Great Lakes Panel on Aquatic Nuisance Species

Panel Member Updates

June 2008

Federal

U.S. Coast Guard: The Coast Guard continues to actively enforce current ballast water regulations through the Joint Ballast Water Management Exam Program. Along with our partners: Transport Canada, the St. Lawrence Seaway Management Corporation, and the St. Lawrence Seaway Development Corporation, we work to harmonize our efforts to eliminate AIS introduction through ballast water into the Great Lakes system. Our 2007 Summary of Great Lakes Ballast Water Management Exams was released in May 2008 and can be viewed at http://piersystem.com/posted/443/Final_2007GL_Ballast_Water_Management_Report.204139.pdf.

The Ninth Coast Guard District hosted a Ballast Water Management Plans and Aquatic Invasive Species Workshop in January 2008 to review current intra-lake vessel ballast water management practices and investigate improvement opportunities with respect to preventing the spread of Aquatic Invasive Species and pathogens, particularly Viral Hemorrhagic Septicemia (VHS), within the Great Lakes once a new species or outbreak has been identified. Since the completion of the workshop, the Ninth Coast Guard District has engaged in discussions with the Great Lakes Fishery Commission and expressed a desire to receive and communicate reports of large scale fish kills on the Great Lakes. Additionally, the Ninth Coast Guard District will notify the Council of the Lake Committees of any fish kills reported to the U.S. Coast Guard or detected by the U.S. Coast Guard. The U.S. Coast, due to its lake-wide presence and communication capabilities, will lead the notification process through its contacts within the maritime industry, the Local and Broadcast Notice to Mariners system.

Additionally, the Lake Carriers' Association, in coordination with the Shipping Federation of Canada and United States Great Lakes Shipping Association, developed and released on April 7, 2008 the Supplemental Voluntary Ballast Water Management Plan (BMP) for the Control of VHS, 2008 Edition. The press release, LCA's 2007 BMP for VHS, and LCA's 2008 supplemental BMP for VHS, can be found at: http://www.lcaships.com. **Contact:** CDR Timothy Cummins, 216-902-6049, Timothy.M.Cummins@uscg.mil.

National Oceanic and Atmospheric Administration: The Great Lakes Aquatic Nonindigenous Species Information System (GLANSIS) was activated on the NOAA-GLERL website in January 2008. A poster (~36 x 48 inches) exhibiting pictures of approximately 140 of the 185 species presently listed in GLANSIS was prepared in collaboration with the U.S. Fish and Wildlife Service and is available on-line via the GLANSIS home page: http://www.glerl.noaa.gov/res/Programs/ncrais/glansis.html.

NOAA organized a session titled “Dreissenids in North America: Twenty Years of Consequences.” at the IAGLR (International Association for Great Lakes Research) 51st Conference on Great Lakes Research held in May at Trent University in Peterborough, Ontario. The session provided several overviews of the significant changes in U.S. national policy, invasion biology/ecology, and outreach, education, and community involvement that followed the invasion.

As part of a program studying harmful algal bloom occurrences in the Great Lakes, NOAA is conducting an assessment of the distribution of *Cylindrospermopsis raciborskii*, a potentially toxic nonindigenous blue-green alga. In recent years it has been found in western Lake Erie and some additional inland Michigan lakes. Some strains of this species are capable of producing several toxins that are a threat to

human and animal health. Benthic populations were or are being assessed in Lake Huron (2007), southern Lake Michigan (fall 2008), Saginaw Bay (spring, summer, and fall, 2008) and Lake Ontario to assess the depth distribution and coverage of dreissenids and their benthic community impacts.

NOAA sponsored a workshop "Predicting Impacts of Invasive Species on Lake Michigan Food Webs" June 3-4 in Chicago Illinois. Scientists and funding agencies identified specific research questions, data gaps, and time and space considerations for research to begin in 2010 on invasive species impacts on food webs in Lake Michigan. The workshop was an activity associated with the Great Lakes Regional Research Information Network (GLRRIN). NOAA will be co-sponsor of the 16th International Conference on Aquatic Invasive Species (ICAIS), to be held in Montreal, Canada, April 19-23, 2009. Abstracts are due by August 1, 2008. More information can be found at http://www.icais.org/. **Contact:** David Reid, 734-741-2019, david.reid@noaa.gov.

U.S. Army Corps of Engineers: The U.S. Army Corps of Engineers (Corps) continues to be engaged in two aquatic nuisance species control programs in the Great Lakes Basin. The Sea Lamprey Barrier Program is authorized by Section 1135 of the Water Resources Development Act and carried out in partnership with the Great Lakes Fishery Commission. The lamprey barrier planned for the Galien River in Michigan has been terminated due to real estate issues. The Corps anticipates beginning construction of a barrier on Trail Creek in Michigan City, Indiana within the next 18 months. Work has begun on a feasibility phase study for a barrier on the Manistique River in Michigan.

The second major activity is the continuing effort to provide an effective barrier on the Chicago Sanitary and Ship Canal (CSSC) to prevent the movement of invasive species between the Mississippi River and Great Lakes basins. The demonstration barrier (Barrier I) remains in continuous operation. Recent evaluations indicate no decline in performance. However, due to its age the Corps is planning a maintenance shutdown in Summer 2008 to replace some barrier components. During this shutdown, the first half of the second barrier (Barrier IIA) will be operated continuously. Barrier IIA will be turned off again after Barrier I is back on line, as IIA is still undergoing safety evaluations. Additional field safety tests at IIA were completed in partnership with the U.S. Coast Guard in April 2008 and test results are under review. The second half of Barrier II (Barrier IIB) is under design. Some aspects of the originally planned Barrier IIB design are being revised based on lessons learned from Barrier IIA. The intent is to operate the demonstration barrier until all of Barrier II is operational, and then upgrade the demonstration barrier to permanent status as funding allows. A recent study indicates the effect of the barrier electric fields on a person immersed in the electrified water could result in serious injury or death. The Corps and Coast Guard have initiated a public education campaign to inform boaters how to safely transit the barriers. **Contact:** Jim Galloway, 313-226-6760, jim.e.galloway@usace.army.mil.

State/Provincial

Illinois: The Illinois DNR recently conducted an herbicide treatment of Mermet Lake (Massac County) intended to control curlyleaf pondweed in the lake. Mermet Lake attracts thousands of waterfowl annually and has been one of the best fishing destinations in southern Illinois; controlling curlyleaf pondweed is of utmost importance at this site to prevent its spread into other lakes and wetlands in southern Illinois, including the Cache River and Cache River Wetlands. **Contact:** Pat Charlebois, 847-872-0140, charlebo@uiuc.edu.

Indiana: The Lake Manitou hydrilla Sonar treatment began in the middle of May. Due to the cool spring, hydrilla tubers just began sprouting at the time of the initial treatment. Spring tuber sampling proved difficult to find hydrilla tubers. This is further reinforcement that the 2007 treatment reduced the tuber bank by approximately 86%. Sonar will be maintained at between 3-6 ppb through the middle of October. Aquatic plants known to occur in trade are being evaluated to determine their risk should they be released

into Indiana waters. A slightly modified version of the New Zealand Aquatic Weed Risk Assessment is being used. A survey is being conducted to determine the level of awareness of AIS and steps boaters and anglers take to prevent the spread. The electronic survey should go out by the middle of June. A report of the findings is expected in August. **Contact:** Doug Keller, 317-234-3883, dkeller@dnr.in.gov.

Michigan: The Michigan Department of Environmental Quality (MDEQ) Office of the Great Lakes sponsored a stakeholder meeting March 5 entitled, *Michigan's Call to Action on Aquatic Invasive Species* to discuss the economic and environmental challenges facing the state of Michigan in regards to AIS. This meeting brought together more than 80 stakeholders with a vested interest and/or concern for AIS prevention and control in the Great Lakes and Michigan waters including environmental organizations, affected industry, riparians, anglers, boaters, resource managers, researchers, and other interested individuals. Participants were asked to recommend needed actions in areas of funding; early detection and monitoring; rapid response; and education and outreach. Discussions and recommendations will be summarized and will provide the foundation for the update of the state AIS management plan. See http://michigan.gov/deqaquaticinvasives for more information. Ninety-four permits have been issued to oceangoing vessels representing 37 different companies under Michigan's ballast water law, which requires a permit for port operations. **Contact:** Emily Finnell, 517-241-7927, finnelle@michigan.gov.

Minnesota: In fall 2007, zebra mussels were found in a chain of four lakes in the Twin Cities metro area, likely spread due to water pumped from the Mississippi River. Brazilian elodea was found in a Minneapolis lake, likely the result of an aquarium dumping. In response, the infestation was treated with an herbicide. New populations of spiny waterfleas were discovered in waters along the Minnesota-Canadian border. DNR enforcement responded to the discovery of truck, carrying pumping equipment with 5-10,000 zebra mussels attached, in transit from a reservoir in Vermont to North Dakota.

In April, the DNR hired 9 new conservation officers who will spend half their time enforcing Minnesota's invasive species laws. DNR hired three new aquatic invasive species specialists (six total statewide) to implement prevention and management strategies. The Watercraft Inspection Program hired 75 inspectors for the 2008 field season, compared to the 50 inspectors in 2007. Total inspection hours are expected to be ~36,000 in 2008, a 50% increase from 2007.

By September 30th, the Minnesota Pollution Control Agency (MPCA) plans to issue a permit for oceangoing and Great Lakes-only ships discharging ballast water into Lake Superior that includes ballast water treatment and management practices necessary to protect Minnesota's water resources. Stakeholder meetings were held in March and April. Meeting presentations, draft permit language, and other information related to permit development are available at: http://www.pca.state.mn.us/programs/ballastwater.html.

The state legislature passed legislation consistent with the MPCA's plans for the ballast water permit. A bill providing DNR with more authority to deal with VHS is being considered by the state legislature. The DNR produced a new VHS brochure. The DNR's annual report on invasive species for calendar year 2007 is available at: http://files.dnr.state.mn.us/eco/invasives/annualreport.pdf. **Contact:** Luke Skinner, MN DNR, 651-259-5140, luke.skinner@dnr.state.mn.us; or Mary Jean Fenske, MPCA, 651-297-5472, maryjean.fenske@state.mn.us.

New York: In December of 2007, the New York State Department of Environmental Conservation (DEC) established an Office of Invasive Species Coordination within the Office of Natural Resources. In recent years, the potential harm caused by invasive plants, animals and pathogens has gained increasing awareness and understanding by all sectors of society. In order to prepare New York State for the many ecological, economic and human health threats posed by the ever-increasing list of invasive organisms, an Invasive Species Task Force was created in 2003. In its 2005 report to the Governor and Legislature, among it principal recommendations was the need to have a single, permanent body within New York

State government to coordinate the activities of State agencies but also those of non-government organizations, industry, academia and other stakeholders. The Office of Invasive Species Coordination will provide that service. The creation of the Office will help State agencies meet the requirements of new invasive species legislation. The 2008 legislation adds a new Title 17 to Environmental Conservation Law Article 9 (Lands and Forests) and creates a 9-agency Invasive Species Council supported by a non-governmental Invasive Species Advisory Committee. The Council is co-chaired by DEC and the Department of Agriculture and Markets.

The new legislation requires the continued implementation of the original Task Force recommendations and includes additional tasks, such as developing lists to identify non-native species that require additional regulation and those that are safe to sell, buy and use. The Office will lead an open and inclusive effort to engage all stakeholders. Other components of a comprehensive program for managing invasive species threats that are in process include: a locational database (GIS) to track the whereabouts of all invasives in and near New York; a web-based information clearinghouse to serve as the "library" for the biology and management of invasives; an institute to coordinate research needs and priorities; eight regional, "grass roots" partnerships (PRISMs) to prevent and manage invasives; a grants program to eradicate both aquatic and terrestrial invasive populations on a local scale; and non-regulatory efforts by industries to minimize invasions. The Office will lead State agencies in a review of programs and practices to help prevent the spread of invasive species and to enable and encourage restoration of native species wherever practical. Because New York State cannot prevent invasions by itself, Office staff will try to influence national and international efforts, including legislation and funding.

The Office of Invasive Species Coordination will not provide all of the resources needed by the Department or other State agencies to effectively manage the invasive species threat. Another task required by Title 17 is the completion of an invasive species management plan. This comprehensive plan will identify existing authorities and resources and assist the Council in identifying needs. The Council will have the ultimate responsibility for securing the powers and resources needed by New York State. **Contact:** David Adams, 518-402-9149, djadams@gw.dec.state.ny.us.

Ohio: The Ohio Department of Natural Resources Division of Wildlife will hold its first AIS Committee meeting on April 30th, 2008. Items to be discussed include the committee's mission, relevant issues, the revision of Ohio's State Management Plan for AIS, and the development of a Rapid Response Plan (RRP) for Ohio. Duane Chapman (USGS) presented the Asian Carp Story to nearly 1000 people at the March 12th Wildlife Diversity Conference in Columbus, Ohio. Following a tip from the USFWS, the Division of Wildlife eradicated diploid grass carp from a golf course pond. Fifty percent of the fish were recovered and legal action is pending against the wholesaler in Texas. ODNR also assisted several local groups with the control of invasive plants along Lake Erie. **Contact:** John Navarro, ODNR Division of Wildlife, 614-265-6346, john.navarro@dnr.state.oh.us.

Ontario: In fall 2007, mandatory HACCP training occurred for licensed bait harvesters, who are required to complete an Ontario Ministry of Natural Resources (OMNR) approved HACCP plan to receive their license. Effective Jan. 2008, commercial bait dealers face the same requirement. In collaboration with Quebec, OMNR, the Ontario Federation of Anglers and Hunters (OFAH) and others are planning a water chestnut monitoring and removal program in the Ottawa River. Ontario Fishery Regulations changes restrict emptying contents of a bait bucket within 30m of a water body and place restrictions on angler use of rusty crayfish. A comprehensive AIS field guide is being distributed to field staff across Ontario. A companion workshop series will be launched this summer to facilitate reporting of AIS. OFAH and OMNR coordinated a workshop in May related to the potential of barriers to limit fish dispersal. In June OMNR will launch an online map-based database of AIS sightings throughout Ontario. The new tool allows users to search and download information about one or more AIS seen in a particular lake or in a defined geographic region and view/print a map. A school program that fits with grade 6 science

curriculums will be launched in September; the grade 4 program Making Waves was a great success in 2007. **Contact:** Beth Brownson, 705-755-1950, beth.brownson@mnr.gov.on.ca.

Pennsylvania: The AIS Workgroup of the Pennsylvania Invasive Species Council (PISC) has been working actively in the areas of developing an AIS Rapid Response Plan, developing a list of priority AIS in the Commonwealth, conducting outreach, and working to secure funding for Council operations. The Council is currently interviewing candidates for the newly created position of PISC Coordinator. Pennsylvania Sea Grant hosted a Lower Great Lakes Ballast Water Management Workshop in March 2008, published a training video and manual for volunteers participating in the state zebra and quagga mussel monitoring network and produced four new AIS fact sheets. Additional training for volunteer monitors was conducted in May 2008. Presque Isle Bay, PA, will be again be a node in the Great Lakes *Hemimysis* Monitoring Network this summer. In partnership with USEPA, PADEP is planning a mock AIS Rapid Response exercise to be conducted this summer. **Contact:** Jim Grazio, PADEP, 814-217-9636, jagrazio@state.pa.us.

Quebec: The *Ministère du Développement durable, de l'Environnement et des Parcs* (MDDEP) is working on an action plan to fight invasive species. The ministry is also developing a database on invasive species that will be linked to the NatureServe Network. The Government of Québec is also working on its invasive species watch list and black list. Didymo monitoring and communication programs, as well as the water chestnut and VHS monitoring programs, will continue this summer. To date, no case of VHS has been detected in Québec's waters. An Eurasian watermilfoil biocontrol pilot-project will continue this summer for the fourth year in lake "*Supérieur*", near Mont-Tremblant Park. **Contact:** Isabelle Simard, 418 521-3907 #4417, isabelle.simard@mddep.gouv.qc.ca.

Regional/Binational

Council of Great Lakes Governors: On November 8, 2007, Chair Governor Jim Doyle sent letters on behalf of the Council to each Presidential candidate. Governor Doyle asked the candidates to outline their vision for the Great Lakes; specifically, whether they endorse the Great Lakes Regional Collaboration's Restoration and Protection Strategy; and, if so, to articulate their implementation plan. On November 21, Governor Doyle wrote on behalf of the Council to the U.S. Fish and Wildlife Service to commend the listing of black carp as an injurious species under the Lacey Act and to request that all forms of Asian carp be listed.

On February 25, 2008, Governor Doyle communicated through a letter to Congress the Council's near-term priorities for FFY09 including the passage of comprehensive invasive species legislation and completion of the carp barrier in the Chicago Sanitary and Ship Canal. Governor Doyle applauded the Congressional authorization and appropriation of barrier funds in FFY08.

On April 18, Secretary Matt Frank of the Wisconsin Department of Natural Resources testified on behalf of the Council before the U.S. House Transportation and Infrastructure Subcommittee on Water Resources and Environment regarding Great Lakes water levels and the Governors' invasive species recommendations. **Contact:** Lisa Wojnarowski, 312/407-0177, lwojnarowski@cglg.org.

Canadian Federal

Transport Canada, Department of Fisheries and Oceans: DFO Science, in partnership with SERC (NBIC), is conducting a study to examine the risk of AIS introduction and/or spread by ballast water of domestic commercial vessels ('Lakers'). An analysis of vessel transits over a three year period, including volumes of ballast water discharged, is expected to be completed by fall 2008. A complementary study on

the biological communities transported in domestic vessels will follow in 2009. DFO Science is conducting further evaluation of the 4-agency ballast water inspection program. A formal report is expected in late 2008, but results to date indicate that the intensive inspection efforts since 2005 have resulted in excellent rates of compliance and a corresponding reduction in the risk of AIS introductions by foreign ballast water.

DFO and Ontario Ministry of Natural Resources (OMNR) have continued their beneficial collaboration in terms of aquatic invasive species risk assessment, research, monitoring and education. DFO's Centre of Expertise for Aquatic Risk Assessment (CEARA) completed three risk assessment projects of interest to the Great Lakes; Chinese mitten crab, spiny-rayed fishes (west of the Rockies, but a problem in Ontario), and *Hemimysis anomala* (bloody-red shrimp) in Canadian freshwaters (focus on Great Lakes). CEARA and OMNR are continuing their collaboration on data collection for the risk assessment of freshwater fish pathways (bait, aquarium, water garden and live food). The DFO-CEARA and Canada Border Services Agency (CBSA) project aimed at inputting one year's worth of live fish import invoices (currently available in hard copy only) into an electronic database for the aquarium, water garden and live food risk assessments has been completed, and the data analyses have begun. In June 2008, an international workshop to complete the national standard for conducting biological risk assessments for aquatic invasive species will be held.

Other projects: Develop a population ecology-based model to predict the probability of establishment of AIS as well as development of ecological invader guides to predict impacts of potential invaders and to identify areas vulnerable to invasion in the Great Lakes. To that end, OMNR, with input from DFO finalized a field guide for Ontario's current and potential AIS.

Monitoring the current distribution of *Hemimysis anomala* in the Great Lakes by various Canadian (federal/provincial) and American agencies is ongoing and collaborative in nature. DFO's sampling in lakes Ontario, Erie, Huron and Michigan, as well as in the Detroit and St. Clair rivers, in summer 2007 added another 4 locations to the previously known locations invaded by Hemimysis.

The focus for DFO's 2008 lower trophic level AIS monitoring (including *Hemimysis anomala*) is to detect presence/absence in Lake Huron. Sampling will also be undertaken in locations where *Hemimysis* is known to occur such as Lake Erie & Hamilton Harbour to obtain abundance estimates. Higher trophic level monitoring will focus on Hamilton Harbour, Great lakes tributaries to detect upstream spread of round gobies and locks on the Trent Severn system as a pathway for AIS spread. A small project will be conducted to investigate whether an established population of the invasive snail Corbicula has spread to similar habitats in the vicinity.

A monitoring and outreach project for AIS with respect to recreational boating was conducted all summer in north western Ontario. This project aimed to increase awareness of recreational boat users and anglers on AIS, and direct them to the live bait end user survey.

The end user surveys for people using live bait, aquarium and water garden species has been strongly supported and promoted by OMNR and Ontario Federation of Anglers and Hunters (OFAH) through consumer trade shows and a direct mailing to licensed anglers. Completed surveys are continuing to arrive, increasing the availability of data that will be used by DFO-CEARA to conduct a relative risk analysis of these trades. **Contact:** Chris Wiley, 519-383-1525, Chris.Wiley@dfo-mpo.gc.ca.

University/Research

Illinois-Indiana Sea Grant (IISG): IISG hosted an Asian carp "Clean and Cook" demonstration at the Bass Pro in Bolingbrook, IL. At this event, Duane Chapman (USGS) demonstrated filleting techniques and Bass Pro fried samples of bighead and silver carp; reaction of those tasting the Asian carp were very

positive, however many declined tasting the samples because they were "carp." There were also booths staffed by US Coast Guard/US Army Corps of Engineers and the Illinois Natural History Survey. As a result of the event, IISG will produce fact sheets with information on 1) protection oneself when plying Asian carp-infested waters, 2) how to harvest and clean Asian carp, and 3) how to cook Asian carp.

IISG conducted a survey of water gardeners at the Indianapolis Flower and Patio Show, which will be used to inform future outreach efforts for this audience in both states. IISG also hosted the Great Lakes Regional Research Information Network - Lake Michigan team's "Predicting Impacts of Invasive Species on Lake Michigan Food Webs" workshop, June 3-4, 2008 in Chicago, IL. At this workshop scientists and funding agencies will engage in a facilitated dialog that is designed to identify specific research questions, data gaps, and time and space considerations needed to conduct research investigating the invasive species impacts on food webs in Lake Michigan beginning in the 2010 field season.

Finally, IISG arranged for an "Outreach" section on Asiancarp.org. We encourage all who have done or are doing outreach on Asian carp to submit their outreach tools for inclusion on the website (David_Britton@fws.gov) to increase the efficacy and efficiency of our collective outreach. **Contact:** Pat Charlebois, 847-872-0140, charlebo@uiuc.edu.

Minnesota Sea Grant: Sea Grant released a new pocket guide, *A Field Guide to Fish Invaders of the Great Lakes Region*, which compares invasive fish to native look-a-likes to accompany AIS-HACCP training workshops and materials. Sea Grant co-sponsored 16th Annual River Quest, a ship-board educational experience for Duluth area youth in May. A booth featuring “Get Habitattude!” reached over 830 6th graders from eight schools.

Lake Superior Days, an annual celebration promoted by the Lake Superior Binational Program, will feature events in the Duluth-Superior and North Shore communities. Local conservation and environmental groups, Sea Grant, Minnesota DNR, U.S. Coast Guard Auxiliary are planning events. Stop Aquatic Hitchhikers! campaign efforts will link with the “Clean Boats Everyday” initiative promoted by the Council of Great Lakes Governor to extend prevention messages to boaters and anglers and information about ballast water and other water quality issues. In March, a symposium, “Predicting Invasive Potential of Exotic Species," was hosted by the University of Minnesota.

The Minnesota Invasive Species Conference 2008 will be hosted by the Minnesota Invasive Species Advisory Council, October 26-29, Duluth Entertainment Convention Center, Duluth, MN. Co-chaired by the University of Minnesota Sea Grant Program and the Minnesota Chapter of the Soil and Water Conservation Society, this first annual statewide conference will bring together experts to improve management of terrestrial and aquatic invasive species. Presentations by experts will cover new and innovative research, management, outreach and technological developments related to ecology and impacts, prevention and containment, early detection and rapid response, control and management, and eradication and restoration. A special ballast water symposium is planned. Several preconference non-technical and technical workshops and training sessions will be offered. Plenary and technical sessions will be held October 27-28. A trade show of business products and services, educational exhibits, and posters will be held throughout the conference. Pre- and post-conference tours and attractions will also be offered. Visit www.minnesotaswcs.org. **Contact:** Doug Jensen, 218-726-8712, djensen1@umn.edu.

Cooperative Institute for Limnology and Ecosystems Research (CILER): CILER will be receiving an award through the Department of Fisheries and Oceans, Canada to extend its current research efforts on the use of brine as an alternative treatment for NOBOB vessels that have not performed adequate mid-ocean exchange. The work is an extension of an ongoing collaboration between DFO, Transport Canada and NOAA-GLERL. Our main activities for this project will be to develop in-tank instrumentation to help evaluate the application of ship-based, brine treatment experiments. Specifically our goal is to help understand the timing, spatial distributions, and effective concentrations of the added brine throughout the

treated ballast tanks. We hope to conduct experiments on 5-7 ships during the next year. **Contact:** Tom Johengen, 734-741-2203, johengen@umich.edu.

At-Large

Maritime Administration: The Maritime Administration continues to work with the Northeast-Midwest Institute with the Great Ships Initiative (GSI). We are trying to determine the most expedient and contractually allowable method of providing funds to augment the shoreside test facility, which is located in Superior, WI. We have a five-year Cooperative Agreement and hope to continue our collaboration. Ms. Cangelosi of GSI met with the Chief Scientist (Dr. Tamburri) involved with our Baltimore AIS research effort, and we are determining a way forward for sharing resources and talent. The goal is to use the same methodologies so that the facilities provide consistent data.

The Maritime Administration also strives to work together rather than in competition with other organizations. The Baltimore effort is sponsored by the Maryland DOT via the Port of Baltimore. We would like to marry up all ports involved with ballast water research and have a constructive dialog on the direction certain projects should proceed.

Challenges the Maritime Administration are related to funding and information. The Maritime Administration is in the process of attempting to obtain NOAA funds to modify a barge to become a mobile test platform in the Chesapeake Bay. The Maritime Administration is also working on ISO standards for ballast water sampling ports/apparatus as well as standards for handling samples once they are obtained. **Contact:** Doris Bautch, 847-995-0122, doris.bautch@dot.gov.

North Central Regional Aquaculture Center: Since the last meeting of the Panel in November 2007 the North Central Regional Aquaculture Center (NCRAC) along with two other of the USDA Cooperative State Research, Education, and Extension Service's (CSREES) five Regional Aquaculture Centers (RAC) have approved several projects pertaining to viral hemorrhagic septicemia (VHS). One funded by the Western RAC has already begun whereas another which will be funded by the Northeastern RAC is pending approval from CSREES. The NCRAC VHS project will soon be submitted to CSREES for approval which if given, the project will begin September 1, 2008. NCRAC's Associate Director (Joe Morris at Iowa State University) is developing a new Web site to be known as the National Aquaculture Biosecurity Clearinghouse (NABC) whose initial focus will be on VHS-related issues. The purpose of the NABC is to provide a Web portal whereby all interested parties can locate information about ongoing or completed research and extension projects related to VHS.

A VHS Educational Alliance was formed in March 2008 to advise and direct USDA Animal and Plant Health Inspection Services' (APHIS) VHS education and outreach campaign. APHIS had been appropriated $300,000 by the U.S. Congress for Fiscal Year 2008 for this campaign. Members of the Alliance in alphabetical order are Ted Batterson (NCRAC/Michigan State University), Paul Bowser (Cornell University), Glenda Dvorak (Iowa State University Center for Food Security and Public Health), Gary Fornshell (University of Idaho Extension), Andy Goodwin (University of Arkansas at Pine Bluff Aquaculture/Fisheries Center of Excellence), Jeff Gunderson (Minnesota Sea Grant), Myron Kebus (Wisconsin Department of Agriculture, Trade, and Consumer Protection), Ron Kinnunen (Michigan Sea Grant), Dave MacNeil (New York Sea Grant), Joe Morris (NCRAC/Iowa State University), Geoff Wallat (Ohio State University South Center at Piketon's Ohio Center for Aquaculture Research and Development), Jim Winton (USGS Western Fisheries Research Center, Seattle, Washington), and Gary Whelan (Michigan Department of Natural Resources Fish Division). Batterson serves as the facilitator for the Alliance and Goodwin and MacNeil are the co-leaders. On May 29, 2008 APHIS, based on input from the Alliance, announced how they would be expending the $300,000 FY 2008 funds and at the same time also mentioned how they would be continuing this campaign in FY 2009.

Batterson was invited in January 2008 to serve on the Advisory Committee for a newly funded Great Lakes Protection Fund planning grant that had been awarded to the Great Lakes Commission. The title of the Commission's project is Building a Framework to Advance Aquatic Nuisance Species Management of Organisms in Trade in the Great Lakes Region. Batterson also serves on the Aquaculture Pathway Team, one of several pathway teams of the Commission's Organisms in Trade (OIT) project. **Contact:** Ted Batterson, 517-353-1962, batters2@msu.edu.

Ontario Federation of Anglers and Hunters: The Ontario Federation of Anglers and Hunters (OFAH), in partnership with the Ontario Ministry of Natural Resources (OMNR) hosted a workshop entitled *Invasive Fish: Barriers to Prevent their Dispersal in Great Lakes tributaries* at the International Association for Great Lakes Research Conference in May. The workshop featured speakers from across North America, and initiated discussions within Ontario regarding opportunities and challenges with the implementation of a variety of barrier types to impede the spread of invasive fish. 3,000 new AIS prevention boat launch signs were produced in partnership with Federation of Ontario Cottagers' Associations, Environment Canada, OMNR and the Ontario Marina Operators Associations. Partners will work together this summer to post these signs at launch sites across the province. OFAH is also working with community partners across the province this summer to post eleven permanent billboards (10' x 20') billboards in major recreational boating and cottage areas. Planned locations include Kenora/Fort Frances, Manitoulin, Sault Ste. Marie, Parry Sound, Peterborough, Ottawa, and Lake Simcoe. Summer programs will include 15 summer students working across the province to implement invasive species prevention and monitoring activities at the community level with local partners. Finally, OFAH hosted a training session for 30 conservation summer staff across the province working for over 15 organizations and government agencies to train them on invasive species prevention and outreach activities. **Contact:** Francine MacDonald, 705-748-6324, francinem@ofah.org.