



CHANGE THE FORECAST FOR WILDLIFE

SOLUTIONS TO GLOBAL WARMING

Global Warming and ARKANSAS

Arkansas' diverse 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 winter and summer and about 3 degrees Fahrenheit in spring and fall if global warming continues unabated. The next century is also likely to bring more extreme floods and droughts, adding more stress to the already over-tapped groundwater supply. Changes in water and air temperatures have already altered bird migration patterns. In 2001, Arkansas experienced a greatly reduced number of waterfowl over the winter season due to warmer temperatures up north. In a state where \$118.3 million is spent on migratory bird hunting each year, this is a dangerous trend to let continue.



Global warming effects on Arkansas wildlife

Arkansas is home to an incredible diversity of native wildlife species, including 312 birds, 69 mammals, 64 reptiles, 203 fish and 49 amphibians. Rising temperatures will likely change the makeup of entire ecosystems, forcing wildlife to shift their ranges or adapt.

- As the temperature warms, the makeup of forests in Arkansas is expected to change dramatically. The eastern portion of the state is expected to be overtaken by longleaf and slash pine, while the rest of the state will be dominated by savanna and woodlands. This could affect the habitat of the critically endangered ivory-billed woodpecker.
- The breeding ranges of 31 species of songbirds, including three species of sparrows, eight warblers and two tanagers, could shift out of Arkansas forever due to climate factors and changing food sources.
- High temperatures and drought during summer months could reduce the productivity of bobwhite quail by limiting the availability of insects necessary to keep hens and chicks healthy. The conditions may also contribute to a reduction in nest cover, which could make broods more susceptible to predators. On the other hand, cooler, wetter summers could increase quail production.



- Global warming has the potential to expand the range of imported red fire ants into northern regions of the state. Wildlife at particular risk to ant attacks include newly born fawns, hatchling quail and ground-nesting waterfowl chicks.

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 Arkansans?

Arkansas is located in an area where Gulf, Pacific and Arctic air masses often meet, making the state highly sensitive to extreme weather changes. Those who have lived in the state 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 to the water we drink.

- Warmer fall and winter temperatures in northern regions would make it unnecessary for waterfowl to fly as far south to find ice-free water and suitable food, seriously affecting Arkansas' waterfowl hunting industry.
- Global warming could cause 40-60 percent of Arkansas' forests to be replaced by grasslands as slightly warmer temperatures push trees currently suited to the state's climate northward. This would put stress on both timber and wildlife recreation industries.

“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

- Loss of wildlife and habitat could mean a loss of tourism dollars. In 2001, more than 1.3 million people spent \$1.2 billion on wildlife viewing, hunting and fishing in Arkansas, which in turn supported more than 25,000 jobs in the state.

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 5,000 new energy technology jobs in Arkansas by the year 2020.
- Provide Arkansas with at least \$5.6 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 Arkansas' farmers by rewarding environmentally friendly farming and forestry practices.

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



Arkansas' solutions to global warming

Though Arkansas' government has not passed any legislation specifically targeting the reduction of carbon pollution, alternative and renewable energy industries are growing.

- Arkansas' Department of Economic Development offers a rebate for anyone who purchases a new fuel-efficient car or converts their car to use fuel more efficiently. The hybrid Toyota Prius, Ford Escape, and Honda Civic and Accord all get about double the gas mileage of their standard engine counterparts. More models are on the way.
- North Little Rock Mayor Patrick Hayes signed the U.S. Mayors Climate Protection Agreement, committing the state's largest city to meet or beat the global warming pollution reductions outlined in the Kyoto Protocol, an international treaty being implemented by 141 countries, but not the United States.

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

- **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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