



## CHANGE THE FORECAST FOR WILDLIFE SOLUTIONS TO GLOBAL WARMING

# Global Warming and INDIANA

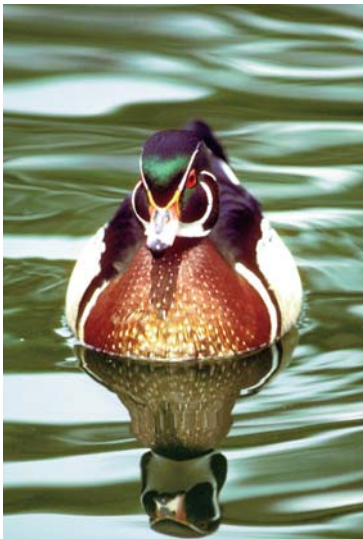
The Union of Concerned Scientists and the Ecological Society of America estimate that by 2100, average summer temperatures in the state could increase between 8-10 degrees Fahrenheit depending on the extent to which greenhouse gas emissions are curbed. This temperature increase could lead to more extreme 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. We can solve global warming and revitalize our economy by rebuilding America with clean energy.



## 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.

## 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 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 2006, more than 3 million people spent nearly \$1.8 billion on hunting, fishing and wildlife viewing in Indiana. The industry in turn supported 40,639 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. *\*(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 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.
- **Midwestern Governors Association Energy Platform and Greenhouse Gas Accord**  
Nine midwestern states, Wisconsin, Minnesota, Illinois, Iowa, Michigan, Kansas, Indiana, Ohio, South Dakota, and the Canadian Province of Manitoba, have signed the Midwestern Regional Greenhouse Gas Reduction Accord. The Accord will establish greenhouse gas reduction targets and a market based cap & trade mechanism to help achieve these targets. Part of the agreement by these Midwestern states is an aggressive energy security and climate program that includes major steps forward on renewable energy, energy efficiency, next generation biofuels, and carbon capture and storage.

To support the shared goal of reducing greenhouse gases, the Midwestern states launched new cooperative regional initiatives to include the following:

- CO2 management to create a regional transportation and storage infrastructure;
- A bioproduct procurement program to support the growth of the region's bioeconomy;
- Electricity transmission adequacy to support thousands of new megawatts of wind energy;
- Low-carbon energy transmission infrastructure that will provide a cost-effective way to supply the Midwest with sustainable and environmentally responsible energy.

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