

**TESTIMONY OF DAN ASHE, DIRECTOR,
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BEFORE THE SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
REGARDING THE PRESIDENT'S CLIMATE ACTION PLAN**

January 16, 2014

Introduction

Chairman Boxer, Ranking Member Vitter, and Members of the Committee, I am Dan Ashe, Director of the U.S. Fish and Wildlife Service (Service), within the Department of the Interior (Department). Thank you for the opportunity to testify on the President's Climate Action Plan.

Over the past 50 years, the phenomenon of climate change has been a significant driver for changes across our landscapes and ecosystems, which have impacted our nation's living resources – our fish, wildlife, and plants. Examples include shifts in precipitation, with more frequent and severe storms, flooding, droughts, and wildfires. Average temperatures of coastal and fresh waters are rising, and we are also experiencing rising sea levels, loss of sea ice, ocean acidification, and increased coastal flooding and erosion¹. From the Arctic to the Everglades, these impacts are affecting wildlife species and habitat critical to the American people. As the climate continues to change over the next century, so too will the impact on species and the ecosystems they rely on. And while my testimony focuses on the impacts the Fish and Wildlife Service is seeing, it is important to note that we are seeing these dynamics play out on other federal lands and private lands alike. The federal government has an important role to play in natural resource climate preparedness and the President's Climate Action Plan recognizes this.

For example, the Department manages 35,000 miles of coastline, including 180 marine and coastal National Wildlife Refuges, making sea level rise a critical concern. National Wildlife Refuges along our nation's coasts are experiencing a rise in sea level that is destroying coastal habitats used by migrating and wintering waterfowl. Rare species that depend on these areas year-round are losing their habitat, too, as are Federally protected marine species, like polar bears and walrus. The dramatic loss of sea ice in northern latitudes – where the impacts of climate change are most profound – has reduced important feeding habitat for these species. Other refuges throughout the country are experiencing extreme drought, which, while not entirely due to climate change, starkly illustrates the impacts of climate change-driven losses of available water to fish and wildlife. Conflicts over water-needs continue to emerge, particularly as the south-central states and Pacific southwest struggle with drought-limited water sources.

The President's Climate Action Plan (Plan) released in June 2013 serves as a blueprint for responsible national and international action to slow the effects of climate change using existing authorities. Building on efforts underway in the states and local communities across the country,

¹ U.S. Global Change Research Program

the Plan cuts carbon pollution while helping the nation prepare for, and ameliorate, future impacts. This is a critical and ambitious effort to address one of the major challenges of the 21st century. The Plan's recognition of the importance of protecting natural resources and promoting resilience in fish and wildlife and their habitats is an integral part of our nation's comprehensive response to climate change.

The Plan has three key pillars:

- 1) Cut Carbon Pollution in the United States;
- 2) Prepare the United States for the Impacts of Climate Change; and
- 3) Lead International Efforts to Combat Global Climate Change and Prepare for its Impacts.

The Department plays a key role in the implementation of the Climate Action Plan. Under the plan, the Department has several responsibilities, including reducing methane emissions; accelerating clean energy permitting; contributing to efforts to prepare the U.S. for the effects of climate change; protecting wildlife; helping Indian tribes adapt to climate change; and developing actionable climate science.

The Service has already made significant progress toward preparing for climate change, the second key pillar of the Plan. We are actively working with states, local communities, and the private sector to meet the goals of this important action plan. Below are examples of actions the Service is undertaking that focus on our efforts to help put fish, wildlife, and plants in the best position to adapt to the effects of climate change.

Preparing the United States for the Impacts of Climate Change

The Plan calls on agencies to identify vulnerabilities of key sectors to climate change. The mission of the Service is, working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. Our focus under the Plan is the effects of climate change on fish, wildlife, and plants and how we must act to ensure that these resources are conserved for the American people over the long term. In 2010, the Service was among the first federal agencies to develop a Climate Change Strategic Plan, which referred to climate change as, "the greatest challenge to fish and wildlife conservation in the history of the Service." This Strategic Plan established a basic framework to help ensure the sustainability of fish, wildlife, plants and habitats in the face of accelerating climate change.

Climate Adaptation Strategy – Language in the Conference Report for the Fiscal Year 2010 Interior, Environment and Related Agencies Appropriations Act (House Report 111–316, pages 76–77) recognized the imperative to address the impacts of climate change on natural resources. The Conference Report urged the Council on Environmental Quality (CEQ) and the Department to “develop a national, government-wide strategy to address climate impacts on fish, wildlife, plants, and associated ecological processes” and “provide that there is integration, coordination, and public accountability to ensure efficiency and avoid duplication.” Taking this charge, the President's Interagency Climate Change Adaptation Task Force, convened by CEQ, called for the development of a climate adaptation strategy for fish, wildlife, and plants in its 2010 Progress Report to the President, as did the Service's Strategic Plan.

In response, the Service helped chair and develop the interagency National Fish, Wildlife and Plants Climate Adaptation Strategy (Strategy), released in March of 2013. This Strategy identifies key vulnerabilities and presents a unified approach – reflecting shared principles and science-based practices – to reduce the negative impacts of climate change on fish, wildlife, plants, our natural resource heritage, and the communities and economies that depend on them.

Our efforts to develop the Strategy were co-led by the National Oceanic and Atmospheric Administration (NOAA) and the New York State Department of Environmental Conservation, representing state fish and wildlife agencies. The Strategy was developed in close coordination with other federal adaptation efforts such as the National Ocean Policy Implementation Plan and the Freshwater National Action Plan (led by the U.S. Geological Survey and the Environmental Protection Agency), and it draws from existing adaptation efforts by states, Federal agencies and others.

The Service is now co-leading (along with NOAA and the Association of Fish and Wildlife Agencies, and with support from CEQ) a Joint Implementation Working Group that is promoting implementation of the Strategy and will be responsible for reporting on Strategy implementation and future revisions. The fact that state agencies are integrating the recommendations of the Strategy into state planning is a testament to its value.

Vulnerability Assessments – The Service is actively conducting vulnerability assessments for species and habitats across the country to improve understanding of how climate change will affect our trust resources in the coming years. Climate change vulnerability assessments are used in conjunction with analyses of non-climate stressors to assess the overall vulnerability of species and habitats and plan for needed management activities.

In 2011, the agency worked with partners to develop the report “Scanning the Conservation Horizon: A Guide to Climate Change Vulnerability Assessment.” This report seeks to help resource managers understand the impacts of climate change on species and ecosystems and to support efforts to safeguard these valuable natural resources.

Safeguarding Communities and Economies – The Plan recognizes that protecting America’s ecosystems is critical to safeguarding the communities and economies that depend on them, and that healthy natural resources can help reduce the impacts of climate change on people as well as nature. Every year, coastal habitats such as coral reefs, wetlands, and mangroves provide protection for people, infrastructure, and communities from storms, erosion, and flood, avoiding potentially billions of dollars of damage. Forests help provide clean drinking water for many cities and towns, while our urban forests help alleviate urban heat island effects and manage stormwater. Hunting, fishing, and other wildlife-related recreation in the United States is estimated to contribute over \$140 billion to our Nation’s economy annually, which is approximately one percent of the Nation’s gross domestic product². The Service works to protect these natural ecosystems and promote resilience in fish and wildlife populations, forests

² USFWS 2011 National Survey of Fishing, Hunting, and Wildlife Associated Recreation

and other plant communities, and freshwater resources in part to ensure they can continue to provide these important benefits to people and communities.

Addressing sea level rise: At Alligator River National Wildlife Refuge on the North Carolina coast the Service is working with partners to evaluate the effects of different adaptation strategies on areas impacted (or likely to be impacted) by sea level rise, to determine how to make the shoreline more resilient to rising sea levels. The strategies include constructing oyster reefs to buffer shorelines from waves and storm surges, restoring the natural hydrologic regime and associated wetland systems, and planting salt- and flood-tolerant species. The goal of this project is to facilitate a transition to salt marsh and open-water habitats that is an inevitable consequence of sea level rise in this area. The project will lead to outcomes that will inform adaptation efforts in other parts of coastal North Carolina as well as throughout the United States and around the world.

Within the boundaries of the Blackwater National Wildlife Refuge on Maryland's Eastern Shore, 5,000 acres of marsh have been lost since the late 1930s from a combination of factors including destruction by nutria, an introduced species, land subsidence, and rising sea levels. For two years, the Service has been working with Federal, state and local partners and individual experts to assess the process of sea level rise and set forth key strategies to enable these tidal marshes to persist for the benefit of people and the special birds that need this habitat for survival, as well as Chesapeake Bay fisheries that depend on these wetlands for shelter and food. Steps can be taken to slow the rate of loss of these tidal marshes and improve their health, and to ensure the marsh has room to move and re-establish as the sea level rises. Techniques include adding thin sediment layers through hydraulic pumping to increase the marsh surface elevation and fill in eroded areas, etching shallow channels to connect the failing marsh areas to existing tidal creeks and lower their water levels, acquiring upland areas to allow the marsh to rise, and controlling growth of invasive plants that crowd out more desirable native grasses favored by salt marsh birds.

Restoring the Gulf: In the Gulf of Mexico, climate change, sea level rise, subsidence, habitat conversion and fragmentation, decreasing water quality and quantity, and invasive species have diminished the resilience of the ecosystem. In Louisiana, coastal wetlands in the world's third largest delta are being lost every day, taking with them nature's best storm protection and water filter as well as habitat teeming with sea life that helps support the region's critical commercial fisheries. Natural disasters like hurricanes and manmade disasters like oil spills only exacerbate these losses.

In the wake of the April 2010 Macondo 252 Deepwater Horizon oil spill, the Service is working with state, tribal and other federal partners to identify and determine the extent of injuries suffered by natural and cultural resources. Through the Natural Resource Damage Assessment process, and the Gulf Coast Ecosystem Restoration Council, the Service and these other governments and agencies will seek to recover damages from those responsible and plan and carry out natural resource restoration, which will include anticipating the effects of climate change on long-term restoration projects.

In addition, the Service is working to build resilience in the Gulf by using the National Wildlife Refuges as key ecological links in connecting existing conservation lands, larger landscapes, buffer areas and corridors in order to make the system more resilient and provide fish and wildlife species the ability to migrate and move across the landscape.

Reducing wildfire risk: The Plan directs agencies to work with tribes, states, and local governments to take steps to reduce wildfire risks, which are exacerbated by heat and drought conditions partially resulting from climate change. Because some fish and wildlife species depend on habitats that are maintained or rejuvenated by fire, the Service uses prescribed burning to stimulate a vigorous regrowth of healthy, nutritious plants that provide better food and cover for these species. More frequent, managed fires can also help reduce the fuel built up in natural communities that might otherwise be subject to large and extremely hot and destructive wildfires.

The Service's fire program is responsible for protecting more than 75 million burnable acres; many of these are small coastal and urban tracts with extensive wildland-urban interface areas along the East, West, and Gulf Coasts and in the Midwest. The Service's fire management program includes hazardous fuels reduction, wildfire management, and wildfire prevention.

And in November of last year, DOI joined six other agencies to announce the National Drought Resilience Partnership to make it easier for communities seeking help to prepare for future droughts and reduce drought impacts. This Partnership enhances the efforts of Federal agencies already working with communities, businesses, and farmers and ranchers to build resilience to drought and help prepare their communities for future drought events.

The Service is also working with states, universities and non-profit partners on America's Longleaf Restoration Initiative, working to expand the longleaf pine forest in the Southeastern United States. A prime example of the importance of large-landscape restoration, one of the goals of the initiative is to establish functional connectivity across large geographic areas to conserve large-area dependent species and resilience to known and potential environmental stresses, including hurricanes, catastrophic fire and climate change. Research conducted by the U.S. Forest Service has suggested that longleaf pine is especially adapted to climate change, in part due to its resistant to drought and high temperatures.

Recovering from Hurricane Sandy: The Plan pilots innovative strategies in the Hurricane Sandy-affected region to strengthen communities against future extreme weather and other climate impacts. Coastal wildlife refuges and marshes provide protection and buffering for inland areas from storms, such as the devastating Hurricane Sandy. In October of 2013, Secretary of the Interior Sally Jewell announced that a total of \$162 million would be invested to help heal the devastation caused by Hurricane Sandy and make our coastal areas more resilient against future storms and a changing climate. Secretary Jewell stated that "our public lands and other natural areas are often the best defense against Mother Nature."

Service projects are designed to increase resilience by restoring coastal marshes, conducting beach and dune restoration, providing aquatic connectivity in streams and rivers, and by

providing integrated science decisions that bring partners and science together to reduce redundancy and increase the effectiveness of conservation actions.

By restoring aquatic connectivity and preserving and rebuilding natural ecosystems, services will be provided that better protect and benefit wildlife, communities, and the economy. For example, the Service has been working to clean up trees and debris left behind by Hurricane Sandy and restore protective coastal marshes at multiple refuges including Wertheim, Target Rock and Elizabeth A. Morton National Wildlife Refuges in New York. The Service is also working to restore and enhance tidal marshes, replace invasive plants with native ones, preserve wildlife habitat and mitigate damage from future storms to coastal communities and infrastructure.

Cutting Carbon Pollution in America

The Service plays a role in helping to cut carbon pollution through improvements in infrastructure and operations, and carbon sequestration.

Infrastructure and Operations/Reducing Carbon Pollution – The Plan sets a goal for the Federal government to be a leader in clean energy and energy efficiency, as well as to increase the resilience of federal facilities and infrastructure. The Service is contributing to this goal by substantially lowering its building energy intensity (energy consumption per square foot of building space) and its potable water consumption intensity (gallons per square foot); reductions that meet or exceed the requirements of Executive Order 13514, *Federal Leadership in Environmental, Energy and Economic Performance*.

The Plan commits the federal government to building a 21st-Century transportation sector. The Service has taken considerable steps to improve the composition of our motor vehicle fleet by replacing over 10 percent of our motor vehicle fleet with more fuel efficient vehicles during FY2010. This change of fleet composition is expected to reduce petroleum fuel use by approximately 185,000 gallons of petroleum fuel per year and reduce GHG emissions by approximately 1,639 metric tons of carbon dioxide annually.

Biological Carbon Sequestration – The Plan commits to protecting our forests and critical landscapes, and to preserving the role of forests and coastal wetlands in mitigating climate change. The Service has made a considerable investment in biological carbon sequestration through our continuing efforts to restore and create fish and wildlife habitats under our statutory mandates. These efforts are important to our mission to conserve the wildlife of America and they also contribute to the reduction of greenhouse gas concentrations in the atmosphere.

We have implemented biological carbon sequestration projects across the Nation, including the reforestation of more than 80,000 acres of refuge lands in the Lower Mississippi River Valley, an important bottomland hardwood forest ecosystem in Mississippi, Louisiana, Arkansas, and Missouri, since the early 1990s. These projects are restoring valuable habitats for wildlife – including endangered species – while capturing and storing thousands of tons of carbon over their lifetimes.

Conclusion

The President's Climate Action Plan supports three common-sense and essential areas of ongoing efforts by the Service: (1) conserving the wildlife of America for the long term by leading efforts to help fish and wildlife adapt to the effects of climate change; (2) reducing GHG emissions by improving the energy efficiency of our infrastructure and vehicle fleet; and (3) removing carbon from the atmosphere through biological carbon sequestration. The Service is embracing the challenge presented by climate change to the Nation's fish and wildlife resources and we look forward to working with this Committee and the Congress to enhance this most important work.