



Pintail duck photo by Peter LaTourette

# Climate Change, Wildlife, and Wildlands

## Introduction

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The U.S. National Park Service and the National Wildlife Refuge System serve as models for public lands around the globe. Almost 365 million people visit our national parks and wildlife refuges annually, and the number continues to climb. With this increase in visitation comes threats to the resources, such as overcrowding and high pollution levels. These challenges now are complicated by the potential impacts of climate change.

Rangers and outdoor guides have a unique opportunity to inform visitors about the impacts of global warming on the natural wonders of our national parks and wildlife refuges. The U.S. Environmental Protection Agency, in partnership with the U.S. National Park Service and U.S. Fish and Wildlife Service, designed this *Climate Change, Wildlife, and Wildlands* toolkit to help rangers and guides introduce the issue to visitors.

Staff members of EPA's climate change program in the Office of Air and Radiation spoke with environmental educators and staff at state and national parks to determine the interest in information and activities that could help them intertwine climate change into their larger message of stewardship and preservation. The result is an interpretive kit that includes a video, trail cards, global warming wheel card, and this CD-ROM, which contains fact sheets, brochures that can be ordered, case studies, sample trail talk outlines, visual aids, and a number of interactive activities. The tools are geared toward people of all ages to serve the needs of the diverse groups that visit parks and refuges.

The kit focuses on four areas of the nation that are especially vulnerable to the impacts of climate change:

- Western Mountains and Plains (including Glacier National Park)
- Great Lakes and Upper Midwest (lakes, forests, and prairie pothole ecosystems)
- Chesapeake Bay and Assateague Island (the mid-Atlantic coast)
- Everglades and South Florida (including the Florida Keys)

Many of the impacts described for these areas are expected to occur in local, state, and national parks and wildlife refuges in other parts of the country as well.



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The toolkit contains the following items:

- A video on climate change directed toward the “10-minute visitor.”
- A set of 12 trail cards, each with a picture of a species that is expected to be affected by climate change.
- A hand-held global warming wheel card for visitors/students to use to determine their personal score on emissions of carbon dioxide—a greenhouse gas—and ways that they can reduce those emissions. One side of the wheel card is titled “Global Warming—What’s Your Score?” and the other side is “Global Warming—What Can You Do?” Interpreters/teachers can use the card to illustrate the importance of energy savings in slowing global warming.

A CD-ROM that contains the following components:

- A set of 13 basic-level fact sheets appropriate for younger and/or non-scientific audiences and a set of 13 advanced-level fact sheets appropriate for a more in-depth introduction. The fact sheets may be printed out for distribution.
- A set of three attractive, four-color brochures on the potential impacts of climate change on public lands, birds, and fish that can be ordered in limited quantities for distribution.
- A 12-panel, fold-out brochure with a poster that describes the evidence for global warming, potential impacts, and actions that people can take to reduce it. The brochure can be ordered in limited quantities for distribution.
- A six-panel brochure on renewable energy technologies. The brochure can be ordered in limited quantities for distribution.

- An eight-panel brochure describing the potential impacts of sea level rise on the coast of New Jersey. The brochure can be ordered in limited quantities for distribution.
- A set of four case studies that provide in-depth descriptions of the potential impacts of climate change on specific areas of the nation, plus a set of four detailed outlines for trail talks on climate change and a set of flash cards to accompany the case studies as visual aids.
- Interactive activities such as word puzzles and coloring sheets that employ images and vocabulary commonly found in discussions of global warming.
- A PowerPoint presentation that can be used for talks with large audiences and school groups.

For additional suggestions on how to incorporate the tools into presentations and talks about wildlife preservation, click on “Getting Started,” under the Introduction menu.

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We value your opinion of the *Climate Change, Wildlife, and Wildlands* toolkit and encourage you to print out and complete the “Kit Evaluation Form” at the end of the CD-ROM under the Conclusion menu. Your comments and suggestions will enable us to produce any additional tools you may need and to refine those provided here.

For millions of people in the United States, national parks and wildlife refuges serve as places where they can relax with friends and family, and enjoy and learn about nature. While visiting parks and refuges, the public looks to interpreters to answer questions about the natural environment.

Back home, students depend on classroom teachers to continue their quest for a connection to the ecosystems in the world around them.

Interpreters/teachers serve as an invaluable line of communication to the public on environmental issues. With the tools provided in this kit, interpreters can relay their enthusiasm for the parks while promoting awareness of how climate change may alter them.

The tools provide fun ways to teach people about the potential impacts of global warming on wildlife, parks, and refuges, and motivate visitors to take action to help preserve those national treasures. Visitors will learn that they need not be at parks or refuges to do their part. Efforts made at home to slow global warming may help ensure that the national parks and wildlife refuges will continue to be available for future generations to enjoy.