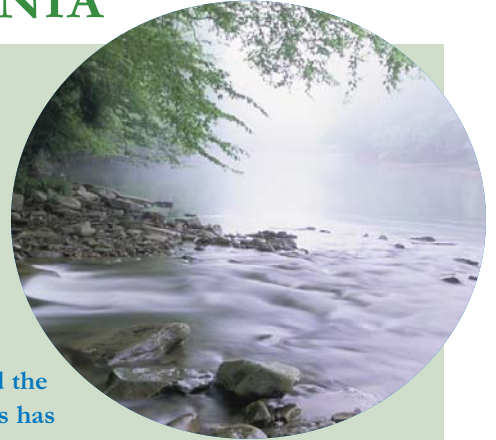




CHANGE THE FORECAST FOR WILDLIFE SOLUTIONS TO GLOBAL WARMING

Global Warming and WEST VIRGINIA

The Intergovernmental Panel on Climate Change estimates average temperatures in West Virginia could rise 5.85 degrees Fahrenheit by 2100 if global warming continues unabated. Just the slightest increase in water or air temperature could alter river streamflow, force animals and plants to shift ranges and create for our children an environment filled with more extreme weather events, increased health problems and repercussions today's scientists haven't even begun to explore. Since 97 percent of West Virginia is forested, the most obvious changes in the state will happen in the woods. Already, warmer temperatures have increased the number of invasive pests like the gypsy moth, which in recent years has attacked valuable hardwoods. Trees sensitive to climate may shift their range northward. Those located on the Appalachian peaks, such as the red spruce, may have no place to go and be overrun by more heat-tolerant species. We can solve global warming and revitalize our economy by rebuilding America with clean energy.



Global warming effects on West Virginia wildlife

West Virginia is home to an incredible diversity of native wildlife species, including 237 birds, 68 mammals, 39 reptiles, 151 fish and 47 amphibians. Rising temperatures in the state will likely change the makeup of entire ecosystems, forcing wildlife to shift their ranges or adapt.

- Higher temperatures in West Virginia's Ice Mountain Preserve already have caused ice to melt earlier in the year. Continued warming could make conditions unfavorable for the area's unique boreal plants and reduce habitat for species such as the endangered Virginia northern flying squirrel, which lives at altitudes above 2,860 feet.



- Some 38 songbird species may no longer breed in West Virginia due to warmer temperatures. These could include the purple finch, black-capped chickadee, tree swallow and 12 species of warblers.
- Higher average temperatures are projected to significantly reduce habitat for trout and other cold-water fish.

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 West Virginians?

Residents of West Virginia may soon feel the heat of global warming, from poorer air quality in cities to shrinking forestry and wildlife recreation industries.

- West Virginia's agriculture industry experienced losses of more than \$80 million in 1999, the driest growing season on record in the eastern United States. Continued warmer, drier conditions projected with global warming could increase such droughts.
- Duck hunters already are seeing a direct relationship between warmer winters and decreased duck numbers. Not only are waterfowl not needing to migrate as far south, but global warming is likely to decrease habitat in important breeding grounds such as the Prairie Pothole Region in the northern U.S.
- Global warming could increase the lifespan of disease-carrying insects such as mosquitoes and ticks, causing more cases of Lyme disease and West Nile virus.
- Loss of wildlife and habitat could mean a loss of tourism dollars. In 2006, more than 1.4 million people spent nearly \$1.2 billion on hunting, fishing and wildlife viewing in West Virginia. The industry in turn supported 29,064 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.



West Virginia's solutions to global warming

West Virginia has a number of incentive programs and tax breaks to encourage businesses and individuals to become more energy efficient and use renewable energy sources such as wind and solar power, a key step to reducing harmful carbon pollution.

- The 44 wind turbines at West Virginia's Mountaineer Wind Energy Center generate enough energy to serve about 20,000 homes, cutting 162,000 tons of carbon dioxide emissions and contributing more than \$700,000 to the local and state economies.
- According to the U.S. Department of Energy, West Virginia has the potential to generate an estimated 5.4 billion kilowatt-hours of electricity using fuel from biomass—organic matter such as plant fibers and animal waste. This would supply the annual needs of 543,000 average homes, or 61 percent of the residential electricity use in the state.

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.

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