



CHANGE THE FORECAST FOR WILDLIFE

SOLUTIONS TO GLOBAL WARMING

Global Warming and UTAH

Utah's growing population is putting pressure on the state's water resources like never before. Global warming may well make the state's water woes even more troubling in the decades to come. The Environmental Protection Agency estimates average temperatures in Utah could rise about 5 degrees Fahrenheit by 2100 if global warming continues unabated. This will likely bring hotter, drier summers. Wildfires may increase, droughts could get worse and rains—when they do come—will likely come in more severe downpours that may cause more flash flooding. Warmer temperatures also mean less snowpack and earlier snowmelt in the mountains, which means more winter runoff and reduced summer flows in many Utah streams.



Global warming effects on Utah wildlife

Utah is home to an incredible diversity of native wildlife species, including 296 birds, 126 mammals, 28 fish, 50 reptiles and 16 amphibians. Rising temperatures in the state will likely change the makeup of entire ecosystems, forcing wildlife to shift their ranges or adapt.

- Higher average temperatures and changes in streamflows could significantly reduce habitat for cold-water fish species such as rainbow trout and cutthroat trout, which support a lucrative sportfishing industry in Utah.
- Rangelands of the Great Basin are already threatened by the expansion of non-native, weedy species such as European cheatgrass. Global warming could exacerbate such threats, as opportunistic exotic species are well-suited to take advantage of the ecosystem disturbances caused by warming temperatures.



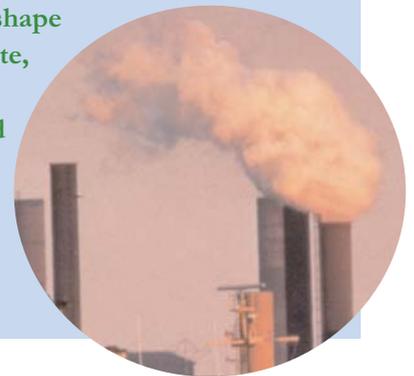
- Increased evaporation rates and reduced freshwater inflow into the Great Salt Lake due to global warming could raise salinity levels and reduce critical stopover habitat for waterfowl and other migratory birds.
- Changes in precipitation could potentially reduce forest cover throughout Utah by 15-30 percent. Also, hotter, drier summers will increase the risk of wildfire in the state's ponderosa pine forests.

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 Utahns?

Residents of Utah may feel the heat of global warming, from poorer air quality in cities to shrinking tourism dollars from wildlife recreation.

- Streams, rivers and other freshwater oases that people and wildlife depend upon in Utah's arid landscape are highly vulnerable to evaporation under expected warmer and drier conditions. These changes could destroy or seriously degrade the few wetland habitats in the state, limiting Utah's ability to meet human water demands.
- Continued trends of higher average temperatures and declining snowpack could cause significant problems for the skiing industry in Utah, particularly for resorts at lower elevations.
- Loss of wildlife and habitat could mean a loss of tourism dollars. In 2001, nearly 1.1 million people spent more than \$1.3 billion on hunting, fishing and wildlife viewing in Utah, which in turn created 33,805 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 4,500 new energy technology jobs in Utah by the year 2020.
- Provide Utah with at least \$6.8 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 Utah's farmers by rewarding environmentally friendly farming and forestry practices.

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



Warren Gretz (NREL)

Utah's solutions to global warming

Utah 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.

- Utah has the potential to generate more than 94 percent of its electricity needs from renewable energy sources such as wind and solar power.
- Equipment purchased to generate electricity from renewable sources is exempt from Utah sales tax. The state also provides an individual income tax credit of up to 25 percent the cost of installing a residential renewable energy system.

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.
- **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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