

# Meeting of the Great Lakes Panel on Aquatic Nuisance Species

May 17-18, 2011  
Milwaukee, Wisconsin

## **Meeting Summary**

Final Draft: October 4, 2011

Tuesday, May 17, 2011

### **Welcoming Remarks and Call to Order**

*Phil Moy, Great Lakes Panel (GLP) Chair, Wisconsin Sea Grant*

Moy led roll call confirming that a quorum was present. He welcomed meeting attendees and reviewed the agenda, which was approved with no changes.

### **Great Lakes Panel Report**

- GLP Chair's Report  
*Phil Moy*

Moy reviewed decision and action items from the spring 2011 Aquatic Nuisance Species Task Force (ANSTF) meeting that took place earlier in the month in Little Rock, AR. The ANSTF will put together an ad-hoc committee to update the ANSTF Strategic Plan and propose methods to track accomplishments; volunteers from the GLP to serve on the committee were solicited. Other ANSTF initiatives include developing an Annual Awards Program and working on industry Best Management Practices (BMPs) for water gardeners and other plant/animal trade groups. The ANSTF is also pulling together an ad hoc committee to revise the recreational activities guidelines, separately from the BMPs effort, and is looking for panel members to serve on this committee. The ANSTF will be provided with the GLP's work to date on the water gardening and recreational user guidelines. The GLP will be provided an opportunity to review approve recommendations developed by the ANSTF ad hoc committee. Following the report on ANSTF activities, Moy brought to the floor the meeting summary from the December 2010 GLP meeting. The summary was approved by the GLP with no changes.

- Report on action items from fall 2010 meeting  
*Kathe Glassner-Shwayder, GLP Coordinator, Great Lakes Commission (GLC)*

Glassner-Shwayder reported on work that has been done on the action items from the December 2010 meeting. First, in response to discussions from that meeting, the GLP is looking more in depth at monitoring and the organisms in trade issues. Glassner-Shwayder mentioned that the GLP wants to be product-oriented and take action on the discussions that take place at meetings. Rapid response planning was also discussed at the December meeting; in follow-up, the GLC submitted a proposal for Great Lakes Restoration Initiative (GLRI) grant program to hold a workshop for multijurisdictional rapid response. In addition, the Information/Education (I/E) committee has been focused on preparing the recreational user guidelines for submission to the ANSTF. The Policy Coordination Committee is in process of refining a position statement on pre-import screening. It was suggested that the GLP submit a recommendation to the ANSTF instead of a position statement, as this was more appropriate to the role of the GLP. Also noted was that the document could be both a position statement and a recommendation, depending on how it is written.

### **Monitoring and Reporting Initiatives**

*Moderator: Luke Skinner, GLP Vice Chair, Minnesota Dept. of Natural Resources (MN DNR)*

Skinner opened the session, remarking on the importance of citizen monitoring programs and the need to ensure collected data can be shared among states. He also noted the potential for the GLP to have a coordinative role on monitoring.

- Citizen Monitoring Programs: Wisconsin  
*Scott Van Egeren, Wisconsin Dept. of Natural Resources (WDNR)*

Van Egeren provided background information on Wisconsin's long history of water quality monitoring, built upon partnerships among scientists, educators and citizens. Currently, the state's approach for AIS monitoring is to

“train the trainer,” which involves training regional WDNR staff, non-governmental organization (NGO) staff, and lake association leaders on holding of citizen-training workshops. Van Egeren spoke about the importance of monitoring for a mix of species, including those that are established and those that are “on the doorstep,” in order to maintain volunteer interest. He outlined the differences between casual observers and trained monitors. Trained monitors are more technically- based, following standard monitoring protocols and entering data into a statewide database. Van Egeren discussed the strengths and shortcomings of using citizens for monitoring, noting that the state is confident that early infestations are being detected. An important strength noted for citizen monitoring is the resulting increase in AIS awareness. The WDNR’s goals for improvement include expanding coverage of citizen monitoring in the state, increasing consistency of sampling techniques (e.g., protocols) among volunteers, and improving online data entry and retrieval, including absence data. Van Egeren clarified that the online Wisconsin database is used by all citizens to access information on water quality and AIS, and that the state accesses the information for uses such as containment planning or targeted treatment.

There was further discussion on the link between Wisconsin’s database and regional and national databases such as the Great Lakes Aquatic Nonindigenous Species Information System (GLANSIS) and the U.S. Geological Survey’s (USGS) NAS database. It was noted that Wisconsin data is uploaded into GLANSIS once yearly, and GLANSIS automatically feeds into the USGS NAS database. Region-wide, these linkages vary and communication among databases could be improved. There was also discussion on national coordination for state-level monitoring protocols and approaches. While there have been attempts to coordinate, and there are national databases, overall coordination is lacking. A goal of the GLRI is creating an early detection network, and moving funds to the states to implement these monitoring programs help towards achieving this goal.

- Citizen Monitoring Programs: Minnesota  
*Luke Skinner, MN DNR*

Skinner gave an overview of Minnesota’s history of citizen monitoring programs; their zebra mussel monitoring program is the longest-running effort and covers 150-200 lakes annually. Citizen monitoring networks have been established with public education programs focused on zebra mussel, purple loosestrife, and Eurasian water milfoil. He described a new program with formalized training workshops targeting lake groups. The goal of the new program is not just to develop a distribution map, but also to support early detection efforts. Skinner said that the state encourages casual monitoring in addition to focused monitoring (utilizing training guidelines standardized recording and reporting, Geographic Information System (GIS) maps, technical equipment, etc.). It was noted, however, that monitoring efforts are mostly casual. The database of monitoring results can be used by the public to help people make good decisions about their recreational activities. The data is also used to enhance planning by state staff. Skinner said that goals for improving the monitoring network include formalizing the process to increase consistency, expanding monitoring statewide and applying monitoring data for a purpose. Skinner clarified that the MN DNR does have plans in place for rapid response. The state has recently implemented specific action plans which designate lakes for regulations based on the level of infestation and the specific species. He also said that Minnesota coordinates with Wisconsin on shared rivers, but there is not much coordinated monitoring on lakes.

- IJC Report: Assessment of Great Lakes AIS Monitoring and Risk Assessment Programs  
*Mark Burrows and Samantha Dupre, International Joint Commission (IJC)*

Burrows said that AIS is a priority issue area for the IJC. He described the current project, the goal of which is to assist the IJC workgroup on binational AIS rapid response by conducting an analysis of all U.S. and Canadian early detection and risk assessment efforts in the Great Lakes region. The project seeks to identify elevated risk areas (e.g., ports of elevated risk, invasion hotspots, and urban areas at high risk); active and passive monitoring programs; and create a basin wide map of these features. Dupre provided a preview of initial maps for elevated risk areas and monitoring programs for each jurisdiction. Burrows clarified that the information gathered for the project would inform workgroup activities, including a jurisdictional analysis on assembling pilot rapid response plan for the Huron-Erie Corridor. He also confirmed that the map would be accessible online when it is completed.

- Update on Great Lakes Aquatic Nuisance Species Information System (GLANSIS)  
*Rochelle Sturtevant, National Oceanic and Atmospheric Administration*

Sturtevant began with mentioning that GLANSIS is a node of the Nonindigenous Aquatic Species (NAS) USGS database, and the commitment to utilizing these databases to track AIS. Outlined were several GLRI-funded enhancements to GLANSIS. These include the addition of range expansion species, development of a high

priority watch list of species, updated and consistent impact information, the addition of non-technical fact sheets for priority species of public interest, and the addition of management information for all species in the database. She went into some detail on the watch list, which is a synthesis of existing literature identifying the species most likely to become introduced and established in the Great Lakes. The list is approximately half invertebrates, and about 75% of species are associated with the ballast water vector. Sturtevant emphasized that this doesn't necessarily mean that ballast water as the highest risk vector, but instead is likely a reflection of the amount of research done on this pathway. She also described the enhanced impact assessments on GLANSIS, which utilize a series of questions on potential impacts and benefits. Sturtevant clarified that the management section of the species factsheets will report current management methods in use for the species, not recommendations or guidelines. There was also discussion on socioeconomic impact assessments; Sturtevant said that these questions were focused on negative impacts, whereas positive socioeconomic impacts (such as those from introduced salmon) were incorporated into the benefits section. She also clarified that the watch list is intended to be a living document, allowing for future opportunities to add species. Also noted was the role for the GLP to coordinate among the states on database management.

### **Pre-import Screening**

*Moderator: Jen Nalbone, Great Lakes United*

- Broken Screens Report: Current status of live organisms in trade and pending legislation on screening live animals in trade  
*Peter Jenkins, Center for Invasive Species Prevention*

Jenkins opened his presentation with the impacts of importation, emphasizing that this is an intentional pathway which is conceptually easiest to fix. He discussed regulatory gaps for importation of plants and described a current attempt to reform these regulations by the U.S. Department of Agriculture (USDA). He also spoke about the statutory gap in regulating the import of non-native wildlife, which is the focus of the 2007 *Broken Screens* report by the Defenders of Wildlife. As a result, species (e.g., red lion fish, Burmese python, and starling) are being introduced into the country through trade sources and causing significant human health and ecological impacts. It was noted that the Lacey Act is not working effectively to protect against these impacts and the need exists for new authority to prevent high risk species from being imported. A solution to these issues is being proposed through a new bill that is expected to be introduced to the Senate that would require pre-import screening of all novel non-native wildlife. The bill is sponsored by Sen. Bill Nelson of Florida, and would strengthen regulations on animal importation. The bill will include exemptions for domesticated pets and farm animals, and will provide immediate administrative relief for Lacey Act listings, which now average four years. Also proposed in the bill is the requirement of importer user fees, a portion of which would be directed to the states to conduct risk assessment work.

There was discussion on specific elements of the Nelson bill, including the issue of burden of proof. Even with the reforms proposed in the bill, the burden of proof would remain with the U.S. Fish and Wildlife Service (USFWS). However, after five years, the burden of proof would be shifted to importers for new species. There was also discussion on whether states could petition to have species listed under the Lacey Act; Jenkins clarified that anyone can petition to list a species, and under emergency designation, the USFWS must respond to a governor's request. It was also clarified that the Nelson bill would not preempt state regulations; states will have the ability to be more restrictive than the federal rules.

- Fish and Wildlife Service Current Regulatory and Non-regulatory Approaches to Managing Risk of Imported Animals and Possible Course Changes  
*Mike Hoff, U.S. Fish and Wildlife Service*

Hoff discussed the need for a balance between regulatory and non-regulatory approaches to managing the risk of imported species. He went on to state that the goal of the USFWS is to prevent significant impacts while preserving the economic benefits of importation. Hoff provided background on the Lacey Act and said that its injurious wildlife provisions are not capable of meeting today's global change challenges. He described the 2009 charge from Dept. of Interior Secretary Ken Salazar, which directed the USFWS to convene a "tiger team" of experts to conduct a review of existing legal and regulatory authorities to address invasive species on larger scale. The USFWS was also asked to make recommendations to update the Lacey Act to "the 21<sup>st</sup> century." Hoff said the team is evaluating what has changed since the Lacey Act was enacted, and is exploring risk assessment tools. Hoff also described the USFWS's GLRI support work to conduct rapid risk screening; this funding is also supporting a University of Notre Dame-The Nature Conservancy risk assessment project. Hoff was asked to provide additional detail on the rapid screening process, which is a trait-based rapid risk

assessment that evaluates history of invasiveness, climate match, and several other factors using a variety of existing resources. The overall goal is to predict the next high risk invader using this scientific assessment process.

There was some uncertainty voiced in regards to whether rapid screening would be considered credible for implementing the Lacey Act. In addition, Hoff clarified that the audience for the screening reports is other federal agencies and the states. The reports will be made available when they have been peer-reviewed and finalized. He said that the screening found that about 10 percent of species represent low risk, and others are of unacceptable risk to certain regions of the U.S. For some species there is a high degree of uncertainty and detailed risk assessment approaches may be needed to draw conclusions.

### **Pre-import Screening, continued**

*Moderator: Mike Murray, GLP Policy Coordination Committee Chair, National Wildlife Federation*

- GLRI Project: Preventing Invasions from Trade in Live Aquatic Organisms  
*Lindsay Chadderton, The Nature Conservancy*

Chadderton first explained the overarching goal of the project, which is to facilitate the removal of AIS from trade by adopting consistent regulations at state and federal levels. The project seeks to fill knowledge gaps by developing scientifically defensible risk assessment tools. Once the tools are developed, the project team will assess a range of aquatic species in trade in the Great Lakes basin, including plants, mollusks and fish, among others. Results will be communicated to policy-makers, trade leaders and other stakeholders. Consultation with a Management Transition Board throughout the project will ensure that outcomes are relevant and usable for state and federal agencies. Preliminary tests of the risk assessment tools suggest that they are promising for regional and national use, with a 96 percent cumulative accuracy in classification. In providing outreach on project outcomes, a website will be established to host information on risk assessment tools, as well as conducting training workshops on use of the tools.

There was discussion on the accuracy of predictors for invasiveness being used for rapid risk assessments at the federal level, such as climate matching and history of invasiveness. It was emphasized that more detailed risk assessments are needed in some cases and that the GLRI project can provide value in this area.

- USDA APHIS Plants for Planting Import Requirements  
*Ingrid Berlanger, U. S. Department of Agriculture (USDA), Animal and Plant Inspection Service (APHIS) (presentation by WebEx)*

Berlanger gave a presentation on a specific nursery stock regulation, known as "Quarantine 37," based on authority from the Plant Protection Act. This regulation allows for plants to be imported to the U.S. unless specifically prohibited. She reviewed the risks associated with importation, such as the huge volume of trade, difficulties in inspections and establishing origin, as well as risks from pests. There are several rulemaking initiatives underway that will enhance protections to agriculture and the environment against these risks. This includes an effort to create a new Quarantine 37 import category of "Not Authorized Pending Pest Risk Analysis (NAPPRA)." Berlanger reported that a final regulatory decision is pending and expected soon, and public input will be sought to add or remove plants and pests from the NAPPRA list. She also reviewed the criteria to add plants and pests to the list. Another proposed rulemaking would modify controlled import permits to rename it the "departmental permit;" establish five risk categories; promote transparency and consistency; and address intended use of imports. Berlanger then described a third initiative that will establish an integrated pest risk management measures program for off-shore risk management. In discussion, Berlanger clarified that the Quarantine 37 rule will likely be released in the next several weeks, and that although there is an initial 60-day comment period on the proposed NAPPRA list, species can be proposed at any time. She said that updated lists would be published periodically. Berlanger also said that the criteria for invasive risk potential would be made available for public comment. This process will address only new species proposed for importation and does not address those species already imported and widespread.

- Industry perspectives  
*Marshall Meyers, Pet Industry Joint Advisory Council (PIJAC)*

Meyers emphasized that PIJAC supports a combination of regulatory (e.g., pre-import screening, the Lacey Act) and non-regulatory (education and outreach, best management practices (BMPs)) approaches to prevent invasions resulting from the trade in live organisms. He spoke about the history of the issue and reviewed

principles for effective regulations and education, suggesting that it can be easier to educate than regulate. Meyers described the Habitattitude™ campaign, emphasizing that the next step is to move beyond brochures to develop innovative tools. He said that the message to the pet industry and pet owners should be clear, positive and consistent. Messages as part of the proactive campaign focus on choosing good pets and appropriate methods of getting rid of unwanted pets. Meyers also championed a tiered education/outreach approach that targets specific segments of the industry and the public. The importance for a unified approach between government, academia and industry was also noted.

He reported that PIJAC is developing voluntary BMPs for water gardening, which is the fastest growing sector of the aquarium industry. The hope is that these BMPs will serve as a model for other industry-specific BMPs, such as for aquaculture. Meyers also reviewed the PIJAC and U.S. Dept. of Interior Memorandum of Understanding, which took three years to develop but established a framework for increased collaboration on education and public awareness (e.g., how to “re-home” pets and not euthanize). Also noted was the need for more effective regulatory system. In follow-up discussion, he added that PIJAC collaborates with sister organizations in Canada, but that many of the issues are different. There was discussion on how the Habitattitude™ campaign could be improved; Meyers said that messaging needs to move more effectively from the federal level into the field.

- State perspectives  
*Bob Wakeman, Wisconsin Dept. of Natural Resources (WDNR)*  
*Dave Adams, New York State Dept. of Environmental Conservation (NY DEC)*

Wakeman described Wisconsin's process of screening for organisms in trade, which is incorporated into the process for listing species under prohibited and restricted regulatory categories. He reviewed risk assessment elements used to classify a species into these two categories, and the emergency listing process which will add a species for period of up to two years. Wakeman reported that the WDNR submitted a proposal to the GLRI for a project examining the pet industry and quantifying resulting invasive species impacts to the state. Outreach efforts include contacting trade catalogs to ask them to indicate species not permissible in Wisconsin, and working with bait dealers to advocate for awareness of AIS issues and promoting best practices when handling bait. Wakeman said the WDNR is also working with the state Department of Agriculture, Trade & Consumer Protection to notify nursery growers of products that are listed as prohibited or restricted, and reported that these efforts have been well received. He also reported that a state-level council on invasive species was formed to help provide direction to WDNR.

Adams said that New York's work on organisms in trade is being modeled after Wisconsin's efforts. The NY DEC has a socioeconomic assessment process that informs listing, although it is not as developed as the ecological assessment process. Examples of the type of input used in New York's socioeconomic rapid assessment include economic and biological impacts, ecological amplitude, and difficulties in control. Outcomes from the assessment influence regulatory listing of species. New York has also established an advisory committee on the issue and has completed approximately 140 draft plant invasiveness assessments. Adams reported that next steps include consideration of climate change and cultivar issues, and the development of rules and regulations.

### *Questions and Discussion*

There was discussion on how the state-based assessment approaches compare to the process Mike Hoff described, clarifying that the state assessment processes are more detailed. There was also discussion on the role of the Canadian federal and provincial governments on this issue. It was reported that the Canadian federal government takes the lead on risk assessment processes under the Centre for Expertise for Aquatic Risk Assessment, Fisheries and Oceans Canada. Also noted was the regulatory gap for aquatic plants in Canada, as provinces do not have authority to regulate them and the federal government is not taking action. There is no federal law in Canada analogous to the Lacey Act. In Quebec, plans are in place to develop a risk assessment tool as part of an invasive species action plan.

Regarding the GLP's recommendation on pre-import screening, the Policy Coordination Committee Chair, Mike Murray, reviewed the general themes of the draft recommendation, which include recommendations on regulatory and non-regulatory approaches, and addresses issues related to new species and species already established in the United States. The committee is expected to review and finalize the recommendation during their meeting and in the report out to the full GLP. Murray said that committee is planning for asking for GLP approval of the recommendation using electronic communications before the next meeting. If approved, the

recommendation would be submitted to the ANSTF. There was discussion on whether other committees should be involved; Murray said that the committees should feel free to discuss the recommendation and provide feedback. It was clarified that whatever the GLP considers appropriate can be included and not be limited to Great Lakes Regional Collaboration recommendations.

Wednesday, May 18, 2011

### **Asian Carp Initiatives I: Update on Asian Carp Risk Assessment**

*Becky Cudmore, Center for Expertise on Aquatic Risk Assessment (presentation by WebEx)*

Cudmore opened her presentation with background on how the risk assessment was initiated and its objectives, noting that the assessment is a binational initiative conducted by Canada's Center of Expertise on Aquatic Risk Assessment in partnership with the Great Lakes Fishery Commission. To estimate risk, the process combines the likelihood of introduction with the magnitude of the consequences. The risk estimate will have some associated uncertainty, based on the quality and quantity of data available to determine likelihood and magnitude. Cudmore pointed out that managers use the results of risk assessments in decision making based primarily on risk tolerance. Likelihood of introduction includes arrival, survival, establishment, and spread; magnitude of consequences includes ecological and socioeconomic. Cudmore said the risk assessment is binational in scope and seeks to be timely while providing strong advice. She outlined several management concerns that the risk assessment will investigate, such as points of arrival and relative risk, as well as identifying areas where Asian carp would become most abundant. The risk assessment is expected to be complete in February 2012. Efforts focused on gathering information on legal and illegal trade; conducting a bait retail survey in Illinois; and mapping chlorophyll distribution and using computer modeling to provide insight into food availability. In addition, information is being gathered on the water temperature and velocities required for hatching and larval drift, as well as barriers and habitat needs (e.g., wetlands providing habitat for spawning), which will help to assess the suitability of rivers/streams. Bioenergetic models are being used to assess spread (dependent upon food availability) and impacts. A question was asked regarding a dispersal model that showed a specific number of carp reaching Lake Huron from a Chicago entry point within two years. It was explained that the model Cudmore's team is using indicates how many sites the carp will likely infest within a given period of time, not how many carp. The model does not currently take ecological characteristics into account although there is more information to be added.

### **Celebrating the 20th Anniversary of the Great Lakes Panel: Looking Back, Looking Forward**

*Phil Moy, GLP Chair, Wisconsin Sea Grant*

*Jay Rendall, Past GLP Chair, Minnesota Dept. of Natural Resources*

Rendall joined the meeting via web conference to share his perspectives on the GLP. He spoke about the origin of GLP being directly related to three events: the introduction of zebra mussels, the impacts of zebra mussels, and the *Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990*. The role of the GLP is to help direct efforts to address AIS throughout the basin, covering all aspects of the issue. GLP members have been pioneers and leaders in a new field of work, with no "cookbook" to follow. In the early years, AIS efforts and programs varied widely from state to state, recommended AIS prevention measures varied widely, and collaboration, sharing, and leadership were needed. In response, the GLP helped worked towards consistency by developing similar prevention messages and encouraging partnerships on public awareness products. The GLP was the first to develop guidelines for recreational activities, which were the basis for national guidelines. Rendall discussed other early accomplishments and products of the GLP, including developing a model state management plan, and a policy statement on ballast water management, and an information/education strategy for AIS prevention and control. The GLP has also identified key leaders working on AIS issues, providing presentations and field trips on emerging issues and responses. This forum helped in efforts to develop a regional approach and consistency on practices.

The GLP was often asked to present views on legislation and other issues in Washington at ANS Task Force meetings; however progress on these issues has been slow, leading to frustration and questions. For instance, there is still an outstanding need to develop consistent ballast water standards and timelines for implementation in the region. Rendall posed several questions, including "Has the ANSTF lived up to expectations or needs as a leadership and coordinating entity;" "How could the panels and ANSTF be more productive;" and "What has changed?" As a response, he described the establishment of state AIS coordinators and the development of AIS programs. He said the GLP role has become more challenging with new AIS and has become more important and complex now that more people and entities are involved in AIS issues. Looking forward, Rendall said that there is still value in regional panels to develop and maintain collegial relationships, maintain consistency and develop regional perspectives. The GLP was once the only panel, but now the GLP needs to work with other

panels and revisit needs at the national level. Areas for coordinated efforts include updating recreational guidelines, developing decontamination protocols and providing more information on management approaches. Moy provided some of his own perspectives on the GLP. He reviewed establishment of the GLP and its mandate. He described how other panels formed over time, resulting in a smaller “piece of the pie” for the GLP because there has been no corresponding increase in funding. He noted that the GLP membership used to include more public utilities, but has shifted toward the shipping industry. Early issues addressed by the GLP included zebra mussel, Eurasian ruffe, recreational guidelines, and ballast water. Into the future, Moy expects the issues to be Asian carp, basin separation, new organisms, organisms in trade and other vectors, rapid response and funding.

Moy next shared comments from other past chairs including Ron Martin, formerly of the Wisconsin DNR and Gary Isbell, Ohio DNR. Martin remarked that the GLP was instrumental in developing the AIS state management plans with some level of consistency among the Great Lakes states as well as a regional ballast water policy. He also noted the challenges of passing comprehensive AIS legislation (e.g., National Aquatic Invasive Species Act) and the need to work together with other regional panels. Martin observed that there currently is stronger involvement from the private sector than in the past.

Isbell remarked that prevention was a more effective strategy than control. He noted the need to take a vector based approach, including basin separation and organisms in trade. Also mentioned was the importance of facilitating rapid response and increased funding for prevention. GLP members were encouraged to focus on prevention and be passionate in their efforts.

It was noted that the Southern Division of the American Fisheries Society is developing a resolution that supports increased funding for regional AIS panels. In addition, the USFWS is internally looking forward to the future of AIS management and funding for regional panels is an important piece of the effort. As an action item, it was determined that a thank you letter to the past GLP chairs would be drafted and sent.

## **Committee Reports**

- Information/Education (I/E) Committee  
*Erika Jensen, Great Lakes Commission*

Jensen provided the report for the I/E Committee in the absence of the committee chair. She noted that the committee meeting did not meet quorum, so no official business could be conducted. Those present, however, suggested several new initiatives which will be discussed with the full committee on a follow up conference call. Jensen reported on the GLP Wiki usage, which has improved since the previous meeting (usage by 15 out of 35 members). GLC staff will continue to promote the Wiki and improve usability; one suggestion has been to use the Wiki to post meeting materials and agendas. Another topic that was discussed was the Great Lakes Aquatic Invasions booklet. Staff will be communicating with state and provincial members on distributing a large portion of the remaining booklets to newly elected officials. Regarding an update and reprint of the booklet, Jensen reported that the committee proposed the development of an interactive, online version of the booklet as an alternative to another large print run. This idea led to a discussion on updating the GLP website. It was suggested that the I/E Committee review other panel websites and make suggestions for updates to the GLP website. An updated GLP website could also be used as a mechanism to distribute outreach materials, communicate on GLRI projects and activities and conduct outreach on other initiatives such as the recreational guidelines and GLANSIS watch list. There was a suggestion to hold a workshop in conjunction with a GLP meeting on new technologies to increase AIS awareness including social media and mobile applications. There was general support for increased sharing of products and efforts among regional panels, which might help to decrease duplication of efforts. Jensen also encouraged GLP members to bring samples/drafts of education/outreach materials to get feedback from the I/E committee. Regarding funding for the GLAI booklet update or development of an online version, Jensen noted that there was nothing definitive to report, but that the GLC staff is actively looking for opportunities.

- Research Coordination Committee  
*Lindsay Chadderton, Research Coordination Committee Chair, The Nature Conservancy*

Chadderton first reported on the committee’s work on an invasive species “hot list” for use in prioritizing surveillance and detection as well as research on high risk AIS. Also mentioned was the correspondence of the hot list with recent development of the GLANSIS “watch list.” Specifically, the committee would like to assist with the development of the list by providing additional management expertise and peer review. The committee, with

the help of the GLC staff, will establish a formal process to coordinate input into aspects of the GLANSIS watch list such as the prioritization process and species data sheets. Another topic of discussion with the committee was developing molecular genetics capacity in Great Lakes region. The committee could have a role in developing a set of recommendations on how to develop basin capacity for environmental DNA monitoring. It was suggested that consultation with the Great Lakes Fishery Commission could provide direction on how similar basin wide capacity was developed in the past. In addition, the committee discussed the Ballast Water Collaborative and suggested that the committee provide a forum for two way communication, identify data source and information needs, and facilitate increased availability of data/information. There is potential for a recommendation to the ANS Task Force if data and information cannot be made readily available. Regarding the emerging issue of grass carp, it was noted that there is increasing evidence of diploid contamination of Great Lakes stocks. The committee identified its potential role in developing protocols and a system to determine if there is evidence of diploid recruitment in basin. To do this, the committee would need to also identify provider and costs, and possible funding mechanisms. The committee suggested that the GLP support the Mississippi River basin's efforts to assess levels of diploid grass carp in trade as well as an independent review of the grass carp situation and assessment of risk. Lastly, the committee discussed the Asian Carp Control Strategy Framework and the potential for the GLP to provide constructive input. It was decided that the Bill Bolen should be contacted to determine how the GLP can provide input.

- Policy Coordination Committee  
*Mike Murray, Policy Coordination Committee Chair, National Wildlife Federation*

Murray reviewed the work plan elements on which the committee is focused, including a priorities document, Asian carp, organisms in trade and rapid response. The committee will be focusing its efforts on developing the priorities document over the summer with a goal to finish in fall. This would include a review of existing policy documents, reports and positions that hold potential value for the priorities document. The GLC has submitted a rapid response proposal for GLRI funding and EPA has indicated an interest in working with the GLP on coordinating rapid response efforts. The committee has also drafted a recommendation on organisms in trade and the need for pre-import screening. Plans are to move the recommendation forward with finalizing, securing GLP approval and submission to the ANS Task Force in the near-term. It was suggested that to help enhance ANS Task Force attention to this recommendation, the specific request of the recommendation should be articulated upfront in the recommendation. Also suggested was inclusion of an issue briefing in the form of a memo for the Task Force to which the recommendation would be attached. In addition, a teleconference briefing was recommended to be held with ANS Task Force co-chairs at least a month before their fall meeting. Staff was directed to rework the language of recommendation to be more appropriate for the ANS Task Force. The revised version will be circulated to the full GLP for 10 working days, to be followed by an opportunity for GLP members to vote on the recommendation.

### **Asian Carp Initiatives II: Report on progress under Chicago Area Waterway System Project** *Tim Eder, Great Lakes Commission*

Eder first provided background on the Chicago Area Waterway System (CAWS) and the Asian carp issue in that area. He said that recent legal action taken by the states has put the GLC and its partner on this project, the Great Lakes and St. Lawrence Cities Initiative (GLSLCI), in tough position. That is one reason this project is so important, because it confronts the issue and seeks a solution as a way to build unity around the issue. Eder reviewed the project goals of preventing the transfer of Asian carp and other AIS, improving transportation, improving water quality, and improving storm and flood water management in the CAWS. While emphasizing the importance of outreach and stakeholder input to the project as critical to its success, Eder clarified that reaching consensus on separation or a specific option is not an objective of the project. He noted the importance of the need to understand the users and the benefits CAWS provides. The outcomes of the project will focus on a set of options for separation, but will not recommend a preferred option. The GLC and GLSLCI have been working closely with an advisory committee and a resource group to provide input into the project. Currently the project is in its second phase which is focused on identifying the options for separation. The GLC and GLSLCI have hired an expert consultant team, lead by HDR Engineering, to perform the technical work associated with developing the separation options. A set of criteria for evaluating the options, as well as a framework "baseline," or "no project" conditions have been established. Eder reviewed some of the issues and risk trade-offs that the team is considering as separation options are developed. He also explained that the options will include information on mitigation strategies, timing of implementation and costs, in addition to barrier locations. The primary outcome from the project will be to present three options for physical separation. It was noted that the project is on track to be completed in January 2012.



Eder provided additional background that the GLC adopted a resolution saying best long term solution is ecological separation, taking into account existing uses of the CAWS. He further clarified that his study is focused specifically on physical separation as a way to accomplish this long term solution. He said that there would be an opportunity for public input, although there will not be a formal comment period. In addition, the results of the study will be presented to decision and policy makers, including Congress as well as the U.S. Army Corps of Engineers to help accelerate the Corps work on Great Lakes and Mississippi River Inter-basin Study (GLMRIS). When asked if the new mayor of Chicago, Rahm Emanuel, supported the project, Eder said that he was optimistic but had not received an official response.

### **Asian Carp Initiatives III**

*Moderator: Phil Moy GLP Chair, Wisconsin Sea Grant*

- Report on Asian carp smuggling bust and emergency response exercise in Ontario  
*Francine MacDonald, Ontario Ministry of Natural Resources (OMNR)*

MacDonald began her presentation with background information relating to OMNR's involvement in Asian carp issues. The province banned possession, transport, and sale of live Asian carp in 2005, and preventing the introduction and spread of AIS is a priority. Provincial actions have included enforcement of the ban, education, inspections, and investigations. Through its investigations, OMNR has found the non-compliance rate to be relatively low; however three recent seizures at the border indicate that a threat from the live food fish trade still exists. MacDonald noted that there are limited cases of non-compliance because of the strong penalties that are in place. The OMNR Enforcement Branch has formed an Asian Carp Task Team, which has a strong working relationship with the Canada Border Services Agency (CBSA). MacDonald reviewed the three recent seizures, with one company owner being sentenced to pay a \$50,000 fine for his second offense for transporting live grass carp and bighead carp. There is significant concern that although water is being drained before transport, the fish are still alive. There have also been instances when fish trucks have overturned, which could result in accidental release.

MacDonald next spoke about the Asian carp response plan has been drafted. OMNR and DFO worked with provincial and federal partners on a "table top" exercise to test their state of readiness for a confirmed case of Asian carp in Ontario waters of the Great Lakes. The exercise was followed up by an Asian carp simulation exercise which included observers from the U.S. and other partners and stakeholders. She reviewed the key objectives of the Asian Carp Response Plan, including multi agency coordination and clarification of jurisdictional authority. Other efforts on this issue have included a brochure; an invading species hotline to report potential sighting; and distribution of education materials to bait dealers and other stakeholders. Also discussed was a generic rapid response plan for AIS which outlines roles and responsibilities of lead agencies, goals and objectives as well as challenges (e.g., use of chemicals for response). MacDonald spoke next about the Invasive Species Strategic Plan for Ontario which will be posted for public comment in this month and is the first invasive species plan for the province. The goals of the plan are focused on prevention, early detection, rapid response and management/control.

Through discussion, MacDonald indicated the source of the fish, i.e., where they are being harvested and by whom, is unknown. She said that the fines for non-compliance increase with each offense, the highest amount being \$1,000,000. Further, much of the enforcement takes place at the fish markets, with approximately 160 market inspections annually. GLP members raised the issue of a lack of border enforcement/patrol on the U.S. side and were interested in opportunities to improve coordination and enforcement binationally. There was additional discussion on whether fish, when out of the water, can be presumed dead. In some of the Ontario cases the water was drained but the fish were clearly alive when placed in water. In addition, the water that is drained could contain propagules making disposal of that water another concern.

- Update on eDNA monitoring for Asian Carp  
*Christopher Jerde, University of Notre Dame*

Jerde gave a presentation on recent developments in the field of eDNA monitoring for Asian carp and other AIS. The team at Notre Dame is developing new genetic markers, with the support of GLRI funding. Several are close to submission, including those for black and grass carp. Another objective of the project is to screen for bighead carp and other AIS in Chicago ponds. The team will be collecting 300 samples starting in July 2011. The results of the sampling effort will be compared with known bighead captures, stocking records, bait shop locations, census records, and known fish markets. Last fall, a number of rivers in the Great Lakes region were sampled with no positive detections. A Memorandum of Understanding (MOU) is being developed on a

communications protocol in the event of a positive detection. Jerde said that a new draft will be provided to the USFWS shortly and that the USFWS would be communicated with the states. Surveys of the Chicago area bait trade and sampling in around the Eagle Marsh area have also been conducted with no positive detections. Jerde was asked about the implications of new research showing that Asian carp can spawn in shorter rivers than previously thought. He said their team does not have the capacity to process enough samples to look at the other rivers; up to 1,000 samples may be needed for a single river to support early detection. They are working with the states, however, to identify areas of concern and expanding coverage to those areas. Jerde said the cost per sample was approximately \$40, not including staff time and the majority of funds are spent on staff. If sampling were done commercially, it could be up to \$120-150 per sample including staff time. He noted that eDNA monitoring is not just about Asian carp, it is an approach that could support a regional early detection program that is a priority of the GLRI. Jerde was also asked about the possibility of developing markers for non-fish species. He said that it is more challenging and had been tried with crayfish without any luck. He noted that eDNA monitoring is likely to only be useful in certain situations, as it has both strengths and limitations.

### **Public Comment**

No public comment was offered.

### **Great Lakes Panel Business**

- Fall GLP meeting  
*Phil Moy, GLP Chair, Wisconsin Sea Grant*

The fall meeting will be held in the Ann Arbor, Michigan area and tentative dates were identified as Nov. 30 to Dec. 1, 2011. The GLP membership was asked to provide suggestions for meeting topics. One suggestion was looking at mechanisms to increase inter-panel coordination and collaboration, such as opportunities for GLP committees to work with other panel committees. Electronic communication was proposed as a mechanism to help achieve this. It was also noted that "Panel principals" meet annually. Other suggested topics included information sharing on what other states are doing on management of AIS. Another issue raised is the need to determine how to communicate more effectively with the ANS Task Force. As part of this discussion, it was mentioned that the GLP should consider revising its strategy in communicating with the Task Force.

- Summary of Action Items  
*Kathe Glassner-Shwayder, Great Lakes Commission*

Glasnner-Shwayder reviewed the action items (*provided as a separate document*).