



CHANGE THE FORECAST FOR WILDLIFE

SOLUTIONS TO GLOBAL WARMING

Global Warming and NORTH DAKOTA

The Environmental Protection Agency estimates average temperatures in North Dakota could rise about 3-4 degrees Fahrenheit by 2100 if global warming continues unabated. Warmer temperatures are expected to lead to earlier snowmelt, increased evaporation and lower streamflows for lakes and rivers. This would threaten groundwater quality and recharge rates, which are especially important for wetlands, grasslands and other complex ecosystems that serve as important habitat for wildlife species in the state. Global warming also poses a serious threat to the Prairie Pothole Region, known as “North America’s duck factory.” North Dakota, the top duck-producing state in the nation, lies in the heart of this region.



Global warming effects on North Dakota wildlife

North Dakota is home to an incredible diversity of native wildlife species, including 318 birds, 85 mammals, 15 reptiles, 87 fish and 12 amphibians. Rising temperatures will likely change the makeup of entire ecosystems, forcing wildlife to shift their ranges or adapt.

- Higher stream temperatures and lower summer streamflows could significantly reduce viable habitat for cold-water fish such as rainbow trout.
- Grassland bird species such as the greater prairie chicken are declining throughout the Great Plains due to loss of habitat. A drier, hotter climate resulting from global warming will likely alter their grassland habitat even more, adding stress to already declining populations.
- By the 2080s, warmer weather could reduce up to 91 percent of the wetlands in the Prairie Pothole Region, an area in the northern Great Plains that stretches through parts of North Dakota. This could lead to a 9-69 percent decline in the number of ducks breeding in the region, affecting waterfowl populations across the country.



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.



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What's at stake for North Dakotans?

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

- Conditions projected under global warming could increase the lifespan of mosquitoes carrying diseases like West Nile virus and malaria, both of which can be lethal.
- Loss of wildlife and habitat could mean a loss of tourism dollars. In 2001 and 2002, sportsmen and women spent more than \$468 million hunting and fishing in North Dakota. Gross business volume, including direct and indirect hunting and angling spending, was \$1 billion, supporting more than 13,000 jobs.
- Future global warming conditions could affect the state's \$3 billion annual production agriculture industry in more ways than one. Higher temperatures and reduced soil moisture may force farmers to rely more on irrigation; crop yields could fluctuate between more productive and less productive harvests and farmed acreage could decrease up to 28 percent.

“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 1,000 new energy technology jobs in North Dakota by the year 2020.
- Provide North Dakota with at least \$4.8 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 the state's farmers by rewarding environmentally friendly farming and forestry practices.

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



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North Dakota's solutions to global warming

Considering North Dakota's tremendous wind and solar energy potential, the state has the opportunity to be a leader in developing innovative solutions to global warming.

- North Dakota ranks first in the nation in its potential to produce wind energy, with the prospect of producing more than 100 percent of its own needs and supplying up to one-third of the entire nation's electricity demand.
- North Dakota passed a resolution in 2001 creating an advisory panel on the potential for agricultural carbon storage.

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.
- **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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