

Testimony Presented by

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On Behalf of the

Great Lakes Commission

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Introduction

Chairwoman Bordallo and members of the Subcommittee on Fisheries, Wildlife and Oceans, I appreciate this opportunity to share my perspectives on the concerns of the Great Lakes region and the steep challenges we face in halting the introduction, spread and impacts of aquatic invasive species (AIS). My name is Katherine Glassner-Shwayder and I am a senior project manager at the Great Lakes Commission. In this capacity I manage and coordinate (AIS) projects and related activities for the organization. I am here today to testify on behalf of the Great Lakes Commission, as well as the state representatives serving on the Great Lakes Panel on Aquatic Nuisance Species (Great Lakes Panel), administered by the Commission.

The Great Lakes Commission is a public agency established by the Great Lakes Basin Compact in 1955 to help its member states and provinces speak with a unified voice and collectively fulfill their vision for a healthy, vibrant Great Lakes - St. Lawrence River region. To fulfill the mission of the Commission, a multi-jurisdictional approach is taken in the development of regional strategies to protect and maintain the ecological and economic health of the Great Lakes.

Under the, *Nonindigenous Aquatic Nuisance Prevention and Control Act* (NANPCA) of 1990, the Great Lakes Commission was directed to convene and provide administrative support for the Great Lakes Panel, the first of six regional aquatic nuisance species (ANS) panels established to advance AIS prevention and control. The state-based partnerships established under the Commission have provided a strong foundation for the operation of the Great Lakes Panel for more than 15 years. The Great Lakes Panel has a diverse membership representing state, provincial and federal government

agencies from the U.S. and Canada, tribal authorities, commercial and recreational groups, NGOs, and others. This regional entity operates on a consensus basis in coordinating the development of prevention and control strategies in areas of information/education, research and policy.

The Great Lakes region is strongly united in our concern over aquatic invasions of the Great Lakes. Addressing the AIS problem, a top priority for both government and the nongovernmental community alike, has been recently galvanized by the development of a common action-based set of priorities through the Great Lakes Regional Collaboration (GLRC) established by Executive Order 13340 in May 2004. This important initiative brought together more than 1500 regional stakeholders representing federal, state, tribal and local governments, industry, conservation groups and tribal interests. The GLRC process produced a strategy for Great Lakes restoration that included actions and recommendations from eight different strategy teams including one focusing on AIS. The AIS chapter of the December 2005 report titled: *Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes*, provides a blueprint for a regional AIS action plan. This plan is consensus-based and reflects the efforts of the basin's governmental leaders and other stakeholders to respond to the problems posed by AIS species to the Great Lakes. The plan, through a series of recommendations, identifies important AIS priorities, many of which you will hear in my testimony.

To protect and restore the Great Lakes from impacts caused by aquatic invasions, we have consistently and repeatedly urged Congress to help stop AIS introduction and spread by passing the National Aquatic Invasive Species Act, (S. 725 as introduced in the 110th Congress) authorizing prevention and control programs to address all pathways by which AIS enter the region. It is critical that we have strong federal legislation that provides the authority and funding to fully implement programs addressing all high risk vectors causing the introduction and spread of AIS, including, among others: maritime commerce, canals and waterways, aquaculture, organisms in trade, and recreational activities. While we prefer comprehensive legislation that addresses all vectors, we are pleased that legislation has been introduced in both chambers of Congress to address discharge of invasive species from ballast water. We applaud the subcommittee's efforts to direct attention to all vectors.

Problem Statement

Ecological and Economic Impacts of Great Lakes Aquatic Invasions

The integrity of the Great Lakes ecosystem is greatly compromised by the presence of more than 180 non-native aquatic species brought into the region from across the globe by a spectrum of vectors and pathways including, among others, ballast water discharge from ships, canals and waterways, live organisms in trade, and recreational activities. Harmful impacts caused by AIS introduced into the Great Lakes result in significant ecological and economic costs to the region. Ecological impacts include disruption of the complex food web, declines in fishery populations due to changes in water quality and clarity, competition with native species for food and habitat that support the aquatic ecosystem, among others.

The economic impacts caused by aquatic invasions in the Great Lakes are of grave concern, including the following, among others:

- Losses to commercial and recreational fisheries caused by invasive fish diseases; predation by parasitic invasive species; and disruptions to the food web such as increased competition for prey fish or declines in native prey fish populations.

- Clogging of waterways by invasive plants that affect water quality, restrict recreational, industrial (e.g., power generators and municipal water suppliers) and agricultural water uses and impede navigation.
- Degradation of beaches resulting from decaying macrophytes and zebra and quagga mussel shells creating aesthetic and public health concerns and decreasing recreational and property values.
- Fouling of water infrastructure by zebra and quagga mussels affecting public drinking water supply as well as intake pipes for industrial and agricultural purposes.

The costs to remediate these impacts are staggering. Approximately \$10 million is spent annually to research and implement control technologies for the parasitic sea lamprey (*Petromyzon marinus*) which devastated Great Lakes fisheries in the mid 1900s. Native to the North Atlantic Ocean, the spread of sea lamprey into the Great Lakes was accelerated when changes to the Welland Canal in 1921 enabled lampreys to by-pass natural barriers and provided a water connection between Lakes Ontario and Erie. Sea lamprey infestations have caused hundreds of millions of dollars in damage to the \$4 billion Great Lakes commercial and recreational fisheries. Control techniques that have been under continual development and implementation by the Great Lakes Fishery Commission since the 1950s include lampricides, barriers, trapping and release of sterile males. In the absence of these control programs, economic impacts as a result of increased sea lamprey populations are estimated at over \$500 million annually.

An estimated \$1 billion a year in damages and associated control costs is attributed to zebra and quagga mussels. Native to Eastern Europe, the zebra mussel and quagga mussel have been introduced by ballast water discharges from ships traveling around the globe. Rapidly spread across the Great Lakes by a variety of vectors, these mussels attach to hard surfaces, and clog water intake pipes and other infrastructure used by electric power generating plants and municipal and irrigation water supplies. Maintenance to clean infested pipes costs industry millions of dollars each year.

The combined cumulative loss estimates from only six of over 70 known harmful non-indigenous fish and aquatic invertebrates exceeds \$1.6 billion in the 1906-1991 period. These staggering figures from only a small subset of research on AIS underscore the importance of maintaining current control activities and expanding prevention efforts.

Recently, a growing sense of alarm has emerged for aquatic invaders that cannot be seen with the naked eye, such as viruses, bacteria and parasites. The fish virus *Viral Hemorrhagic Septicemia* (VHS) was first discovered in the Great Lakes in 2005. The pathogenic effects of the microbe are manifested by massive die-offs among VHS-infected Great Lakes fish, including muskellunge, freshwater drum, yellow perch, gizzard shad, and white bass.

It is believed that VHS arrived in the Great Lakes around 2002, probably introduced by untreated ballast water. Once introduced into a wild fish community, the virus is essentially impossible to eliminate and difficult to control. This contagious disease can cause large scale mortalities of valuable adult fish and can be carried throughout the Great Lakes and inland waters by a wide range of potential fish carriers. The economic implications associated with VHS invasions are enormous given the threats to the sport and commercial fisheries including state and tribal fish stocking programs, and aquaculture operations. To protect Great Lakes fisheries, states have taken measures to prevent the spread of the virus. These range from increased surveillance programs, restricting bait fish movement within state borders, and a moratorium on hatchery production of selected high risk fish species such as walleye. The federal government (U.S Department of Agriculture – Animal and Plant Health Inspection Service, APHIS) is implementing policies in response to this threat that have been controversial with the states. While swift action was necessary to restrict interstate movement of

certain fish species to prevent VHS from spreading out of infested waters, coordination and communication with states was lacking and insufficient, prior to imposition of federal emergency orders.

In our view, measures for AIS prevention and control are “woefully inadequate” as invasions and their impacts continue to escalate. Potential Great Lakes invasions by new species such as the Asian carp, the snakehead fish or hydrilla pose extremely high-risks. If introduced, these species could wreak havoc on the Great Lakes ecosystem.

Asian carp, which can reach more than 100 lbs. in size, were originally imported from Asia for algae control in southern fish farms, but escaped into the Mississippi River in the early 1990s during floods. Since then, their populations have expanded northward into the Illinois River, which connects the Mississippi River to the Great Lakes via the Chicago Sanitary and Ship Canal. These fish are voracious eaters and scientists predict they have the potential to upset the Great Lakes food chain, cause catastrophic damage to native species and decimate the Great Lakes sport fishery - one of the world’s finest. The Asian carp is dangerously close to entering the canal and then Lake Michigan, underscoring the urgency to block further migration. An electrically charged demonstration dispersal barrier – operating since 2002 in the canal to prevent Asian carp from migrating upstream into Lake Michigan and the rest of the Great Lakes – is nearing the end of its design life. Plans are underway to bolster protection and block passage of this invasive fish by upgrading the demonstration barrier and completing construction on a larger and more powerful permanent barrier. Passage of the Water Resources Development Act (WRDA) will provide the authority for construction, operation and maintenance of the new barrier system.

Hydrilla (*hydrilla verticillata*), native to the warm waters of Asia, is a fast growing aquatic invasive plant, forming dense mats that shade out beneficial native species. First introduced in Florida during the 1950s, this submerged perennial invasive has infested waters in the southern regions of the country and is found as far north as Maine. Although hydrilla has yet to be detected in the Great Lakes proper, infestations have been discovered near the Great Lakes in Indiana (Lake Manitou, 75 miles from the southern shore of Lakes Michigan) and an inland artificial pond in northeast Wisconsin. Currently, an estimated \$100 million is being spent annually – primarily in the southern U.S. states – to control hydrilla from clogging waterways, thus impeding navigation, blocking irrigation and drainage canals and interfering with public water supplies.

The Urgent Need for Comprehensive Federal Legislation

Solutions to AIS problems must address every avenue for introduction and spread. While ballast water from ocean-going commercial vessels is a primary vector for AIS introduction to the Great Lakes-St. Lawrence system, concern is also growing over other commercial and recreational activities (e.g., aquaculture, recreational boating, aquarium trade, horticulture, live food fish) that provide additional pathways. A federal comprehensive prevention and control program to address all known pathways of AIS is needed. We have been left without U.S. federal legislation addressing this need since passage of the National Invasive Species Act (NISA) in 1996, which reauthorized NANPCA. This important Act subsequently expired in 2002. The Great Lakes Commission, the Council of Great Lakes Governors, the Great Lakes Fishery Commission and other regional organizations have repeatedly advocated for the reauthorization of this legislation for the past several years. The Commission has identified the passage of the National Aquatic Invasive Species Act (NAISA), reauthorizing NISA, as a top priority for Great Lakes restoration and protection. The region further endorsed this legislation in 2005 with the release of the *Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes*. Important components of a comprehensive approach provide support for national, regional and state programs to address high

priority vectors of AIS introduction and spread, including, but not limited to ballast water. Comprehensive AIS legislation is an overdue federal initiative that is needed to protect U.S. aquatic ecosystems, including the Great Lakes-St. Lawrence ecosystem, from further damage.

Aquatic invasive species, by definition, are an environmental and economic problem, crossing jurisdictional boundaries often involving interstate commerce. As such, Congress must take action in establishing a strong federal AIS prevention and control program, providing the essential elements – most importantly, authority and funding – enabling effective implementation by state and federal agencies. In the case of ballast water, the state of Michigan has grown impatient waiting for a federal program and has begun requiring ships visiting Michigan ports to obtain permits and install treatment technology before discharging ballast water. In the Great Lakes region, there is strong consensus for a comprehensive, transboundary approach to prevention and control. This approach must be driven by strong federal leadership in close coordination with states, providing the authority, tools, mechanisms and funding required to effectively address vectors that invariably cross jurisdictional lines. We applaud the members of the House Natural Resources Subcommittee on Fisheries, Wildlife and the Oceans for your leadership in moving forward in development of a comprehensive approach to the threat of aquatic nuisance species to wildlife habitat. The time has arrived to address all of the AIS vectors that pose high risks to the integrity of aquatic ecosystems in the Great Lakes and beyond.

To address the challenges of AIS prevention and control on a state, regional and federal level, this testimony provides recommendations in the following areas:

- A. Improving the performance of the ANS Task Force to develop and implement a comprehensive and cohesive response to address AIS threats;
- B. Increasing capacity to achieve the goals and objectives of State Management Plans for ANS Prevention and Control through federal and state partnerships; and
- C. Strengthening AIS prevention and control programs through comprehensive legislation at the federal level.

Recommendations

A. Improving the performance of the ANS Task Force to develop and implement a comprehensive and cohesive response to address AIS threats

Background: ANS Task Force and Regional ANS Panels

The ANS Task Force (Task Force, ANSTF) was established under NANPCA as the primary entity coordinating federal AIS management activities. It is dedicated to the prevention and control of AIS and the implementation of NANPCA. The Task Force consists of ten federal agency representatives and 12 ex-officio members, and is co-chaired by the U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA). The Task Force includes five standing committees to address priority areas of AIS management: control; research; communication, education and outreach; detection and monitoring; and prevention. (*Further information on the Task Force, including federal agency membership, is posted on the ANSTF website at: <http://www.anstaskforce.gov/default.php>).*

Recognizing the value of a multi-jurisdictional approach to AIS prevention and control, the Task Force also incorporates representation from six regional ANS panels also established under NANPCA to operate under the auspices of the Task Force. Membership of the regional panels includes representation from state and federal government, tribes, non-government organizations,

commercial and environmental interests, as well as neighboring countries. The role of the panels is to identify regional AIS priorities; coordinate AIS program activities in the region; make recommendations to the Task Force; and provide advice to public and private interests concerning methods of AIS management and control. The six regional panels include the Great Lakes Panel, Northeast Panel, Mid-Atlantic Panel, Gulf of Mexico and South Atlantic Regional Panel, Mississippi River Basin Panel, and Western Regional Panel. The Task Force engages governmental agencies, stakeholders from the public and private sector, and representatives from the panels to facilitate coordination of AIS prevention and control programming across the United States.

The Great Lakes Panel was the first regional ANS panel to be established under NANPCA, primarily due to the invasion of zebra mussels and the associated ecological and economic impacts, particularly those related to the manufacturing and power generating industries in the Great Lakes states. The Great Lakes Panel includes state representation from Illinois, Indiana, Ohio, Michigan, Minnesota, New York, Pennsylvania and Wisconsin. Membership also includes representatives from U.S. and Canadian federal government, provincial agencies, tribal authorities, scientific researchers, policy makers, outreach specialists, commercial and recreational user groups, NGOs and other stakeholders from both the public and private sectors. The diverse body of regional experts participating on the Great Lakes Panel has been operating since 1991 to address a wide range of AIS problems in the Great Lakes.

The mission of the Great Lakes Panel is to coordinate the development of education, research and policy to prevent new aquatic invasive species from entering the Great Lakes basin and to control and mitigate those AIS populations already established, including associated impacts. The Panel provides a forum for interagency/organizational communication and serves as a vehicle for regional dialogue and discussion on AIS issues. Consensus-driven, the Panel welcomes the active participation of an array of interested parties involved in AIS prevention and control. The Panel operates through three implementation committees: Information and Education; Research Coordination; and Policy. Funding for Panel operations is provided by the USFWS and NOAA. Additional financial support for special projects has been received from numerous federal and state agencies, foundations, and other sources. (*More information on the structure and function of the Great Lakes Panel, including featured regional projects, is available on the Panel website at: <http://glc.org/ans/panel.html>.)*

One such project is the recent publication, ***Great Lakes Aquatic Invasions: Aquatic Invasive Species Prevention and Control: Outreach, Research, Management and Policy***. This 14-page color booklet provides a comprehensive overview of the AIS challenges in the Great Lakes, including model programs and strategies being conducted in efforts to solve AIS problems. (*The booklet has been provided to supplement this testimony and is also available online at: <http://glc.org/ans/aquatic-invasions/>.)*

The infrastructure created by NANPCA of the national Task Force and the six regional panels lays the foundation for establishing coordination, communication and collaboration to advance AIS prevention and control programs. The implementation of these efforts, however, are significantly impeded by inadequate funding levels and limited use of authority. The following recommendations address these issues in the hopes of improving the ability of the Task Force and associated initiatives to more effectively address AIS issues in the Great Lakes region and across the country.

Recommendations

- 1. Increased Funding:** There must be significant increases in funding levels for prevention and control programs on a federal, regional and state level to effectively address the problems caused by aquatic invasions.

The lack of full scale funding is unequivocally the most significant obstacle that has impeded implementation for AIS prevention and control programs. Funding appropriations are most critically needed to support full operation of the ANS Task Force, Great Lakes and other regional ANS panels, and the states (*see recommendation on State Management Planning under Section B*) to comprehensively address AIS priorities on prevention and control.

- **ANS Task Force:** The Task Force must have increased funding to support operation that addresses the broad scale responsibilities that need to be fulfilled under NANPCA and NISA. Our understanding of the complexities of the AIS issue have only grown since the Task Force was first established in 1990, requiring associated increased resources to effectively manage a multi-vector, multi-jurisdictional approach to AIS problems.
 - **Regional ANS Panels:** It is strongly recommended that operational funding to support the Great Lakes Panel and other regional ANS panels should be significantly increased. The regional ANS panels confront significant funding constraints to effectively implement their mission. Since establishment of the Great Lakes Panel in 1991, the level of funding appropriated for regional panel operations has not increased sufficiently over time to accommodate the increasing number of panels from one to six. For example, the Great Lakes Panel received \$100,000 in funding from the USFWS in 2003 with current funding level diminished to \$50,000.
- 2. Exercise of Federal Authority:** Federal authority needs to be more fully exercised among agency members of the ANS Task Force to advance programmatic priorities and, whenever possible, coordinate these efforts with the states.

The recent discovery of VHS in Great Lakes waters, illustrates this need for emergency action by the federal government and to coordinate this action with the states. In October of 2006, federal authority was exercised by APHIS to contain the spread of VHS by issuing an emergency order restricting the movement/transport of fish within and between the Great Lakes states. Given the high risk that VHS poses to the Great Lakes fisheries, it was critical that federal authority was exercised on a rapid timeframe. The order, however, was issued in the absence of communication with the states, causing disruption to state fisheries management operations. Further, APHIS did not provide assistance to the states to help with outreach, testing, monitoring, enforcement, among other management priorities. This situation underscores the need for better communication with the states along with sufficient technical and financial assistance needed to develop and implement effective management measures to limit the spread of AIS through priority pathways. The Task Force is well structured to help facilitate this coordination based on participating federal, regional and state members. Direct communication with the states and the use of other mechanisms should also be pursued.

- **Rapid Response:** The ANS Task Force should support efforts to develop a response communication protocol for the Great Lakes region, facilitating coordination between federal and state governments and management of new aquatic invasions. (*see recommendation on Early Detection and Rapid Response and on Rapid Response Planning under section B of recommendations*)

- **National Screening Process:** The ANS Task Force should exercise leadership in establishing a national screening process for planned importations of live aquatic organisms under federal regulation to ensure consistency across the country. The regional ANS panels and state agencies should also play a role in this process (*see recommendation on Listing of AIS under section B of recommendations*).
 - **Pathway Analysis:** The ANS Task Force needs to continue work on pathway analysis to identify the highest risk pathways for AIS introduction into U.S. waters and implement management strategies to reduce these introductions.
- 3. Strengthen Mechanisms for Technical Assistance:** The ANS Task Force needs to more effectively utilize the expertise of associated federal agencies by providing technical assistance and technology transfer for management and control addressing state needs.

The Task Force has been structured to include representation of federal agencies with authorities related to the various AIS prevention and control issues. To more effectively implement prevention and control programs, the Task Force should strengthen their capacity for technical assistance, including equipment, staff, and technology transfer to assist the regional ANS panels and affiliated state agencies on AIS prevention and control efforts. Consideration should also be given to developing a technical outreach program, matching federal technical expertise and staff resources with programs underway on the regional and state level.

- 4. Early Detection and Rapid Response:** To increase capacity for the prevention of new AIS introductions, it is recommended that the following strategies be considered by the Task Force, in close cooperation/communication with the Great Lakes Panel and states as well as the other regional ANS panels, as applicable:
- Provide leadership and technical assistance in enhancing a system of monitoring, surveillance and ecological surveys in the Great Lakes to facilitate rapid response to new invasions;
 - Provide assistance to state agencies in developing state rapid response plans based on state/regional rapid response models;
 - Establish a revolving funds on a regional basis to expedite implementation of rapid response plans;
 - Provide institutional and technical support for a Great Lakes federal interagency rapid response team, that will conduct activities on federal lands, and in other locations with state, tribal, and local cooperation; and
 - To facilitate “rapid” implementation of response plans, the Task Force should assist the states in overcoming permitting and regulatory obstacles (e.g., programmatic environmental impact statements) through Categorical Exclusions and other mechanisms.

There is an urgent need for the ANS Task Force to work with federal authorities to provide the federal resources and technical assistance to Great Lakes states to prevent hydrilla from spreading into the Great Lakes. This issue has drawn considerable concern over the past year given recent infestations of inland waters in Indiana and Wisconsin. Despite the listing of hydrilla as a federal noxious weed, limited federal dollars have been made available to the Great Lakes states to implement management activities such as a regional surveillance program, rapid response, education/outreach programs and containment/eradication measures. Given these financial challenges, Indiana’s efforts to respond to hydrilla infestations in Lake Manitou (located in northern Indiana, 75 miles from the southern shore of Lake Michigan), has led to diversion of funding for other programs in order to initiate the \$2 million multi-year eradication effort for a single lake. It cannot be expected that such state funding can be maintained to support the long-term

programs needed to combat the spread of hydrilla. Funding is urgently needed to allow for aggressive action to battle hydrilla, especially on the leading edge of its range.

B. Increasing capacity to achieve the goals and objectives of State Management Plans for ANS Prevention and Control through federal and state partnerships.

Background: State Management Planning for ANS Prevention and Control

To promote a multi-level approach to AIS management, NANPCA encourages states to develop state management plans (SMP) for ANS prevention and control. These plans allow states to receive federal technical, enforcement, or financial assistance to reduce the risk of aquatic invasions. In order to receive this assistance, a state must submit a completed SMP to the ANS Task Force for review and approval. A completed SMP will have undergone a public comment period and received the Governor's signature. SMPs should address four primary areas: state and local AIS prevention and control programs, coordination with federal AIS prevention and control activities, gaps in state authority needed to ensure protection from harm by AIS, and an implementation schedule. States may also identify non-public facilities that would benefit from federal support to prevent and control AIS. Collaboration with local and regional government and non-government entities, including tribes, is also encouraged through NANPCA. This is further emphasized with the acceptance of interstate management plans in addition to individual SMPs. Seven of the eight Great Lakes states have a Task Force-approved ANS SMP. Minnesota does not have an approved SMP and has focused its efforts on creating a comprehensive SMP to address both aquatic and terrestrial invasive species.

The Great Lakes region has made significant progress in the development of SMPs. However, there is considerable concern that effective implementation of these plans will require significant increases in funding from what has historically been allocated. Over the past three years, the Great Lakes Commission has worked extensively with the states to advance the SMP process across the region. Through a project funded by NOAA's National Sea Grant Program, the Commission was able to collaborate with state environment/natural resource agencies and Sea Grant programs to develop, implement or revise SMPs, dependent on state needs. (*Documentation of this SMP project is available online at: <http://glc.org/ans/initiatives.html#advance>, with a project summary included as an attachment to this testimony.*) Throughout the effort, Commission staff witnessed the value of collaboration to advance AIS management. While the resources and expertise provided by each of the project partners contributed greatly to the success of the effort in each state, the need for increased funding for plan implementation was universally recognized by all project participants as critical in fully achieving SMP goals and objectives.

As a culminating event for the project, the Commission organized a one-day session to share outcomes as part of the May 2007 meeting of the national ANS Task Force (*proceedings posted online at: <http://glc.org/ans/initiatives.html#advance>*). The session provided a forum for the states to exchange ideas and lessons learned from their workshops. It was also an opportunity for members of the ANS Task Force to receive a briefing on the status of SMP programs across the region and to actively engage with state representatives and other Great Lakes Panel members as well as other regional ANS panels to develop recommendations for facilitating state ANS management planning at a regional and federal level. Discussions during this session generated strategies that could be used to help overcome certain obstacles states are experiencing, such as a limited availability of resources. A significant recommendation voiced during these discussions was the need for stronger federal leadership to increase the amount of funding provided for SMP work as well as to establish enabling federal legislation to facilitate a regulatory approach to management (e.g., listing process for prohibited AIS and associated screening process). The importance of state and federal cooperation

and communication on regulatory issues was emphasized, as well as the need for other types of federal assistance such as staff, equipment and technical support. These types of activities were recommended to build state capacity for AIS prevention and control within their jurisdictions.

Recommendations

- 1. Increase Funding:** It is critical to significantly increase funding to support full-scale implementation of the state management plans (SMPs) in the Great Lakes region and across the country.

As with the regional ANS panels, a lack of full scale funding is considered the most significant obstacle impeding states in their efforts to develop and implement SMPs for AIS prevention and control. Over time, funding levels have not increased to accommodate the increasing number of approved plans. Therefore, funding for each individual SMP has progressively decreased. States are receiving approximately one-half the amount from the Task Force through the USFWS compared to just four years ago. The trend of significant per state funding reductions must be reversed if the federal government is to be an effective partner. To strengthen the federal – state partnerships under the ANS Task Force, funding levels must increase

- 2. Listing of AIS:** Federal and state governments need to work together with the regional ANS panels and other fora to prevent the introduction and spread of AIS through high risk vectors through a consensus-based listing process.
 - **National Screening Process:** Regional ANS panels and member state representatives should work collaboratively with the ANS Task Force to establish a national screening process under federal legislation for planned importations of live aquatic organisms, transported by pathways such as the aquarium and pet trade; nursery and water garden trade; aquaculture; live food fish industry; and the live bait industry, among others.
 - **Prohibited Species List:** Regional ANS panels and member state representatives should work in their respective regions with guidance from the ANS Task Force to develop regional lists of high risk species. These regional-based prohibited species lists should be based on the prohibited/banned AIS lists from the states/provinces. As part of the listing process, clean lists are recommended.
 - **State Authority:** The ANS Task Force and Congress should provide the state authority necessary to enforce moratoria on the trade of live organisms and establish more stringent regulations, based on the aforementioned regional-based prohibited species lists.
- 3. Rapid Response Planning:** Federal assistance in areas of funding, authority and technology is needed to facilitate the development and implementation of state-specific rapid response plans for integration into the state management plans.
 - **State Rapid Response Plans:** To assist in development of state rapid response plans, regional plans such as the *Model Rapid Response Plan for Great Lakes Aquatic Invasions* should be referenced to ensure consistency among the states. The regional rapid response plan, developed by the Great Lakes Commission with Panel guidance, is available online at <http://glc.org/ans/initiatives.html#rapid>. (*An executive summary has been included as an attachment to this testimony*)
 - **Communication Protocol:** Establishment of a communication protocol coordinating response on a local, state, regional and federal level is a priority in facilitating rapid response to new invasions. The protocol should provide a mechanism to ensure early and

consistent communication based on expert knowledge as well as an assessment of available resources into a jurisdictional authority's decision making process.

4. **Evaluation:** Performance measures need to be integrated as part of the SMP process based on plan goals and objectives in order to demonstrate measurable progress on prevention and control. The ANS Task Force can facilitate this effort by offering federal guidelines and recommendations for SMP performance measurement. Regional ANS panels should also be involved in the process to support states in their efforts to incorporate performance measurement and ensure regional consistency.
5. **Outreach Programs:** Increased funding is needed to strengthen and broaden the scope of the conduct and evaluation of AIS vector-specific outreach and education programs. Funding should be provided to those agencies and organizations experienced in the development and implementation of outreach programs, including federal, state and tribal agencies, Sea Grant and academic institutions, among others.

C. Strengthening AIS Prevention and Control Programs through Comprehensive Legislation at the Federal Level

Background: Regional Support for Comprehensive AIS Legislation at the Federal Level

As mentioned previously in this testimony, AIS prevention and control is strongly endorsed by the region through the *Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes* (GLRC). This regional-based policy initiative is based on a growing sense of urgency to promote action for restoring and protecting the Great Lakes. A priority recommendation of the GLRC's AIS strategy is prevention of further introductions through comprehensive legislation that addresses all of the AIS vectors identified as high risk, including: maritime commerce, canals and waterways, aquaculture, organisms in trade and recreational activities. In March of this year, six Great Lakes organizations representing a broad spectrum of regional stakeholders went on record in support of the National Aquatic Invasive Species Act (NAISA) as the vehicle for establishing comprehensive federal legislation. These organizations included the Council of Great Lakes Governor's, Great Lakes Commission, Great Lakes Fishery Commission, Great Lakes and St. Lawrence Cities Initiative, Chippewa-Ottawa Resource Authority, and the Healing Our Waters Coalition (*a copy of this statement has been included in the attached documents*). The following recommendations reflect those outlined in the GLRC Strategy, as related to amending current law (National Invasive Species Act 1996) to strengthen AIS prevention and control programs on a comprehensive national basis.

Recommendations

1. **Organisms in Trade:** Federal and state government must take immediate steps to prevent AIS introduction and spread through the trade and potential release of live organisms. Priority attention should be given to the following areas:
 - **Federal Screening:** Establish a federal screening process for live organisms proposed for importation based on risk assessment models for species and pathways;
 - **Species Classification:** Classify species proposed for trade into three lists: prohibited, permitted, and conditionally prohibited/permitted;
 - **Burden of Proof:** Place the burden of proof of non-injuriousness on the importer;
 - **Strengthen the Lacey Act:** Allocate sufficient resources to heighten the number of species listed under the Lacey Act as "injurious," to prevent the interstate transportation of harmful species within a reasonable timeframe. Although the USFWS was able to

overcome obstacles in listing black, bighead, and silver carps as injurious under the Lacey Act, the listing process was considered inordinately slow to effectively respond to the threats posed by these species.

2. **Enforcement:** Improve enforcement of laws governing the trade of live organisms and increase resources to ensure consistent enforcement of those laws. Significantly increase resources for the enforcement of laws governing the trade of live organisms.
3. **Canals and Waterways:** Enact measures at the federal, state and local levels that ensure the region's canals and waterways are not a vector for AIS.
 - **Chicago Sanitary and Ship Canal:** Authorize and provide full federal funding for the Chicago Sanitary Ship Canal AIS dispersal barrier system through passage of WRDA. The conference report for this legislation has been passed by the House and Senate. However, WRDA will not become law until signed by the President.
 - **Sea Lamprey Control Program:** Provide full federal funding for the Great Lakes Fishery Commission's sea lamprey control program to continue protection of the multibillion-dollar Great Lakes fishery.
4. **Integrated Pest Management:** Establish a Great Lakes AIS Integrated Pest Management Program (IPM) to implement rapid response, control and management programs for high risk AIS and assess the effectiveness of these IPM programs.
5. **Recreational Activities:** Implement outreach and educational programs on a wide-scale basis to address the high risk pathways associated with recreational activities. These programs should focus on changing behavioral practices and enhancing the responsibility of resource users in areas identified as high-risk based on level of recreational activities and confirmed or predicted AIS infestations.

Conclusion

Action on Great Lakes aquatic invasions is urgent given the costly, frequently irreversible AIS impacts that only worsen over time as invasive plants and animals multiply. Federal response and financial resources have been grossly insufficient to develop multifaceted solutions to these complex problems on a state, regional and national scale. The Great Lakes Commission strongly supports action by the House Natural Resources Subcommittee on Fisheries, Wildlife and the Oceans to strengthen prevention and control programs in this country. We urge you to consider developing comprehensive federal legislation that will establish the federal authority and provide the funding needed to stop aquatic invasions. It is also strongly recommended that the ANS Task Force provide the leadership necessary to continue building capacity among the regional ANS panels and their state representatives to develop and implement comprehensive and effective AIS prevention and control programs.