
AQUATIC NUISANCE SPECIES TASK FORCE: MINUTES OF THE 2016 NOVEMBER MEETING

NOVEMBER 9 - 10, 2016; FALLS CHURCH, VIRGINIA

On November 9-10, 2015, the Aquatic Nuisance Species Task Force (ANSTF) held a two-day meeting at U.S. Fish and Wildlife Service Headquarters in Falls Church, Virginia. Action items are listed below, followed by a summary of the meeting.

Decisional Items

The ANSTF made the following decisions:

- ANSTF approved the Maryland State ANS Management Plan.

New Action Items

The ANSTF assigned the following action items:

- ANSTF Executive Secretary will inquire about the ability of the Mississippi River Basin Panel (MRBP) to review and provide comments on the ACRC 2017 Action Plan.
- ANSTF Executive Secretary will provide a summary of the outcomes from the USFWS 2017 Triploid Grass Carp stakeholder meeting as it relates to the May 2015 recommendations from the GLP and MRBP.
- ANSTF Executive Secretary will distribute information from NAA on their Aquaculture America 2017 Conference to the ANSTF and USFWS Office of Law Enforcement.
- ANSTF will inquire with NISC about actions to better understand the pathway associated with Live Release for religious/cultural purposes.
- Economics group will distribute their draft interview questions and script to ANSTF members and Regional Panels. Comments on the documents along with suggestions for sectors and potential contacts to include in their economic assessment are due by December 1.
- ANSTF Co-chairs will consider criteria for membership expectations of members, and report back at the May 2017 meeting.
- ANSTF members and Regional Panels will submit (or resubmit, if needed) completed ANSTF Reporting Forms to the Executive Secretary by December 15.
- CEO sub-committee will distribute request to ANSTF members and Regional Panels for input on needs for development, implementation, and evaluation of outreach programs.
- John Darling (EPA) and Stephanie Carman (BLM) will lead efforts to discuss future work and ANSTF structure for (1) Research and (2) Prevention, EDRR, Control / Management, and Restoration and provide recommendations at the May 2017 meeting.
- Elizabeth Brown will distribute the CEO charter to the ANSTF members and Regional Panels.
- ANSTF Exec Sec will facilitate communication with USGS and other applicable Federal agencies regarding recommended MRBP research priorities.

Wednesday – November 9, 2016

1. Welcome

David Hoskins (U.S. Fish and Wildlife Service) and Jennifer Lukens (National Oceanic and Atmospheric Administration) welcomed attendees and thanked them for attending.

Hoskins reviewed the agenda which included presentations on Organisms in Trade, Ballast Water Legislation and Management Systems, updates from several outreach campaigns, pending approval of the Maryland State ANS Management Plan, and discussion on ANSTF Reporting Form responses.

Hoskins stated that the 2015 ANSTF Report is now complete. Copies were distributed to the members, but a hold on further distribution was requested to allow time for the report to be sent to Congress.

Lukens thanked the USFWS for hosting and organizing the meeting. She also thanked the ANSTF Members, Regional Panels, and committees who have dedicated hours of personal time and expertise to ensure that the meeting action items remain progressing or completed.

Self-Introductions

ANSTF members and audience members introduced themselves. The list below includes actual and call-in attendees.

Name	Affiliation
Mike Allen	Maryland Sea Grant
James Ballard	Gulf States Marine Fisheries Commission
Mike Bober	Pet Industry Joint Advisory Council
* Kim Bogenschutz	Association of Fish and Wildlife Agencies & Iowa DNR
Bill Bolen	U.S. Environmental Protection Agency
Elizabeth Brown	Colorado Parks and Wildlife
Stas Burgiel	National Invasive Species Council Secretariat
* Susan Burks	Minnesota Department of Natural Resources
Stephanie Carman	Bureau of Land Management
* Pat Charlebois	Illinois-Indiana Sea Grant
Al Cofrancesco	U.S. Army Corps of Engineers
Greg Conover	U.S. Fish and Wildlife Service
John Darling	U.S. Environmental Protection Agency
Elizabeth Daut	National Socio-Environmental Synthesis Center
Ian Davidson	Smithsonian Environmental Research Center
Josh Emerson	U.S. Environmental Protection Agency
Jack Faulk	U.S. Environmental Protection Agency
Ray Fernald	Mid-Atlantic Panel
Jane Gamble	U.S. Department of State
Jason Goldberg	U.S. Fish and Wildlife Service
Andrew Green	University of Georgetown; Invasive Hitlist
Rachel Habib	University of Georgetown; Invasive Hitlist
David Hoskins	U.S. Fish and Wildlife Service

Jessica Howell	North Dakota Game and Fish
David Hu	Bureau of Land Management
Danielle Huang	University of Georgetown; Invasive Hitlist
Doug Jensen	Minnesota Sea Grant
Erika Jensen	Great Lakes Commission
Su Jewell	U.S. Fish and Wildlife Service
Cindy Kolar	U.S. Geological Survey
Brian Landry	U.S. Fish and Wildlife Service
Mark Lewandowski	Maryland Department of Natural Resources
Robert Likins	Pet Industry Joint Advisory Council
Joe Love	Maryland Department of Natural Resources
Jennifer Lukens	National Oceanic Atmospheric Administration
Donald MacLean	U.S. Fish and Wildlife Service
Craig Martin	U.S. Fish and Wildlife Service
Noah Martin	University of Georgetown; Invasive Hitlist
* Karen McDowell	San Francisco Estuary Partnership
Trevor Meckley	NOAA
Kathy Metcalf	Chamber of Shipping of America
* Meg Modley	Lake Champlain Basin Program
John Morris	U.S. Coast Guard
Noah Museles	University of Georgetown; Invasive Hitlist
* Matt Neilson	U.S. Geological Survey
Stephanie Otts	National Sea Grant Law Center
Susan Pasko	U.S. Fish and Wildlife Service
Susan Qashu	U.S. Department of State
Hilary Smith	U.S. Department of Interior
* Kristen Sommers	Florida Fish and Wildlife Conservation Commission
Joe Starinchak	U.S. Fish and Wildlife Service
Mario Tamburri	Maritime Environmental Resource Center
Michele Tremblay	Northeast Aquatic Nuisance Species Panel
Bob Wakeman	Wisconsin Department of Natural Resources
John Wullschleger	National Park Service
Libby Yranski	National Marine Manufacturers Association
Dennis Zabaglo	Tahoe Regional Planning Agency
Paul Zajicek	National Aquaculture Association

* *On the phone*

2. Adoption of Agenda/Approval of Minutes/Review of Past Action Items

Following introductions, Jennifer Lukens called for approval of the current meeting agenda. Al Cofrancesco moved to adopt the agenda. Stephanie Carman seconded the motion. The agenda was approved unanimously without discussion.

Lukens called for approval of the meeting minutes from the May 2016 ANSTF meeting in Traverse City, Michigan. Erika Jensen moved to adopt. John Darling seconded the motion. The minutes were approved unanimously without discussion.

Susan Pasko (ANS Task Force Executive Secretary) provided an overview on the status on the action items from the May 2016 meeting:

- ANSTF Executive Secretary will distribute status of November 2015 actions items and post to meeting website.
STATUS: Complete, updates are available on ANSTF website
- ANSTF Members will submit written updates to the Executive Secretary for distribution.
STATUS: Complete, updates were collected following May 2016 meeting and included in meeting minutes (posted on ANSTF website)
- ANSTF Executive Secretary will revise the Activity Reporting Form and provide guidance / examples on form completion. Form will be distributed to ANSTF members and Panels in September 2016 for collection of FY 15 and 16 accomplishments.
STATUS: Complete and ongoing, reporting Form was updated and distributed. Collection of reports from members and Regional Panels is in progress.
- ANSTF (working with Panels and NISC) will explore options for a workshop on CRISPR and gene-drive technologies as a part of the Innovation Summit.
STATUS: Complete and ongoing, ANSTF has partnered with NISC Secretariat in development of the Innovation Summit scheduled for December 5, 2016.
- ANSTF will facilitate communication between USCG, EPA, and NBIC and the Western States on ballast water management reporting.
STATUS: Complete and ongoing, ANSTF Executive Secretary communicated the Regional Panel's concerns to USCG, EPA, and NBIC. Each entity provided a statement and/or point of contact to the Western States. The ANSTF Executive Secretary will follow up as needed.
- NOAA will identify a speaker for the November 2016 meeting that will provide an update regarding Arctic issues (e.g., Arctic Council).
STATUS: Complete, NOAA identified a speaker from the NISC Secretariat (Stas Burgiel) to present at the Western Regional Panel meeting in October 2016.
- ANSTF Executive Secretary will invite representatives from the American Waterways Operators (AWO) to attend the next ANS Task Force meeting and engage in discussions about ANS prevention and control.
STATUS: Complete and ongoing, the Mississippi River Basin Panel reached to AWO to participate on the Panel. Their engagement and level of the interest with the Panel will be evaluated to determine if ANSTF should extend an invitation to AWO to attend future (national) ANSTF meetings.

- ANSTF Federal agency members to provide an update on their agency's participation on all Regional Panels at the 2016 Fall ANSTF meeting.
STATUS: Complete a request for a Federal membership updates were made following the May 2016 meeting. Results from the requests were discussed at the All-Panel meeting (November 8, 2016)
- ANSTF Executive Secretary will report on USFWS FY 17 funds for the Chesapeake nutria eradication project.
STATUS: Complete and ongoing, budget numbers for FY 17 are uncertain at this time as a result of the CR; funding levels will be reported as this information becomes available.
- ANSTF will hold a discussion at the Fall 2016 meeting regarding membership.
STATUS: Complete, this discussion is scheduled for Thursday morning (November 10, 2016)
- USFWS will meet with Economics sub-committee to develop detailed outline of the aquatic invasive species (AIS) Economics report.
STATUS: Complete, the discussion is scheduled for Thursday morning (November 10, 2016)
- Federal member agencies will provide the ANSTF Executive Secretary with the activities (steps, status, and timeline) they will undertake for Options 1-5 of the Federal Policy Options Implementation Table as well as perspectives on proposed activities for Options 6-8. Information will be provided by the Fall 2016 meeting.
STATUS: Complete and ongoing, a request for information was made and results are currently being reviewed.
- ANSTF Executive Secretary will work with Regional Panels to develop a follow-up discussion on AIS interbasin transfer and control technologies at the Fall 2016 meeting.
STATUS: Complete, this discussion has held at the All-Panel meeting (November 8, 2016)

3. ANSTF Update

David Hoskins gave an overview an ANSTF business items. ANSTF members continue be vetted through the Department of the Interior and the White House Liaison's vetting process. 10 members were recently vetted, including representatives for the new ex-officio members (National Marine Manufacturers Association and National Aquaculture Association). Members will continue to be vetted as they are reappointment or replaced.

NANPCA requires the ANSTF to submit a report to Congress detailing progress in carrying out the provisions of the Act. At the May meeting, it was reported that the 2015 RTC was being reviewed by OMB. OMB has since cleared the report. The final layout of the report has been completed and is ready for distribution.

The President's FY 2017 budget for the Service continues to focus on key invasions - Asian carp and Quagga/zebra mussels. The current Continuing Resolution (CR) is scheduled to end on December 9, 2016. It is uncertain whether there will be another CR or whether the Federal government will receive a final budget for FY17. Congress will return in a lame-duck session after the election to work on legislation that will keep the government open throughout FY17.

The President's funding request for FY17 included an increase (\$669,000) focused on prevention. The funds will support risk assessments to evaluate potentially invasive species, improve the injurious wildlife listing process, and enhance collaboration with industry and states.

The FY17 House Report provides an increase of \$1.14 million to fund state plans and directs the USFWS to fund state plans at not less than \$3.7 million. This increase may come at a cost to other parts of the invasive species budget. The Service currently provides \$2.0M for state plans which comes from two sources: \$1 million from QZAP funds and \$1 million from the \$2.57 million currently provided for NISA Implementation and Regional Coordination. The House Action requires state plan funding to be increased by \$1.7 million to \$3.7 million but only provides \$1.14 million to do so. Implementing the budget as the House directs would increase state plan funds but force a reduction of \$566,000 to implement NISA and regional coordination. The USFWS has expressed its concerns to Congress as it continues its work on the FY17 budget.

In FY16, an additional \$1 million was appropriated by Congress for the State/Interstate ANS Management Plan Grant Program, bringing the total to \$2 million. 41 of the 42 eligible plans applied for funding this year and each plan received approximately \$48,000. (Idaho did not apply). There are currently 42 ANSTF-approved plans (39 state and 3 interstate). The state of Maryland has drafted a plan and will be seeking approval at this meeting. As a result of the Continuing Resolution, the FY17 funding levels for State/Interstate Plans should remain at \$2M.

The FY16 President's budget included an increase of \$42,000 for Regional Panel support. This increase was approved by the Senate, but was not approved by the House. As a result the FY16 Regional Panel funding remained at \$40K/Panel. As a result of the Continuing Resolution, the FY17 budget maintains FY16 funding levels for Regional Panels.

In FY16, the USFWS allocated approximately \$930,000 to partners through grants for projects to control the spread of invasive mussels in the western U.S., with emphasis on preventing the spread via trailered watercraft from areas already contaminated. The Quagga-Zebra Action Plan (QZAP) Team met in early June to rank projects and nine projects were funded. Funded projects addressed the highest priorities of the QZAP and the 2015 Dreissenid Mussel Research Priorities Workshop. It is anticipated that the FY17 budget will maintain FY16 funding levels for QZAP.

The USFWS received \$7.9 million in FY16 for Asian carp management. \$5.3 million was allocated to the Great Lakes to support existing efforts. \$2.6 million was allocated to augment existing funding and management efforts outside of the Great Lakes as described in the National Asian Carp Management and Control Plan. It is anticipated that the FY17 budget will maintain FY16 funding levels for Asian carp management.

4. Informational: New Species Occurrences

Pam Fuller, USGS was not able to attend. Matt Neilson (USGS) gave the presentation via teleconference.

Neilson provided an overview of the NAS system alerts from the past 6 months. Alerts are generated when a species report is new to one or more geographic levels. Since May 2016, USGS had 129 alerts; 8 new to the United States, 17 new to states, 78 new to drainages, and 26 new to counties. Of these alerts, 37 were fish, 38 were mollusks, and 33 were plants. Twelve of the alerts were from Asian carp, 10 from zebra mussels, and 8 from Hydrilla. Other new species occurrences included the starry stonewort, tropical nutrush, Pennant Coralfish, Blotched Foxface, Freshwater Tubenose Goby, Blackbelt Cichlid, and red swamp crayfish.

USGS is working to improve the ability to develop new maps and spatial queries. New features have been added to the database to allow users to view all records within a specified geographic area. A new taxonomic tab has been added to allow individual species to be highlighted on the map and allow for species comparisons. New options for base layers, reference layers, and species observations will allow for customized maps. A url can now be generated for map created in from the database which can be

embedded into other websites. The referenced map will be updated automatically as new information becomes available through the USGS NAS Database.

Q: Robert Wakeman - How do you handle situations where a previously reported species was eliminated from a specific location? How do you get this data?

A: We attempt to keep the data as up-to-date as possible. Each occurrence is labeled as observed, established, eradicated, failed, or unknown; however the information may not always be current. USGS continues to work on improving its tracking system. Some data is gathered from other databases (e.g., EDDMaps); however it mostly relies on individuals reporting species that they observe on the ground.

Q: Erika Jensen – A comment on new occurrences. The U.S.EPA reported a new copepod (*Thermocyclops crassus*) in the Great Lakes last week. The pathway of introduction is unclear along with potential impacts from this species. The copepod was found in samples collected from Lake Erie during 2014 to 2016. Other agencies are checking past samples to determine if this species was present prior to 2014.

5. National Invasive Species Council Update

Stas Burgiel, NISC Secretariat, presented on the recent activities of the National Invasive Species Council (NISC). The revised management plan was released in August 2016 and will serve to guide NISC and its Invasive Species Advisory Committee (ISAC). The Plan emphasizes the role of NISC in regards to implementing Executive Order 13112. ISAC has been recently restructured to a task team orientation that corresponds to deliverables where NISC needs non-Federal input. Current task teams include Federal-State Coordination, Federal-Tribal Coordination, Wildlife Health, Infrastructure, and Gene Editing/Advanced Biotech; upcoming task teams will be asked to consider options pertaining to managed relocation and watercraft movement.

To future its regional coordination efforts, NISC continues its work with the Arctic Invasive Alien Species (ARIAS) Strategy and Action Plan under the Arctic Council with a goal to have a final draft before the 2017 Ministerial meeting (May 11, 2017). There is also an effort to develop a North American Invasive Alien Species Strategy. The impetus for this action was the North American Leadership Summit in which member countries have recognized the importance of engaging various regional and non-Federal entities. NISC also worked with the Office of Insular Affairs to organize a U.S. Territories Invasive Species Coordinating Committee (US TISCC). The committee held a workshop and training course in June 2016 and continues to develop territorial action plans

The Early Detection Rapid Response (EDRR) Framework was released in February 2016. Many of the recommendations from the Framework were incorporated into the NISC Management Plan. NISC is currently assessing Federal capacities and capabilities to establish a baseline and guide future efforts. An Innovation Summit is planned for December 5, 2016 which will focus on key challenges and technology innovation. Lastly, NISC has assisted development of a documentary, "Protecting What Matters." The film is intended to show how invasive species impact everyday lives and is projected to be completed early 2017.

Q: Paul Zajicek - I noticed the Plan has 5-year interval to review the Executive Order and update it.

A: The Executive Order is currently being reviewed; CEQ is leading that process.

Q: Paul Zajicek - The Innovation Summit sounds interesting; what are the potential outcomes from this event?

A: It's intended to a platform that can help identify and address emerging issues. It may also be used to inform Federal agencies and help generate additional support.

Q. John Morris - Can Coast Guard contacts attend the next Policy Council meeting?

A: Yes, NISC recognizes that there is a fragmented capacity for agencies to participate. We're working to improve that effort as part of interdepartmental coordination.

Q: Doug Jensen - There are a number of efforts at the state and regional level that features practical applications on invasive species. Can connections be made between these efforts and the Innovation Summit? Also, how do others communicate the activities that NISC is doing?

A: Tracking the work at state and local levels is an ongoing discussion. It is difficult to capture everything, but efforts are improving. The ISAC Task Team on Federal-State relations continues to work on this issue and will make recommendations in regards to partnerships between states and Federal agencies.

ORGANISMS IN TRADE SESSION

6a. Informational: Infectious pathogen risk stemming from U.S. Exotic Animal Imports and Exporting Countries

Elizabeth Daut (National Socio-Environmental Synthesis Center) provided an overview of her research on the risk of pathogens stemming from animal importation. Imported animals, either wild-sourced or captive-bred, can harbor infectious pathogens harmful to native U.S. wildlife if accidentally or deliberately released into the wild. For example, in 2015 there were ~118 million live fish imported into the United States (from 83 Countries). Many aquatic pathogens have been previously introduced from the fish trade including Cyprinid (Koi) herpesvirus, Infectious spleen & kidney necrosis virus, and Spring viraemia of carp virus. Given the high volume of shipments worldwide, a method is needed to prioritize which shipments have the highest risk of carrying potential pathogens.

It is reasonable to assume that risk of importing infectious pathogens varies according to conditions in the exporting countries and is a function of the number of imported species and individuals per country. To better understand the potential of importing pathogens, 17 years of USFWS import data were examined and quantified for composition, magnitude, and source (i.e., exporting country) of live bird, mammal, reptile, amphibian and fish imports. An exporting-country level infectious disease threat index was created by first evaluating the relative risk that countries will export infected animals and then combining these results with the number and diversity of exotic animals each country exports to the United States. Many of the top exporting countries are developing, with limited resources for disease surveillance. Many have high species biodiversity and are located in SE Asia, a known hotspot for emerging infectious diseases. There is limited information on disease risk for many exotic species that are being imported; however, reportable diseases for agriculture can be used as a proxy. Socio-economic factors can influence a country's ability to respond to or prevent disease whereas ecological factors may influence possible exposure to pathogens. Approximately 60 factors were used in a predictive model to predict the risk of a species arriving with at least one pathogen. The model generates predictions of the top 10 countries expected to export a pathogen. The models are still under development as there are still some issues to work out; for example, high exporting counties (e.g., Singapore, Hong Kong, and Thailand) outweigh other countries due to the volume they ship. Once the model is refined, the next step will be to collect diagnostic samples from high and low risk countries and see if the framework is working.

Q: Dennis Zabaglo - Where does Hong Kong rank?

A: Hong Kong is identified as a high risk country, which may be skewed by the fact that is a heavy exporter. For example, other countries have high risk of agricultural diseases, but the model identifying them as a low risk because they do not ship many animals into the United States. That

questions whether the United States should sample imports from such countries since the risk may be perceived as low in relation to the transmission of disease and volume shipped.

Q: Paul Zajicek - The Nation Aquaculture Association works with USDA on foreign and domestic diseases. What has your interaction been with USDA?

A: I work with USDA through a Working Group at SESYNC that is working on issues related to the live plant trade. There hasn't been specific interaction with them on this research design.

Paul Zajicek (Comment): USDA just completed a public comment period related to animals. There is another public comment period open until Dec. 5 related to reportable diseases from organisms in trade.

Q: David Hoskins - You mentioned that FWS doesn't have existing authority to conduct health surveillance on animals. How do you see this applied?

A: I'm anticipating that once the framework is complete, agencies that have the capabilities (such as CDC and USDA), may find it easier to implement health surveillance on animals.

Q: David Hoskins - Is individual risk of pathogens or country risk assessed?

A: All diseases are assumed to have the same risk value. We haven't broken it down to genera.

Q: Paul Zajicek -The risk of a specific pathogens may be more important than the number.

A: Good point. For example, the model would not have predicted the impact of Bsal in Europe or the response it provoked in the United States. Bsal is being used in this study as an example to identify new threats.

Q: Mario Tamburri - Have you considered that the source of the organism may not be the country, but instead a trading hub?

A: We recognize that there are some limitations in the data. For example, Singapore is a significant hub for organisms in trade, but we don't always have the original source. We know captive breeding of fish is happening in the top three countries (Singapore, Hong Kong, and Thailand), so those data results may be more accurate than others.

Q: Doug Jensen - Transshipment of fish is a real problem; we know they're going through different locations en route to their final destination. In Lake Superior, we have 14 species that have been introduced since 1983. These may serve as a model for your work.

6b. Informational: Regulatory Challenges for Aquaculture Trade

Paul Zajicek (National Aquaculture Association) provided perspective from the aquaculture industry in regards to the challenges associated with complying with state and federal regulations. Evolving regulations place workers that culture, sell, and/or ship live animals and plants across state lines at risk for a Lacey Act violation and/or state/local law enforcement. There are a total of 2256 regulated species and requirements may differ by state or agency for inspection, escape prevention, or recording keeping. There are 51 regulators (All U.S. states plus Puerto Rico) and multiple agencies in each state; resulting in approximately 4,166 state "regulations." It is a huge effort for industry to keep up and be knowledgeable about the requirements for each species. One solution may be an online clearinghouse that provides up-to-date regulations. This database should be searchable by species and used to inform buyers and shippers about both state and federal regulations. In addition, greater risk analysis is needed; portraying all non-native species as damaging is counterproductive. Focusing on the most damaging species will assist industry in managing the regulations.

Q: Robert Wakeman - Many states use a risk assessment tool to identify greatest threats. Is that something that industry recognizes?

A: Yes; however, sometimes the data isn't as good as it could be, or one state will use the assessment performed by another although habitats between states will differ. Some of the established species in one state are not a threat in another; hence, risk assessment should be performed independently.

Q: Robert Wakeman -Would industry prefer a consistent level of regulation?

A: This is not a likely scenario as states have different needs.

John Darling (comment): Focusing only on the number of known invasives vastly underestimates the scope of the problem. The impacts of many species are unknown, it may be better to consider them as invasive until proven otherwise.

Robert Wakeman (comment): The quality of the risk assessment is important. Risk assessment should be a tool to advise a decision, not to make the decision. Industry has developed some risk assessment tools, but we don't think they should be the only tool used to make regulatory decisions.

6c. Informational: Perspective from States

Stephanie Showalter Otts (National Sea Grant Law Center) provided an update on the "Building Consensus" efforts. The National Sea Grant Law Center was approached by the National Association of Attorneys General in 2010 about legal education on invasive species management. A pilot workshop focusing on the Chesapeake Bay was held in May 2011. As a result of its success, additional partnerships with regional panels to host similar workshops were sought. In 2012, the National Sea Grant Law Center began developing the Building Consensus effort with the Western Regional Panel to focus on watercraft vectors. Participants of the first Building Consensus workshop developed an action plan to address movement of invasive mussels in the Western U.S that is currently being implemented. In addition, the group has developed model legislation (2014) and regulation (2016) and conducted a Gap analysis (2014). Members of this effort are currently working on a model MOU to be used between states. Since the 2012 workshop, nearly a dozen western states have amended laws and regulations to better manage the watercraft vector. Further, Model Legislative Provisions informed development of new Watercraft Inspection and Decontamination programs in several of the western Canadian provinces. Planning is underway for the 2017 Building Consensus meeting.

In October 2016, the National Sea Grant Law Center partnered with the Mississippi River Basin Panel to host a regional bait workshop. Presentations focused on state bait programs, the Great Lakes Fisheries Commission harmonization project, and the Building Consensus efforts. There was facilitated dialogue among participants to discuss collaboration opportunities between states. Potential next steps include an assessment of the bait industry and state regulations, build upon Great Lakes Fisheries Commission harmonization project, and perform an analysis of bait pathway BMPs and the extent to which they are incorporated into state laws.

Comment: Dennis Zabaglo - This is a great example of what coordination can get you. I encourage ANSTF to continue fighting for funds to do this kind of work. Opening lines of communication is critical.

6d. Informational: Enforcement Challenges to Species Sold over the Internet

Bryan Landry, USFWS Office of Law Enforcement, provided the ANSTF an overview of the Lacey Act. This legislation is the oldest federal wildlife protection statute, first enacted in 1900. Various amendments over the years have strengthened the Lacey Act; most recently, the 2008 Lacey Act Amendments include trafficking provisions for state and federally protected plants, trees, and lumber. Title 18 of the Act prohibits importation/interstate shipment of live fish and wildlife which the Department of Interior declares by regulation to be "Injurious." Injurious Species Import/Transport

Offenses are a Class B misdemeanor, resulting in a \$5- 10K fine, and/or imprisonment up to 6 months, and forfeiture of wildlife. Incidents of knowingly transporting or trafficking injurious wildlife or false labeling will result in stiffer penalties (Class A misdemeanor to Class D felony). “Knowingly violated” is a key element that will determine the severity of the charge; which is often difficult for law enforcement offices to prove; U.S. Fish and Wildlife Special Agents must build a compelling case to present to the US Attorney’s Office. This office also prosecutes other federal crimes of equal importance. Landry presented a case study in which Asian carp were being illegally transported and sold. Although the Special Agents identified a clear violation of State law; the Department of Justice declined to prosecute, citing confusion of various state laws and language barriers (persons involved only spoke Chinese). Lessons that can be learned from this and similar cases is that the complexities of establishing a viable case suggest that Lacey Act enforcement is a valuable tool; however, comprehensive state laws and specific federal regulations may be the best first line of defense and most effective deterrent to combat the spread of invasive species

Q: Mark Lewandowski - Maryland had a similar case with Asian swamp eel. By the time the officers arrived, everything was gone. Would Federal officers prosecute something at a state level?

A: Yes, Federal officers often rely on assistance from the states to enhance enforcement of laws.

Q: John Darling – How did no one get prosecuted in that Asian carp case? It sounds like the burden of proof was really low. How could no one get prosecuted for possession of a listed species?

A: The burden falls to the government to show that the seller had some knowledge that what they were doing was illegal. This case was several years ago, Bighead carp were not listed injurious at this time.

Q: James Ballard (to David Hoskins) - Has there been movement on court challenges to the Lacey Act in regards to the constrictor listing impacts on interstate transport.

A: David Hoskins - An oral argument for this case was held on April 1, 2016 in the D.C. Circuit Court. We are still waiting on the decision from the court.

BALLAST WATER SESSION

7a. Informational: U.S. Coast Guard Update

John Morris (U.S. Coast Guard (USCG)) provided an update on implementation of U.S. Coast Guard Ballast Water Management regulations, including the type approval process for Ballast Water Management Systems (BWMS) and ongoing activities with the Environmental Protection Agency (EPA) and International Maritime Organization (IMO). The 2012 regulation required the U.S. Coast Guard to conduct a practicability review to determine if a more stringent standard is achievable. The review published in May 2016, concluded that, at this time, the available technologies are not able to achieve a significant improvement in ballast water treatment efficacy. The Ballast Water Reporting and Record Recordkeeping Rule became effective February 22, 2016. The rule standardizes and streamlines reporting process and improves the U.S. Coast Guard’s ability to track ballast water management trends. Since 2004, there has been an increase in the volume of ballast water being discharged. This trend is expected to continue; as such it is urgent to implement a BWMS approval process. The U.S Coast Guard is currently providing extensions that address the numeric discharges for compliance since there are no U.S. type-approved systems available. About 60 systems have been accepted as an Alternate Management System for use in U.S. waters, which may be used instead of ballast water exchange prior to the vessel’s compliance date and for 5 years after the vessel’s compliance date.

The United States has not determined if the country will ratify the IMO Convention. Both the U.S. Coast Guard and IMO Convention type approvals have land-based and shipboard-testing components. There are similarities within discharge standards and the allowable concentrations of organisms; however, the United States and IMO Convention have administrative and technical differences. The U.S. Coast Guard continues to work with private test facilities for approval testing. Next steps include developing alternative methods for testing, modification of system components, and applying results from testing at small volumes to understanding consequences at large volumes. The U.S. Coast Guard will also continue to provide grant exemptions, develop compliance policy, and remain engaged with stakeholders.

Q: Dennis Zabaglo – Can you elaborate on ultraviolet treatment? Do you have a target species in mind?

A: It's intended to work on all systems. Our regulations are not species-specific.

Q: Erika Jensen - Can you clarify the Alternate Management System that is approved in the absence of U.S. approved technology? What is the process?

A: These are foreign type approved systems, in which other countries send testing reports or materials. Although there have been a number of updates to Alternate Management Systems, it does present some challenges. For those systems that can't be upgraded, the vessel only has a five-year window before a type-approved BWMS must be in place.

Q: John Wullschleger – Do you have systems that are on the verge of type-approval?

A: Yes. Three applications have been submitted. This information is available to the public and on The U.S. Coast Guard website.

Q: John Wullschleger – What is the timeframe? When do you move to making the systems a requirement?

A: We don't have a timeline yet; however, it will be a transition process.

7b. Informational: Environmental Protection Agency Update

Jack Faulk (EPA) discussed Environmental Protection Agency (EPA)'s Vessel General Permit (VGP) and the provisions applicable to ballast water management. The Clean Water Act gives the EPA the authority to regulate discharges of pollutants, which extends to the management of ballast water. The current VGP expires at the end of next year; a revised process will be published next year. In drafting the new VGP, the current permit was reviewed for potential improvements and considered the best available technology is for managing ballast water. The process will include a formal notice and comment period. EPA is open to any comments and suggestions between now and the close of the comment period on how the permit can be improved. EPA will also consult with the U.S. Fish and Wildlife Service, NOAA's National Marine Fisheries Service, and the states where the permit is in effect.

On October 2015, the 2nd District found EPA's VGP to be arbitrary and capricious although its requirements and rational comparable to those within the U.S. Coast Guard (USCG)'s ballast water regulations. Specifically, the Court found the VGP's rational weak for restricting onshore treatments, yet permitting certain exemptions in the Great Lakes. The VGP will remain unchanged, but these issues will be addressed in the 2018 reissuance.

On December 27, 2013 EPA issued an Enforcement Response Policy (ERP). The ERP states that vessels that don't meet the VGP's numeric ballast water limits and have received an extension from the USCG and are in compliance with all other VGP requirements. A joint memo from EPA and USGS was sent to vessel owners/operators that have received an extension from the USCG. The memo states that if vessels meet certain requirements, they do not have to abide by additional requirements that require new system installations, with the stipulation that the USGS may require these systems to be removed if

technology fails to meet standards. Several ballast water management technologies are in development, a number of vessels have adopted these technologies are being monitored for effectiveness. Noncompliance of ballast water regulation is also being reported; in FY 2015 and 2016, less than 2% of annual reports identified violations.

EPA is also developing a ballast water technical development document, evaluating the 2011 ballast water report from the EPA Science Advisory Board, and updating of the Ballast Water Treatment Testing Protocol. The Vessels Incidental Discharge Act (VIDA) draft legislation is being followed closely as its passage may remove the EPA's regulatory responsibility of ballast water.

Q: Robert Wakeman – What is happening to the ballast water exchange requirement?

A: It is not likely that ballast water exchange requirements will be removed for the Great Lakes. One of the nuances of the Ballast Water Convention is that ballast water must be treated, which may not be practical for the Great Lakes.

Q: John Wullschleger – Is there a document that can be used to identify what drives the differences in standards between EPA and USCG?

A: There are some tables that show similarities and differences, but EPA does not have a document for this specific purpose, but it may exist through other groups.

Erika Jensen (comment): The Great Lakes Commission may be able to provide this info.

7c. Informational: Ballast Water Convention and other Assorted Challenges

Kathy Metcalf, Chamber of Shipping of America, presented on the challenges surrounding ballast water management aboard commercial ships. The International Maritime Organization (IMO) deals with commercial operations. It has a Marine Environment Protection Committee (MEPC) that held its 70th session in October 2016 to discuss many issues, including ballast water. During an earlier session, MEPC agreed to revise its guidelines for equipment testing that are included in the Ballast Water Management Convention. These revisions were approved at the October 2016 session. The new guidelines will take effect in October 2016 for new type approvals and October 2020 for new installations. Revisions are being done to realign the implementation schedule with the International Oil Pollution Prevention (IOPP) survey. During the October 2016 session, extending implementation schedule was proposed to align it with the International Oil Pollution Prevention (IOPP) survey. Without an extension, vessels with implementation dates before October 2020 would be forced to install systems type approved under the old G-8 (unless systems conducted additional testing to meet the revised G-8 guidelines prior to 2020). A decision to extend the schedule was not reached, yet with issue will be revisited at the 71th session in May 2017.

At the international level, there are significant uncertainties in regards to ballast water management system manufacturers, vessel owners, and IMO member states. At the National level, requirements under the USCG, EPA, and individual states may cause confusion and uncertainty. One set of regulations is needed that can help shipowners better understand what they need to do. In addition, there is a need for a better communications network across all stakeholders to develop a strategy that influences positive outcomes reflecting real world operations.

Q: What is the relationship between the Vessel Incidental Discharge Act (VIDA) and the Clean Water Act?

A: A new section under VIDA would be created for VGP discharges (not just ballast water) that would preempt any new State requirements. VIDA may get rid of some of the complications because it means two agencies won't be operating under separate statutes.

7d. Informational: Challenges with Certification Testing of Ballast Water Management Systems

Mario Tamburri, Maritime Environmental Resource Center, presented on the challenges with effectively and reliably removing live organisms from ship's ballast water to meet national and international discharge standards. Unfortunately, current certification testing conducted under the IMO G8 guidelines and the USCG Independent Laboratory program are variable and flawed, resulting in widespread skepticism and uncertainties on the true performance of Ballast Water Management Systems (BWMS). The IMO Ballast Water Correspondence Group is working on suggested improvements to address current G8 shortcomings. In addition, the USCG has an ongoing Environmental Technology Verification (ETV) Protocol review. The shipping industry often views the USCG BWMS certifications as the "gold standard" that can resolve issues with the IMO G8 guidelines. The USCG is seeking a robust system for testing and certification, but more work is needed to achieve this goal. There are some challenges with the USCG BWMS type approval process; for example, there is little consistency of results and methods used between different testing facilities. Independent laboratories or manufactures may manipulate the process to maximize the likelihood of passing certification testing; the level of scrutiny may vary by testing method and laboratories often lack a comprehensive review of procedures or audits. For example, the ETV Protocol states to "count the number of dead organisms, defined by a lack of visible movement during an observation time of at least ten seconds;" however, the statement does not consider eggs, larvae, diatoms, and other organisms that may be alive, yet exhibit little movement. The USCG is aware of this and other issues; future revisions of the protocol will address these limitations.

8a. Regional Panel Updates

Great Lakes Panel on Aquatic Nuisance Species

The fall Great Lakes Panel (GLP) meeting was held November 2-3 2016, and included ad-hoc committee sessions on grass carp and risk assessments, as well as plenary sessions tracking progress on ANS prevention and control; regional organisms in trade project updates; and advancements in control approaches for Sea Lamprey and Asian carp.

The Grass Carp Ad Hoc Committee was established a year ago to track and report on activities in addressing Grass Carp priorities, assist with coordinating member and partner agency activities, identify emerging needs and issues, develop recommendations for the ANS Task Force, and communicate with GLP standing committees. At the recent fall meeting, the committee discussed the population status of Grass Carp in the Great Lakes Basin and a potential approach to help assess population status which will be refined and considered further by the GLP. The committee also identified communications challenges around Grass Carp and is working on developing effective messaging tools.

The Risk Assessment Committee was established by the GRP in Spring 2016 to perform scoping work to develop a risk assessment clearinghouse by identifying the end users for risk assessments, the type of information that should be shared and sensitivity level of the information, options for mechanisms to share risk assessments and results, priority species/pathways for risk assessment, and funding sources and organizations or individuals able to conduct the work. The committee identified the need for a risk assessment clearinghouse and continues to work on its recommendations.

The GLP Information/Education (I/E) Committee is continuing work on an update of the Great Lakes Aquatic Invasions (GLAI) booklet, last published in 2007. The majority of the content has been reviewed and updated, editing has begun, and progress toward the design overhaul has been made.

The GLP Research Coordination Committee met via conference call this fall to continue its work on tracking investments in AIS prevention and control. This effort will attempt to provide a comprehensive overview of what aquatic invasive species activities have been funded in the Great Lakes, and how that matches regional priorities to develop strategies for the future.

The GLP Policy Coordination Committee continues to serve as a forum for exchanging information on regional policy activities. The committee previously identified the need for and recommended that the GLP consider convening the ad hoc risk assessment committee.

Northeast Aquatic Nuisance Species Panel

The May 2016 Northeast Aquatic Nuisance Species (NEANS) Panel meeting was convened in Providence, Rhode Island at the Save the Bay headquarters. Meeting topics and discussions included developing messages for public service announcements, boat washing efficacy study results, round table updates, Rhode Island invasive species management efforts, VIDA, and progress report on settlement plate data.

The Fall 2016 meeting will be convened in New Haven, Connecticut at the Connecticut Agricultural Experiment Station and marks the Panel's fifteenth anniversary. Presentations will include non-invasive techniques for invasive species prevention and updates on the National Database and Mapping Tool. All presentations are posted to NortheastANS.org. The next jurisdiction in rotation for the May 2017 meeting is Vermont, but the meeting location may be changed to accommodate a possible joint meeting with the Mid-Atlantic Panel. The NEANS Panel anticipates that it will be hosting the ANSTF meeting in May 2018. The rotation jurisdiction for the May 2018 meeting is Maine. The ANSTF may wish to change the rotation based on preferences relative to meeting location, field trip options, and airport proximity.

Mid-term conference calls are convened in February and August to keep the Panelists connected and to prepare recommendations for the ANSTF meetings. New panelists include Alyson Eberhardt (University of New Hampshire Sea Grant), Read Porter (Rhode Island Sea Grant Legal Program), and Steve Williams (Seaplane Pilots Association). Although there are three new Panelists, NEANS Panel participation has declined steadily in the past few years. NEANS Panelists and others have expressed that there is little incentive for them to participate since there has not been funding for projects. The Panel is running out on the critical mass needed from which to nominate co-chairs and to lead and participate in committees.

The Climate Change Work Group continues its work to formulate an existing and likely invasive species list based on changing environmental conditions. The Spread Prevention Work Group is developing a universal decontamination standard operating procedure. The progress of these work groups has been hampered by the lack of financial support.

Through pro bono work donated by its contractor, the NEANS Panel maintains listserves for the NEANS Panel and interested parties. The NEANS Panel solicited orders and produced a new print of its Asian Clam Watch Card. With server migrations and firmware updates, NortheastANS.org, the monthly rotating featured species, and the dynamic online identification guide have been broken several times. There are no funds to contract with a developer to re-design the site to a content management system or provide code fixes for the rotating featured species and the dynamic online identification guide.

Gulf and South Atlantic Regional Panel

The Gulf and South Atlantic Regional Panel (GSARP) is the 3rd year of their small grants program. Past recipients were brought in to give talk about their research, and included work on apple snail, weevil, giant salvinia, and didymo efforts. Numerous proposals have been received for the upcoming year; the review committee is evaluating the proposals.

The GSRAP Education and Outreach Committee is updating the material for the traveling trunks. These trunks were produced in 2012 and have been consistently used for a variety of outreach events and school lessons. The updated material will include information and hands-on materials for several new invaders, such as apples snails. A game for schools age children and classroom posters are also in development.

GSARP is also working to fill its key vacancies, resulting in several new members at the last meeting. The Panel also voted to establish a Distinguished Achievement Award to help recognize long-time volunteers who have contributed to the Panel. The next GSARP meeting is tentatively scheduled for May 2017.

Western Regional Panel

The Western Regional Panel (WRP) Executive Committee typically meets on the second Thursday of each month. All approved minutes can be found at: https://www.fws.gov/answest/ExCom_Minutes.html. The next Executive Committee call will be November 17th.

The 2016 meeting of the WRP was held in October 19-21, 2016, Jackson, WY; social marketing and eDNA workshops held prior to the meeting. The meeting was attended by approximately 120 people and included great presentations, lively discussions, and an informative field trip. Membership elections were held, with the following members elected onto the 2016-2018 Executive Committee term: Jeff Adams (WA Sea Grant), Tammy Davis (AK Game and Fish), Tom McMahon (AZ Game and Fish), John Wullschleger (National Park Service) and Dennis Zabaglo (Tahoe Regional Planning Agency). The election also included a new representative for academia – inland: Mark Poesch (University of Alberta). The WRP will be hosting the Spring 2017 ANSTF meeting in Lake Tahoe; the 2017 WRP meeting is scheduled for September 2017 in San Diego, California.

The WRP has four standing committees dedicated to biofouling, membership, planning, and Building Consensus. An ad-hoc committee for Lab Standards has recently been created to help ensure that sound science is being incorporated into field testing.

Mississippi River Basin Panel

The Mississippi River Basin Panel (MRBP) held its most recent Panel Meeting in September 2016 in Lake Itasca, Minnesota. Approximately 30 attendees were present over this 2 ½ day meeting. Several presentations spanned a variety of topics and a field trip provided demonstrations of mussel-sniffing dogs and watercraft decontamination units. Committees reviewed their 2016 work plans and developed 2016-2017 work plans.

In October 2016, the MRBP worked with National Sea Grant Law Center to host an Attorney General's workshop at the Upper Midwest Invasive Species Conference. A plenary session hosted a discussion on organisms in trade prior to the workshop that focused on the baitfish industry. Other recent accomplishments of the MRBP were the purchase and development of an MOU for a Whac-A-Mussel, to be loaned out as an ANS educational tool; revision of the commercial harvest guidelines for ANS; and evaluation of chemical treatment used for killing zebra mussel veligers in fish transportation.

Ongoing work of the MRBP includes development of an Action Item Task List spreadsheet that will be used to guide the Panel's work. Executive Committee conference calls are held on a quarterly basis and more frequently as needed to accomplish priority tasks. The Panel is working to update its operational guidance document and is actively soliciting membership for currently vacant positions. The MRBP website is being updated to provide relevant information in a user-friendly manner. The Panel is also developing an implementation plan for recommendations to harmonize Grass Carp regulations, finalizing a Request for Proposals for baitfish pathway analysis, and soliciting support for research on eDNA markers, live releases of organisms for ceremonial practices, and snakehead impacts and management.

The next MRBP Executive Committee and Panel Meeting will take place in late June/early July 2017 (location TBD). The MRBP plans to work with National Sea Grant Law Center to determine next steps in response to the Attorney General's workshop that was hosted in October and is considering a symposium on Asian carp capture techniques.

Mid-Atlantic Panel on Aquatic Invasive Species

The Spring 2016 Mid-Atlantic Panel (MAP) meeting was held in Annapolis, Maryland on May 17-18, 2016 and focused on issues of regional significance, website rebuilding, and boat decontamination programs. MAP also evaluated submitted proposals as part of the Panel's small grant program; selected projects focused on eDNA, watercraft inspection and decontamination, and economic analysis of risk in the bloodworm trade. Continued projects of the MAP small grant program include a program to train dogs to detect nutria, managing New Zealand mud snail populations, and development of a Mid-Atlantic field guide for aquatic invasive species. The next meeting will be November 15-16, 2016 in Annapolis, Maryland.

8b. Regional Panel Recommendations

Great Lakes Panel on Aquatic Nuisance Species

None submitted for this meeting

Northeast Aquatic Nuisance Species Panel

1. Restoring full funding for the six regional panels to last year's level will cost a total of only \$60,000 nationally. The NEANS Panel recommends that the ANSTF identify and secure \$60,000 to restore this funding and work within the US Fish and Wildlife Service and other agencies to identify and secure additional and dedicated sources of support so that the panels may continue to provide the high level and high quality services and products for which they were tasked by the ANSTF.

Michele Tremblay (comment): NEANS Panel has instituted a voluntary registration fee meetings, most work to keep the Panel operation is conducted pro bono, which is not a sustainable model. NEANS Panel attendance was been declining as members can no longer attend or do not any funding / staff to contribute to upcoming projects.

Ray Fernald (comment): Over 50% of the ANSTF Report to Congress has a definite regional focus, which adds to the value of our united regional efforts

Elizabeth Brown (comment): Five years ago, the U.S. Fish and Wildlife Service chose not continue coordinating the WRP; the panel was given some funds to assist with the transition – this money is gone. The Panel Coordination is critical, yet has not received a raise since hired; and the panel is uncertain if she will remain in the position. In 2017, no travel support for members was available. All meetings need to be fully sponsored or they will not be held; the WRP suspended all funded projects four years ago as a result of the lack of funding. The Panel representatives can no longer attend the ANSTF meetings and will no longer be able to operate its website.

Response: We recognize that Regional Panels provide essential coordination and work production for the Task Force at the Regional and local levels. As described at past meetings, Sequestration resulted in a significant deficit within the AIS program in FY13 and difficult budget decisions continue to be made. In FY 16, the President's budget included an increase of \$42,000 for Regional Panel support, which would have given each Panels \$47,000. However, this increase was not appropriated by Congress, thus panel funding will continue at \$40K/Panel.

The Service does not have a FY 17 budget and is currently operating under a CR. Congress is considering an increase of \$1.7M for State Plans, but those funds will come at a cost to the ANSTF. We have conveyed that message to the Hill, yet the Service is asking all programs to hold back some funds anticipating a possible cut. Congress has chosen to make Asian carp, zebra/quagga mussels, and State plans a higher priority; all funds must be allocated as Congress directs. FY18 budget is roughly \$1 billion for the U.S. Fish and Wildlife Service in total. The Regional Panels and ANSTF are not a focus, as discussion remains on larger issues. The new

Administration will make decisions how they want to approach the budget for FY18 beginning with the CR that is due to expire on Dec. 9.

Q: James Ballard - Is the \$1.7M for the State ANS Management Funds new money?

A: It causes a reduction of about \$500K to other Service activities. It's admirable that it increases State plan funding, but it has other negative impacts to the USFWS's Branch of Aquatic Invasive Species (BAIS).

Q: John Darling– Has the budget come back up?

A: It has not, at least not for BAIS. The Service has seen increases in other programs, such as Hatcheries.

Q: Elizabeth Brown – With the membership list of the ANSTF, why is it all on the FWS? Why aren't other agencies contributing?

A: It's likely a specific authorization to FWS, but coming from different sources may make it more difficult.

Q: John Morris - I recall one of my (USCG) predecessors transferring funds to the website under an MOU. Is this correct?

A: Under NANPCA, there are authorizations for different activities. One is that the ANSTF was authorized to create an AIS program, which became BAIS under the FWS. ANSTF funds are provided to BAIS. The Branch used to receive some fund from other agencies, but that has dried up over the years.

Michele Tremblay (comment): Some State plans include travel to Panel meetings as allowable expenses.

Jessica Howell (comment): It's not just about getting people to the Panel meetings. It's about other activities that rely on Panel funding. There's a lot more that can be done at the Regional Panel; there are so many activities that are critical that rely on Panel funding.

Robert Wakeman (comment): We're getting to a point that we have to realize that the model we're working under is no longer sustainable. We should attempt to identify another model that can benefit the Panels and the States and find an exit strategy from the current strategy.

Gulf and South Atlantic Regional Panel

1. Provide increased financial support to the Panels and identify alternative funding sources that the Panels can utilize to support annual meetings, coordination and panel activities.

Response: See response from Northeast Regional Panel.

Western Regional Panel

1. Maintain and/or increase financial support to the Panel(s) and identify methods for Panels to raise additional funds to support annual meetings, coordination and Panel activities.

Response: See response from Northeast Regional Panel.

2. Funding: Maintain funding to support highest priority implementation components of QZAP and objectives of the 100th Meridian Initiative.

Response: The ANSTF Co-chairs support this recommendation. The U.S. Fish and Wildlife Service continues to support the implementation of QZAP through the funding of the

State/Interstate ANS Management Plans and through grant support for projects to control the spread of invasive mussels.

3. Encourage coordination: Encourage coordination among federal and state entities on ballast water management. USCG, EPA, and NBIC should increase communication and cooperation with West Coast states on ballast water management reporting.

Response: The ANSTF Executive Secretary has contacted the USCG, EPA, and NBIC in regards to the ballast water concerns of the Western States. Each has provided a statement and/or point of contact. ANSTF Executive Secretary will continue to coordinate communication as needed.

Mississippi River Basin Panel

1. The MRBP requests that the ANSTF members encourage research-oriented entities to prioritize the development of eDNA technology for use on Grass Carp, Black Carp, and Northern Snakeheads; specifically, the development of meaningful markers, sampling protocols, and data interpretation of the eDNA results for these three species are needed.

Response: The FWS shares in the growing concern of these species and considers the development and deployment of eDNA technology to be a foundational component of interagency strategies to manage these invasions.

- The Asian Carp Regional Coordinating Committee (ACRCC) has formed an interagency Black Carp Working Group to develop a strategy for the species, and identify highest-priority research and management needs (including new sampling protocols and new genetic markers).
 - ACRCC has requested the development of an interagency Grass Carp strategy for inclusion in its 2017 Action Plan. The draft strategy identifies the development and use of eDNA sampling as a key component to inform management decisions
 - FWS also shares in the growing concern of Northern Snakehead Invasion and has developed a proposal to sequence the entire genome of this species. The proposal would use the USFWS Whitney Genetics Lab (WGL) to generate the raw data needed to map the genome. Work would be conducted by USFWS, in collaboration with USGS, to map the whole genome of Northern Snakehead. This same work has been completed by USFWS WGL for Silver Carp, and genome sequencing for Bighead, Black, and Grass Carp are underway through GLRI funding.
2. The MRBP recognizes that live release for religious purposes can be a substantial problem, but is poorly understood. Managers require information and guidance to generate a nationwide unified message that is sensitive to the participants in these activities. The MRBP requests that ANSTF members support sociological research and development that provides the information managers need to appropriately engage participants, and where possible, to accommodate participants without risk of environmental damage.
Response: The FWS supports and encourages further social science and legal research that will allow a unified message pertaining to "Live Release" that is consistent with invasive species prevention goals and federal, state, tribal, and local laws, yet sensitive to religious beliefs. The Service supports including this type of messaging within social marketing campaigns, such as Habitattitude.
 3. The MRBP requests that ANSTF members encourage research-oriented entities to prioritize research on current knowledge gaps for Black Carp and Northern Snakehead; specifically, life history information and potential/realized impacts of these species that can guide risk assessments and inform the development of management or control activities are needed.

Response: For Asian carp as well as Northern Snakehead, the ANSTF co-chairs encourage relevant agencies to identify specific agency actions that can be developed and implemented to address these priorities. The USFWS is the lead agency that has drafted the Black Carp Strategy as part of the 2017 ACRCC Action Plan. Specific Objectives within the strategy that address knowledge gaps for Black Carp include:

- Determine the distribution, abundance, movements, and reproductive success of Black Carp in the Mississippi River
 - Determine life history characteristics such as habitat use, foraging behavior, diet, growth, age structure, natal origin, recruitment and survival of young
 - Improvement of tools for species identification, ploidy determination, and reporting new observations
 - Determine the interactions that Black Carp have with locks and dams
 - Assess ecological impacts of Black carp, particularly their effects on native mussels and benthic fishes
4. The MRBP recognizes an information gap in the causality of the establishment mechanisms for Asian carps, and asks that the ANSTF members encourage prioritization of those research questions.

Response: Specific objectives within the Black Carp Strategy that address prevention of establish through a focus on monitoring and control for Black Carp include:

- Determine most effective surveillance, capture, and detection methods for each life stage
- Identification of control technologies that could prevent upstream dispersal, range expansion or establishment
- Develop and implement an active monitoring plan in the lower Illinois River
- Development of tools that selectively eradicate Black Carp
- Develop a targeted eDNA monitoring plan
- Identify all potential and current vectors for movement and new introductions identify actions to reduce these threats and eliminate vectors
- Develop and implement an active and intense outreach campaign
- Work with industry to reduce culture, use, and potential release of the species into the wild

Jessica Howell (comment): A past recommendation of the MRBP was to host the CRISPR Gene Drive Workshop to explore the pro and cons of this emerging technology. We don't think that this need will be met by the National Invasive Species Council's Innovation Summit and request follow-up to do something more substantial.

David Hoskins (response): Let's see how this unfolds with the Innovation Summit. If it's considered to be inadequate, we can follow-up as needed.

Don MacLean (comment) – This recommendation may be beyond the ANSTF purview. It has applications beyond the ANSTF.

9. Informational: BLM / Georgetown Presentation

David Hu, Bureau of Land Management (BLM), provided an overview of the work that BLM has been doing to increase their aquatic invasive species role. The Agency has partnered with the Kennedy Institute of Ethics at Georgetown University to create a fun and engaging AIS publication series. Six university students developed a book called "Invasive Species Hitlist: Snakehead" and are seeking assistance in distribution. The books take a non-traditional approach to invasive species outreach by telling a story that encourages readers to discuss the issue with others. Currently, the effort is focused on Northern Snakehead, but the team plans to develop books for additional species.

Q: Elizabeth Brown - Do you have a stock of supplies ready to go?

A: We are supported by Georgetown University. We have sold them, but we do have stock in house that we can produce. BLM has also produced some with its own information inside.

Q: Michelle Tremblay – Are there interactive abilities on your website? It seems like it offers opportunities for data collection?

A: There's a small feedback form on the website. We want to be responsive to feedback we receive. We also utilize Google Analytics.

Q: Dennis Zabaglo – Have you thought about promoting this during National Invasive Species Awareness Week?

A: That would be a great idea.

Q: James Ballard – Is there a cost per copy?

A: There is a small cost per copy. It will vary dependent upon the number ordered.

Q: John Darling – The product looks tailored for the next generation of anglers. How are you reaching them?

A: The book is aimed at families. We're working with a photographer to help with additional work.

Bill Bolen (comment): You mentioned Asian carp. The Asian Carp Regional Coordinating Committee may appreciate the opportunity work with you.

A: We're writing the Asian carp book now and would appreciate the opportunity to work with the Committee.

Public Comment

None

Thursday – November 10, 2016

Welcome

The ANSTF co-chairs welcome attendees to Day 2 of the meeting.

10a. ANSTF Membership Discussion

At the last ANSTF meeting, two new ex-officio members were approved; which led to the action item to discuss future membership requests at this meeting to ensure that the ANSTF remains at a size that is effective and functional.

David Hoskins: Should we change membership by increasing it? Adding more members could increase diversity of views, but it also could be unwieldy. I would like us to see more emphasis on how we can be strategic and work together.

Jennifer Lukens: My perception from working with other Federal Advisory Committee is that less than 30 people allows for more productive discussions.

Robert Wakeman: Regarding size, if we're going more toward an ad hoc format, perhaps we should use that same process for Federal participation. If we have a specific project that needs particular assistance, we can follow-up with specific agencies. Regardless of whether agencies are or are not ANSTF members, we want to make sure they have the opportunity to participate.

David Hoskins: Regarding updates, other meetings often provide updates in writing in advance of the meeting. Updates are read beforehand and time is open for discussion and questions, which helps us to focus on what's important and allows for questions about each other's work

Ray Fernald: I agree, many members already submit updates to everyone.

Elizabeth Brown: I don't think it's necessary to determine a participate size of the ANSTF. It's not the number that matters, but rather the quality and level of involvement of the members.

Erika Jensen: While there is a threshold number at which point it becomes difficult, we need to think about other issues. What is expected from members? If we're moving toward being more task-group oriented, and that allows us to bring in outside expertise who may not be as AIS-oriented, then we may want to have some guidance on how to bring that expertise in rather than trying to maintain a specific number.

David Hoskins: Let's assume all members show up and participate at most ANSTF meetings. When does the group become too large? We can add one member at a time. But, without criteria and adding members on an ad-hoc basis, we'll get unwieldy very quickly. Robust conversations on strategic issues become more difficult with more people.

Q: John Darling – We're not too small, possibly too big. Is there a mechanism for removing members?

A: David Hoskins: Under statute, co-chairs appoint members. If we can add people, we can remove people.

Q: John Wullschleger - Do you anticipate any issues with the size of the group now? I don't think I've seen size become a problem with the effectiveness of the group?

A: This issue came up at the last meeting when we added two ex officio members and questions were raised. It was added to the agenda for this meeting.

James Ballard: GSARP had this same issue. We check on standing members who do not attend repeatedly to see if their job duties have changed. We remove non-standing members if they are not attending meetings. Can we do something where people are considered for removal if they don't attend meetings? We don't want to keep people who just a name on the list.

Stephanie Carman – Over time, we've reached out to many ex officio members for a robust discussion. We've worked with industry, aquaculture. We're always trying to get tribal participation. We don't want to discourage that. We want others with different expertise at the table.

Erika Jensen: We have an absence of process. We don't have guidance on how to manage membership, what happens if they don't participate, and what expectations are of members. We also have a term-limited process for some members.

Michele Tremblay: Members are not people; they are organizations or interests that we're bringing to the table. If the person's priority has changed, we need to find out if the organization is still interested.

Dennis Zabaglo: Speaking as a newer ex officio member, one of our goals was to identify what ANSTF is about and how we could contribute. What are the gaps under the ANSTF? For example, boating is a critical issue and we need to understand how we can work together – which is why the addition of the National Marine Manufacturers Association was supported.

Jessica Howell: MRBP invites prospective members to the meetings first to gauge their interest, and explore whether the Panel is the right forum for the discussions we're having. Similar guidance or a process is needed for the ANSTF.

Libby Yranski: I echo Jessica's comments. Invite people so they can attend and see how the process works. It was apparent to me in my first meeting that the work of the Panels and the industry are running in parallel tracks. Participation on ANSTF helps bridge those.

Elizabeth Brown: We have three layers of membership in the WRP. We do elections in a cycle. Members come and go as the issues change. For example, I started attending NMMA meetings only once boat inspections became more important. We don't know what industries we may need to be talking to in 10 years. We need a process to bring people in for a select period of time. There are many complexities and we don't know what the future holds for us. There doesn't just need to be one list. We don't want unlimited growth, but we need flexibility to add someone when appropriate.

John Darling: Terms could be set at which point an ex officio review could be conducted.

Erika Jensen: The Panels have operational guidance documents which can serve as starting points for this work.

David Hoskins: There should be some limit. The current structure allows for changes. We need continuity between meetings and people to attend. It could be difficult to move an agenda if people don't have the expertise. I'm hearing we don't have criteria for considering new members and some thought should be given to expectations of current members. I'm also hearing some reluctance, but not necessarily consensus, to further increase group size.

10b. ANSTF Reporting Results

At the Spring 2016 meeting, the Government Accountability Office's recommendations were discussed along with accomplishment reporting. The ANSTF Executive Secretary completed revisions to the Activity Reporting Form and distributed it in early September. Several agencies, ex-officio members, and Panels have contributed information, but there are still many who have not yet responded. This information is needed to analysis ANSTF progress on the Strategic plan and look ahead. Susan Pasko, ANSTF Executive Secretary, provided a snapshot of the responses received thus far, showcasing projects conducted in FY 15 and FY 16 as well as funds spent to combat ANS. There are some issues yet to be smoothed out, such as the level of reporting – some agencies lumped projects together while other gave more detail. Also definitions may come problematic; for example, work may be listed under prevention by some, as the goal is to prevent further spread, while others may view this work as control of a widespread, established species.

Q: Dennis Zabaglo - We misunderstood the ultimate goal. We provided activities that directly related to ANSTF funding. Our actual program is much larger. I thought the discussion at the last meeting was that we didn't want to show everything we're doing, and that some work is happening outside the ANSTF. Are we sending the right message and showing that no new additional money is needed?

A: To the extent that we're reporting to Congress, we need some nexus for work that is reported on under the ANSTF. However, reporting everything in totality helps us to understand the big picture and explore whether we're achieving everything we are supposed to be doing.

Erika Jensen: We're all investing money in prevention and control work independent of the ANSTF. The ANSTF is to help us coordinate and make those investments more effective as we work toward a common agenda. The narrative is that the ANSTF is needed to help us coordinate those efforts, but it's not the driver.

Jessica Howell: To do a true gap analysis, we will need to determine where the states fit in. The form ties back to the ANSTF Strategic Plan, but that's not appropriate for the State ANS Management Plans. State numbers should be much higher, but it's not reflected here. If you want gap analysis, the reporting form needs to be more significant. States don't report to the ANSTF strategic goals.

Elizabeth Brown: Much of the WRP work is funded with outside funding. We reported the \$40K that we received through the ANSTF. We don't want to double-report. Is the goal to show how much we are spending as a nation, that's a very different form and different instructions.

Dennis Zabaglo: What is the scope? If we're just capturing Federal and ex officio, it's just a snippet of what we're spending in total. We need the global picture if we want to see what's being spent at the national level.

John Darling: Double-counting is an issue. EPA did not account for GLRI funding except for what it spent internally. If someone did not report a project because they thought EPA would account for it, it's been lost.

Susan Pasko: We started this exercise to meet the GAO recommendations, which is to help track progress in meeting our strategic plan. It wasn't intended to be a broad national perspective.

David Hoskins: We're ANSTF members to give a concise summary of their ANS efforts. Regional panels, which are not members, should account for how they spend money from FWS; their charge is narrower. We did not include efforts under the State ANS Management Plans. We have information on what they do with grants funding in our database and they are not members of the ANSTF. This is something that we can use for showing what we did by year in reporting to Congress. It also lets us be proactive in seeing what we want to do next year, or within the next five years. Are we collectively spending resources in the right way? That helps show where we need to go, which will be helpful for the next strategic plan. To do that, we need submissions from everyone, but some members have not yet submitted information.

11. Informational: ANSTF Committee Updates

Boating Industry Partnership Committee

Dennis Zabaglo provided an update on the Boating Industry Partnership Committee. At the Fall 2015 meeting, the WRP put forward a recommendation to create the Boating Industry Partnership Committee. The committee had volunteers to draft a charge document for the committee. The ABYC moved forward with the development of a Technical Information Report (TIR) to guide the boating industry on ANS issues. The TIR has finished its first round of review, and a second draft was distributed for comment in October 2016. The final document is anticipated by Summer 2017. The next steps will be to develop ANS standards for the boating industry. The committee is also seeking a more diverse membership, as a majority of the committee members are from the Western states.

Q: Craig Martin – Is the Technical Information Report considering other aspects of design and construction beyond inspection and decontamination?

A: Yes – We're working on other standards, such as standing water. We want to keep boaters boating, and the industry wants to sell boats. We are seeing some signs of success. For example, one manufacturer will be incorporating new drain hoses that will allow for more effective decontamination starting next year.

Q: Jessica Howell – Are you working on more than engines? Are you working on trailers?

A: When the committee was first brought together, there was a trailer group. 2016 is the first year when all trailer manuals will include information on Clean Drain Dry.

Ray Fernald (comment): We have a lot of Mid-Atlantic States that want to increase their level of inspections and decontaminations. We can't do it statewide because of the wide number of lakes we have, but we want to increase our training and expertise for some areas.

Research / Economics Committee

John Darling provided an update on behalf of the Economic Subcommittee. At the last meeting, the committee was asked to address several questions. The committee was formed after the GAO Report on aquatic invasive species was finalized. The GAO Report outlined Federal expenses on ANS, but failed to consider specific costs including prevention and control, as well as losses to ecosystem services. Upon reviewing this Report, the ANSTF determined that a communication tool to describe the broader economic picture of ANS was needed. Many previous analyses (e.g., Pimental) are not suitable for outreach of the issue as they tend to be academic or very broad in scope. As an example, a recent study estimated the economic costs if the spiny water flea were to be introduced to Lake Mendota. The analysis calculated that \$150 million would be needed to return water clarity to the lake following introduction. In spite of this large estimate, response against this invader seems to be lacking. The committee felt that these studies require a lot of time and data, yet impact is often minimal as the study results are difficult to communicate to decision-makers. Accordingly, the committee adopted a more journalistic approach to achieve more effective communication. The final product will include information that is easy to digest and understand, visually striking, and focused on things that decision-makers care about (their constituencies). The committee will use information from economic sectors that have experienced losses from aquatic invasive species. Currently we have a drafted a list of questions for interviews with economic sectors and am requesting input from the ANSTF in regards to what sectors should be interviewed.

Ray Fernald (comment): I really like this approach. We did a bloodworm study that looked at biological and socioeconomic impacts. Once we get that info, it might be a good case study for a project like you're discussing.

Robert Wakeman (comment): We work in the Great Lakes to make messages memorable. The committee may want to connect with NISC to make sure this product is complementary to NISC's documentary. These projects will help make the connection between invasives and everyday lives. A meeting of the minds might benefit each project.

Jessica Howell (comment): This is the type of project we're looking for stateside so we have a tool to take to legislators and beyond. I like the approach of having industry and other case studies where there are hard numbers.

Libby Yranski (comment): I can share with you National Marine Manufacturers Association's contacts for marina operations. I can also try to get economic data.

Q: David Hoskins– How will we distill these vignettes into an overall set of lessons learned and recommendations? If we show costs of control, we need to show clearly the benefits of the work so decision-makers don't think the control costs are expensive. How will these stories tie together?

A: These are excellent points. We've been drafting questions and an interview script we can follow to gather information. Your questions should be part of our issues. We want to make the point that we could have avoided tremendous costs by taking action against ANS.

Jessica Howell (comment): The committee's request should be sent to the Regional Panels; these folks know who the impacted individuals are and who may be interested in participating in interviews.

Erika Jensen (comment): Another way to tell success stories may be for sectors to give credit to management plans or preventative actions, because they have witnessed the impacts of operations that did not have these measures in place.

Stephanie Carman (comment): Lake Tahoe is a success story. It isn't infested like much of the rest of the West.

Q: David Hoskins – I'm hearing support for this approach. What's the way forward? What species, geographic regions will be included, and how do we tell the story? Who's responsible for gathering information? What's the timeline? How do we pay for it? If we're going to do it, how will we do it?

A: When we put together recommendations at the last meeting, our thought was to look at Panels, States, and ANSTF to give us recommendations on geographic areas and contacts. We've written the initial script for interviews, and have volunteers to do them. The costs will depend on the number of case studies.

Paul Zajicek (comment): I like the focus on prevention. In thinking about aquaculture scenario, there's a Safe Bait program in Arkansas that could be one of the vignettes.

Doug Jensen (comment): I like the idea of focusing on success stories. We have success stories on prevention in Minnesota. The perception of impacts is important. There are real impacts and perceived impacts. Having the stories connect to them is important.

Prevention Committee

Stas Burgiel provided an update on the Prevention Committee. This committee was been co-led by the NISC and ANSTF for the last several years; however, as NISC is being restructured, it will be stepping down as the chair of this committee. The committee has been dormant for some time. The two major products it produced were the 2005 Pathways Ranking Guide and 2007 Guide for Pathway Definition Risk Analysis and Prioritization. Afterward the committee worked on repopulating the group with webinars as well as analyzing and prioritizing pathways of introduction. Fracking was discussed by the ANSTF and it was recommended that the Prevention committee scope the potential for this technology to introduce ANS. However, the committee was lacking the expertise to address this issue. The ANSTF needs to decide if there is a benefit to keeping this standing committee and, if so, how to address issues of specific prioritization, balance different issues, and ensure appropriate expertise.

Q: David Hoskins: I understand why NISC is moving in a different direction. How should the ANSTF proceed? We have two other standing committees – Education and Outreach and Research. We don't have committees that address goals related to prevention, EDRR, control and management, or restoration. Form should follow function, so what issues should the committees address? Do we want to retain a Prevention Committee, do we want something that is broader, and if we do, who leads it?

Erika Jensen (comment): The Great Lakes Panel has three standing committees. Each of those developed priority documents and meet regularly. We are struggling to make progress on specific priorities. If there are common priorities across all of them, we could work that way. We decided to not disband the standing committees but rather to make their role to track progress on goals they had established. In thinking about ANSTF and Strategic Plan, maybe the committees should track progress under specific actions and ask ANSTF to do specific task-focused work.

Q: David Hoskins – Where are the gaps in effort? Where does that take us as we move forward to an updated Strategic Plan and chart a course forward?

John Darling (comment): Another approach would be to have task-oriented team. Strategically, we should identify teams conducting tasks toward each of our strategic goals. Teams should be working across goals.

Michele Tremblay (comment): NEANS Panel felt it was better to break up projects by specific goal and objectives. It's working out well because there is a sense of urgency with a beginning, middle, and end. We have a specific charge to follow.

Jennifer Lukens (comment): Sometimes ad hoc and task forces allows outside experts to be brought in. Having those issue specific task teams with a mini-charter that identifies members, goals, actions, and a sunset date can be very helpful. It offers flexibility on different issues with adaptive management.

Ray Fernald (comment): MAP had standing committees that faded out as we started specific task groups. It seems to be more effective. In the State, we need to have a number of standing committees, but even within that context, we have smaller groups that do work on specific tasks even if they're formally part of a standing committee.

Elizabeth Brown (comment): People may be more apt to volunteer for temporary committees because they know their expectations, that the teams have endpoints. It's efficient and gets the work done. It also engages new members. WRP has standing committees, but we approach it a little differently with specific goals and endpoints.

Doug Jensen (comment): GLP has an Education Committee. It has done many things over the last few decades. It goes back forth depending on whether there is a specific task. In working on the Recreational Activities Guidelines, we had a clear goal and endpoint; that approach worked successfully. The Education and Outreach Committee has specific tasks with SAH! I think ad hoc committees within Standing Committees seems to be an effective approach.

David Hoskins (comment): Suggestion that if form follows function, we need to decide what we're trying to accomplish. We need to delve into this in more detail, trying to identify specific goals of prevention, control, etc. What needs to happen between meetings? What are they trying to achieve? We have two committees that have not moved in some time.

12a. Informational: Stop Aquatic Hitchhikers / Habitattitude Update

Joe Starinchak, FWS, provided an update about the Stop Aquatic Hitchhikers! (SAH!) campaign including background of the campaign, accomplishments, and changes made. The SAH! campaign has simplified ANS and made the issue relevant by putting a consumer face on a very complex environmental issue. However, in spite of the successes and attraction to unprecedented partners, SAH! needs to improve by generating impact measurements and analytics. Since the campaign started, digital communications has significantly increased and numerous regional and local ANS initiatives have emerged. SAH! needs to account for these changes and offer relevant products to interest all of the different generations. Recently SAH! has incorporated "Clean.Drain.Dry" as a viable part of the brand, is refreshing the campaign website, developing new brand standards with guidance on co-branding, and is working with States to maximize the network the campaign has created.

12b. Informational: PlayCleanGo Update

Susan Burks, Minnesota Department of Natural Resources, provided an overview of the outreach campaign PlayCleanGo: Stop Invasive Species In Your Tracks (PCG). The campaign was launched in 2012 with the assistance from the U.S. Forest Service. The brand and education plan was developed with the goal to use social marketing to change social behaviors. FWS assisted with development of PCG, using the SAH! campaign as a model. Outdoor recreation has been declining, thus a prerequisite of the campaign was to encourage people to get outdoors and have fun, while providing voluntary actions people can take to prevent introduction of invasive species. The resulting brand has a modular form and a large graphics library. There is an online order form, yet individuals and organizations are encouraged to print out materials for their personal use. The campaign highlights various species, yet can be customized to include others. Joining the partnership is free; users are asked to comply with the graphic standards. The logos are nationally registered, which helps to maintain graphic integrity. Many partners are creating their own graphics and sharing them; this helps to build partner support and broadens audience exposure as multiple partners are using the same message. As of October 2016, PCG has 360 partner organizations representing 35 states and 4 Canadian provinces. The campaign has been adopted as the national campaign by the Canadian Council on Invasive Species. In 2015, the campaign initiated a Steering Committee with 10 members, updated graphic standards, and explored co-branding in the

media. In the context of co-branding, the campaign worked with SAH! to ensure compatibility. We are not directing partners in co-branding, but they can do so as it fits their needs.

12c. Informational: Taking Aim at Fulfilling a Need of the OIT Audience

Pat Charlebois, Illinois-Indiana Sea Grant, provided an overview of the Taking Aim campaign that focuses on providing information and best practices to manage The Organisms in Trade (OIT) pathway. The OIT pathway is one of the main avenues by which non-native species become established in waterways, but historically there has been no comprehensive, national information resource for individuals involved in buying or selling aquatic organisms. This resource gap makes it difficult for these audiences to take the steps necessary to prevent the spread of AIS via the OIT pathway. TakeAIM.org helps fill this gap by providing practitioners with information key to preventing the introduction of AIS. The project began with the National Sea Grant Office focusing on management practices for biological supply houses. With funding from the Sea Grant, the work expanded into compiling risk assessments, laws, and regulations pertaining to AIS and making them available to the public. TakeAIM.org was released in the summer of 2016 and included information for both non-scientific and scientific audiences. The website includes information on specific pathways and species, information of how to prevent introductions, and a list of non-invasive alternatives. The site also includes a section on predicting invaders, which provides a list of risk assessments resources. A list of state and federal contacts is also provided. A searchable database will be added soon to locate state and federal regulations associated with a particular species. Continued issues include the use of white lists by states that do not list of prohibited species by specific names, lack of funds, and rapidly changing regulations. Moving forward, TakeAim.org is incorporating feedback from its partners to improve the site and will continue to update the site with additional materials and information.

Q: Elizabeth Brown – With respect to the list of regulations, Sea Grant may have all the State regulations on their database. Is this different from what you’re trying to do?

A: Many lists may be available and are being reviewed. The Take Aim.org database will be different as it will be searchable by species.

Q: Susan Qashu: Looking at the list of species organized by region, you have quite a few terrestrial species. Is the intent to include both aquatic and terrestrial species?

A: Our focus is on aquatics. We have incorporated some resources that fit into “semi-wet” areas such as wetland plants.

Q: Elizabeth Brown - In interest of eliminating duplication, we have a contact list on the ANSTF website. Maybe we could work together to link the two rather than try to divide the site.

A: Thanks for the suggestion.

12d. Informational: Promoting Consistent AIS Messages

Elizabeth Brown, Colorado Parks and Wildlife, recapped the information from the previous talks and provided perspective from the ANSTF Communications, Education, and Outreach (CEO) committee. The CEO committee is tasked with several objectives, including promoting the use of guidance documents. Campaigns such as SAH! and PCG help change behavior and should continue to be implemented. Consideration is needed as to the best venues to present this information as well to tailor the information to different audiences and generations. The goal of the CEO Committee is to help get these campaigns implemented; however, the more campaigns being developed, the more difficult it becomes to determine which is most effective for a particular region of audience. Some states may be required to follow certain standards and use multiple campaigns. Co-branding can be confusing; what really matters is the message within. The CEO committee is requesting feedback from the ANSTF and

Regional Panels regarding the guidelines and campaigns being implemented. This information should be reviewed to ensure that consistent messages are being given and what improvements are needed.

Q: Jessica Howell– Could you send this request to the Panels? We can work to get you information.

A: Yes, the CEO committee will put the request in an e-mail and distribute it.

Doug Jensen (comment): We've identified 13 assessments of SAH! and Habitattitude. We found consistent messaging in the campaigns that were being implemented. It's leading to raised awareness. We've also collected information on 6 different projects and the results were the same – public outreach can change behavior.

13. Decisional: Maryland State Management Plan Approval

Joe Love, Maryland Department of Natural Resources, provided an overview of the Maryland State Aquatic Nuisance Species Management Plan. There are some major pathways for Maryland including ballast water, biofouling, the aquarium trade, live seafood and bait, angler/boater gear, and water gardening. Numerous control efforts and other initiatives already exist in Maryland including control programs for snakehead species, invasive catfish, nutria, and aquatic plants; testing for whirling disease; and a ban on felt-soled waders. In 2015, the passing of the State Lakes Invasive Species Act (H.B. 860) requires boat owners to clean their vessels prior to launch. The law was passed as a preventive measure, but it has had other positive outcomes such as baseline surveys of all 16 state owned/managed water bodies, increased education and outreach, and development of field biologist protocols for the Department of Natural Resources' staff. The Maryland Department of Natural Resources' Invasive Species Matrix Team worked with state partners and the general public to develop a comprehensive Maryland State ANS Management Plan to: 1) prevent new and additional introductions of ANS to Maryland waters; 2) establish an early detection and rapid response mechanism to find, contain, and/or eradicate newly introduced species; and 3) control and slow the spread of existing ANS in Maryland. The relevance and scope of the plan are described in the Introduction, with later sections prioritizing actions for targeted ANS and pathways of introduction. An implementation table summarizes these actions and helps identify partnerships in achieving them. These partners seek to achieve 10 of these actions by 2020, including vector pathway analysis, risk assessments, and adoption and use of a reporting database. This plan will help streamline efforts among state partners, leverage resources, and improve communication between federal and state agencies in protecting Maryland from ANS.

Q: Paul Zajicek – Has there been input from industries that would be encompassed by this – boating, aquaculture, etc.

A: The Maryland Department of Natural Resources has an aquaculture group, and the Plan went through them. The Plan does list blue catfish as an invasive species, and Catfish Nation expressed concern. We encourage the harvest of invasive catfish and have an open season. We didn't receive comments from the aquaculture community. There are already some standards by which the aquaculture community needs to operate, but they didn't provide feedback on the plan specifically.

Q: Paul Zajicek – Does the Plan have an advisory committee?

A: There is a group that could be more formalized (the Matrix Team) that should meet more often. The public and industry could also be brought into those conversations. The State highly encourages working with business to achieve common objectives.

Q: Robert Wakeman – How did you develop your priority species?

A: The list was developed by the Matrix Team. The high priority species are those that are generally regarded as invasive and have established in Maryland. Red Alert species have not established, yet risk assessments have indicated that they could establish if introduced.

Don MacLean (comment): I'm excited to see this Plan presented for approval. I've been providing advice on it since 2014 and reviewing it through their process.

Decision: Stephanie Carman motioned to approve the Maryland State Aquatic Nuisance Species Management Plan. Dennis Zabaglo seconded the motion. The ANSTF unanimously approved the Maryland State Aquatic Nuisance Species Management Plan.

14. Informational: Member Updates

Tahoe Regional Planning Agency

The Tahoe Regional Planning Agency has a Federal Summit every year, this year marked the 20th event. It was hosted by Senator Reid and was attended by President Obama. There is a small portion of Lake Tahoe that is on private land and is infested with watermilfoil and pondweed. The prohibition on aquatic herbicides has been lifted and most resource managers believe herbicides should be used. However, there is emotional rhetoric associated with Lake Tahoe that needs to be addressed before this method can be considered for use. We hope to have the issue resolved in the next few months before applications for herbicide use are submitted.

Bureau of Land Management

The Bureau of Land Management (BLM) continues to partner with states on the prevention and control of invasive species. Current program highlights include *Didemnum vexillum* control in Whiting Harbor, Alaska, and inspection and decontamination efforts in Arizona and Utah. Additionally, the BLM partners with Wildlife Forever to place invasive species outreach messages in western state hunting and fishing regulations and sportsman magazines. The BLM has also been working with the Georgetown University Ethics Lab on the publication of The Invasive Hitlist: Snakehead, a waterproof field guide to educate anglers on the threat of the Northern Snakehead.

National Park Service

Earlier this year, National Park Service (NPS) staff met with the Western Association of Fish and Wildlife Agencies in San Diego and Lake Powell to improve cooperation with State partners. In addition, the NPS is participating in regional data sharing as well as reviewing invasive species regulations pertaining to the work of the Agency. The NPS has also been working to develop ballast water technologies.

Environmental Protection Agency

The focus of the Environmental Protection Agency (EPA) continues to be ballast water. The Agency is working to develop new and better protocols for understanding efficacy of treatment systems with the U.S. Coast Guard and others. We are also working with the U.S. Fish and Wildlife Service and others on Great Lakes Water Quality Agreements to develop better AIS monitoring tools. EPA is looking at optimal sampling protocols and locations and working to improve molecular tools such as eDNA. The Agency has also been conducting analysis of data with U.S. Geological Survey to better understand spatial / temporal trends of AIS.

Department of State

The Department of State, Office of Polar Affairs is tasked with assisting the prevention and management of invasive species in the Arctic. The Department conducts the Fulbright program with researchers working internationally on Arctic issues, which has opportunities for work with invasive species.

National Marine Manufacturers Association

National Marine Manufacturers Association (NMMA) continues to be engaged in the American Boat and Yacht Council AIS Technical Information Report as well as the Boat Trailer Manufacturer's

Association. In 2016, all boat trailer user manuals included information on Clean, Drain, Dry. During NMMA's American Boating Congress, held each year in May, we had an AIS panel. The Panel was very informational on the general issue, whereas the panel for 2017 will be specific to the inspection process.

NMMA recently submitted comments regarding the model legislation and supporting documents through Association of Fish and Wildlife Agencies' AIS Committee. NMMA has been working on a state by state basis trying to educate state agencies on how the verbiage would affect their inspection agents and will continue to work on exempting pontoon boats from this language since these boats have permanent drain plugs.

Great Lakes Commission

The Great Lakes Commission (GLC) became a member of the Asian Carp Regional Coordinating Committee (ACRCC) in March and continues to participate on the Executive Steering Committee of the Great Lakes and Mississippi River Interbasin Study (GLMRIS), and serves as convener of the Chicago Area Waterway System (CAWS) Advisory Committee. The 30-member advisory committee is the primary regional stakeholder forum seeking solutions to the threat of Asian carp and other AIS passing through the CAWS while maintaining current uses of the system. The committee last met on October 14 in Chicago. A technical consultant hired by GLC (HDR Inc.) completed work on a scoping exercise to outline potential hydrologic, hydraulic, and water quality investigations that are needed to inform and evaluate the conceptual elements identified by the committee for a long-term solution to AIS transfer through the CAWS. This report and other technical analyses are available on the GLC website (www.glc.org).

Work is continuing on a GLRI-funded project to develop software and tools to track, identify and monitor the sale of invasive species via the internet. The web-crawling software system – the Great Lakes Detector of Invasive Aquatics in Trade (GLDIATR) – is complete and in operation. The GLC was awarded a second GLRI grant in May to continue this work, including making improvements to the system and targeting reductions in the availability of specific species. Ongoing work will be coordinated with a multi-stakeholder team that includes NGOs, industry, and state and federal agencies.

The GLC continues to support federal efforts to prevent the importation of potentially harmful non-native species. The GLC issued a news release in support of the Invasive Fish and Wildlife Prevention Act of 2016, legislation introduced by U.S. Sens. Kirsten Gillibrand (D-NY), Gary Peters (D-MI), Chuck Schumer (D-NY) and Debbie Stabenow (D-MI) that would expand the authority of the U.S. Fish and Wildlife Service to prohibit harmful nonnative species from being imported or sold in the United States.

The GLC is leading planning efforts to convene government agencies, industry representatives, NGOs and others for a ballast water workshop scheduled for November 16-17 in Detroit, Michigan. The workshop objectives are to share information and promote a common understanding of the state of ballast water regulation, technology development, and associated issues and challenges. The GLC is also developing a background briefing paper to distribute in advance of the workshop.

The GLC continues to expand a partnership with the USGS-Great Lakes Science Center to lead communications and regional efforts to address the invasion of the non-native plant Phragmites. A recent addition to the website is a series of case studies highlighting best management practices. The GLPC is guided by a regional advisory and steering committee using an approach known as Collective Impact. This approach provides structure to the collaboratives necessary to address complex natural resource challenges. In April 2016, staff published a peer-reviewed paper in the journal *Biological Invasions* that showcases this approach as a novel strategy to align priorities and resources for complex issues. The GLPC is also advancing the science of non-native Phragmites management by launching the Phragmites Adaptive Management Framework (PAMF), a program that will develop a model to analyze monitoring data across the region to provide Phragmites managers with site-specific management recommendations.

Working in partnership with USGS, the Great Lakes Fishery Commission and NOAA, the GLC continues to support the Invasive Mussel Collaborative, which is providing a framework for communication and coordination among scientists, managers and others to share information and lessons learned, guide supporting research, and inform management actions related to control of zebra and quagga mussels. The collaborative is organized around a steering committee and a science team. This fall the collaborative will begin work on a strategy for dreissenid management in the Great Lakes that will include the identification of management and research priorities. The Collaborative is hosting webinars to facilitate learning and information sharing on topics related to control of dreissenid mussels; webinar announcements and recordings are available online. The website and an email listserv have been established to provide and share information, webinar announcements and recent news, and to connect researchers, managers and others interested in dreissenid management.

The GLC, in collaboration with the Great Lakes Fishery Commission, is maintaining a barrier mapping application built over the last two years, which represents the location of lamprey barriers in the Great Lakes basin. It provides historical maximum extent data, showing how far up waterways sea lamprey larvae have been found, barrier fact sheets, and images of lamprey traps where relevant (<http://data.glf.org>).

The GLC is working in partnership with The Nature Conservancy on the Great Lakes Blue Accounting initiative. The effort is focused around developing metrics and tracking progress around key Great Lakes issues in order to support decision-making. The initiative is being piloted across several issues and the team is considering opportunities to conduct an AIS pilot that would be focused on developing metrics and reporting progress on regional goals for AIS prevention and control. A proposed approach was presented to the GLP at their fall meeting for feedback.

National Aquaculture Association

Pathogens and parasites continue to be a significant issue for the National Aquaculture Association (NAA). NAA is working with USDA to support a commercial aquaculture standards programs (CAPS) to address farm biosecurity. This is an in-depth issue affects both that finfish and shellfish farming and one NAA hopes biosecurity measures will eventually be adopted across the country. NAA has hosted numerous webinar pertaining to AIS, including topics such as biosecurity, HACCP, and regulatory activities.

NAA also encourages review of the book series produced by the National Research Council that is focused on risk analysis. Each volume advances the approach and analysis as to how to best assess and manage risk and clearly elucidates the relationship between risk assessment, management and communication:

- Risk Assessment in the Federal Government: Managing the Process (1983) and accessible at <https://www.nap.edu/catalog/366/risk-assessment-in-the-federal-government-managing-the-process>
- Issues in Risk Assessment (1993): <https://www.nap.edu/catalog/2078/issues-in-risk-assessment>
- Understanding Risk: Informing Decisions in a Democratic Society (1996): <https://www.nap.edu/catalog/5138/understanding-risk-informing-decisions-in-a-democratic-society>
- Science and Decisions: Advancing Risk Assessment (2009): <https://www.nap.edu/catalog/12209/science-and-decisions-advancing-risk-assessment>

Association of Fish and Wildlife Agencies

Association of Fish and Wildlife Agencies (AFWA) held its Fall meeting on September 12, 2016 in Philadelphia, Pennsylvania. The Spring meeting will be held during the North American Wildlife and Natural Resources Conference in Spokane, Washington on March 5-10, 2017. Other major

accomplishments include approval of a resolution by the Western Association of Fish and Wildlife Agencies (WAFWA) AIS Subcommittee Resolution at their July 2016 meeting encourages all Western states to adopt regulations requiring the removal of drain plugs during the overland transport of watercraft. In addition, the Blue Ribbon Panel on Sustaining America's Diverse Fish and Wildlife Resources, comprised of national business and conservation leaders, was convened to evaluate and recommend a more sustainable funding approach to avert a fish and wildlife conservation crisis. The Panel completed its work in December 2015 and recommended that Congress dedicate up to \$1.3 billion annually in existing revenue from the development of energy and mineral resources on federal lands and waters to the Wildlife Conservation Restoration Program. A bill to fund this program, Recovering America's Wildlife Act of 2016 (H.R.5650), was introduced on July 6, 2016. This bill amends the Pittman-Robertson Wildlife Restoration Act to direct the Department of the Treasury to transfer, beginning in FY2016, revenues from energy and mineral development on federal lands totaling \$1.3 billion to the Wildlife Conservation and Restoration Subaccount of the Federal Aid to Wildlife Restoration Fund, to be available without further appropriation. The purpose of the subaccount is to fund state wildlife conservation and restoration programs for managing fish and wildlife species of the greatest conservation which are frequently impacted by invasive species.

AFWA continually tracks and solicits state agency input on proposed and relevant invasive species legislation (e.g., Invasive Fish and Wildlife Prevention Act of 2016, Recovering America's Wildlife Act of 2016), develops AFWA positions on legislation, and prepares Congressional testimony or briefings on legislation as needed. Other ongoing work from AFWA includes participation in Building Consensus in the West, especially in development of model regulations for state watercraft inspections and decontaminations. The AFWA Invasive Species Committee continues ongoing implementation of the AFWA-FWS-PIJAC MOU on aquatic species not yet in trade by providing recommendations on species that need to go through a screening process and by reviewing the results of risk screening efforts. The AFWA Invasive Species Committee is also looking for potential topics for a National Conservation Need (NCN) for the 2018 Multistate Conservation Grant Program (MSCGP). The NCN submitted by the Invasive Species Committee for the 2017 MSCGP focused on the need to develop approaches that effectively address threats from ANS while simultaneously minimizing impacts to angling and boating opportunities. The NCN was not selected as a funding priority for the 2017 grant cycle.

Chesapeake Bay Program

The State of Maryland passed the State Lakes Invasive Species Act of 2016. The law, which applies to any vessel that is operated in a lake owned or managed by the State, provides that, "after April 1, 2017, an owner of a vessel may not place the vessel or have the vessel placed in a lake at a public launch or public dock unless the owner has cleaned the vessel and removed all visible organic material" NR § 8-703. A vessel owner who violates this requirement will be subject to civil penalties starting at \$100 for the first offense and increasing to \$250 for a second offense and \$500 for subsequent violations.

Maryland Department of Natural Resources (MDDNR) conducted the first baseline survey of all 16 state owned/managed water bodies to assess current level of AIS infestation. This report is due Dec 30th. MDDNR continued the Deep Creek Lake Voluntary Inspection program for AIS. Zebra mussels were intercepted for the first time in July 2016. Signs with the Clean/Drain/Dry message were placed at all state, county, and National Park Service launches in Maryland. MDDNR will also fund Year 4 of the Hydrilla Control plan at Deep Creek Lake. Thirteen areas where hydrilla has been observed will be treated with pelletized fluoridone every three weeks over the summer. Follow-up field monitoring will test water quality, follow dosage rates and scout for any hydrilla.

U.S. Department of Transportation Maritime Administration

U.S. Department of Transportation Maritime Administration (MARAD) continues to support the three domestic ballast water technology test facilities. We are also continuing our research on compliance monitoring tools and hull fouling quantification.

USDA Forest Service

The U.S. Forest Service continues to conduct a wide range of research and management activities against aquatic invasive species (AIS) across the agency, with particular emphasis on work in major watersheds to restore areas impacted and prevent invasions from establishing. Significant issues at the national level include work on national policy advancements through the Forest Service Handbook. The Handbook will provide additional tactical policy requirements and guidance to all National Forests and Grasslands for the prevention, control, and other management activities against all taxa of invasive species, including aquatic invasive species. The agency has completed formal Tribal Consultation with Native American Tribes across the United States on the draft Handbook and will be continuing to refine key chapters into FY2017 and will be providing opportunity for broad public review before finalization and issuance. Policy direction on invasive species prevention is a key component of the Handbook, and the Forest Service has played a key role in establishing AIS prevention measures that can be universally applied across multiple agencies and landownerships, including AIS prevention protocols related to fire suppression activities in collaboration with the federal interagency team. The U.S. Forest Service is also revising its national Fisheries and Aquatic Ecology Strategy (previously known as “Rise to the Future”). This revision to the national strategy will greatly expand the agency’s work to detect, prevent, and control aquatic invasive species across a wide range of taxa (plants, pathogens, vertebrates, invertebrates, algae, etc.).

At the regional and local levels, the U.S. Forest Service continues to support and participate in the work of the ANS Regional Panels, and is trying to maintain our support for invasive species prevention and control, as well as education and outreach, within very limited and declining budgets. The U.S. Forest Service has representatives on every ANSTF Regional Panel in the nation, and works closely with state personnel and tribes on a variety of AIS issues impacting watershed conditions. The U.S. Forest Service continues to provide support where it can for educational campaigns such as Stop Aquatic Hitchhikers, Clean Drain Dry, Play Clean Go, and others. Recent documentation of invasive mussel veligers in Tiber reservoir in Montana has energized U.S. Forest Service fisheries and aquatic ecology programs, and affected National Forests, to increase their coordination with State agencies, tribes, other federal agencies, public recreationalists, and the Montana Invasive Species Council. Many of the watersheds at risk have direct connections to the National Forests in Western and Central Montana.

National Oceanic and Atmospheric Administration

National Oceanic and Atmospheric Administration (NOAA) does not receive allocated funding for invasive species efforts, rather the Agency’s work is reflective of impacts to NOAA’s trust resources. For example, more than \$1 M was given out by the National Sea Grant for invasive species work, and over \$ 161,000 by the National Estuarine Research Reserve System (NERRS) for control, management, and restoration.

The Habitat Blueprint is NOAA’s strategy to integrate habitat conservation throughout the Agency. It focuses efforts in priority areas and leverages internal and external collaborations to achieve measurable benefits within key habitats such as rivers, coral reefs, and wetlands. NOAA has identified state and federal invasive species experts and plans to consider invasive species prevention and management while developing Habitat Blueprint Focus Area Implementation Plans. In Kachemak Bay, Alaska native bivalve population recovery efforts are being promoted that are consistent with the long-term sustainability of a healthy and functional ecosystem. The 3-5 year objectives for this area include planning and monitoring for invasive species. In January 2016, the implementation plan for the St. Louis River Estuary Habitat focus area, was completed. The plan prioritizes invasive species monitoring and

removal for the Wisconsin Point Dune area and Lake Superior Coastal Wetland Manoomin (Wild Rice) restoration.

NOAA also continues to serve in its leadership role as co---chair to ANSTF and NISC. The Agency has been involved in numerous projects including the ANSTF Report to Congress, Review of the Maryland ANS Plan, and participation in the ANSTF Economics committee discussions. NOAA's has also assisted NISC by maintaining its AIS cross-cut budget, worked on next steps for addressing the movement of aquatic invasive species onto and off of federal lands, and collected data within the Agency on Early Detection and Rapid Response. Internationally, NOAA has represented the Protection of the Marine Environment Working group of the Arctic Council for the Arctic Invasive Alien Species Strategy and Action Plan.

In the Great lakes Region, sample processing for the 2015 Lake Michigan Combined Science and Monitoring Initiative Benthic Survey is underway and on-schedule. Ultimately, this survey will produce updated lake-wide estimates for dreissenids and other benthos. The Great Lakes Environmental Research Lab (GLERL) has field growth experiments in progress, which will help to improve year--round growth estimates of quagga mussels. Simulations are being run on Asian carp effects on food webs in Lake Erie, Lake Huron, and Lake Michigan. GLERL is also modeling habitat suitability of Grass Carp in the Great Lakes.

From the Western Region, NOAA's Hawaii Regional office held a workshop in May to work with State partners to discuss the impacts of toxoplasmosis and invasive feral cats on endangered Hawaiian Monk Seals, discuss solutions, and focus on implementing next steps to reduce the negative impacts of toxoplasmosis. Toxoplasmosis is a parasitic disease that has also been transmitted from cats to Sea Otters. On Catalina Island, NOAA has been testing the efficacy of using a super sucker to remove Brown Algae.

The Northwest Fisheries Science Center is using environmental DNA (eDNA) to detect the presence and seasonal distribution of non-native walleye in Lake Washington. An established walleye population is of great concern for ESA-listed salmon populations.

In the Gulf and Southeast, NOAA has spent \$25,000 on lionfish prevention, containment, and removal. NOAA scientists have been conducting field trials for prototype lionfish traps designed to capture lionfish and reduce bycatch typically seen in traditional fish trap designs, as well as working with industry to address lionfish demand in the seafood market.

In the Northeast, NOAA supported the creation of a Mitten Crab Early Detection and Rapid response plan for the Chinese Mitten Crab in the Gulf of Maine. NOAA has also been involved in the coordination of the Invasive Catfish Task Force in the Chesapeake Bay.

U.S. Fish and Wildlife Service

On September 30, 2016, the Branch of Aquatic Invasive Species (BAIS) published the "11 species" final rule in the Federal Register, about a year after the U.S. Fish and Wildlife Service (Service) published the proposed rule. The Service received 20 comments from the public and comments from three expert peer reviewers during the proposed rule phase. The rule took effect on October 31, 2016. As of that date, importation and interstate transport of any of the 11 species is prohibited, except by permit from the Service for zoological, educational, medical, and scientific purposes. The rule lists 10 freshwater fish and 1 crayfish as injurious species. All species have a high climate match in parts of the United States, a history of invasiveness outside their native ranges, and, with one exception (Zander in Spiritwood Lake, North Dakota), are not currently found in U.S. ecosystems. This is the first rule that the Service proposed since we signed a Memorandum of Understanding with Pet Industry Joint Advisory Council (PIJAC) and the Association of Fish and Wildlife Agencies (AFWA) in 2013, which outlines an agreement regarding the voluntary refrain from importation of species not yet in trade in the United States.

In December 2013, the United States Association of Reptile Keepers (USARK) filed a lawsuit against the Large Constrictor Snake final rule, challenging the Department of Interior that the Service does not have the authority to prohibit interstate transport of species listed as injurious wildlife under Title 18 of the Lacey Act, as well as several other challenges regarding the implementation of the National Environmental Policy Act (NEPA) and the Administrative Procedure Act. This was in response to the listing of four large constrictor snakes as injurious species in 2012. After a final rule was published in 2015 to list the reticulated python and the three anacondas, USARK filed an amendment to add the four newly listed species to their challenge. Currently, a preliminary injunction is in effect, which allows members of USARK to transport the reticulated python and green anaconda across State lines in the Continental U.S., except into Florida and Texas. The oral argument for this case was held on April 1, 2016, in the D.C. Circuit Court. A decision from the court could come any day. Regardless of the appellate court's decision, the Service will continue to litigate in U.S. District Court the remainder of the case regarding eight species of large constrictor snakes that the Service lawfully listed as injurious wildlife.

The Service published an interim rule in the Federal Register on January 13, 2016 to list 201 species of salamanders as injurious because they pose a serious threat to native salamanders as carriers of the lethal fungus *Batrachochytrium salamandrivorans* (Bsal). The interim rule took effect January 28. The public comment period ended March 14, 2016. Comments are currently under review. The Service is working with the Office of Law Enforcement and Division of Management Authority to answer stakeholder questions about how the rule will be implemented.

On September 23rd, the Secretary of the Interior received a formal Petition "To Amend 50 CFR §16.13 to List 43 High risk Fish, Crayfish, and Mollusk Species as Injurious Species under the Lacey Act." The Service is processing the petition consistent with the Department's regulations found at 43 CFR part 14. At this time, the Service does not have any definitive plans for how the Agency will proceed, other than The Service is looking globally to identify the greatest threats to U.S. ecosystems and how the Agency can best achieve invasive species prevention outcomes.

On November 2, 2015, the Service's Division of Fisheries and Aquatic Conservation unveiled a new publicly available webpage called "Species Ecological Risk Screening Summaries" that posts 150 Ecological Risk Screening Summaries (ERSSs). The Service will continue to post new ERSSs as resources permit. Last month, the revised and greatly expanded Standard Operating Procedures for the Ecological Risk Screening Summaries were posted on the website. The website is located at http://www.fws.gov/fisheries/ANS/species_erss_reports.html.

Public Comment

None.

15. Meeting Summary

A list of final action items and decision items was discussed (see pages 1-2 above). The next meeting of the ANS Task Force will be hosted by the Western Regional Panel in Lake Tahoe on May 2-4, 2017.

The Fall 2016 ANSTF Meeting was adjourned.