





WELCOME TO THE ALASKA COCORAHS NEWSLETTER

This newsletter will discuss Fall 22 and winter 22-23 updates to the Alaska Community Collaborative Rain, Hail and Snow Network.

Thank you for submitting your daily precipitation reports! This newsletter's purpose is to inform all of the volunteers about weather events in Alaska, and to talk about current events and opportunities.

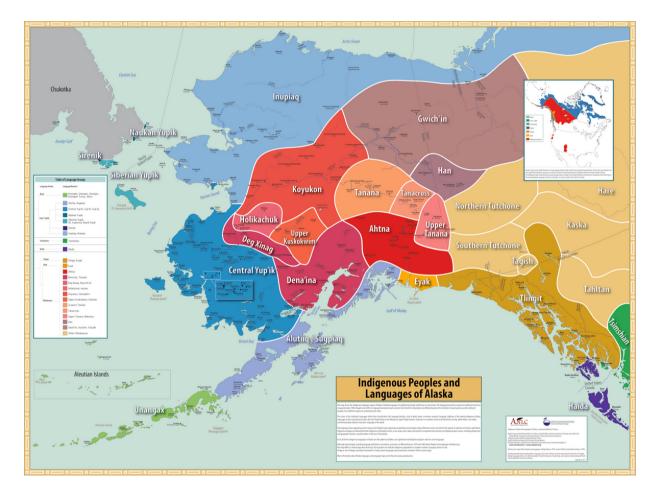


We would also like to thank the Canadian Commission for Environmental Cooperation (CEC) and Local Environmental Observer (LEO) network for their support of CoCoRaHS Alaska!



We would like to express our thanks to the Alaska Indigenous Peoples who inhabit and steward this land. It is a precious privilege to be doing this work on Indigenous land, and continue to work alongside our Native friends.

Below is a map of AK Native Languages for Alaska and surrounding areas.







THANK YOU ! QUYANAA!

We greatly appreciate our volunteers for taking the time to report their precipitation

measurements to us!

A special thank you goes out to those who have been consistently reporting for the last few months, and some new observers:

* New observer as of Fall '22/Winter '23.

THANK YOU

(continued from previous page):

AK-HB-3 Haines 0.3 N AK-HB-2 Haines 0.5 NNE AK-HB-6 Mosquito Lake 5.7 SSE AK-JB-11 Juneau 5.6 NW AK-JB-16 Juneau 15.7 NW AK-KP-3 Soldotna 5.1 E AK-KP-6 Soldotna 2.3 ESE AK-KP-7* Soldotna 9.5 E AK-BC-4 Sleetmute 1.4 SSE

AK-MS-26* Trapper Creek 2.2 N

AK-MS-12 Talkeetna 7.6 S AK-MS-14 Wasilla 2.7 NW AK-MS-15 Mosquito Lake 1.0 WSW AK-MS-19 Trapper Creek 8.5 SSW AK-MS-21 Palmer 7.1 WSW AK-MS-22 Chickaloon 1.7 WSW

AK-MS-25* Palmer 2.7 SW

AK-PW-1 Edna Bay 13.8 SE AK-PW-9 Thorne Bay 0.6 S AK-SF-3 Tok 1.7 NE

AK-SF-5* Delta Junction 6.5 NW AK-VC-6 Paxson 10.8 SSE

AK-VC-8 Glennallen 3.2 NE

AK-VC-9* Valdez 4.6 NW

* New observer as of Fall/Winter '22-23.

ACTIVE REPORTING IN THE VICINITY OF FAIRBANKS

AK-FN-35 (Fairbanks 18.9WNW) AK-FN-41 (Salcha 1.5SSW) AK-FN-38 (Fairbanks 18.4WNW) AK-FN-32 (Fairbanks 6.3W) AK-FN-33 (Fairbanks 12.1W) AK-FN-31 (Fairbanks 7.2NNE) AK-FN-35 (Fairbanks 18.9WNW) AK-FN-39 (Anaktuvuk 63.8NE) AK-FN-19 (North Pole 1.0N) AK-FN-15 (Fairbanks 5.7N) AK-FN-16 (Fairbanks 4.4W)

Thanks to Erin Billings and Martin Stuefer for coordination and setup of gauges and observations in the Fairbanks area/borough. This area has been the most active for new observers over the last 2 years!

OBSERVER SPOTLIGHT and Q&A

Observer: Sylvan and Nancy Morgan

Station: AK-MS-19 (Trapper Creek 8.5 SSW)

First Observation: 03/28/2020 Total # observations: about 1100

The Morgans have been observing river levels for more than 20 years, and in 2020 they became active CoCoRaHS observers at their remote AK location (only accessible by snowmobile during the long winter). They perform weekly snowpack SWE measurements at their site (10.16" as of 04/03/2023), and have a long history with their pack of sled dogs there.



Q1: What is your most difficult Observation or siting issue, historically? A1: That would be the SWE snowpack measurement. Even with good equipment it takes the longest.

Q2: What motivates you as an observer? A2: I've always been fascinated by weather and the complexity of precipitation in Alaska.

Q3: Are there any trends in your observations over the years? A3: In the 23 years we have been at the cabin, the winters seem milder temperature wise. We have experienced fewer nights below minus 20 in the past four or five years. My calendars show that between 2001 and 2012 we would have several nights where the temperature dipped below -30, usually for several days in a row. Snow levels have ranged from 43 inches to 220+, but most years stay between 120 and 140 inches with a pack maximum about 48 inches most years.

> Q4: What's your current observation count? A4: ~1100 (consecutive)

CoCoRaHS Awards and Honors

Wasilla observer Suzanne Yehle's award this month for 3650 lifetime observations.



Spring, 2023

Alaska CoCoRaHS Newsletter





PICTURES OF THE SEASON



Grizzly tracks just east of Anchorage, Oct. 10, 2022.



Anchorage, Dec. 17 2022

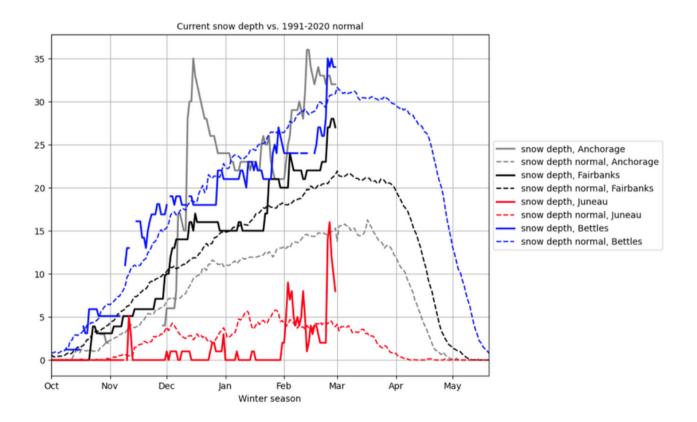


Hal Morgan's Bandit at his cabin

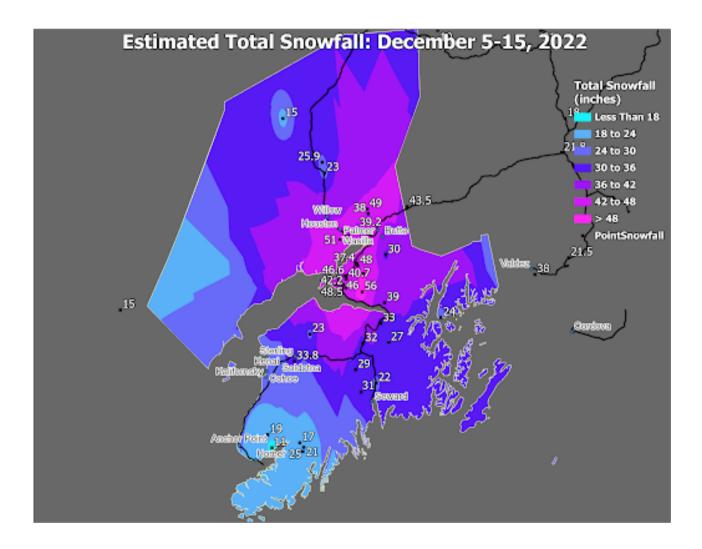
Have a photo to share? Send it to us at the contact information at the end of this newsletter!

Snow Early Dec 2022

The Anchorage region was pummelled by a series of storms that brought near record amounts of snow to the city and surrounding areas. Over the course of about two weeks, three major storm systems moved through Southcentral Alaska. The first system occurred (Dec. 6-7), along with two more rounds of snow on December 11-12 and December 14-15, totalling 30-55" over the Anchorage Bowl and Hillside.. The daily (and in some cases more frequent) reports of snowfall, submitted by CoCoRaHS, COOP, and public observers, including "Significant Weather" measurements submitted by some volunteers, helped map out the snowfall. December 2022 turned out to be the snowiest December on record at ANC.

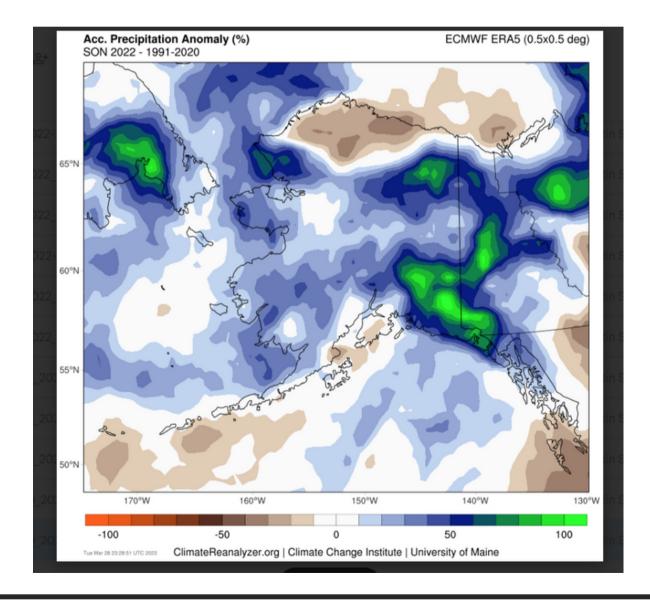


Heavy snowfall Anchorage Dec 5-15 2022, thanks to D. Levin's analysis (scientist at NWS Anchorage), including CoCoRaHS, COOP and public observations

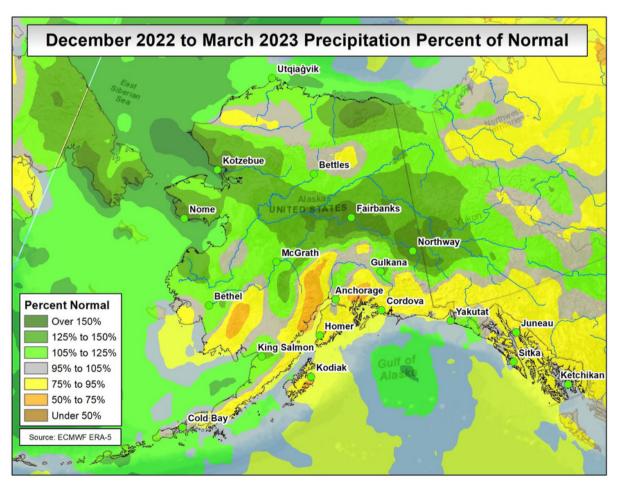


Keep in mind that Anchorage experienced its 2nd wettest year on record for 2022.

The general pattern observed during the summer months continued through Nov 2022, with very wet (up to double the average observed precip) conditions over the Copper River drainage, southeastward to the extreme northern panhandle and over the northern portions of the eastern Yukon River drainage region. Shown below are the anomalies for Sept-Nov 2022. The only large area that experienced dry anomalies was north of the Brooks Range. Much of the rest of AK saw normal to 20-40% above normal values.

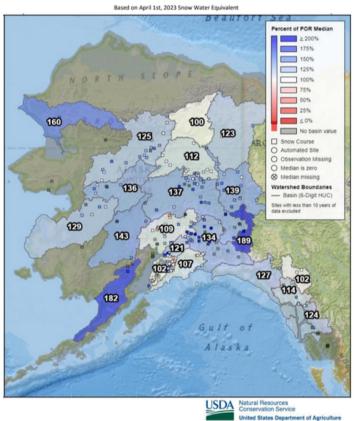


This cold-season period marked a major change in the pattern experienced from mid-2022 to the end of the warm season. Note that the latter ~half of this fall/winter period is getting into the climatological dry season in AK. Most of southern AK returned to belowaverage precip values, despite the very heavy snowfall observed in portions of southcentral during the first half of Dec. Meanwhile much of the central interior including Fairbanks, northwestward through Kotzebue, and far NE AK maintained snowier-thanaverage conditions. Same goes for much of the Yukon/AK border region, except for the south end.



Alaska Snotel Analysis 04/1/2023

These are based on SNOTEL measurements at high-elevation sites



Alaska Statewide Snowpack Map

This analysis is useful for the runoff/breakup potential, as it represents one estimate of the current snowpack late in the winter. All areas with observations reported at or above the average snowpack values as of 04/01/2023

REMINDERS

Please report zeros! Recording no precipitation is just as important as recording any amount >0.

RAIN, SNOW and ICE:

Your precip measurements are of critical importance to monitoring these conditions in AK. In particular, drought- and heavy rain-related measurements are crucial as the public, scientists and interested parties monitor actual conditions on the ground in areas that are sparsely populated.

Review Measurement Training! The CoCoRaHS website has plenty of precip measurement resources in the "<u>Training Slide Shows</u>" link on the left of the main page. Learn about gauge placement, measuring liquid equivalent, as well as the potential complicating effects of nearby trees and gauges that are not mounted properly.





The Service High School CoCoRaHS raingauge and stand in Anchorage

SPREAD THE WORD!



Help measure rain!



Measure precipitation in your own backyard with CoCoRaHS!

Do you know someone in your community who is interested in weather and measurement? Please introduce them to CoCoRaHS and contact your CoCoRaHS coordinator, listed on the final page of this newsletter.

Thank you for your help!

Links: - <u>CoCoRaHS brochure</u> - <u>CoCoRaHS "Wanted" Flyer</u>

We need to recruit more observers, and continue to train, for measuring precipitation in Alaska's unique terrain!

Alaska CoCoRaHS Newsletter

CONTACTS

Alaska CoCoRaHS State Coordinator:

Martin Stuefer Alaska State Climatologist Alaska Climate Research Center University of Alaska Fairbanks 2156 Koyukuk Drive P.O. Box 757320 Fairbanks, Alaska 99775 907-474-6477 <u>mstuefer@alaska.edu</u>

Anchorage Regional Coordinator:

Doug Wesley NWS Alaska Regional HQ 222 W. 7th Ave Anchorage, AK 99513 907-500-5890 douglas.wesley@noaa.gov

Southeastern/Panhandle Coordinators:

Kimberly Vaughan, Aaron Jacobs National Weather Service Juneau Forecast Office 8500 Mendenhall Loop Rd Juneau, AK 99801 907-790-6824 <u>kimberly.vaughan@noaa.gov</u> <u>aaron.jacobs@noaa.gov</u>

Fairbanks Regional Coordinator:

Erin Billings National Weather Service UAF-Akasofu Building Post Office Box 757345 Fairbanks, AK 99775-7345 (907) 458-3708 <u>erin.billings@noaa.gov</u>

Thanks go out to Martin Stuefer, Rick Thoman, Brian Brettschneider and Aaron Jacobs for providing the climatological plots in this Newsletter.



