AQUATIC NUISANCE SPECIES TASK FORCE: MINUTES OF THE 2004 FALL MEETING

On November 16–17, 2004, the ANSTF met at the Marriott Crystal Gateway in Arlington, VA. Following the first day of the ANSTF meeting, an award ceremony and reception was held. Then, on the afternoon of November 17, the ANSTF met with chairs of the regional panels.

This document includes the following sections:

- Summary of the two-day ANSTF meeting. The first day included the welcome through the annual report for NOAA. The second day included the annual report for the USDA through the public comment period and meeting wrap-up.
- Summary of the award ceremony and reception.
- Summary of the joint meeting between the ANSTF and chairs of regional panels.
- An acronym list for easy reference.

ANSTF FALL MEETING NOVEMBER 16–17, 2004

During the meeting, ANSTF members voted on several issues. The following list is compiled from the list reviewed at the end of the meeting (page 29), as well as from the presentation summaries:

- If changes to a state ANS management plan are minor, the plan can be presented to the ANSTF for review and not have to be signed by the state governor. The ANSTF voted to determine an exact process for revising such plans and send that process to ANSTF members for review and concurrence.
- The ANSTF voted to fully endorse the Habitattitude™ campaign, as a primary author and funding partner, and encourage regional panels, member agencies, and ex officio members to do likewise.
- The ANSTF conditionally approved the *National Management Plan for the Genus Caulerpa* for seeking public comment pending ANSTF comments received by the end of two weeks (December 3). If there are substantial changes, the plan will probably be distributed to ANSTF members and regional panels again.
- ANSTF members voted on a motion to have Bill Jacobs, TNC, join the Northeast Regional Panel.
- ANSTF members moved to acknowledge the two-page summary adapted from the science fair protocol and send a letter and recommendation to the Intel International Science Fair Program suggesting that Intel include this protocol in its guidance to students and student sponsors.
- The ANSTF voted in favor of approving membership seats on the Gulf of Mexico Regional Panel for the Alabama Department of Conservation and Natural Resources, Freshwater Division, and the Georgia Department of Natural Resources. The ANSTF also voted to include South Carolina in the Gulf of Mexico Regional Panel, as well as North Carolina if it were interested. North Carolina already belongs to the Mid-Atlantic Regional Panel, but membership in two regional panels was deemed acceptable by the ANSTF.
- The ANSTF voted to approve the lists of action items, motions passed, and topics for the spring 2005 ANSTF meeting as shown on page 29.
- The ANSTF voted to hold the next meeting May 24–26, 2005, in Monterey Bay, CA.

For easy reference, an acronym list is included at the end of this document.

Several action items were generated during the ANSTF meeting. The following list is compiled from the list reviewed at the end of the meeting (page 29), as well as from the presentation summaries:

- Approve the May 2004 meeting minutes with one change (mistaken attribution of a comment to Zajicek on p. 76).
- Put deadlines on incomplete action items from the previous ANSTF meeting. Send out draft deadlines via e-mail, and if no replies, make these deadlines final.
- Determine the process for revising state ANS management plans and send that process to ANSTF members.
- Endorse Habitattitude™ using the language offered by Riley ("…to fully endorse the campaign, as a primary author and funding partner of Habitattitude™, and encourage regional panels, member agencies, and ex officio members to do likewise").
- Distribute the draft *National Management Plan for the Genus Caulerpa* to ANSTF members and regional panels for a two-week review prior to release. Comments will be due December 3, 2004.
- Change the name of the Gulf of Mexico Regional Panel to the Gulf and South Atlantic Regional Panel.
- Add Alabama, Georgia, and South Carolina (and North Carolina, if interested) as new members of the Gulf and South Atlantic Regional Panel.
- Add Matt Fleming, Maryland Department of Natural Resources, as the Chesapeake Bay Program's replacement for Leo Dunn on the ANSTF.
- Add Bill Jacobs, TNC, as a new member of the Northeast Regional Panel.
- Distribute Zajicek's letter about the generic risk analysis process.
- Send the brown tree snake bill (HR3479) to ANSTF members. Co-chairs will work with the chair of the BTS working group on implications of this bill.

Welcome, Introductions, and Approval of May 2004 Meeting Minutes—Mamie Parker, Assistant Director, Fisheries and Habitat Conservation, USFWS

Dr. Mamie Parker, USFWS, welcomed members of the ANSTF and guests to the meeting. Parker introduced herself as co-chair of the ANSTF with Tim Keeney, NOAA, who was unable to attend. Members then attended to the following administrative tasks:

- **Changes to the ANSTF**—Dr. Jeffrey Fisher replaced Brooke Zanetell as the representative from the DOS.
- **Changes to the agenda**—The USCG was removed from Wednesday's federal agency annual reports since Commander Kathy Moore was scheduled to provide her ANS update Tuesday.
- **Public comment**—Parker reviewed the structure of the meeting. The audience would have an opportunity to provide input, either after each presentation, if time allowed, or during the public comment period before the close of the meeting. Those wishing to sign up for public comment were to do so at the registration table.
- **Status of the Executive Secretary position**—Everett Wilson, USFWS, was still serving as the Acting Executive Secretary. That position would soon be advertised. Parker hoped that it would be filled within the next 120 days.
- **Approval of the May 26–27, 2004, ANSTF meeting minutes**—The minutes were reviewed and approved by the ANSTF with one revision to page 76.

For easy reference, an acronym list is included at the end of this document.

ANSTF Strategic Plan Implementation—Everett Wilson, USFWS

Acting Executive Secretary Everett Wilson reviewed the following action items from the May 2004 meeting (included in the registration packet with notes regarding their status):

- **Research Committee**—Dorn Carlson, NOAA, was chosen as chairperson for the Research Committee. A semiformal meeting was held prior to October 1, but a formal meeting could not be held until notice was given in the Federal Register. Members were still needed so notify Carlson with suggestions.
- **Detection and Monitoring Committee**—The Detection and Monitoring Committee, chaired by Pam Fuller, USGS, had three members, and nominations were still welcome.
- **ANSTF liaisons to committees**—The ANSTF still needed to designate members to serve as liaisons to the committees.
- **Agency ANS budget numbers**—Wilson encouraged agency representatives to provide their ANS budget numbers to him within the next two weeks for the ANSTF report to Congress. He had information from several agencies but still needed information from others.
- **Strategic Plan Interim Working Group**—Several people had volunteered for the Strategic Plan Working Group, but others were needed. Commander Kathy Moore, USCG, and Paul Zajicek, NASAC, were added to the list.
- **Communication, Education, and Outreach Committee**—Joe Starinchak, USFWS, addressed navigability issues associated with the Stop Aquatic Hitchhikers! website.
- **Economic impacts report**—The USFWS had put together the report, although it was not yet finished. The USFWS will have the report reviewed by in-house economics staff before it is released.
- **ANSTF website**—Discussions on the redesign of the website have begun. Once committee memberships were finalized, that information would be added to the website.
- **Regional panels**—To address the first action item for regional panels, a joint meeting of the ANSTF and panel chairs was scheduled for Wednesday afternoon. Wilson had received a couple of specific recommendations/requests to add to the agenda. ANSTF staff had refined and provided standard operating procedures for the regional panels. NEANS has developed a listserv for the regional panels but it has not yet received full participation.
- **Prevention Committee**—The task of sending a letter charging the Prevention Committee with exploring/resolving issues associated with the risk assessment peer-review process was not yet complete.
- **Environmental Law Institute list**—ELI developed a list of what states regulated regarding ANS a few years ago. It was now doing the same review for the federal agencies. Agencies should be prepared to participate in the ELI process.

Dean Wilkinson, NOAA, emphasized the need for participation on the committees, where much of the "real work" was done. These committees need both federal and ex officio membership. In addition, the ANSTF report should reflect not only budgeting information, but also accomplishments by federal agencies and ex officio members regarding ANS.

Linda Windhausen, Lake Champlain Basin Program, asked about the revision process for state ANS management plans. Following discussion, a motion was approved that, if changes to a state ANS management plan were minor, the plan could be presented to the ANSTF for review and not need to be signed by the state governor. The ANSTF voted to determine an exact process for revising such plans and send that process to ANSTF members for review and concurrence. Wilson would write a letter and send it to federal bureau chiefs.

For easy reference, an acronym list is included at the end of this document.

ANSTF Committee Reports

Research Committee—Dorn Carlson, NOAA/Sea Grant

Dorn Carlson, NOAA, reported that action items for the Research Committee had included identifying membership, proposing roles and responsibilities, and holding a kickoff meeting. Five members had been nominated by the ANSTF so far: Gary Jensen, USDA–CSREES; Ernest Delfosse, USDA–ARS; Glen Contreras, USFS; Jeffrey Hill, University of Florida; and Robert Stickney, Texas Sea Grant. Currently, efforts are focused on developing membership in the committee. Participants in an ad-hoc kickoff meeting were charged with ensuring that the appropriate people from their agencies were on the committee (themselves or others). Participants to that meeting drafted roles and responsibilities for the committee, which are still out for review and comment. Drafted roles and responsibilities included updating the research protocol, identifying AIS research needs and priorities, facilitating coordination of AIS research, assisting in AIS research, and accomplishing other duties as assigned. The goal is to have the membership and roles ready for the ANSTF to approve at the May 2005 meeting.

Detection and Monitoring Committee—Pam Fuller, USGS

Pam Fuller, USGS, and Greg Ruiz, SERC, are co-chairs for the Detection and Monitoring Committee. Fuller met with Sharon Gross, USGS, and Ruiz several months ago and came up with a list of about 15 names of potential committee members from various agencies and areas of the country. Several agencies and regional panels still needed representation on the committee. She hoped to finalize membership later this month and hold a meeting within the next several months.

The committee had four charges: developing standard protocols, conducting an inventory of current monitoring programs, developing long-term and annual priorities, and making recommendations to the ANSTF on detection and monitoring priorities. Because her office had funding for developing standard protocols, state and federal protocols for monitoring were being compiled and added to a database, where they could be sorted in various ways. This database will be available online eventually. She plans to meet with experts to have protocols reviewed and the best ones chosen. Fuller added that the Gulf of Mexico Regional Panel was developing a rapid response plan. Part of that plan included compiling lists of monitoring activities in the region. The USGS office in Gainesville, FL, recently launched an alert system that has been very popular. This tool can be used to notify people about new species detections. People can register for alerts about states, taxonomic groups, or species at http://nas.er.usgs.gov/. Windhausen said that she would e-mail Fuller a list of monitoring activities that might be useful.

Prevention Committee—Richard Orr, NISC

Richard Orr, NISC, displayed an organizational chart of the joint ANSTF and NISC Prevention Committee and its five working groups. He also distributed membership lists for the Prevention Committee and working groups. Because prevention requires coordination, combining the NISC Prevention Committee with the ANSTF Prevention Committee had made sense. Both committees focused on increased coordination among federal agencies, reduced redundancy among their efforts, and similar invasive species goals. In addition, both generally use the same federal and nonfederal contacts. Orr reviewed the roles and responsibilities for the Prevention Committee and working groups, as well as their progress in 2004. He was very pleased with the work accomplished in the working groups.

- **Prevention Committee**—Orr is the committee chair. This committee oversees activities of the five working groups to implement the appropriate components of the ANSTF strategic plan and the NISC management plan. It coordinates these activities and products with other working groups overseen by the ANSTF and NISC. It also provides a communication and decision-making link

For easy reference, an acronym list is included at the end of this document.

between the working groups and the ANSTF and NISC proper. The first meeting was held May 4, 2004, and the next one will be held in spring 2005. Between meetings, the committee coordinates activities through e-mail updates.

- **Pathway Working Group**—Sharon Gross, USGS, is the ANSTF liaison, and Penny Kriesch, APHIS, is the chair. This working group identifies high-risk pathways, in addition to ballast water, on which the ANSTF and NISC should focus. This task includes developing a process for facilitating identification of these pathways. The working group also identifies possible actions, based on existing opportunities and constraints, for reducing the risk associated with each of the identified pathways. In addition, the working group identifies high-priority invasive species likely to be introduced unintentionally. The Pathway Working Group held four meetings in 2004, completed a statistically valid study of the assessment tool, created a library of relevant literature, developed a communications website for group members and is developing an expert list for pathway analysis. The working group is now amending the pathways assessment tool and diagrams and creating an inventory of databases and pathway-prioritization focus groups.
- **Risk Analysis Working Group**—Paul Moran, NOAA, serves as the ANSTF liaison, while Anne Sergeant, EPA, is the chair. Roles and responsibilities of the Risk Analysis Working Group include facilitating development and use of science-based risk assessments to determine the risk level associated with intentional and unintentional introductions of potential invasive aquatic species; reviewing and updating, if appropriate, the 1996 *Generic Nonindigenous Aquatic Organisms Risk Analysis Review Process*; providing technical assistance on methodologies and processes proposed for specific NISC/ANSTF-sanctioned risk assessment projects; coordinating and reviewing input from regional panels and ISAC concerning priority invasive species that may require risk assessments; and coordinating, initiating, and overseeing new risk assessments identified as high priority by the NISC/ANSTF. Progress in 2004 included holding two meetings and building on the previous ANSTF Risk Assessment and Risk Management Committee.
- **Aquatic Organisms Screening Working Group**—Pam Thibodeaux, USFWS, is both the chair and ANSTF liaison. This committee is responsible for developing a screening process or processes to address intentional introduction of nonnative aquatic species. One meeting was held, and a workshop for developing a screening process is planned.
- **Propagative Plant Screening Working Group**—Craig Regelbrugge, ANLA, is the ANSTF liaison, while William Thomas, APHIS, serves as working group chair. This group's role is to develop a screening process or processes to address the intentional introduction of nonnative propagative plant material. The working group held an initial meeting and is working with USDA–APHIS on the regulatory revision of Quarantine 37. There has also been trilateral progress on invasive propagative plant materials through the North American Plant Protection Organization.
- **Hawaiian Islands Screening Working Group**—Earl Campbell, USFWS, is the chair, and Val Chambers, NOAA, is the ANSTF liaison. Although no formal meeting has been held, this group will develop a screening process or processes to address the introduction on nonnative plants and animals into the Hawaiian Islands. Despite no formal meeting, progress is already taking place in Hawaii, so the working group will focus on current gaps in coverage.

Following his update on the working groups, Orr reported that two of the groups will probably present at the next ANSTF meeting. Although screening deals with intentional introduction and pathways deal with unintentional introduction, the working groups may be able to borrow from each other. Hawaii wants to deter introductions from the continental United States. There was talk of a federal quarantine for Hawaii, but the issue is not to a decision point.

For easy reference, an acronym list is included at the end of this document.

Communication, Education and Outreach Committee—Joe Starinchak, USFWS

Joe Starinchak, USFWS, reported on numerous activities of the ANSTF CEO Committee. The Stop Aquatic Hitchhikers! public awareness campaign continues to grow. Website usage has increased by 8% (77,000 to 83,000 hits/month), partner organizations have grown by 36% (96 to 148 formal partners), and e-mail news subscribers have increased by 17% (1,500 to 1,800 subscribers). Through funding from IAFWA, the USFWS is working with a team of contractors to evaluate the effectiveness of the campaign in four pilot states. Each state was first asked to define its ANS of concern and identify the audiences associated with these species. Once all four states identified their available resources, each chose to use the Stop Aquatic Hitchhikers! campaign as its communication vehicle. Following are activities associated with the campaign in the four pilot states:

- Missouri chose to target bait dealers and Lewis & Clark Trail visitors and communities through a variety of outreach techniques to make the issue relevant to audiences and engage them in promoting prevention.
- New Hampshire chose to target recreational boaters and policymakers. Boaters in New Hampshire were surveyed on ANS awareness and prevention actions; they were also provided with ANS materials to raise their awareness. To target policymakers, a planning team has been initiated to develop a New Hampshire ANS management plan and form a coalition of legislators prepared to address state ANS issues.
- South Carolina chose to target recreational boaters and anglers, seafood consumers, and policymakers. Recreational boaters were approached with a baseline survey. Then a subsequent one-year education process included dissemination of existing materials and websites in conjunction with the national Stop Aquatic Hitchhikers! campaign. ANS messages have been incorporated into existing programs that encourage oyster-shell recycling to reach seafood consumers. And a planning team is being formed to develop a South Carolina ANS management plan to target policymakers.
- Arizona targeted policymakers, as well as recreational boaters and anglers. Baseline surveys were given to anglers, and this effort was followed by participation in crayfish tracking and control efforts and a post-project evaluation. A full-time position for ANS coordinator was created, and a planning team was formed to develop an Arizona ANS management plan to target policymakers.

Other committee activities include Habitattitude™. This campaign was unveiled to industry and will soon be unveiled to the public (see the summary of Marshall Meyers' presentation about Habitattitude™ below). Website features are still being developed. This campaign will likely be larger than the Stop Aquatic Hitchhikers! campaign.

The first steps have been initiated to address the ANSTF website, although the design process has not yet been initiated. In the meantime, the ANSTF has been working with information technology staff with the USFWS to regain full capability to update information.

The USFWS is still completing its internal review process of the economic impact report. A one-page overview will be developed in response to a request by the ANSTF co-chairs. The CEO Committee reengineering process is still a viable part of our improvement efforts. The committee is awaiting further direction from ANSTF leadership regarding its strategic planning efforts and how this process can be aligned.

Habitattitude™: The New Public Awareness Campaign—Marshall Meyers, PIJAC

Marshall Meyers, PIJAC, talked about the new public awareness campaign, Habitattitude™ and encouraged people to look at a display set up in the meeting room. Pets are an important part of our culture. More than 13 million households maintain aquaria, and water gardens are rapidly increasing in

For easy reference, an acronym list is included at the end of this document.

popularity, resulting in an industry with independent retail sales around $1.4 billion. Unfortunately, owners sometimes dispose of unwanted aquatic plants or fish inappropriately, or pets inadvertently escape. These situations usually result from lack of knowledge. Release of nonnative plants and fish can cause negative environmental, economic, and human health impacts and translates into increased scrutiny and a potential for increased regulation.

Habitattitude™, a public awareness campaign, is the product of a unique partnership between industry, academia, and government. Historically, the relationship among these partners has been adversarial. However, under the leadership of the ANSTF, the advisory panel for this campaign includes PIJAC, USFWS, NOAA/National Sea Grant College Program. These entities, along with state and local organizations for pet owners, are partners in the public awareness campaign. The focus of Habitattitude™ is to raise public awareness, engage people, and promote unified environmental messages with corresponding beneficial actions to targeted audiences. Habitattitude™ uses educational and public outreach programs that explain the risks and ways to minimize them, provides user-friendly identification aids, and guides audiences on what to do. Partners of Habitattitude™ have access to campaign materials, links to the official website (www.habitattitude.net), a brand and brand standards manual, guidelines providing alternatives to release, displays and banners, in-store partnership certificates, a CD with camera-ready artwork, industry-sponsored products, Microsoft® PowerPoint presentations, and evaluation surveys.

Although the effort is in an early phase, industry promotion for Habitattitude™ includes ads in aquarium magazines and displays at trade and pet consumer shows. Care sheets, advertisements on 20 million fish bags and 4 million fish boxes, and starter kits for independent retailers and nurseries will appear in more than 2,000 retail stores. There was a "kickoff" launching of the campaign in Las Vegas. Industry activities include company newsletters, cover stories, editorials, articles, aquarium product labels, trade shows, Florida's "Dive-In" campaign (aimed at school-age children), and the Pennsylvania farm show.

The crucial next step is to develop as many partnerships with industry, agencies, academia, societies, and consumers as possible. Meyers reiterated the importance of this campaign and the willingness of consumer groups and others to help. Habitattitude™ is currently endorsed by the WRP, and several members of NEANS and the Gulf states are joining.

Evaluation of the Habitattitude™ campaign was discussed in more depth after the presentation. Several surveys have already been conducted. Despite two-year funding from Sea Grant, the campaign is not just a two-year effort. Evaluations will be conducted throughout the campaign on many different levels.

ANSTF members also discussed whether an endorsement of Habitattitude™ was desirable or necessary. At the end of the discussion, ANSTF members voted to fully endorse the campaign, as a primary author and funding partner of Habitattitude™, and encourage regional panels, member agencies, and ex officio members to do likewise.

Control and Management Working Group Activities

Submission of the National Caulerpa Control and Management Plan—David Bergendorf, USFWS

David Bergendorf, USFWS, delivered a presentation on the draft *National Management Plan for the Genus Caulerpa*. Likely dumped from an aquarium, *Caulerpa taxifolia* was first found in the Mediterranean Sea in 1984. By June 2000, an established colony of *C. taxifolia* was discovered in two sites of southern California. Subsequent findings resulted in the formation of an action team to coordinate eradication of the infestations. Eradication methods included pumping liquid chlorine

For easy reference, an acronym list is included at the end of this document.

bleach under tarps covering larger colonies and placing plugs or pucks of solid chlorine under tarps covering smaller colonies. These methods appeared to work, although *Caulerpa* has not officially been declared eradicated since the eradication protocol requires a three-year period of no new finds before success can be declared.

In 2001, Sandra Keppner, USFWS, presented a *C. taxifolia* action plan to the ANSTF. That same year, *C. brachypus* was discovered off the coast of Florida. In 2002, Keppner presented a draft *C. taxifolia* prevention program to the ANSTF, and the ANSTF authorized the expansion of *Caulerpa* management planning to include "all invasive species of *Caulerpa*." In 2003, the Caulerpa Working Group was formed and tasked with expanding the prevention plan for *C. taxifolia* to address other invasive *Caulerpa* species and creating a NMP for the genus *Caulerpa*. Creation of the NMP included working with many experts, including those from Europe, and reviewing relevant literature. The draft NMP includes goals, objectives, and prioritized action items. Goals include prevention, early detection, eradication, long-term management, education and outreach, research, and adaptive management.

The plan was written for the *Caulerpa* genus rather than for individual species, as directed by the ANSTF. Twenty-eight species have been recorded in the United States, but not all may be invasive. It is difficult to determine the number of native or potentially invasive species in the United States due to inadequate research on individual species of *Caulerpa*. On the other hand, the genus is very distinctive and easy to identify. *Caulerpa* species have a creeping rhizome with photosynthetic branches and rhizoids (root-like structures) that allow it to derive nutrients from sediments, which is unusual for algae. Invasive characteristics include a high growth rate, clonal growth form, and nutrient uptake from sediments. *Caulerpa* species contain toxic compounds, which only tropical fish and slug species appear to be capable of metabolizing. This means that *Caulerpa* species, which are capable of surviving in temperate waters, will not be consumed. For example, studies using Pacific Ocean temperate water species have found that the toxic compound caulerpenyne inhibits the growth of microorganisms and is toxic to the larval and adult stages of potential herbivores.

The next step is to have the ANSTF approve the draft plan, allowing the Caulerpa Working Group to put a notice in the Federal Register, obtain public comment, finalize the plan, and begin implementation. Members of the ANSTF noted that some agencies would like to view the document electronically and asked whether the plan could be sent out, with comments due from agencies around December 3, 2004. This approach would allow the ANSTF to compile the comments and provide a more meaningful review. Bergendorf agreed, providing that the document was not released to the public at this time. He asked the ANSTF to clarify whether the draft plan was being approved at this time. The ANSTF stated that the draft NMP is conditionally approved and will be considered approved after the Executive Secretary to the ANSTF addresses comments provided by the ANSTF and appropriate revisions are made to the draft NMP.

Update on the Asian Carp Management and Control Plan—Greg Conover, USFWS

Greg Conover, USFWS, delivered a presentation on the Asian carp management and control plan being developed by the ACWG. Although Conover had hoped to present a draft of that plan at this meeting, the complexity of the issues and different interests of the multiple stakeholders require more time if an effective management and control plan is to be developed.

Accomplishments of the ACWG included May and August meetings, as well as a presentation about the plan at the annual meeting of the American Fisheries Society (August 22–26, 2004). During the May ACWG meeting, a draft framework for the management and control plan was circulated. Participants were divided into breakout groups to discuss strategies and initiatives and to develop action plans and timetables for accomplishing the goals and objectives of the management and control

For easy reference, an acronym list is included at the end of this document.

plan. Discussion focused on prevention, detection and monitoring, population control and abatement, and research and information exchange.

A smaller, more focused ACWG meeting was held in August to review ANSTF expectations and the draft framework of the management and control plan; to provide an overview of the May ACWG breakout sessions; and to identify components of the plan, writing teams, processes, and timelines necessary for completion. During this meeting, draft goals and objectives were critically reviewed, including in-depth conversations regarding the wording and intent of each. The initial three goals and seven objectives were expanded to six goals and sixteen objectives, which are currently being reviewed by the ACWG.

Conover emphasized the uniqueness of this plan. There are strong advocates for and against these species, and a different set of complex issues exists for each of the four species. Aquaculture representatives on the ACWG have proposed new goals and objectives that are being reviewed by the complete ACWG. Conover is investing a considerable amount of up-front time into a collaborative process to develop goals and objectives that are agreeable to everyone. The goals and objectives will be the foundation of a successful plan. All stakeholders must support the goals and objectives of the management and control plan for implementation to be a success. The ACWG's vision for the plan is to include action plans for areas of consensus and identify issues needing further collaboration (such as transportation of live fish) to allow for a more rapid implementation of action plans in areas with consensus. It is also the ACWG's intention to create a living document: new action plans can be added as consensus is reached, and the plan can be modified as technologies and circumstances change.

To complete this management and control plan, the ACWG must finalize the goals and objectives of the plan; link the proceedings to the finalized goals and objectives; finalize writing teams; write the various sections; compile the plan into a first draft; circulate the draft to ACWG, MRBP, and Mississippi Interstate Cooperative Resource Association members for review and comment; address any comments; and provide a draft plan to the ANSTF. He asked that ANSTF members continue to be supportive and patient regarding this plan, given its unique nature.

Barrier Feasibility Study—Michael Hoff, USFWS

Michael Hoff, USFWS, delivered a presentation on the biological and technical aspects of the feasibility study to limit the invasion of Asian carp into the upper Mississippi River Basin. The study was completed in March by the consulting firm FISHPRO and funded by the Minnesota Department of Natural Resources, Wisconsin Department of Natural Resources, and USFWS.

Four species of carp (bighead, silver, black and grass) are collectively referred to as Asian carp. Of these four species, all but the black carp are self-sustaining in the Mississippi River Basin. Establishment of one or more species of Asian carp will probably disrupt the food web, reduce the abundance of sport and commercial fish, reduce the abundance of imperiled mollusks, and result in a loss of biodiversity.

Recommendations from the study included strategies relating to education; research and monitoring; regulation and enforcement; management, including development and implementation of a national management and control plan; and completion of ecological risk assessments. Another study recommendation is to install barriers and deterrents either in or downstream of a lock and dam. Of the 16 types of barriers and deterrents evaluated, the hybrid bubble-acoustic system showed the greatest potential for effectiveness, so FISHPRO recommended that system as the provisional, preferred barrier alternative. This system combines the ability of sound frequency selection available in a sound projector array with the concentrated sound field-bubble curtain of a bioacoustic fish fence. The recommended sites for the barriers included locks and dams 8, 11, 14, 15, and 19. The cost estimate for integrated management is $10 to $15 million per site. This estimate includes installation of the

For easy reference, an acronym list is included at the end of this document.

recommended barrier at a lock entrance ($1.2–$1.6 million) and below the spillway ($8.5–10.5 million), installation of a habitat-attracting staging area downstream of the spillway ($0.5–$3.0 million), and diversion and harvesting of Asian carp for population control downstream of the spillway to minimize risk of Asian carp passing through the barriers (cost unknown).

Next steps include development of audiograms in the laboratory for bighead and silver carp and integration and testing of audiogram result on paddlefish, lake sturgeon, and bighead and silver carp. Final engineering plans, work plans, permit compliance, other agency requirements, timelines, and budgets must be developed. Because the ACOE will be the lead agency, budget acquisition options include the 1135 cost-share program and full, direct federal appropriation. ANSTF members expressed concern over the ability to acquire funding for three sites.

U.S. Coast Guard ANS Program Update—Kathy Moore, USCG

Commander Kathy Moore, USCG, delivered an update on Coast Guard activities. Moore displayed the poster presented at the Ireland Invasive Species conference that included the new "Carry Cargo, Not Critters" logo. Other new outreach materials include an updated program brochure and ballast water conversion card that can be worn behind a name badge.

Ballast water regulatory projects include the publishing of two new rules in the Federal Register, penalties (implemented August 2004) and mandatory BWM (implemented September 2004). The notice of intent for a third rule, ballast water discharge standards, was published September 26, 2003. Completion of an EIS to meet NEPA requirements will be an important part of this project.

The national mandatory BWM program now includes three options for ballast water management: exchange, retain, or treat with an approved system. Compliance inspections will be done during COI and PSC inspections and boardings. If other areas of the vessel appear to be out of compliance, the inspection may be expanded to include comparison of records and logs and sampling of exchanged BW. If the vessel is out of compliance, a ticket may be issued and must be paid at that time. This approach links compliance and enforcement, reducing the burden on enforcement officers. A new screening tool, BEAM, is under development. BEAM is a hand-held device capable of testing colored, dissolved organic matter fluorescence.

A new incentive program, the Shipboard Treatment Evaluation Program, was announced in January 2004, and the first application was received April 2004. Each application receives a NEPA and ESA review and, if accepted, will result in a vessel that is permitted to use installed BWM equipment in lieu of the current requirements. The ETV program is working on protocols and elements of actual test design. Nothing has been published or finalized yet. The facility in Key West, FL, is the most mature facility of its kind and capable of plugging into a test rig and monitoring almost everything.

News on the international front included a meeting in October 2004 to complete guidelines on BWM systems and approval of active substances. Moore hopes that the guidelines will be approved next summer.

Critical events include FSI 13 (survey and certification of guidelines), BLG 9 (guideline development), IBBWG 4 (guideline development), and MEPC 53 (review of the convention and guideline adoption). Technical challenges include verifying mid-ocean BW exchange, establishing a BW discharge standard, evaluating BWM systems, and verifying compliance for a BW discharge standard.

The future of the USCG ANS program includes domestic rulemakings, an international convention, research and development to support enforcement and evaluate treatment systems, and coordination with other stakeholders to develop and implement ANS prevention and control strategies.

For easy reference, an acronym list is included at the end of this document.

Participation needed by the ANSTF includes technical workshops on the environmental consequences of alternative concentrations of a BW discharge standard and BWM strategies for reducing the risk of ANS introductions from NOBOBs. When asked who had filed the petition on regulations for NOBOBs, Moore replied that seven of the eight state attorneys general for the Great Lakes states had done so. Moore also noted that the comment period for approving BWM systems closes December 3, 2004.

Invasive Terrestrial Animals and Pathogens, the New Taxonomically Based Invasive Species Technical Committee—Bill Gregg, USGS

Bill Gregg, USGS, delivered an update on the new taxonomically based ITAP committee. He also distributed an ITAP fact sheet to meeting participants. ITAP is a strictly federal committee focused on filling the taxonomic gaps of many invasive terrestrial vertebrates and species that spread disease but haven't had a focal point in the federal government. In 2003, the presence of the cactus moth (*Cactoblastis cactorum*) increased the need for such a committee, and the ITAP Steering Committee was established. In 2004, 15 agencies attended a planning retreat where they developed a mission statement, drafted an operational charter and organizational structure, elected officers, established priorities, and developed an MOU. Pending signatures on the MOU, participants include the USDA, DOI, DHS, DOD, DOS, DOT, EPA, HHS, NASA, and SI. Benefits of ITAP include seamless interagency coordination (especially in the earliest stages of invasion), increased information exchange, increased research and technical assistance, increased public awareness and education, reduced duplication of efforts, reduced response time, and support for interagency initiatives on priority invaders.

ITAP includes the following eight subcommittees, some of which have started meeting although the MOU isn't yet in place:

- Invertebrates—chaired by ARS
- Vertebrates—still being developed and may overlap with ANS
- Animal Diseases—not fully constituted
- Plant Pathogens—chaired by ARS
- International
- Systematics—chaired by ARS and currently putting together a white paper on collections
- Protocols—responsible for screening and monitoring
- Cross-Cutting Issues

The International Subcommittee is fairly active and has a charter. Its areas of interest include transportation of biocontrol agents and applications of biosensor technologies in screening and early detection.

Gregg shared some history about the cactus moth, an emerging pest. This moth is a pest of the prickly pear genus (*Opuntia*), icon of the North American desert. The cactus moth, indigenous to Argentina, was introduced in Australia to control the widespread invasion of prickly pear. The moth was successful but was also spread to other old world areas. In the 1950s, it moved to the Caribbean, where it began island hopping. It arrived in Florida in 1989. Its most recent detection (July 2004) was on Dauphin Island, Alabama.

Interagency accomplishments in 2004 include the Cactus Moth Coordinating Group, economic analysis (APHIS) and impact assessment (USGS), expanded research and a research plan (ARS, APHIS), initiation of *Opuntia* mapping and habitat modeling (CONABIO), and the cactus moth

For easy reference, an acronym list is included at the end of this document.

campaign in Mexico. Through continuous interagency, bilateral, and international collaboration, future plans include expansion of *Opuntia* mapping, detection and monitoring of cactus moth on public lands along the invasion front, development of an online reporting system and database, a public awareness campaign, and a validation experiment.

Federal Interagency Committee for the Management of Noxious and Exotic Weeds—Al Tasker, USDA-APHIS

On behalf of the FICMNEW co-chairs, Gina Ramos, BLM, and Mike Ielmini, USFS, Al Tasker, APHIS, updated ANSTF members on the FICMNEW 2005–2006 work plan.

FICMNEW was established in 1994 through an interagency MOU. It is recognized in EO 13112 as a resource for implementation of the NISC regarding invasive plants. The biennial planning conference was held in November 2004, with the new work plan covering five major program areas: networking and coordination, FICMNEW function, education and outreach, policy and procedure, and early detection and monitoring. Tasker discussed these program areas in more detail:

- FICMNEW wants to continue to network by cooperating with allied organizations through existing relationships and new opportunities, including five new projects and presentations with nontraditional contacts.
- To enhance its function, FICMNEW will work with others to identify key issues that need to be researched and addressed and write a white paper on the key national and global weed needs over the two-year work plan period. Also, each member agency will report annually on its weed management activities to contribute to the development of a FICMNEW report. Finally, FICMNEW will review its MOU and define the current and future roles of FICMNEW in light of the EO and other, more recent invasive plant management priorities.
- FICMNEW plans to expand in the area of education and outreach by publishing the 2nd edition of *Invasive Plants: Changing the Landscape of America*, also known as the weed factbook. The primary author, Randy Westbrook, USGS, will provide a scope of work by December, and the revision will be complete by the end of the two-year work plan period. FICMNEW will also develop a similar biological control factbook. Finally, FICMNEW will explore the potential for an eastern weed clearinghouse similar to the current one in the western United States.
- The EDRR plan was developed following a workshop held in 2000. FICMNEW is beginning to see the need for a follow-up workshop to evaluate progress made and activities needed to fill gaps in the current plan. A task group will be established to coordinate all aspects of the conference, including objectives, outcomes, and logistics. FICMNEW is also relying on volunteer networks and will consider the possible need for a national volunteer support coordinator for EDRR.

Regarding policies and procedures, Tasker added that the participants' packet included a Federal Register notice from APHIS regarding petitions to revise the regulation of *Caulerpa taxifolia*. The petitions have raised policy questions about how APHIS could be working with other federal agencies for regulating pathways that APHIS has not traditionally addressed.

Tasker additionally mentioned the recent passage of S144 (Noxious Weed Control Act of 2004). Originally, that act excluded aquatic and agricultural plants; however, those restrictions were removed from the passed version. The law now authorizes $15 million per year for weed management, but it is not yet funded.

For easy reference, an acronym list is included at the end of this document.

Invasive Species Advisory Committee and National Invasive Species Management Plan Revision—Lori Williams, NISC

Lori Williams, NISC, delivered a presentation covering two agenda items, NISC activities and national invasive species management plan revision. NISC was established to ensure that federal agency activities related to invasive species are coordinated, complementary, cost-effective, and effective. The organizational structure of NISC includes three co-chairs: the Secretaries of Agriculture, Commerce, and the Interior. Twelve policy liaisons (one per department or agency) and 40 agency representatives meet monthly. NISC has a number of federal working groups and subcommittees and the nonfederal ISAC. FACA-chartered task teams and subcommittees for NISC and ISAC address issues related to the budget, communications and outreach, control and management, early detection and rapid response, information management, international cooperation, leadership and coordination, research, and prevention. Prevention issues are addressed in a joint committee with the ANSTF.

The management plan, titled *Meeting the Invasive Species Challenge: National Invasive Species Management Plan*, was approved January 2001. Development of the initial plan included input from federal and nonfederal working groups, extensive internal and external comment, formal public listening sessions, and a public comment period. The plan contains 57 actions items that call for about 170 identifiable actions, 128 of which are completed, established, or in progress. NISC members have a wide range of responsibilities for these actions, including leadership responsibilities, significant roles, and coordination perspectives.

Several key areas are addressed in the plan, and actions recommended. To improve coordination and leadership, the management plan includes developing a cross-cut budget for invasive species programs to highlight cooperative efforts, developing an oversight mechanism, and preparing annual progress reports on plan implementation. As the first line of defense and most cost-effective approach, the plan encourages prevention through developing and testing a risk-assessment screening system, identifying key pathways, ranking key pathways by which invasive species move, and developing mechanisms to reduce movement.

When revising the management plan, NISC will review the goals and set new priorities. After input from NISC, ISAC, GAO, and OMB, it was determined that the current plan should be retained as the core document and complement the ANSTF strategic plan. The revised plan should include a discussion and clarification of the federal definition of "invasive species" and be more prioritized, streamlined, and focused. The plan should be linked to the invasive species performance-based cross-cut budget. It should include measurable goals and set out a "game plan" for action over the next three years. The new plan will emphasize leadership and coordination issues, stress economic impact data, and highlight outreach efforts. Within the next two months, NISC and ISAC will complete a thorough analysis of the existing plan. Within two months, a small steering/writing team, composed of federal members, will be formed to develop the first revision, identifying the structure and overall mission statement. Finally, a broader review team will be developed; this team will include one representative from all key NISC agencies, at least three ISAC members, NISC/ISAC subcommittee chairs, and ANSTF representatives. NISC and the OMB will review, edit, and approve the revised plan following a 60-day public comment period. Williams added that NISC will be sending an analysis of the current status of progress under the plan and encouraged people to update it.

Other NISC activities include the development of EDRR guidelines to assist in establishing or evaluating EDRR systems. The guidelines provide a list of "attributes" of EDRR systems. NISC will be updating these guidelines as understanding and experience increase. A new program promoted by NISC is the invasive species of the month, which began in May 2004 and has featured six species to date. Some states are using this program as a model for their own state actions.

For easy reference, an acronym list is included at the end of this document.

Before the next ANSTF meeting, NISC will finalize the five-year review mandated in EO 13112, which includes an evaluation and report to OMB. The review is undergoing the first round of internal reviews; once completed, it will be submitted to NISC for final approval. Williams was asked whether the EO should be reviewed at the same time as the plan. She responded that members should look at the EO review before the management plan is to be updated: NISC doesn't want to keep agencies that are acting on the plan from moving forward. NISC will also be drafting NEPA guidelines. FY 05 will also see a continued emphasis on EDRR and prevention and an analysis of invasive species laws and regulations.

ANSTF members discussed several other issues following William's update:

- When asked about the role of ISAC during the spring meeting and whether any consideration had been given to concurrent or overlapping meetings with the ANSTF, Williams replied that concurrent meetings are a good suggestion and will be explored.
- ANSTF members expressed concern about the need for common definitions and a more sophisticated message, clarification about the role NISC could play, and interaction of other groups with NISC to deliver this new message. They expressed interest in coordinating with NISC to develop definitions and provide a united front to the public. Williams replied that NISC will look to the ANSTF for leadership and that revision of this section of the management plan is very important. She added that not all groups will agree on definitions but implementation will probably not be affected unless definitions are legislated into law. She wants to keep the emphasis on the impacts, not on definitions. Others noted that, although definitions may not affect implementation, they do affect how the public views ANS activities. If the ANSTF doesn't clearly define what agencies and others are doing, the press will.

Participants asked how the ANSTF could be involved in the revision of the management plan: in the past, the ANSTF has commented as a whole. It was suggested that the ANSTF designate someone to work through the group to ensure that the plan is consistent with the ANSTF strategic plan. Other members suggested that this was a good opportunity to engage regional panel members in the discussion.

Williams said that she will provide Bill Wallace, APHIS, with a copy of the revision process after she has incorporated revisions suggested by the USFWS.

DOD Funding for Brown Tree Snake Activities—Pete Egan, DOD

Pete Egan, DOD, provided updates about activities of the BTS Coordinating Group and the two-day meeting held the previous week in Guam. Below is information he shared about the terrestrial, arboreal brown tree snake (*Boiga irregularis*) and the BTSCP.

The BTS Coordinating Group is an interagency working group, with Dr. Earl Campbell, USFWS, taking the lead in steering the group. The group includes both federal and local government agencies such as the DOI, USDA, DOD, and DOT, as well as governments of the Commonwealth of the Northern Marianas, Hawaii, and Guam.

- Within the last year, the Office of Insular Affairs had funded a blue ribbon panel to review the original 1996 plan. Review of the plan indicates that it is more of a list than a plan; however, most items have been accomplished or started.
- The Federal Aviation Administration is working to establish a permanent barrier at Won Pot International Airport in Guam.
- Progress in research has been positive. It is now known that the brown tree snake uses smell and vision to seize its prey. It will attack a live mouse but ignore decoys with the appropriate smell. It

For easy reference, an acronym list is included at the end of this document.

is also known that small snakes do not attack mice. There was no such research program in 1993 when the BTSCP was established.

- Cooperative efforts accomplished through the plan have been fairly effective. Initially, about one live snake was reported found in Hawaii each year, but there have been none found in almost a decade.
- Methods used to trap snakes include trapping, fence line hand captures, and canine searches of cargo.
- On October 30, 2004, HR3479 was signed by President Bush "to provide for the control and eradication of the brown tree snake on the island of Guam and the prevention of the introduction of the brown tree snake to other areas of the United States, and for other purposes," becoming PL 108-384. The Brown Tree Snake Control and Eradication Act of 2004 also authorizes funding and gives the DOI and USDA the authority to request funds (up to a limit of about $19 million a year). Because the FY 06 budget has been submitted to the president, it will probably be FY 07 before money can be requested, unless Congress intervenes. It was encouraging that the bill was introduced last fall and had already passed.
- Part of the meeting was spent analyzing the current draft of the plan and deciding who would write which sections. A preliminary draft should be finished by the end of February, and a report should be released. Campbell is leading the effort, and a meeting has been scheduled the week of April 4, 2005, in Honolulu, HI.
- Air Force and Navy programs in Guam received some additional funding in the FY 05 Defense Appropriations Bill to cover increased costs. USDA Wildlife Services will be able to provide complete interdiction to support this coming year.

Update on USFWS Injurious Wildlife Actions for Asian Carp—Kari Duncan, USFWS

Kari Duncan, USFWS, provided an update on injurious wildlife evaluations, specifically for Asian carp species. An injurious wildlife species is any species, including offspring and eggs, that is found to be injurious to the health and welfare of human beings; the interests of forestry, agriculture, and horticulture; or the welfare and survival of wildlife or wildlife resources in the United States. Plants and insects are not considered injurious wildlife species. Factors that contribute to injuriousness include the species' ability to escape, survive, and spread and their impacts on wildlife resources and/or ecosystems, threatened and endangered species and their habitats, and possible wildlife or habitat damages that would occur because of measures used to control the injurious species. Factors that reduce injuriousness include the ability to prevent escape and establishment, eradicate the species, manage established populations, prevent or control the spread of pathogens, and rehabilitate disturbed ecosystems. Sterility and triploidy may also reduce the injuriousness of a species.

If a species is listed as injurious, import and interstate transport are prohibited. Exceptions include the transport of dead animals, unless specifically stated (salmonids); transport by federal agencies, without a permit, for their own use; or transport with a permit for zoological, educational, medical, or scientific purposes. Even though federal agencies can transport injurious wildlife species without a permit, communication about such transport is important.

Black carp (*Mylopharyngodon piceus*) was petitioned for listing in February 2000, and the proposed rule was published in July 2002 and reopened for comment July 2003. Next steps include reviewing comments and developing an environmental assessment and economic analysis. Bighead carp (*Hypophthalmichthys nobilis*) and silver carp (*Hypophthalmichthys molitrix*) were petitioned for listing by 25 members of Congress in October 2002. The USGS risk assessment was initiated in 2003 and needs to be peer reviewed. The Federal Register published a notice of inquiry for scientific and economic information regarding silver carp in July 2003 and for bighead carp in September 2003.

For easy reference, an acronym list is included at the end of this document.

Next steps include reviewing comments and developing both a draft environmental assessment and economic analysis. Intrastate transport of live and dead animals will not be impacted for either of these species.

ANSTF members asked whether fish could be prevented from getting into interjurisdictional water. Duncan did not believe so. ANSTF members and Duncan also commented on the injurious nature of diploid and triploid black carp, noting specifically that triploid species can live for 10 years and affect mollusks.

Federal Agency Annual Reports

The annual reports for the USFWS and NOAA were presented on November 16, while the rest were presented the morning of November 17.

U.S. Fish and Wildlife Service—Kari Duncan, USFWS

Kari Duncan, Branch of Invasive Species, presented the annual report on invasive species activities for the USFWS. Three major areas received funding this year (discussed below): prevention, detection and monitoring, and control and management. In addition, there were several projects that fell under "other areas."

- A $1 million budget increase for prevention activities benefited HACCP analysis ($110,000), pathways evaluation ($20,000), training and identification ($10,000), the zebra mussel (*Dreissena polymorpha*) monitoring network ($30,000), zebra mussel rapid response plan ($30,000), California boater survey ($20,000), and risk assessment ($85,000). Other prevention projects funded in 2004 include the Ballast Water Demonstration Program ($250,000), 100th Meridian Initiative ($375,000), New York State Canal Prevention Program ($50,000), and Alaska ballast water ($125,000).
- Detection and monitoring activities included goby/carp monitoring ($77,000), ecological surveys ($250,000), and information system enhancement ($55,000).
- Funded control and management activities included brown tree snake (*Boiga irregularis*) ($175,000), ruffe (*Gymnocephalus cernuus*) ($212,000), mitten crab (Eriocheir sinensis) ($95,000), New Zealand mudsnail (*Potamopyrgus antipodarum*) ($70,000), Asian carp ($352,000), native mussel protection ($35,000), giant salvinia (*Salvinia molesta*) ($30,000), *Caulerpa* ($25,000), *Cryptocoryne* ($20,000), rapid response assessment ($10,000, most of which went to Maryland and Virginia to assist in snakehead [*Channa argus*] sampling), and zebra mussel ($20,000 in Virginia).

Other activities include public awareness campaigns ($135,000); conference support ($5,000); and Washington Office, regional office, and field personnel support and partnering opportunities ($1,422,389). Part of the $1 million budget increase was also applied to implementation of state, interstate, and tribal management plans ($1,075,000) and support of regional panels ($300,000).

National Oceanic and Atmospheric Administration—Dean Wilkinson, NOAA/NISC Liaison

Dean Wilkinson, NOAA, reported on elements of NOAA programs and invasive species activities that take place in the context of other NOAA programs. He also distributed copies of the 2004 annual report to the ANSTF. Typically, three appropriations areas have specific references to aquatic invasives: the Ballast Water Demonstration Program, the National Sea Grant competition, and implementation of the NANPCA. In FY 04, $3.525 million dollars were allocated to the Ballast Water Demonstration Program, with $1.7 million earmarked for a single project. The National Sea Grant

For easy reference, an acronym list is included at the end of this document.

competition had $2.981 in funding in FY 04. Grants for research and education are on a two-year cycle, and FY 04 was the second year in the previous cycle. One of the projects funded was Habitattitude™, which Marshall Meyers, PIJAC, discussed earlier. Individual Sea Grant institutions have also funded projects from their core funds. In a typical year, they fund another $700,000 to $800,000 in projects. For a number of years, NOAA received $800,000 for implementation of the act. These funds were used for projects such as *Caulerpa* eradication in California and development of the Hawaii early warning system. This appropriation has also been used to help support the ANSTF. In FY 04, NOAA received zero funding for implementation of the NANPCA, and no projects were sponsored.

In FY 04, there were three earmarks: $590,000 for Eurasian water milfoil (*Myriophyllum spicatum*) in New Hampshire, $250,000 for removal of invasive algal species on Hawaiian coral reefs, and $1.3 million to be divided evenly between the State of Alaska and the Pacific States Marine Fisheries Commission. NOAA has encouraged that these entities use these funds for items that either the ANSTF or NOAA has identified as priorities, such as implementing state management plans or ecological surveys to establish baselines for nonnative species occurrence in Alaska.

NOAA's Great Lakes Laboratory has been actively engaged in research on invasive species for several years. Much of this environmental research laboratory's work has focused on determining the ecological impacts of various invasive species, including the zebra mussel (*Dreissena polymorpha*). GLERL has also been involved in ballast water research and is the lead agency on the NOBOB project. In FY 04, GLERL spent about $2 million on invasive species activities. These expenditures are from GLERL's base funding rather than from invasive species-specific appropriations.

NOAA's coral reef program has sponsored projects addressing reef fouling by nonnative algae. This program has been funding control efforts at a level of $300,000 to $500,000 for several years. The National Ocean Service spent about $1 million in FY 04 to generate information on range, abundance, environmental tolerances, and prey species of the lionfish (*Pterois volitans*) off the East Coast. NOAA Fisheries (also known as the National Marine Fisheries Service) spent $2 million to generate information needed for a full EIS on the proposal to introduce oysters into Chesapeake Bay. Finally, in FY 04, there were 25 different habitat restoration projects with invasive species components. The total cost for the restoration projects was $7 million.

U.S. Department of Agriculture—Bill Wallace, APHIS

Bill Wallace, USDA–APHIS, reported that total USDA spending on ANS for FY 04 was $5.3 million, excluding transfers for emergency programs. This figure was roughly the same as expenditures in FY 03 and projected spending for FY 05. He would provide exact figures to Wilson.

- The ARS spent about $2.6 million for aquatic weed research, including assessing biocontrol agents for aquatic weed management.
- The CSREES provides about $900,000 for land grant institutions and funds. FY 04 funds were directed toward aquatic weed biology and management, marine biodiversity and resistance to exotic species, and aquatic animal health work through the regional aquaculture centers.
- The Natural Resources Conservation Service spent slightly over $800,000 for eradication, suppression, and control of invasive aquatic plants that diminish open water availability of wetlands for wildlife use.
- The USFS is increasingly focused on invasive aquatic organisms associated with habitat disruption. Research in the South has looked at the effect of zebra mussels on native fish and mussels, while research in the Southwest examined the impacts of invasives on native fishes. A major accomplishment by the USFS this year was the recent unveiling of its National Invasive Species Strategy. The document, *National Strategy and Implementation Plan for Invasive Species*

For easy reference, an acronym list is included at the end of this document.

Management, is available at www.fs.fed.us/foresthealth/publications/ and contains 14 key elements. Implementation of the plan will use one of the new tools of the Healthy Forests Initiative: an early warning system to help land managers detect new invasives. The USFS will establish two threat assessment centers, one in the East and one in the West (Oregon).

- On the plant side, APHIS spent $800,000 on *Salvinia* biocontrol and surveys and several site-specific aquatic weed control projects.

  In the Veterinary Services Program, $8.2 million of emergency funds were transferred to APHIS to deal with animal aquatic health problems, including infectious salmon anemia in Maine, spring viremia of carp in North Carolina and Virginia, and white spot in Hawaii.

  In the area of prevention, APHIS recently published in the Federal Register its animal health risk analysis procedures and, on the plant side, a rule outlining information requirements for importers as well as a request for comments on petitions to regulate additional strains and species of *Caulerpa.* In the near future, APHIS also intends to publish an advance notice of proposed rulemaking concerning possible new approaches to its regulations for the importation of plants for planting, known as Quarantine 37.

  Wallace provided copies of an emergency response and management PowerPoint slide from last year's presentation. It had been updated to show Commodity Credit Corporation transfers as well as those from 1995 through 2004. The authority to transfer was granted to the Secretary of Agriculture in the early 1970s. In 1995, transfers were at about the $7 million level. In each of the last five years, transfers have been over $200 million, with $380 million transferred in 2003. This is a striking trend. Although most funds are not for ANS, the graph reflects the value of prevention programs: the federal government is feeling the strain of providing funds for emergency operations. Last year, Wallace had talked briefly about the Emergency Operation Center that APHIS established to maintain communication and direction for emergency programs. Recent presidential directives have implication for homeland security and natural disaster response mechanisms, including a directive calling for cooperation among federal, state, and local departments in NIMS. APHIS is increasingly incorporating NIMS in its approach to emergency response, including components such as the command system, systems for training, exercises to prepare and communicate among participants, and public outreach.

Wallace distributed handouts pertaining to the national directive and USFS strategy.

U.S. Geological Survey—Susan Haseltine, USGS

Sue Haseltine, Associate Director, BRD, presented the annual report for the USGS. The Invasive Species Program is one of eight programs in the BRD. The mission of the program is to provide reliable information and useful tools for documenting, understanding, predicting, assessing, and addressing threats from invasive species in U.S. ecosystems. Although the total scope of the program is around $9.3 million, only 30% of funding focuses specifically on ANS issues. Funding for BRD has steadily grown in the last nine years, with an additional $1 million requested for FY 05 to be focused on the brown tree snake (*Boiga irregularis*) and control of aquatic invaders. The funding for the Invasive Species Program is concentrated on six program goals (discussed in more detail below): prevention, early detection and rapid assessment of new invaders, monitoring and forecasting of established invaders, effects of invasive species, control and management, and information systems.

- Research to support prevention includes ballast water management technologies, indicator species and assemblages for assessing effectiveness of ballast water treatment, and diagnostic molecular tools to determine species composition in ballast water.

For easy reference, an acronym list is included at the end of this document.

- Activities for early detection and rapid assessment of new invaders include assessments of key species to support management actions and information and technical assistance for responding to new invaders, specifically the development of an alert system for nonindigenous aquatic species.
- Although the majority of monitoring and forecasting of established invaders has focused on terrestrial species, there is significant application for aquatic use, including generation of probabilistic maps at a regional or landscape scale using a probabilistic monitoring design. These models may be useful for mapping vulnerable habitats.
- To determine the effects of invasive species, USGS activities include measuring round goby (Neogobius melanostomus*)* predation on sturgeon eggs, measuring impacts of zebra mussels (Dreissena polymorpha*)* and round gobies on deepwater fish and invertebrate communities, and determining strategies to reduce impacts of exotic species.
- Control-related projects include management and eradication of nutria (*Myocastor coypus*), detection and control of brown tree snakes, and research on the use of pheromones as a control method for Asian carp.
- Regarding information management, the USGS developed and has maintained the Nonindigenous Aquatic Species Database for over a decade and is now working with numerous other partners to develop the NISBase, a distributed information system that allows users to query a single database instead of multiple ones to get information on aquatic invasive species. When asked whether there is any effort to reconcile the various federal government databases, Haseltine replied that the goal is not to have one database but to have them all linked together.

New activities for the next fiscal year include working with partners to conduct additional research to detect and control the brown tree snake and to develop strategies to control Asian carp and other ANS in the Mississippi River Basin, southeastern United States, and Great Lakes region. Sharon Gross, USGS, distributed a two-page list of BRD research activities.

Department of State—Jeffrey Fisher, Bureau of Oceans and International Environmental and Scientific Affairs

Dr. Jeffrey Fisher, DOS, distributed an overview of international initiatives, treaties, agreements, and management actions addressing invasive alien species and then summarized some of the information. Although the DOS generally does not have programmatic funds for IAS management at the local level, the department addresses IAS in international negotiations wherever IAS issues are discussed. According to Fisher, multilateral agreements and treaties are particularly useful at addressing problems caused by IAS when their impacts can be viewed as potentially affecting resources shared by the international community. The DOS is also involved in capacity building in various regions of the world and in addressing IAS issues in environmental cooperation mechanisms of free trade agreements. He provided the following specific information about ongoing DOS efforts and initiatives:

- The DOS provides approximately US$12 million funding for the Great Lakes Fishery Commission's sea lamprey control program administered by the ACOE and USFWS.
- Some of the best DOS work is on the capacity building side, most of which is funded by an OES grant program internal to the DOS. Since 2000, over $500,000 has been contributed to convene workshops all over the world. The latest was held in March in Ghana, while others have convened in Hawaii, Mesoamerica, and other places around the world. Different collaborators have been involved, including the World Conservation of Nature (formerly the International Union for Conservation of Nature), Commonwealth Agricultural Bureau International, the National Fish and Wildlife Foundation, and GISP. Proceedings of these meetings can be accessed through the GISP website (www.gisp.org).

For easy reference, an acronym list is included at the end of this document.

- Negotiations are ongoing under the Central American and Andean free trade agreements to include IAS in the work plans for environmental cooperation.
- The DOS (OES/ETC) is the lead U.S. negotiating agency for all articles under the Convention on Biological Diversity, including Article 8(h) on invasive alien species. The department is involved in negotiating other conventions where IAS issues are discussed as well (International Plant Protection Convention, International Maritime Organization, and others), although it does not serve as the lead negotiating agency in all of these.
- Next week, the DOS, NISC, USDA, DOI, and others will attend a scoping meeting with Canada regarding plans to address the shared IAS problem along the United States–Canada border.
- DOS is also active in addressing IAS within APEC. The DOS will be convening a meeting in China in 2005 with representatives from all 12 APEC working groups to develop a strategy for invasive species in trade among the 20 APEC countries along the Pacific Rim.
- TNC has been promoting trade practices that minimize the spread of invasive species through the organization's Clean Trade Program. Recently, TNC also recently initiated the Pacific Islands Invasives Learning Network with startup funds from the DOS. This program is designed for capacity building among island states so that they might better manage IAS risks. It began in Micronesia and will eventually expand to establish learning networks throughout Melanesia and Polynesia under the oversight of the South Pacific Regional Environmental Program.
- In April, the DOS hosted a meeting on developing a Global Invasive Species Network to link all existing databases on invasive species through a central portal system. A steering committee was established, and proceedings for that meeting can be found at the National Biological Information Infrastructure website (www.nbii.gov/about/pubs/Metadiversity3.pdf).
- Habitattitude™ is a good program to promote to an international audience, specifically the aquaculture industry, and DOS will be seeking ways to represent the initiative.
- There has been a major push to recognize the vulnerability of small island developing states. A meeting in June encouraged safe trade practices between the United States and the Caribbean regarding invasive species. However, separate island states are not working well together on this issue and will be reconvening again in 2005 to ratify a draft strategy developed over the last couple of months. They will be seeking participation from agencies.

Parker asked about a follow-up meeting to the scoping meeting being held next week in Canada. Fisher responded that another meeting will be held in Washington, DC, early in 2005 to discuss what the United States and Canada can implement on the ground and where the gaps are along the border. In addition, he commented that some programs were initially viewed to be trilateral but are not progressing; they might try to move forward bilaterally. At the follow-up meeting, the agenda will not cover ballast water because this issue is too large to address in a single meeting. Parker mentioned that there had been discussions with Canada about adding them to the Task Force as an ex officio member, but this had not yet been resolved. Tom Crane, GLC, offered help from the GLP, given that this regional panel has representation from the International Joint Commission and Canadian government.

Smithsonian Environmental Research Center—Whitman Miller, SERC

Whitman Miller, SERC, provided an overview of the Smithsonian Institution and its ANS activities. SI is not a federal agency but a nonprofit research organization whose research is supported through competitive grants and contracts. The SERC facility in Edgewater, MD, contains 16 labs with about 150 staff. Other organization units within SI include the National Museum of Natural History, the National Zoological Park, and Smithsonian Tropical Research Institute. Areas of ANS expertise differ across SI units but are complementary. When focusing on patterns of invasion, SERC tackles species identification, inventories and surveys, databases, biodiversity patterns, invasion extent and rate,

For easy reference, an acronym list is included at the end of this document.

transfer mechanisms, and susceptibility to invasion. The only area in which SERC does not concentrate is reference collections. For invasion effects, SERC addresses ecological, economic, wildlife disease, and public health effects. Management of invasive species is unique to SERC and includes prevention, control, and eradication.

The NBIC (with FY 04 spending of approximately $700,000) is a joint SERC/USCG program funded through the USCG. Its purpose is to measure national patterns of BW management and delivery. Reporting rates have been higher this year than in past years and are being received at a rate of approximately 100,000 per year. New penalty regulations were promulgated by the USCG this summer that address domestic (mandatory BW reporting) as well as international traffic (mandatory BW management.) The NBIC has also developed a web-based database and drafted a second biennial report on its activities; this report was submitted to the USCG to be part of a larger USCG report to Congress.

The BW treatment/management program (FY 04 spending of $500,000) examines ballast water exchange efficacy and methods of distinguishing coastal from oceanic waters for verification of ballast water exchange. SI, which is also interested in vector ecology, is researching transfer and survivorship in ships' ballast, transfer by ships' hulls, and other vectors that contribute to U.S. marine invasions. Finally, ecological surveys to detect invasion rates and patterns are of great interest to SI and could lead to early detection capabilities. Over the past five years, 24 standardized surveys have been completed in various saltwater bays of North America during which data on native and nonnative species, georeferenced locations, and environmental factors have been collected. Databases maintained by SI include NEMESIS and NISbase. NEMESIS contains occurrence, biological, ecological, life history, and impact data for approximately 1,000 NIS nationwide. NISbase, developed in conjunction with the USGS, is a distributed database system that allows end users to query and receive output from multiple databases simultaneously. The Aquatic Bioinvasion Research and Policy Institute is the result of a new partnership with Portland State University. The goal of the institute is to develop an interdisciplinary approach (economics, trade, engineering, biogeography, ecology, environmental science, and policy) to address aquatic NIS issues. Of particular interest is the economic impact of ANS. An MOU was signed between SI and Portland State University last month (October 2004), and the Institute will be housed primarily in Portland.

ANSTF members expressed concern that NISA gives ANSTF the responsibility of determining the effectiveness of ballast water exchange. They would like to see more information brought to this group for analysis. Members would also like to hear more about ballast water treatment and research, perhaps at the next ANSTF meeting.

U.S. Army Corps of Engineers—Al Cofrancesco, Waterways Experiment Station

Alfred Cofrancesco, ACOE, spoke about invasive species activities of the U.S. Army Corps of Engineers. The ACOE receives funding through both military and civilian programs. The 1899 River and Harbor Act tasked the ACOE with removal of aquatic vegetation from U.S. waterways since they serve as conduits for the movement of invasive species. These invasive species affect all ACOE missions including navigation, flood control, environment, hydropower, regulation, and recreation.

The ACOE has five authorized aquatic invasive species programs, including three control operations and two R&D programs, and various 1135 projects. The ACOE has a significant infrastructure that is being impacted by invasive species at an increasing rate each year. Maintenance is a special concern for locks. Control operations keep waterways and facilities running and operational where they are impacted by invasive species, but they do not offer solutions to invasive species. These programs include O&M, RAG, and APC. The FY 04 O&M program costs were $51 million and 100% federally funded. The RAG program is limited to the removal of aquatic plants from navigation channels that would impede the movement of commercial vessels. FY 04 funding for this program was $5.2 million

For easy reference, an acronym list is included at the end of this document.

(100% federal), which was distributed to Florida and Louisiana only. The APC program includes the control of noxious aquatic plants of major economic significance. This program is a cost-share program (50% federal and 50% local) that has not been funded since 1996; it had been cut as a cost-saving benefit.

R&D programs provide solutions to invasive species and reduce operation costs while providing better management techniques. These programs include the APCRP and ANSRP. APCRP is responsible for management of the nation's aquatic plant research program and provides effective, economical, and environmentally compatible techniques for identifying, assessing, and managing invasive aquatic plant problems. Activities include cost-effective biological control agents, patent approval for mycoherbicial formulation, and new aquatic herbicides. FY 04 funding for this program was $2,315,000, all of it federal. ANSRP provides effective, economical, and environmentally compatible management techniques for problems caused by aquatic nuisance fauna associated with ACOE and public facilities. This program was begun in 1990 as the zebra mussel (*Dreissena polymorpha*) research program, but it was broadened in 2002 to address all aquatic invasive fauna. FY 04 funding was $900,000 and completely federal.

The section 1135 projects include the Chicago sanitation and ship canal project and habitat restoration projects. Cofrancesco described the electrical barrier system under construction in the Chicago sanitation and ship canal. The first barrier is operational, and construction of the second barrier began in October 2004. Barge tests will be conducted with the first barrier. However, the ACOE is still operating under demonstration authority and is unsure how to obtain authority for the program. Habitat restoration projects apply in systems that were devoid of aquatic vegetation prior to impoundment. In such systems, invasive species move in quickly. The ACOE wants to remove the invasive species but also encourage natives. With limited funding, the ACOE is unsure about which problem to address first.

ANSTF members talked about that status of barrier electrodes. If one of the links corrodes, it sends the system into disarray. The extent of deterioration isn't documented; however, once the second barrier is operational, the ACOE would like to shut down the first barrier and repair any corroded links. Other issues discussed included possible efforts for promoting the cost-share program and obtaining authorization for the Chicago barrier system and a review of the ACOE's protocols for moving equipment in the context of aquatic invasive species (and possible development of a HACCP plan).

Environmental Protection Agency—Marilynn Katz, Office of Wetlands, Oceans and Waterways

On behalf of David Redford, Marilyn Katz, EPA, highlighted several FY 04 activities and previewed FY 05 activities targeting ANS.

- The EPA worked closely with the USCG this year developing the ballast water rule discussed earlier by Moore. Prior to and during FY 04, the Office of Water within the EPA worked to develop a discharge standards rule. Work included treaty negotiations in London, where the treaty was finalized last year, and collaboration with the U.S. Navy on discharge standards. Twenty-five of these standards require some kind of control, and three are related to ballast water. Although these standards are being developed, they will not be finalized until 2010 or 2012.
- A draft Office of Wetlands, Oceans, and Watersheds invasive species action plan is awaiting final approval by the Assistant Administrator of the Office of Water, Benjamin Grumbles. Once approval is received, the action plan will be posted. The plan contains six priority actions to ensure that work done by the EPA, such as wetland restoration, doesn't lead to introduction of invasive species.

For easy reference, an acronym list is included at the end of this document.

- The invasive species section of the EPA website has been redesigned (www.epa.gov/owow/invasive_species) to describe what the EPA is doing and link users with other websites of interest. More links will be added based on presentations given during this meeting.
- The Region 10 office (Pacific Northwest and Alaska) deserves special mention for its involvement in a number of prevention activities, such as quarterly reports, and agreement with NOAA Fisheries to print brochures, posters, and other documents about the zebra mussel (*Dreissena polymorpha*). The EPA Region 10 Invasive Species Coordinator, Joan Cabreza, will speak at a biennial Puget Sound conference in early 2005, describing the kind of prevention work that is involved at the local, state, and regional levels.
- The ANSTF approved the management plan for Alaska, and the EPA is working with representatives to develop a session focusing on marine invasives to be presented at the Alaska Forum on the Environment (February 7–11).
- EDRR work has begun at headquarters but will fan out across the agency and its partners. One of the six action items comes from ANSTF suggestions for the need at the regional, state, and local levels for a good understanding of what federal barriers to EDRR might be, especially regarding issues over which the EPA has oversight such as pesticides and toxins. The EPA has included development of a document to provide information and assistance to state and local representatives who are developing their own EDRR plans but need to understand applicable rules and regulations. This work is primarily within the agency, but a follow-up document to expedite the permitting process will be developed. This project may not be finished in FY 05, but it will certainly be started.
- The EPA provides support for major partners in the national estuary programs, including a funding effort in the Pacific Northwest. In addition, Andrew Cohen, San Francisco Estuary Institute, is developing monitoring protocols, suggested criteria for determining presence and absence of invasive species, sampling methodology, and sampling frequency and timing.
- The ORD will probably receive similar funding to work on a Great Lakes strategy; representatives have met with state and regional people to develop a research approach for the Great Lakes. ORD also sponsored a second workshop on NIS and will publish the results. In addition, ORD is working on a number of issues related to applied research including predictive models of invasion, microgenomic analysis, modeling frames for detection of invasive species, and ETV (testing of BW technologies proposed by the private sector).
- Activities are underway to quantify the economic impacts of all invasive species to the United States. A previous figure of $128 billion wasn't based on a scientific method. The first part of developing an estimate is to partner with the EPA's Office of Policy, Economics, and Innovation. Two economists who have done a literature review concluded that there is very little information in this area, and decision makers have no information on which to base prevention, control, and management policy. Nor can they say how much has been spent in an aggregate sense on AIS. In late 2005, the EPA would like to convene a workshop of economists and biologists to discuss what to develop to support an economic analysis. The agency will try to work with the SI and Portland-based institute to develop an estimate of economic impact of AIS and provide an electronic copy of the inventory. Participants reinforced the necessity of understanding economic impacts, for tribes as well as for local, state, and federal agencies and private industry. Dr. Lodge, Notre Dame, was mentioned as conducting economic analyses on zebra mussel impacts. Maryland has also assessed the economic impacts of nutria (*Myocastor coypus*), especially pertaining loss of wetland habitat to fisheries.

For easy reference, an acronym list is included at the end of this document.

After Katz's presentation and ensuing discussion, Matt Fleming, Maryland Department of Natural Resources, was announced as the Chesapeake Bay Program's replacement for Leo Dunn on the ANSTF.

Snakehead Fishes in the Potomac River—John Odenkirk, VDGIF

Because Becky Wajda, VDGIF, was unable to attend, John Odenkirk of the same agency talked about the northern snakehead fish (*Channa argus*) in the Potomac River system. While it is unknown how the species was introduced, its presence is probably related to the food service industry.

The first northern snakehead caught in the open system was in a canal off Little Hunting Creek, Fairfax County, VA. Sampling began in early May 2004 and included electrofishing, gill netting, trap netting, seining, trawling, hook and line angling, and using minnow traps. Because different jurisdictions were involved, several agencies and individuals participated in the sampling, including VDGIF, MDNR, USFWS, watermen, anglers, the Potomac River Fisheries Commission, and the Marine Operators Association of America. Several mature females with ovaries and eggs were collected, but neither spawning behavior nor beds were documented by biologists. All the fish kept were aged (otoliths rather than scales), and an age frequency distribution was discovered, showing a peak of three years. It appears that these fish have been present for a few years based on the typical catch curve. Maps of the capture sites showed areas of concentration, leading Odenkirk and colleagues to believe that they had found the epicenter. But evidence was inconclusive. He strongly suspects that the species was introduced to Dogue Creek and spread outward from there.

The first northern snakehead was caught on May 7, 2004, with snakehead catches peaking in July 2004. A YOY was collected September 29, 2004, indicating reproduction. Of the fish caught, seven of nine females contained eggs, the total length of adults ranged from 12 to 25 inches, the mean length of adults was 16.5 inches, the total weight range of adults was 0.8 to 5.8 pounds, the mean weight of adults was 1.8 pounds, and YOY measured 88 mm.

Challenges now include identifying the real biological and ecological impacts of an infestation, obtaining funding and equipment, and identifying the right sampling techniques. Rampant misinformation is also causing fear among citizens (who dub the species "Frankenfish"). Positive aspects include a great baseline dataset of community structure prior to northern snakehead presence, better working relationships with MDNR and federal agencies, publicity for agencies, publicity for impacts of invasive/exotic species, and perhaps a new species for the fishing industry.

ANSTF members asked about the regulatory or control management responsibilities of the states. Odenkirk responded that local law enforcement has been very active with a fairly large undercover component. Unfortunately, northern snakeheads are still available at Asian fish markets in some states. Stomach contents of captured fish suggest that the species is fairly opportunistic in its feeding. Everett Wilson said that the USFWS has been directed to develop a management plan for the snakehead.

Regional Panel Reports

Wilson announced the joint meeting between the ANSTF and regional panel chairs scheduled for the afternoon and distributed copies of the agenda. He encouraged ANSTF members to attend since the regional panels are the implementing organizations. He also informed participants of a *Washington Post* article about Blackwater National Wildlife Refuge (MD) being "nutria free."

Great Lakes Regional Panel—Tom Crane, GLC

Because the panel chair, Roger Eberhardt, Michigan Department of Environmental Quality, could not attend, Tom Crane, GLC, discussed ANS activities of the GLP. The GLP is a multijurisdictional entity

For easy reference, an acronym list is included at the end of this document.

working to address the challenges of aquatic invasion in the Great Lakes. Duties of the regional panel include identifying ANS priorities for the Great Lakes, making recommendations to the ANSTF, coordinating federal ANS programs in the Great Lakes with the ANSTF, providing advice concerning ANS control, and preparing progress reports describing regional prevention and control activities. Diverse panel membership, staffed by the GLC, has been established to ensure that the panel's policy positions provide a balanced and regional perspective on ANS issues in the Great Lakes region. In 2001, panel staff conducted an election for at-large membership for the GLP based on a potential member's ability to represent constituency effectively, expertise on current and/or emerging issues regarding ANS prevention and control, and ability to fill unmet needs.

The panel has three standing committees that meet twice a year at panel meetings: Information/Education, Research Coordination, and Policy and Legislation. Priorities are being developed by the committees to provide objective guidance on project ideas for the Great Lakes region and guide funding agencies on those concepts that need to be addressed.

The panel is developing an operational guidance document as a vision statement to guide panel work on regional ANS prevention and control. It will define the roles and responsibilities of GLP officers and at-large members and identify areas where stronger representation is needed on the panel. Finally, the operational guidance will identify ways of developing a more secure funding base by diversifying the base to provide adequate and secure long-term support for general operation of the panel.

Specifically regarding GLP efforts on ANS, Crane reported that the GLP had been involved in the international treaty on ballast water and prospects for domestic legislation (spring/summer 2004) and, with support from NOAA, published the newsletter *The Live Food Fish Industry: New Challenges in Preventing the Introduction and Spread of Aquatic Nuisance Species* (fall/winter 2004). Other regional ANS initiatives can be found online at the Great Lakes ANS website (www.glc.org/ans/panel.html).

Current panel projects include a model GIS assessment of nonindigenous invasive species in Michigan water. For this project, an online tool to collate, document, and disseminate information on key aquatic invasive species was produced. The panel is also developing a model rapid response plan as part of an overall regional effort to enhance the capacity to anticipate, prevent, and respond to new aquatic invasions in the Great Lakes–St. Lawrence region. A pilot project for early detection and monitoring of nonindigenous aquatic invasive species in the Lake Michigan basin was initiated in 2003. Another project is aimed at developing a collaborative approach to advance the implementation of ANS state management plans for the prevention and control of ANS in the Great Lakes region.

Western Regional Panel—Sue Ellis, CADFG

Susan Ellis, CADFG, delivered an update on the activities of the WRP for Bettina Proctor, USFWS, who was unable to attend. The WRP is a large organization that includes 19 states. Members are loosely related without administrative authority, and most WRP business is handled through the annual meeting and conference calls between members of the executive committee.

This year's annual meeting was held September 8–10 in Anchorage, AK. Topics included Alaskan perspectives, northern pike (*Esox lucieus*) impacts in Alaska, the New Zealand mudsnail (Potamopyrgus antipodarum*)*, exotic freshwater fishes of Mexico, the Canadian national strategy, and Habitattitude™. The Alaska Department of Fish and Game also sponsored a field trip.

Current WRP projects include cross-boundary *Spartina* control and eradication (United States and Canada), participation in the Desert Fishes Council (United States and Mexico), and recreational boater outreach (United States and Mexico). There is an emphasis on tribal projects, but none are currently operating. Smaller projects include the Kansas ANS plan, a preinvasion rapid response team for aquatic plants, the North American Lake Management Society, an online searchable educational materials catalog, and zebra mussel (Dreissena polymorpha*)* rapid response planning.

For easy reference, an acronym list is included at the end of this document.

Several challenges face the panel, including direction from the ANSTF concerning Atlantic salmon (*Salmo salar*), resolution of joint Western Governors' Association projects, and coordination with other panels. In addition, active members on the regional panel are often overcommitted, so the panel needs help with outreach. Finally, the panel faces a challenge addressing lag effects in management efforts.

Gulf of Mexico Regional Panel—Ron Lukens, GSMFC

Ron Lukens, GSMFC, updated the ANSTF on the status of the Gulf of Mexico Regional Panel. The most recent panel meeting was held November 8–10, 2004, in Biloxi, MS. Agenda items for this meeting included an update on the status of state plans. Those for Florida and Louisiana are complete, while the state plan for Texas is nearly complete. The state plan for Mississippi is in progress and should be completed by June 2006. Alabama has an agreement to develop a plan but has not identified a budget source for the plan. Other states (such as Mississippi) enlisted funding for their plans from a power company.

The panel began developing a strategic plan in March 2004 that has been adopted pending some edits and reorganization. Completion is expected by January 2005 when it will be submitted to the ANSTF. The strategic plan currently has 5 goals, 24 objectives, and 59 tasks. The rapid response plan that began in early 2003 should be completed by December 2004. However, the completed plan cannot be implemented until each state approves the section specific to it and then signs an MOU. The approach is to have a plan for each state and then develop linkages to make the plan regional. A NOAA Sea Grant funded this project.

Two rapid response assessments were completed this year, the Mobile Bay drainage and Mississippi Sound and associated drainages. Over 120 scientists participated, and over 500 samples were taken. Not all the data have been processed, but two nonnative species, *Corbicula*, introduced long ago, and Nile tilapia (*Oreochromis niloticus*), a relatively new invader, were identified.

Upon Lukens' recommendation, the ANSTF voted in favor of approving membership seats on the panel for the Alabama Department of Conservation and Natural Resources, Freshwater Division, and the Georgia Department of Natural Resources. Lukens added that the panel would be receptive to requests from North Carolina and South Carolina if they chose to join. A representative from South Carolina, the only state without membership in a regional panel, expressed interest. The ANSTF voted to include South Carolina in the Gulf of Mexico Regional Panel, as well as North Carolina if interested. North Carolina already belongs to the Mid-Atlantic Regional Panel, but membership in two regional panels is acceptable to the ANSTF.

The panel has been invited to meet jointly with the Florida Exotic Plan Pest Council in Key West, FL, on May 9–11, 2005. The panel is hoping that this meeting will lead to a productive collaboration and is pleased with the level of work being done.

Lukens also suggested that the name of the panel should be changed from the Gulf of Mexico Regional Panel to the Gulf and South Atlantic Regional Panel.

Northeast Regional Panel—Judy Pederson, Sea Grant at the Massachusetts Institute of Technology

The recently elected panel co-chair, Judy Pederson, Massachusetts Sea Grant at the Massachusetts Institute of Technology, spoke about NEANS panel activities. She co-chairs this regional panel with John McPhedran, Maine Department of Environmental Protection. The geographic scope of the panel is fairly broad and includes Connecticut, Maine, Massachusetts, New Brunswick, New Hampshire, New York, Nova Scotia, Rhode Island, Vermont, and Quebec. NEANS hopes to formally include Prince Edward Island so that meetings can be held there in the summer or early fall. Canadian

For easy reference, an acronym list is included at the end of this document.

participation is mainly in marine issues. Panel membership includes government agencies, military organizations, universities, nonprofit and nongovernmental organizations, and private industry.

The goals of the panel are to prevent introduction, establishment, and dispersal of ANS in the Northeast; control the spread of ANS already introduced into the Northeast; and mitigate the harmful ecological, economic, social, and public health impacts associated with the introduction, establishment, or spread of ANS in the Northeast. Committees include Ballast Water; Communication, Education, and Outreach; Policy and Legislation; and Science and Technology. The operational framework focuses on regional activities, and most meetings involve having the committees speak about their activities.

Selected panel accomplishments since the last ANSTF meeting include semiannual meetings with a "Spotlight on Species" feature; peer-to-peer coordination on state plan development and revision; development of a water chestnut (*Trapa natans*) hand-pulling brochure targeted at resource managers, lake groups, and volunteer trainers; development of the MarineID website; and a Stop Aquatic Hitchhikers! floating key ring. Planned panel activities include review of committee work plans and project proposals, revision of the NEANS website, a workshop about ANS legislation, development of a website listing target species, and an update on the MarineID website.

The panel is developing a rapid response protocol for aquatic invaders and has put together a group to identify research priorities. Priorities include management, education, ecology and invasion biology, prevention and vector research, surveys and monitoring, and socioeconomic studies. Recent ANS discoveries in the Northeast (including Canada) include *Hydrilla*, clubbed tunicate (Styela clava) in Canada, MSX (*Haplosporidium nelsoni*) in Canada, water chestnut, *Corbicula*, and sea squirts (*Didenmum* sp.)

Pederson was asked about a recently held workshop on an alternative ballast water exchange zone that was held in Halifax, Nova Scotia, in October 2003. This was not a NEANS-sponsored workshop, but several NEANS Ballast Water Committee members attended and provided advice during the planning stages. Sue Haseltine, USGS, responded that a workshop about a year ago had addressed issues such as traffic between Canada and the Northeast. Recommendations from the scientists, shipping community, environmental groups, and government agencies were incorporated into a workshop consensus statement recommending that ballast water exchange be conducted along the edge of the continental shelf where currents were likely to disperse and minimize the probability of invasive species reaching coastal areas. The recommendations are based largely on scientific information and intended to be consistent with the International Maritime Organization and the USCG, which are seeking alternative treatment technologies as the preferred approach to managing ballast water. Haseltine agreed to get copies of the PowerPoint presentation to Don MacLean, USFWS, to distribute among ANSTF members.

ANSTF members then voted on a motion to have Bill Jacobs, TNC, join the panel. The motion passed.

Mid-Atlantic Regional Panel—Julie Thompson, USFWS

Julie Thompson, USFWS, delivered a presentation on the newly formed Mid-Atlantic Regional Panel. The panel was created last November by the ANSTF. Because this panel is in the very early stages of development, its members have not yet had the opportunity to meet. The Chesapeake Bay Program, which is a regional partnership, has agreed to provide panel administration. The panel will include members from federal, state, regional, and academic entities and private environmental and commercial interests representing New Jersey, Pennsylvania, Maryland, Virginia, West Virginia, North Carolina, and Delaware.

Although the ANSTF does not typically approve individual members of a regional panel, it does have a responsibility to make sure that the membership has a healthy balance of State, local, and Federal

For easy reference, an acronym list is included at the end of this document.

agency representation as well as stakeholders from academic institutions, businesses and industry, and regional conservation organizations. A draft membership list was submitted to the Task Force for review and a couple of suggestions were made. The first priority of the Mid-Atlantic Regional Panel is to have its first organizational meeting early in 2005 at which it will elect a chair and co-chair, determine what work groups are established, and initiate the development of a work plan.

Mississippi River Basin Regional Panel—Michael Hoff, USFWS

Before talking about current activities of the MRBP, Michael Hoff, USFWS, reported that a dead, 30-inch-long silver carp (*Hypophthalmichthys molitrix*) was collected past the barrier in the Chicago sanitation and ship canal. Silver carp were known to be about 20 miles south of where this one was found. Additional information is being gathered by the Illinois Department of Natural Resources and others, and that information will be used to decide on the next steps.

The Mississippi River is 2,300 miles long and drains 41% of the United States. The basin contains 260 of the 600 native species of freshwater fish in North America. It also contains 163 aquatic nuisance species.

In 2004, the MRBP sent representatives to Western and Gulf of Mexico regional panel meetings and to the Midwest ANS workshop. Meetings proposed for 2005 include a fourth panel meeting in January or February and a fifth panel meeting in September with the WRP. Developing state ANS management plans and increasing federal funding to implement existing and forthcoming state plans is a priority for state panel members in 2005.

MRBP committees have been working on their responsibilities and work plans. Prevention and Control Committee projects include a list of priority species and their status within the basin, a position statement on the tradeoff of benefits and liabilities of barriers for ANS and fish passage, a white paper on the harvest of ANS, and a position statement supporting a national screening process for intentional importation into the United States. Information and Education Committee projects include inventorying I&E products; identifying products, messages, and audiences for focusing I&E efforts; purchasing and distributing the new Stop Aquatic Hitchhikers! brochure, and developing the *Field Guide to Aquatic Invasive Species*. The Research Committee is planning a risk assessment workshop for the next MRBP meeting, developing a database of experts and current research to increase the pool of those skilled at performing risk assessments, developing a research priority list, and planning a symposium on ANS research at the 2005 Midwest Fish and Wildlife Conference.

The MRBP recommends that the ANSTF continue to strengthen its focus on prevention, especially on developing a screening process for imported plants and animals. The panel also recommends the development of national prohibitions (with listed exceptions) on the transport of aquatic plants and priority ANS on public roads and the establishment of a national contingency fund for rapid response. Hoff was advised by ANS members to keep in contact with Richard Orr, NISC, of the ANSTF Prevention Committee regarding the regional panel's prevention and screening efforts. The issue of terminology (nuisance vs. invasive vs. nonindigenous, etc.) was also discussed.

Public Comment and Wrap Up

Before reviewing action items, a couple of issues were raised and discussed:

- Paul Zajicek, NASAC, distributed copies of the NASAC letter addressed to Everett Wilson, USFWS. This letter concerned the generic risk assessment process. The ANSTF decided to talk about risk assessment and risk mitigation efforts at the next meeting.
- Lukens, GSMFC, requested that the ANSTF discuss the two-page summary adapted from the more technical science fair protocol that had been previously submitted. It was recommended that

For easy reference, an acronym list is included at the end of this document.

a letter be provided to the Intel International Science Fair Program with the information posted on the website. The ANSTF should also suggest, but not require, that Intel include this protocol in its guidance to students and student sponsors for developing science fair projects and noted a section within the guidelines where additional language could be inserted. ANSTF members moved to acknowledge the summary and send the letter and recommendation to Intel. Larry Riley, IAFWA, stated that this issue is representative of broader issues and that curriculum development includes a lot of experiments. Wallace commented that the updates would appear in the protocol appendices. The motion was approved, and sending the letter and recommendation was added to the list of action items.

Wilson summarized the following action items developed during the ANSTF meeting:

- Approve the May 2004 meeting minutes with one change (mistaken attribution of a comment to Zajicek on p. 76).
- Put deadlines on incomplete action items from the previous ANSTF meeting. Send out draft deadlines via e-mail, and if no replies, make these deadlines final.
- Determine the process for revising state ANS management plans and send that process to ANSTF members.
- Endorse Habitattitude™ using the language offered by Riley ("…to fully endorse the campaign, as a primary author and funding partner of Habitattitude™, and encourage regional panels, member agencies, and ex officio members to do likewise").
- Distribute the draft *National Management Plan for the Genus Caulerpa* to ANSTF members and regional panels for a two-week review prior to release. Comments will be due December 3, 2004.
- Change the name of the Gulf of Mexico Regional Panel to the Gulf and South Atlantic Regional Panel.
- Add Alabama and Georgia as new members of the Gulf and South Atlantic Regional Panel.
- Add Bill Jacobs, TNC, as a new member to the Northeast Regional Panel.
- Distribute Zajicek's letter about the generic risk analysis process.
- Send the brown tree snake bill (HR3479) to ANSTF members. Co-chairs will work with the chair of the BTS working group on implications of this bill.

He also reviewed motions that had been voted on:

- Approved that, if changes to a state ANS management plan were minor, the plan could be presented to the ANSTF for review and not need to be signed by the state governor.
- Conditionally approved the *National Management Plan for the Genus Caulerpa* for seeking public comment pending ANSTF comments received by the end of two weeks (December 3). If there are substantial changes, the plan will probably be distributed to ANSTF members and regional panels again.

Potential topics for the May 2005 meeting include the following:

- Annual reports from ex officio members
- In-depth discussion on ballast water, including ballast water efficacy
- Discussion on how the ANSTF can help with appropriations
- Coordination of information collection and delivery of USGS research
- Discussion of economic analysis
- Elevation of ANS issues before state wildlife directors

For easy reference, an acronym list is included at the end of this document.

- Presentation on the generic risk analysis process, its implementation, and effectiveness

ANSTF members reviewed these lists for accuracy and approved them as they were. They then voted to approve the next meeting for May 24–26 in Monterey Bay, CA. The meeting will run for three days with a half day to meet with panel chairs. Members added that a field trip would be worthwhile. It was suggested that the Western Regional Panel meet at the same time. The motion to adjourn was approved.

For easy reference, an acronym list is included at the end of this document.

RECEPTION AND SPIRIT AWARDS
NOVEMBER 16, 2004

Following the meeting, ANSTF members and guests were invited to a reception during which the first annual Spirit Awards were given. The Spirit Award recognizes people who have moved and motivated others through their concern for aquatic invasive species. Dr. Parker presented Dean Wilkinson, NOAA, with the Spirit Award for his long-standing involvement with and dedication to the ANSTF. She then recognized Marshall Meyers for asking the tough questions, being there to help the ANSTF answer them, and leading the Habitattitude™ campaign. Next, she awarded Congressman Wayne Gilchrest of Maryland for lending a strong voice to the environment and serving as chair of the House Subcommittee on Fisheries Conservation, Wildlife and Oceans.

Acting Executive Secretary Everett Wilson, USFWS, presented the last three Spirit Awards. Congressman Vernon Ehlers of Michigan has advocated for invasive species resources. Matthew Reiffer, Legislative Counsel, accepted the award for Congressman Ehlers. Great Lakes Task Force Director Joy Mulinex then accepted a Spirit Award for Senator Carl Levin of Michigan who apologized that the NISA has not been reauthorized (as NAISA). The last award was presented to Allegra Cangelosi, Northeast-Midwest Institute, who has led the battle against aquatic invasives in the upper Great Lakes area, especially her efforts concerning ballast water.

Following the awards, Sharon Gross (USGS), Gordon Brown (DOI Invasive Species Coordinator), and Anna Cherry (NISC) toasted Dean Wilkinson on his upcoming retirement from NOAA. They spoke about his collaborative efforts in the early days of the ANSTF, his attention to detail, his dedication to the cause, and his expansive technical expertise.

For easy reference, an acronym list is included at the end of this document.

ANSTF AND REGIONAL PANEL MEETING
NOVEMBER 17, 2004

The following action items were assigned during the joint meeting of the ANSTF and chairs of the regional panels:

- Conduct a FACA legal review.
- Review policies and procedures document and provide comments and revisions to Wilson by January 31. If approved by the ANSTF, it will go into effect March 1, 2005.
- Provide information on locations for past ecological surveys.
- Provide lists of regional priorities to the Executive Secretary of the ANSTF to distribute to ANSTF members prior to the next meeting.
- Provide input on Carlson's letter to the ANSTF chairs regarding the straw proposal.
- Send annual reports to Wilson to compile into a report to Congress.
- Provide someone to help Fuller design and build the expert database.
- Consider having a contact in Washington who would maintain an ANSTF calendar on the website and coordinate with panels chairs on meeting dates.

Everett Wilson, USFWS, welcomed the regional panel chairs, had participants introduce themselves, and expressed the importance of meeting with them to hear what is going on and how the ANSTF can help them. Wilson stated that the panels operate on the level of ANSTF committees. Kathy Glassner-Shwayder, Great Lakes Panel, joined the meeting via conference call. The joint group decided to combine the agenda item for NOAA Sea Grant research and education priorities with the agenda item regarding setting priorities for regional panels. It was also suggested that a time limit be set for input to the NISC management plan revision.

Roles, Responsibilities, and Boundaries—Group members were provided copies of the four-page policies and procedures document (dated May 18, 2004). The following issues regarding regional panel roles and responsibilities were raised and discussed:

- One issue of concern among regional panels is the need to report to the ANSTF. The ANSTF should probably approve the policies and procedures developed for the regional panels. It was argued that the ANSTF should be careful not to discourage the interstate cooperation occurring in the regional panels. Not every action taken by the regional panels should have to be approved by the ANSTF. On the other hand, the ANSTF is a legislated group subject to FACA. The regional panels endorsement of something that the ANSTF doesn't endorse could be problematic. Participants decided that, if an issue was important, it needed to be considered by the ANSTF. If the issue needed to be acted on immediately, the ANSTF could hold a telephone conference.
- Panels cannot send letters to Congress, support specific pieces of legislation, or endorse specific funding proposals because the ANSTF and regional panels are part of the federal office. Individual members who are nonfederal can do a number of things that federal members cannot. State representatives who are unable to go through their agencies to further their views should not use the regional panels to do so.
- Rotations in regional panel membership and leadership have led to uncertainty about policies and procedures. Knowledge does not get passed on with these changes. Policies and procedures need to be communicated effectively. Although chairs, co-chairs, and vice chairs are supposed to be

For easy reference, an acronym list is included at the end of this document.

approved by the ANSTF, this process may not be occurring. It should be enforced, giving the ANSTF opportunity to educate these panel leaders on the boundaries. The ANSTF is unlikely to turn down a nomination for chair from a regional panel, but the approval process will provide the opportunity to pass information on.

- Each regional panel has established bylaws governing leadership changes. The ANSTF has approved the bylaws.
- Overlapping geography means that some states can have representation on multiple panels. Some states have the same person serving on both panels, while others have different representatives who sometimes communicate poorly with each other on panel issues. Although this lack of communication is an important issue, participants decided that the panels themselves should coordinate, rather than relying on individuals to do so.
- A periodic FACA review would be useful for the ANSTF and regional panels. NOAA has conducted such reviews and finds them helpful every time. The ANSTF and regional panels must comply with FACA and run notices of meetings in the Federal Register. But work groups and committees do not have to run meeting notices since they report to entities already covered by FACA.

Ecological Surveys—The regional panels were asked to prioritize ecological surveys. To date, USFWS Regional ANS Coordinators have provided regional priorities to the USFWS, but it is more appropriate that regional panels do so. Pam Fuller, USGS, pointed out that, to be compliant with the NANPCA, ecological surveys have to be associated with ballast water. She agreed to provide information to Wilson about the act.

Ron Lukens, Gulf and South Atlantic Regional Panel (formerly the Gulf of Mexico Regional Panel), talked about two recent rapid response efforts. He thought it would be helpful if the federal government was involved in helping identify ports where invasive species are likely to show up. Wilson was asked to provide information on where past ecological surveys have been conducted.

Regional Panel Priorities—The joint group discussed approaches for comparing priorities, research and otherwise, from the various regional panels. Wilson commented that some priorities are similar across panels, such as the need for training in risk assessment. These could be addressed in a larger or cooperative manner if identified. Participants agreed, although there was some concern about priorities being forced onto panels by other panels and about the difficulty of comparing priorities among panels.

Regarding the example of training in risk assessment, several members mentioned possible training by Cindy Kolar, USGS. The ANSTF also has a guidance document for starting on risk assessment. In addition, NOAA's Coastal Services Center also provides training. It was pointed out that many agencies had expertise in risk assessment. Rather than training everyone in risk assessment, which is a science in itself, people could utilize the expertise within the various agencies.

Dorn Carlson, who managed the Sea Grant AIS competition, offered a straw proposal in which Regional ANS priorities could possibly be included as criteria in the grant process thus potentially allowing applicants to apply for grants to help address some of the regional ANS priorities. Sea Grant AIS research and outreach competition is held once every two years, with about $5 million dollars available through each competition. Proposals can be for one or two years but can request no more than $150,000 per year. Each dollar requested must be matched with $0.50 of nonfederal funds. In the past, priority areas have been set nationally to be quite broad and reflect NOAA's mission in the area of invasive species. Under Carlson's proposal, the regional panels would propose priority areas for the 2007 Sea Grant AIS research and outreach grants competition. These priorities would be advertised in the competition announcement, and proposals addressing these priorities would be given preference during the project-selection process.

For easy reference, an acronym list is included at the end of this document.

Carlson suggested that each panel form a working group, chaired by a NOAA representative who was familiar with NOAA policies and practices. The working group, accepting outside input, would develop priority language and propose it to the regional panel. Then the panel would propose the priority language to the ANSTF at the fall 2005 meeting. NOAA would then draft the federal funding opportunity announcement for the *2007 Sea Grant National Strategic Investment in Aquatic Invasive Species Research and Outreach*, which would be published in the spring of 2006. Proposals would be due in the winter, selections made early in 2007, and grants awarded in the summer and fall of 2007. When the research projects were completed, panels could give their input on the success of the projects as well as on this regional priorities experiment.

Carlson addressed conflict of interest. To avoid any appearance of a conflict of interest, the following entities would not be eligible to submit a competition proposal addressing a regional priority: the regional panel that proposed the regional priority, its co-chairs, its host entity, or any member of the working group that developed the priority.

Following Carlson's proposal, two concerns were raised: 1) regions that don't have marine, great lake, or coastal resources and are therefore unable to submit project proposals and 2) the difficulty in forming a work group if members are unable to propose on projects. Carlson addressed the first by saying that he has talked with other grants people about partnering on some inland projects. He believed that the regional panels would have to resolve the second issue.

Carlson's proposal would address reporting regional priorities, an action that is important so that the ANSTF can support efforts of the regional panels and show Congress what needs to be done throughout the United States. But it wouldn't address overlap in regional priorities. Wilson asked whether the ANSTF should develop a national list of priorities. Lukens pointed out that, when regions expressed the need for a taxonomic and expert database, Fuller was able to pursue a solution. If the regions provide their priorities, then the ANSTF can help them move forward on securing resources for issues that have national implications.

Wilson requested that regional panels send him their lists of priorities before the next ANSTF meeting. He will forward these priorities to ANSTF members to review. The Executive Secretary will work on a forum for talking about which priorities have national implications or can be combined and how they might be funded. A uniform format for these priorities may be helpful.

Annual Reporting—Mandates of Congress, as well as the ANSTF strategic plan, call for annual reporting. Wilson is compiling information from agencies and other entities to include in a report to Congress. This information has typically included accomplishments and funding but could also include the priorities. Although he has sent a request and format (NISC format) to federal agencies, he will send the same request and format to regional panels and ex officio members. Because some of these organizations have to submit other reports, Wilson suggested writing one report and using it for multiple purposes. Effective reporting may indicate to Congress the importance of AIS projects and funding.

Expert Database—Because several regional panels needed expert databases, Pam Fuller, USGS, had attended panel meetings. Instead of building several databases, they requested one database that would allow each panel's website to have an independent view of it with the option of looking at other regions. Her office is willing to design, build, and maintain the database if the regional panels are interested. The database would include taxonomic experts as well as management experts. Phase 1 would be to build the database to be compatible with other databases, while Phase 2 would be to actually link it to these other databases. Joe Starinchak, USFWS, suggested building something similar for reporters to access for outreach efforts. He agreed to work with Fuller on this idea. The regional panels were interested, and the ANSTF said that would provide someone to help her.

For easy reference, an acronym list is included at the end of this document.

NISC Management Plan Revision—Because Lori Williams was unable to attend this portion of the meeting, Wilson had talked with her about how the ANSTF and regional panels could be involved in revision of the NISC management plan (titled *Meeting the Invasive Species Challenge: National Invasive Species Management Plan*). She anticipates that the revision will be an update to supplement the original plan rather than a completely new plan. A few improvements planned are having fewer action items per each functional category, actions that can be accomplished within a three-year period, and performance measures. The draft should be out in about six months. Members of the joint group suggested that there might be some value in getting comments collectively. Perhaps a two-hour forum could be set up so that 100 people were networked and looking at the document together.

ANSTF Committee Membership—Wilson encouraged committee membership since the lack of volunteers is resulting in important work not being done. Three main issues were raised concerning committee membership: travel expenses; attendance via conference calls, which isn't always effective; and optional website support for committee meetings. The ANSTF noted that five committees are looking for liaisons and people to populate them.

Promotion of Habitattitude™—Dr. Mamie Parker, USFWS, reported that several regional panels have already asked Marshall Meyers, PIJAC, and others to present Habitattitude™ to their membership. All the regional panels are encouraged to do so, as well as having members sign up as partners. The partnership goal is 100%.

State Contact List—Dean Wilkinson, NOAA, distributed a list of state contacts for aquatic invasive species issues. In the past, this list has been kept informally. He would like to see the list systematically updated and posted to the website. Discussion followed about who the appropriate contacts were—only those with jurisdiction, one contact per state, or those whose primary work deals with aquatic invasives? Wilkinson thought the more comprehensive, the better. Wilson suggested developing a list of questions in succinct terms and sending it out to collect appropriate contacts. This contact list would have to be updated periodically.

Participants asked whether the ANSTF has a similar list of panel members. Some regional panels include their membership on their websites, while others do not. The ANSTF has an informal list that seems to change constantly. It was suggested that, since memberships to regional panels require ANSTF approval, the ANSTF should have a list of panel members.

Regional Panel Chairs/Coordinators Listserv—The group discussed the necessity of a listserv for ANSTF members and panel chairs. No final decision was made, but participants did decide to consider having a contact in Washington who would maintain an ANSTF calendar on the website and coordinate with panels chairs on meeting dates. Currently, the National Agricultural Library includes NISC and invasive-related meetings on its calendar. But it doesn't include tentative meetings. If the ANSTF does develop a calendar, work group and committee meetings may not be included.

Closing Thoughts—Several regional panel chairs commented that $50,000 isn't sufficient for their tasks. Wilson replied that there hasn't been any big increase, which would in turn allow the ANSTF to provide more funding to the regional panels. Parker suggested thinking about how they could encourage more funding. Reports on accomplishments and what more could be done with more funding might help.

Carlson will send a letter to the ANSTF chairs within the next couple of weeks regarding the straw proposal (see information about regional priorities above). The chairs can send this letter on to the regional panel chairs. If people find problems with the document, they are to let Carlson know.

Wilson thanked everyone for attending and adjourned the meeting.

For easy reference, an acronym list is included at the end of this document.

ACRONYMS USED

ACOE	U.S. Army Corps of Engineers
ACWG	Asian Carp Work Group
AIS	aquatic invasive species
ANLA	American Nursery & Landscape Association
ANS	aquatic nuisance species
ANSRP	Aquatic Nuisance Species Research Program
ANSTF	Aquatic Nuisance Species Task Force
APC	Aquatic Plant Control
APCRP	Aquatic Plant Control Research Program
APEC	Asia Pacific Economic Cooperation
APHIS	Animal Plant and Health Inspection Service
ARS	Agricultural Resource Service
BLG 9	bulk liquids and gases 9
BLM	Bureau of Land Management
BRD	Biological Resources Discipline
BTS	brown tree snake
BTSCP	Brown Tree Snake Control Program
BW	ballast water
BWM	ballast water management
CADFG	California Department of Fish and Game
CEO	Communication, Education and Outreach
COI	certificate of inspection
CONABIO	National Commission for the Understanding and Use of Biodiversity
CSREES	Cooperative State Research, Education, and Extension Service
DHS	U.S. Department of Homeland Security
DOD	U.S. Department of Defense
DOI	U.S. Department of the Interior
DOS	U.S. Department of State
DOT	U.S. Department of Transportation
EDRR	Early Detection and Rapid Response
EIS	environmental impact statement
ELI	Environmental Law Institute
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ETC	Ecology and Terrestrial Conservation
ETV	EPA's Environmental Technology Verification Program
FACA	Federal Advisory Committee Act
FICMNEW	Federal Interagency Committee for the Management of Noxious and Exotic Weeds
FSI 13	Flag State Implementation 13
FY	fiscal year
GAO	General Accounting Office
GIS	geographic information system
GISP	Global Invasive Species Program
GLC	Great Lakes Commission
GLERL	Great Lakes Environmental Research Laboratory
GLP	Great Lakes Panel
GSMFC	Gulf States Marine Fisheries Commission
HACCP	Hazard Analysis Critical Control Points
HHS	U.S. Department of Health and Human Services
HR	House of Representative bill
I&E	Information and Education
IAFWA	International Association of Fish and Wildlife Agencies
IAS	Invasive Alien Species
IBBWG 4	Intersessional Ballast Water Working Group 4
ISAC	Invasive Species Advisory Committee

For easy reference, an acronym list is included at the end of this document.

ITAP	Invasive Terrestrial Animals and Pathogens
MDNR	Maryland Department of Natural Resources
MEPC 53	Marine Environmental Protection Committee of the International Maritime Organization
MOU	memorandum of understanding
MRBP	Mississippi River Basin Panel
NAISA	National Aquatic Invasive Species Act
NANPCA	Nonindigenous Aquatic Nuisance Prevention and Control Act
NASA	National Aeronautics and Space Administration
NASAC	National Association of State Aquaculture Coordinators
NBIC	National Ballast Information Clearinghouse
NEANS	Northeast Aquatic Nuisance Species Panel
NEMESIS	National Exotic Marine and Estuarine Species Information System
NEPA	National Environmental Policy Act
NIMS	national incident management system
NIS	nonindigenous species
NISA	National Invasive Species Act
NISC	National Invasive Species Council
NMP	national management plan
NOAA	National Oceanic and Atmospheric Administration
NOBOB	vessels with "no ballast on board"
O&M	Operation and Maintenance
OES	Bureau of Oceans and International Environmental and Scientific Affairs (formerly Oceans and Environmental Sciences Bureau)
OMB	Office of Management and Budget
ORD	Office of Research and Development
PIJAC	Pet Industry Joint Advisory Council
PSC	Port State Control
R&D	research and development
RAG	Removal of Aquatic Growth
S	Senate bill
SERC	Smithsonian Environmental Research Center
SI	Smithsonian Institution
TNC	The Nature Conservancy
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VDGIF	Virginia Department of Game and Inland Fisheries
WRP	Western Regional Panel
YOY	young of year