

## Alaska: Ground Zero for Global Warming Warming Is Causing Alaska Meltdown

- According to a 2009 government report, over the past 50 years Alaska has warmed at more than twice the rate of the rest of the United States' average. Its annual average temperature has increased 3.4°F, while winters have warmed by 6.3°F.
- Alaska could see temperatures rise by as much as 11° F by the end of century. Scientists estimate a probability of the Arctic Ocean being ice free in the summer by 2040, with a possibility summer ice being gone within the next decade.
- During the 1990s, south-central Alaska experienced the largest outbreak of spruce beetles in the world as rising temperatures allowed the beetle to survive the winter and to complete its life cycle in half the usual time. Between 1972 and 1998 over 5 million acres of Alaska spruce forests were destroyed by the beetle.
- Insect infestation combined with drought caused by warming also means significant increases in wildfire risk. By the end of this century, the area burned in Alaska is projected to triple or even quadruple. Between 2004 and 2005 alone, fire burned an area the size of Maryland and Connecticut combined (over 11 million acres). It cost taxpayers more than \$160 million in fire fighting related expenses.



**Glacier Bay National Park, Alaska  
Riggs Glacier**



**Bruce Molnia Photo 2002**

**Arctic National Wildlife Refuge** - Global warming is causing the McCall glacier to retreat up the flanks of the Brooks Range and the loss of sea ice off the shore of the Arctic Refuge threatens many marine mammals, particularly the polar bear, which is vulnerable to extinction. According to a 2007 study by the United States Geological Survey, two-thirds of the world's polar bears – including the entire Alaska population - could disappear by 2050 as global warming continues to melt the Arctic's sea ice. In 2004 scientists found four dead polar bears floating in the ocean 60 miles offshore of northern Alaska, at a time when the polar ice cap had retreated a record 160 miles north of Alaska's coasts.

**NPR-A** - Inupiat hunters are having a harder time harvesting traditional subsistence foods because the ice pack is retreating. As a result, the marine mammals they depend on are more difficult to locate. Furthermore, with less sea ice to hunt on, polar bears are forced to come closer to shore and towns, where they're often shot.

**Beaufort & Chukchi Seas** - The polar ice cap is melting at an alarming rate of nine percent per decade. Arctic ice thickness has decreased more than 40 percent since the 1960s. In recent years, the amount of ice replaced in the winter has not been sufficient to offset summer ice losses. The result is more open water in summer, which then absorbs more heat, warming the ocean and further melting the ice. Between 2004 and 2008, multi-year ice cover shrank 595,000 square miles -- nearly the size of Alaska's land area. At the same time, sea level has increased 3.1 mm per year between 1993 and 2003 or 10-20 times faster than during the last 3,000 years. At this rate America's largest arctic lake, Teshekpuk Lake, and the town of Nuiqsut will be part of the Arctic Ocean by 2100.

**Alaska's Rainforests** - Global warming is devastating the world's largest intact temperate rainforest—The Tongass National Forest. Without adequate snow cover, the yellow cedar's roots freeze to death in the spring. Yellow cedar is an extremely economically and culturally valuable tree. The timber industry, as well as Native carvers and weavers are hoping for the yellow cedar's come back. Scientists investigating the dramatic decline in yellow cedar have eliminated all other possible causes except global warming.

**We Must Act Now** - Protect Alaska's wild places! Development in Alaska is putting our nation's wildest places in double jeopardy, first by weakening these pristine ecosystems and then by putting them under a heat lamp of greenhouse gases. To show a commitment to a clean energy future, healthy wildlife populations, and the integrity of our wild public lands, we must protect areas like the Arctic National Wildlife Refuge, Teshekpuk Lake, the Beaufort and Chukchi Seas, and the Tongass National Forest.

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