CHANGE THE FORECAST FOR WILDLIFE

SOLUTIONS TO GLOBAL WARMING

Global Warming and ALASKA

Alaska is on the front lines of global warming, having experienced a rise in average winter temperatures of 5-7 degrees Fahrenheit in just the last 60 years. Already the state's ecosystems are transforming and affecting the lives of people and wildlife. The Arctic Climate Impacts Assessment estimates that by 2100, average temperatures in Alaska could rise another 5.4-9 degrees Fahrenheit annually if global warming continues unabated. In November, 2004, Arctic researchers released a study projecting that at least half the summer sea ice in the Arctic will melt by the end of this century. Rising sea level and reductions in winter sea ice that protect shoreline from winter storms are forcing some coastal villages to relocate as coasts now erode up to eight feet per year. The implications for Alaska, the rest of the country and the world are significant. We can solve global warming and revitalize our economy by rebuilding America with clean energy.

Global warming effects on Alaska wildlife

Alaska is home to an incredible diversity of native wildlife species, including 269 birds, 96 mammals, 44 fish and 6 amphibians. The sharp rise in temperature in the state in the past few decades has caused significant sea ice melting, coastal erosion and the appearance of forests in what once was tundra, forcing wildlife to shift their ranges or adapt.

- Recent research suggests sea ice melting due to global warming is reducing the time polar bears can hunt on the ice for ringed seals, their primary prey. Polar bears in Hudson Bay are already showing a dramatic loss of body mass because of shortened hunting seasons.
- Between 1992-1996, a rapid warming trend triggered a nonstop outbreak of spruce bark beetles in Alaska, wiping out 2.3 million acres of spruce forests in Kenai Peninsula—more than 90 percent of the forests. It was the largest loss by spruce bark beetles ever recorded in North America.
- Alaska provides breeding habitat for 20 percent of America's waterfowl, including half of the species that winter in the Pacific Flyways states. Thawing permafrost, higher water temperatures and changes in boreal forest and tundra vegetation could have a significant effect on populations of scaup, scoters and other species that breed in the region.

- Since the 1970s, climate-related changes in food availability have contributed to a 50-90 percent decline in populations of some of Alaska's seabird species (including murres, kittiwakes and puffins) as well as marine mammals such as harbor seals and stellar sea lions.

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 Alaskans?

On the tiny barrier island of Shishmaref, the ground is literally eroding out from under the village. Buildings are falling into the sea from a combination of softening permafrost, storm surges and rising sea levels. Now, the village is contemplating relocating, making the people of this small Alaskan village some of the first documented refugees of global warming. They are not alone. Alaskans across the state are already seeing the effects of global warming in regards to their economy, lifestyle and livelihoods.

- Thanks to warmer, drier weather, Alaska suffered its second worst fire season ever in 2004, with 4.5 million acres burned.
- Melting permafrost around Alaska's Prudhoe Bay has cut in half—from 208 to 98—the number of days in the frozen season oil explorers can drive their massive seismic trucks across the tundra in search for oil deposits.
- Loss of wildlife and habitat could mean a loss of tourism dollars. In 2001, more than 632,000 people spent nearly $1.4 billion on hunting, fishing and wildlife viewing in Alaska, which in turn created 28,583 local jobs.

"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.**

Ian Baring-Gould (NREL)

Alaska's solutions to global warming

Though Alaska's government has not passed any legislation targeting the reduction of carbon dioxide emissions, alternative and renewable energy industries are growing.

- The Alaska Energy Authority's Alternative Energy and Energy Efficiency section currently manages or funds 47 projects totaling $63.9 million in the areas of hydroelectric, wind, biomass, transmission and distribution, geothermal, solar, diesel generation and end-use efficiency, helping to lower the cost of power and heat to communities, increase efficiency and develop alternatives to diesel-based energy technology.
- An Alaska State Wind Working Group has been formed to identify specific state concerns, barriers and obstacles to wind development in Alaska. The working group is a collaboration of government agencies, nonprofit organizations, businesses and industries interested in wind development.
- Three commercial wind-diesel projects are up and running in the rural villages of Kotzebue, Selawik and St. Paul. The Kotzebue project produces enough wind energy to power 200 homes.

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. That's the same as taking 1.2 million cars off the road for an entire year.
- **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, an international treaty being implemented by 141 countries, but not the United States.

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NATIONAL WILDLIFE FEDERATION

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