

Mississippi River Basin Panel Meeting

July 23-24, 2013
Schiermeier Olentangy River Wetland Research Park
Columbus, OH

Decisions Points and Action Items

1. Mike Hoff will run round goby through climate match and share the results with panel members.
2. Greg Conover will send the electronic files provided by Mandy Beall for the AIS Field Guide to Luci Cook-Hildreth.
3. Nick Schmal will follow-up with Steve Schainost regarding the Assistant State Attorneys General workshop.
4. Steve Schainost will report back to the Executive Committee with recommended next steps regarding the Assistant State Attorneys General workshop.
5. Nick Schmal will contact the National Mississippi River Museum and Aquarium through Wildlife Forever to see if the Panel can get total final cost of the AIS kiosk design for use by the panel member states and agencies.
6. Curtis Tackett will contact members of the National Aquatic Resources Education Association (<http://www.aneanet.org/>) prior to their October 2014 national conference in Traverse City, Michigan.
7. Duane Chapman will contact AWO in hopes of getting a person to our meeting regarding barges as vectors of plants and external things like apple snail eggs.
8. Peter Sorensen will provide Duane Chapman with the 2012 AFS symposium abstract and speaker list for final project report.
9. States should consider providing ANS outreach materials to pay lake operators.
10. Sue Thompson will devise a potential strategy to acquire the knowledge we need and an estimate of what it would cost to investigate paylakes in a three-state area.
11. The Research and Risk Assessment Committee will provide a letter to the Executive Committee regarding the potential transfer of ANS by fracking activities (i.e., water transfer) to be a substantial concern.
12. Duane Chapman will contact Dr. Silvia Secchi (SIU) to discuss the questions addressed by the Research and Risk Assessment Committee members and evaluate the possibility of developing of a “business model” (using the term model in the sense with which ecologists are familiar) into which different values could be plugged into parameters in a way that would be useful for managers to evaluate the potential success of different Asian carp marketing plans.

13. The Executive Committee will review the panel's budget and make decisions regarding the panel's FY2014 work plan once the panel's FY2013 funding is received from the FWS.
14. The Executive Committee will propose a discussion of a national AIS action plan at the fall ANSTF meeting.
15. The Executive Committee will review the draft letter submitted by the Research and Risk Assessment committee regarding fracking as a potential vector for the spread of AIS and consider submitting the letter as supporting information for the panel's recommendation.
16. The Executive Committee will propose an update on the ANSTF members' progress to fund and implement the 40 prioritized recommendations from the national Asian carp management and control plan.
17. The Executive Committee will propose updates from USDA and USACE on the agencies' biocontrol development programs at the fall ANSTF meeting
18. The Executive Committee will finalize the draft recommendations develop by the panel members and submit them for discussion at the fall ANSTF meeting.
19. The next panel meeting will be scheduled in late-March or early-April.

Draft ANS Task Force Recommendations

1. The ANSTF should adopt, fund, and implement a national AIS action plan.
2. The ANSTF should complete a pathway risk assessment of water transportation associated with fracking and develop an issue white paper that outlines concerns.
3. ANSTF member agencies should reinstate (or strengthen) biological control development programs for AIS.

Recommendations for MRBP Committees

1. The Research and Risk Assessment Committee should investigate development of a model that helps explain if stocked diploid grass carp are enhancing natural reproduction in waters where management agencies are using diploid grass carp in management programs. – Submitted by Prevention and Control Committee
2. The Executive Committee should dedicate a significant portion of time at next MRBP meeting to discuss grass carp, including an update on the National Analysis of Grass Carp (*Ctenopharyngodon idella*) Regulation, Production, Triploid Certification, Shipping, and Stocking project. (May require some discussion with contractor prior to commitment). – Submitted by Prevention and Control Committee

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Agenda

Tuesday, July 23

- 7:45 Registration and sign-in
- 8:00 Welcome and Introductions (Luci Cook-Hildreth, Scott Zody)
- 8:15 Record Keeping of International Imports of Live Aquatics (Tamesha Woulard)
- 9:15 Round Gobies (Tim Campbell)
- 9:45 Is it Time for a National AIS Action Plan? (Mike Hoff)
- 10:15 Break
- 10:30 Predicting Asian Carp Recruitment in Reservoirs (Tatiana Garcia)
- 11:00 Asian Carp Commercial Harvest Tournament (Ron Brooks)
- 11:15 Ohio River Basin Asian Carp Action Plan and 2013 Monitoring (Ron Brooks)
- 11:30 Midwest Governors Association's Regional AIS Summit (Emily Marthaler)
- 12:00 Lunch
- 1:00 AFWA Invasive Species Committee Update (Kim Bogenschutz)
ANSTF and Panel Principals Updates (Susan Mangin)
MICRA Updates (Steve Shults)
MRBP Coordinator Report (Greg Conover)
- 2:00 Committee Breakouts (All)
- Review of New Orleans Meeting Action Items
 - Review on-going projects and 2013 work plan
 - Develop 2014 work plan
 - Identify recommendations for the ANSTF
- 5:00 Adjourn

Wednesday, July 24

8:00 Public Comment Period

8:30 Committee Reports (Committee Chairs)

9:30 2013/2014 Work Plan (Cook)

- Recommendations and Decision Items for ANSTF

10:15 Set Date and Location for Next MRBP Meeting (Cook)

10:30 Break

11:00 Tour Schiermeier Olentangy River Wetland Research Park

- Meet in the lobby of the Heffner Building shortly before 11:00 AM (EDT)

12:00 Lunch

Joint Session with MICRA Executive Board

- Asian Carp Commercial Harvest Workshop -

1:00 Introductions and Overview (Ron Benjamin)

1:10 Habitat and Life Cycle Needs, and Recruitment as Relates to Harvest (Chapman)

1:35 Overview of Illinois DNR Contract Fishery (Kevin Irons)

2:00 Modeling Effects of Asian Carp Harvest in Upper Illinois River (Jim Garvey)

2:25 Perspective from a State without Commercial Harvest (Chris O'Bara)

2:50 Financial Realities of Private Business Development (TBD)

3:15 Break

3:30 Round Table Discussion

5:00 Adjourn

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Participants

Name	Affiliation
Nick Schmal	U.S. Forest Service
Mark Oliver	Arkansas Game and Fish Commission
Tatiana Garcia	University of Illinois
Rich Carter	Ohio Department of Natural Resources
Mike Hoff	U.S. Fish & Wildlife Service
Kevin Irons	Illinois Department of Natural Resources
Steve Shults	Illinois Department of Natural Resources
Eileen Ryce	Montana Fish, Wildlife, and Parks
Peter Sorensen	University of Minnesota
Louie Thompson	Catfish Farmers of America
Eric Fischer	Indiana Department of Natural Resources
John Navarro	Ohio Department of Natural Resources
Ron Brooks	Kentucky Department of Fish and Wildlife Resources
Curtis Tackett	Oklahoma Department of Wildlife Conservation
Luci Cook-Hildreth	Texas Parks and Wildlife Department
Brad Parsons	Minnesota Department of Natural Resources
Eugene Braig	Ohio State University
Sam Finney	U.S. Fish & Wildlife Service
Emily Marthaler	Midwestern Governors Association
Duane Chapman	U.S. Geological Survey
Konrad Dabrowski	Ohio State University
Steve Rider	Alabama Division of Wildlife and Freshwater Fisheries
Sue Thompson	Carnegie Mellon University
David Roddy	Tennessee Wildlife Resources Association
Tim Banek	Missouri Department of Conservation
Jessica Howell	Kansas Department of Wildlife, Parks, and Tourism
Kim Bogenschutz	Iowa Department of Natural Resources
Dennis Riecke	Mississippi Department of Wildlife, Fisheries and Parks
Joanne Grady	U.S. Fish & Wildlife Service, Region 6
Jason Goeckler	Kansas Department of Wildlife, Parks, and Tourism
Earl Chilton	Texas Parks and Wildlife Department
Michael Durkalec	Cleveland Metroparks

Frank Jernejcic	West Virginia Department of Natural Resources
Brian Wagner	Arkansas Game and Fish Commission
Tamesha Woulard	U.S. Fish & Wildlife Service
Greg Conover	U.S. Fish & Wildlife Service - MRBP Coordinator

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Meeting Notes

1. Welcome and Introductions

Luci Cook called the meeting to order and thanked Ohio for hosting the meeting.

Ohio Division of Wildlife Chief Scott Zody welcomed the MRBP to Ohio and provided opening remarks.

Discussion:

The two pieces of draft legislation on AIS (H.R.709/S.365 Upper Mississippi Conservation and River Protection Act, H.R.358/S.125 Strategic Response to Asian Carp Invasion Act) referenced by Chief Zody are a good start, but they are really focus on just a very small piece. It would be nice to see AFWA and others push for more holistic legislation. We also need a better approach to keeping AIS out of the country to begin with.

2. Record Keeping of International Imports of Live Aquatics

Tamesha Woulard, USFWS, provided an overview of the USFWS's invasive species enforcement authorities, data collected by the Wildlife Inspection Program, the USFWS's data collection system, and the Wildlife Inspection Program.

USFWS's authorities come from two parts of the Lacey Act and the Endangered Species Act. USFWS Office of Law Enforcement has a responsibility for regulating the importation and exportation of all live exotic wildlife, but it has no authority to enforce health risk type laws and regulations other than what is listed in 50 CFR Part 16. The USFWS's other authorizations in the Lacey Act are related to wildlife trafficking. The part of the Lacey Act that deals with Injurious Wildlife is 18 USC 42 and 43.

The information USFWS collects for general permitting regulations and for import/export regulations must go through the OMB approval process. OMB must approve of the burden put on trade to collect the data. The Endangered Species Act requires any person or company to obtain permission to engage in business as an importer or exporter of fish and wildlife. The licensee must keep records of the

import or export and subsequent disposition of the fish and wildlife. USFWS has no authority to track imported fish or wildlife beyond its original distribution. USFWS Office of Law Enforcement stores the data it collects in a system called Law Enforcement Management Information System (LEMIS). Import/export data collected by the USFWS such as species, quantity, country of origin, etc. is stored in LEMIS. The information stored in LEMIS is shared with other agencies and divisions via FOIA request. This system was built in 2000 and provides USFWS with access to the information stored in the system necessary to conduct law enforcement. However, an Executive Order currently being drafted by the National Security Staff and the Department of Homeland Security threatens the future viability of the system. An initiative to create a single window filing system wherein the trade will only have to go to one source, Customs and Border Protection (CBP), to submit their import/export paperwork. This system is owned and operated by CBP and thus the information in the system no longer belongs to the FWS.

USFWS has approximately 140 wildlife inspectors at 18 designated ports and 20 other locations along the border. Inspectors are primarily located at designated ports. Wildlife Inspectors review fish and wildlife declaration packages, permits, documents, and physically inspect shipments. Tamesha showed an example declaration package and explained the types of data collected. All of the information is scanned into the system and therefore is not in a format that can be queried. However electronic copies of the records can be obtained and searched via FOIA.

The importer (or broker) must notify the USFWS a minimum of 48 hours prior to arrival of an import shipment. USFWS then notifies the importer if the shipment is going to be inspected. Once a shipment has passed inspection it is cleared through Customs. The 48 hour notice gives Wildlife Inspectors the opportunity to prepare for inspection of a shipment.

Discussion:

Water hyacinth was prohibited for importation and trade in 1956 by Congress, but no federal agency was specified to be the lead for enforcement. The Lacey Act does not authorize the USFWS to list any plants as injurious wildlife.

USFWS Law Enforcement Officers can only enforce those regulations within USFWS authority, e.g. they are not able to enforce drug related regulations.

States have been able to request data in LEMIS and use that data when deciding whether or not to issue licenses for paddlefish.

Much of the data collected prior to 2000 was corrupted and is not available.

Importers are required to include both the common and scientific names of all imported fish and wildlife on the invoice that accompanies the declaration form. Sometimes the records are hand written which can cause problems reading the names and other information. Wildlife Inspectors cannot be expected to be able to identify and know the names of all fish and wildlife around the world. This is managed by focusing on what is prohibited. Species identification training is done on the job. Wildlife Inspectors are provided books, tablets, and other resources. Wildlife Inspectors do not just look for organisms prohibited in Part 16. They must be aware of what organisms are prohibited for export from the exporting country, and other foreign laws.

The declaration forms have specific codes that importers use to identify the type of fish and wildlife being imported, e.g. marine tropical fish or freshwater tropical fish. Importers are then required to list the common and species names of all the organisms on an invoice that accompanies the declaration form.

USDA APHIS is the agency that looks at fish health and disease. They do not accompany USFWS Wildlife Inspectors. Other agencies are good about contacting USFWS when they encounter live fish or wildlife in shipments they are inspecting for other reasons. They will get calls for hitchhikers that have been found in shipments.

USFWS has fewer Wildlife Inspectors and therefore a smaller percentage of shipments are physically inspected. Sequestration has also impacted the number of inspectors and inspections. Inspection will depend on who is importing (record of violations or not), what is declared, originating country, etc. Inspectors are forced to prioritize and make difficult decisions about which shipments to inspect.

3. Round Gobies

Tim Campbell, Wisconsin Sea Grant, began with a quick overview of basic information on round gobies including: Identification, native range, introduction and distribution in the U.S., feeding habits, habitat requirements, and reproduction.

Through his outreach work, Tim has found that fishermen are very interested in using round gobies as smallmouth bass bait. Some fishermen are aware that gobies will eat zebra and quagga mussels and can create problems with bioaccumulation. Mostly the public tends to agree that round goby are a nuisance.

Tim became interested in the impacts of round gobies in streams and worked on this for his graduate project. Tim reviewed a number of studies to provide information on stream distribution, impacts, and control. A landscape model did best at predicting round goby distribution in tributaries around Lake Michigan. The key variables were

watershed area, stream slope, and watershed gradient. During his research in Michigan tributaries of Lakes Huron, St. Claire, and Erie, Tim found round gobies in a wide variety of stream types including high quality, urban, and large agricultural streams, and small streams. In general, streams with gobies present tended to be bigger, without a lot of canopy cover and large wood, shallow water, and the watershed gradient was less steep. Goby abundance has been shown to be higher in disturbed systems; riprap increases goby habitat. Low conductivity streams may deter invasion.

Tim summarized impacts of round gobies and provided (via email) a list of references documenting impacts on native species.

Tim has done some gear comparison work for sampling round gobies using minnow traps, backpack electrofishing, and seining. In streams with known goby populations, seining was most effective at detecting gobies (80% success), electrofishing was 58% successful, and minnow traps were 50% successful. With triple pass seining you can have 95% certainty that you would detect gobies when they are present. Multiple gears provide more certainty.

There has been some work looking at controls for round gobies. There is research looking into pheromone trapping. Anecdotal data has indicated that trapping has successfully reduced local goby populations. Hydraulic modifications can be used to limit distribution.

Discussion:

Gobies can tolerate relatively cold water temperatures (36-38°F), but Tim was not certain about warm water tolerance.

Gobies tend to like more brackish, higher conductivity waters. There is a lot of potential habitat in the Great Lakes region, and probably throughout the Midwest and much of the U.S. Natural distribution is much further south than the Great Lakes. It would be interesting to look at the climate match for round gobies.

Putting round gobies on prohibited species list is a good idea to keep people from moving them around and limit their inland distribution. Bait bucket transport is an area of concern. Some states have altered fishing regulations to protect smallmouth bass and other fish populations. Regulations will be useful for stopping overland transport, but options for containing populations and minimizing distribution in river systems are limited.

Type of stream is a more likely factor in determining goby presence than habitat. Small streams with high slope make for less desirable goby habitat.

Action Item:

! *Mike Hoff will run round goby through climate match and share the results with panel members.*

4. Is it Time for a National AIS Action Plan?

The Nonindigenous Aquatic Nuisance Prevention and Control Act (NANPCA) was up for reauthorization in 2000. Mike Hoff provided an overview of the draft framework for a national AIS action plan.

Discussion:

The costs of AIS to the U.S. are in the billions annually. Although the cost to fund and implement a national AIS action plan is large, there are cost benefits to doing so. This is a big issue and the solutions are going to come with a big price tag. There is no reason that a user pay system similar to the PR and DJ programs couldn't be considered to fund a portion of this. Residents of Minnesota, for example, voted to raise taxes to increase state revenues to support AIS prevention and control activities.

It was recommended to include biocontrol programs in the discussion of IPM programs.

NATIONAL ACTION PLAN TO MINIMIZE ECOLOGICAL IMPACTS OF AQUATIC INVASIVE SPECIES

I. Problem Statement

Significant progress, which resulted from implementation of the Clean Water Act, to restore damaged ecological diversity and integrity of large aquatic ecosystems in the United States (US) has been reversed by the present crisis of aquatic invasive species (AIS) impacts. An “invasive species” is defined as a species: 1) that is not native, and 2) whose introduction causes, or is likely to cause, harm to economies, ecosystems, and human health (Executive Order 13112). The United States continues to face wave after wave of aquatic species invasion, yet we and our aquatic ecosystems cannot afford even a single new invader. A new approach is needed to deal with this crisis. Our recommended approach is to implement this *National Action Plan to Minimize Ecological Impacts of Aquatic Invasive Species* (Plan). This plan builds on the need to reauthorize the Nonindigenous Aquatic Nuisance Prevention and Control Act, as amended.

AIS have entered, and continue to enter and spread within, the United States through pathways such as ship ballast-water discharge, canals, recreational activities, and the release or escapement of organisms imported for a variety of uses. This Plan focuses on the need for enhanced, collaborative efforts to lead a strategic, action-oriented approach to minimize risk of AIS introduction by means of those pathways, and also focuses our collective efforts to implement an integrated pest management approach to containing and controlling established populations of AIS. We assume that minimizing risks of introducing AIS will result in an outcome of a reduced rate of introduction, establishment, and impact of those species. We assume that containing and controlling established populations of AIS will result in an outcome of reduced ecologic and economic impacts of those species. Reduced impact of AIS is a critically important goal as we continue our collaborative efforts to conserve aquatic resources.

II. Goals and Milestones

We must work collaboratively and cooperatively so that we and our partner management agencies understand: 1) risks of introductions, spread, and impacts of AIS, and 2) how to coordinate and cooperate on management actions that most effectively and efficiently minimize those risks and impacts. Thus, our strategic approach for AIS is that of risk assessment and risk management.

The primary goals for this action plan are described below. More **details, about strategic approaches to help lead action to attain those goals, are described in the Recommendations Section below.**

- **Goal 1** – Our ultimate goal is for the U.S. is to **prevent all additional introductions** of AIS.
 - Although that goal may not be attainable in the near term, we support implementation of actions intended and designed to best achieve it (i.e., develop best available management practices) under present circumstances
 - A more attainable near-term goal is to reduce, from scientifically documented high or moderate risk of establishment and impact to low risk, introductions of AIS into the U.S.
 - **Milestones:**
 - A list of priority species (i.e., high risk of introduction, establishment, spread, and impact) will be developed, updated as needed, and used for ranking priorities for collaborative efforts
 - This needed decision-support tool will be developed using available risk assessment processes (e.g., Mississippi River Basin Panel on Aquatic Nuisance Species 2009), and will be updated as needed.
 - The first draft of this list will be completed by [insert date]
 - Species on that list will include bighead carp, silver carp, zebra mussel, quagga mussel, and others
 - Management actions will be developed for each priority species, pathway of introduction, and location of the country.
 - A list of management actions will be developed by [insert date]
- **Goal 2** – Our second, ultimate goal is to **extirpate** harmful AIS, **or** if impossible, then **contain and control established AIS** to ensure sustainable aquatic ecosystems and the social, economic, and cultural uses they support.
 - We will work with our partners to help develop detailed integrated pest management plans for priority species (including bighead carp, silver carp, zebra mussel, quagga mussel and other priority species), and for locations infested and impacted by several of those species
 - **Milestone:**
 - Integrated pest management programs will be developed or adopted, by [insert date], for bighead carp, silver carp, zebra

mussel, quagga mussel and other priority AIS that are established in the U.S.

III. Recommendations

The following three actions are recommended to direct efforts toward achieving both goals.

1) Federal and state governments should work with industries and others to take immediate steps to prevent the introduction and spread of AIS as the result of escapement/release of organisms imported for various uses. Federal agencies, states, industries, and others shall work to achieve the following objectives:

- Facilitate development of voluntary agreements, best management practices, and other approaches for industrial trade groups
- Support development and use of improved screening and risk assessment products for nonnative species; disseminate those products to:
 - industries for non-regulatory risk management, and
 - appropriate regulatory authorities
- Support increased resources for the enforcement of laws governing the importation and use of live organisms.

Total Federal Budget Requested: \$20 M Annually

Rationale: Thousands of animal species and millions of organisms are imported and traded live each year. These efforts are intended to support: 1) efficiently and effectively assessing risk of imported aquatic organisms, 2) allowing continued importation and use of organisms with low risk of impact, 3) regulating species that are high risk of establishment, spread, and impact in the U.S., and 4) continually improving screening and risk assessment tools for use by Federal and State regulatory authorities.

2) Develop and implement integrated management program (IPM) for priority AIS. This program could be modeled after the Great Lakes Fishery Commission's integrated sea lamprey control program. The objectives of this IPM program are to:

- Allocate additional funds for states to implement expanded State, Interstate, and Tribal Aquatic Nuisance Species Management Plans, with a particular emphasis on the immediate use of techniques to prevent AIS introductions, and slow the spread and control established, priority populations of AIS
 - Federal Budget requested: \$75 M Annually (\$1 M for each approved State Aquatic Nuisance Species Management Plan, and the remainder allocated to support Tribal AIS Management Plans)
- Implement a scientifically based, monitoring program to detect newly introduced species, at invasion hotspots and other locations at risk of new invasions

(particularly for priority AIS including bighead and silver carps, and zebra and quagga mussels) in the U.S., before they spread and become established

- Federal Budget requested: \$40 M annually
- Authorize a single lead Federal entity to:
 - Administer a revolving fund for rapid response actions to be mostly implemented under state leadership
 - Federal Budget requested: \$5 M Annually
 - Coordinate Federal rapid response actions on Federal lands, and when and where requested by State agencies
 - Federal Budget requested: \$1 M Annually
 - Support additional research to develop and implement new, effective, and ecologically sound containment and control methods for priority species
 - Federal Budget requested: \$10 M Annually
 - Facilitate, coordinate, and/or lead development, implementation, evaluation, and adaptation of new, integrated management approaches in interjurisdictional waters to contain, control, and mitigate impacts of priority AIS
 - In cooperation and partnership with States, Tribes, local governments, Aquatic Nuisance Species Task Force, National Invasive Species Council, and others
 - Including, and especially, implementation of the Management and Control Plan for Bighead, Black, Grass, and Silver Carps in the United States (Asian Carp Working Group 2007)
 - Federal Budget requested: \$48 M Annually [\$24 M annually for Asian Carp Plan + \$24 M for other IPM programs such as those that will be developed for zebra and quagga mussels]
- Ensure overall coordination and accountability of AIS management in the U.S. by collaborating on:
 - Development of outcome-based performance targets against which AIS program accomplishments will be measured
 - Evaluating the effectiveness of AIS management and control activities
 - Leading the adaptation of the AIS program activities to improve effectiveness and efficiency
 - Communicating program accomplishments and needs to partners, stakeholders, Congress, and decision makers.
 - Federal Budget requested: \$0.1 M Annually

Total Federal Budget Requested: \$179.1 M Annually

Rationale: Implementing an integrated pest management program in the U.S. will result in immediate cost-effective benefits (e.g., Leung et al. 2002). We will work with the

states and others to enhance support for, and implementation of: 1) approved (by the Aquatic Nuisance Species Task Force) State and Interstate Management Plans, 2) implementing priority recommendations in the Management and Control Plan for Bighead, Black, Grass, and Silver Carps in the United States (Asian Carp Working Group, 2007), 3) developing and implementing IPM programs for zebra and quagga mussels, and 4) developing and implementing IPM programs for other priority AIS.

3) Enhance implementation of AIS pathway-specific outreach and education programs by Federal, State, and Tribal agencies, academic institutions, and other organizations.

Objectives of these programs are to:

- Increase funding to expand the Stop Aquatic Hitchhikers!TM campaign to inform boaters and anglers on how to take preventive actions so that they do not spread AIS
- Increase funding to expand the Pet Industry Joint Advisory Council/Sea Grant/U.S. Fish and Wildlife Service's HabitattitudeTM campaign
- Work with others to develop AIS-related modules for use by teachers in primary and secondary schools
- Expand AIS-focused Hazard Analysis and Critical Control Point (HACCP) training and plan implementation for research and management agencies

Total Federal Budget Requested: \$20 M Annually

Rationale: Outreach is critically important to minimize the spread of AIS by the public. More fiscal resources are needed to: 1) conduct existing outreach campaigns more extensively throughout the U.S. by paying for expanded media exposure, and 2) evaluate how to improve and expand on existing outreach campaigns. We also intend to enhance materials for, and work with, formal educational institutions so that teachers are better trained and supplied to teach students about the biology, ecology, and impacts of AIS, and what they can each do to prevent the spread of AIS.

References

Executive Order 13112. <http://www.invasivespecies.gov/laws/eo13112.pdf> (accessed on September 24, 2009).

Great Lakes Regional Collaboration. 2005. Strategy to restore and protect the Great Lakes. http://www.glrc.us/documents/strategy/GLRC_Strategy.pdf (accessed on September 24, 2009).

Leung, B., D.M. Lodge, D. Finnoff, J.F. Shogren, M. Lewis, and G. Lamberti. 2002. An ounce of prevention or a pound of cure: bioeconomic risk analysis of invasive species. *Proc Royal Soc London B* 269: 2407-2413.

Mississippi River Basin Panel on Aquatic Nuisance Species. 2009. Model for a Natural Resources Agency Risk Assessment and Risk Management Process.

[http://www.aux.cerc.cr.usgs.gov/MICRA/MRBP/MRBP_Working_Version_Model_Risk_Assess. & Management Process 5-12-09.pdf](http://www.aux.cerc.cr.usgs.gov/MICRA/MRBP/MRBP_Working_Version_Model_Risk_Assess._&_Management_Process_5-12-09.pdf) (accessed on January 7, 2010).

Risk Assessment and Management Committee. 1996. Generic nonindigenous aquatic organisms risk analysis review process. Aquatic Nuisance Species Task Force.

http://www.anstaskforce.gov/Documents/ANSTF_Risk_Analysis.pdf (accessed on January 7, 2010).

DRAFT

5. Predicting Asian Carp Recruitment in Reservoirs

Tatiana Garcia, University of Illinois, presented an overview of a risk assessment tool that can be used to analyze which tributaries are suitable for Asian carp spawning and egg development. The fluvial egg drift simulator (FluEgg) was developed by the University of Illinois and USGS with support from the Great Lakes Restoration Initiative. Tatiana provided general information on Asian carp recruitment in reservoirs, followed by an overview of the FluEgg drift simulator and the input phase, and then a demonstration of the output using the Sandusky River.

FluEgg can be used to identify the location of the eggs in the water column at different periods of time and at different downstream distances. It can also be used to determine hatching distance from important ecosystems like Mississippi River Basin reservoirs or the Great Lakes. The tool can also be used to back-calculate and determine spawning location of collected eggs. Potentially settling zones can also be identified using FluEgg.

The paper that the presentation was based on is available at:

<http://www.sciencedirect.com/science/article/pii/S030438001300255X>; and a companion USGS report is available at: <http://pubs.usgs.gov/sir/2013/5106/>.

Discussion:

How hard would it be to incorporate suspended particulates in the water column that could enhance buoyance of the eggs?

How much time and money does it take to be able to collect the necessary data to model a river? USGS has collected the necessary data for an individual stretch of the river in a single day using a boat equipped with an ADCP. Ideally the sampling is done from upstream to downstream in conditions similar to when spawning would occur.

So far the data has only been collected to run the model for the Sandusky River.

6. Asian Carp Commercial Harvest Tournament

Ron Brooks, Kentucky Department of Fish and Wildlife Resources, discussed the Asian carp commercial harvest tournament held by the state of Kentucky. The main reason the state decided to organize the tournament is because the state's aquatic resources in Barkley and Kentucky lakes are in trouble due to abundant Asian carp populations. There is little organized effort to harvest Asian carp and reduce their abundances. Kentucky also wanted to raise awareness about the problems caused by Asian carps and the need for efforts to reduce their populations.

As early as 2009, commercial fishermen were collecting more than 5,000 pounds of Asian carp as by-catch in a single night of paddlefish netting in Kentucky Lake. In a tailwater sample below Kentucky Lake, 56% of the fish collected were Asian carp. This is a popular area where people collect live bait that is transported all around the state. Asian carp are moving inland into many tributary streams in Kentucky. State biologists have seen evidence that Asian carp are outcompeting paddlefish in backwater lakes. There is lots of recreational fishing and boating on Kentucky and Barkley lakes and jumping silver carp are injuring people and destroying equipment. There is over a \$1 billion dollar outdoor recreation industry centered around these two reservoirs.

The public wants to know what the state is doing to address this problem and is demanding action. There has been a lot of outreach and education to the public, state legislators, and decision makers. Kentucky has changed some regulations to encourage more harvest of Asian carps, but other than a few commercial fishermen harvest has been minimal.

The commercial harvest tournament was a first of its kind event. Kentucky received media coverage from around the country, Nova Scotia, and Saskatchewan. Kentucky Afield did a nice program on the tournament that focused on why the state was having the tournament. Kentucky also focused on the message that Asian carp are a problem for the entire Mississippi River Basin, not just Kentucky or the Great Lakes.

The tournament required a lot of volunteers; they had over 60 volunteer observers participate. Volunteer observers went out with commercial fishermen to record data: number of nets sets, by-catch, disposition of by-catch, etc. Many of the volunteers were recreational fishermen. Using them as observers allowed the recreational fishermen to see how minimal by-catch and by-catch related mortalities were; only two non-target fish were killed – one small bass and one paddlefish.

Twenty-two teams registered, but only 15 teams fished. There were several public meetings with anglers and commercial fishermen before the tournament. Fishermen were limited to a maximum of two boats; one boat fishing while another boat was weighing in fish. Fishermen were allowed on the water from 6AM to 7PM. It was also colder than optimal, windy, and snowy during the tournament. The time of year and time of day likely resulted in a lower harvest than was possible. Over 40 tons of Asian carp were harvested during the 2-day tournament. The majority were caught by a handful of fishermen who were familiar with the lakes. The top team harvested 28,000 pounds; his goal was 20,000. The second place team harvested 22,000, almost all caught on the second day. The fishermen reported that they could have harvested a lot more fish if they had more time.

Coordinating volunteer observers (4 hour shifts) to be with commercial fishermen at all times was perhaps the biggest challenge. Observers were also used at the boat ramps to make sure fish were not added to the boats when they pulled off the water.

Kentucky DFWR did demonstrations on preparing Asian carp at the weigh-in site. Chef Parolla was preparing Asian carp at a nearby restaurant. The food demonstrations resulted in a lot of positive reaction to the fish.

The media coverage of the tournament has resulted in more calls from legitimate businesses wanting to get into processing and marketing Asian carps. A lot of these people that are already processing fish elsewhere and are looking to open a plant in Kentucky.

Kentucky secured a few small sponsorships to assist with the financial costs. A couple of processors provided scales and trucks. Protein Products bought most of the fish for 2 cents/pound so the state did not have to dispose of the fish. The company is now interested in setting up business in Kentucky to purchase Asian carp and by-products from other fish for fish meal. FLW provided a media board. It was amazing how many people came and watched the programs on the media board when fish were not being weighed in.

Kentucky is planning on a second Asian carp commercial harvest tournament in October or November if they receive enough donations to cover the cost. The state paid for much of the first tournament but used up the available funds. The state is hoping that local business will chip in small amounts of money and raise the \$20,000 purse through donations. Another option is that a reality TV show is interested in the tournament and may cover the purse.

Some of the fishermen did not bother fishing the second day if they did poorly on the first day. There will be a first prize awarded for each day of the second tournament to hopefully keep everyone on the water and fishing for the whole tournament. They are also planning to have spotters provide reports on Asian carp to help all of the teams get on fish. The tournament's purpose is not to find fish, but to harvest them. The second tournament may also include night fishing which should result in increased harvest.

Discussion:

Kentucky currently has one processing plant. A second operation is awaiting permits for a foreign investor. He is anticipating processing 100,000 pounds/day.

There were no entry fees, other than commercial licenses, to attract as many teams as possible. There may be a \$350 entry fee for the second tournament to make sure the teams actually fish the whole time.

Fishermen were allowed up to 3,000 feet of nets in the water, but this limit will be increased to 6,000 feet in the second tournament. The fishermen tried to block off embayments with their nets. They also doubled their nets so that when fish jumped over one net they would get caught in the second net. Fishermen used 3" to 6" webbing.

Are these fish all spawned and recruited in the Ohio River. It's possible that they are spawning in tributaries to these two reservoirs. Kentucky and Tennessee will be investigating this in the future.

7. Ohio River Basin Asian Carp Action Plan and 2013 Monitoring

Ron Brooks, Kentucky Department of Fish and Wildlife Resources, described the Ohio River states' efforts to develop an Ohio River Basin Asian carp action plan. The focus of the efforts in the Ohio River has two parts: 1) contain the fish and stop their movement upriver, and 2) reduce populations down river so that there are fewer fish impacting this part of the basin and trying to move upriver.

The action plan was drafted by the six mainstem states. The action plan is basically a step-down plan from the national Asian carp management and control plan. The states used those portions of the national plan that were relevant to control, containment, communication and outreach, and research. The states are now forming an Ohio River Asian Carp Task Force to work with partners and stakeholders to finalize and implement the plan.

USFWS has worked with the Ohio River states this summer to develop and implement a monitoring plan in the upper Ohio River. USFWS is assisting with telemetry, hydro-acoustics, side-scan sonar, and field sampling. Four fish have been tagged and released already in the upper Ohio River.

Asian carp are very abundant below Louisville, KY, and less abundant above. Contract fishers have caught approximately 15 Asian carp in the Meldahl Pool and only 1 Asian carp in the Greenup Pool this year. All of the monitoring work corroborates that there are very few fish in the Greenup Pool, but more and more fish as you move to each pool downriver. The states are trying to determine where the focus of their efforts should be to knock back the leading edge of the invasion and to keep them from moving upriver.

Discussion:

Contract commercial fishers are not allowed to keep the other fish that they catch.

The Ohio River Basin action plan is a good template that the other basins might want to consider. The regional organization and communication that comes about through development of sub-basin level plans is very useful and powerful when communicating with and providing information to partners, legislators, decision makers, and the public.

The Ohio River Basin Asian carp distribution map is also something that the other basins might want to consider replicating. These maps could be posted on the MRBP and MICRA websites to present a basin-wide picture of Asian carp distribution. There was a national map created using the USGS NAS database that was published in a report by Baerwaldt, Irons, and Benson earlier this year.

8. Midwest Governors Association's Regional AIS Summit

Emily Marthaler, Deputy Director of the Midwest Governors Association (MGA), provided an overview of the MGA and the AIS Policy Summit hosted in June. The MGA is a bipartisan, non-profit organization that brings together the governors of nine Midwestern states on issues of public policy that are important to the region. The focus is on regional economic development and coordinating a regional agenda before Congress and the Federal government.

Minnesota's Governor Dayton took over as MGA Chair this past February. The MGA has set issues that they work on, but the Chair has an agenda each year that is a focus for the year. Governor Dayton has chosen to focus on AIS this year, particularly in the inland lakes and waterways.

In partnership with Upper Mississippi River Basin Association (UMRBA) and the Environmental Initiative, MGA held a Policy Summit June 27-28, 2013, to focus on information sharing about best practices, current efforts underway to slow the spread of Asian carp, eliminating communication barriers, model draft legislation, survey of rules and regulations, and model regulations. The goal of the Policy Summit was to provide the governors with a list of areas they can work together. The general themes from the discussions that will be discussed with Governor Dayton's staff were:

- **Elevate Importance of Aquatic Invasive Species through Leadership**
 - Governors make clear to public/lawmakers via their visibility
 - Federal coordination and development of tools

- **Consistent Metrics and Useful Ways to Measure**
 - What would it mean to be “successful”; define benchmarks for progress whether behavioral change or reduced rate of spread
- **Need for More Research – Biological/Ecological and Behavior**
 - More information, including detection and control of local population. What policies, messages, delivery methods are most effective in changing public behavior?
- **Utilize Existing Management and Coordination Infrastructure**
 - States, federal, non-profit, academia, etc. have built considerable expertise and coordination abilities; utilize these and existing relationships
- **Coordinated Message Development Use**
 - No reason to “reinvent the wheel”; work to learn from each other’s efforts to refine messaging and develop joint marketing campaigns
- **Benefits of Aligning Policies and Identifying Common Priority Species and Pathways of Introduction**
 - Greater alignment of states’ statutes and regulations, including regulated banned species – possible “bad actor”/“black lists”

There is only so much that MGA and Governor Dayton will be able to take on since he will only be Chair for one year. Some of the possible next steps would be to:

- draft a letter regarding the need for a lead federal agency responsible for AIS
- convene State agencies to discuss policy alignment and priorities (vectors and species) as well as to develop rapid response plans
- convene regional groups to coordinate activities
- sharing best practices among states
- states work on joint communications (e.g., PSAs)
- participate in National Invasive Species Awareness Week (NISAW) – e.g., Governor representatives attend meetings with Congressional staff, agencies, etc.

Additional funding for AIS was identified as a need during the summit, it would be difficult to get consensus among the governors given the nation’s financial situation. The governors may discuss flexibility and prioritization of federal funding.

Another outcome of the meeting is the development of federal agency coordination letter. A big theme that came out of the summit was the need for single lead federal agency to deal with ANS.

Other aspects of Governor Dayton's agenda are to draw more attention to invasive species in general (not just AIS) and coordinating media outreach.

Discussion:

One of the big action items that I heard at the summit was MGA is considering a request to the governors to each develop a policy statement for their state recognizing AIS as important issues that require coordination among state agencies. The states expressed a need for leadership from the governor's office to instruct and unite the state agencies.

It's great that Governor Dayton has made this issue a priority and is drawing attention to it. Are there similar efforts by or coordination with other regional associations or the national association to elevate AIS? The National Governors Association has a position statement on AIS. At the Midwest Legislative Conference last week, one of the things they want to follow-up on is coordination of lists and regulations among states. It could be very influential to have that come from the legislators and the governors.

Governor Dayton will step down as Chair in February 2014, but it is likely that some of the work will continue beyond then. The next Chair is not known yet.

9. AFWA Invasive Species Committee Update

Kim Bogenschutz, Iowa DNR, is vice-chair of the Association of Fish and Wildlife Agencies (AFWA) Invasive Species Committee. Kim provided an update on the committee. Bill Hyatt, Connecticut, is the current committee chair. The committee addresses all invasive species, not just aquatics.

The committee's National Conservation Needs (NCN) proposal was not selected for funding this year. The NCNs are multi-state grants funded through USFWS Sport Fish and Wildlife Restoration funds. This year's NCN was for the development of funding options for state-based invasive species programs, specifically reviewing existing funding mechanisms, how states get funding for their invasive species work, and recommend new approaches for securing funding. The committee's NCN was tied for 7th and top 6 were funded. The previous NCN proposal that was submitted two years in a row was on early detection and rapid response models. That proposal fell just below the cutoff both years also. This will be discussed at the AFWA meeting in September. NCN proposals are due in February. Kim requested ideas for next year's proposal.

AFWA has been working on an MOU with the Pet Industry Joint Advisory Council (PIJAC) and USFWS on non-regulatory approaches for the pet trade industry. The MOU has been approved by PIJAC, AFWA, and USFWS and is waiting on final signatures. The MOU addresses novel species in trade and voluntary guidelines for the pet industry to follow before importing new species.

The committee had a session at its last meeting regarding incentives for harvest of aquatic invasive species. We heard earlier from Ron Brooks about Kentucky's Asian carp commercial harvest tournament. The committee also heard from speakers about a python challenge in Florida and snakehead tournaments in the DC area.

The committee participates in National Invasive Species Awareness Week (NISAW) planning. There is a call coming up soon to discuss NISAW in 2014. NISAW was impacted by sequestration last year and there is uncertainty about NISAW in 2014.

The AFWA liaison for the committee is serving on the ANSTF working group that is looking at the federal agencies and their roles related to Dreissenid mussel management. That was a recommendation that came out of the Assistant Attorneys General workshop hosted by the Western Regional Panel. The group will be meeting in August.

Legislation is a big thing that AFWA is able to work on. AFWA was requested to testify at a hearing later this week on a number of bills, including two on Asian carp. AFWA's testimony states that the association liked the bills, but AFWA would like to see the bills expanded to include the entire Mississippi River Basin, including the Missouri and lower-Mississippi River basins.

AFWA has not provided a comment letter on HR 996 (The Invasive Fish and Wildlife Prevention Act). The committee generally supports the bill, but the states have some concerns. For example, many states have non-native species that they consider sport fish.

The Healthy Habitats Coalition is trying to push forward an invasive species control and management act that would put 80% of the funding that federal agencies currently spend on invasive species to on the ground projects. Funding would go to the states' Departments of Agriculture for the governors to decide how the funding would be spent within the state. This has not been put forward as a bill yet. AFWA has concerns about the funding being directed to the departments of agriculture, and directing the federal agencies funding. This is something to be aware of and watch for more information.

AFWA provide comments and testimony for a hearing on the *Arundo donax* rule by EPA allowing it to be used for biofuels. *Arundo* was not in the original rule, but it has now been allowed. AFWA has held conference calls with Chem Tex, one of the companies that are promoting *Arundo*, to discuss the agencies concerns.

There was a meeting with CEQ, USFWS, and AFWA to discuss outcomes of Asian carp sessions during AFWA's meeting last September. There were three things that AFWA agreed to focus on with the agencies: 1) standardizing state regulations for Asian carp; 2) in conjunction with other committees develop model regulations and educational materials on Asian carp for law enforcement; and 3) summarize information on economic impacts of Asian carp to the states.

The committee's next meeting will be in Portland, OR, the week of September 9th.

Discussion:

HR 996 has to do with redoing screening, risk assessments, and lessening the time it takes for species to be listed as Injurious Wildlife under the Lacey Act. There are some things the USFWS can do to speed up this process. There is a proposal in the Federal Register to add a Categorical Exclusion under NEPA for the action of listing a species as injurious. This proposed action would allow injurious species listings to occur without having to undergo a separate NEPA evaluation, with the justification that by listing a species as injurious, the action helps to maintain current environmental conditions by preventing injurious species from becoming established, thus creating no negative impact, and further improves the efficiency of the listing process.

Don Schmidts has formed a North American Invasive Species Network and is conducting a survey on economic costs to combat invasive species. Some states do not have budgets just for invasive species so it would be very difficult to provide the type of information that he is requesting. The economic data that AFWA would like to summarize is impacts to fishing, boating, and outdoor recreation related economies.

10. ANSTF and Panel Principals Updates

Due to the sequester, ANS Task Force Executive Secretary Susan Mangin was unable to attend the meeting. Conover shared the following update provided by Mangin on the ANSTF's webinar, which replaced the group's regular spring meeting.

- The ANSTF has a new co-chair: David Hoskins. He serves as the USFWS Assistant Director for Fish and Aquatic Conservation. His last position was the Executive Director of the Izaak Walton League. He has been briefed on the ANSTF and has done some work in the invasive species arena.
- The joint ANSTF/NISC Prevention Committee continues to work on guidance for developing pathway management plans.
- The recreational and water garden guidelines have been published in the Federal Register for public comment. Comments are due to Laura Norcutt by July 31. These documents are on the ANSTF website.
- The update of the Michigan state plan was approved by the ANSTF along with the new Mississippi plan. We now have 41 approved state/interstate plans.
- Susan will send out an e-mail requesting whether there is interest in either the regular and training the trainer HACCP training.
- We will set up a conference call to discuss panel funding, which is at \$40,000 for FY13.

- Next ANSTF meeting is planned for November 6 and 7, with a possible all panel meeting on the 5th. The meeting will be held in Silver Spring, MD, at NOAA HQ. Agenda items for the meeting include a session on eDNA, Habitattitude, voting on approval of the snakehead and lionfish management plans and the classroom guidelines, QZAP update, and streamlining regs/policies for addressing AIS at Federally-managed waterbodies.

Discussion:

Arkansas's Governor has requested approval of Arkansas's AIS management plan and will be discussed at the November ANSTF meeting.

11. MICRA Updates

Steve Shults, Illinois DNR, provided an update on the MICRA AIS committee. MICRA is currently updating its goals, objectives, priority needs, and accomplishments. MICRA requested AIS committee members to review the AIS objective and priority needs. MICRA's AIS objective can include priority needs that the MRBP would not move forward to the ANSTF.

MICRA has provides financial support for the panel in excess of the \$5,000 panel funding that MICRA keeps each year. MICRA has been operating in the red for several years and is working on balancing its annual budget. To that end, MICRA has requested the panel to reimburse MICRA for \$3,000 in FY12 funding and to contribute \$3,600 in future budget years to defray MICRA's cost for hosting the panel. These funds are in addition to the 10% of the annual funding that MRBP has paid for MICRA support in the past.

Shults updated MICRA on the national analysis of grass carp project. The contractor is approximately 40% complete. There are a couple of issues related to this project that the Executive Committee needs to discuss prior to the MICRA meeting later this week.

12. MRBP Coordinator Report

Greg Conover, USFWS, reported that the panel's website is up and running but has been hacked. Let him know if you find casino links that need removed or other problems. The web host will soon be upgrading the website to a more secure platform in the near future.

Conover handed out copies of protocols for handling, shipping, and data collection for black carp and grass carp that he and Duane Chapman developed in coordination the USFWS Whitney Genetics Lab and others. The protocols are for black carp collected anywhere in the U.S., and for Grass Carp collected in the Great Lakes Basin or other novel locations in the U.S. where the fish are not known to be

established. Panel members were requested to review and provide input on the protocols. A black carp ID fact sheet will be added to the protocols before they are distributed electronically. The protocols were developed in coordination with the Great Lakes Restoration Initiative monitoring efforts. The idea is to have one set of protocols that everyone in the two basins, and nationally, is using.

Conover reviewed the status of MRBP's existing projects and budget obligations.

2012 Projects/Obligations:

- Four obligations were completed
- Funds for one project have been de-obligated
- Two projects on-going

Sorensen recommended de-obligating the remaining funds for the AFS travel support.

2013 Projects/Obligations:

- Two obligations complete
- Most projects not started

Committee chairs were asked to review the FY13 project obligations in the committee meetings to make sure the funds were still needed and that projects would be completed by the end of the year if possible.

It was decided at the last meeting to obligate FY13 funding to cover meeting expenses and web hosting in 2014 due to the uncertainty of continued panel funding.

Chapman recommended de-obligating the funds to provide travel support for a speaker on pay lakes. The panel might want to consider providing funding support for a graduate student or researcher to do a better investigation of the risks associated with pay lakes.

Discussion:

Chapman informed the group that whole grass carp do not necessarily need to be shipped to his lab. He is primarily interested in the head (including a couple of vertebrae) and the ovaries. If you or your staff collects a grass carp in the Great Lakes or other novel location, please call Duane and he will discuss with you the best way to get the samples shipped to him. Chapman requested MRBP members to provide the information to their state agency field staff and encourage them to help us collect data on these fish.

13. Committee Breakouts (All)

The committees met from 3:00 PM to 5:00 PM. Committees were asked to review the action items from the October 2012 meeting in New Orleans, to review the status of on-going committee projects, and to develop an FY2014 work plan. Funding requests for committee projects need to be identified in the work plan. Committees were also asked to identify potential ANSTF recommendations for discussion and consideration during committee reports.

Action items are captured in the individual committee meeting notes.

14. Public Comment Period

No public comments were received.

15. Committee Reports (Committee Chairs)

Outreach and Education Committee

The meeting began at 3:00pm Eastern and adjourned at 5:00:pm Eastern

Attendees:

Dennis Riecke Mississippi Dept. Wildlife, Fisheries and Parks
David Roddy Tennessee Wildlife Resources Agency
Luci Cook-Hildreth Texas Parks and Wildlife
Curtis Tackett Oklahoma Department of Wildlife Conservation
Emily Marthaler Midwest Governors Association
Joanne Grady USFWS Region 6 Denver, CO
Nick Schmal US Forest Service Eastern Region Milwaukee, WI (Acting
Committee Chair)

Desired outcome:

Review FY 13 workplan projects, discuss and recommend updates and propose projects for FY 14 workplan

We used the notes from the October 11, 2012 New Orleans Committee meeting as well as the email notes from Steve Schainost (July 11, 2013) and the FY 13 Workplan table. We also used dollar values from Greg Conover MRBP budget spreadsheet.

FY2013 Workplan Discussions:

A field guide to ANS:

The committee had a long discussion about this project, as experienced every year.

The committee recommended the following:

1. Post existing fact sheets already produced and edited for the field guide at the MRBP web site. Shift some funds to Greg to help update and secure the updated site and include some of the unused workplan funds to update the website. (Use some of the \$16,000 for web work if needed.)
2. Defund \$16,000 the field guide (except for what is used to work on the website)
3. Luci Cook Hildreth has begun creating a state by state spreadsheet with information on AIS material available for each state, including any gaps in information. She will continue to pursue the completion of that effort. Will eventually send out for review by panel member states.

Action Items:

- ! *Conover will send the electronic files provided by Mandy Beall for the AIS Field Guide to Luci Cook-Hildreth.*

ANS Boater Surveys:

A \$5,000 obligation from FY2012 was carried over into FY2013. No RFP for the funding was sent to the states and the funding was de-obligated earlier in the year. No FY2013 funding was obligated for ANS boater surveys.

The committee recommended:

1. Obligate \$10,000 FY2014 for ANS boater survey.
2. Consider changing from \$5,000 for two surveys to \$10,000 for one survey. This change might need to be discussed at the ExCom level.

ANS Workshop for Assistant State Attorney Generals:

Steve Schainost contacted Stephanie Showalter-Otts of the Sea Grant Law Center after the October 2012 meeting to discuss the potential for sponsoring an MRBP workshop. She informed Steve that the Sea Grant Law Center's role in the Workshops is to help organize them and provide funding for speakers. The Law Center did have funds and a Workshop in the fall/winter of 2013/14 would work for them. She noted that these workshops tend to work best if there is a

theme. We discussed possibilities (such as states' live bait laws) but decided that this would have to wait until the Committee and the MRBP had a chance to discuss this.

Joanne Grady (FWS) briefed us on how and what the Western Regional Panel did in a two stage approach for zebra and quagga mussels related to boat washing and inspections. Their cost for the 17 state region was \$65,000 which was funded by the 100th Meridian Initiative.

We agreed that we needed additional information prior to co-hosting a similar workshop with Assistant State Attorney Generals.

The committee recommended:

1. ExCom discuss in more depth with Stephanie Showalter-Otts of the Sea Grant Law Center.
2. Due to the number of states in the panel, it was suggested that a smaller set of states such as the Upper Mississippi River states (Midwest Governors Association) or the Ohio River Basin states (both for Asian Carp issues) be considered for the workshop.
3. Keep the \$10,000 obligation for this project to leverage funds for the workshop (match with Sea Grant Law Center).

Action Items:

- ! Schmal will follow-up with Schainost regarding the Assistant State Attorneys General workshop.
- ! Schainost will report back to the Executive Committee with recommended next steps regarding the Assistant State Attorneys General workshop.

ANS Display for the Mississippi River National Museum and Aquarium:

Construction of the travelling Riverworks Discovery Museum Exhibit is complete. The exhibit was in Shreveport, LA; now in Memphis, TN; then will be in West Virginia later this year.

MRBP funding (\$5,000) was used to match external partner contributions to add two panel kiosk with AIS messages to the 2000 sq ft travelling exhibit.

The museum will not loan the display to the MRBP for use, but the committee would like to know if the museum would allow the MRBP to reproduce the kiosk panels. We would need to get the design information for the panels and an estimate of the museum's cost to produce them (minus in-kind contributions).

Action Items:

- ! Nick Schmal will contact the national Mississippi River Museum and Aquarium through Wildlife Forever to see if the Panel can get total final cost of the AIS kiosk design for use by the panel member states and agencies.

Evaluation of State AIS Education Programs:

There was an interest in the committee to learn where people (or a subset of people) get their information about AIS issues. It was thought that a survey could be developed and funded (possibly similar to the boater survey) that could target individual groups (possibly from the pet trade?) for this information. Discussions on this are still on-going and funding in following years may depend on the response to the next boater survey (i.e. if the response is poor the AIS info survey could replace it).

This project also included a proposal to evaluate AIS exhibits at museums and aquariums. This was discussed at New Orleans meeting and again yesterday. The Shedd Aquarium conducts its own evaluations. They have their own staff that evaluates the exhibits and the people that view them. They keep detailed statistical information on behavior change, awareness, etc. The committee decided to drop this component from the project.

AIS information for Aquatic Fishing Educators:

Idea is to see if all states and agencies that have aquatic education materials and hold youth fishing clinics have AIS messages and best management practices as part of their education materials.

The committee recommended:

1. Obligate \$5,000 FY2014 funds for participation in the National Aquatic Resources Education Association's October 2014 national conference in Traverse City, Michigan.

Action Items:

- ! Curtis Tackett will contact members of the National Aquatic Resources Education Association (<http://www.areanet.org/>) prior to their October 2014 national conference in Traverse City, Michigan.

Outreach and Education Committee Proposed Recommendation for ANS Task Force:

1. Fund and implement the education portion of the proposed the national AIS Action Plan.

Committee Report Discussion:

ANS Workshop for Assistant State Attorney Generals:

The idea of the Sea Grant Law Center and MRBP co-hosting an Assistant Attorneys General ANS Workshop started as a way to bring all of the basin states together to identify similarities and differences in ANS related laws and then attempt to harmonize and improve regulations in the region. The workshop would be a way to allow for information sharing among states for them to learn from one another about regulatory mechanisms in place for ANS species and pathways, and to foster the promulgation of laws and rules by state and federal agencies to address identified gaps or weak links.

The committee is concerned that a basin-wide workshop would be cost prohibitive based on the Western Regional Panels experience. The FWS provide \$65,000 to the Western Regional Panel through the 100th Meridian Initiative. Those funds paid for travel for up to 3 people per state to attend the workshop. The MRBP is a larger panel (6 more states than WRP) and the cost would be even higher for the MRBP if we provided the same level of travel assistance. The MRBP has only obligated \$10,000 towards a workshop. That is why we suggest considering smaller regional workshops like the Upper Mississippi River or Ohio River states.

Keep in mind that Sea Grant Law Center can submit their own budget requests to cover a portion of the costs.

The Western Regional Panel formed a planning team and a lot of effort was put into both Phoenix and Denver. Considerable discussion and planning will be needed by the MRBP to make a workshop a reality. The MRBP would likely need to form a planning team and continue discussions via conference calls following the meeting.

We may want to consider a single basin-wide issue like bait, rather than a broad AIS workshop for only one region within the basin. Another single issue opportunity that we will have is to follow-up on the results of the on-going grass carp review. This might be a good next step for the grass carp project and way to move the recommendations from the evaluation forward.

ANS Display for the Mississippi River National Museum and Aquarium:

There was a kiosk that Minnesota DNR developed with assistance from FWS that was installed at the Cabela's store in Owatonna, MN. The interactive kiosk includes a computer with information on approximately 20 species. The kiosk was eventually pulled from Cabela's because of maintenance issues and now is possibly used only at Minnesota state fairs. The kiosk is semi-portable and could be shipped. It might be another option for an AIS display that could be shared. Species information could be added for a relatively minor programming cost.

Evaluation of State AIS Education Programs:

There were some inconsistencies between the October 2012 meeting notes and the July 2013 notes that Steve Schainost provided to the committee members prior to the meeting. Nick needs to get clarification from Steve regarding the various aspects of AIS evaluation programs that were discussed at the last meeting and by the committee yesterday.

Illinois has started a new outreach campaign called "Be a Hero, Transport Zero" that builds on Habitattitude and Stop Aquatic Hitchhikers. More information is available at www.transportzero.org.

Stop Aquatic Hitchhikers and Habitattitude Websites:

The Stop Aquatic Hitchhikers and Habitattitude websites are being revamped. More materials will be available on both websites. Stop Aquatic Hitchhikers is now being managed by Wildlife Forever. An update from Wildlife Forever was circulated to MRBP members prior to the meeting. An advisory board may be assembled to provide input to Wildlife Forever on content for the revised Stop Aquatic Hitchhikers website. How the advisory board would be assembled is unknown, but there is likely an opportunity to provide input on the website in the future.

Education and Outreach Committee FY2013 Work Plan Updates:

Activity	Deliverables	2013 Funding Obligated	Status
A Field Guide to Aquatic Nuisance (Invasive) Species	Web-based fact sheets with images and text in standardized format	De-obligate remaining \$16,000	Field guide project dropped. Web-based fact sheets will be posted on MRBP website.
ANS Workshop for state Assistant Attorneys-General in MRBP region	Explore opportunities with Sea Grant Law Center for sponsoring an MRBP workshop in 2013.	\$10,000 – keep obligated	Planning continues for workshop, possibly late 2013 or 2014.
ANS display for National Mississippi River Museum and Aquarium	Construction of a traveling ANS display.	\$5,000 – full amount spent	Project complete
Evaluations of state ANS education programs	Copies of results of evaluations or protocols used to conduct same.	De-obligate full \$10,000; may request funding in future	Discussions on this are still on-going
Develop materials and workshop for state Aquatic/Fishing Educators	Report on possibility of participating in 2014 conference.	No funds requested.	MRBP will be contacting the National Aquatic Resources Education Association

Education and Outreach Committee FY 14 Work Plan:

Activity	Description	Deliverables	FY2014 Funding
Web-based ANS fact sheets	Fact sheets were provided by contractor for ANS field guide. Standardized fact sheets and images will now be posted on MRBP website rather than printed	On-line ANS identification tool	No funds requested.
ANS and Boater surveys	Cost-share state ANS boater survey (either \$5,000 for two, or \$10,000 for one)	Up to two state survey results	\$10,000
ANS Workshop for state Assistant Attorneys-General in MRBP region	Explore opportunities with Sea Grant Law Center to cost-share an ANS Assistant Attorneys General workshop in late 2013 or 2014. Funding would likely be used to provide travel assistance.	Workshop to increase Assistant Attorneys General ANS awareness and begin dialogue on ANS	FY2013 \$10,000 obligation - no additional funding requested.
Evaluations of state ANS education programs	Develop a survey/s for target group/s to determine where they get their information about ANS issues	Copies of results of evaluations or protocols used to conduct same.	No funds requested.
Develop materials and workshop for state Aquatic/Fishing Educators	Work with National Aquatic Resources Education Association to provide ANS messages and best management practices for education materials	Report on possibility of participating in 2014 conference.	\$5,000

Prevention and Control Committee

The meeting began at 3:00pm Eastern and adjourned at 5:00pm Eastern

Attendees:

Tim Banek, MO Dept. of Conservation
Kim Bogenschutz, Iowa Dept. of Natural Resources
Ron Brooks, KY Dept. of Fish and Wildlife Resources
Earl Chilton, Texas Dept. Parks and Wildlife
Sam Finney, USFWS
Eric Fischer, Indiana Dept. of Natural Resources
Jason Goeckler, Kansas Dept. Wildlife, Parks and Tourism
Joanne Grady, USFWS
Jessica Howell, Kansas Dept. Wildlife, Parks and Tourism
Frank Jernejcic, WV Dept. of Natural Resources
Steve Rider, AL Dept of Conservation and Natural Resources
Eileen Ryce, MT Fish Wildlife Parks
Steve Shults, Illinois Dept. of Natural Resources (Committee Chair)
Louie Thompson, Catfish Farmers of America

FY2013 Workplan Discussions:

Triploid Grass Carp Program External Review

Steve gave an update on the progress of the contractor and project progress. State regulators and Producers have been contacted. There are approximately 400 potential contacts on the "Transporters / Distributors" list. Will need to have a method to winnow this number down, or possibly have contractor contact all of them.

Dry Hydrants

Continue - Tim Banek to help collect state materials and provide a short (1-page) synopsis.

Rapid Response Plan Plant Module

Continue - Luci Cook and Steve Shults will coordinate and collect additional information from states that can be used as a model for a rapid response plan. A plan under development by Illinois for hydrilla may serve as a model for MRBP states.

Develop BMPs for the lake services industry

Some folks unintentionally move AIS by docking or storing boats and/or large equipment. The online module from MN can be used as-is or potentially modified for distribution. This may be useful to post to the MRBP website.

Invasive crayfish control project

MRBP is cost-sharing (with MDC) a research project to develop a chemical control protocol for killing crayfish in fish hatchery shipments. The project is ongoing and PCC recommends continued support. Payments being made by MRBP up to \$10K until funds are spent. Likely to last 2 years.

ICS training / TTx support

Keep, advertise widely through a letter from MICRA to fish chiefs (and copy to ANS coordinators). Place a notice on the MICRA and MRBP websites. If no interest, then we can drop next year. INCLUDE DELIVERABLES (i.e. a brief statement of expectations or how this training will be used to enhance job abilities by recipient/agency).

HACCP training

Include an announcement of support for HACCP training in the ICS / TTx support letter and website notice. Also, include travel support for personnel to attend “Train the Trainer” programs to bring the information back to their home agencies. A Train the Trainer workshop will be available in the Washington DC area in the near future. INCLUDE DELIVERABLES (i.e. a brief statement of expectations or how this training will be used to enhance job abilities by recipient/agency).

Baitfish Vector analysis

Request \$40k FY14 funding – several states are looking at the issue and could use additional information. This could be used as background or follow-up info for an Attorney General’s Workshop in the future. This will become a higher priority when the TGC review is completed and the committee will revisit at the next meeting.

Prevention and Control Committee Recommendations:

Recommendations for other MRBP Committees:

- Research and Risk Assessment – Develop a model that helps explain how stocked diploid grass carp are enhancing natural reproduction in waters where management agencies are using diploid grass carp in management programs.
- ExComm – Dedicate a significant portion of time at next meeting to Grass Carp – discuss above recommendation, and update of Grass Carp Review Program data and report / final product. (May require some discussion with contractor prior to commitment).

Proposed Recommendations for ANS Task Force:

- ANSTF should provide an update on the funding and implementation of the top 40 prioritized recommendations of the National Asian Carp

Management Plan as set by regional panels. This is a follow-up from the previous recommendation.

- Provide an update on the Biological Control Development Program of USDA and USACE. Reinstate, Develop and Encourage Biological Control development for aquatic invasive species.

Committee Report Discussion:

The recommendation to the Research and Risk Assessment Committee for the diploid grass carp project is important because AIS coordinators in diploid states need a document to share with their administrators that demonstrates reasons why a shift away from diploid stocking is justified even though wild diploid stocks may be present throughout the state. This would be useful information to go along with the results of the on-going national grass carp review.

When funding MRBP members to take training, the ExComm might want to consider requiring a short report to the ExComm upon completion of the training. A paragraph or two describing the usefulness of the training and how it will benefit the trainee/agency could provide some valuable feedback to the panel.

The U.S. and Canada have both agreed to update the Great Lakes Water Quality Agreement and the new agreement went into effect in February 2013. In the next two years there will be several projects completed, including a substantial Great Lakes Rapid Response exercise. The reports from that exercise might prove valuable to the MRBP, for example providing guidance for planning larger rapid response exercises than have been completed in the past.

Prevention and Control Committee FY2013 Work Plan Update:

Activity	Description	Deliverables	2013 Funding Obligated	Status
Triploid Grass Carp Program External Review	Monitor progress of contractor toward achieving accomplishments	Report with recommendations to reduce risk associated with the use of triploid grass carp	\$20,000 – keep obligated	Continue – Steve Shults and Sam Finney to coordinate
Dry Hydrants	Collect existing state materials (KS, MO, MN, others) to develop an MRBP briefing on dry hydrants	Short introduction and state materials for distribution on MRBP website	None	Continue - Tim Banek to coordinate
Rapid Response Plan Plant Module	Development of a plant module for MRBP Rapid Response Plan	Plant module for MRBP Rapid Response Plan (developed from existing materials)	None	Continue - Luci Cook and Steve Shults to coordinate
Develop BMPs for the lake services industry	Collect existing state materials to develop an MRBP briefing on lake services industry	Short introduction and state materials for distribution on MRBP website	None	Continue - Kim Bogenschutz will provide details of the MN online module
Invasive crayfish control project	Cost-share a research project to develop a chemical control protocol for killing crayfish in fish shipments	Report with protocols for chemical control of invasive crayfish	\$10,000 (FY2012 obligation) – keep obligated	Continue
ICS training / TTx support	Financial support for tabletop (TTx) and regional mock exercises involving invasive species	Increased number of trained persons in ICS and identifying gaps in ability to perform rapid response for AIS	\$10,000 – keep obligated	Continue – keep FY2013 funding obligation; advertise widely by a letter from MICRA to fish chiefs (or others). If no interest, then we can drop

HACCP training	Financial support for HACCP training to prevent introduction and spread of invasive species	Increased number of HACCP trained persons and implemented HACCP plans	\$5,000 – keep obligated	Keep, advertise widely by a letter from MICRA to fish chiefs (or others). If no interest, then we can drop
Baitfish Vector analysis	Solicit proposals and identify opportunities to cost share analysis of baitfish vector	Report with recommendations to reduce risk associated with the use of baitfish	None	RFP after triploid grass carp project complete

Prevention and Control Committee FY2014 Work Plan:

Activity	Description	Deliverables	2014 Funding Request
Triploid Grass Carp Program External Review	Monitor progress of contractor toward achieving accomplishments.	Report with recommendations to reduce risk associated with the use of triploid grass carp	FY2013 \$20,000 obligation - no additional funding requested.
Dry Hydrants	Collect existing state materials (KS, MO, MN, others) to develop an MRBP briefing on dry hydrants	Synopsis and materials for distribution on MRBP website	None
Rapid Response Plan Plant Module	Development of a plant module for MRBP Rapid Response Plan	Plant module for MRBP Rapid Response Plan (developed from existing materials)	None
Develop BMPs for the lake services industry	Collect existing state materials to develop an MRBP briefing on lake services industry.	Short introduction and state materials for distribution on MRBP website.	None
Invasive crayfish control project	Cost-share a research project to develop a chemical control protocol for killing crayfish in fish shipments	Report with protocols for chemical control of invasive crayfish	FY2012 \$5,000 obligation - no additional funding requested.
ICS training / TTx support	Financial support for tabletop (TTx) and regional mock exercises involving invasive species.	Increased number of trained persons in ICS and identifying gaps in ability to perform rapid response for AIS.	FY2013 \$10,000 obligation - no additional funding requested.
HACCP training	Financial support for HACCP training to prevent introduction and spread of invasive species.	Increased number of HACCP trained persons, HACCP Trainers, and implemented HACCP plans.	FY2013 \$5,000 obligation - no additional funding requested.
Baitfish Vector analysis	Solicit proposals and identify opportunities to cost share analysis of baitfish vector.	Report with recommendations to reduce risk associated with the use of baitfish.	\$40,000

Research and Risk Assessment Committee

Committee members attending:

Duane Chapman
Sue Thompson
Mark Oliver
Brad Parsons
Peter Sorensen
Eugene Braig
Kevin Irons
Brian Wagner

Guests:

Tatiana Garcia
Konrad Dabrowski
Michail Durkaloc (md@clevelandmetroparks.com)

Workplan Discussions:

Asian carp in reservoirs:

The committee acknowledges that managers need to be able to identify reservoirs at risk for establishment by Asian carps. Drift models developed by USGS need real-world validation. In 2012, the committee requested 15 K in matching dollars for state and/or USFWS funding, but said funding was not successfully acquired. The committee asks that this money be held obligated for at least 6-9 months more while other potential sources of matching funds to accomplish this work are researched. It is also possible that USGS funds will be made available and that these funds are not needed, but with the current federal fiscal situation this is far from secure. Previously, we focused on Truman Reservoir in Missouri as the place to accomplish much of this work, but if USGS funds are not available we will cast a broader net looking for potential collaborators to get this work done.

River Barges and tows as Vectors for Asian carp:

This project was begun at the request of MRBP and GLP, funded by EPA GLRI, and implemented through the Coast Guard with guidance by MRBP and GLP Research Committee chairs. HDR received the contract, and work was completed in 2010 – 12, and the final report was published January 2013.

C. Ehrler D. Heilprin P. Herring T. Main January 2013 Asian Carp Survivability Experiments and Water Transport Surveys in the Illinois River,

Accession number ADA571454

Abstract:

This report combines two earlier reports regarding investigations into the potential for barges and towboats to transport Asian carp upstream across the Army Corps of Engineers electronic dispersal barrier and release them on the Lake Michigan side of the barrier. It summarizes a series of experiments conducted during June 2011 to evaluate the potential for Asian carp larvae to be entrained into and survive in barge ballast tanks on the Illinois River. It also describes investigations in 2010 and 2012 to determine the amount of water normally carried in barge ballast tanks.

Experiments were conducted in the LaGrange Reach of the Illinois River. Results indicated few Asian carp larvae were entrained and the majority of entrained fish were non-Asian carp, primarily gizzard shad. Survival of Asian carp larvae in test cages in tanks was high, even when water quality conditions were not favorable (low dissolved oxygen concentrations). A very small percentage (0.56%) of Asian carp survived for 30 minutes after being pumped through either a 2-inch or 3-inch pump. Although long-term survival following pumping was not determined, this extremely low survival rate translates to a minimal risk. Visual inspections of ballast tanks and voids on 132 barges (empty and loaded) and 14 towboats were completed in the Chicago Sanitary and Ship Canal in August 2010. An additional tank survey was conducted in July 2012 on barges operating locally near the electronic dispersal barriers. Overall, only 5% of the more than 1000 tanks surveyed contained a measurable amount of water. Dissolved oxygen in tanks ranged between 0.44 - 7.80 mg/L. Although the water quality conditions were not optimal and water depth was very shallow, tanks could support early developmental stages of Asian carp. Volume 1 of this report contains the descriptions, results, and conclusions from the experiments and surveys as well as a description of barge design and normal operating procedures. First draft of report on second year's work has been completed by USCG's contractor.

Action Item:

- ! Chapman will contact AWO once again in hopes of getting person to our meeting regarding barges as vectors of plants and external things like apple snail eggs.

AFS symposium on ANS control:

Peter Sorensen chaired a successful symposium at the American Fisheries Society annual meeting in St. Paul. MRBP funded the travel of three high profile scientists and two students to the meeting. A list of symposium speakers and titles is available from Duane Chapman. The symposium abstract follows.

Symposium Abstract:

Invasive fishes are rapidly becoming a primary challenge to fisheries managers worldwide. There does not seem to be any watershed or ecosystem that is not seriously threatened. The taxonomic variety of fishes that are invasive, the damage they cause, and reasons for their invasiveness is also extraordinarily diverse. Yet, common lessons can be drawn from different species and situations about how to study and control these species. This symposium seeks to identify these lessons by examining species from across the world (ex. Sea lamprey, common carp, Asian carp, brown trout, smallmouth bass, etc.), locales (Great lakes, Mississippi basin, Australia, Japan, etc.) and approaches to control (ex. toxins, behavioral barrier, predators, integrated control) in new and integrative manners. A broad range of integrative ideas and approaches are solicited. Sub-symposia on special issues such as Asian carp are possible.

Action Item:

- ! Sorensen will provide Chapman with the 2012 AFS symposium abstract and speaker list for final project report.

Paylakes:

ANSTF and other groups have brought this up again as an issue. It was an action item last year to get updated information on paylakes where available, and to search for a speaker with better understanding of the issues, for example a leader of an industry association group that was familiar with the range of practices and business models. Kentucky provided an updated list of paylakes. Committee chair provided a webex similar to the talk given to MRBP, but with Kentucky's updated information, to Southeast Aquatic Resource Partnership. An extensive search did not yield an appropriate person to talk to MRBP. There does not seem to be an appropriate business group or business leader that has broad knowledge of practices.

The committee recommended:

1. States should consider providing ANS outreach materials to pay lake operators.

Action Item:

- ! Sue Thompson will devise a potential strategy to acquire the knowledge we need and an estimate of what it would cost to investigate paylakes in a three-state area.

Fracking as a vector for invasive species:

Invasive species with Fracking water – trucks that are not washed out, Other potential water movement 2 to 3 million gallons per well moved. Even pipelines, when endemic mussels present. Golden algae in Pennsylvania possibly came from water transport for fracking. The committee tried to get a speaker from industry that could speak regarding water transfer issues but we were unable to find an appropriate person that was willing to talk to the group.

The committee is preparing a draft letter for the EXCOM as a recommendation for the ANSTF. The letter will outline concerns regarding the potential transfer of ANS by fracking activities and will request the ANSTF to conduct a risk assessment of paylakes as a vector and develop an issue white paper.

Action Item:

- ! The Research and Risk Assessment Committee will provide a letter to EXCOM regarding the potential transfer of ANS by fracking activities (i.e., water transfer) to be a substantial concern.

GLMRIS (Great Lakes - Mississippi River Interbasin Study):

Committee chair assisted with COE Risk Assessment on Eagle Marsh, attended COE charrette, (had separate meeting on grass carp in Great Lakes; GLMRIS report on Risk of Adverse Impacts from the Movement and Establishment of Aquatic Nuisance Species did not address grass carp because “grass carp are established in Lake Michigan”) and also on Asian carp distribution maps produced by COE. That report is currently in agency technical review. When it is released, Committee chair will investigate GLMRIS treatment of grass carp in the final report, otherwise chair is done with GLMRIS involvement unless asked to contribute further.

Marker Development (eDNA):

Committee discussed eDNA marker development as a potential need. This topic was tabled at the last meeting and brought up again this year. Committee opinion was that uncertainties regarding interpretation of eDNA results make this an unwise option at this time, but that rapid advances in understanding of eDNA interpretation might change this opinion in the near future. Committee notes that \$15,000 would be adequate to develop a large number of markers for species other than Asian carps that might be useful, once some key questions are answered. Committee will once again consider requesting this amount in the next MRBP meeting. MRBP and MICRA would develop priority list of species for which eDNA markers would be useful.

Marketing:

Committee members identified many questions regarding marketing of Carps. What are economics of the markets? Bighead, silver, common carp – do alternative products like fertilizer and fish meal make economic sense without subsidies? How close are we? Would a small subsidy to get people started do it? How do native fish fit into this scenario? Is Asian carp market damaging market for common carp?

Most key questions regarding the marketing process remained after the following day's meeting with MICRA regarding marketing of carp. The Committee met by conference call, one week after the meeting to further discuss these issues, and was assisted in the meeting by Jeff Nichols, a local Columbia Missouri businessman with advanced degrees in business.

Action Item (from follow-up conference call):

- ! Research and Risk Assessment Committee chair will contact Dr. Silvia Secchi (SIU) to discuss the questions addressed by the committee members and evaluate the possibility of developing of a “business model” (using the term model in the sense with which ecologists are familiar) into which different values could be plugged into parameters in a way that would be useful for managers to evaluate the potential success of different marketing plans.

Pathogens in invasive fish:

Peter Sorensen's lab will be investigating pathogenic influence on numbers and distribution of invasive fish. MRBP members were asked to let Sorensen know if they are aware of viruses or pathogens that might be specific for carps.

Research and Risk Assessment Committee Proposed Recommendation for ANS Task Force:

1. MRBP submit a letter to ANSTF outlining concerns regarding the potential transfer of ANS by fracking activities and request ANSTF to conduct a pathway risk assessment and develop an issue white paper.

Committee Report Discussion:

The USCG might be away to approach AWO and request their participation at a meeting. USCG may have some information on the issue of ANS transport by river barges and tows and/or may be able to provide a contact with AWO. If we are not able to find someone from AWO to come to an MRBP meeting, perhaps they would allow an MRBP representative to attend one of their meetings to discuss issues of concern.

Research and Risk Assessment Committee FY2013 Work Plan Updates:

Activity	Deliverables	2013 Funding Obligated	Status
Asian Carp in Reservoirs	Model to determine which reservoirs are suitable for Asian carp to spawn in	FY12 - \$15,000 obligated; no FY13 funding – keep obligated	Searching potential sources of matching funds
Paylakes	Travel support for a speaker to attend an upcoming MRBP meeting	FY13 - \$1,500	De-obligate; no speaker identified
Catfish Stocking as a Source of Bighead Carp	White paper to increase awareness about this issue.	No FY13 funding	Issue paper published by IL DNR
Fracking Water and Water-Hauling Equipment as a Vector for ANS	Letter and increased awareness of resource managers and industry	FY13 - \$3,000	De-obligate; no speakers identified
eDNA Marker Development	eDNA markers for priority ANS species	No FY13 funding	May request \$15k in future, once some key questions are answered
Database of Imported Species	Travel support for a speaker to attend an MRBP meeting to provide more information on international imports.	FY13 - \$1,500	De-obligate; travel assistance was not needed by speaker

Research and Risk Assessment Committee FY2014 Work Plan:

Activity	Description	Deliverables	FY2014 Funding
Asian Carp in Reservoirs	Identify collaborators to help fund model development to determine if reservoirs are suitable for Asian carps spawning	Model to determine which reservoirs are suitable for Asian carp to spawn in.	No FY14 funding requested; FY12 - \$15,000 obligated
Paylakes	Devise a potential strategy to acquire needed knowledge and an estimate of what it would cost to investigate paylakes in a three-state area	Proposal for consideration at next panel meeting	No FY14 funding requested; may request funding in future FY
Fracking Water and Water-Hauling Equipment as a Vector for ANS	The committee will provide a draft letter on this issue to EXCOM and recommend a letter be sent to ANSTF requesting a pathway risk assessment and white paper	Letter and increased awareness of resource managers and industry	No FY14 funding requested
eDNA Marker Development	Develop a priority list of species for which eDNA markers would be useful and provide funding for development of markers for priority ANS species	eDNA markers for priority ANS species	No FY14 funding requested; may request \$15k in future FY
Database of Imported Species	A database of information on what species are being imported and what organisms are arriving with these imports is needed	Proposal for consideration at next panel meeting	No FY14 funding requested

16. 2013/2014 Work Plan (Cook)

One FY12 project is on-going and with a remaining \$7,750 obligation.

Seven FY13 projects with obligations totaling \$54,500 are on-going or remain to be started.

Approximately \$31,000 was de-obligated and made available for FY14 projects.

The committees identified four new projects requiring funding totaling \$56,500.

The Research and Risk Assessment Committee will hold a conference call soon after this meeting to discuss an 'Asian carp market development' project on the committee's 2014 work plan and may submit an additional FY14 funding request to the ExComm for consideration. The committee also postponed a \$10,000 funding request for an 'eDNA marker development' project to a future budget year.

Action Item:

- ! *The ExComm will review the panel's budget and make decisions regarding the panel's FY2014 work plan once the panel's FY2013 funding is received from the FWS.*

17. Recommendations and Decision Items for ANSTF

The panel members reviewed and discussed the committees' proposed recommendations for the ANSTF.

- 1) Fund and implement the education portion of the proposed the national AIS Action Plan.

The panel members agreed to expand the recommendation to funding and implementation of the full national AIS action plan.

The FWS, Great Lakes Panel, and MRBP are familiar with the concept of a national AIS action plan, but it has not been discussed with the ANSTF. Either of the Regional Panels could tee this up for discussion by the ANSTF.

One option would be to request a discussion on a national AIS action plan at the next ANSTF meeting. Once the concept has been presented to the ANSTF, the panel may then want to recommend funding and implementation of a national AIS action plan. Alternatively if the panel were to submit the recommendation for consideration at the next ANSTF meeting, the panel would certainly be requested

to lead a discussion on this topic. Mike Hoff volunteered to lead this discussion for the MRBP.

Draft Recommendation:

The ANSTF should adopt, fund, and implement a national AIS action plan.

Action Item:

- ! *Propose discussion of a national AIS action plan at the fall ANSTF meeting.*

2) Examine fracking as a vector for AIS.

The Research and Risk Assessment Committee is drafting a letter for panel consideration to be forwarded to the ANSTF. The letter will request development of a white paper on the issue.

The panel will request the ANSTF to examine fracking as a vector for the spread of AIS. If approved by the panel Executive Committee, the Research and Risk Assessment Committee's letter will be submitted to the ANSTF with the recommendation. The draft letter provides a bulleted list of important issues that should be considered and addressed in a white paper.

The panel may want to include in the letter a recommendation to consider the BMP's that have been developed for fire suppression and water transport as a possible starting point.

Draft Recommendation:

The ANSTF should complete a pathway risk assessment of water transportation associated with fracking and develop an issue white paper that outlines concerns.

Action Item:

- ! *The Executive Committee will review the draft letter regarding fracking as a potential vector for the spread of AIS and consider submitting the letter as supporting information for the panel's recommendation.*

3) ANSTF should provide an update on the funding and implementation of the top 40 prioritized recommendations of the National Asian Carp Management Plan as set by regional panels.

This is a follow-up to the MRBP's previous recommendation to the ANSTF to fund and implement the 40 prioritized recommendations. This panel decided that requesting an update on the previous recommendation would make for a better agenda item, rather than a new recommendation.

Action Item:

- ! *Propose an update on the ANSTF members' progress to fund and implement the 40 prioritized recommendations from the national Asian carp management and control plan.*
- 4) Provide an update on the Biological Control Development Program of USDA and USACE. Reinstate, Develop and Encourage Biological Control development for aquatic invasive species.

The committee recommends an update from these agencies regarding where the programs currently stand, what the agencies are currently doing with respect to these programs, and the agencies' long-term plans for these programs. The committee members are not aware of recent activity in these programs. Based on the update, the committee suggests encouraging the agencies to continue work in the development of biocontrols for AIS – not limited to plants.

Draft Recommendation:

ANSTF member agencies should reinstate (or strengthen), develop, and encourage biological control development programs for AIS.

Action Item:

- ! *Propose updates from USDA and USACE on the agencies' biocontrol development programs at the fall ANSTF meeting.*

Action Item:

- ! *The Executive Committee will finalize the draft recommendations develop by the panel members and submit them for discussion at the fall ANSTF meeting.*

18. Set Date and Location for Next MRBP Meeting (Cook)

The nine month meeting cycle would put the next meeting date in mid-April. It would be better to meet in mid- or late-March to allow adequate time for the panel to submit recommendations 30-days prior (required) to the ANSTF meeting generally scheduled during the first full week in May. AFWA will meet March 11-15, 2014. The Gulf and South Atlantic Regional Panel generally meets during the 2nd or 3rd

week in April. Easter is in late-April next year so that should not present any problems. The meeting date will likely be late-March to early-April to avoid conflicting with the other meetings.

Dennis Riecke (MS) offered to host the next panel meeting. The panel was informed that a large outdoor/sporting goods retailer expressed interest in attending the next panel meeting if it is held in the Kansas City area. The panel decided to explore the opportunity to bring in a new partner as the first option, otherwise the panel will hold its next meeting in Mississippi.

Decision Item:

! *The next panel meeting will be scheduled in late-March or early-April 2014.*

19. Tour Schiermeier Olentangy River Wetland Research Park

Staff of the Wilma H. Schiermeier Olentangy River Wetland Research Park provided a guide tour of the Ohio State University facility.

20. Asian Carp Commercial Harvest Workshop

The MICRA Executive Board hosted the Mississippi River Basin Panel for an in-depth discussion on the potential for commercial harvest to be an effective tool to reduce Asian carp populations in the Mississippi River Basin.

The workshop started with four speaker presentations and concluded with a group discussion about the concerns, opportunities, and needs of natural resource management agencies related to commercial harvest of Asian carp. Several recommendations were identified for MICRA to consider addressing.