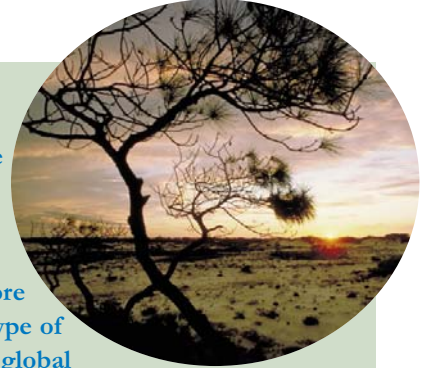




CHANGE THE FORECAST FOR WILDLIFE
SOLUTIONS TO GLOBAL WARMING

Global Warming and MISSISSIPPI

Mississippi's diverse coastal and inland ecosystems face a serious threat from global warming. The Intergovernmental Panel on Climate Change estimates that by 2100, average summer temperatures in the state could increase 5.85 degrees Fahrenheit depending on the extent to which greenhouse gas emissions are curbed. The warmer climate is expected to cause more extreme fluctuations in precipitation across the region, contributing to heavier rainfall and flooding events, as well as more severe drought conditions. Hurricane Katrina offers an example of the type of severe storm that scientists expect to become more common because of global warming. Projections also indicate sea level along Mississippi's coast could rise 15 inches in the coming century, contributing to coastal erosion and a loss of important wetland ecosystems, as well as leaving beaches more vulnerable to damage from hurricanes and other storms. We can solve global warming and revitalize our economy by rebuilding America with clean energy.



NPS

Global warming effects on Mississippi wildlife

Mississippi is home to an incredible diversity of native wildlife species, including 301 birds, 56 mammals, 209 fish, 82 reptiles and 58 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.

- Global warming could cause the breeding ranges of 17 songbird species, including the American goldfinch and scarlet tanager, to shrink or shift out of Mississippi.
- By 2080, a warmer, drier climate could reduce up to 91 percent of the wetlands in the Prairie Pothole Region, an area in the northern Great Plains on both sides of the U.S./Canadian border



that is one of the most important waterfowl breeding grounds in North America. This could lead to a 9-69 percent decline in the number of ducks breeding in the region, significantly affecting the Mississippi and Central Flyway populations of mallards, gadwall, blue-winged teal and northern pintails.

- Hotter, drier conditions could alter the composition of the state's forest ecosystems, with forested area giving way to grasslands.

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 Mississippians?

Changes from global warming threaten to not only degrade the natural forest and aquatic ecosystems of Mississippi but also the health and economy of the state.

- The coast of Mississippi was hit hard by Hurricane Ivan in 2004 and Hurricane Katrina in 2005, costing millions of dollars in damage and turning many counties into disaster areas. Research from MIT shows that hurricanes and other major storms have increased in intensity and duration by about 50 percent since the 1970s and are linked to increases in average sea surface temperatures. Rising sea levels will leave beachfront development more vulnerable to storm surges and erosion.
- The EPA estimates sea level along the beaches of Pass Christian, Miss., could rise another 15 inches by 2100. Prior to Hurricane Katrina, estimates to protect this and the rest of the state's 360 miles of coastline were figured between \$70-\$140 million.
- Warmer, drier conditions could not only change the makeup of Mississippi's forests, they could increase the frequency of wildfires, hurting the state's lucrative commercial timber industry.
- Loss of wildlife and habitat could mean a loss of tourism dollars. In 2006, more than 1.5 million people spent more than \$978 million on hunting, fishing and wildlife viewing in Mississippi. The industry in turn supported nearly 23,438 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.”—

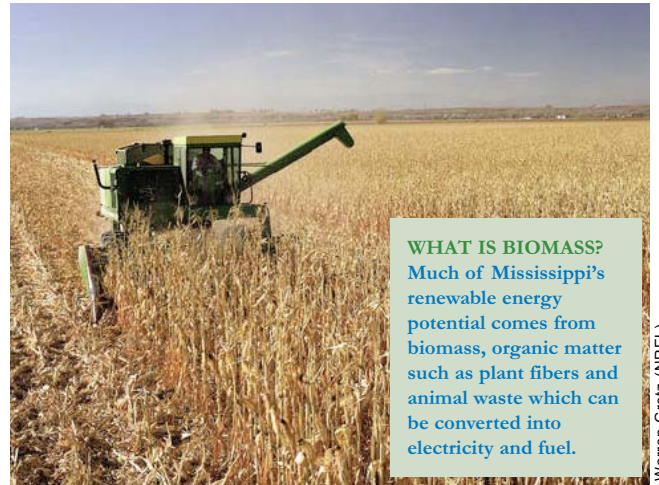
Larry Schweiger
President, CEO
National Wildlife Federation

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.



Warren Greitz (NREL)

WHAT IS BIOMASS?
Much of Mississippi's renewable energy potential comes from biomass, organic matter such as plant fibers and animal waste which can be converted into electricity and fuel.

Mississippi's solutions to global warming

As is the case for the nation as a whole, the primary source of Mississippi's global warming pollution is the burning of fossil fuels. However, reducing greenhouse gas emissions and carbon dioxide levels is not hopeless.

- Mississippi offers tax breaks for the use of compressed natural gas and for renewable energy technology investments.
- Programs to store carbon are currently underway by such groups as the PowerTree Carbon Company LLC, which has an initiative sponsored by 25 U.S. power companies to plant trees in critical habitats in the Lower Mississippi River Valley. As the trees grow, they will capture more than 1.6 million tons of carbon dioxide from the atmosphere.
- Mississippi has the potential to meet more than 71 percent of its electricity needs with renewable energy, nearly all from biomass.

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. That's the same as taking 1.2 million cars off the road for an entire year.
- **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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