

Invasive Species Advisory Committee Meeting

December 6–8, 2016

Smithsonian Institution

National Museum of the American Indian (NMAI)

Tuesday, December 6, 2016

The Department of the Interior recently completed a review of all FACA committees. During the review period, ISAC and other FACA committee business was placed on hold. In accordance with this policy, the ISAC meeting planned for July 2017 was cancelled. These draft minutes would have been reviewed and considered for adoption at that meeting. The draft minutes are being made available as a matter of public record in accordance with FACA guidelines. All references to these draft minutes should indicate that they have not been adopted or otherwise endorsed by ISAC.

Opening Remarks, John Peter Thompson, MD Nursery and Landscape Assoc.

John Peter Thompson opened the ISAC meeting and welcomed ISAC members, noting their responsibility and opportunity to advise federal agencies on NISC Management Plan priorities. He thanked Jeff White for Newmont Mining Corporation's sponsorship of coffee and snacks, as well as the evening reception. ISAC members and additional attendees proceeded with a round of self-introductions. John Peter then reviewed the meeting's agenda.

Approval of Minutes (July 2016, Washington, DC)

John Peter opened introduced the agenda item on the adoption of the minutes from ISAC's July 2016 meeting. Bob Wiltshire moved to adopt them, which was seconded by Ed Mills. ISAC approved them unanimously.

Update from the NISC Secretariat. Jamie K. Reaser, Executive Director, NISC Secretariat

Jamie reviewed recent activities by NISC and the Secretariat. New staff include: Jason Kirkey, Director of Publications (2 year term); Sarah Veatch, Project Manager; Fabien Laurier, Assistant Director for Interdepartmental Coordination; Jhoset Burgos, Senior Policy Analyst (2 year term); Genny Brune, intern; Wendy Fink, detailee; Mark Frey, detailee (starting in January 2017). The position of Senior Scientific and Technical Analyst still needs to be filled.

Recent activities by NISC and the Secretariat include:

- IUCN World Conservation Congress (WCC): At the WCC (September 2016), the NISC Secretariat ran a training program entitled, "Make It a Priority and Make It stick! How to Institutionalize Invasive Alien Species Programmes." More than 60 participants attended the course, which include panels and a range of group exercises.
- Website and social media: The NISC website has been overhauled to focus on projects under the current Management Plan, as well as ISAC-related materials (e.g., meeting documents,

- charter, guidance documents, white papers, recommendations). The NISC Secretariat now has a Facebook page, which is updated on a daily basis. ISAC members were encouraged to follow it.
- NISC Management Plan 2016-18: The NISC Management plan was finalized in August 2016, and focuses on NISC's specific niche in high-level policy planning. The Plan includes activities intended to facilitate an enabling environment, remove barriers, and improve institutionalization of invasive species activities across the federal government. It also includes a strong focus on EDRR, as it incorporates recommendations from the national EDRR report, *Safeguarding America's Lands and Waters from Invasive Species* (2016).
 - Crosscut Budget: The NISC Secretariat started compiling the interagency crosscut budget on invasive species in 2004. The 2016 exercise includes responses from 12 NISC member Departments, and shows an increase of almost \$100 million in expenditures between FY2014 and FY2015.
 - Innovation Summit: The Innovation Summit (December 5, 2016) included over 250 participants along with another 100+ logging into the webcast. Representation included government agencies, NGOs, the private sector, and academia. The day's agenda was divided into segments on case studies of grand challenges, a spotlight on game changing technologies, incentives and encouraging investment, social license and regulatory frameworks, and attracting technology innovators and applicators.
 - Arctic Invasive Alien Species (ARIAS) Strategy and Action Plan: The ARIAS Strategy and Action Plan is being developed by a steering committee under the Arctic Council's working groups on the Conservation of Arctic Fauna and Flora (CAFF) and Protection of the Arctic Marine Environment (PAME). It has gone through multiple national reviews as well as review by the CAFF and PAME boards, and is now in the final review phase. The intention is for it to be adopted at the Ministerial Arctic Council meeting in May 2017. Alongside the Strategy and Action Plan, the steering committee is planning the launch of a social media campaign entitled, "Arctic Invasive Alien Species, Not Cool!"
 - North American Invasive Alien Species Strategy and Action Plan: The North American Leadership Summit (June 2016) called for the formation of a working group to develop a strategy and action plan focused on priorities for high-level policy and planning. Structurally it will be based on the ARIAS Strategy and Action Plan. The working group has been established and the goal is complete the Strategy and Action Plan by May 2017 in time for the North American Invasive Species Forum.
 - Protecting What Matters Documentary: The NISC Secretariat is working on a documentary designed to make personal linkages to the issue of invasive species and encourage action. Filming has proceeded at the WCC in Hawaii, the port of Long Beach in California, and the BioBlitz in Washington DC and Virginia. Current plans include releasing the film through environmental film festivals.
 - NEPA Guidance: The NISC Secretariat worked with the Council on Environmental Quality (CEQ) to issue a data call in December 2015. Department submissions have been collected, analyzed, and used to inform discussions with CEQ on product development. The current aim is to develop a general NEPA guide for invasive species practitioners that could be supplemented by guidance on specific invasive species topics. Additionally, there is a perceived need for additional materials and activities (e.g., podcasts, webinars, meetings) to build understanding and capacity in agencies to efficiently execute their NEPA obligations.
 - US Territories Invasive Species Coordinating Committees (USTISCC): The concept of USTISCC arose from a workshop of US territories (June 2016, Honolulu). Territories agreed to

develop their own strategies and action plans, most of which are completed. The first official meeting of US TISCC will be on December 15, 2016 in Washington, DC.

Upcoming activities include:

- Completion of NISC's first Annual Report;
- Collation of a report on the Innovation Summit;
- Assessments of federal EDRR capabilities and capacities;
- Development of a citizen science program for urban areas, entitled "Invader Detectors"; and
- Creation of a prioritization tool for Departments to facilitate identification of strategic issues from the field level up and across a range of Departmental and agency missions.

Jamie then discussed the role of the ISAC task teams, which are intended to provide advice to NISC on topics included in the Management Plan. They are to be comprised of ISAC members, non-federal experts, a designated federal office (DFO) and a note-taker. ISAC members may serve on more than one task team simultaneously. Existing task teams are addressing: tribal coordination, state coordination, infrastructure, wildlife health, and advanced biotechnology. New task teams will be formed to address managed relocation (Ed Clark, chair) and the movement of watercraft (Bob Wiltshire, chair).

During discussions, past work on NEPA guidance was highlighted, including work by agencies to develop field-level guidance, which could be a good source of information. In response to a question regarding involvement of ISAC members whose terms have finished, Jamie noted that they could continue to serve on the task teams as non-federal experts if asked.

NISC Principals

Robert Bonnie, USDA Undersecretary for Natural Resources (USFS/NRCS)

Bonnie focused his comments on future opportunities for invasive species and land management activities on private and federal lands, particular in the areas of forestry and agriculture. He noted a shift in agency activities towards a more collaborative approach to conservation and restoration. For the Natural Resources Conservation Services he noted relevant work on sage grouse, rangeland restoration, conservation easements, and the need to bring management of invasive grasses to scale. He also highlighted NRCS's Conservation Innovation Grants Program for the development of new tools and applied research. Regarding the US Forest Service, Bonnie discusses forest conservation and restoration, linkages to fire regimes, and the need to build more resilient systems. He noted how the size of the "fire budget" (more than half of the entire USFS budget) has squeezed work in other areas, including invasive species.

Discussion: In response to a question on vector management, Bonnie noted the work of APHIS on pathways and at border prevention activities.

Tom Novotny, HHS, Deputy Assistant Secretary for Health

Tom noted HHS recent engagement with NISC on invasive species, including involvement in the development of the new Executive Order. He highlighted the Centers for Disease Control OneHealth initiative and its incorporation of health issues across the continuum of animal and human health. He noted recent work on harmful algal blooms, vector control programs to address the Zika virus, and future work on assessing the connections between invasive species and public health as requested in the EO. He

closed by noting the broader context of climate change and how it shapes the aforementioned health issues.

Lori Faeth, DOI Deputy Assistant Secretary for Policy and International Affairs

Faeth reviewed ongoing work by DOI in the areas of early detection and rapid response, FWS review of biocontrol applications, FWS recent rule to list 10 non-native freshwater fish and one crayfish as injurious wildlife under the Lacey Act, and trilateral work with Canada and Mexico. She highlighted the efforts of the DOI Invasive Species Task Force including the development of a departmental policy on invasive species, identification of performance metrics for reporting, and an assessment of data practices. She concluded by noting DOI's provision of \$500,000 to address rapid Ohī'a death in Hawaii, along with support from DOI's Office of Insular Affairs to the US Territories Invasive Species Coordinating Committee.

Discussion: ISAC members engaged Faeth on issues regarding air travel as a pathway of introductions, contacts for addressing questions on specific biocontrol agents, and the development of economic analyses to help with prioritization.

Maureen Sullivan, DOD Deputy Assistant Secretary for Environment, Safety and Occupational Health

Sullivan highlighted DOD's role as the third largest federal land manager and presence on facilities throughout the rest of the world. She noted requirements in the Sikes Act on the need for integrated natural resource management plans for installations, which largely decentralizes DOD invasive species activities to the site level. She outlined difficulties in addressing the movement of Zika on aircraft given that EPA has yet to approve a pesticide for passenger aircraft. She also suggested that the trend towards disallowing more pesticides, will impact health-related activities and require the development of alternative tools. Sullivan outlined the work of the Strategic Environment Research Development Program, which has addressed issues related to brown tree snake, coconut rhinoceros beetle, yellow star-thistle, feral hogs, fire ants, Formosan termites and Aedes mosquitoes.

Discussion: ISAC members inquired about efforts to address the lack of EPA approved pesticides, to which Sullivan noted collaboration with APHIS on alternatives and with EPA on special use permits. DOD was thanked for providing information on cleaning of military equipment which has been adopted by transportation departments for preventing the spread of invasive species along highway corridors.

Carrie Thompson, USAID Deputy Assistant Administrator

Thompson highlighted that USAID has six ongoing projects related to invasive species that total ~\$2 million. Project activities are primarily focused on EDRR and control and management to enhance food security in eastern Africa, Asia, and Latin America and the Caribbean. She also noted USAID's support to other governments to implement free trade agreements, and suggested the utility of a more specific focus on invasive species within those types of capacity building efforts.

Camille Mittleholtz, DOT Deputy Director, Office of Safety, Energy and Environment

Mittleholtz explained how the Federal Highway Authority provides funding to states and tribes for transportation infrastructure, which can include vegetation management. Priorities in this area include development of a web-based tool for managing roadside vegetation, promotion of native species to assist with pollinator conservation, and creation of an ecoregional database for vegetation management. She also noted work by the Maritime Administration to research the effectiveness of ballast water treatment and hull cleaning of decommissioned military vessels, as well as the Saint Lawrence Seaway Development Corporations cooperation with partners on vessel inspection.

Chris Adamo, CEQ Chief of Staff

Adamo provided an overview of the new EO and CEQ's role in its development. He highlighted the addition of HHS and opportunities to work on health issues; a focus on the development and use of innovative technologies; and the need to engage with states and local partners. He concluded with a note on how invasive species can impact the maintenance of local identities and cultures.

Discussion: ISAC members stressed linkages with CEQ's work on NEPA as well as recent guidance on climate change. Other issues included the potential for addressing invasive species concerns within free trade agreements, such as the TransPacific Partnership, and cooperation with other interagency groups, such as the Aquatic Nuisance Species Task Force and the Federal Interagency Committee on the Management of Noxious and Exotic Weeds. In response to concerns expressed about the reversal of this EO, Adamo noted that it updates and revises EO 13112 which would still remain in effect. Comments also focused on the EO's definition of introduction and terms the omission of terms that were in EO 13112.

Task Teams

The five task teams created at the July 2016 meeting (tribal coordination, state coordination, infrastructure, wildlife health, and advanced biotechnology) met throughout the three days. The infrastructure task concluded its work and presented its recommendations to ISAC for adoption. Two new task teams were formed on managed relation and movement of watercraft. See annexes for individual task team reports.

Members Forum

Chuck Barger

- Next 6 months: North American Invasive Species forum may 9-11 in Savannah, Georgia.
- Registration opens shortly after Jan 1.

Bob Wiltshire

- Yellowstone River in Montana suffered massive fish kill.
- Montana governor declared invasive species emergency and closed the river to all human activity.
- Fishing is a major segment of Montana economy.
- It is yet unknown whether the disease (proliferated kidney disease) is caused by invasive species.
- Zebra or quagga mussels were also discovered in Montana.
- Working to develop a summer training for teacher who want to teach students about invasive species.

Blaine Parker

- Oregon is still mussel free but this could change (based on Bob's update).
- Continuing to work with Watercraft Taskforce but it will not be sunset.

Ed Mills

- Attended the New York Invasive Species Advisory Committee.
- A professor in this group has identified two major vectors for forest species.
- Now that they have identified the vectors, they are working in DC to take action.

Bill Hyatt

- Association of Fish and Wildlife Agencies is currently looking at watercraft model regulation.
- The expectation is that the association will have it done before their March Meeting.
- They are also looking at the Pet Industry USFWS MOU.
- Conserving Americas Wildlife act, which mentions invasive species, has bipartisan support in the association.

Patt Burch

- Working on how invasive plants affect pollinators.

Marshall Meyers

- Looking at wildlife diseases.
- Interested in discussing cargo issues with airlines.
- Looking for funding to support new vehicle for use in aquatic invasive species research.

Bonnie Harper-Lore

- Continuing to engage in yearly conference and outreach.
- Added Japanese barberry and crown vetch to the injurious list.
- She is part of an organization that spent fifty million dollars in environmental work with two projects involving invasive species (carp and applied terrestrial research).
- New species appear in Minnesota.

Ed Clark

- Need a database available for diseases that present biosecurity issues.
- Wildlife Center of Virginia created the template for such a site for use by the public.
- They are looking at this tool that has already been built and plugging in basic data as well as trying to get agencies to standardize format.
- Currently, no two agency reports are in the same format, digitized, or can be compiled.

The Member Forum will be concluded on Wednesday, December 7th.

Public Comment

Lori Buchanan with the Molokai/Maui Invasive Species Committee highlighted progress on work that she'd identified from the July 2016 ISAC meeting, including invasive species guidance from the Hawaii Department of Land and Resources. She noted the convening of a summit on Ohia death with thanks to funding from DOI, and also expressed her gratitude to DOD for its efforts on coconut rhinoceros beetle.

The NISC Executive Director noted the official creation of the US Territories Invasive Species Coordinating Committee through a memorandum signed by the Governors of American Samoa, the

Commonwealth of the Northern Marianas, Guam, and the US Virgin Islands, and DOI's Assistant Secretary for Insular Affairs, Esther Kia'aina.

Wednesday, December 7, 2016

Members Forum (Continued)

The Member Forum is continued from the previous day.

Jeff White

- Newmont Mining Corporation has ~2.7 acres in Nevada that are managed for access to minerals, water, and conservation of biological diversity.
- Major accomplishments: Conservation Framework Agreement with key agencies of DOI and Nevada agencies, which were key elements in sagebrush ecosystem strategy.
- Corporation manages for sagebrush, sage grouse, cheatgrass through conservation-focused ranching on mining lands.
- Invitation for ISAC to visit ranch lands was offered.

Damon Waitt

- Two years into new position as director of North Carolina State University Botanical Garden.
- Launching program to offer more botanical related courses at NC State as part of university's strategic planning.
- Conducting feasibility study to build research and plant conservation lab that will serve as a funnel for programs planned for botanical gardens.

Slade Franklin

- Wyoming state budgets were reduced. State lands zeroed out budget but successfully got 3.5 million back into it.
- Medusahead grass showed up in state near borders of Wyoming and South Dakota on DOD land and state/private lands in foothills of the Bighorn Mountains.
- Identification bounties put out for private land owners.
- One initial treatment was performed this fall and will continue next fall.

Janis McFarland

- OSTP put out call for agencies to work together on soil health.
- There are opportunities for this group and agencies working on invasive species issues to weigh in and be part of that assessment.
- Weed Science Society will have meeting in Tucson with several symposia:
 - Area wide management plans
 - Precision Agriculture
 - Teaching weed science
- Would like to help this committee coordinate with Weed Science Society in 2018 when WSS meeting will be in DC. Opportunity to bring invasive species topics to foreground. The meeting will be held in early February.

Jamie K. Reaser

- Our team has been involved in OSTP soil project and it will have invasive species section.
- The soil document should have gone out for public comment on Dec. 5.
- Long term intent is to develop something along the lines of a National Soils Framework.
- Endorsement of Janis' call to give it attentiveness.

Sean Southey

- Elected as chair of IUCN Commission on Communication and Education.
- Access to 1,400-1,500 members of IUCN.
- Launched IUCN's first global campaign with 2,500 institutional parks plus a number of small groups involved.
- "How do we create a new generation of people who love biodiversity?" URL: Natureforall.global.
- Work continues with the NISC Secretariat on an invasive species documentary. To be released in first quarter of 2017, 42-55 minutes in duration.
- Proper distribution plan will be determined closer to release when the final quality can be assessed.
- Possible release at environmental film festivals.
- 2-3 minute interviews will be released online.
- Explore potential for larger, Netflix or Hulu release if it is possible to work around budget constraints to meet their release standards.
- New campaign with UN Environment on wildlife trafficking won Webo award, given away to top 10 socially conscious campaigns.

John Peter Thompson

- Continuing to work with state of Maryland using APHIS weed risk assessment tool.
- How can these assessments be placed in an accessible digital library of APHIS weed risk assessments for public use?
- University of Maryland is defunding their herbarium; working to find funding to keep it open and accessible.

Jamie K. Reaser

- Draft release from White House on soils framework with invasive species section, with public comment open until January.

Task Team Reports

Infrastructure Task Team

- The purpose of the infrastructure task team was to determine impact of invasive species on infrastructure.
- A case study was added to the report since it was sent out for review, but it does not change the recommendations whatsoever.
- How do these recommendations parlay into the Management Plan action item, which is explicitly related to lack of authority concerns?

- Federal authorities were addressed in table of Federal agencies and their relatedness to infrastructure concerns.
- Presentation is now under consideration for adoption.
- Did group reflect on environmental protection guidelines?
 - The group did not reflect on these issues.
 - Environmental assessments typically consider the impact of the infrastructure on the environmental, rather than the environment's (including invasive species) impact on the infrastructure.
- Request for specifics/guidelines related to first recommendation.
 - Difficult to come up with economic impacts of IS on infrastructure. It would behoove federal agencies to track more closely their expenditures as they relate to invasive species.
 - There is likely a significant operational cost in upkeep of infrastructure that is related to IS, which is currently unknown.
- Suggestion that wording be changed to NISC Secretariat rather than NISC.
 - All recommendations go to Council. Recommendations can be made that the Council direct Secretariat to undertake specific tasks.
- What is meant by the word "understand" and how is it measured? That wording is vague. Amendment suggested to change "better understand" to "assess."
 - Amendment accepted.
- A way was sought to include climate change/extreme weather events. Does ISAC have suggestions for working that into the recommendations?
- If these recommendations are addressed to the Council then adding "relevant" before agencies is an acceptable amendment.
- Motion made and seconded to vote on adoption of paper.
- Motion carries: the report and recommendation are adopted by ISAC.

Federal-Tribal Task Team

- Motion made to review accompanying paper tonight for a vote tomorrow morning on adoption.
- Motion accepted.
- Discussion of recommendations:
 - Are we potentially overstepping our bounds in making this suggestion?
 - We are not suggesting that a law or clause be added to EO. But this coordination could be increased at the agency level to enhance Federal-Tribal invasive species actions, rather than creating barriers by including tribal concerns at the end of the process.
 - This recommendation could be tied to section of new EO. A reference could be made to this to help define the scope of the recommendation.
 - There is a lot of verbiage in these recommendations that could be cut down on.
- Motion to table this until when we reconvene tomorrow.
- Motion seconded.
- Motion carries; tribal task team report and recommendations are tabled until tomorrow morning.

States Task Team

- Recommendations are finalized. We are not looking for approval at this meeting. Will present for feedback, run the draft past some expert resources recently consulted, pull together the final reports and recommendations. Seeking to approve report/recommendations in coming weeks via conference call.
- Send feedback to Bill either in person or email. No questions will be fielded at this time.

Public Comments

Consultation: referred to when federal action is required. When a federal employee picks up the phone, the tribe considers it a federal action. The federal departments/agencies does not consider it a federal action until they are ready to break ground. That is where the disconnect is.

Thursday, December 8, 2016

Innovation Summit

During a discussion on the Summit, members highlighted it as an opportunity for information exchange, networking and engagement of non-traditional partners (e.g., tech developers and experts in small business). A number of comments focused on how to make it an annual event, including organizing it during National Invasive Species Awareness Week. Other suggestions included better incorporating ISAC's expertise and extending it to multiple days. ISAC members were encouraged to support and spread the "We can do this" messaging campaign.

Next Meeting

The next two ISAC meetings will be hosted at the National Museum of the American Indian in Washington, DC, and will take place July 18-20, 2017 (new date) and December 5-7, 2017. Funding has been secured for both meetings. New officers will need to be selected at the July meeting.

Appendix 1

Breakout Session Summary Invasive Species Advisory Committee (ISAC) Advanced Biotechnology (Gene Editing) Task Team

Task Team Members

David Baisch	Conservation X Labs
Karl Campbell	Island Conservation
Janis McFarland	Syngenta Crop Protection
Edward L. Mills	Cornell University

Observers

Stanley Burgiel (DFO)	NISC Secretariat
Jhoset Burgos (note-taker)	DOI
John Darling (resource person)	EPA

The ISAC Advanced Biotechnology Task Team met over the course of the ISAC meeting (December 6-8, 2016) for the purposes of discussing the draft paper started at the June 2016, ISAC meeting. This draft paper addresses Action 6.3.1 of the National Invasive Species Council Management Plan: “Conduct an assessment of the potential ecological, socio-economic, and political benefits and costs of gene editing technology in the context of invasive species prevention, eradication, and control.” It met for three work sessions and was also informed by dialogue with the full ISAC during in-session progress. The following summary provides an overview of the structure of discussions and topics addressed by the Task Team, including its next steps.

The Task Team reviewed the draft paper started at the last ISAC meeting for content, language selection and areas that require further analysis, such as the social messaging and communication, types of advanced biotechnologies, and ethical implications of these technologies. The Task Team determined that new peer reviewed journal articles could be use as reference since they strike a proper balance between the benefits of biotechnologies and the levels of uncertainty. The Task Team also considered that the National Academy of Science (NAS) report on gene drives could be use as reference and that the recommendations could be complimentary to the report.

In this regard, the Task Team identified a number of key points for the introductory section to help set the overall context of the white paper:

- The field(s) of advanced biotechnology is rapidly evolving, often faster than the necessary policy, social and ecological assessments necessary to evaluate them.
- The white paper is a “snapshot in time” reflecting the state of current technologies and may require updates in the future.
- Many of these technologies could be “game changers” if effectively applied to invasive species control and eradication problems.

- Advanced biotechnologies represents a diverse field of activity, where specific technologies may be at different levels of development.
- The paper should connect developments in this field with new priorities identified in Executive Order 13751 (e.g., tech innovation, public health, national security).

The Task Team looked at previous experience with biotechnology and GM products particularly in terms of social acceptance for lessons applicable to invasive species. This could include focusing on unpopular invasive species easily recognizable to the public. Human health and the role of invasive mosquitoes was highlighted. In terms of targets, the Task Team also discussed invasive lampreys in the Great Lakes since the species entire genome is now available.

The Task Team noted that the public sector rarely invests in invasive species technologies outside the health sector, but recognized that many stakeholders are interested in new technologies. The Task Team identified that the lack of incentives, such as increased liability of labeled pesticides and lack of intellectual property rights, may deter the private sector from investing in the invasive species technology market. The Task Team recognized the need to target recommendations at these policies to help incentivize the private sector.

The Task Team discussed intersections between advanced biotechnologies, where a combination of technologies might be applied to an invasive species problem (e.g. RNAi, genome editing, and gene drive). Nonetheless, they identified the need to differentiate between the available advanced biotechnologies and to state their current status. Also, the Task Team recognized the importance of differentiating and explaining eradication technologies from replacement technologies.

The Task Team addressed the fact that the availability of these technologies needs to be coupled with their efficient delivery and application since the discovery of the technology alone doesn't solve the invasive species issue. The Task Team considered that invasive species management issues could be related to other initiatives such as, endangered species, pollinators, soils, health, infrastructure, and biodiversity conservation. The Task Team talked about how advanced biotechnologies could replace other eradication and control methods and that risk assessment should be applied across the full range of technologies that could be applied to a specific problem. The Task Team determined that the paper needed additional content on risk assessment.

The group concluded with a discussion on next steps, including writing and review assignments, identification of reviewers, and a timeline for the next draft of the paper and its recommendations.

Appendix 2

Breakout Session Summary
Invasive Species Advisory Committee (ISAC)
Federal-Tribal Coordination Task Team

- Introduce knowledge of intent and what it constitutes, so as not to confuse with scoping.
- Who to talk to in tribes is a big issues. A high priority is continuity within tribes and communication. Providing training in environmental science to tribal members could be a recommendation. This allows for continuity of support for next generations. Tribe members need to be able to speak the same “science” language that goes beyond specifically the invasive species “classes.” Need for stable environmental education.
- Counties are beginning to provide IAS courses in community colleges (funding option).
- Because of communication problems, we need continuity and stability for tribal members through environmental science education in order to enable vested interest by tribe members.
- This needs to be a vocational program for training into life sciences/environmental sciences to avoid the pressures and demands of multiyear program requirements.
- Tribes being vested into the effort. Federal officials would provide higher support for this education program. Building capacity at the tribal level to be able to self-manage through future generations.
- Option to be done through land-grant universities. NEPA funds to some extent. This could be a recommendation through USDA.
- **Recommendation:** Facilitate training of tribal members in (resource leadership, capacity building, environmental stewardship) across scientific and governance fields through existing programs, for example... (leave broad so each agency has flexibility). What doors can the highest levels of government open?
- **Framing:** have a “need” statement and a “response” statement. It may not be immediately obvious to the feds as to what barriers this would lift or create.
- There are existing opportunities but there are substantial barriers (funding, access, etc.)
- American Indian Higher Education Consortium; Native American Journalist Association—could serve as a template on how to model this initiative.
- Mentoring, capacity building, formal/informal training... keep it broad. Creating new incentives to inspire people to take these opportunities.
- **Recommend** that the NISC partner with federally recognized American Indian tribes, Alaska Native Corporations, and Native Hawaiians to convene an indigenous peoples and invasive species conference.
 - Near term recommendation
- North American Indigenous People’s Coordinating Committee, MOU, high level council person, person of contact (or alternative to MOU). Where needed provide the financial resources to create/implement plans (appropriations?).
- Existing examples: Have tribes create plans. Only approved plans get funding.
- How many tribes have invasive species plans? None to our knowledge—all state plans.

- **Goal:** Improve communication/coordination.
- Fire plans can serve as example/model for language: simplified version of fire management plans (assumes tribes have a land management plan).
- Get list of recommendations ready to print and go over.
- “Support tribes in developing invasive species management plans... Refer to BIA fire management plans as a model.”
- Members then gathered sources for reference from the BIA to formulate recommendation.
- Define knowledge of intent: a recommendation might be that federal agencies notify and consult with tribes as appropriate when implementing section 3 of EO 13751, when these actions have the potential to influence tribal lands or tribal resources.
- Fellow entities will notify and consult with tribes as soon as they have [knowledge/intent].
- New section 3 of EO language (“coordinate with and compliment”; “cooperation with”)
- Members discussed when tribes should first be notified of potential projects: when “federal action” is taken?
- **Recommendation:** In keeping with Section 3(2)viii of the EO 13751, Federal agencies will notify potentially impacted American Indian tribes, Native Alaskan corporations, and Native Hawaiians when considering implementing the duties set forth in Section 3 of EO 13751 and to consult [engage] with these entities upon the commitment of resources to these actions.
 - Notify upon consideration and consult upon commitment.
- This is focused on building the relationship and communication between federal action and tribes.
- A point of contact will be necessary—one who understands both sides (as a moderator).

Wrap Up

- Focused on:
 - 2016-2018 NISC Action Plan calls for tribal consultation/coordination for any actions under the Plan.
 - In order for tribes to actively participate and convey problems with IS, TT looked through established documents (such as BIA manual for fire management). TT paraphrased that task to pertain to IS.
 - Building capacity/intellectual infrastructure for communication and access/funding to educational resources. Build resource expertise, federal coordination expertise, etc. instead of investing in transient people.

December 7, 2016

- Task Team takes individual time to clean up recommendations and consolidate information.
- The revised recommendations were then reviewed by all task team members and appropriate edits were made.
- The task team then worked on converting notes and recommendations into a report format.

December 8, 2016

- Task Team met in the morning and revised recommendations and justifications based on comments received in the previous ISAC wrap up session.

Appendix 3

Breakout Session Summary Invasive Species Advisory Committee (ISAC) Federal-State Coordination Task Team

December 6, 2016

Task Team Members Present: Bill Hyatt (Chair), Susan Ellis (Co-Chair), Slade Franklin

DFO: Hilary Smith, DOI

Observers: Deb Hayes, USFS; Jason Kirkey, NISC-Secretariat; Bill Bolen, EPA; Susan Pasko, FWS/ANSTF

Bill Hyatt summarized progress to-date which included drafting case studies and preparing preliminary recommendations, which he previously circulated to the group. He also shared feedback from discussions with task team members who were unable to attend. Their suggestions included:

- Consider categorizing recommendations that address small scale needs; and another set that addresses large scale needs;
- A point person within the NISC Secretariat could assist coordinating with the states and tribes;
- Cautioned against creating additional bureaucratic layers;
- Emphasized working towards enlisting local buy-in;
- Small issues lend themselves to a point person for a coordinating function; large scale issues lend themselves to having someone who could focus on a planning function;
- Invasive species issues need cheerleaders at state and federal levels; a coordinator or facilitator who could connect and motivate state and federal entities;
- Current system could evolve more towards coordinating groups focused on plants or animals (rather than separating by aquatic and terrestrial);
- Need state and federal contact list that is accessible and maintained, and posted on a website to enable one stop shopping for invasive species.

The group reviewed the preliminary recommendations and noted the importance of ensuring that the strengths and weaknesses outlined in the case studies are addressed in the recommendations. The group also clarified the style and formatting needs of the final product (e.g. need statement followed by recommendation compared to a more formal white paper).

ISAC members raised several questions during the morning report of the task team's progress. Questions included whether or not recommendations would address:

- Incorporating invasive species into state management and pollinator protection plans;
- Addressing conflict resolution between state to state or state to federal;
- Encouraging multistate approaches;
- Developing a template for a multi-state compact.

The group then discussed the recommendations.

- *Federal points of contact:* The group noted the difficulty of identifying specific contact information due to staff turnover or lack of federal positions with invasive species in their portfolio. It is also important to have the right person at the table, rather than those who may have inconsistent participation or lack decision-making authority. The group noted that engaging contacts at federal agencies at the local level is the most significant need, but often it is the national and regional contacts who can help identify those local contacts, so perhaps it is more efficient to maintain a regional/national contact list.
- *State points of contact:* clarify that NISC should request information from states (rather than directing states to provide information)
- *Accessing points of contact:* Federal departments/agencies should have their respective invasive species contacts listed on their website. All federal and state points of contact for invasive species should be included on the NISC website as well.
- *MOU:* MOUs may be too complex, lengthy to pursue. Consider using “terms of reference” or “operating principles.” Interagency agreements are the mechanisms to move money between entities. The group questioned whether there are existing MOUs with AFWA and NASDA that could be built upon.
- *Compacts:* The group discussed that compacts are designed to address intractable problems. Compacts (e.g. CT River; Atlantic States Fish Commission) present a long-term means of addressing issues involving state/federal coordination. Another model for interagency coordination is WAFWA, which is a non-regulatory, facilitation model, or the Asian Carp Regional Coordinating Committee, which could be model to garner resources.
- *Other:* The group discussed the importance of evaluating what contributed to the successes of the case studies and lifting those up as recommendations as well.
- *Addendum:* Ann Gibbs later shared that Maine has an MOU with USDA APHIS that does not involve money but focuses on dealing cooperatively with plant pest issues. Also there has been an effort in the northeast to develop a compact modelled after the fire compact to deal with managing forest pests. This was complicated to set up, but has been useful in several situations.

December 7, 2016

Task Team Members Present: Bill Hyatt (Chair), Susan Ellis (Co-Chair), Slade Franklin, Bonnie Harper-Lore

DFO: Hilary Smith, DOI

Observers: Bill Bolen, EPA

The group reviewed the recommendations Bill Hyatt redrafted based on the previous day's conversations. Additional topics raised for discussion included:

- Adding a state detailee to assist NISC on state-federal coordination.
- Adding language about the need for an EDRR funding mechanism

The remainder of the session focused on editing the recommendations, including differentiating between whether implementation of the recommendation was aimed toward the NISC member department or the NISC Secretariat.

Appendix 4

Breakout Session Summary Invasive Species Advisory Committee (ISAC) Managed Relocation Task Team

Task Team Members

Ed Clark, Chair	Wildlife Center of Virginia
Mark Schwartz	University of California, Davis
Dan Simberloff	University of Tennessee
John Peter Thompson	Consultant

Observers

Patrick Gonzalez, DFO	National Parks Service
Cat Hawkins Hoffman	National Parks Service
Gregor Schuurman, DFO & note-taker	National Parks Service

The ISAC Managed Relocation Task Team held their inaugural sessions over the course of the ISAC meeting (December 6-8, 2016) for the purposes of outlining a white paper and associated recommendations. This draft paper would address Action 4.1.3 of the National Invasive Species Council Management Plan, which is focused on “reducing the risk of biological invasion via managed relocation.” The group started with member introductions and met for three work sessions. Content was also informed by dialogue with the full ISAC during in-session progress. The following summary provides an overview of the structure of discussions and topics addressed by the Task Team, including its next steps.

In discussing the overall purpose of the group, NPS resource persons noted that similar discussions have been started over the years by land management agencies that never came to completion. In discussing the nature of the group's product, participants identified the need to consider the full range of options that come before managed relocation is attempted, attention to whether managed relocation should be done as well as how to do it, and a best practices framework to incorporate these considerations.

During initial discussion to explore the topic, a number of aspects were raised that would require incorporation, such as purpose for the relocation, movement within and/or outside of a species historical range, method of relocation, criteria or thresholds for deciding on whether to move a species, impacts on native species in the relocation site, the possible need for multiple movements to achieve objectives, whether to distinguish between genotypes and species, and relocated species serving as vectors for other species, pathogens, etc. Examples involving the Guam rail, bull trout, Karner blue butterfly, and Douglas fir were used to highlight some of these issues

In terms of process, members of the group discussed the role of permitting by federal and state authorities, linkage to NEPA, the adequacy of other existing guidance (e.g., IUCN), species prioritization, risk assessment, transparency in decision-making, monitoring of outcomes, review of proposals, social acceptance, tribal linkages, and ethical concerns around the movement of species. There was general agreement that managed relocation should be a last resort, and that full consideration also be given to suitability of other sites, feasibility of relocation (biological, legal, financial), and potential movement/expansion of species beyond expected introduction range. Additionally, it was recognized that agencies may have different objectives for relocation given their specific mandates and authorities.

With regard to prioritization, vulnerability assessments are a useful tool and can address whether there is an imminent risk, alternatives to relocation, social acceptance, and feasibility. Risk assessments could build on biocontrol practices, while recognizing their shortcomings. Other risk assessment tools could also be applied (e.g., APHIS weed risk assessment, NAPPRA screenings, CAST). Key risk factors could include: hybridization, competition with native species, predation on or by local species, parasitism and disease, unpredictable indirect effects, vector issues, and ecosystem effects (e.g., on fire regimes, nutrient regimes, hydrology, carbon sequestration).

The group considered using case studies to illustrate key points on managed relocation. Categories could include: managed relocations already done for climate change adaptation (e.g., bull trout, brook trout/yellow perch in MN, butterflies in England, Guam rail, New Zealand birds, relocations already performed by private actors (e.g., *Torreya taxifolia*, White-bark pine), and where relocation is being considered (e.g., Karner blue butterfly, salamanders in Shenandoah National Park, tiger salamanders in George Washington National Forest, Joshua trees, sequoias, lodgepole pine in Kenai Fjords National Wildlife Refuge).

The group conclude by putting together a draft outline for a white paper, using the following structure:

- Executive summary
- Introduction
 - Charge
 - Objective
 - Audience
- Definition and scope of the term “managed relocation”
- Existing scientific understanding (literature review)
- Risk Factors (including illustrative case studies)
- Risk assessment tools
- Discussion of key issues
 - Need for agencies to hold a higher standard
 - Importance for considering managed relocation in general, even if not under consideration for particular species
 - Need and role for public process and discussion, including recognition that entities are doing this on their own
 - Need for monitoring/follow-up that evaluates ecological consequences
 - Contingency planning
 - Site selection
- Recommendations
- Glossary

Appendix 5

Breakout Session Summary Invasive Species Advisory Committee (ISAC) Movement of Watercraft Task Team

Participants

Robert Wiltshire

Susan Ellis

Jason Kirkey (DFO/note-taker)

December 7, 2016

- Why is this needed?
 - Protocols and resources are out there. They are not being implemented either because of lack of funding or lack of coordination.
 - Needed to fulfill requirement of NISC Management Plan
 - Task force to determine:
 - Is lack of National Environmental Policy Act (NEPA) involvement a barrier to implementation of actions?
 - If yes, what guidance is needed; what would trigger NEPA that is in current outlines of decontamination?
 - If no, what are the barriers that are stopping implementation?
- California Environmental Quality Act (CEQA), in developing state management plan, is only triggered under particular circumstances. NEPA triggers are similar, and it is not readily apparent how decontamination of watercraft would trigger it.
- NEPA purview:
 - Is it movement involving federal lands?
 - Involving federal agencies?
 - Involving federal dollars?
- Relevant provision in new EO Section 3.3:
 - *refrain from authorizing, funding, or implementing actions that are likely to cause or promote the introduction, establishment, or spread of invasive species in the United States unless, pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions.*
- Preliminary actions:
 - Identify materials to read for reference
 - Develop outline of what products task team intends to produce
 - Brainstorm broader committee
- Some potential committee members have already been discussed and/or contacted
- Should someone from Tribes (such as Blaine) be involved in the group to provide tribal lands perspective?

- Major methods of dealing with issue is decontamination or completely closing down areas to watercraft.
- Possible barriers:
 - Lack of authority
 - Lack of funding/staffing/resources
 - Lack of will at all levels (related to worldview)
 - Lack of infrastructure
 - Lack of consistency in both guidelines and implementation (not a direct barrier)
- Possible management:
 - Eradicate IS
 - Restrict watercraft use (rentals only, closure, etc)
 - Decontaminate watercraft
- Need of outside reviewers on the task team
- Need someone with expertise east of the Mississippi
- Estimated timeline
 - Done by July
 - Identify task team members by first of the year

December 8, 2016

- Bringing some partners (agencies, Departments, etc) around on watercraft regulations may create more involvement through “peer pressure”
- How prescriptive do we want to get?
- Discussion of potential task team members
 - BoatUS person
 - Nathan Stone
 - Steven Phillips
 - Pria
 - Dave Reed
 - Blaine
 - Wade Blackburn (American Canoe Association)
 - Add non-Fed ANSTF member
 - Someone from a recreationist group may not be appropriate because the recommendations generated by this group are unlikely to directly impact such groups.
- Best practices have already been established and it would be overreach for this group to try to identify and prescribe those in the white paper.
- Issues may intersect with marine usage where it concerns overland movement.
- Is this group expected to address military usage?
- Tailor recommendations to each of the three NEPA triggers:
 - Recommendations for movement on/off federal lands
 - Recommendations for federally funded programs
 - Recommendations for federal agencies
- Bounding this paper/recommendations to exclude marine, may result in recommending a “Part B,” where another group takes on that task.