



NATIONAL CLIMATE ASSESSMENT: ALASKA AND THE ARCTIC

The draft National Climate Assessment is the most comprehensive report on climate change impacts in the United States. Here are a few things we learned from the draft assessment about impacts in Alaska and the Arctic.

Heat and Wildfires

- Climate change is happening now, and is primarily caused by carbon pollution from fossil fuels like coal, oil, and gas. How much the climate changes in the future is up to us.
- Like the rest of the Arctic, Alaska is rapidly warming. Over the last 60 years, the average temperature has increased 3 degrees Fahrenheit — twice as fast as the rest of the United States.
- If carbon pollution continues to increase, northern Alaska could warm as much as 12 degrees Fahrenheit by the end of the century — a dramatic change likely to bring harmful and unforeseen consequences.
- Rising temperatures are introducing new health problems into some rural Alaskan communities, like water pollution and food-borne diseases.
- Warmer, drier summers in Alaska have led to more large fires in the past ten years than in any decade since recordkeeping began. The area burned in Alaska each year could double by the middle of the century.

Permafrost

- Much of Alaska is covered by frozen ground called permafrost. As permafrost thaws, the cost of replacing worn-out pipelines, roads, and other infrastructure could increase up to \$6 billion by 2030.
- Rural Alaskans already pay some of the highest prices in the nation for food and fuel. These low-income communities will be hit hardest by supply disruptions brought by climate change.

Sea Ice and Glaciers

- Summer Arctic sea ice is rapidly receding, and could completely disappear in just a few decades.
- As the sea ice disappears and permafrost thaws, Alaska's shorelines are eroding, causing homes and buildings to literally fall into the sea. For instance, the school building in Newtok, Alaska could be destroyed by erosion as early as 2017. Some villages are now trying to relocate their people away from the coasts.
- Glaciers in Alaska are melting faster than anywhere else on Earth. In the coming decades, the loss of glacial ice could reduce an important source of hydroelectric power.