



Location:

Virginia Department of Game and Inland Fisheries Office
3801 John Tyler Memorial Highway
Charles City, VA 23030
804-829-6580

Final Agenda for April 2008 MAP Meeting

Tuesday, April 15, 2008

9:00 am Parting words from past Panel Chair and Introduction of new Chair and Vice Chair (Fredrika Moser, Maryland Sea Grant)

9:10 am Announcements and Introductions (Jonathan McKnight, Panel Chair)

9:25 am Review and Approve Agenda (Jonathan McKnight, Panel Chair)

9:30 am Update and Discussion on State Rapid Response Plans (Jessica Smits and Fredrika Moser, Maryland Sea Grant)

10:15 am Regional Invasive Species Workshop: Discuss what the focus should be and identify an ad hoc group to move forward with implementation (Fredrika Moser, Maryland Sea Grant)

11:00 am Break

11:15 am IMap Invasives database (DJ Evans, Director, New York Natural Heritage Program)

12:00 pm Update and discussion on MAP mapping project (Jonathan McKnight, Panel Chair)

12:30 pm Lunch

1:30 pm Presentation on Northern Snakehead in Virginia (John Odenkirk, VA Department of Game and Inland Fisheries)

2:10 pm The impact of red-eared sliders on native turtle species (JD Kleopfer, VA Department of Game and Inland Fisheries)

2:40 pm Nutria Eradication Project Update (Steve Kendrot, USDA, APHIS)

3:10 pm Break

3:30 pm Updates on Projects

-Eyes on the Water Campaign (Ann Faulds, Pennsylvania Sea Grant)

-SERC Mitten Crab Efforts, Panel discussion on how to move forward with response to increasing numbers of mitten crabs in MD, DE, NY (Greg Ruiz, SERC)

4:15 pm FY 2008 Priorities

-discussion on moving forward with ELI AIS prevention recommendations

-other projects

5:00 pm Adjourn

Wednesday, April 16, 2008

Panel Business

9:00 am Panel Budget and Small Grants Competition (Julie Slacum, Panel Coordinator and Panel Review team)

10:30 am Break

10:45 am Continue RFP discussion if needed

11:15 am Discussion on Ad Hoc Groups versus standing working groups (Jonathan McKnight, Panel Chair)

11:30 am Discussion of Draft Environmental Impact Statement for the Proposed Introduction of a non-native oyster to the Chesapeake Bay (Julie Slacum, Panel Coordinator).

12:00 pm Unfinished Business and Dates for Fall 2008 Meeting (Jonathan McKnight, Panel Chair)

12:15 pm Adjourn



Mid-Atlantic Panel on Aquatic Invasive Species

Tuesday, April 15th, 2008 – Wednesday, April 16th, 2008
 Virginia Department of Game and Inland Fisheries
 Charles City, Virginia

Present:

Jonathan McKnight, MD DNR Chair	jmcknight@dnr.state.md.us
Steve Minkkinen, USFWS Vice Chair	Steve_Minkkinen@fws.gov
Julie Slacum, USFWS Coordinator	Julie_Thompson@fws.gov
Liana Vitali, CRC/CBP Staff	Vitali.liana@epa.gov
Ann Faulds, PA Sea Grant	afaulds@psu.edu
Stephanie Flack, TNC	sflack@tnc.org
Lisa Moss, USFWS	Lisa_moss@fws.gov
Carin Ferrante, SERC	ferrantec@si.edu
Jessica Smits, MD Sea Grant	smits@mdsg.umd.edu
Roger Mann, VIMS	rmann@vims.edu
DJ Evans, NY Natural Heritage	dxevas@gwweb.dcc.state.ny.us
Greg Ruiz, SERC	ruizg@si.edu
Rob Emens, NC DENR	rob.emens@ncmail.net
Steve Kendrot, USDA/APHIS	skendrot@aphis.usda.gov
Cathy Martin, DE Div of Fish and Wild.	catherine.martin@state.de.us
Jim Grazio, PA DEP	jagrazio@state.pa.us
Tom Smith, VA DCR	tom.smith@dcr.virginia.gov
Bruce Taggart, USGS	btaggart@usgs.gov
Fredrika Moser, MD Sea Grant	moser@mdsg.umd.edu
David Heicher, SRBC	dheicher@srbc.net
Ray Fernald, VA DGIF	ray.fernald@dgif.virginia.gov
JD Kleopfer, VA DGIF	john.kleopfer@dgif.virginia.gov
John Odenkirk, VA DGIF	john.odenkirk@dgif.virginia.gov

Action Items:

All States' Panel members to respond to Jessica with answers to the following questions:

1. Who is the incident commander?
2. Is the expert list correct for your state?
3. Who are the legal authorities for your state?

Action: Greg Ruiz, Ray Fernald, Jim Grazio and Tom Smith volunteered to assist Jessica and Fredrika with developing a decision tree process for response to an AIS invasion.

Action: Fredrika Moser to lead an effort to assemble an ad hoc group to organize 3 proposals for an upcoming regional invasive species workshop

Julie Slacum to find a replacement for the New York panel member

MAP to speak with VA (Jack Travelstead) about contacting watermen organizations to aid SERC in raising awareness of Chinese Mitten Crab

Julie Slacum to contact several PIs to get answers to questions posed during the RFP discussion, after getting answers she will arrange a conference call of the Executive Committee to make final decisions regarding funding.

Julie Slacum to provide a brief synopsis to the Panel of the Draft EIS when it is released. Panel to decide on whether to provide an opinion

DAY 1

Parting Words

Jonathan McKnight, the new Panel Chair, began the meeting by asking the past Chair, Fredrika Moser to say a few parting words. Fredrika thanked everyone for their help over the past couple years. Fredrika stated that everyone in the Panel has done a great job setting priorities and achieving success. Fredrika also said that the panel is a dedicated group of people and that she has enjoyed working with everyone on the panel. She thanked Julie Slacum for all her hard work and dedication to the panel. She also said that she is encouraged by the state leadership on the panel and believes the panel should be primarily driven by the state and local agencies for whom they represent. Jonathan and Liana Vitali presented Fredrika with a framed picture and certificate of appreciation.

Announcements and Introductions – *Jonathan McKnight, MD DNR*

Panel members and guests introduced themselves. Jonathan thanked the Commonwealth of Virginia for hosting the meeting. He stated that he was pleased with the turnout for the meeting and thanked everyone for travelling.

Review and Approve Agenda

All panel members approve the agenda.

Update and Discussion on State Rapid Response Plans - *Jessica Smits, MD Sea Grant and Fredrika Moser, MD Sea Grant*

Jessica Smits and Fredrika Moser began the discussion of the status of the State Rapid Response Plans. Jessica reminded the panel of last Fall's MAP meeting which focused on the Incident Command System and Rapid Response. The Aquatic Nuisance Species Task Force recommended implementation of ICS in response to a non-native species invasion. Jessica and Fredrika worked on their first draft plan with Maryland, working with the Invasive Species Matrix Team at DNR to identify issues. Fredrika reiterated that their hope is for each state in the Mid-Atlantic region to take this plan and customize it for their needs. It is important to maintain the same language used in ICS as it is used as a common language for natural disasters. Fredrika believes there is no down-side for each state to draft and utilize a Rapid Response Plan. Each panel on ANSTF received \$20,000 from NOAA to develop a regional Rapid Response Plan so this has been set as a priority for the Panel. She stated that Jessica would be contacting each of the states regarding participation in this project.

Jessica reminded the Panel members that this plan is created to respond to an incident and not an issue. She then walked through each page of the Maryland Rapid Response Plan for Aquatic Invasive Species.

When discussing the first step, Incident/Event, Fredrika mentioned that Maryland didn't have an Invasive Species Sighting Form and feels other states are in the same situation. This form itself is a major contribution to the advancement of State Rapid Response Plans. Jessica mentioned to panel members that their help is needed to review the ANSTF experts list at the back of the Plan to be sure the correct individuals are listed as Species Experts. When

discussing the Command and General Staff Meeting, Jessica told panel members she is planning to add a draft press release in the appendix of the plan to provide further guidance. When discussing the Incident Action Plan Preparation and Approval, Jessica told panel members that she will also include a mock action plan document in the appendix to provide further guidance. Fredrika added that the states will have to customize this plan to fit their needs and issues and use this plan as a type of check-off list.

Jessica told the states that to complete the Plan and make it ready for region-wide application, she needs answers from each state for the following questions:

1. Who is incident commander?
2. Is the expert list correct for your state?
3. Who is the legal authorities for your state?

Fredrika reminded the panel of the importance of reflecting on the results of applying the Rapid Response Plan and highlighted the feedback flow chart illustrated at the beginning of the draft Plan. She anticipated that in certain situations, the states may have to review this chart multiple times to be sure all avenues were explored regarding the incident.

Jessica mentioned that identifying legal authorities that will be documented in the Plan will likely be the most time consuming and Fredrika encouraged panel members to contact each other for advice. Steve Minkkinen asked what happens when legal authority is ambiguous. Fredrika responded that at one of the early meetings in ICS, legal authorities have to be identified and included in the discussions. Once the incident has been identified as necessary to respond, the states may need to talk to their Secretaries to determine legal council. Jonathan reminded that the more ambiguous the legal authorities are, the more the states may tend to rely on a State Rapid Response Plan as each position and role is clearly outlined and once the necessary information, legal or otherwise, is obtained, other roles can then spring into action. Fredrika said this should be included in the introduction of the Plan to encourage utilization of the Plan in each state. Appendix B of the draft Rapid Response Plan addresses many of these issues as well.

Jonathan added that he is the oil spill coordinator at DNR and has used ICS in those situations and he has found it to be very effective. Another example is the Crofton Pond Snakehead situation. Jonathan stated how critically important it was to have a clearly outlined plan for response not only for efficiency but also safety. Another example is West Nile Virus response and its reaction in the press. Having the right tools to handle the press and public in these situations is invaluable. Personally, he feels there is a lot of opportunity here.

Roger Mann discussed VIMS' experience with oil spills and utilizing the US Coast Guard which uses ICS. Each step in the process demands a decision and the plan lends itself to explanation if the best decision is not made. He endorses the single line of communication with the Incident Commander but feels the major issue, at least in Virginia, is jurisdictional lines. Ray Fernald added that the problem in adapting ICS to invasive species is that the location of the incident is highly variable and depending on the location, may involve many individuals. He fears most people that could be involved in an incident aren't trained in ICS. He recommends adding a mini-ICS training workshop as one of the steps in the beginning when an incident is identified. Fredrika agrees and says the introduction of the plan should include that information.

Ray continued that VA had a core of individuals that could be trained in ICS and when the states adopt their own plan, they are already trained in ICS. Jonathan remarked on the training stating that other departments at DNR, such as those concerned with forest fires, were highly trained in ICS and dovetailed nicely when these situations may merge. The opportunities for coordination on incidents is more efficient when more individuals are trained in ICS. Ray said it is likely too late to start training after an incident and encourages states to train in advance of an incident. Julie suggests that instead of organizing a mock response workshop, each state should organize a state ICS training workshop. Roger asked if the Center for Disease Control uses a similar system such as ICS and Fredrika confirmed she believed so.

Ann Faulds wondered if the less than optimal response to the most recent DE oil spill was because of a lack coordination that could have been attained if an ICS-like system was adopted. Fredrika said that there is a greater level of coordination if all states have the same plan and language. Jonathan believes this plan would work well within each state as well as for interstate issues. He reminded panel members of the joint command aspect of ICS if jurisdictional lines can't be drawn.

Greg Ruiz asked if this evaluation process is applicable to all species and if so, which species receive priority since there are literally hundreds of species requiring response. Fredrika mentioned an initial step in which a discussion would take place to decide if the incident warranted State Secretarial involvement. She said she is open to adding an additional appendix based on the CA Rapid Response Plan that provides insight on prioritizing incidents. Jonathan said the MD DNR Invasive Species Matrix Team meets monthly to decide which incidents require response. If a new species were to be identified, the team meets immediately. Greg mentioned a decision matrix would be a helpful tool to identify priorities. Fredrika asked how invasive species biologists determine current priorities and thinks academic institutions are the likely candidates to identify these priorities.

Roger added that everyone has their own most-wanted list and in regards to AIS, the ability to contain an aquatic species is markedly more difficult than terrestrial species. It's not so much a defeatist attitude as a realization of the challenge. Greg responded that there have been successful cases of eradication and new literature suggests a limited initial distribution of an AIS.

Jim Grazio asked the academic partners for recommendations on prioritizing risks. Ann stated it seemed that even with the best available information, predictive models can vary wildly. Jonathan talked about MD DNR's list of 50 invasive species and Ann said creating a larger list of priorities may be easier than whittling it down. Fredrika returned to Greg's point that creating a decision matrix would be a proactive addition to the plan. Greg suggests researching the basic information available-is it on a most-wanted list? Is there history of invasion elsewhere? By checking off items on a list such as the questions above, it could add or remove priority AIS. He suggests also starting high level and working down, for example, he regards filter-feeder species as one of higher concern than others. Roger added that listing the generic approaches for response and looking at general biological characteristics may be an ideal place to start. He inquired about how many generic options would we want? He added that ICS response is applicable across many topics beyond AIS.

Jonathan provided a summary of the discussion:

1. There is a gap in that we don't have a threats analysis (how do you decide whether to respond to an AIS invasion), we need the decision tree to determine whether to trigger an ICS process
2. There is general Panel consensus that the Draft Rapid Response Plan is a sound model and that all the states should develop and implement one
3. The Panel could provide/endorse ICS training for the states

Jonathan asked who would like to work on drafting the decision tree process and identify a way to fill the initial gap. **Action:** Greg Ruiz, Ray Fernald, Jim Grazio and Tom Smith volunteered to assist Jessica and Fredrika with developing a decision tree process for response to an AIS invasion.

Regional Invasive Species Workshop - *Jonathan MnKnight, MD DNR and Fredrika Moser, MDSG*

Fredrika talked about the premise for this idea and said MDSG would be willing to conduct a regional invasive species workshop to provide a forum for sharing information on AIS across the states. She is seeking input on workshop priorities. One priority was bringing together state AIS councils across the regions. Also, evaluating ELI recommendations and identify actions to develop regional MOUs, MOAs could be another workshop objective. Julie added that a database discussion would be helpful. Fredrika mentioned that a step beyond the previous workshops would be to encourage states to step away from single AIS species management. A product of the workshop may be a time line and list of individuals involved in Panel priorities.

Julie stated that the Panel may want to create an ad hoc group to plan the workshop. Fredrika stated that she wanted to get input from the Panel at this meeting and perhaps an ad hoc group would not be necessary. Julie said the motivation of the workshop was to spend Panel money before we lost it. There had been a suggestion to bring the councils together to share information on current and past AIS issues. Also, Julie stated we haven't hosted a region wide workshop to discuss state specific issues. Fredrika said that it was up to the Panel to decide what the workshop should be focused on.

Greg offered to research what's known about existing vectors and the level of vector activity and also what management infrastructure surrounds those vectors. For example, ships are often highlighted but perhaps movement

of live organisms in food or bait could be worth investigating. Then perhaps, look prospectively to anticipate what may happen in the future regarding the current vectors existing today. Identifying the current flux and gaps could be a useful product of this workshop and each state can use the information. Julie added this could assist with ELI discussions. Ray asked how we would encourage others besides the current panel members to come. He speculated that a way to do that is to try to piggyback a parallel meeting or session in which directors may already be there.

Regarding the idea of bringing invasive species councils together, it was asked if the assumption was that the state councils would be focused on AIS and if each state has a delineation between aquatic and terrestrial teams. Panel members stated most states do not separate.

Julie added it would be useful to know how different councils were formed, such as legislatively mandated councils versus grassroots. Julie asked if we were going to partially reimburse travel. Fredrika thought it was unlikely based on the budget. Julie also asked about the size of the workshop. Steve asked if this would be separate from the ICS workshop. Fredrika stated that it would be separate.

It was mentioned that AIS are difficult to contain for rapid response. With the funding situation, people may feel apathetic about AIS. Fredrika reminded the Panel that it all comes down to prevention. Perhaps incorporating Greg's idea with the various councils could result in an understanding of how each state works on prevention. It was suggested that we bring in legal authorities that could clear up the ambiguity about jurisdictional lines regarding the Rapid Response Plans. Other Panel members agreed.

Julie feels the value of the workshop would lie in producing a strategy for engaging state legislature for funding. Ann suggests inviting state legislator representatives to the workshop. Jonathan said if we all work on outreach for this workshop, it would create a more diverse audience. It was also mentioned that out of state travel is difficult, even NJ can't leave the state right now even if the travel is reimbursed.

Roger Mann discussed interstate communications, or sometimes lack of, and how most agencies involved in AIS response and prevention lack authority. Julie suggested bringing the councils together could help address these questions. Roger remarked that without the enforcement or authority it is difficult to implement the solutions to these issues. A product of the workshop would be to figure out a way to apply the solutions presented at the workshop. Fredrika asked if one could take an example of a pathway and identify the 3 main components; legislative, on-ground response, and current state management plans, to examine whether it would provide a tool for enforcement/authority. Someone mentioned that these different components might draw a diverse crowd to our workshop. Fredrika stated that it would and said that we would probably have to emphasize economic and health implications at the workshop as well. She added most agencies have had a wake-up call with recent biosecurity issues.

Ann added that good speakers attract more people. Fredrika added that also applies to who is invited. More directors attending would encourage even more to come. Jim Grazio asked to clarify the theme of the workshop. Roger suggested making AIS a societal and health issue examining the cumulative economic, societal and public health impacts. Someone asked if there was economic analysis impact study that could be examined. Jonathan mentioned an economic impact study that was conducted on the effects of nutria in Maryland. Ann also mentioned a zebra mussel impact study that could be used. Roger confirmed that retrospective analysis is valuable but doesn't grab people's attention. When discussing vectors, we are getting to the point of saying we are trying to implement better control of vectors but in the context of something like global warming, you'll find fragmentation of habitat resulting in an exacerbation of AIS issues across the region and the world. It doesn't matter what you do, even with regards to vector control, since climate change will be the ultimate decider. He discussed the learning curve in the climate change debate and how society is finally getting the message. In regards to AIS, it needs to be elevated to a higher level.

Jonathan reviewed that the theme needs to be nailed down for the workshop about one year from now. He suggests the following ideas:

1. Coordinate state councils for a workshop
2. Discuss ELI document and law and policy across the region
3. Vector-analysis
4. Climate-focused workshop and its implications for IS

He suggested continuing with the agenda and discussing further over lunch. All agreed.

Revisited at Lunch:

ANSTF have chosen not to fill the executive secretary position. Jonathan suggested recommending to the Task Force at the spring meeting that they fill the position at the spring Task Force meeting. Regarding the workshop, Fredrika asked what else we wanted to talk about besides what we talk about at the Panel meetings. Steve commented that the law and policy gaps are enormous. Jim agrees with that theme as long as there was a product such as a recommendation sent to the Task Force. It was also asked if we could pick a feature species and address these issues with one species. Fredrika would prefer to focus on a feature pathway. Tom Smith suggested it could be useful to go to meetings and discuss best practices and success stories. Fredrika inquired about running a workshop about teaching the states how to approach their state legislature. Jonathan is concerned about the difference between the states. Ann commented that there is usually a grassroots component. PA could probably gain tremendously by incorporating more non-profits. Greg reminded the Panel that he represents an information resource and there is a real opportunity to engage state and federal partners.

Fredrika asked which option is favored. Julie envisions the first option as each state is given 20 minutes to give an update. Jonathan continued that the power lies in each state knowing someone in another state and having that connection. Fredrika then said this would likely result in a smaller workshop. It was pointed out that items 1-3 could almost go together. The National Invasive Species Council has commented on the lack of communication between the state councils on all types of invasive species, not just aquatic. Jonathan decided that an ad hoc group will need to be organized and should create 3 proposals for the workshop. Fredrika will lead this initiative with possible Deiter Busch, Bruce Taggart and Julie Slacum.

iMap Invasive Database - *DJ Evans, NY Wildlife and Heritage Program*

DJ gave a short background about IMap and began the discussion by talking about Florida and their desire to track invasive species. They recognized invasive species are a primary threat to FL's biodiversity and FNAI (Florida Natural Areas Inventory) was well positioned to address the problem. They began a small pilot project in Marion County, FL to track the distribution of an invasive grass. Through this effort they recognized the power of this information. FNAI focused on expanding their information and increased their query capabilities, etc.

New York heard of this project and recognized invasive species to be a great biological threat to the natural habitat and species of New York. The NY Heritage Program's "Biodiversity Reports" cited invasive species as one of the biggest threats to biodiversity in sensitive areas with the most management recommendations. In 2004, an Invasive Species Task Force convened and issued a report in 2005 with 12 recommendations of its own. Recently, there has been an effort to create a State Invasive Species Council that would oversee the Task Force.

DJ then reviewed the recommendations that the Task Force developed. The recommendations included: 1) providing permanent leadership in invasive species; 2) working with the Cornell Cooperative Extension Service to develop better outreach and education; 3) work with Cornell Invasive Species Research Institute to conduct research; 4) follow the IPANE model to train volunteers to document invasive species occurrences; 5) develop on the ground regional partnerships called PRISMS; the council would provide base money to each prism, then each PRISM would apply for grants to leverage the funding. DJ then began discussing the recommendation where NY State should establish a state-wide database clearinghouse for all taxa of invasive species. A \$5M line item has allowed for funding to implement the recommendations. PRISMS focus on Early Detection by species and location. Therefore, the database should facilitate quick on-the-ground response to early invasions. It should also address early detection and rapid response by location. The challenge was to design a database with limited resources. The focus was on proactive response to invasions instead of reactive.

In order to maximize resources, NY and FL states along with the NY and FL Nature Conservancy chapters worked together to create a national database funded initially by the Nature Conservancy. It was recognized the database needs to address ALL taxa. Although it is starting with just plant data, it will eventually include all taxa. It was also important that the database have spatial qualifications. All data is entered with a secure password and a module was added to allow public reporting. Developers are currently working to allow easy importing of other organizations data from Access, ArcPad, etc.

There are 3 action applications in the database:

1. Easily create early detection lists for regions
2. Ability to see a region and identify which invasive species are approaching
3. Automated early detection email alerts by region

DJ then discussed the upcoming time line for the database by module. Currently, there are between 4-6 states interested in participating in the database. There will be an annual membership fee and NatureServe will administer the membership.

DJ discussed the benefits of iMAP including:

1. Protection of biodiversity
2. "Hot-button Issue"
3. A collaborative effort translates to cost-effectiveness for the member states
4. Member-driven
5. Member organization suggests upgrades and enhancements
6. Allows for maintenance AND improvement
7. Insulates from funding sways
8. Coordination across state boundaries

If interested, please contact Meg Wilkinson or DJ Evans for more information or contact your state Natural Heritage Program.

Ann asked how decisions are made for time-management of researching existing data. DJ responded that NY is working with what is currently available in digital format. They are also considering the possibility of double-counting. Greg asked if USGS has been involved in this process since each has a complimentary program. She responded that contact has been made and iMAP isn't meant to replace existing efforts but to provide a link for existing information. He also asked what the costs are? Initial set-up fee is \$1500/state. After that, the membership is stratified from \$500 to \$10,000/year with standard membership being \$5000/year. Ray asked if the data actually resides with NatureServe. DJ answered that it resides at FL State University. Fredrika asked if TNC is still providing funding. DJ said yes, \$30K last year and \$30K this year but no further funding has been discussed. NY state deposited \$100K to finish the development of the database. Ann inquired about volunteer input and if they have to pay to join. DJ explained volunteers would become part of a volunteer network and have access to the data. The general public can view it and perform simple queries. It was asked what QA/QC-ing of the data was being performed and what standards were being followed. DJ said there are no standards yet but each PRISM is responsible for the data entered in their region.

Ray commented that VA has not yet made a commitment to become a member of the database but has gathered information and sent it to Florida to see how the data might be used and identify their interests in the database. Fredrika asked who would pay for a VA membership and Tom suggested he would talk to the state invasive species group. Fredrika reminded everyone that NY has the legislative funding for on-the-ground work and that legislatively mandated funding provides support and authority. There was a discussion about how changing technologies may affect the carry-over of data from one source to another. Costs, if any, would be minimal. It was asked what technology was used in the database. DJ responded that they are using ArcGIS.

Jonathan then began an update for the Panel on the Species of Interest maps. The regions were identified based on jurisdictional boundaries and Bailey's Eco-regions. Seven composite regions were established and the 48 identified species of interest initially decided upon one year ago were whittled down to a smaller list and research on those species is currently underway to identify species locations on the new maps. Blank maps were sent to each state and those members were supposed to identify presence/absence of several species. Liana, CRC Staffer, has joined the project to help contact the state representatives. Any guidance and assistance from Panel members would be appreciated and most members agree this is another useful tool for early detection. Fredrika asked if the maps would be added to the MAP websites and Jonathan agreed that could be possible. Ann offered assistance with Google Maps as well. Jonathan also mentioned the possibility of advancing the technology behind this mapping project and Fredrika commented that the simplicity of these maps lends itself to frank conversations about those species.

Jim inquired about the policy survey the Panel conducted that inquired about species of concern in each state.. The survey was completed and Liana is working with staff at CBP to explore different formats for public dissemination of the information. Fredrika reminded Panel members of the NAFTA survey about databases. It's a quick survey through surveymonkey.com. There is a large gap between databases and federal leadership.

Julie reminded the Panel that we lost our New York member and she is working on filling that vacancy.

Presentation on Northern Snakehead in Virginia - *John Odenkirk, VDGIF*

John began his presentation discussing the overall lack of knowledge regarding the current status of the Northern Snakehead. In May of 2004, a snakehead was found in Little Hunting Creek, VA confirming the presence of this species in VA. Informational signs were posted to help educate the public to correctly identify snakeheads. Electrofishing has been identified as the best way to sample snakeheads.

A panel member asked what happens in the winter since they are obligate air breathers. John explained that their metabolism slows down and they are able to get oxygen between the ice and water.

Snakehead have been found as far as Great Falls in VA. John theorizes that Dogue Creek is the epicenter of introduction. Snakeheads have a sustained level of reproductive activity for almost 6 months of the year. Females can roughly spawn up to 44,700 eggs with decent survival rates. They prefer to eat banded killifish but will also eat white perch, pumpkinseed, and blue gill. Mosquito fish have been the primary predator for young snakeheads. Birds are the second major predators. More than half of the stomachs sampled were full.

Through a radiotelemetry study, they found that about 20% of fish tagged migrated, the rest stayed in the same geographic area. The fish have a high degree of site fidelity and have a small home range.

Steve Minkinnen asked if the fish behaved differently after spawning. John responded that at post-spawn, the fish are more active. Someone asked if there were any trends with the migrating fish and it was determined that there was no statistically significant trends regarding migration.

Jonathan asked how guides and outfitters are reacting. John said some don't care and others don't want to hear about it but there are a few people making a sport out of catching snakeheads. Smithsonian Environmental Research Center (SERC) genetic studies suggest 4-5 vectors (locations) of introduction and it was asked if John thinks there are still more introductions occurring. John thinks its unlikely. It was commented that they taste good.

The Impact of Red-Eared Sliders (RES) on Native Turtle Species - *JD Kleopfer, VDGIF*

Turtle farming started in the late 1800s in the US. In the 1960s there was a huge turtle farming industry, mostly located in Louisiana. The red eared slider is the most prevalent turtle species farmed. The slider is an aquatic turtle. In the 1970s having a red eared slider as a pet was big. In 1975 there was a FDA ban due to salmonella. Turtles smaller than 4" were banned from sale in the US. China and other eastern countries are the major importer of turtles, mainly for food. Someone asked that if the turtles are marketed as salmonella-free, wouldn't they just get re-infected with salmonella in the environment. JD responded that they would. Red eared sliders have been introduced to over 20 countries due to the trade. IUCN has listed red eared slider as one of the "100 World's Worst Invasive Species". IUCN's biggest concerns with the species is disease introduction, competition, predation, and intergradation (in AL where they hybridize with the yellow bellied slider). Red eared slider are native to the US in the south and mid-west. The illegal wildlife trade is second in the world to the illegal drug trade. It was asked if there are imports allowed in the US for food sources. If the turtle is over 4 inches long, it is legal to import them. The four inch rule was created because it seemed like a child would not be able to fit it in their mouth if it's at least 4 inches long.

Nutria Eradication Project Update - *Steve Kendrot, USDA, APHIS*

Steve discussed the history of the nutria introduction in Maryland, VA, and DE and showed a variety of experiments/evidence illustrating the destruction nutria has caused to marshes and wetlands in Dorchester County, MD. He then discussed the goals and strategies of the Nutria Eradication Project, which is centered around the

Blackwater National Wildlife Refuge. The goals of the project include: 1) developing a systematic de-population strategy; 2) develop detection techniques; 3) develop new control tools; and 4) investigate the feasibility of eradication on the Delmarva peninsula. The project involves systematically eradicating nutria using integrated techniques such as trapping, shooting, dogs, GIS, and GPS. There is follow up monitoring to prevent re-infestation. For de-population, the Delmarva peninsula is split into 40 acre grids. These grids are trapped sequentially. The team has had to enhance and develop trapping techniques such as floating conibears, floating platforms with drowning footholds, and snares for live captures. Population monitoring begins three months after de-population to allow for sign deterioration and their reproductive cycle. The monitoring is stratified into high priority areas (every 3 months), medium priority areas (every 6 months), and low priority levels (every 12 months). Priority levels are based on the initial capture densities. The project team has covered over 25,000 acres a year and 4,924 nutria were captured in 2003. This number has decreased to 70 captured in 2007. The muskrat community had since rebounded with nutria eradication. Given the proper resources and funding, nutria can likely be eradicated from the Delmarva Peninsula. The team has been working with nutria voice recording to lure mates for capture. When asked what the future funding outlook was, Steve said it's been about \$1.3M/year but this year the team lost \$300K in support. MD may need to go to the government and show what the investment has gotten them. Ceasing funding now would devastate all the years' previous efforts. With continued funding, the Team feels Nutria can be successfully eradicated within 5 years. It was asked if remote fly-over or infrared can be used for monitoring. The only time of year this would work would be the winter as the thick vegetation blocks the infrared imagery. Greg suggested using that tool as a way to identify recently destructed marshes and wetlands as a sign of nutria inhabitation.

Locals inquire about establishing a bounty but Steve remarked that it is just as difficult to eradicate a larger population as a smaller one. Each population has its own caveats. As far as migratory ranges, it's entirely possible for nutria to travel from Delmarva to Delaware. It was asked how much trapping was being done by private trapping. Steve responded that only full time staff hired by USDA APHIS are performing the trapping.

Eyes on the Water Campaign - Ann Faulds, PA SG

A goal this year would be to reprint Chinese mitten crab watch cards. Also, it would be helpful if the Panel members can provide best available contacts for a contact list.

SERC Mitten Crab Efforts- Greg Ruiz, SERC

Thirteen crabs have been caught on the east coast to date and have all been caught by commercial fishermen with one exception. They have been found in the Chesapeake, the Delaware and the Hudson Bay. SERC has worked to create a public-friendly reporting service for citizens to contact them to report a sighting. Both males and females have been caught, and in the Chesapeake the animals are reproducing, although the success of reproduction is not clear. The 13 locations of capture have been integrated into a Google Map and each location shows as much information that they have about that sighting including photos, etc.

The goals for 2008 include:

1. Establishing an Atlantic Coast Reporting System (Outreach, Cross-State Coordination, Online Reporting, ID Tools)
2. Web-based Data Access, Mapping and Information Resources
3. Targeted Surveys this Spring and Summer
4. Development of a Contingency Plan in the event of an outbreak

The exact timing of reproduction is unknown and the crabs in the east coast are not following the usual life cycle they demonstrate in their native range and in other introduced areas. On the east coast, they are not dying after annual reproduction. It is unknown if the crabs are established, and in their native habitat, they behave as a 'boom or bust' species. As SERC moves forward with this initiative, they are increasing focus on "citizen scientists".

Steve Minkennen asked if there was a concern that there may be a continued introduction through ballast water introduction. Greg discussed 3 possible vectors of introductions:

1. Ballast water release
2. The St. Lawrence Seaway

3. They are already established

The genotype of the east coast crab matched the European genotype but does not match the genotype of crabs that were introduced in California. A panel member asked if they are being imported as part of the seafood industry. Greg said that is illegal but he can not say whether it is happening. Jonathan mentioned a couple of seizures of shipments from oriental ports. There may only be a few tributaries or streams that may be appropriate for the mitten crab but we don't know enough about them to identify their preferred habitat characteristics. What is known about them in their Chinese habitat may not translate 100% to the Chesapeake Bay region. It's agreed that the crab can travel far south in the US but in the Chesapeake Bay, they are bound by salinity.

Members discussed possible risks to existing fisheries industries and the importance of a contingency plan and the proper notification that should be given to the fisheries industries should an outbreak occur. Ann Faulds asked if it was worth investigating mitten crab as a commercial fisheries. The west coast has not established a fisheries for fear it could result in a niche market and demand for a species that could potentially disrupt the biological integrity of the west coast. It was asked if the Virginia or North Carolina watermen were aware of the mitten crab issue and if they were on the lookout for this species. There was some outreach done in those states but there hasn't been many inquiries from those states as well. It has also been reported that fishermen in Delaware have been seeing the crabs for upwards of 8 years but just didn't report the sightings.

It was also discussed that VMRC should be participating in the technical meetings involving AIS to be prepared to act if necessary. Ann agreed that's what Eyes on the Water needs to do, broaden the outreach to those who will be affected by an outbreak. Also, it was asked if the press was contacted to encourage writing stories about the mitten crabs and also creating press releases. Jonathan mentioned popular crabbing websites and message boards and how they can be used to spread the message. It happens to be a great management tool for spreading awareness and minding the public chatter.

Jonathan asked about next steps. Ann worked with Carin Ferrante from SERC to identify achievable tasks for outreach. SERC is going to inundate the public with information and begin trapping in the late summer while relying on the watermen to watch out for crabs during the early summer. Public relations co-workers will participate in the early trapping trips to provide the media with information. Jonathan suggests purchasing ad space in the Virginia Gazette to spread the word. Julie volunteered talking to Jack Travelstead from VMRC and inquiring about his participation in this initiative.

Greg stated that Chinese Mitten Crabs would migrate way above the tidal waters. Therefore, spreading the knowledge more northwards may be necessary. Jonathan mentioned the MD Volunteer Waders Program and MD Biological Stream Survey and how each volunteer and scientists receives the crab watchcards. Jonathan asked all of them to report any sighting to Carin at SERC.

Upcoming ANSTF Meeting

For suggestions on recommendations to the Task Force, Fredrika suggested recommending the harmonization and synchronization of AIS lists stating that Washington and Maryland have already done this. Julie reminded the Panel that we proposed that recommendation at the Fall 2007 Task Force meeting and even recommended they should post them on the Task Force website.

Jim Grazio reminded the Panel that ANSTF has a vacant executive secretary position. Perhaps bringing this issue up would be warranted. It may not be appropriate to recommend, but if the Panel agrees, this is an issue that should be discussed.

Greg asked how recent ANSTF meetings have been themed. He wondered if there was a focus on particular issues? In the past there were presentations at the Task Force meetings and members would exchange information and leave without much accomplishments in between meetings. Jonathan said the spring 2008 meeting was supposed to be themed about control plans and that part of the meeting was dropped. Julie and Fredrika stated that the spring 2007 meeting which focused on state management plans was one of the best ANSTF meetings in recent memory.

Issues to recommend at the next ANSTF meeting may include:

1. Meetings that are thematic with actions

2. The need to fill the executive secretary position
3. Acknowledge Scott Newsham's contributions and visions while he held the executive secretarial position
4. Encourage the states to list and harmonize AIS lists and post on Task Force website.

MAP Priorities

Julie told Jonathan that we can continue with our current priorities, or we can adjust our priorities. Implementing recommendations identified in the ELI report was suggested as a potential priority. Julie mentioned that the state AIS lists could be worked on and that the Panel could post the lists on the MAP website. The Panel could also perform smaller tasks that would make measurable progress. Jonathan would like for the Panel to have a little more homework between meetings.

DAY 2

Panel Budget and Small Grants Competition – Julie Slacum, US FWS

There is \$14,264 of carry over funding from 2007 that was allocated to the two top ranked projects of the recent RFP. We will be getting our 2008 funds of \$50K this year. We currently have \$19,914 now which will fund part of the second project and will be used to fund several other projects from the RFP. We need to figure out how to spend the extra \$19,914 today.

Jonathan suggested partially funding some projects. Julie provided a brief synopsis of the 2008 MAP RFP and ranking results. There was approximately \$39K available to fund projects and MAP received 9 proposals. She reviewed the criteria and the 9 different proposal titles.

Someone asked when the money had to be spent by. Julie said by the end of July. Also, someone asked whether people would be asked to leave the room if they are related to a proposal. Jonathan didn't feel that was necessary since the ranking is complete. Each proposal was summarized for the panel members. For additional information on each proposal, contact MAP Coordinator, Julie Slacum, USFWS.

The following proposals were submitted to the 2008 MAP RFP (not listed in ranking order):

1. Development of a Sustainable AIS Trainer Workshop
2. Tracking Invasive Species in PA
3. Aerial GPS Census of Phragmites in VA
4. The effects of water temperature and salinity on veined rapa whelk
5. Invasiveness of Fish Species and Invasibility of Mid-Atlantic Drainages: Predicting Future Non-indigenous Invaders
6. Publication and Dissemination of AIS Prevention Literature in PA
7. MD DNR Invasive Species Matrix Team Public Outreach Project
8. Cooks Creek Invasive Species Survey
9. Eradication of Water Chestnut on Delmont Lake

The Panel discussed the ranking results and each proposals. A decision regarding funding will be made by June 16th.

Presentation on Blue Catfish – Bob Greenlee, Virginia Department of Game and Inland Fisheries

Blue catfish have been introduced on the eastern shore of Virginia and have migrated to all major tidal tributaries of the Bay. They were introduced to enhance the fisheries and recreational industries. Low frequency electrofishing is used to perform monitoring studies. The electrofishing averages 5000 fish caught per hour on the Rappahannock. Five of the 10 most common fish sampled in VA were non-native in the late 1990's.

When non-native catfish are introduced to a system, it depletes the variety of natural, native fish species. The food habits of the blue catfish are largely unknown except that they prefer large schooling/foraging fish when available and will also eat freshwater mussels. They sometimes display an unusual food targeting behavior such as searching for and ingesting snails, organic materials, etc. On average, 48 mussels were found in the gut with over 100 within transit

throughout the gut system. Since 1980, the catfish have consistently grown in population size but appear to be leveling out in 2006 and on. There is a state-wide regulation to protect fish larger than 32 inches mostly because the health regulation that 0% of catfish over 32 inches should be consumed. There are approximately 30-50,000 fry per reproducing female. Recruitment appears to be density-dependent. Recently, there has been well over 100 fish over 50 lbs. The current state record is 95 lbs caught in the tidal James River.

A current question is whether or not there is evidence that the catfish are affecting blue crab populations. There may be a salinity wedge impacting feeding behavior of the catfish on the crabs but crabs have not been found in the gut of large catfish. There are 1.5 million lbs of commercial harvest of catfish per VMRC data. The PCB load on the smaller fish is below the USDA threshold level but above the EPA threshold level. There is high individual variability as well.

When discussing the ecological impacts of the introduction of blue catfish, it is noted that there is very high bald eagle production in areas where blue catfish exist. Someone questioned whether there is any effect on local water quality due to their consumption of mussels. It is indeterminable. It was asked what happens to the gut contents after they are retrieved. There is a potential for hindsight studies by analyzing, in particular, the mussels found in the gut of the catfish. It was asked what the native weight range of the catfish is and the upper limit is 125 lbs. It is generally agreed that even a large market for the blue catfish would have little to no effect on populations.

Discussion on Ad Hoc Groups vs. Standing Working Groups – *Jonathan McKnight, MD DNR*

Jonathan suggests tabling this item until the next meeting.

Discussion of Draft Environmental Impact Statement (EIS) for the Proposed Introduction of a non-native oyster in the Chesapeake Bay – *Julie Slacum, US FWS*

Julie gave a quick background of the state of oysters in the Bay and summarized eight alternatives of the Oyster Restoration EIS. Alternative 6 will likely be removed as a viable alternative. The draft will likely be distributed in July 2008. During the public comment period, it may be an appropriate time to offer the Panel opinion on the alternatives. The EIS executive committee encourages a MAP discussion and a possible letter of opinion.

Alternatives:

1. Continue current restoration practices of the native oyster
2. Expand native oyster restoration
3. Harvest moratorium
4. Aquaculture with the native oyster
5. Aquaculture with the non-native oyster
6. Introduction of a different non-native oyster than *ariakensis*
7. Introduce *ariakensis* into the Bay
8. Combination of alternatives

It was asked if there was another Virginia Seafood Council triploid aquaculture proposal this year. There is and there will be a decision later this month. It's agreed that VSC's motivation is highly economic but the proposal will provide no new information to contribute to the EIS. There is concern among the scientific and management community that the proposal is implementing the aquaculture alternative in the EIS before a decision on an alternative has been reached. Panel members went through the list of EIS alternatives and discussed which are viable and which are not. Roger Mann stated that Alternative 1 lacks evidence of it actually working in the past. If Alternative 1 is decided against, Alternative 2 should be as well. Alternative 3 may not truly affect the population significantly. Alternative 4 is a quiet but large success story but the problem would be to change the whole regulatory structure to allow aquaculture. MD authorities would need a major legislative change to incorporate this alternative and overcome cultural issues. Alternative 5 is already making money. Alternative 6 will be dropped. Alternative 7 may be removed because there are too many variables involved with the proposed introduction of *C. ariakensis*. Alternative 8 could occur.

In regards to aquaculture, triploid animals are preferred for both the native and non-native oysters. There was a question of whether disease affects the oysters but since the oysters are market ready in a little over a year, it's unlikely to contract disease before its ready for market.

Julie asked if MAP wanted to be involved and share their opinion during the public comment period. The point of the Panel is to address non-native species issues. Jonathan reminded the Panel that our job is to protect the ecosystem and although he is unsure about introducing *ariakensis* into the Bay, he is unconvinced that it would become established. It was asked what Washington state had done with their introduction of the non-native oyster. The ecosystem there widely varies from that of the Chesapeake Bay and is not the best model to identify how the animal would behave in the Bay. It's difficult to look at its native habitat to predict its behavior as well since the native habitat is not pristine and is affected by industrial pollution and years of environmental degradation. The issue lies that you can't reverse the introduction of *ariakensis* in the Bay and it may extirpate the native oyster.

It will come down to a political decision and FWS is taking a precautionary approach. They feel proponents of the introduction should have to prove to the dissenting population that there will be no negative repercussions of an introduction. There have been authorized introductions around the world but not on the scale of what was originally suggested here which was to dump an exponential number of *ariakensis* in the Bay in the hopes they will establish.

It was suggested we draft a letter citing the National Academy of Sciences report and encouraging the implementation of a precautionary approach. It was mentioned that a Science Panel, who will review the sufficiency of the EIS, have not yet seen the Draft EIS and there will likely be red flags raised by the science community. The best timing to weigh in on the EIS is during the public comment period and the question is whether that timing is ideal. Jonathan suggests that we table this decision on whether to weigh in and what we will say until the draft is released. Julie will provide a synopsis to the Panel of the draft EIS when it is made available

Unfinished Business and Dates for Fall 2008 Meeting

Roger Mann stated that the International Council for Exploration of the Seas Non-Native Species Working Group will be meeting in DC in March 2009. There is an ongoing debate on vector regulation, especially ballast water. The International Maritime Organization has loose guidelines for controlling vectors such as ballast. It was suggested that some of the speakers may stay around for a MAP workshop if invited.

Panel members agreed upon September 9th and 10th for the 2008 Fall meeting in Annapolis.