Citizen Science with the CoCoRaHS (Community Collaborative Rain, Hail and Snow) Network - ALASKA

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Historical CoCoRaHS in Alaska

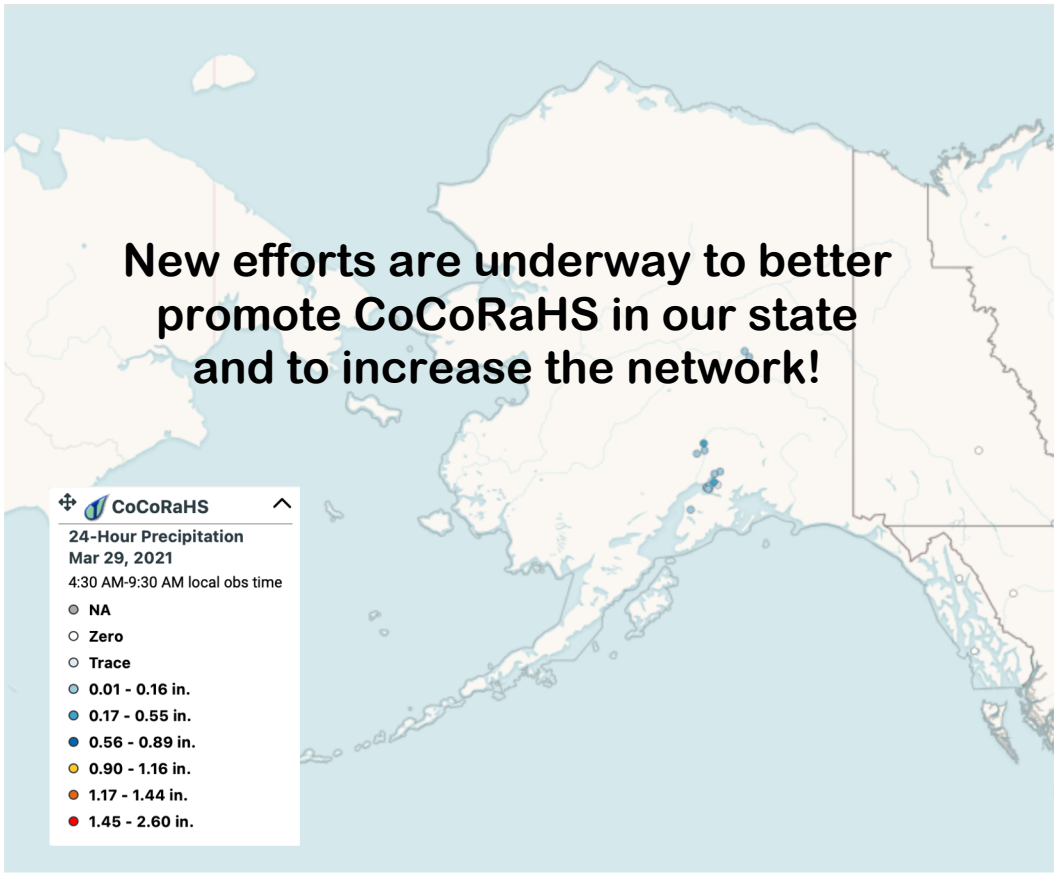
First observations: Spring 2007, Anchorage area

Expansion: 2009, more locations near Anchorage and parts of western Alaska, Juneau and Ketchikan

Two years later (2011): western observations stop

By 2014: observations in Fairbanks

Current CoCoRaHS in Alaska

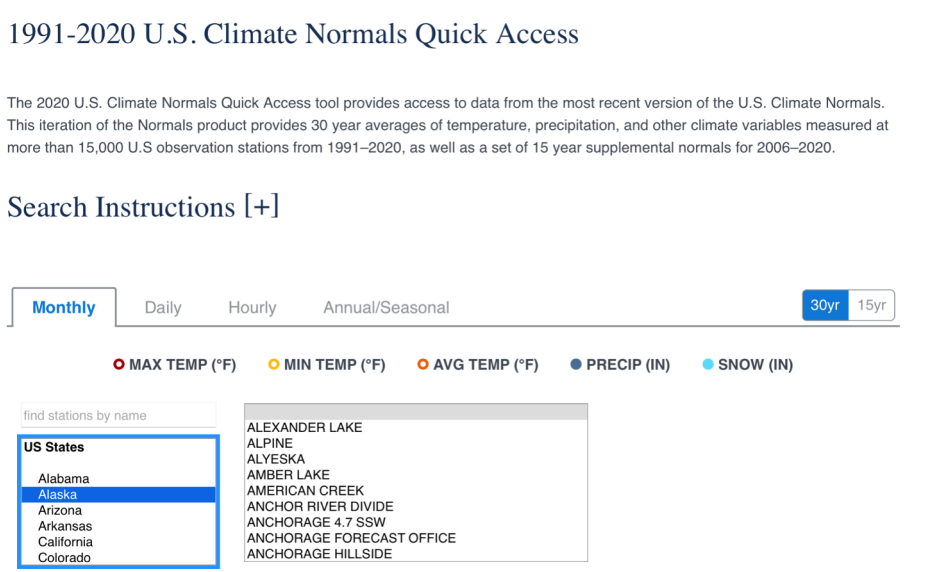


Alaska covers a THIRD of of the lower 48 states in terms of acreage.

A good day in Alaska?
a dozen to two dozen observations, clustered in the Fairbanks and Anchorage areas.

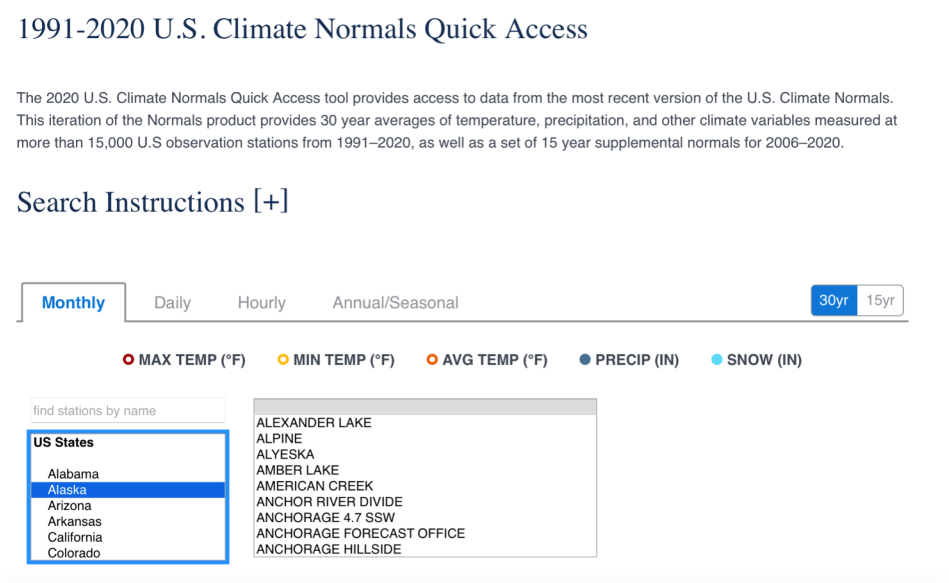
Pictured here: March 29, 2021 (18 observations)

Importance of Snow



- **Snow covers Alaska regionally for more than 8 months per year and impacts the lives of many Alaskan residents.**
- **Data is important for planning and for looking at long-term climate trends.**
- **But data collection is sparse.**

Importance of Snow



- **On May 4, 2021, NOAA released new climate normals for the 1991 - 2020 timeframe.**
  - **Selected SNOTEL sites and CoCoRaHS observations were included in these computations, highlighting the importance of this data.**

When to Measure New Snow

- Measure new snowfall as soon as possible after it ends, before settling and melting occur.
- This often will not be at your regular observation time.

Note that we never measure the depth of the snow in the rain gauge itself. Any frozen precipitation in the rain gauge must first be melted, then measured.

Where to measure new SNOWFALL

1. Find a nice, level place to measure where drifting or melting has not occurred (like a snow board).

2. Slide your snow ruler into snow until it reaches the ground/board surface.

3. Read value on snow ruler (value is always to nearest tenth of an inch, like 3.4 inches).

4. If using snowboard, sweep it clean after taking a snow core. Place the board on top of the new snow.

Challenges to Alaska

- **Daily observation numbers are low – work in progress**

Challenges facing Alaskans

- **Extremely cold temperatures in winter for snow sampling, darkness during measurement time**
- **Snow sampling is more involved/complex**
- **Financial burden**
- **It is frequently windy when the snow falls at typically well below freezing temperatures, and representative measurements are non-trivial (=> snow drift)**

Possible Solutions

- **Snow sampling training videos, specific to Alaska and Alaskan challenges**
- **Subsidized rain gauges**
  - **Potential problem: it's no longer really volunteer**

Doug Wesley, sampling in his backyard in Anchorage

Post-Pandemic Plans

- **SPRING/SUMMER 2021**
  - **Continue to reach out to schools, libraries, organizations (LEO) and tribal communities, to make contacts**

- **FALL 2021**
  - **Visits and hands-on demonstrations in classrooms, COVID-permitting**

Contact Information

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