



CHANGE THE FORECAST FOR WILDLIFE

SOLUTIONS TO GLOBAL WARMING

Global Warming and SOUTH DAKOTA

The Environmental Protection Agency estimates average temperatures in South Dakota could rise about 3-4 degrees Fahrenheit by 2100 if global warming continues unabated. Scientific models show the state's ecosystems as among the most vulnerable in the nation to global warming. Warmer, drier conditions could significantly reduce wetlands in the Prairie Pothole Region, which provide critical habitat and breeding ground for waterfowl and shorebirds from across the country. Reductions in this habitat would reverberate not only throughout South Dakota's hunting community, but throughout the sporting industry nationwide.



Global warming effects on South Dakota wildlife

South Dakota is home to an incredible diversity of native wildlife species, including 339 birds, 90 mammals, 89 fish, 31 reptiles and 15 amphibians. Rising temperatures in the state will likely change the makeup of entire ecosystems, forcing wildlife to shift their ranges or adapt.

- Warmer temperatures and drier summers are expected to increase the risk of wildfires in the Black Hills National Forest, affecting ponderosa pines and the populations of many wildlife species dependant upon forest habitat, such as the mountain bluebird, bald eagle, whitetail deer, mule deer, elk, mountain lion and coyote.
- The breeding ranges of 31 songbird species—including the sage thrasher, the scarlet tanager and five species of sparrows—could shift from South Dakota's borders due to warmer temperatures.



- Scientists project that global warming could eliminate up to 91 percent of the wetlands in the Prairie Pothole Region by the 2080s, leading to a 6-69 percent reduction in the abundance of ducks breeding in the region.

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 South Dakotans?

Global warming will bring the people of South Dakota a new set of environmental challenges in the coming century, affecting everything from agriculture to water sources to tourism brought in by something as simple as the American goldfinch.

- Warmer average summer temperatures are expected to contribute to lower stream-flows and groundwater levels, placing increased pressure on water resources for crop irrigation and other uses.
- Conditions projected under global warming would be more welcoming for mosquitoes carrying diseases such as West Nile virus, malaria, and equine encephalitis—all of which can be lethal.
- Loss of wildlife and habitat could mean a loss of tourism dollars. In 2001, more than 518,000 people spent nearly \$562 million on hunting, fishing and wildlife viewing in South Dakota, which in turn created more than 12,700 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 1,800 new energy technology jobs in South Dakota by the year 2020.
- Provide South 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.climateactionnetwork.org/csa for more information.



Robert Gough (NREL)

South Dakota’s solutions to global warming

South Dakota has a number of incentive programs for businesses and individuals to become more energy efficient and use more renewable energy sources, one of the first steps to addressing global warming.

- The state has a property tax incentive exempting renewable energy systems on residential and commercial property from local taxes for three years after installation.
- South Dakota is poised to become a leader in the wind power market in the coming decade. The state has the potential to produce more than 1.2 billion kilowatt-hours of wind energy annually, more than 125 times its current electricity needs.
- In 2004, South Dakota ranked in the top 10 states that produce corn and soybeans, two primary ingredients in biofuel, an emerging industry which converts crops into an alternative source of fuel.

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.
- **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.

Myra Wilensky
303-786-8001
globalwarming@nwf.org

Chris Helsa
605-224-7524
sdwf@mncomm.com

