) focused on the biological efficacy of the BWMS. For those systems whose performance could be affected by the cold and pure fresh water of the Great Lakes, additional testing may be necessary. Assessment of the BWMS' ability to properly operate in the harsh marine environment is also undertaken and all of the system's components are examined to ensure compliance with marine engineering, electrical, and mechanical standards. This testing and certification is usually conducted by vessel classification societies. The Coast Guard has certified three Independent Labs (IL) that will be involved in the type approval process. Duluth-Superior's Great Ship Initiative is part of a certified IL. There are eight BWMS in the process of type approval testing at these laboratories and another 17 have sent a Letter of Intent stating they will begin testing soon.

Alternate Management Systems (AMS)

Since it will take some time to certify all of the independent labs that will be completing this testing, the Coast Guard has developed an interim program to accept the use of some BWMS that have been type-approved by other flag states. AMS is intended as a bridging strategy to allow for the use of BWMS type-approved by foreign administrations in accordance with the IMO Convention. The AMS must be installed and approved and would be used in lieu of ballast water exchange until full type approval can be obtained, but for a period of no longer than 5 years after the ship was otherwise required to comply with the ballast water discharge

standard. The Coast Guard has issued 53 AMS Determination Acceptance Letters to date including five for fresh water operations.

Ballast Water Working Group (BWWG)

The ballast water working group has completed the 2014 annual report and it is posted on the Ninth Coast Guard District website. In 2014, 100% of vessels bound for the Great Lakes Seaway from outside the Exclusive Economic Zone (EEZ) received ballast management exams on each Seaway transit. All 8,497 ballast tanks, during 454 vessel transits, were assessed; (100% of the ballast tanks on inbound vessels were assessed in 2009-14).

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State/Provincial

Indiana

The Indiana Department of Natural Resources continues its efforts to prevent the spread of AIS species throughout the state of Indiana but especially across the Watershed divide from the Mississippi River basin watershed to the Great Lakes watershed.

One of the greatest threats to the Great Lakes is the potential introduction of Asian Carp beyond the Mississippi river basin and into the Great Lakes. One of the largest accomplishments related to the Early detection and rapid response in regards to prevention of the establishment of Asian carp was started during the construction of an Asian carp prevention fence at the GLIMRIS pathway at Eagle Marsh a collaboration of state, federal, local government, and many others came together to find a permanent solution to the watershed connection at Eagle Marsh. Eagle Marsh in Fort Wayne, Indiana, was determined in 2010 to pose a near term risk for the potential spread of Asian carp into the Great Lakes Basin. In 2010 The Indiana Division of Fish and Wildlife and AIS staff was part of a cross-disciplinary DNR team that was formed to find a temporary solution to block non-native Asian carp from gaining access to the Great Lakes, a large ecological threat. Many state, federal agencies and local partners joined this effort, it was the work of this DNR led team that cut through the regulatory labyrinth to get the "carp fence" designed and built not only ahead of schedule but also under budget. In late 2014 contracting to proceed with the construction of an earthen berm to create a permanent barrier to hydrologic movement was begun. After securing funding for this project and making preparations for wetland mitigation the project will continue to move forward in 2015.

The Indiana DNR in the fall of 2014 wrapped up 2 Asian carp research projects one that was evaluating the critical knowledge gaps about pathogens and diseases including exotic parasites and infectious diseases that might be associated with Asian Carp introductions and furthering the evaluation of their susceptibility to native pathogens and diseases these evaluations and biological collections are ongoing through this winter from Asian Carp located within the upper and middle Wabash River. The Second project funded Asian Carp Telemetry work in the Upper Wabash River – In 2014 we continued the project started in 2011, a total of 300 Asian carp have been outfit with transmitters to categorize their movements in the upper Wabash River and to continue ongoing evaluations of Asian carp use of Little River which is the stream they would use to approach the fence across Eagle Marsh. In 2014 our contractor Purdue University has concluded its multiple year tracking study and has begun to pull together all of the materials and has submitted a final report on the tracking, movement and usage of the Upper Wabash River by Asian Carp.

We have recently finished the 8th year of sonar treatment at Lake Manitou in Rochester, IN working on Hydrilla Eradication – There has been 8 consecutive years of intensive and prolonged Sonar treatment being performed at the 735 acre lake in Fulton Co Indiana. With 20+ plants located during in the 2012 intensive diver survey and having the following season (2013) recording only 4 hydrilla plants in all our surveys which accounts for a 75% reduction in plant discoveries we had high hopes that continued funded had got the state of Indiana close to eradication of this extremely aggressive aquatic invasive plant residing so close to the Great Lakes basin. In 2014 no Hydrilla was located throughout the entire season including the intensive one and a half day diver survey, no hydrilla was located for the first time since the inception of the program. Aggressive treatment with sonar will continue through the 2015 season with continued funding but the funding from State and GLRI funding. (http://www.in.gov/dnr/fishwild/files/fw-1080_Manitou_AVMP_2013_Update_Fulton_County_Feb_2014.pdf). We also continue to fight the spread of EWM and the growth of Starry Stonewort in northeast Indiana. This macro algae especially has proven very difficult to control but we continue to try different chemical prescriptions and are coordinating with universities and plant control companies with hopes of finding better tools that are effective at limiting the growth and success of this invasive aquatic plant. The aggressive and large scale control and eradication efforts have slowed the spread of this aggressive macro alga.

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Michigan

A new grant program was initiated by the Michigan Department of Natural Resources (MDNR) in collaboration with the Departments of Environmental Quality (MDEQ) and Agriculture and Rural Development (MDARD) as part of a new \$5 million state budget appropriation to support an interdepartmental aquatic and terrestrial invasive species program. Aquatic related projects funded include support for regional Cooperative Invasive Species Management Areas; Clean Boats, Clean Waters; 3 projects focused on

integrated approaches for aquatic plant control; data management through the Midwest Invasive Species Information Network; and a public awareness project.

The interdepartmental procedure, Invasive Species Decontamination for Field Operations in Michigan, was finalized to assist state employees in minimizing the risk of transferring invasive species while performing job activities in the field. The 3 Departments are phasing in implementation this field season.

The MDNR Fisheries Division is conducting a research project focused on distribution, reproductive capacity, and origin of grass carp in western Lake Erie. The project includes a partnership with Michigan State University to investigate seasonal habitat use and movement patterns using acoustic transmitters. Fisheries Division is also partnering with Central Michigan University and commercial fishermen to collect and analyze grass carp for ploidy status and determination of origin based on otolith microchemistry. In addition, the project team collected and analyzed water samples for grass carp genetic material to help aid sampling efforts. The Fisheries Division also conducted response activities following information about a positive eDNA detection for silver carp in the Kalamazoo River in October, 2014. Response included assisting USFWS with follow-up eDNA sampling.

Michigan is collaborating with the Great Lakes states, The Nature Conservancy, and other partners on developing an interstate Early Detection and Response Plan. Work has been initiated and the plan is in the early stages of development. The MDNR Wildlife Division will continue to conduct early detection monitoring and response for aquatic plants as well as continue removal efforts for known infestations of European frog-bit, parrot feather, water lettuce and water hyacinth. An extensive infestation of water lettuce and water hyacinth was encountered in a tributary to Lake Erie in fall 2014; additional assessments will continue in 2015. The MDEQ water resources Division continues to incorporate AIS monitoring into routine field work and evaluate methods for targeted AIS surveys in inland lakes and other waters.

The MDARD and MDNR's Law Enforcement Division are continuing inspections and education efforts for wholesale/retail bait dealers, plant nurseries, and the pet industry. A second AIS "Landing Blitz" is planned for June/July 2015, to raise awareness about preventing the spread of AIS through recreational boating (based on Wisconsin's annual Blitz). Novel communications efforts aimed at broadening invasive species messaging to new audiences are planned for 2015.

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Minnesota

- In 2014, no AIS not previously found in the state were detected in Minnesota waters. Brazilian waterweed (*Egeria densa*) was found in one lake in Minnesota in 2007, but the Minneapolis Park and Recreation Board and the Minnesota Department of Natural Resources (MNDNR) partnered to extirpate the invasive plant. The lake was no longer considered infested with *E. densa* as of 2014.
- The MNDNR treated an early infestation of zebra mussels in Christmas Lake with Zequanox®, copper sulfate and potash in an attempt to prevent the spread of this invasive species. The MNDNR also partnered on a zebra mussel control effort in Lake Independence. This spring, MNDNR and partner staff will conduct follow-up surveys and analyze monitoring data to determine whether the treatments were successful at eradicating the newly-found zebra mussel populations.
- In addition, the DNR issued 265 permits and 207 grants for \$660,000 to support management of invasive aquatic plants by partners in 2014.
- Pursuant to the Water Resources Reform and Development Act passed in 2014, the Upper St. Anthony Falls lock on the Mississippi River in Minneapolis will be closed on June 10, 2015. In 2014, silver and bighead carp were confirmed in Pool 2 of the Mississippi River, the furthest upstream that these species have been found. The University of Minnesota has installed an acoustic system at Lock and Dam 8 on the Mississippi River to discourage passage of invasive carp.
- The MNDNR sampled water left in watercraft after the watercraft had been drained to better understand the risk of moving zebra mussel larvae (veligers) in "residual water." MNDNR staff will take additional samples in 2015.
- The MNDNR hired two new planners to help counties develop prevention plans detailing how the counties will use newly available funding to prevent the spread of AIS. The MNDNR will also add several new AIS trainers to support the Minnesota counties that are receiving AIS prevention aid money.
- More than 1,000 lake service provider businesses completed AIS prevention training and were issued permits in 2014. The training program has been in effect since 2012. In 2013, businesses offering decontamination services were added to the

definition of lake service provider, so in 2014, the MNDNR offered two hot-water/high-pressure decontamination skills training sessions to 23 participants.

- The MNDNR continues to work with local government units and tribes to provide watercraft inspection training around the state: in 2014, the MNDNR provided watercraft inspection training to 363 tribal and local government unit (LGU) authorized inspectors working throughout the state.
- In April 2015, the MNDNR reclassified water hyacinth (*Eichhornia crassipes*) as a regulated invasive plant species in the state; it was listed as a prohibited invasive species in 2014.

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New York

The New York Invasive Species Advisory Committee (25 NGOs) met on March 31 and the Council (9 agencies) met on January 29. An updated NY State Aquatic AIS Plan was released for a 45 day public comment period beginning late October 2014. Public comments are currently being reviewed and the Plan edited. The Department finalized invasive species regulations establishing a list of prohibited and regulated invasive species, which became effective March 10, 2015. New DEC and OPRHP boat launch regulations were finalized in summer and fall of 2014 respectively, which require boaters utilizing state managed launches to clean their boats and equipment prior to launch and on retrieval. DEC staff are developing statewide regulations defining “reasonable precautions” boaters shall take before launching watercraft or floating docks into public waters and expect to finalize these by fall 2015. During the 2014 boating season a mandatory trailered boat inspection and decontamination program was implemented on Lake George. An expanded boat steward and decontamination pilot program will be implemented in the Adirondack Park region during the 2015 field season. Hydrilla management continues at the Cayuga Lake Inlet and Tonawanda Creek/Erie Canal. A statewide invasive species public awareness poll has been conducted by the Cornell University Human Dimensions Unit. The second annual statewide invasive species awareness week will be held July 12-18, 2015.

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Ohio

- Continued control efforts of Phragmites and Hydrilla in the Lake Erie basin. Continued to monitor for Bighead and Silver carp in Lake Erie and the Muskingum River using eDNA, routine sampling activities, and telemetry.
- Continued surveillance for grass carp to determine if diploid (fertile) fish were present in the wild. Continue to investigate closure options for the four Great Lakes Mississippi River Interbasin Study connections in Ohio at Little Killbuck Creek, Ohio Erie Canal, Grand Lake St Marys, and Mosquito Creek Lake. The USACE has completed their initial assessment of the Ohio Erie Canal connection and will move towards final design for closure. We have consultants conducting preliminary closure designs at Little Killbuck Creek and Mosquito Creek. The initial assessment for closure options at Grand Lake St Marys is complete.
- Initiated an inspection program to determine if AIS, including Bighead and Silver Carp, are being transported through the bait trade. Also, initiated an AIS outreach campaign through Wildlife Forever to target anglers moving bait. This outreach program will include billboards, print media, and items for distribution at events.
- Participated in the following groups: Council of Great Lakes Governors, Mississippi River Basin Panel, Great Lakes Panel, Aquatic Nuisance Species Task Force, Ohio Aquatic Invasive Species Committee, Great Lakes Water Quality Agreement Annex Six, Grass Carp Binational Committee, Chicago Area Waterway System Advisory Committee, Asian Carp Regional Coordinating Committee, and the Ohio Aquatic Invasive Species Committee.

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Pennsylvania

Pennsylvania’s AIS Rapid Response plan was adopted by the PA Invasive Species Council in September 2014. Recent AIS responses include an enforcement action related to live Asian carp in a pay-to-fish lake in southwestern PA and an ongoing response to the discovery of Round Goby in a northwestern PA Lake that lies in the French Creek (Allegheny River) watershed. A multi-agency meeting will be held on 30 April 2015 related to the discovery of *Hydrilla* in Conneaut Lake in northwestern PA/northeastern OH and response actions continue related to the discovery of Water Chestnut on state game lands property in Warren County. The Council is also in the process of reviewing PA’s broader Invasive Species Management Plan for 5-year renewal and is coordinating mock AIS responses are planned for this summer. PA Sea Grant is in the process of developing an AIS field guide for the mid-Atlantic region.

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Wisconsin

Wisconsin has initiated a strategic planning effort to update its 11 year old ANS Management Plan. Relying upon other plans and the input from key stakeholders Wisconsin hopes to have a final draft completed by the end of 2015. Wisconsin will host the spring joint meeting of the Great Lakes Panel and the Mississippi River Basin Panel of the ANS Task Force in Madison. Wisconsin (Badgers) are in the final four (NCAA)...Go Bucky!!

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Regional/Binational

Great Lakes Commission

Asian Carp

The GLC is working in partnership with the Great Lakes and St. Lawrence Cities Initiative (Cities Initiative) to investigate solutions to the threat of Asian carp and other invasive species passing through the Chicago Area Waterways System (CAWS), while maintaining current uses of the system. The GLC and Cities Initiative are continuing to convene meetings of an Advisory Committee as the primary regional stakeholder forum seeking solutions to the problem of AIS transfer through the CAWS. The Committee last met on April 9 and will meet again on June 3 in Chicago.

Internet Trade

Work is underway on a grant from the Great Lakes Restoration Initiative to develop software and tools to track, identify and monitor the sale of invasive species via the internet. The GLC hired the software development firm RightBrain Networks to develop the web-crawling software system. The final system is complete and in the initial stages of operation.

Ballast Water

The GLC convened a Ballast Water Task Force to assess current ballast water standards and develop a common platform among Great Lakes states and provinces from which to advance a future ballast water management regime. The GLC is tracking activity on U.S. legislation, S. 373, the Vessel Incidental Discharge Act, that would impact state authority to regulate ballast water.

Phragmites

The GLC continues to expand a partnership with the USGS-Great Lakes Science Center to lead communications and research on the invasive plant Phragmites. The Great Lakes Phragmites Collaborative, established in 2012, continues to engage the resource management community, reduce redundancy, link science and management, facilitate adaptive management, and encourage a systems approach to management and conservation associated with this species. The GLC also supports the Collaborative for Microbial Symbiosis and Phragmites Management, established in partnership with the USGS to bring together researchers to explore the potential to use symbiotic relationships both to control invasive Phragmites and encourage native plant establishment.

Zebra and Quagga Mussels

The GLC is providing backbone support to a new collaborative to advance development of control technologies for invasive mussels. The collaborative was established in partnership with USGS, the Great Lakes Fishery Commission and NOAA. The Collaborative Steering Committee was established in early 2015 and met for the first time in February. More information is available at www.invasivemusselcollaborative.net.

Sea Lamprey

The GLC recently completed work in partnership with the Great Lakes Fishery Commission to develop a sea lamprey barrier mapping tool. The tool allows the user to search and select barriers in the Great Lakes region to see what tributaries and watersheds are being protected from sea lamprey movement by those barriers in order to inform future decision-making.

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At-Large

Minnesota Sea Grant

The Great Lakes Sea Grant Network (GLSGN) is leading the region's first multi-media campaign aimed to raise awareness and change behaviors to prevent the spread of AIS. Led by Minnesota, it helps to protect water resources from the spread of AIS by promoting, in collaboration with partners, Stop Aquatic Hitchhikers!™, Nab the Aquatic Invader, Habitattitude!™, and AIS-HACCP. Funded by the Great Lakes Restoration Initiative, efforts by the GLSGN and its partners generated 21.2 million exposures since 2010. Efforts featured 375 talks and 100 education tools produced, which serve as models for use elsewhere in the U.S. Three hundred booths hosted at boat shows and other events educated nearly 270,000 people. Social and mass media generated 17.5 million impressions.

Over 106,500 teachers and students learned about AIS through Nab the Aquatic Invader! training workshops, events, and website. Through partnerships and buy-ins on print runs, \$135,868 was saved. Promotion of the campaign communicates simple and consistent messages that avoids duplication of effort, and promotes guidelines that foster sustained preventative actions by watercraft users, consumers, educators and students. Since 2006, 1.7 billion impressions were generated by campaign partners. GLSGN efforts were supported by 500 partners. Post event surveys showed that exposure to Stop Aquatic Hitchhikers! raised awareness among 70% of respondents and 90-100% indicated they would likely take actions to prevent the spread of AIS. A vast majority of visitors at booth & events pledged to take actions in the future to prevent AIS spread.

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National Wildlife Federation

- Continue to participate on the Chicago Area Waterways System (CAWS) Advisory Committee tasked with developing a short term and long term list of recommendations around efforts to prevent the two-way transfer of AIS/Asian carp through the CAWS;
- Worked with Congressional staff on legislation to reduce the risk of AIS and Asian Carp in the Chicago region (Brandon Road Lock/Dam);
- Help leading a coalition of ENGO's in Minnesota in implementing the final steps in closing the Upper St. Anthony Falls Lock/Dam (as an effort to reduce the risk of Asian carp moving further north above the lock along the Mississippi River)

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Ontario Federation of Anglers and Hunters

Since December the Invading Species Awareness Program has been wrapping up 2014/2015 fiscal year projects and gearing up for the 2015 field season. Highlights include:

Water Soldier Management Project

The ISAP has been working with the Ministry of Natural Resources and Forestry to update the Integrated Management Plan for water soldier originally drafted in 2013. Updates focused on including information gathered from the 2014 field season experience. In October of 2014 approximately 50ha of water soldier was treated with Diquat (Reward). A five year targeted management strategy is included in the IMP. In 2015 the ISAP will be piloting new control techniques previously not used tested to control water soldier. The pilot will include a diver assisted suction harvesting (DASH) project and the use of a mechanical harvester. Information from the pilot will be used to inform current plans in the 5 year control strategy. Surveillance and post treatment monitoring for water soldier in the Trent Severn Waterway will begin in May.

Boater Outreach Strategy

In the fall of 2014 the ISAP began the development of a strategy document for targeted outreach to the recreational pathway. The strategy was developed using information obtained through a literature review, Ontario survey data, and survey data from other jurisdictions in the Great Lakes Basin. The strategy breaks up the recreational boating pathway into individual groups (anglers, tournament anglers, canoeists, pleasure craft boaters etc.) to take a targeted communications approach to each group in addition assessing the risk with each group. This information will be used to target those high risk groups, as well as groups most likely to change boating behavior when reached through education and outreach. While the strategy has not yet been completed, The ISAP has used the information to begin a targeted recreational boating campaign coined as the "two minute campaign". The two minute campaign seeks to focus the outreach on the bare minimum approach for boat decontamination and frame the outreach on the ease of decontamination.

Tournament Outreach Project

Working with the MNRF the ISAP will also be implementing a pilot project targeting competitive tournament anglers which have been identified as a very high risk boating group through the Boating Outreach Strategy. The outreach will be conducted utilizing a mobile boat washing unit previous purchased for past outreach projects. ISAP staff will partner with smaller club level tournament organizers to attend angling tournaments and provide boat washing demonstrations for the participating anglers. The goal of the pilot is to educate tournament anglers on the importance of proper boat decontamination, the easiness of the decontamination, and to create ambassadors for the CLEAN / DRAIN / DRY messaging through the contacted anglers.

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Saint Lawrence Seaway Development Corporation

In February, the Great Lakes Seaway Ballast Water Working Group (BWWG) released its report summarizing Great Lakes Seaway ballast water management for 2014. The report examines outcomes of the joint U.S. – Canada Great Lakes Seaway System ballast

water ship inspection program. The BWWG consists of the Saint Lawrence Seaway Development Corporation, the St. Lawrence Seaway Management Corporation, Transport Canada – Marine Safety & Security, and the U.S. Coast Guard. The group's mission is to harmonize ballast water management efforts among the group members. The Great Lakes are protected by the strictest ballast water management enforcement regime in the world, as it requires that every ballast tank of every incoming international vessel be inspected. In 2014, 99 percent of all international vessels entering the Seaway were in compliance with Seaway regulations requiring that water in ballast tanks be at least 30 ppt saltwater. Compliance has remained high over the past two years after steadily increasing: 2014 (99%), 2013 (99%), 2012 (98%), 2011 (97%), and 2010 (94%). During 2014, 100 percent of the ships bound for the Great Lakes from outside the EEZ received a ballast tank exam. Vessels that had not conducted a ballast water exchange or flush were required to either retain the ballast water and residuals on board, treat the ballast water in an environmentally sound and approved manner, or return to sea to conduct a ballast water exchange. Since this joint enforcement regime started (2006) there have not been any reports of new invasive species attributed to ballast water discharge in the Great Lakes. For more information and a link to the full report, please go to: <http://www.d9.uscgnews.com/go/doc/4007/2458846/>

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