



CHANGE THE FORECAST FOR WILDLIFE
SOLUTIONS TO GLOBAL WARMING

Global Warming and WASHINGTON

Washington's many mountains, lakes, river valleys and beaches make it one of the best places in America to hunt, fish and view wildlife. However, global warming is changing the fabric of the state's ecosystems, posing a serious challenge to wildlife species that abound in the state. The Intergovernmental Panel on Climate Change estimates average temperatures in Washington could rise about 5.4 degrees Fahrenheit by 2100 if global warming continues unabated. Warmer average temperatures are expected to reduce snowpack in the mountains, contributing to lower summer streamflows and higher river temperatures, placing additional stress on threatened and endangered salmon and steelhead. Sea level rise may also affect the state's low-lying estuaries, which are important habitat for waterfowl and other wildlife. We can solve global warming and revitalize our economy by rebuilding America with clean energy.



Global warming effects on Washington wildlife

Washington is home to an incredible diversity of native wildlife species, including 372 birds, 127 mammals, 21 reptiles, 51 fish and 25 amphibians. Rising temperatures and sea level in the state will likely change the makeup of entire ecosystems, forcing wildlife to shift their ranges or adapt.

- Scientists project that a 3-degree Fahrenheit rise in average August temperatures could cause up to 20 percent of the Columbia-Snake River Basin and coastal watersheds in Washington and Oregon to become too warm for salmon, steelhead and trout species.
- In summer 2005, coastal ocean temperatures were 2-5 degrees above normal, resulting in huge declines of phytoplankton and krill, which thrive in cold water. Fish which feed on plankton and krill, and many seabirds which, in turn, feed on the fish, suffered drastic population declines. Tens of thousands of Brandt's Cormorants and Common Murres starved to death and Glaucous-Winged Gulls, which normally produce 8,000 to 10,000 chicks, fledged only 88 young. In 2004, the yearly run of Sockeyed Salmon was about 1/2 its normal number of fish a result of warmer waters.



- In 2004, there were numerous sightings of the Humbolt squid from Southern Washington to Whidbey Island. The squid normally lives near Mexico and Southern California. Its movement north is a clear sign of warmer water.

Global Warming Pollution

Burning coal, gas and oil produces carbon dioxide, which is a greenhouse gas that warms the planet as it builds up in the atmosphere. Some of the carbon dioxide 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, causing global temperatures to rise by about 1° Fahrenheit in the last century. Earth has not experienced such a rapid change in temperature in thousands of years.

A Global Solution

The U.S. must lead the world by passing global warming legislation at home and working with other nations at the Copenhagen climate summit at the end of 2009 to sign a new climate treaty that keeps further warming below 2° Fahrenheit. With a global solution, we can avoid the worst impacts of global warming.



What's at stake for Washingtonians?

Global warming threatens not only to degrade the natural forest and aquatic ecosystems of Washington but also the health and economy of the state.

- As sea level increases and stream flows decrease, the quality of Washington's estuaries could decline, impacting oysters and clam populations and the state's \$77 million shellfish industry.
- 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. Already, the Seattle-Tacoma area has had trouble meeting the national health standards for ozone.
- Loss of wildlife and habitat could mean a loss of tourism dollars. In 2001, nearly 3 million people spent more than \$2.3 billion on hunting, fishing and wildlife viewing in Washington, which in turn created 45,205 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

GLOBAL WARMING NATIONAL POLICY SOLUTION:

A federal legislative solution can drive American ingenuity, create millions of green jobs, and restore America's global leadership on global warming. Legislation should:

- * Include ambitious targets to reduce America's global warming pollution as swiftly and deeply as possible. Scientists say that developed countries as a whole need to reduce their global warming pollution by at least 80% from 1990 levels by 2050 to avoid the worst impacts of global warming.
- * Move America toward a 100% clean electricity future by maximizing energy efficiency, modernizing the electric power grid, expanding power generation from renewable energy resources, and investing in clean transportation infrastructure.
- * Invest in natural resources. Forests, coasts, wetlands, clean air and clean water are already being impacted by global warming. Funding is needed to safeguard the natural resources that are critical to wildlife populations and human health.
- * Lead a worldwide effort to finance clean energy technology, forest conservation, and adaptation to unavoidable impacts of global warming.

For more information, visit: www.nwf.org/globalwarming.



Energy Northwest (NREL)

Washington's solutions to global warming

Washington has been a leader in developing solutions to global warming.

- Seattle Mayor Greg Nickels is spearheading a nationwide Climate Protection Agreement, which has gained the support of more than 150 U.S. mayors. The agreement commits cities to meet or beat the global warming pollution reductions outlined in the Kyoto Protocol.
- Washington has the potential to generate 63 percent of its electricity needs from renewable energy sources including wind, biomass, geothermal and landfill gas.

The Western Climate Initiative

The Western Climate Initiative is a collaboration between Arizona, California, New Mexico, Oregon, Washington, Utah, Colorado, British Columbia and Manitoba to develop regional strategies to address climate change. WCI is identifying, evaluating and implementing collective and cooperative ways to reduce greenhouse gases in the region. The partners set an overall regional goal to reduce greenhouse gas emissions 15% below 2005 levels by 2020. By August 2008 the Partners will also complete the design of a market-based mechanism to help achieve that reduction goal.

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.
- **Visit www.nwf.org/energy for more tips on energy efficiency.**

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