

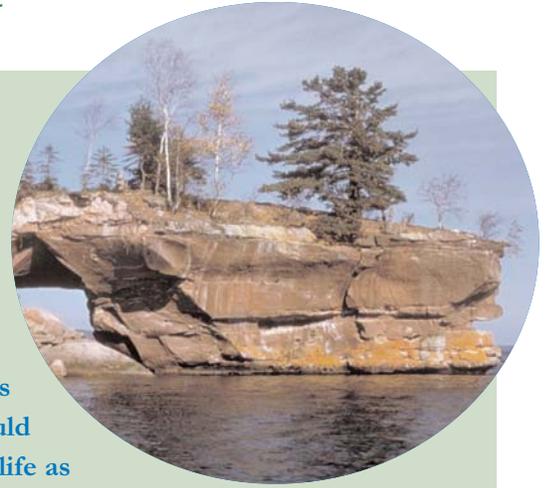


CHANGE THE FORECAST FOR WILDLIFE

SOLUTIONS TO GLOBAL WARMING

Global Warming and WISCONSIN

Signs of global warming are apparent throughout the Great Lakes. Over the past 150 years, the average extent of ice cover on many of Wisconsin's lakes has continuously declined—a trend expected to continue. The Union of Concerned Scientists and the Ecological Society of America estimate that by 2100, average summer temperatures in the state could increase between 8-17 degrees Fahrenheit depending on the extent to which greenhouse gas emissions are curbed. Some models suggest that average summer water levels in the Great Lakes could drop 1.5–8 feet by the end of the century, affecting fish and wildlife as well as communities that depend on them.



Global warming effects on Wisconsin wildlife

Wisconsin is home to an incredible diversity of native wildlife species, including 279 birds, 146 fish, 67 mammals, 35 reptiles and 19 amphibians. Rising temperatures will likely change the makeup of entire ecosystems, forcing wildlife to shift their ranges or adapt.

- During the 1850s, ice covered Lake Mendota for four months during the winter. Today, the lake freezes only 2.5 months out of the year. As ice coverage declines and water temperatures increase, cool-water fish such as walleye and perch and cold-water fish such as lake trout and salmon could face serious declines.
- The extent of forested areas in Wisconsin could decline by as much as 55–70 percent as a result of global warming, thereby disrupting forest ecosystems and displacing birds, mammals and other wildlife.



• Scientists project global warming and resulting drier weather conditions will thin and fragment conifer forests in southern Wisconsin, possibly altering these ecosystems and the wildlife they support.

• Already, development and agriculture have reduced wetland habitat in Wisconsin. Additional losses of wetland and forest habitat due to global warming would jeopardize food resources necessary for migratory songbirds, shorebirds and waterfowl.

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 Wisconsinites?

Global warming poses a real threat to the future of the state's economy, impacting Wisconsin's tourism, agriculture and forestry industries that depend on healthy ecosystems to survive.

- Global warming models project that extreme "100-year floods"—named because they happen once every 100-200 years—could begin to occur on a much more frequent basis.
- In between more extreme floods, higher temperatures in Wisconsin could cause more drought conditions due to increased evaporation. The reduced soil moisture may force farmers to rely more on irrigation, raising the competing needs of water in an already water-stressed state.
- Scientists have found that warmer temperatures caused by global warming can lead to higher concentrations of ground-level ozone pollution, a leading cause of respiratory problems, especially in children and seniors.
- Loss of wildlife and habitat could mean a loss of tourism dollars. In 2001, more than 3.1 million people spent more than \$3.6 billion on hunting, fishing and wildlife viewing in Wisconsin, which in turn created 79,450 jobs in the state.

"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 13,500 new energy technology jobs in Wisconsin by the year 2020.
- Provide Wisconsin with at least \$8.7 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 Wisconsin's farmers by rewarding environmentally friendly farming and forestry practices.

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



MSB Energy Associates (NREL)

Wisconsin's solutions to global warming

The state has taken various initiatives to reduce emissions of carbon pollution by developing renewable energy sources.

- Wisconsin enacted a minimum renewable electricity standard that requires utilities to provide 2.2 percent of the state's power from renewable sources by 2011.
- Wisconsin Public Service Corporation installed 14 wind turbines in Kewaunee County, which will provide enough electricity for 3,600 homes and generate a combined \$600,000 in tax revenue for the county as well as the town of Lincoln.
- Wisconsin has a considerable amount of solar potential. The National Renewable Energy Laboratory estimates that if the state installed one solar energy system covering 200 acres, it could produce up to 30 million kilowatt-hours of electricity, enough to power 3,034 homes.

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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