



Drought and the Future in Alaska

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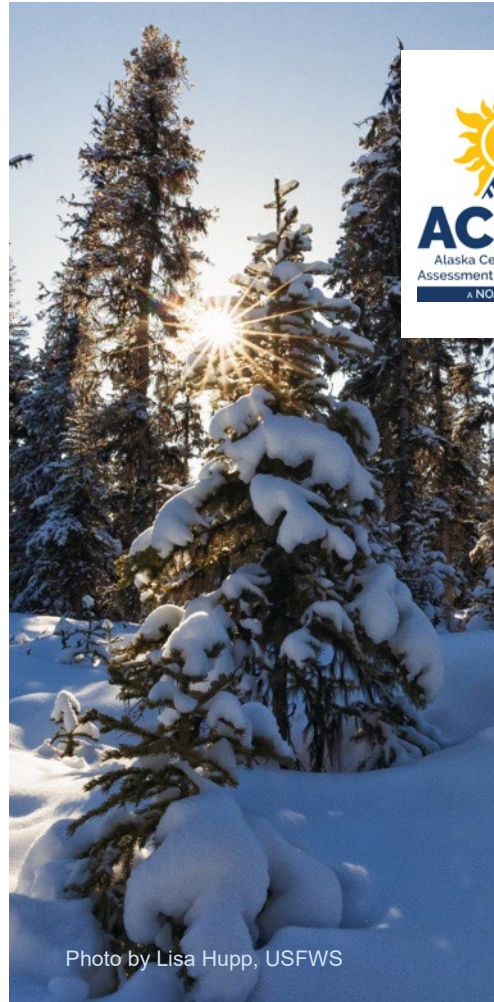


Photo by Lisa Hupp, USFWS



Photo by Keith Ramos, USFWS

Alaska Drought

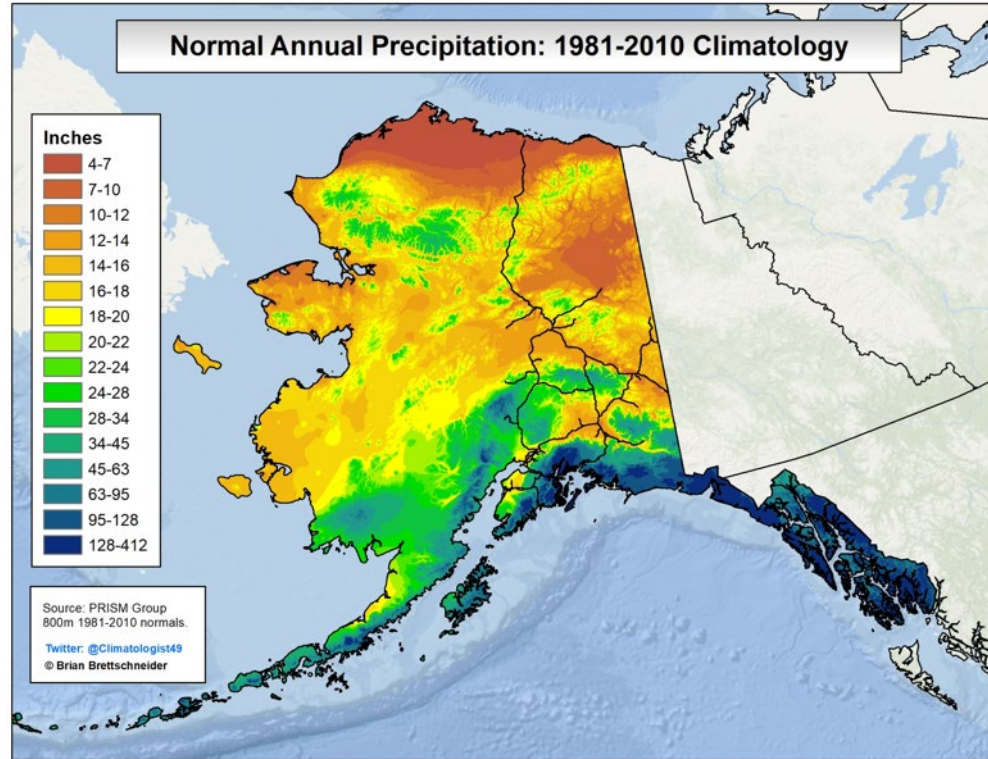
Diverse climates

- Arctic tundra to temperate rainforest
- Sea level annual mean precipitation 5 to 250 inches

Precipitation strongly modulated by complex terrain

- Individual storms to long term climate

“Low precipitation” impacts vary greatly based on region and season



Alaska Drought Challenges

Snow drought vs. low precipitation

- Historically in Southeast Alaska
- Recently in Southcentral Alaska

Strong precipitation seasonality: dry season:

- Mainland Alaska: early spring
- Southeast Alaska: early summer

Multi-month snow cover and frozen ground

Agriculture greatest controls not precipitation, rather air and soil temperatures

Summer wildfire risk and “flash drought”

Though disguised by lush vegetation, a partially dried stream bed is visible near Juneau in August 2019. Photo by Molly Tankersley



Alaska Drought (Possible) Changes

Timing of spring snow melt

- Earlier snowmelt \Rightarrow earlier drying

Increasing summer evapotranspiration

Changes in snow level

- Most obvious Southeast and Southcentral Alaska
- Southwest and Interior Alaska manifest as episodic valley rain-in-winter

Southeast Alaska: (projected) trend toward less summer rainfall



Farewell, Alaska
February 21, 2025
Photo credit: FAA



ACCAP's drought work

Listening sessions (with USDA NW Climate Hub) to help understand what drought means in different regions in Alaska

Reports and workshops focused on 2017-19 drought in Southeast Alaska

Work with NWS Alaska Region on supporting US Drought Monitor for Alaska

