



CHANGE THE FORECAST FOR WILDLIFE SOLUTIONS TO GLOBAL WARMING

Global Warming and INDIANA

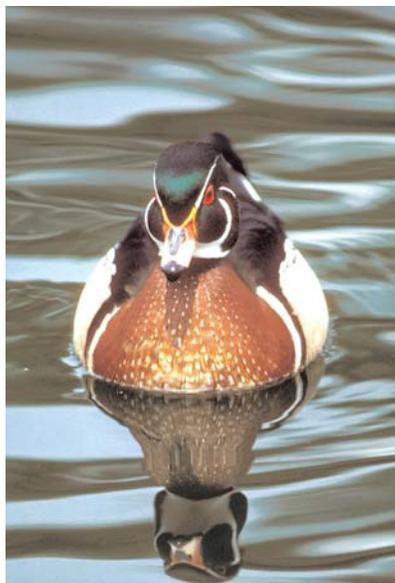
The Union of Concerned Scientists and the Ecological Society of America estimate that by 2100, average summer temperatures in the state could increase between 8-10 degrees Fahrenheit depending on the extent to which greenhouse gas emissions are curbed. This temperature increase could lead to more extreme weather events like floods and drought, lower water levels in Lake Michigan, poorer corn harvests and more health problems such as asthma and Lyme disease. The slightest warming could throw entire ecosystems out of balance, not only harming Indiana's wildlife habitats but also people and economies that depend on a healthy environment. For example, scientists project that warmer, drier weather could change the consistency of Indiana's forests and could cause forested areas to decline by as much as 60-75 percent, greatly affecting the state's timber industry.



Global warming effects on Indiana wildlife

Indiana is home to an incredible diversity of native wildlife species, including 275 birds, 68 mammals, 189 fish, 58 reptiles and 38 amphibians. Rising temperatures in the state will likely change the makeup of entire ecosystems, forcing wildlife to shift their ranges or adapt.

- Global warming is likely to significantly alter Indiana's forests. Not only would warmer, drier conditions decrease forested areas overall, but the types of trees dominating the forests are expected to shift away from eastern hardwoods toward pine and scrub oaks.



- Indiana is well known for its limestone caves which support the endangered Indiana bat. Warmer conditions could boost temperatures inside cave roosting sites, contributing to winter weight loss and higher mortality rates for the bats.
- Warmer average temperatures and drier conditions could alter the state's wetlands, which are important breeding grounds and stopover sites for wood ducks and other waterfowl in the Mississippi Flyway.

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 Hoosiers?

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

- Warmer temperatures are expected to bring more extreme droughts as the warmer air evaporates moisture from the soil at more rapid paces. Crop yields from corn, one of Indiana's chief crops, could decline by up to 42 percent.
- Warmer conditions could increase the lifespan of disease-carrying insects such as mosquitoes and ticks, causing increases in the number of cases of Lyme disease and West Nile virus, to name a few.
- Loss of wildlife and habitat could mean a loss of tourism dollars. In 2001, more than 2.4 million people spent nearly \$1.5 billion on hunting, fishing and wildlife viewing in Indiana, which in turn supported 37,839 jobs in the state. In 2002, close to 2 million people came to visit Indiana Dunes National Lakeshore, one of the most biologically diverse parks in the nation.

“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 13,000 new energy technology jobs in Indiana by the year 2020.
- Provide Indiana with at least \$8.5 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 Indiana's farmers by rewarding environmentally friendly farming and forestry practices.

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



Warren Grez (NREL)

Indiana's solutions to global warming

Indiana has enacted several state level initiatives to reduce global warming pollution and enhance renewable energy production and use.

- Indiana offers an alternative fuel transportation grant, designed to help businesses and institutions acquire alternative fuel vehicles. Another alternative power and energy grant offers money to businesses to help install and study alternative and renewable energy systems.
- The Indiana Utility Regulatory Commission has established a mandatory net metering rule as of 2004, which requires the state's investor-owned utilities to offer residential customers and K-12 schools the ability to sell excess renewable power back to their utility.
- Indiana has the potential to generate more than 21 percent of the state's energy needs from renewable biomass and landfill gas.

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.
- **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.
- **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.

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