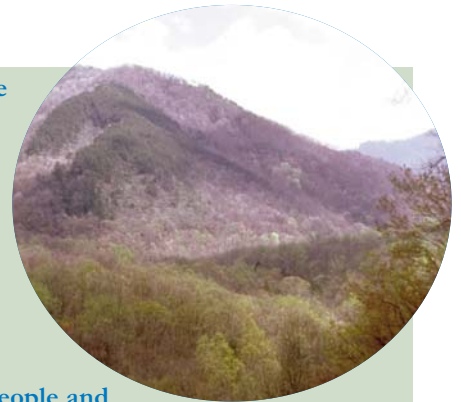




## CHANGE THE FORECAST FOR WILDLIFE SOLUTIONS TO GLOBAL WARMING

# Global Warming and TENNESSEE

From the peaks of the Great Smoky Mountains to the depths of the Cumberland Caverns, Tennessee's diverse forest and river ecosystems face a serious threat from global warming. The Intergovernmental Panel on Climate Change estimates average temperatures in Tennessee could rise about 6.75 degrees Fahrenheit by 2100 if global warming continues unabated. This increase could lead to more extreme weather events like floods and droughts, poorer agricultural harvests and more health problems such as asthma and Lyme disease. Global warming could throw entire ecosystems out of balance, not only harming Tennessee's wildlife habitats but also the people and economies that depend on a healthy environment. For example, the state saw a greatly reduced number of waterfowl in 2001 due to warmer winter temperatures up north that discouraged ducks and geese from flying as far south. We can solve global warming and revitalize our economy by rebuilding America with clean energy.



NPS

## Global warming effects on Tennessee wildlife

Tennessee is home to an incredible diversity of native wildlife species, including 278 birds, 76 mammals, 283 fish, 55 reptiles and 72 amphibians. Rising temperatures in the state will likely change the makeup of entire ecosystems, forcing wildlife to shift their ranges or adapt.

- Global warming could lead to a significant reduction in the abundance and habitat range of trout in the Appalachian region, including a 61 percent decrease in abundance and 90 percent loss of habitat of brook trout in headwater streams.
- The breeding ranges of 34 species of songbirds—including the American redstart and the scarlet tanager—are in danger of disappearing from Tennessee's borders due to global warming.
- Seventy-five percent of the ducks that migrated to Tennessee between 1990-2000 originated from the Prairie Pothole Region, an area in the north-central U.S. and south-central Canada.



Researchers project that global warming could destroy up to 91 percent of these wetlands by 2080, reducing the abundance of breeding ducks by 9-69 percent and seriously affecting Tennessee's waterfowl hunting industry.

## 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 Tennesseans?

Tennesseans 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 air and water quality to tourism and recreation opportunities.

- Warmer, drier conditions not only may cause changes in the makeup of the state's forests, they may also increase the frequency of wildfires, hurting Tennessee's lucrative commercial timber industry.
- More extreme floods and droughts due to global warming could contribute to costly property damage and losses in cash crop production.
- Scientists have found that warmer temperatures caused by global warming can lead to higher concentrations of ground-level ozone pollution, a leading cause of respiratory problems, especially in children and seniors.
- Loss of wildlife and habitat could mean a loss of tourism dollars. In 2006, nearly 3.6 million people spent more than \$2.1 billion on hunting, fishing and wildlife viewing in Tennessee. The industry in turn supported 35,226 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](http://www.nwf.org/globalwarming).



Warren Greer (NRFEL)

## Tennessee's solutions to global warming

If Tennessee, North Carolina, Florida and Georgia were considered one country, it would rank seventh in the world for global warming emissions. While serious legislation needs to be enacted to reverse this statistic, action is already being taken by businesses and individuals, who are finding alternative energy solutions not only better for the environment, but also more profitable.

- Tennessee participates in a program called Rebuild America, an organization committed to assisting state and local governments and school systems to implement energy-saving improvements.
- The Tennessee Valley Authority has developed a program called Green Power Switch that enables customers to purchase 150-kilowatt-hour blocks of renewable energy for \$4. The block equals about 12 percent of a typical household's monthly energy use.
- Tennessee has the potential to generate more than a quarter of its energy from renewable sources, the most promising of which is biomass, organic matter such as plant fibers and animal waste that can be converted into electricity or fuel.

**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 to block the sun in summer and wind in winter can reduce your annual heating and cooling costs by an average of 40 percent.
- **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:  
**Steve Murchie**  
941-441-7035  
[MurchieS@nwf.org](mailto:MurchieS@nwf.org)

