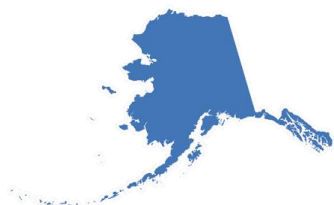


FOR IMMEDIATE RELEASE

May 6, 2014

FACT SHEET: What Climate Change Means for Alaska



Today, the Obama Administration released the third U.S. National Climate Assessment – the most comprehensive scientific assessment ever generated of climate change and its impacts across every region of America and major sectors of the U.S. economy. The findings in this National Climate Assessment underscore the need for urgent action to combat the threats from climate change, protect American citizens and communities today, and build a sustainable future for our kids and grandkids.

The National Climate Assessment is a key deliverable of President Obama’s Climate Action Plan to cut carbon pollution, prepare America’s communities for climate-change impacts, and lead international efforts to address this global challenge. Importantly, the plan acknowledges that even as we act to reduce the greenhouse-gas pollution that is driving climate change, we must also empower the Nation’s states, communities, businesses, and decision makers with the information they need prepare for climate impacts already underway.

The Obama Administration has already taken a number of steps to deliver on that commitment to states, regions, and communities across America. In the past year alone, these efforts have included: establishing a Task Force of State, Local, and Tribal Leaders on Climate Preparedness and Resilience to advise the Administration on how the Federal Government can respond to the needs of communities nationwide that are dealing with the impacts of climate change; launching a Climate Data Initiative to bring together extensive open government data with strong commitments from the private and philanthropic sectors to develop planning and resilience tools for communities; and establishing seven new “climate hubs” across the country to help farmers and ranchers adapt their operations to a changing climate.

ALASKA is part of the National Climate Assessment’s Alaska Region. According to the third U.S. National Climate Assessment Highlights report:

“Over the past 60 years, Alaska has warmed more than twice as rapidly as the rest of the U.S., with average annual air temperature increasing by 3°F and average winter temperature by 6°F, with substantial year-to-year and regional variability. Most of the warming occurred around 1976 during a shift in a long-lived climate pattern (the Pacific Decadal Oscillation) from a cooler pattern to a warmer one. The underlying long-term warming trend has moderated the effects of the more recent shift of the Pacific Decadal Oscillation to its cooler phase in the early 2000s. Alaska’s warming involves more extremely hot days and fewer extremely cold days. Because of its cold-adapted features and rapid warming, climate change impacts on Alaska are already pronounced, including earlier spring snowmelt, reduced sea ice, widespread glacier retreat, warmer permafrost, drier landscapes, and more extensive insect outbreaks and wildfire.

Alaska is home to 40% of the federally recognized tribes in the United States. The small number of jobs, high cost of living, and rapid social change make rural, predominantly Native, communities highly vulnerable to climate change through impacts on traditional hunting and fishing and cultural connection to the land and sea.” (NCA Highlights, p. 82-83)

Regional Findings of the Third U.S. National Climate Assessment: ALASKA

- “Arctic summer sea ice is receding faster than previously projected and is expected to virtually disappear before mid-century. This is altering marine ecosystems and leading to greater ship access, offshore development opportunity, and increased community vulnerability to coastal erosion.
- Most glaciers in Alaska and British Columbia are shrinking substantially. This trend is expected to continue and has implications for hydropower production, ocean circulation patterns, fisheries, and global sea level rise.
- Permafrost temperatures in Alaska are rising, a thawing trend that is expected to continue, causing multiple vulnerabilities through drier landscapes, more wildfire, altered wildlife habitat, increased cost of maintaining infrastructure, and the release of heat-trapping gases that increase climate warming.
- Current and projected increases in Alaska’s ocean temperatures and changes in ocean chemistry are expected to alter the distribution and productivity of Alaska’s marine fisheries, which lead the U.S. in commercial value.
- The cumulative effects of climate change in Alaska strongly affect Native communities, which are highly vulnerable to these rapid changes but have a deep cultural history of adapting to change.” (NCA Ch. 22: Alaska)

Selected Findings and Information from the Third U.S. National Climate Assessment Relevant to ALASKA

- **Water:** “Alaska is home to some of the largest glaciers and fastest loss of glacier ice on Earth. Glacier retreat currently increases river discharge and hydropower potential in south central and southeast Alaska, but over the longer term might reduce water input to reservoirs and therefore hydropower resources.” (NCA Ch. 22: Alaska)
- **Thawing Permafrost, Infrastructure, and Health:** “Uneven sinking of the ground in response to permafrost thaw is estimated to add between \$3.6 and \$6.1 billion (10% to 20%) to current costs of maintaining public infrastructure such as buildings, pipelines, roads, and airports over the next 20 years. In rural Alaska, permafrost thaw will likely disrupt community water supplies and sewage systems, with negative effects on human health. The period during which oil and gas exploration is allowed on tundra has decreased by 50% since the 1970s as a result of permafrost vulnerability.” (NCA Ch. 22: Alaska)
- **Fisheries:** “Ocean acidification, rising ocean temperatures, declining sea ice, and other environmental changes interact to affect the location and abundance of marine fish, including those that are commercially important, those used as food by other species, and

those used for subsistence. For example, reductions in seasonal sea ice cover and higher surface temperatures may open up new habitat in polar regions for some important fish species, such as cod, herring, and pollock. However, continued presence of cold bottom-water temperatures on the Alaskan continental shelf could limit northward migration into the northern Bering Sea and Chukchi Sea off northwestern Alaska. In addition, warming may cause reductions in the abundance of some species, such as pollock, in their current ranges in the Bering Sea and reduce the health of juvenile sockeye salmon, potentially resulting in decreased overwinter survival. If ocean warming continues, it is unlikely that current fishing pressure on pollock can be sustained. Higher temperatures are also likely to increase the frequency of early Chinook salmon migrations, making management of the fishery by multiple user groups more challenging.” (NCA Ch. 22: Alaska)

- **Tribes:** “Alaska is home to 40% (229 of 566) of the federally recognized tribes in the United States. The small number of jobs, high cost of living, and rapid social change make rural, predominantly Native, communities highly vulnerable to climate change through impacts on traditional hunting and fishing and cultural connection to the land and sea. Climate impacts on these communities are magnified by additional social and economic stresses. However, Alaskan Native communities have for centuries dealt with scarcity and high environmental variability and thus have deep cultural reservoirs of flexibility and adaptability.” (NCA Ch. 22: Alaska)
- **Wildfire:** “Even if climate warming were curtailed by reducing heat-trapping gas (also known as greenhouse gas) emissions (as in the B1 scenario), the annual area burned in Alaska is projected to double by mid-century and to triple by the end of the century, thus fostering increased emissions of heat-trapping gases, higher temperatures, and increased fires. In addition, thick smoke produced in years of extensive wildfire represents a human health risk.” (NCA Ch. 22: Alaska)

Examples of Efforts Underway in ALASKA to Address Climate Change

In **ALASKA**, many efforts are already underway to mitigate and respond to the impacts of climate change, including:

Preparing Communities for the Consequences of Climate Change:

Many important preparedness, resilience, and adaptation efforts are already being led by local, state, and regional entities across the country. Mechanisms being used by local governments to prepare for climate change include: land-use planning; provisions to protect infrastructure and ecosystems; regulations related to the design and construction of buildings, road, and bridges; and preparation for emergency response and recovery. These local adaptation planning and actions are unfolding in municipalities of different sizes, and regional agencies and regional aggregations of governments are also taking actions. And States have also become important actors in efforts related to climate change.

- Reggie Joule serves on the President’s State, Local and Tribal Leaders Task Force for Climate Preparedness. He is an enrolled tribal member of the Native Village of Kotzebue. Reggie currently serves as the Mayor of the Northwest Arctic Borough located in Kotzebue, AK.

The Northwest Arctic Borough is comprised of eleven villages and roughly 7,500 residents. The Borough the second largest borough in Alaska, comprising approximately 39,000 square miles. Prior to being elected Mayor, Reggie served in the Alaska State Legislature, House of Representatives for 16 years. From 2010 – 2012 he served as the chairman of the Northern Waters Task Force, and currently serves as a member of the Alaska Arctic Policy Commission.

Cutting Carbon Pollution in ALASKA:

In 2012, power plants and major industrial facilities in Alaska emitted more than 18 million metric tons of carbon pollution – that’s equal to the yearly pollution from almost 4 million cars. Through the Climate Action Plan and state initiatives, there are many efforts already underway to mitigate and respond to the impacts of climate change in Alaska, including:

- ***Investing in Clean Energy:*** Since President Obama took office, the U.S. increased solar-electricity generation by more than ten-fold and tripled electricity production from wind power. In Alaska, renewable energy generation from energy from wind, solar, and geothermal sources increased by nearly a factor of nine. Since 2009, the Administration has supported tens of thousands of renewable energy projects throughout the country, including 8 in Alaska, generating enough energy to power almost 4,000 homes.
- ***Improving Efficiency:*** Using less energy to power our homes, businesses and vehicles is critical to building a clean and secure energy future. President Obama has made essential investments in research and development for energy efficiency advances, and set new standards to make the things we use every day – from cars to microwaves – more efficient.
 - President Obama established the toughest fuel economy standards for passenger vehicles in U.S. history. These standards will double the fuel efficiency of our cars and trucks by 2025, saving the average driver more than \$8,000 over the lifetime of a 2025 vehicle and cutting carbon pollution.
 - Since October 2009, the Department of Energy and the Department of Housing and Urban Development have jointly completed energy upgrades nearly two million homes across the country, saving many families more than \$400 on their heating and cooling bills in the first year alone.
 - Nationally, the President’s Better Buildings Challenge partners and Better Buildings, Better Plants partners have committed to reduce energy intensity at least 20 percent in over 3 billion square feet of building space.

For more information about the third U.S. National Climate Assessment, please visit www.globalchange.gov or contact engagement@usgcrp.gov.

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