

# Lessard-Sams Outdoor Heritage Council

## Agenda Item Memo

DATE September 20, 2011

SUBJECT: Consideration of Funding for Aquatic Invasive Species

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### Background

The possible evidence of Asian carp in the St. Croix and Mississippi waterways has prompted a request from the Commissioner of DNR to consider funding a portion of a plan addressing the presence of these species in Minnesota waterways. The council heard a presentation by staff from the DNR, the National Park Service, the Mississippi River Fund, and the University of Minnesota at its August 23, 2011 meeting. The council recommendations are firming up and the council needs to begin consideration of this report.

### Suggested Motion

Staff sees four options:

“Motion to adopt a Call for Requests for Aquatic Invasive Species for proposals to be considered for appropriation recommendations in the 2012 Outdoor Heritage Fund cycle.”

“Motion to adopt a Call for Requests for Aquatic Invasive Species for up to \$10 million to be considered for appropriation recommendations in the 2012 Outdoor Heritage Fund cycle.”

“Motion to request the DNR to submit a Request for Funds addressing a portion of a plan for the control of aquatic invasive species to be appropriated with 2012 Outdoor Heritage Funds.”

“Motion to not consider additional proposals for Aquatic Invasive Species.”

### Suggested Procedure

Once motion is before the Council, it is up for questioning witnesses, discussion, amendments and final passage.

### Attachments

Draft Call for Requests for Aquatic Invasive Species

“LSOHC Alternatives for Addressing Emerging Issues of Aquatic Invasive Species”

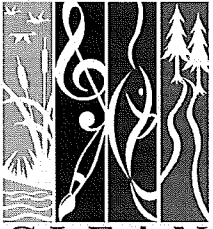
AIS Task Force Draft Report

“Governor Dayton’s Action Plan to Stop the Spread of Asian Carp in Minnesota Waters”

# Lessard-Sams Outdoor Heritage Council

## FY13 Call for Funding Request for

### Aquatic Invasive Species



**CLEAN  
WATER  
LAND &  
LEGACY  
AMENDMENT**

The Lessard-Sams Outdoor Heritage Council (L-SOHC) is charged with making annual recommendations to the Minnesota Legislature on appropriations from the Outdoor Heritage Fund (OHF). **Due to the emergent issue of aquatic invasive species, the Council is issuing a Call for Funding Requests for proposals that address strategies to control aquatic invasive species.** The request is open to all who want to apply. This Call for Requests recognizes the unique issues

associated with addressing aquatic invasive species. Program proposals should, however, address the issue programmatically, with the assumption that enhancement programs for waters affected by aquatic invasive species will contain multiple tactics, including, but not limited to electronic barriers, water control structures, biologic controls, genetic manipulation, and removal.

Successful applicants will:

1. Read and understand L-SOHC's vision for each L-SOHC Section and the Council's priority actions contained in this Call for Funding Requests **as they relate to aquatic invasive species**;
2. Develop a request addressing those priorities;
3. Complete the documents attached to the web form found at <http://www.lsohc.leg.mn/FY2013/index.html> by **4 p.m., Central Standard Time, November 1, 2011**. A confirmation e-mail will be sent within 48 hours of the closing time;
4. Be available for a formal presentation/hearing and answer questions based on accurate completion of the details you provide;
5. Be recommended for funding by the Council; and
6. Be appropriated funds in the 2012 Minnesota Legislative Session for fiscal year 2013 (July 1, 2012 – June 30, 2013).

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*"The mission of the Outdoor Heritage Fund, as specified in the state Constitution, is to protect, restore, and enhance wetlands, prairies, forests and habitat for fish, game and wildlife."*

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The L-SOHC will only consider funding requests that are:

- consistent with the Minnesota Constitution and state law;
- supported by the Legislature, the Governor and the public;
- sure to attain the immediate objectives of the strategic framework and plan for the Outdoor Heritage Fund; and
- priority actions identified by the Council.

The Council is currently estimating \$XX million will be available for appropriations from the Outdoor Heritage Fund (OHF) for expenditures for Aquatic Invasive Species in fiscal year 2013 (July 1, 2012-June 30, 2013). This amount would include any recommendations made for aquatic invasive species programs under this Call for Requests. This estimate will be revised in November, 2011.

**Key Dates:**

September 30	Call for Request posted
November 1	Call for Requests due
November 15	Council hearing on proposals and decision
December 13	Council meeting to review draft accomplishment plans

## L-SOHC Alternatives for Addressing Emerging Issue of Aquatic Invasive Carp Species

The Council has some options on how it approaches the issue of aquatic invasive carp specie. Those options and some thoughts about them are:

1. At the Aug. 23 meeting, ask the DNR to discuss their AIS strategy and allow them to submit a request as soon as possible to be heard on September 7 or 8.
  - Puts the burden on DNR for strategy and tactics, including permitting and construction
  - How is effectiveness measured?
  - Responsive to issue
2. Re-open application period specifically for aquatic invasive carp species and hear all requests on September 12 and 13, prior to Sept. 20 allocations.
  - Responds to request to re-open process
  - Provides an opportunity for all organizations to respond to issue
  - Calls into question integrity of process if the Call for Requests deadline is changed
  - What if no one responds?
  - How is effectiveness measured?
3. Set aside an amount of money to be dedicated to aquatic invasive carp species requests at the Sept. 20 allocation hearing either:
  1. for a special Call for Requests to be reviewed and allocated on November 15<sup>th</sup>, or
  2. for the DNR to coordinate an set of aquatic invasive carp species requests with other possible proposers.
    - Puts the executive branch in the driver's seat
    - The timeline appears to be not as responsive as other options

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## Asian Carp Action Plan – 8/25/11 DRAFT 3

This plan lays out a step-wise approach to prevent or minimize the impact of Asian carp in Minnesota. It was developed by an ad hoc Task Force that included state and federal agencies and local governments (see Appendix A for a list of participants). It builds upon national and regional plans and is consistent with the overall goals of the Asian Carp Regional Coordinating Committee.

Plan elements include: 1) early detection and response; 2) prevention; 3) mitigation and control; and 4) outreach and communication. Actions 1.1-4.3 (pages 1-4) were agreed to by all participants.

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### **1) Early Detection and response**

Individual Asian carp have been caught occasionally by commercial fishermen along the Minnesota and Wisconsin border in the Mississippi and St. Croix Rivers since the early 1990's (See Appendix B for a list of past captures). While present, Asian carp are not known to be in this area in significant numbers, and there is no evidence of natural reproduction. There have been no known captures upstream of Lock and Dam #2 (near Hastings, MN); however recent eDNA evidence indicated the presence of DNA from silver carp in the St. Croix River. Early detection is necessary to know if and when Asian Carp numbers increase or their range expands. A response plan is needed to identify specific actions should Asian carp be detected.

Detection is planned through an intensive program of ongoing fisheries surveys, monitoring commercial harvests, investigating public sightings, and sampling for Asian carp DNA (Actions 1.1-1.6).

**1.1 Continue annual fisheries monitoring programs in Pools 2-9.** These surveys include annual electrofishing, gill netting, seining, trammel netting, and hoop netting completed by the Wisconsin and Minnesota Department's of Natural Resources (DNR's), United States Fish and Wildlife Service (USFWS), and the Long Term Resource Monitoring Program (see Appendix C for details on these programs). A standard protocol will be established for data collection, recording, and processing of collected Asian carp.

**1.2 Monitor commercial fishing catch in Pools 2-9.** Wisconsin and Minnesota DNR's continue to closely monitor commercial fishing effort and harvest. Commercial operators are required to report their catch monthly. In Minnesota operators are required by law to

notify the DNR if they capture any Asian carp, and are strongly encouraged to do so in Wisconsin.

**1.3 Collate and update existing information on fisheries surveys, Asian carp captures, and prevention efforts within Upper Mississippi River states.** Complete a report that compiles existing information from Iowa, Minnesota, Wisconsin, and Illinois on the location and movements of Asian carp, sampling programs, and efforts to prevent or minimize Asian carp impacts. Update report annually or as needed.

**1.4 Request public to report potential sightings.** Increasing awareness and requesting public assistance in reporting potential Asian carp sightings (i.e. jumping fish) could help identify Asian carp presence. A formal reporting process including points of contact, data recording, data storage, and validation is being developed.

**1.5 Conduct environmental DNA (eDNA) testing.** Asian carp DNA can be detected in water samples. This technology has been used successfully in the Illinois River to identify potential presence of Asian carp, and most recently was used in the Upper Mississippi and St. Croix Rivers. Annual or more frequent sampling at locations where there is less standardized fisheries monitoring, and based upon previous eDNA results will improve Asian carp detection capabilities. Additional testing should be considered at the mouth of major tributaries to the Minnesota, Mississippi, and St. Croix Rivers.

**1.6 Targeted commercial fishing gear to capture Asian carp.** Commercial fishermen on the MN or WI boundary waters of the Mississippi River have the knowledge and equipment needed to collect Asian carp. A contracting process is being established whereby qualified commercial operators can be deployed as directed by DNR staff to sample for Asian carp.

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## 2) Prevention

Prevention includes permanent or temporary barriers and deterrent structures for preventing or slowing the upstream movement of Asian carp. Mississippi River dams from Hastings to the Iowa border (Lock and Dam 2-9) are constructed and operated such that the gates are removed from the water during high flows, allowing Asian carp to pass. Exceptions are Upper St. Anthony Falls and Lock and Dam #1. These are high dams, and the only way fish can migrate past is through the lock chambers.

Alternative deterrent technologies could restrict or slow Asian carp, and in combination with permanent barriers and other removal techniques could help reduce impacts.

**2.1 Complete feasibility study for a permanent fish barrier at Upper St. Anthony Falls.** The feasibility study must evaluate alternatives and associated impacts. Technologies that allow navigation, but are 100% effective in preventing the establishment of Asian carp above the barriers, are preferred. A comprehensive evaluation of ecological, economic, recreational, commercial and other impacts of Asian carp spreading upstream must be part of the study.

**2.2 Create back-up barrier at the Coon Rapids Dam.** In 2011, the Minnesota Legislature and Governor approved repairing the Coon Rapids Dam as a fish barrier. While not 100% effective, the dam could add redundancy to Action 2.1 by creating additional protection.

**2.3 Evaluate and if feasible install deterrent barriers (acoustic, bubble, light, etc) to slow Asian carp movement at strategic locations.** Alternative technologies, while untested in large river systems, offer potential solutions to prevent or slow fish passage. Acoustic, sound, light, and electric barriers, as well as new technologies currently being developed (ie. hydroguns) could deter Asian carp. These technologies, alone or in combination, should be considered at key sites as follows: mouth of the St. Croix River at Prescott, WI; Lock chambers at Locks and dams #1, #2, #5, and #19. These locations can help slow movement into the Upper Mississippi River, Minnesota River, St. Croix River, and Lake Pepin, respectively. Barriers at Lock and Dam #19 could still prevent the spread of Black Carp and other potential invasive species into the Upper Mississippi. Other potential sites, such as near Mankato on the Minnesota River where flood control projects have confined the channel, and at the mouth of key tributaries, should also be considered.

**2.4 Explore options to voluntarily limit lock usage.** Voluntarily reducing the number of lockages, while long term solutions to prevent fish from moving through the locks are being developed, will reduce the chances of Asian Carp passing through the lock.

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### **3) Mitigation and Control**

Mitigating and controlling populations of Asian carp is a critical element of this plan. Despite barriers and other technologies, there are pathways that may result in movement of Asian carp, including illegal or unintentional transport by bait dealers, anglers, and others. Developing new tools to control Asian carp populations and improving water quality and habitat for native species so they can compete with Asian carp are important long-term strategies.

**3.1 Support and accelerate research on behavioral and long term control methods.** Research is ongoing regarding Asian carp physiological and behavioral controls, such as attractants, toxicants, and deterrents. Supporting this work through funding, permitting, evaluation and other measures necessary to complete studies and implement projects is needed.

**3.2 Physically remove Asian carp.** Utilize commercial fishing, intensive sampling by MN and WI DNR and USFWS, and other potential control methods to remove Asian carp if warranted.

**3.3 Improve water quality and habitat so native species can better compete with Asian carp and other invasive species.** A list of potential habitat and water quality projects and their anticipated benefits is provided in Appendix D.

**3.4 Evaluate more restrictive harvest regulations for some species of commercial and sport fish.** Restrictive harvest regulations may improve the size and age structure of some native fishes and increase predation on Asian carp, along with improving the health of commercial species that compete directly with Asian carp for food. A study evaluating the recreational, ecological, and economic impact of more restrictive harvest regulations should be completed.

#### **4) Outreach and Communication**

Communication between agencies and outreach to the general public, media, legislators, and local officials is critical to the success of this action plan. An informed public will improve our chances for preventing or minimizing impacts of Asian carp. Outreach and communication actions focus on establishing primary contacts, web links, news releases, and media events.

**4.1 Establish and maintain a contact list of agency staff for media access.**

**4.2 Link agency websites.** The Asian Carp Regional Coordinating Committee and the National Asian Carp Task Force have excellent web sites that are updated frequently with information about Asian carp. Providing links to these websites will prevent duplication of effort and provide access to the best available information.

**4.3 Provide regular news releases and conduct media events.** These actions will bring attention to Asian carp issues and highlight the activities of the Task Force. MN DNR and National Park Service (Mississippi National River and Recreation Area and St. Croix National Scenic Riverway) will take the lead on preparing and distributing these releases and scheduling media events.

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The following action was discussed; however there was no consensus agreement. Each organization/agencies position is provided below.

**Emergency closure of Upper St. Anthony Falls and/or Lock and Dam #1.** Upper St. Anthony Falls and Lock and Dam #1 (Ford Dam) are high-head dams that block fish passage except through the lock chamber. The Corps of Engineers does not have authority to close these locks due to invasive species under emergency conditions. Such action will have ecological, social, and economic effects.

“MN Department of Natural Resources: Lock and Dam #1 (Ford Dam) and Upper St. Anthony Falls are the only locations on the commercially navigable portion of the Upper Mississippi River where it is possible to establish 100% effective barriers to fish passage. Other locks and dams are managed such that the gates are pulled out of the water during high flows, allowing fish to pass. Deterrent barriers (bubble/sound) at lock chambers and other sites can help slow passage, and we support their use, however they will not eliminate the migration of Asian carp upstream. Authority for the Corps of Engineers to close these locks under emergency conditions is needed. A feasibility study that addresses the economic, recreational, legal, ecological, and operational impacts of an emergency or non-emergency closure and how those impacts can be mitigated should be completed. Until a feasibility study is completed and a 100% effective barrier is installed, however, the locks should be closed if there is an imminent threat from Asian carp. This is the best option currently available for protecting aquatic resources and the recreational and tourism industries of central and northern Minnesota.”



## Action Plan Consensus Actions

Action	Lead organization	Estimated cost	timeframe
<b>Detection and Response</b>			
1.1 – Continue annual fisheries monitoring	MN, WI DNR	Existing funding	ongoing
1.2 – Monitor commercial fishing	MN, WI DNR	Existing funding	ongoing
1.3 – Collate and update existing information	NPS	Existing funding	1 <sup>st</sup> Report by 1/1/2012
1.4 – Request public to report sightings	MN DNR	Existing funding	ongoing
1.5 – Conduct eDNA testing	NPS, MN DNR, USFWS	\$75,000/year	Annually
1.6 – Targeted commercial fishing	MN DNR	\$6000/week	When triggered in response plan
<b>Prevention</b>			
2.1 – Complete feasibility study for a permanent fish barrier at Upper St. Anthony Falls	Corps, USFWS	???????	Feasibility study completed 2013
2.2 – Create backup barrier at Coon Rapids dam	MN DNR, Three Rivers Park District	\$16 million – funded through bonding bill	2014
2.3 – Evaluate and if feasible install deterrent barriers	USGS, USFWS, MN DNR, U of M	\$10-15 million	2012
2.4 - Explore options to voluntarily limit lock usage	Corps, navigation industry, local gov'ts	Existing funding	Ongoing
<b>Mitigation and Control</b>			
3.1 – Support and accelerate research on behavioral and long-term controls	USGS	?????	ongoing
3.2 – Physically remove Asian carp	MN, WI DNR, USFWS	\$50,000/year	When triggered in response plan
3.3 – Improve water quality and habitat for native species	see Appendix XX		

3.4 – Evaluate more restrictive harvest regulations	MN DNR	Existing funding	????
<b>Outreach and Communication</b>			
4.1 – Establish and maintain contact list	NPS	Existing funding	Sept 2011
4.2 – Link to websites	Each partner organization on Task Force	Existing funding	January 2012
4.3 - News releases and media events	DNR, NPS	Existing funding	As needed

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## Appendix A –ad hoc Asian Carp Task Force Membership

### Agency or organization

- National Park Service (co-chair)
  - Mississippi National River and Recreation Area
  - St. Croix National Scenic Riverway
- Minnesota Department of Natural Resources (co-chair)
- US Army Corps of Engineers, St. Paul District
- US Fish and Wildlife Service
- US Geological Survey
- Wisconsin Department of Natural Resources
- City of Minneapolis
- City of St. Paul
- City of Hastings
- Prairie Island Indian Community
- Shakopee Mdewakanton Sioux Community

### Technical advisors

- University of Minnesota
- Three Rivers Park District
- Mississippi River Fund
- St. Croix Valley Foundation
- Saint Paul Port Authority

### Observers

- Friends of the Mississippi
- Upper Mississippi River Waterways Association

**Appendix B – history of Asian Carp captures, Twin Cities to Lock and Dam #9**

<b>Location</b>	<b>Species</b>	<b>Date</b>	<b>Number caught</b>	<b>Type of gear</b>
St. Croix River	Bighead adult	10/17/1996	1	commercial
Lake Pepin – near Camp Lacupolis	Bighead adult	10/23/2003	1	commercial
Lake Pepin – near Frontenac	Bighead adult	10/3/2007	1	commercial
Miss River Pool 8 – gravel pit - WI	Bighead adult	11/1/2008	3	commercial
Miss River Pool 8 – Running Slough	Silver adult	11/1/2008	1	commercial
Miss River Pool 5a – Polander Lake	Bighead adult	1/1/2009	1	commercial
Miss River Pool 9 – Ferryville (WI/IA)	Bighead adult	1/30/2009	1	commercial
Miss River Pool 8 – WI side	Silver adult	3/10/2009	1	commercial
Miss River Pool 9 – Winneshiek Slough (WI/IA)	Silver adult	2/14/2011	1	commercial
St. Croix River - near Prescott	Bighead adult	4/18/2011	1	commercial

## Appendix C – ongoing fisheries monitoring programs

### Long Term Resource Monitoring Program (LTRMP)

The LTRMP is part of the federal Environmental Management Program which is administered by the US Geological Survey with oversight from the Corps of Engineers. Funding is passed to field offices in the upper river states, including Wisconsin and Minnesota, to conduct long term resource monitoring. Field stations are located in LaCrosse, WI with a focus on Pool 8, and in Lake City, MN with a focus on Pool 4. Fisheries surveys include:

- 3 sampling periods from June-October using the following gears in Pool 4 and Pool 8:
  - Baited hoop nets (large and small)
  - Fyke nets
  - Mini-fyke nets
  - Electrofishing
  - Trawling (tailwaters only)

### Minnesota Department of Natural Resources

Monitoring is completed annually on the Mississippi River from Pool 2 to the Iowa border, and on the St. Croix River. Field office in St. Paul conducts surveys in Pool 2 and the St. Croix River, and the field office in Lake City conducts surveys from Pool 3-9 (Hastings to the Iowa border).

Annual effort by program is as follows:

#### Lake Pepin Large Lake Program:

- Seining – July
- Trawling – August
- Adult fish shoreline electrofishing – September
- Gill netting – October
- Juvenile fish shoreline electrofishing – October

#### Major River Survey Program:

- Pool 3-9, excluding Pool 4 and Pool 8
- Backwater seining – July
- Backwater and side channel electrofishing – October

#### Metro Area – St. Croix River and Mississippi River

- Main channel and backwater electrofishing – spring – fall
- Gill netting – Lake St. Croix
- Trap netting – Lake St. Croix
- Hoop netting

### **Wisconsin Department of Natural Resources**

Following gears are used in various pools and locations throughout the open water season:

- Fyke netting
- Hoop netting
- Electrofishing
- Trammel netting

### **United States Fish and Wildlife Service**

Conducts annual fish collections by electrofishing in Pools 3, 4, and 7 for the National Fish Health Survey. In addition, fyke and hoop netting is conducted in Pool 9 backwaters and the main channel during the spring.

## Appendix D – Water quality and habitat improvement projects

Improving water quality and habitat will benefit native species and increase their ability to compete with Asian carp. For example, in Mississippi River pools with good water quality and healthy aquatic vegetation, common carp comprise less of the fish community than in other pools with poor water quality and little or no aquatic vegetation. Locations on the Illinois and Mississippi River where Asian carp are currently abundant are generally those with turbid water, little or no aquatic vegetation, and poor overall habitat.

Habitat restoration has been successful on Mississippi River pools downstream of Lake Pepin. Island construction projects and dredging have rebuilt the physical structure that has been lost due to wave erosion and sedimentation and increased depth for native fish. Water level management, especially summer water level drawdowns, have reestablished aquatic vegetation for emergent species like arrowhead and provided critical habitat for fish and wildlife.

Water quality improvements through Total Maximum Daily Load (TMDL) implementation plans could improve water clarity and result in increases in aquatic vegetation.

Island construction and water level management projects have been proposed on the Mississippi River from the Twin Cities to Lake Pepin in upper Pool 4, but have not been funded. Funding for projects further downstream has come primarily through the Environmental Management Program, managed by the Corps of Engineers. This program provides 100% federal funding for projects on federal land, but requires a non-federal cost share on non-federal lands. Most of the Mississippi River and floodplain from the Twin Cities to Lake Pepin is on state, tribal, or private land.

Projects that have been discussed for the Mississippi River from the Twin Cities to Lake Pepin include:

- Construct islands in Spring Lake and Lower Pool 2 (near Hastings)
  - Estimated cost \$8 million
- Construct islands in North and Sturgeon Lakes in Pool 3 (upstream of Red Wing)
  - Estimated cost \$8 million
- Water level drawdowns in Pool 2 and Pool 3
  - Estimated cost \$2 million

**GOVERNOR DAYTON'S ACTION PLAN  
STOP THE SPREAD OF ASIAN CARP INTO MINNESOTA WATERS**

September 12, 2011

**THE ISSUE**

Whereas Asian carp have had a destructive impact on the ecology and fisheries in other states;  
Whereas Asian carp pose an imminent threat to Minnesota's lakes and rivers, because they are advancing northward in the Mississippi River at an alarming rate and are poised to enter southern Minnesota from Iowa lakes and streams; and  
Whereas Minnesota's local economies and cultures depend on the health of its aquatic resources;  
Therefore, Governor Dayton empowers his executive agencies to pursue the following actions:

**THE ACTIONS**

- 1) Support a cooperative approach among state and federal agencies to limit the spread of Asian carp in Minnesota and its border waters;
- 2) Recognize that the Asian carp invasion is an urgent issue requiring immediate action and work together to obtain necessary funding and authority to support efforts to limit the spread of Asian carp in Minnesota and its border waters;
- 3) Formally charter a multi-organizational Asian Carp Task Force to facilitate strategic discussions, conduct collaborative problem solving, and provide recommendations to state and federal agencies on how to limit the spread of Asian carp into Minnesota;
- 4) Support immediate congressional action to give the Army Corps of Engineers emergency authority to close the Upper St. Anthony Falls Lock, and Lock and Dam #1, if Asian carp are detected nearby;
- 5) Support immediate congressional action to fund a feasibility study that examines the economic, ecological, recreational, legal, and operational impacts of making Upper St. Anthony Falls Lock a permanent fish barrier; and
- 6) Support long-term actions recommended by the ad hoc Asian Carp Task Force:
  - a. Enhance information on Asian carp population size and movements;
  - b. Evaluate and if feasible install deterrent barriers at strategic locations to slow Asian carp movement, such as a "bubble barrier" at the mouth of the St Croix River;
  - c. Accelerate research on fish behavior control and removal technologies;
  - d. Improve habitat for native species.
- 7) Continue to be involved in future discussions addressing the threat of Asian carp in Minnesota.