# **BACKGROUND**

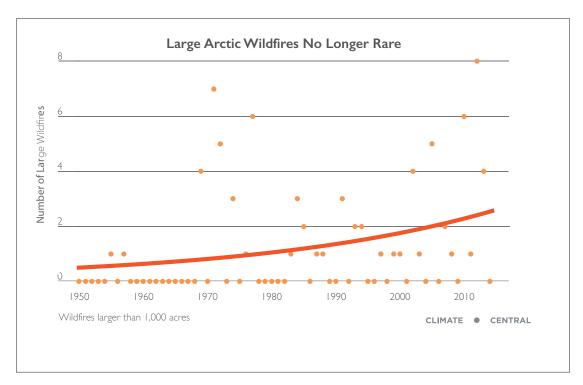
Burning fossil fuels, such as coal and gas, releases carbon dioxide.  $CO_2$  builds up in the atmosphere and causes Earth's temperatures to rise. This extra, trapped heat disrupts many of the interconnected systems in our environment, posing risks to human health. Some impacts of climate change are already being felt throughout the United States. We need to safeguard our communities by protecting people's health from the effects of climate change.

# **ISSUE SUMMARIES**

### **DROUGHT AND WILDFIRES**

Droughts increase the likelihood of health hazards like wildfires, dust storms, extreme heat events, flash floods and degraded air and water quality. Drought threatens water supplies and ecosystems, contributing to increased food prices that disproportionately affect low-income individuals. Exposure to wildfire smoke and dust storms increases respiratory and cardiovascular hospitalizations, asthma, bronchitis, chronic obstructive pulmonary disease and medical visits for lung illnesses and respiratory infections.

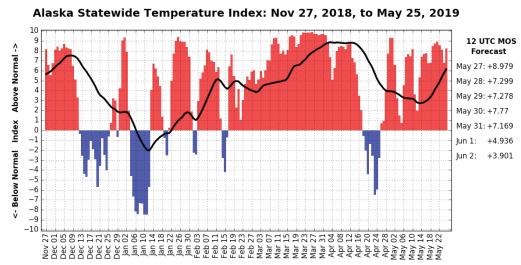
#### **NUMBER OF LARGE WILDFIRES IN ALASKA, 1950–2015**



Source: Climate Central

## THAWING PERMAFROST

Permafrost is a thick subsurface layer of soil that remains frozen throughout the year. Climate change and warming temperatures have caused the permafrost to thaw, affecting an estimated 100,000 Alaskans. As permafrost thaws, entire communities could have to relocate due to damaged infrastructure and limited resource access. Thawing permafrost also erodes coastlines, placing homes, medical clinics, water sanitation systems, roads and culturally significant sites at risk.





Index based on 1981-2010 daily normals and standard deviations of 25 stations. A value of +1 means that the day is warmer than 10% of all Above Normal days. A value of +8 means the day is warmer than 80% of all Above Normal days; and so on. The opposite is true of negative numbers. Data source: NCEI & ACIS. **30-day average shown as black line.** 



Source: Alaska Center for Climate Assessment and Policy

#### **EXTREME HEAT**

Extreme heat leads to increased hospitalizations and, sometimes, fatal health events. Children, the elderly, people with chronic diseases, low-income populations and outdoor workers are at the highest risk for heat-related illnesses. Extreme heat is also linked to increased aggression, raising the incidence of assaults, murders and suicides.

### **FAST FACTS**



**Alaska warmed twice as fast** as the rest of the U.S. from 1949–2011, threatening the safety of communities reliant on thick permafrost.



**Many Alaskans express a feeling of depression** related to the uncertainty of the scope and magnitude of climate change.



Of Alaska Native communities, 86% are at risk of flooding and erosion, and 12 communities have already decided to relocate, resulting in physical and psychosocial distress.



A majority of **rural Alaskans** — **60%** — **live below the federal poverty level,** making them particularly vulnerable to climate change due to limited resources to adapt or migrate.

