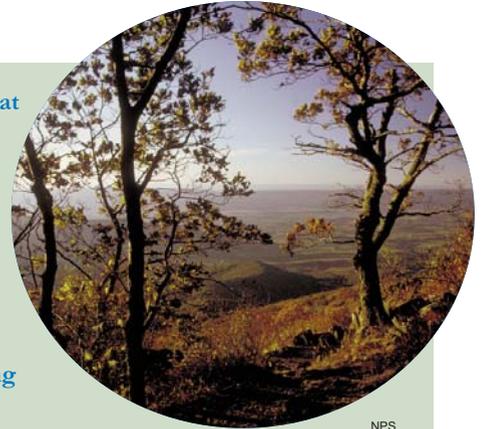




CHANGE THE FORECAST FOR WILDLIFE
SOLUTIONS TO GLOBAL WARMING

Global Warming and VIRGINIA

Virginia's diverse coastal and inland ecosystems face a serious threat from global warming. By 2100, the Intergovernmental Panel on Climate Change estimates average temperatures in the state could rise about 5.4 degrees Fahrenheit. Precipitation patterns are projected to change, with the likelihood of more extreme weather events such as floods and droughts. Additionally, sea level rise along Virginia's 3,300 miles of coast will have a significant impact on the state's coastal marshes and other critical wildlife habitat. We can solve global warming and revitalize our economy by rebuilding America with clean energy.



NPS

Global warming effects on Virginia wildlife

Virginia is home to an incredible diversity of native wildlife species, including 322 birds, 80 mammals, 202 fish, 60 reptiles and 74 amphibians. Rising temperatures and sea level in the state will likely change the makeup of entire ecosystems, forcing wildlife to shift their ranges or adapt.

- Warmer water temperatures due to global warming could lead to as much as a 61 percent decline in trout in the Appalachian region, as well as a 90 percent loss of habitat for brook trout in headwater streams.
- At the rate temperatures are increasing, the red spruce forests in Shenandoah National Park could be replaced with southern pines and oaks in the next 30-80 years, greatly affecting the animals and vegetation that call these unique mountain forests home.
- Chesapeake Bay historically has been an important waterfowl wintering ground, but sea level rise within the bay is

changing the makeup of salt marshes, making them less attractive to many ducks and geese. Projections for the region suggest sea level rise will further reduce shallow water waterfowl habitat.



Global Warming Pollution

Burning coal, gas and oil produces carbon dioxide, which is a greenhouse gas that warms the planet as it builds up in the atmosphere. Some of the carbon dioxide released today remains in the atmosphere after even 100 years, trapping more and more heat.

Since the mid-1800s, emissions of carbon dioxide have skyrocketed, causing global temperatures to rise by about 1° Fahrenheit in the last century. Earth has not experienced such a rapid change in temperature in thousands of years.

A Global Solution

The U.S. must lead the world by passing global warming legislation at home and working with other nations at the Copenhagen climate summit at the end of 2009 to sign a new climate treaty that keeps further warming below 2° Fahrenheit. With a global solution, we can avoid the worst impacts of global warming.



What's at stake for Virginians?

Those who have lived in Virginia for any amount of time may think they know how to handle the heat, but global warming is something that cannot be ignored. The changes that come are expected to affect everything from the air we breathe and water we drink to the revenues brought in by tourism.

- Warmer water temperatures due to global warming could encourage the spread of diseases among oysters in the Chesapeake Bay, threatening the state's oyster fishery, which is the lifeblood of some local rural communities.
- The EPA estimates sand replenishment for Virginia's coastline could cost \$200 million-\$1.2 billion in the next century to compensate for a possible 20-inch sea level rise.
- Warmer average temperatures could increase concentrations of ground-level ozone, which is known to aggravate respiratory problems such as asthma, especially in children and seniors.
- Loss of wildlife and habitat could mean a loss of tourism dollars. In 2006, more than 3.6 million people spent more than \$2.1 billion on hunting, fishing and wildlife viewing in Virginia. The industry in turn supported 49,265 jobs in the state.* (*Jobs are an average of 2001 and 2006 data.*)

“Global warming poses an overriding challenge to our responsibility to protect wildlife for our children's future. We must advance balanced solutions that work for people, wildlife and the economy to overcome this challenge.”—

Larry Schweiger
President, CEO
National Wildlife Federation

GLOBAL WARMING NATIONAL POLICY SOLUTION:

A federal legislative solution can drive American ingenuity, create millions of green jobs, and restore America's global leadership on global warming. Legislation should:

- * Include ambitious targets to reduce America's global warming pollution as swiftly and deeply as possible. Scientists say that developed countries as a whole need to reduce their global warming pollution by at least 80% from 1990 levels by 2050 to avoid the worst impacts of global warming.
- * Move America toward a 100% clean electricity future by maximizing energy efficiency, modernizing the electric power grid, expanding power generation from renewable energy resources, and investing in clean transportation infrastructure.
- * Invest in natural resources. Forests, coasts, wetlands, clean air and clean water are already being impacted by global warming. Funding is needed to safeguard the natural resources that are critical to wildlife populations and human health.
- * Lead a worldwide effort to finance clean energy technology, forest conservation, and adaptation to unavoidable impacts of global warming.

For more information, visit: www.nwf.org/globalwarming.



John Thornton (NREL)

Virginia's solutions to global warming

The Virginia Energy Plan:

The Virginia Energy Plan identifies four overall goals. One of these goals is to reduce greenhouse gas emissions by 30 percent by 2025, bringing emissions back to 2000 levels through, in part, energy conservation and renewable energy actions identified in the Plan. Further study will be required to formulate a plan to fully achieve the goal, and in December 2007 the Virginia Governor created a Commission on Climate Change to prepare a Climate Change Action Plan.

Following some simple guidelines, you can cut your global warming pollution, become more energy efficient and give something back to nature.

- **Plant shade trees:** The Department of Energy says planting three trees strategically around your home can reduce your annual heating and cooling costs by an average of 40 percent.
- **Convert to compact fluorescent bulbs:** If every household in America replaced its next burned out light bulb with a compact fluorescent, we would prevent more than 13 billion pounds of carbon dioxide from being emitted.
- **Become a Green Tag subscriber:** Many states now offer options for homeowners to buy electricity from clean, renewable sources such as wind, solar and biomass that produce little or no global warming pollution. Green energy can also be purchased through the National Wildlife Federation by visiting www.nwf.org/energy.
- **Act locally:** Contact your mayor and ask that (s)he sign the U.S. Mayors Climate Protection Agreement, committing your city or town to meet or beat the global warming pollution reductions outlined in the Kyoto Protocol.



For more information, contact:

Julie Lalo
703-438-6084
LaloJ@nwf.org