



CHANGE THE FORECAST FOR WILDLIFE

SOLUTIONS TO GLOBAL WARMING

Global Warming and NEBRASKA

Global warming now joins development, agriculture and pollution as a serious threat to Nebraska's diverse ecosystems and the wildlife they support. The Environmental Protection Agency estimates average temperatures in the state could rise about 3-4 degrees Fahrenheit by 2100 if global warming continues unabated. This could provide further challenges for places like the Sandhills Prairie in north-central Nebraska, one of the largest contiguous dune areas in the Western Hemisphere. Besides changes in precipitation patterns that could alter the makeup of this unique ecosystem, the sandhills could see an increase in destructive wildfires, thereby altering this unique area and its wildlife.



Global warming effects on Nebraska wildlife

Nebraska is home to an incredible diversity of native wildlife species, including 346 birds, 83 mammals, 87 fish, 47 reptiles and 13 amphibians. Rising temperatures in the state will likely change the makeup of entire ecosystems, forcing wildlife to shift their ranges or adapt.

- Global warming could contribute to a 20-50 percent decline in forested area, particularly in eastern Nebraska, where grasslands and savanna could replace forests and woodlands.
- The breeding range of 41 songbird species—including the willow flycatcher, red-breasted nuthatch and eight species of sparrows—could shift out of Nebraska's borders due to warmer temperatures.



- Increased drought in the Great Plains and decreased snowpack in the Rocky Mountains could reduce water flow in the Platte River and other streams, which are used by sandhill cranes, endangered whooping cranes and many species of waterfowl as they migrate north in the spring.

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 Nebraskans?

No one wants to re-live the "Dust Bowl" of the 1930s, but scientists expect hotter, drier weather in Nebraska by the end of the century because of global warming, which could affect crops and water supply. About 40 percent of Nebraska's farmed acres are irrigated.

- Drier summer conditions could cause crop failures and increasing competition for irrigation, ultimately hurting Nebraska's agriculture economy.
- Warmer weather could increase the lifespan of mosquitoes carrying malaria and ticks carrying Lyme disease in Nebraska.
- Loss of wildlife and habitat could mean a loss of tourism dollars. In 2001, more than 768,000 people spent nearly \$585 million on hunting, fishing and wildlife viewing in Nebraska, which in turn created more than 12,000 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 nearly 3,800 new energy technology jobs in Nebraska by the year 2020.
- Provide Nebraska with at least \$5.8 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 Nebraska's farmers by rewarding environmentally friendly farming and forestry practices.

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



Warren Grez (NREL)

Nebraska's solutions to global warming

As is the case for the nation as a whole, the primary source of Nebraska's global warming pollution is the burning of fossil fuels. However, reducing greenhouse gas emissions and developing renewable energy sources could greatly reduce the impact of global warming on the state in the coming century.

- Nebraska has the potential to generate nearly 1.4 billion kilowatts of renewable energy, enough to meet and exceed its electricity needs. Most of this comes from wind power, as the state is ranked fifth in the nation for wind energy potential.
- The state has adopted various incentive programs that offer tax breaks for improved energy efficiency and alternative fuel use.

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 to block the sun in summer and wind in winter 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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