

**From:** [Mott, Seth](#)  
**To:** [Benjamin Tuggle](#)  
**Subject:** Fwd: For Review: Climate Change Briefing Paper  
**Date:** Friday, January 19, 2018 1:03:48 PM  
**Attachments:** [Information Memorandum\\_SO3349 Climate Change final draft 4-10-17.docx](#)  
[PDD Memo - NCT and Climate Change Jan 12 2018.docx](#)

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IF you do come to town next week, we should find time to sit down with Jason on this stuff he has prepared for a briefing with Greg. I've deleted some of the documents he refers to, so you can focus on the main (?) points

----- Forwarded message -----

**From:** **Goldberg, Jason** <[jason\\_goldberg@fws.gov](mailto:jason_goldberg@fws.gov)>  
**Date:** Fri, Jan 12, 2018 at 12:52 PM  
**Subject:** For Review: Climate Change Briefing Paper  
**To:** "Mott, Seth" <[seth\\_mott@fws.gov](mailto:seth_mott@fws.gov)>  
**Cc:** "Hudson, Michael" <[michael\\_hudson@fws.gov](mailto:michael_hudson@fws.gov)>

Hi Seth,

Attached please find for review the briefing paper for Dr. Tuggle's planned discussion with PDD Sheehan. Several members of the NCT and other Service staff offered feedback and had excellent comments which we've incorporated.

In addition to the briefing paper, I have attached several files that Dr. Tuggle may want to use or share with PDD Sheehan. The NCTC file is still draft, but everything else is something we've produced previously.

Please let us know if you have any questions or if we can be of additional assistance.

Regards,

Jason

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## Information Memorandum for the Acting Assistant Secretary for Fish, Wildlife, and Parks

**Date:** April 10, 2017

**From:** Seth Mott, Acting Assistant Director for Science Applications, U.S. Fish and Wildlife Service (FWS) 202-208-7165

**Subject:** Preliminary response to the deliverable outlined in section 5(b)(1) of Secretarial Order 3349 – “American Energy Independence”

### I. Introduction

This memorandum identifies FWS Actions relating to the Presidential Actions, reports, and guidance that are rescinded by the March 28, 2017 Executive Order that relate to climate change.

### II. Background

The March 28, 2017, Presidential Executive Order entitled “Promoting Energy Independence and Economic Growth” revoked Executive Order 13653 of November 6, 2013 (Preparing the United States for the Impacts of Climate Change) and other related policies and directed the heads of all agencies to identify agency actions relating to or arising from those policies.

On March 29, 2017, the Secretary signed Order 3349, “American Energy Independence,” which established a “Climate Change Policy Review” that requires, among other things, each bureau and office to identify all actions they have adopted or are in the process of developing relating to Executive Order 13653 and other climate change policies identified in the March 28, 2017, Presidential Executive Order.

### III. Discussion

The U.S. Fish and Wildlife Service (FWS) has identified ten items relating to the Presidential Memorandum and Secretarial Order 3349.

1. **056 FW 1 (FWS Policy Manual, adopted July 22, 2013):** Establishes overall FWS policy and staff responsibilities on climate change adaptation and steps down the Departmental policy on climate change adaptation (523 DM 1)
2. **056 FW 2 (FWS Policy Manual, adopted June 20, 2014):** Establishes the Climate Adaptation Network in FWS, a team of senior-level staff which guides the bureau to enhance preparedness, adaptation, and resilience in the face of the impacts of climate change and its interaction with non-climate influences on fish, wildlife, plants, ecosystems, cultural --resources, and facilities.

3.

(b) (5) DPP



4. (b) (5) DPP [Redacted]

[Redacted]

[Redacted]

7. **A Framework for Building Climate Literacy and Capabilities among Federal Natural Resource Agencies:** Under the leadership of DOI’s Office of Policy Analysis, the FWS, NOAA, USDA-National Resources Conservation Service, USDA-Forest Service, EPA, and the U.S. Army Corps of Engineers contributed to this report. It describes common climate training and education goals and objectives, efforts to provide climate training for senior leaders, and opportunities to work with external partners and stakeholders on developing and delivering climate training.

8. **Climate-Smart Conservation: Putting Adaptation Principles into Practice**: This handbook, which underwent scientific peer review, was prepared in 2014. It offers guidance for designing and carrying out conservation in the face of a changing climate. The guide is designed to help conservationists and resource managers incorporate climate change considerations into their work.

9. **Planning for Climate Change on the National Wildlife Refuge System**: A publication completed in March 2014 to provide a practical primer for FWS employees. It is designed to help employees integrate climate change adaptation, mitigation and engagement strategies into planning activities.

10. **Considering Multiple Futures: Scenario Planning To Address Uncertainty in Natural Resource Conservation**: This guide, which was prepared in 2014 with FWS support and input, presents a broad synthesis of scenario planning concepts and approaches, focused on applications in natural resource management and conservation.

#### IV. Next Steps

The Fish and Wildlife Service has identified some examples of how it has stepped down climate change policy into guidance or criteria into project approvals or rankings in various FWS programs.

1. **North American Wetlands Conservation Act (NAWCA) Grants (Migratory Birds):** NAWCA Grants increase bird populations and wetland habitat. Grant decisions are based on scoring that includes categories such as waterfowl and wetlands status and trends, including climate change and long-term conservation. One criterion used in Standard NAWCA Grant proposal ranking is “Long-term Conservation and Climate Change” which may include up to 3 points for climate change considerations out of a total possible score of 100. For Small Grants under NAWCA, “Climate Change and Long Term Conservation” is allocated 1 possible point out of a total of 15. In FY16, \$66 million was available for NAWCA grants.  
<https://www.fws.gov/migratorybirds/pdf/grants/ProposalInstructions.pdf>
2. **Neotropical Migratory Bird Conservation Act (NMBCA) Grants (Migratory Birds):** NMBCA Grants addresses migratory bird population needs on a continental scale and throughout their life cycles. Project proposals must identify whether the project reduces the effects of a predicted or current climate change impact on a highly vulnerable species or habitat and are scored up to 3 points (out of 60 total points) in proposal ranking. In FY16, \$3.91 million was available for NMBCA grants. <https://www.fws.gov/migratorybirds/pdf/grants/nmbcaApplicationInstructions.pdf>
3. **Competitive State Wildlife Grant Program (Wildlife and Sport Fish Restoration):** This program provides States, the District of Columbia, Commonwealths, and territories (States) Federal grant funds to develop and implement programs for the benefit of wildlife and their habitats. The application states that additional points toward consideration of the proposal may be awarded for projects that significantly incorporate climate change considerations in project design. In 2016, grants to States under this program totaled \$5.6 million.  
<https://wsfrprograms.fws.gov/Subpages/GrantPrograms/SWG/SWG-NOFA2015.pdf>
4. **Cooperative Recovery Initiative (CRI) (National Wildlife Refuge System):** CRI is an internal FWS program with a strategic, cross-programmatic approach to recovering federally listed species on National Wildlife Refuges and surrounding lands that provides project funding for on-the-ground conservation efforts. Climate change is about 12% of the score for round 2 ranking of consideration of CRI Projects. In 2016, \$6.8 million was available for funding projects under this program.  
<https://www.fws.gov/refuges/whm/cri>
5. **National Coastal Wetlands Conservation Grant Program (Wildlife and Sport Fish Restoration, with assistance from the Coastal and Marine Program):** This program annually provides grants of up to \$1 million to coastal and Great Lakes states, as well as U.S. territories to protect, restore and enhance coastal wetland ecosystems and associated uplands. The grants are funded through the Sport Fish Restoration and Boating Trust Fund, which is supported by excise taxes on fishing equipment and motorboat fuel. Ranking criteria include questions regarding wetlands conservation, coastal watershed management, conservation of threatened and endangered species. Criteria for “other factors” includes a request for how the proposed project addresses climate change concerns and how it will be affected by climate change impacts. In January 2017, \$17 million in grants to States were awarded under this program.  
[https://www.fws.gov/coastal/CoastalGrants/pdfs/FY2018NCWG\\_NoticeAndInstructions.pdf](https://www.fws.gov/coastal/CoastalGrants/pdfs/FY2018NCWG_NoticeAndInstructions.pdf)

6. **National Fish Habitat Action Plan (Action Plan) (Fish and Aquatic Conservation):** Projects conducted under the Action Plan protect, restore and enhance the nation's fish and aquatic communities through partnerships that foster fish habitat conservation and improve the quality of life for the American people. The application process requests information from project applicants to identify when proposed projects address climate. However, no scoring or ranking criteria is based on this information, and it is used for internal reporting purposes only. In 2016, \$1.8 million was available for funding projects under this program.
  
7. **Cooperative Endangered Species Conservation Fund (CESCF) Grants (Ecological Services):** CESCF grants provide funding to support voluntary conservation projects for federally listed species and species that are candidates for listing under the Endangered Species Act. The projects reflect the collective priorities of the States and FWS. As part of review and scoring, each proposal is assessed for project readiness and conservation in the context of climate change and may be assigned additional points for such work. In 2017, grant awards included \$9.48 million for Habitat Conservation Planning Assistance, 19.64 million for Habitat Conservation Plan land acquisition, and \$11.16 million for Recovery land acquisition.  
[https://www.fws.gov/endangered/grants/pdf/FY17\\_CESCF-NOFO\\_FINAL.pdf](https://www.fws.gov/endangered/grants/pdf/FY17_CESCF-NOFO_FINAL.pdf)

## INFORMATION MEMORANDUM FOR THE PRINCIPAL DEPUTY DIRECTOR

**DATE:** January 12, 2018  
**FROM:** Dr. Benjamin Tuggle, Assistant Director, Science Applications  
**SUBJECT:** Climate Change and the U.S. Fish and Wildlife Service

### BACKGROUND

Environmental conditions are changing rapidly and include the effects of climate change, which are compounding existing impacts to fish and wildlife and adding new ones. This poses significant challenges for accomplishing the Service mission. Without acknowledging and factoring them into our work, these changes are expected to increasingly result in impacts on ecosystems, the economic and cultural services they provide, and local, State, and Tribal communities. Service climate change-related efforts promote efficient and cost-effective management. As part of this effort, the Service's National Climate Team (NCT) works internally and with partners to anticipate and address these challenges to trust resources.

### DISCUSSION

#### *Why must the Service consider climate change impacts?*

- Climate change affects stakeholders who rely on healthy natural resources for recreation and livelihood: hunters and anglers, wildlife-related industries, State fish and game agencies, and Tribes. The more detrimental the changes linked to climate change, the more focus, response, staff resources, and funding that are required by States and other partners to address those changes.
- The effects of climate change, particularly in combination with other existing stressors, are affecting every aspect of the Service mission and already are resulting in habitat loss, range shifts, population declines, changes in bird migration patterns, spread of invasive species, greater wildfire frequency and intensity, and a higher incidence of insect and disease outbreaks. These effects will continue into the future and are likely to increase.
- Service lands and facilities, and those of States and partners we support, are facing increasing climate-related challenges including more frequent or severe floods, fires, sea level rise, and drought. Understanding the risks to Federal, State, Tribal and private infrastructure helps the Service prevent loss of structures and habitat and avoid costly replacement in the future.
- The Service has a long-standing commitment and legal responsibilities to manage resources based on a strong science foundation. For example, the Refuge System Mission and Guiding Principles state "We subscribe to the highest standards of scientific integrity and reflect this commitment in the design, delivery and evaluation of all our work;" several sections of the Endangered Species Act require the use of the best scientific information available; and DOI and Service scientific integrity policies guide our work.

#### *What is the National Climate Team (NCT)?*

- The Service-wide, cross-programmatic NCT is comprised of professional staff who provide relevant technical expertise and facilitate communications on climate change science, adaptation, outreach, policy, and guidance to the Service and its partners.
- The NCT's FY18 Workplan has five key priorities: Provide Technical Assistance and Internal Coordination, Review the 2010 Climate Change Strategic Plan, Improve Communications, Enhance Partnerships and External Coordination, and Facilitate Delivery

of Training.

***What are examples of the Service's climate change-related accomplishments?***

- The Service collaborated with the Association of Fish and Wildlife Agencies (AFWA) to assist States in voluntarily incorporating climate science and adaptation into State Wildlife Action Plans.
- Following Hurricane Sandy, the Service led more than 30 projects to restore coastal marshes, wetlands, and shoreline; create or open connections to rivers and streams for fish passage; and reduce the risk of future flooding and damage to local infrastructure. This work benefited National Wildlife Refuges and National Fish Hatcheries and surrounding communities.
- The Service provides climate-related technical capacity such as decision support tools, modeling, vulnerability assessments, and other science products that manage and synthesize large amounts of data. Examples include: an application matching 16 climate variables and nonnative species' ranges to better predict the risk of invasive species introductions; a Weather Severity Index to help estimate influences of climate change on waterfowl populations, habitat, and hunter opportunity; and the FishVis Mapper for identifying vulnerabilities of riverine habitat and fishes to climate change in the Midwest.
- The Service recognizes that some climate changes result in beneficial conditions. For example, part of the basis for the Service downlisting the wood stork from endangered to threatened was modeling which projected habitat expansion due to changing climate.
- The Service works with partners to improve understanding of species adaptive capacity to cope with changing climate; this will help improve status assessments and the effectiveness of conservation planning and management.
- The Service developed tools to assess vulnerability of its infrastructure. For example, Fish and Aquatic Conservation developed a tool that is currently being applied to National Fish Hatcheries to evaluate how climate change may impact hatchery infrastructure and operations in the Pacific Northwest.
- Where feasible, the Service implements projects to reduce energy use, such as retrofitting existing facilities, incorporating the latest energy efficient products into designs for new construction, and expanding renewable energy availability. As a result, the Service has reduced its energy consumption per gross square foot by an impressive 24.6% from the FY 2015 energy intensity baseline. This reduction has resulted in a savings of nearly \$2 million since FY 2015.
- Developed at the direction of Congress and published in 2013, following public review, the Service helped lead the development of the National Fish, Wildlife, and Plants Climate Adaptation Strategy with the States and other partners. The Strategy advocates a coordinated response across management and jurisdictional boundaries in light of environmental changes being observed across the nation.
- The Service's National Conservation Training Center (NCTC) designed and offered climate-related courses to address natural resource management needs of the Service and its partners.

**NEXT STEPS**

The Service will continue to pursue opportunities, within existing capacities and consistent with Departmental guidance such as Secretarial Order 3360 and our Director's Office, to better conserve trust resources in the face of a changing climate, including continuing work to implement the NCT FY18 Workplan.