



CHANGE THE FORECAST FOR WILDLIFE

SOLUTIONS TO GLOBAL WARMING

Global Warming and GEORGIA

Georgia's diverse coastal and inland ecosystems face a serious threat from global warming. The Environmental Protection Agency estimates that by 2100, average temperatures in the state could increase about 2 degrees Fahrenheit in summer, 3 degrees Fahrenheit in winter and spring and 4 degrees Fahrenheit in fall. In addition, scientists project that sea level along Georgia's coast could rise up to 25 inches in some areas, contributing to coastal erosion and loss of wetlands, particularly where sea walls and other coastal development reduce the availability of wetlands to migrate inland.



Global warming effects on Georgia wildlife

Georgia is home to an incredible diversity of native wildlife species, including 328 birds, 92 mammals, 83 reptiles, 250 fish and 77 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.

- Higher average temperatures due to global warming could cause many of Georgia's mountain streams to become too warm for the state's prized native brook trout populations.
- Georgia's state bird, the brown thrasher, may disappear from the state altogether as temperatures affect its migration patterns and habitat.
- Warmer conditions could cause longleaf and slash pine forests to expand northward, replacing loblolly and shortleaf pines and changing the consistency of the state's forest ecosystems. Fluctuations in precipitation levels could further complicate things, as wetter conditions would encourage more oak and hickory trees to grow, and drier conditions could cause grassland to replace 10-15 percent of forests in west-central Georgia.
- Warmer winters could exacerbate problems associated with invasive red imported fire ants, allowing them to further expand into Georgia's upland regions. Wildlife at particular risk to ant attacks include newly born fawns as well as hatching quails and ground-nesting waterfowl chicks.



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What is Global Warming?

When coal, gas and oil are burned, they produce carbon dioxide that builds up in the atmosphere and traps the sun's heat. Much of this greenhouse gas 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, and subsequently global temperatures have risen by about 1 degree Fahrenheit in the last century. Earth has not experienced such a rapid change in temperature in thousands of years.

Unless we reduce the pollution that causes global warming, temperatures could climb between 2-10 degrees Fahrenheit this century. Such a rapid rise in temperature would fundamentally reshape the planet's climate, forever changing the landscape and water resources people and wildlife depend upon.



What's at stake for Georgians?

Those who have lived in Georgia for any amount of time may think they know how to handle the heat, but global warming is something that cannot be ignored. Increasing temperatures are expected to resonate throughout the state's agriculture, timber and wildlife recreation industries, while at the same time decreasing air quality and allowing more disease-carrying tropical insects to make their way into the state.

- Evidence suggests that hurricanes have already increased in intensity and will continue to do so because of global warming. Moreover, rising sea levels will leave beachfront development more vulnerable to storm surges and coastal erosion.
- According to the EPA, heat-related deaths in Atlanta during a typical summer could more than double by the end of the century.
- Salt-water intrusion into coastal marshes due to sea level rise could harm critical habitat for shrimp, oysters and other species that support the region's thriving fisheries industry. It could also destroy important habitat for wintering waterfowl.
- Loss of wildlife and habitat could mean a loss of tourism dollars. In 2001, more than 2.1 million people spent nearly \$1.6 billion on wildlife viewing, hunting and fishing in the state, which in turn supported 33,458 jobs in Georgia.

“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

THE CLIMATE STEWARDSHIP ACT:

The Climate Stewardship Act is a bipartisan plan of action in Congress that sets achievable goals for reducing global warming pollution in the United States. The bill requires power plants, oil companies and other major sources to collectively reduce emissions of carbon dioxide and other greenhouse gases to what they emitted in the year 2000. The bill also allows businesses to implement their own solutions, using a flexible emissions trading system that has successfully reduced air pollution under the Clean Air Act at a fraction of the anticipated costs. The Act will:

- Create more than 18,000 new energy technology jobs in Georgia by the year 2020.
- Provide Georgia with at least \$12 million each year in additional wildlife conservation funding to help protect the state's wildlife from the impacts of global warming.
- Provide new income to Georgia's farmers by rewarding environmentally friendly farming and forestry practices.

Visit www.nwf.org/globalwarming or www.climatenetwork.org/csa for more information.



Warren Gretz (NREL)

Georgia's solutions to global warming

If Georgia, Tennessee, North Carolina and Florida were considered a single 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 that alternative energy solutions not only help the environment, but turn a profit too.

- Georgia's No-Tillage Assistance Program leases “no-till” equipment to farmers, allowing them to increase the amount of carbon captured and stored in their soils.
- Georgia has the potential to meet more than 20 percent of its electricity needs from renewable energy sources such as biomass, which is organic matter such as plant fibers and animal waste, that can be converted into electricity and 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 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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