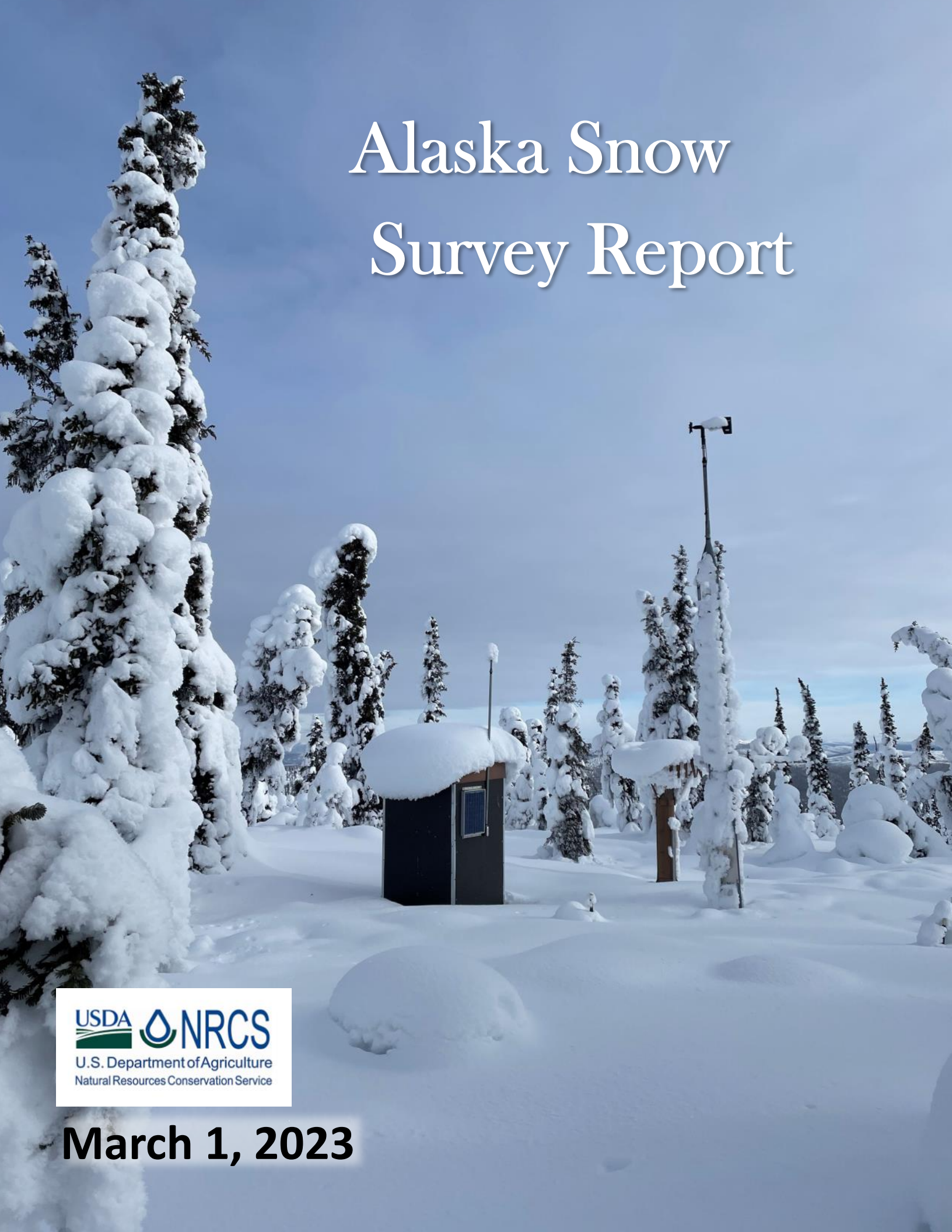

Alaska Snow Survey Report

USDA NRCS
U.S. Department of Agriculture
Natural Resources Conservation Service

March 1, 2023

The USDA Natural Resources Conservation Service cooperates with the following organizations in snow survey work:

Federal

U.S. Depart of Agriculture - U.S. Forest Service
- Chugach National Forest
- Tongass National Forest

U.S. Department of Commerce
- NOAA, Alaska Pacific RFC

U.S. Department of Defense
- U.S. Army Corps of Engineers

U.S. Department of Interior
- Bureau of Land Management
- U.S. Geological Survey
- U. S. Fish and Wildlife Service
- National Park Service

Municipalities
- Anchorage
- Juneau

Private
- Alaska Electric, Light and Power, Juneau
- Alyeska Resort, Inc.
- Alyeska Pipeline Service Company
- Anchorage Municipal Light and Power
- Chugach Electric Association
- Copper Valley Electric Association
- Homer Electric Association
- Ketchikan Public Utilities
- Prince William Sound Science Center

State of Alaska
- Alaska Department of Fish and Game
- Alaska Department of Transportation and Public Facilities
- Alaska Department of Natural Resources
  - Division of Parks
  - Division of Mining and Water
  - Division of Forestry
- Alaska Energy Authority
- Alaska Railroad
- Soil and Water Conservation Districts
  - Homer SWCD
  - Fairbanks SWCD
  - Salcha-Delta SWCD
- University of Alaska
  - Geophysical Institute
  - Water and Environment Research

Alaska Public Schools
- Mantanuska-Susitna Borough School District
- Eagle School, Gateway School District

Canada
- Ministry of the Environment
  - British Columbia
- Department of the Environment
  - Government of the Yukon

United States Department of Agriculture

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Cover Photo: Jack Wade Junction SNOTEL site, near the Yukon Border. The snowpack in the area is above Normal. Photo by Brant Dallas.

Table of Contents

General Overview

Updated 1991-2020 Snow Survey and Water Supply Normals

Every 10 years, The NRCS's Snow Survey and Water supply Forecasting Program (SSWSF) produces new 30-year central tendency statistics. These are often call the site Normals. The new 1991-2020 Normals have been developed and are being used in this publication. A detailed discussion can be found on the National Water and Climate Center's website here. The main take away is that "100% of Normal" this winter is not likely to be the same as it was last decade. A side-by-side comparison of the new and old Alaska snowpack Normals for February can be found here.

SnowPack

In a state as large as Alaska, spatial variability in snowfall totals are expected. February 2023 was no exception, with some reporting stations recording well below Normal gain in snowpack and some stations reporting totals that approach historic highs In some cases, this difference was noted in the same basin.

The Tanana is an example. The stations the feed into the basin near Fairbanks reported dramatic February increases in snow water equivalent (SWE). The 2.2-inch increase measured at the Caribou Snow Pillow is the largest February increase in its history. All the stations in the Chena basin boasted top 10 February snow totals. Whereas in the eastern, upstream, reaches of the basin increases were considerably below Normal. This bucks the trend of snowfall in this basin for the year to date. The stations that reported the least February increases are reporting the most robust snowpacks in the basin, with some stations reporting historic March 1 snowpack.

In Southcentral Alaska there are a lot of factors at play to form snow. Storms can come from either the Bering Sea or the Gulf of Alaska and then collide with the Chugach Mountains and winds aloft to make a snowpack that can vary dramatically over short distances. In January, the storms that track from the Gulf of Alaska were winning this battle. In February snowfall shifted towards systems that originate in the Bering Sea. As such February snow totals favored locations on the western Kenai, Anchorage and north through the lower reaches of the Susitna. These storms occurred with cool temperatures and snow was recorded to sea level. Kenai Moose Pens SNOTEL and the Kincaid snow course recorded top five snowpacks. The Anchorage airport did as well. The stations in the Talkeetnas and the lower Susitna all recorded well above Normal SWE for the month.

The stations in Southcentral that benefit from a Gulf of Alaska storm track tell a different story in regard to February snow totals. Western Prince William Sound and the eastern Kenai received well below Normal February snowfall. As did the stations around Valdez. However, one does not need to travel very far southeast before February snow totals increase. At Mt. Eyak, near Cordova, the nearly ten inches of SWE increase is double its normal monthly increment.

Southeast Alaska reported the most exceptional February increases in the state. Precipitation totals were highest in southern Southeast and graded to near normal precipitation in the northern parts of the panhandle. With colder-than-Normal temperatures,snow was noted at all elevations. The low elevation snow measurements on Douglas Island and Peterburg made February gains that were more than six times Normal. The 11.5 inch SWE increase at Eaglecrest was the second highest February gain in forty-four years of observation.

General Overview, Continued

SnowPack Continued

For most of Alaska, March through May is the climatological dry season. As Alaska heads into its dry season, snowpacks throughout the state are generally robust. In the Interior, portions of the Copper, Upper Susitna and Central Yukon are reporting historic March 1 snowpacks. Northwest Alaska is also reporting a snowpack that is much above Normal. The same can be said about parts of the Upper Yukon. On the other end, the Eastern Kenai and Western Prince William Sound are reporting pockets of below Normal snowpack. Most of the rest of Alaska is reporting Normal to above Normal values for March 1 SWE. April through July stream flow forecasts reflect this and range from Normal to well above Normal for every basin that they are produced.

		Basin Index	
		Current	Last Year
Alaska Statewide Snowpack	**# of Sites**	**Percent of Median**	**Percent of Median**
Upper Yukon Basin	31	112	161
Central Yukon Basin	8	122	170
Tanana Basin	18	143	220
Koyukuk Basin	7	134	152
Kuskokwim Basin	1	153	163
Copper Basin	16	132	140
Matanuska-Susitna Basin	15	124	156
Northern Cook Inlet	14	126	152
Kenai Peninsula	21	97	116
Western Gulf of Alaska	9	100	119
Southeast Alaska	12	122	148

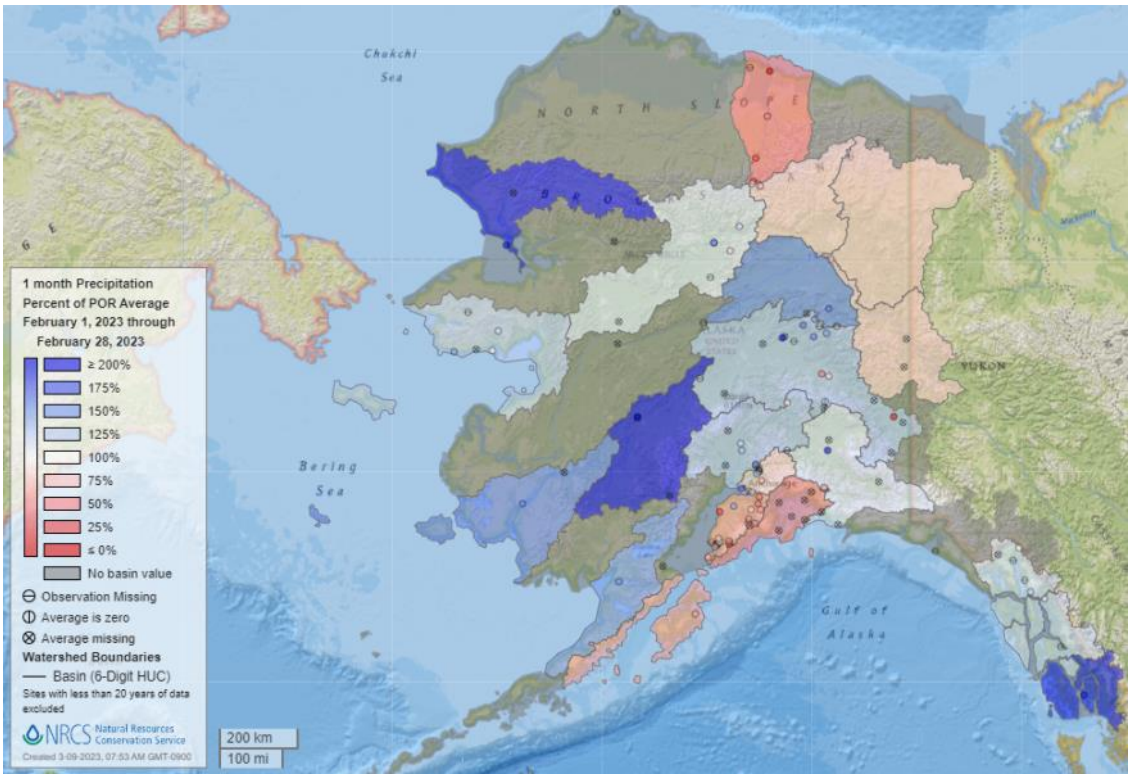
Precipitation

February temperatures were cooler than normal for almost the entire state. As such precipitation fell as snow and mirror snowfall trends for February. Well above normal precipitation was reported in Southeast Alaska north to Eastern Prince William Sound. Below normal precipitation was noted in Western Prince William Sound and the Kenai Peninsula. The eastern portion of the interior and the stations along the Dalton Highway north of the Brooks Range also reported below normal precipitation for the month. The central portion of the state reported near normal precipitation. Western Alaska reported above normal precipitation for the month, with Aniak and McGrath both reporting more than double normal February precipitation.

Alaska Statewide Precipitation Maps

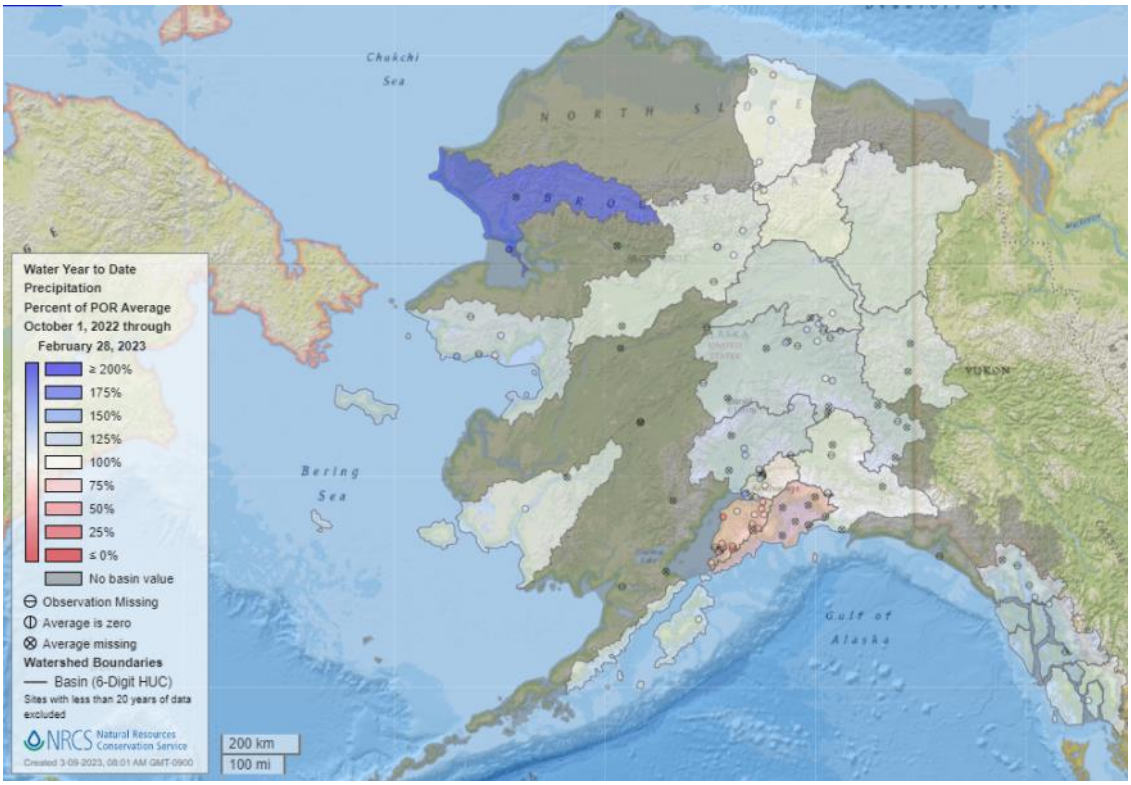
Monthly Precipitation for February 2023

(% of Period of Record Average)



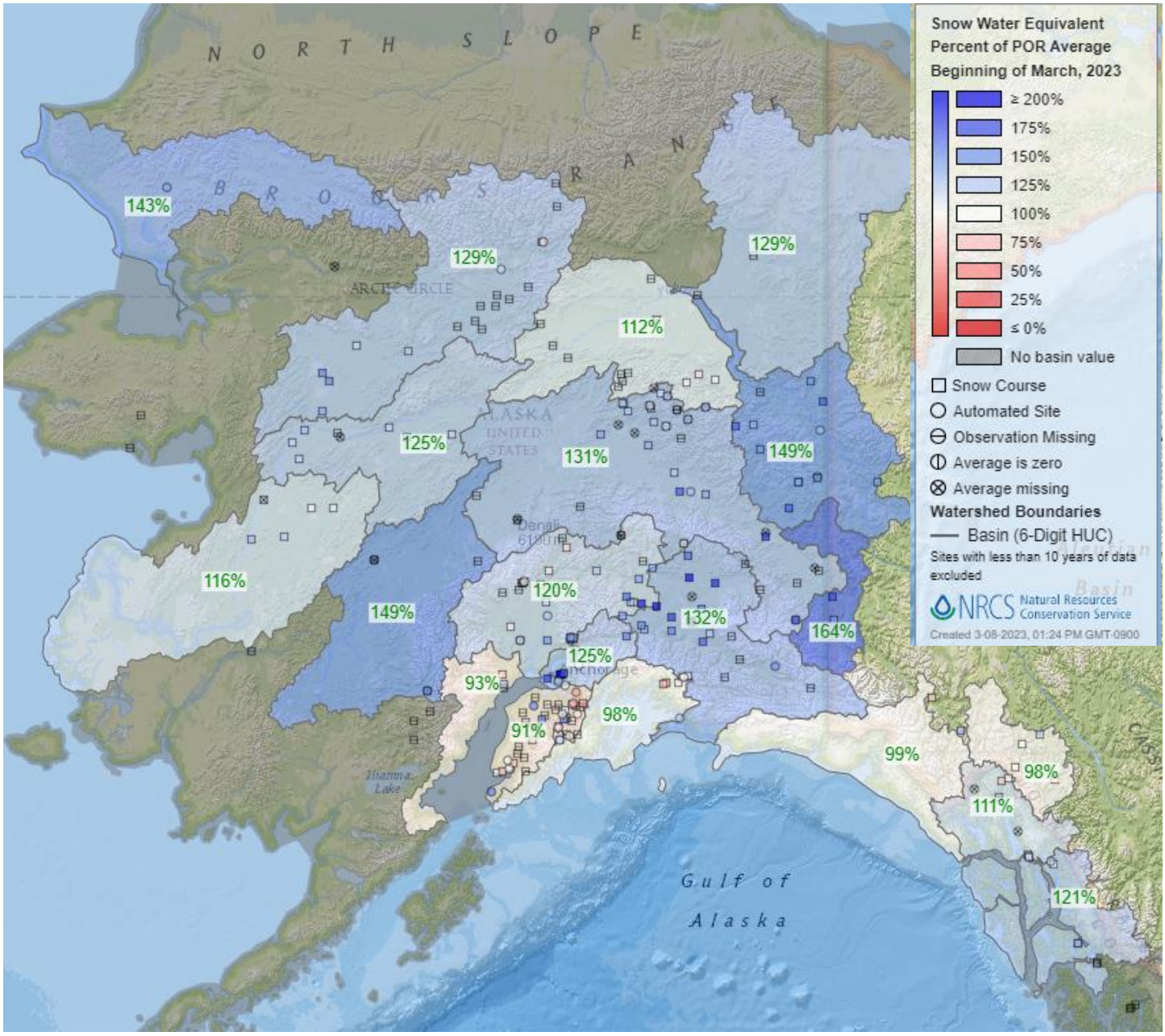
Water Year-to-date Precipitation (Oct. 1, 2022-Feb 28, 2023)

(% of Period of Record Average)



Alaska Statewide Snowpack Map

Based on March 1st, 2023 Snow Water Equivalent



USDA Natural Resources Conservation Service
United States Department of Agriculture

Streamflow Forecasts

FORECAST POINT*	Percent of Ave. Flow	Period
Yukon River at Eagle	111	April - July
Porcupine River nr Int'l Boundary……	111	April - July
Yukon River near Stevens Village	106	April - July
Tanana River at Fairbanks	119	April - July
Tanana River at Nenana	120	April - July
Little Chena River near Fairbanks	118	April - July
Chena River near Two Rivers	113	April - July
Salcha near Salchaket	127	April - July
Kuskokwim River at Crooked Creek	119	April - July
Sagvanirktok River near Pump Station 3	101	April - July
Kuparuk River near Deadhorse	111	April - July
Gulkana River at Sourdough	171	April - July
Little Susitna River near Palmer	117	April - July
Talkeetna River near Talkeetna	102	April - July
Ship Creek near Anchorage	117	April - July
Kenai River at Cooper Landing	98	April - July
Bradley Lake Inflow		April - July
Taiya River nr Skagway	103	April - July

Snowmelt Runoff Index (SRI): for streams which no longer have stream gauging

FORECAST POINT	INDEX
Koyukuk River at Hughes……..	—
MF Koyukuk R near Wiseman ……..	—
Slate Creek at Coldfoot……..	—
Beaver Creek above Victoria Creek……..	—
Birch Creek below South Fork……..	1.0
Caribou Creek at Chatanika……..	0.5
Susitna River near Gold Creek……..	1.5
Chulitna River near Talkeetna……..	-2.0
Deshka River at mouth near Willow……..	-1.0
Montana Creek at Parks Highway……..	0.0
Willow Creek near Willow……..	0.5
Skwentna River at Skwentna……..	-1.5
Chuitna River near Tyonek……..	-1.5
Campbell Creek near Spenard……..	1.5
Indian Creek at Indian……..	-2.5
Bird Creek at Bird Creek ……..	-2.5
Glacier Creek nr Girdwood ……..	-2.5
Six Mile Creek near Hope……..	-0.5
Resurrection Creek near Hope……..	—
Grouse Ck at Grouse Lake Outlet nr Seward ……..	0.0
Anchor River near Anchor Point ……..	-2.0
Deep Creek near Ninilchik……..	-2.0
Ninilchik River near Ninilchik……..	-2.0
Fritz Creek near Homer……..	-2.0
Skagway River at Skagway……..	1.0
Municipal Watershed C nr Petersburg ……..	1.0
Gold Creek near Juneau……..	-0.5

Key:

Index	
-2 to -3	much below average snowmelt runoff
-1 to -2	below average snowmelt runoff
-1 to +1	average snowmelt runoff
+1 to +2	above average snowmelt runoff
+2 to +3	much above average snowmelt runoff

HOW FORECASTS ARE MADE

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

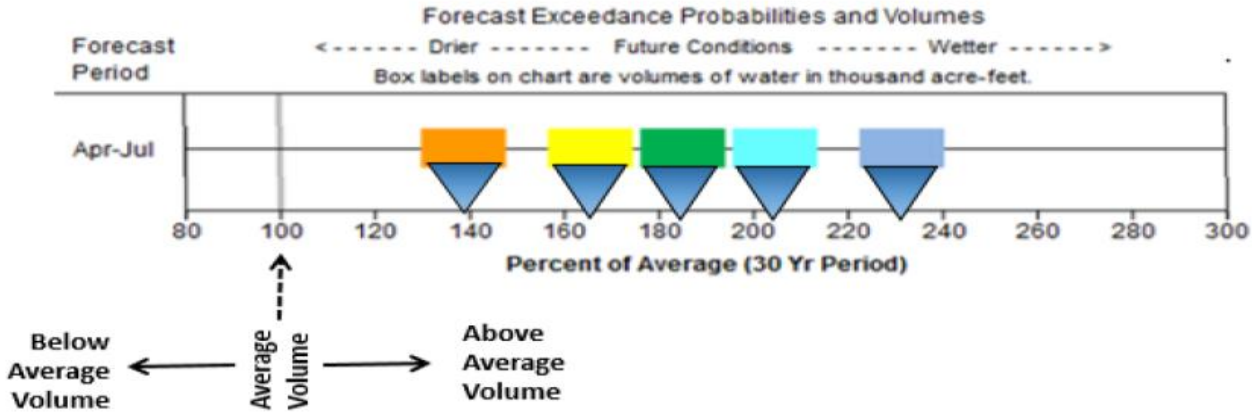
Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

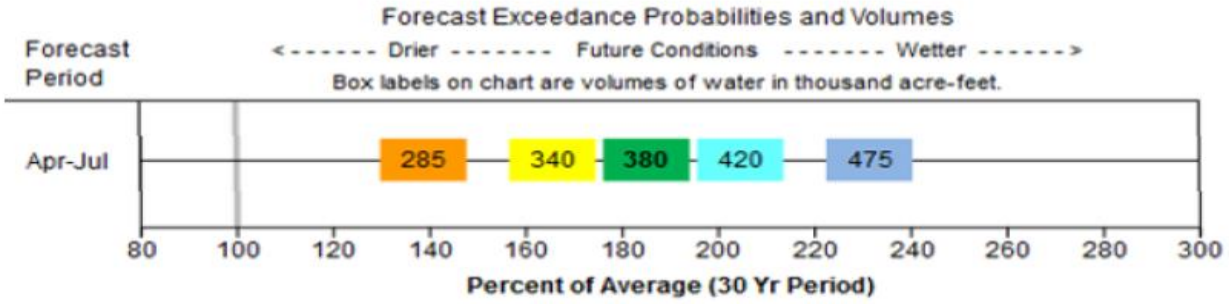
How to Interpret the Streamflow Forecast Graphic:

This graphic provides a visual alternative to the forecast tables the NRCS has presented for years. It gives both the volume and percent of average of each of the five forecast exceedances.

The five colored boxes represent each forecast's five exceedances.
The center of each forecast exceedance box corresponds to that exceedance's percent of average on the horizontal axis. In this case the green 50% exceedance forecast box is centered over 185% of average streamflow. If drier future conditions occur the orange box (90% exceedance) is 139% of average. If wetter future conditions occur the darker blue box (10% exceedance) is 232% of average. In some cases when exceedance volumes are similar, the width of the colored boxes gets squeezed. Still use the center of the box to determine its percent of average. The width of the box is irrelevant.



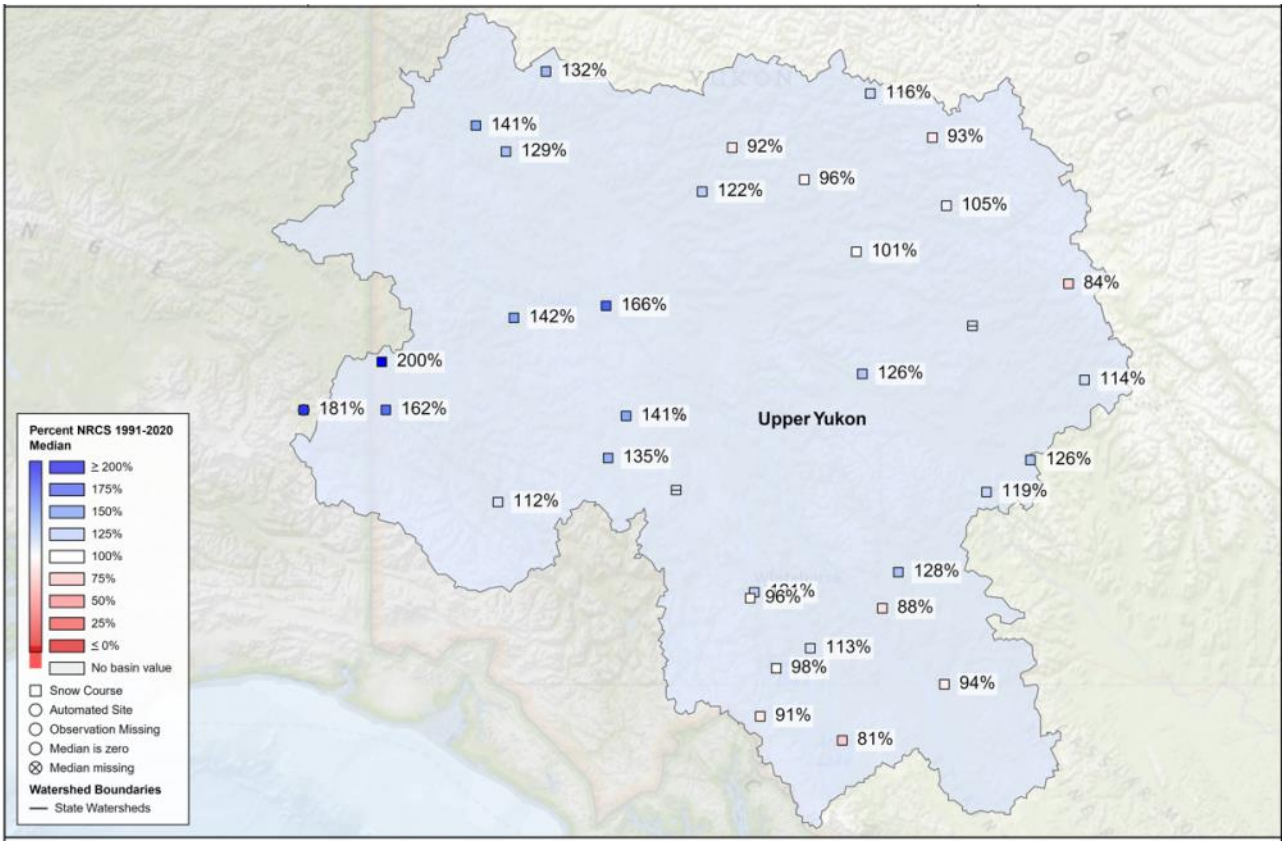
Boxes to the right of the gray 100% of average line represent above average volumes. Conversely, any boxes to the left of the gray 100% line represent below average volumes. In this case all forecast exceedances are for above average April-July volumes. Averages are based on the 1981-2010 period. The number inside or above each colored box represents the volume of that exceedance forecast in thousand acre-feet (KAF). In this case the green 50% exceedance forecast volume is 380 KAF which is

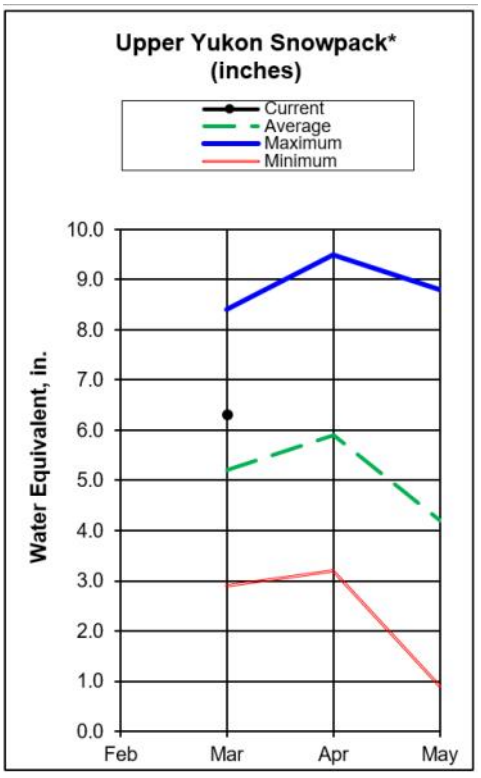


centered above 185% of average. Volumes decrease with drier future conditions (left of green box) and increase with wetter conditions (right of green box).
Forecast graphics for other basins are available at: https://www.wcc.nrcs.usda.gov/wsf/Fcst_Chart/

Upper Yukon Basin

Upper Yukon Snowpack





Snowpack

The snowpack in the upper Yukon is mostly above normal. In general terms, the stations closest to the border with Interior Alaska have the most robust snowpacks. Chair Mountain, off the Alaska Highway, just east of the border, is reporting its period-of-record maximum SWE for March 1. There are several others in the vicinity with their highest five March 1 readings. There is a gradation towards slightly below normal snowpack as to the east and south from the border. As a whole, the 31 sites used to index the basin are 112% of normal SWE for March 1.

Upper Yukon Basin

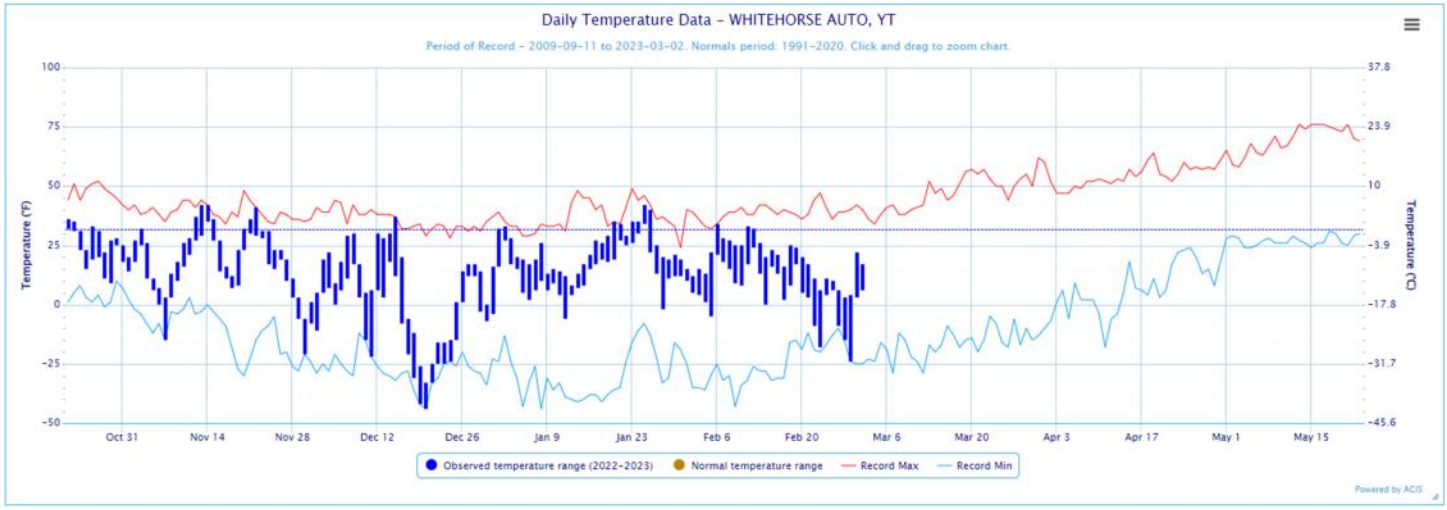
Snowpack Data

Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Atlin Lake	2395	15	22	18	3.0	5.1	3.7
Beaver Creek	2150	29	32	16	5.4	6.5	2.7
Blackstone River	1020	29	33	---	5.0	6.7	---
Burns Lake	3650	39	57	36	8.7	12.5	7.6
Burwash Airstrip	2660	14	18	10	1.9	2.8	1.7
Calumet	4300	36	46	34	5.9	9.7	6.4
Canyon Mine	1160	18	---	---	2.9	---	---
Casino Creek	3495	33	---	26	6.1	---	4.3
Chair Mountain	3500	29	26	20	5.2	5.2	3.2
Edwards Lake	2720	29	41	27	5.1	8.6	5.3
Finlayson Airstrip	3240	26	35	20	4.8	6.7	3.8
Francis River	730	32	46	---	6.1	9.3	---
Fuller Lake	3695	30	43	32	5.7	8.8	6.8
Grizzly Creek	3200	35	40	30	7.8	8.0	5.9
Hoole River	3400	30	37	25	5.7	7.4	4.8
Hyland	855	33	45	---	6.6	10.3	---
Jordan Lake	3050	30	36	24	5.9	9.1	4.6
King Solomon Dome	3540	36	52	30	8.0	12.4	6.2
Log Cabin B.C.	2900	45	53	47	12.9	16.5	14.2
Macintosh	3805	27	32	20	4.6	7.3	3.4
Mayo Airport	1770	26	31	20	4.4	6.3	3.6
Meadow Creek	4050	41	60	42	9.3	15.6	10.6
Midnight Dome	2805	35	50	28	7.9	11.1	5.6
Montana Mtn.	3350	25	28	25	5.3	6.9	5.4
Morley Lake	2700	23	37	24	4.6	9.1	4.9
Mt. Mcintyre B	3600	29	40	26	5.2	9.0	5.4
Mt. Nansen	3350	23	29	17	3.8	5.4	2.7
Ogilvie River	550	28	30	---	5.4	6.0	---
Pelly Farm	1550	23	26	15	4.8	6.9	2.9
Pine Lake Airstrip	995	33	55	---	6.3	13.6	---
Plata Airstrip	2725	30	48	29	6.4	10.4	6.1
Rackla Lake	3410	35	41	30	7.2	8.0	6.2
Rose Creek Faro	1080	26	35	25	4.8	7.7	3.8
Russell Lake	3480	36	58	35	7.5	14.0	7.4
Summit	985	37	43	31	7.6	11.0	7.4
Tagish	3540	28	33	26	5.9	7.5	5.2
Watson Lake Airport	685	24	46	---	3.9	10.2	---
Whitehorse Airport	2300	22	28	20	4.6	6.6	3.8
Williams Creek	3000	27	34	19	4.8	6.9	3.1

Upper Yukon Basin

Temperature Chart

Source: NOAA ACIS



Streamflow Forecasts

UPPER YUKON BASIN
Water Supply Forecasts
March 1, 2023

Forecast Exceedance Probabilities

Forecast Point	Forecast Period	< Drier — Future Conditions — Wetter >
Yukon R at Eagle	Apr-Jul	96% · 105% · **111%** · 117% · 126%

Labels on chart represent volumes of water expressed as percent of median (1991-2020 period).

95% 100% 105% 110% 115% 120% 125% 130%

Percent of Median (1991-2020)

Legend

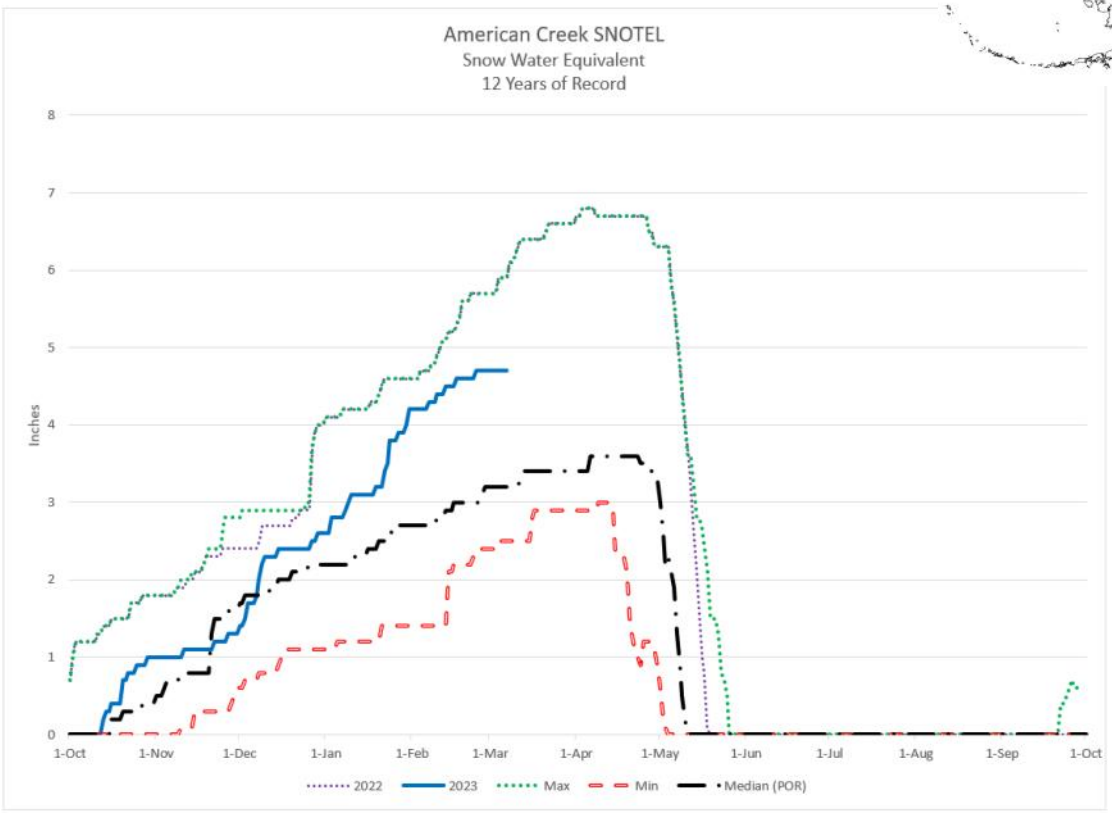
95% or 90% Exceedance	70% Exceedance	**50% Exceedance**	30% Exceedance	10% or 5% Exceedance
There is a 95%/90% chance that flows will exceed this volume	There is a 70% chance that flows will exceed this volume	There is a 50% chance that flows will exceed this volume	There is a 30% chance that flows will exceed this volume	There is a 10%/5% chance that flows will exceed this volume

When selected, the following historic streamflow values and statistics will be shown.

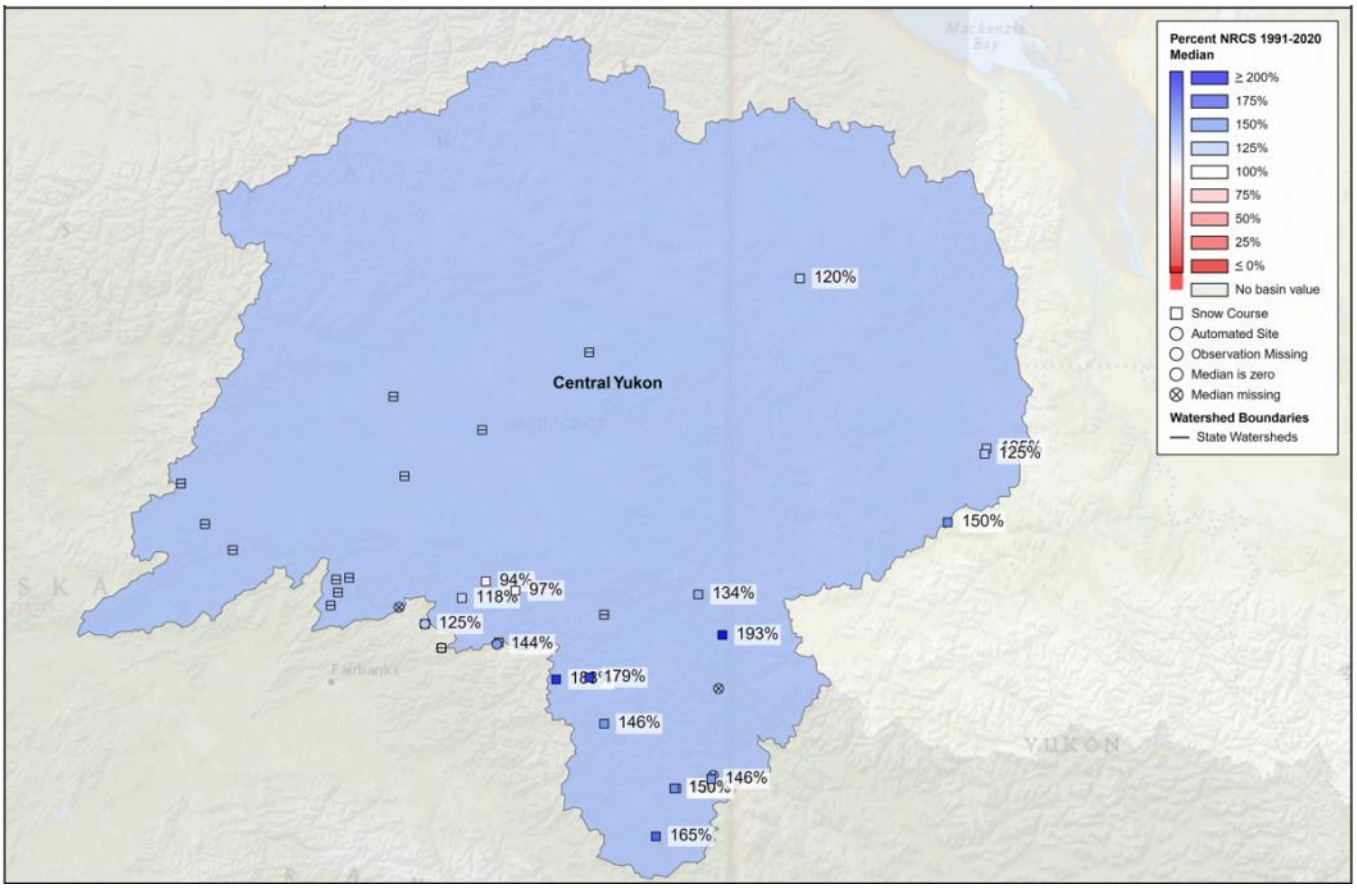
Period of Record Minimum Streamflow KAF (Year) · *1991-2020 Normal Streamflow KAF* · *Observed Streamflow KAF* · *Period of Record Maximum Streamflow KAF (Year)*

Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

Central Yukon Basin



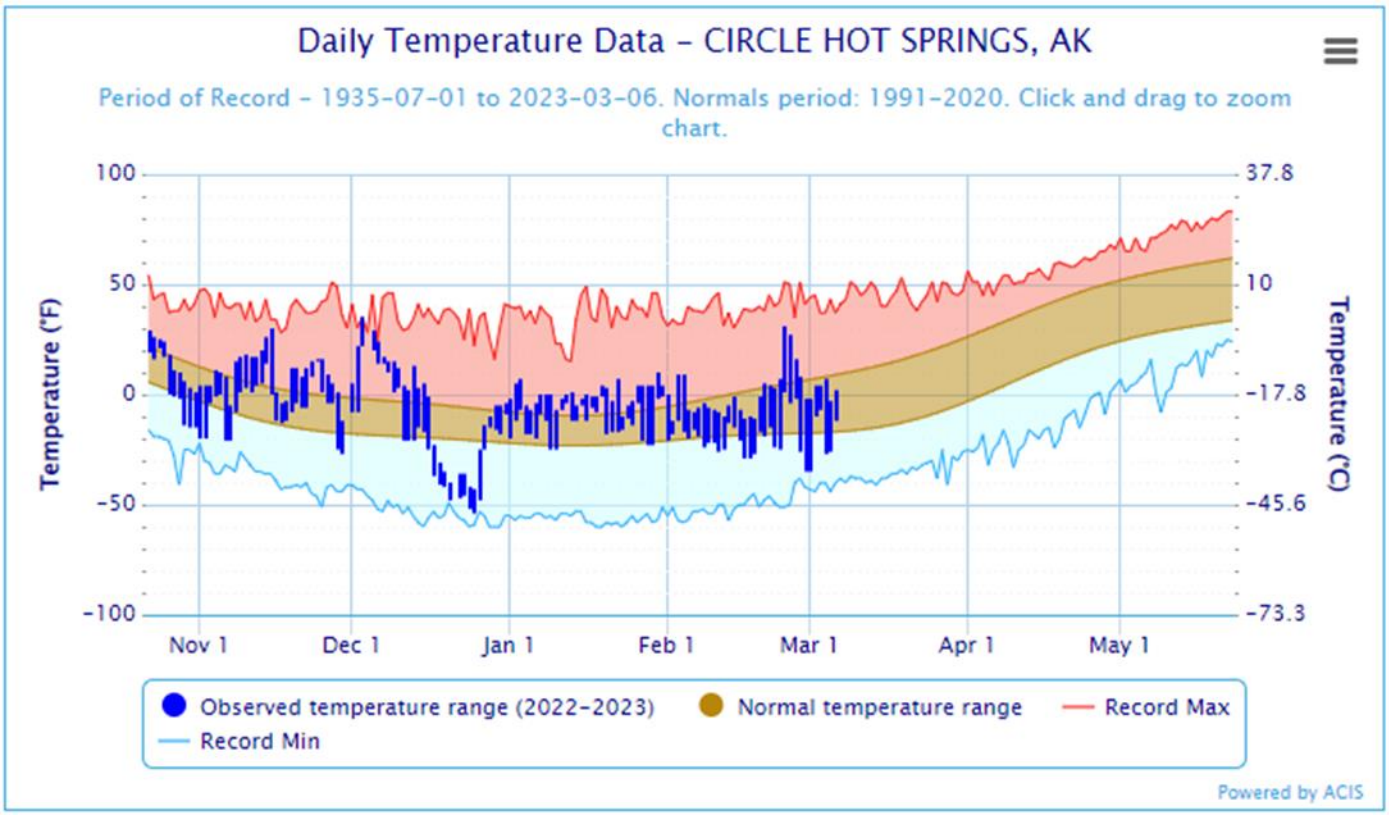
Snowpack Map



Central Yukon Basin

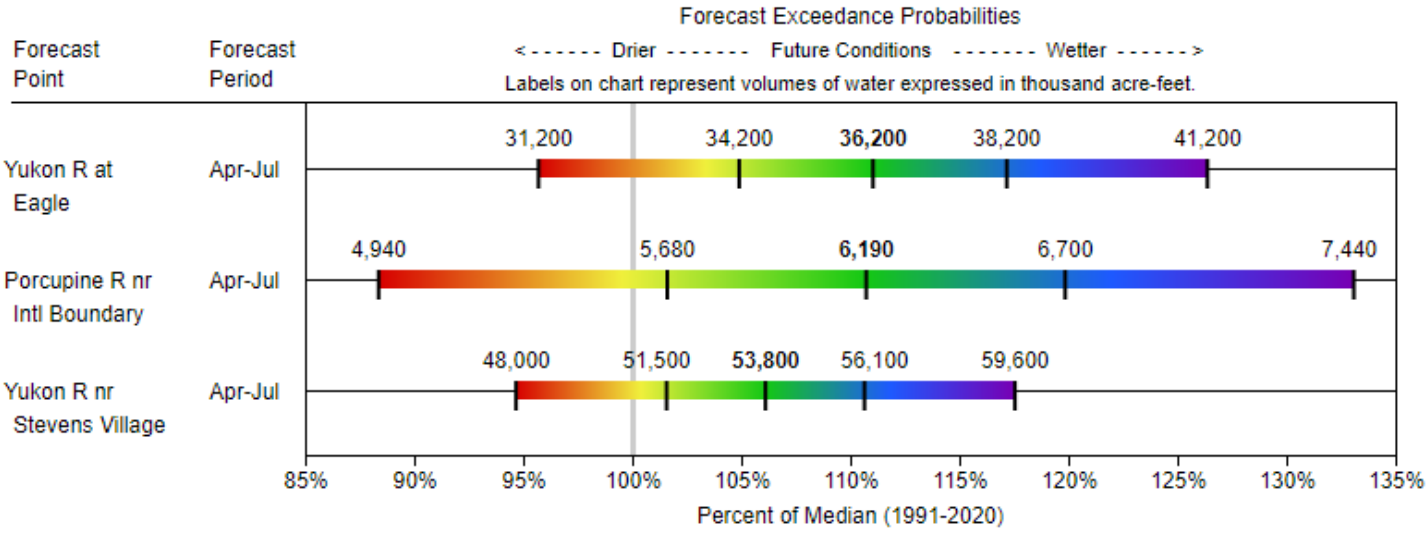
Temperature Chart

Source: NOAA ACIS



Streamflow Forecasts

CENTRAL YUKON
Water Supply Forecasts
March 1, 2023



Central Yukon Basin

Snowpack

The snowpack in the Central Yukon is above normal. The highest deviation from normal is in the upper portions of the basin where several snow courses are reporting period-of-record maximum SWE for March 1. In the Fortymile drainage Mt. Fairplay and Chicken Airstrip reported their wettest snowpack in forty-nine and fifty-five years, respectively. The Yukon-Charlie snow depth markers also reported the deepest in their history. Downstream of Fortymile River and Yukon-Charlie National Park, values approach average for this time of year. As a whole the basin index is showing 122% of normal SWE for March 1.

Snowpack Data

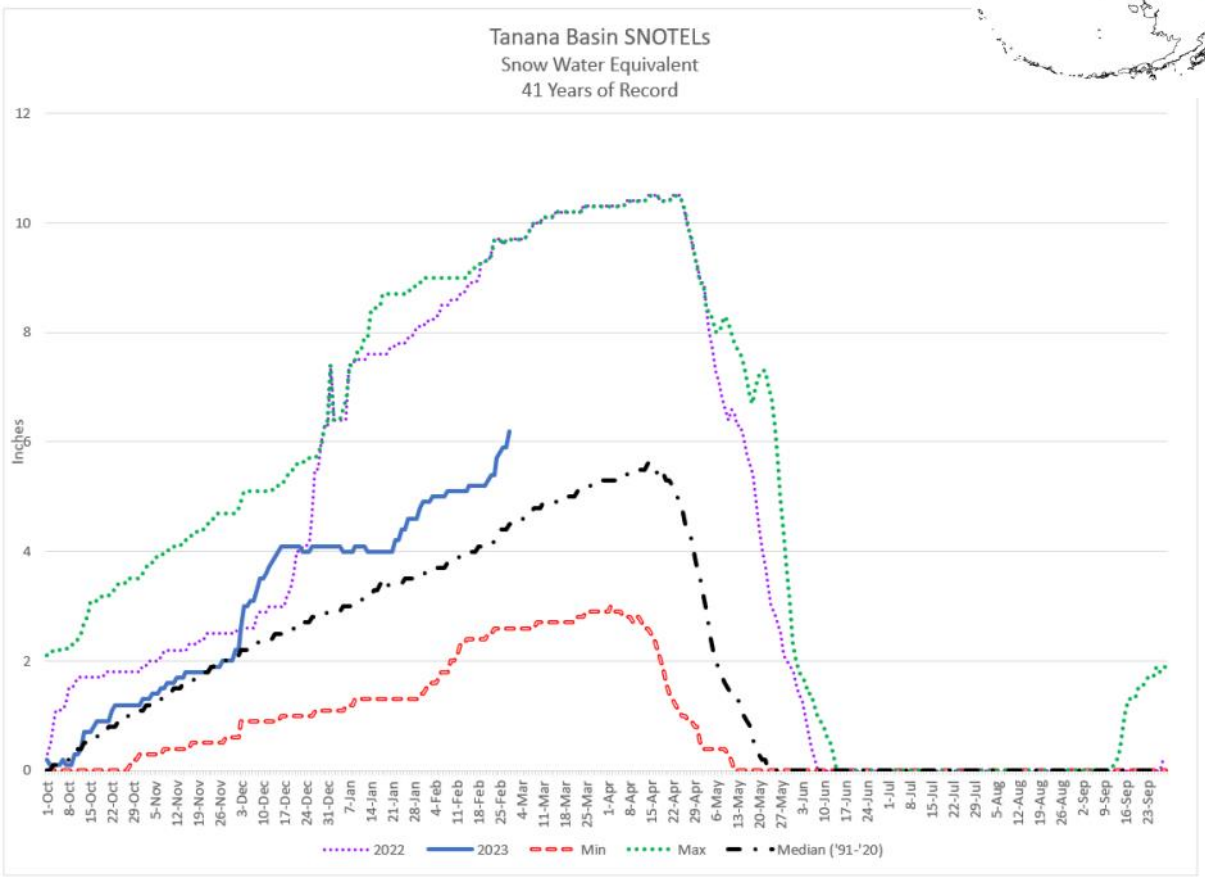
		Snow Depth (in)			Water Content (in)		
Site Name	**Elev.**	**Current**	**Last Year**	**1991-2020 Normal**	**Current**	**Last Year**	**1991-2020 Normal**
American Creek	1050	24	27	---	4.7	5.7	---
Atigun Pass	4800	37	36	---	---	---	---
Boundary	3500	32	---	22	6.7	---	4.6
Cathedral Creek	1800	40	---	26	7.9*	---	4.1
Chicken Airstrip	1650	23	---	16	4.2	---	2.8
Circle Hot Springs	860	21	36	22	3.4	6.3	3.5
Copper Creek	2000	25	---	17	5.0*	---	2.8
Crescent Creek	2600	30	---	18	5.5*	---	3.0
Eagle Plains	2330	34	39	30	7.0	8.4	5.6
Eagle River	1115	28	38	26	5.0	8.0	4.0
Eagle Summit	3650	15	23	---	---	---	---
Fort Yukon	430	18	25	---	---	---	---
Jack Wade Jct	3585	32	39	---	5.6	7.3	---
Lost Chicken Hill	2150	24	---	18	4.2	---	3.4
Mt. Fairplay	3100	31	---	20	6.6	---	4.0
Old Crow	980	32	31	26	5.4	5.8	4.5
Ptarmigan Creek	2270	28	38	23	4.6	8.4	3.9
Riffs Ridge	2130	36	35	29	7.8	7.5	5.2
Stack Pup Creek	1620	22	36	22	3.2	6.0	3.4
Step Mountain	2850	35	---	28	7.1*	---	5.3
Three Fingers	3350	39	---	27	7.6*	---	5.2
Upper Nome Creek	2520	31	38	---	5.2	8.1	---

**Estimate*

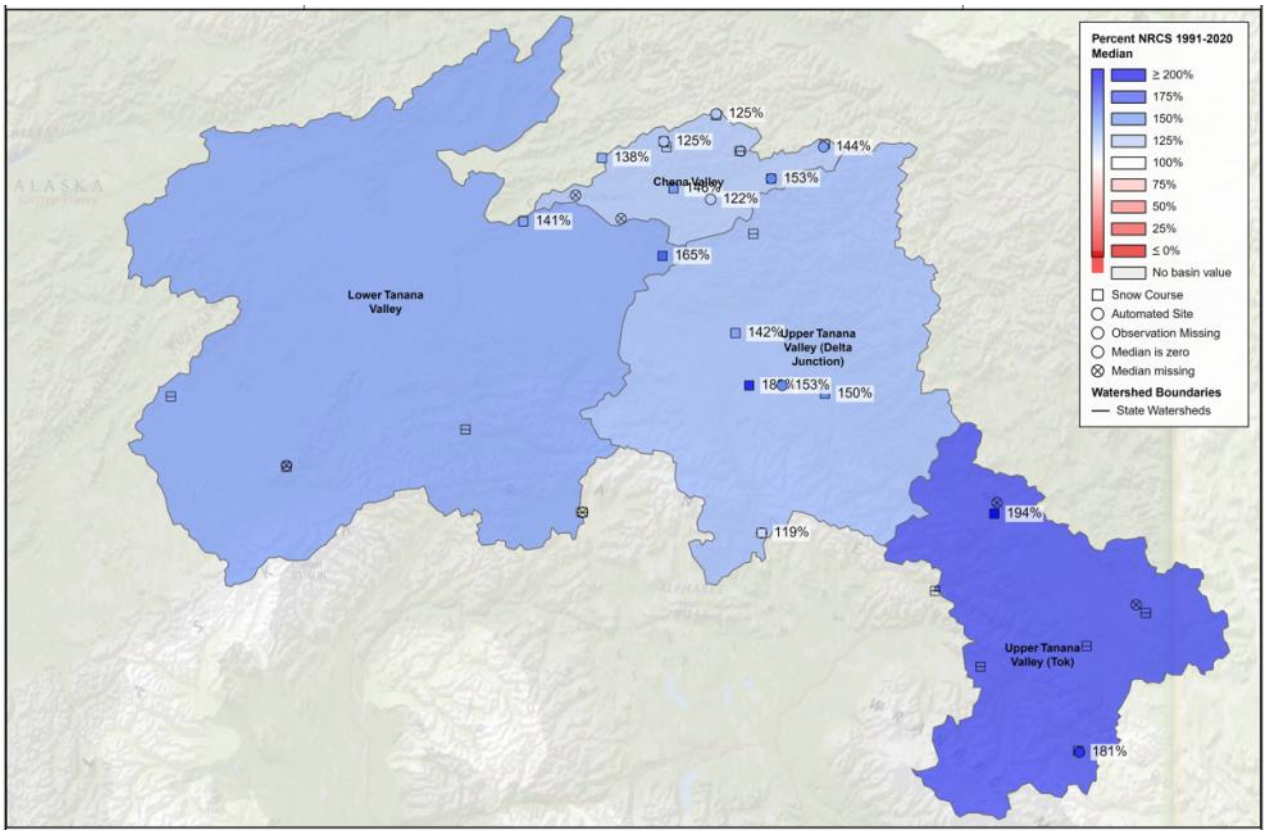
Precipitation Data

		Inches Accumulated since October 1st			
Site Name	**Elev.**	**This Year**	**Last Year**	**1991-2020 Normal**	**% of Normal**
American Creek	1050	4.9	4.5	---	---
Atigun Pass	4800	4.9	5.3	4.8	102%
Eagle Summit	3650	5.0	9.2	4.4	114%
Fort Yukon	430	3.5	4.4	3.1	113%
Jack Wade Jct	3585	6.0	5.7	---	---
Upper Nome Creek	2520	7.3	9.8	5.4	135%

Tanana Basin

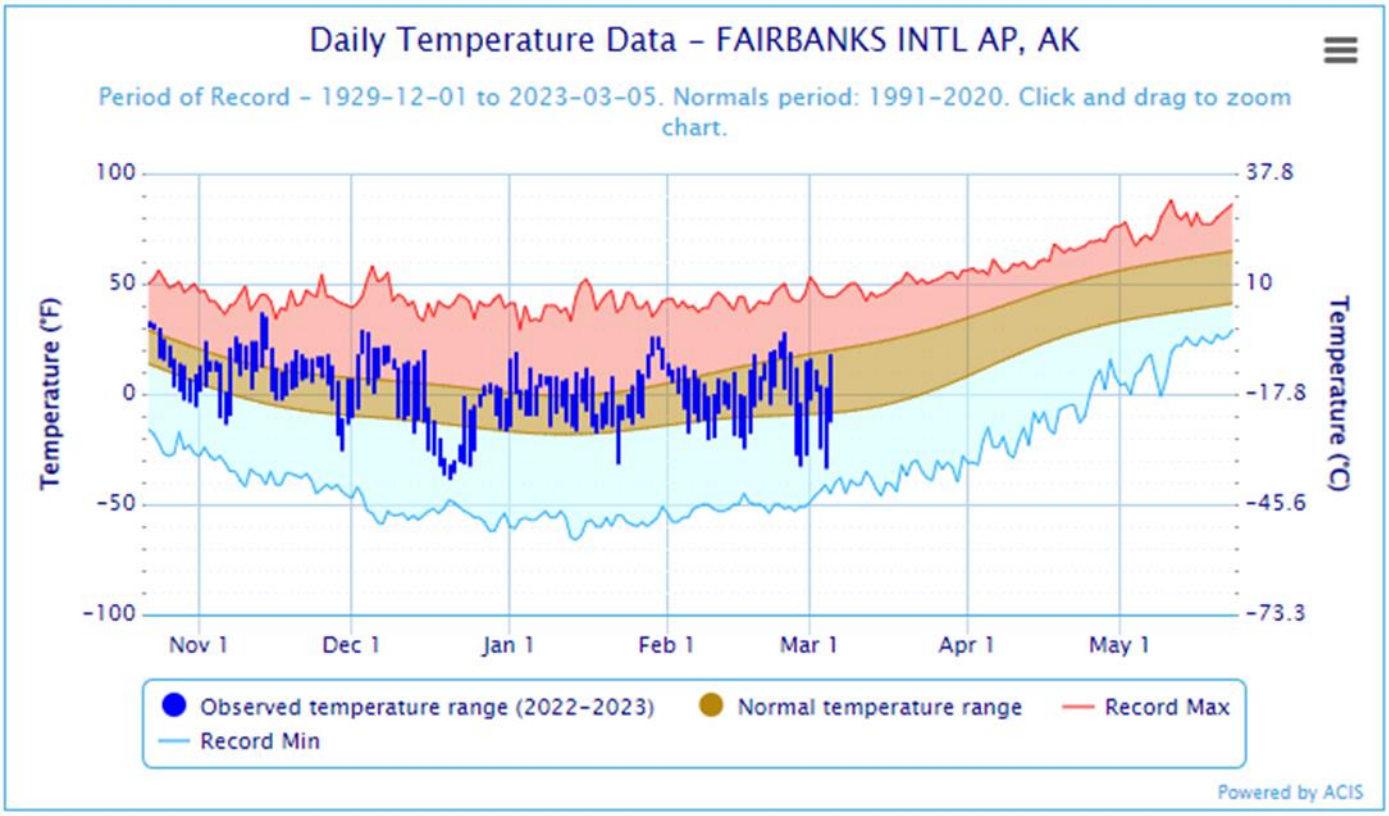


Snowpack Map

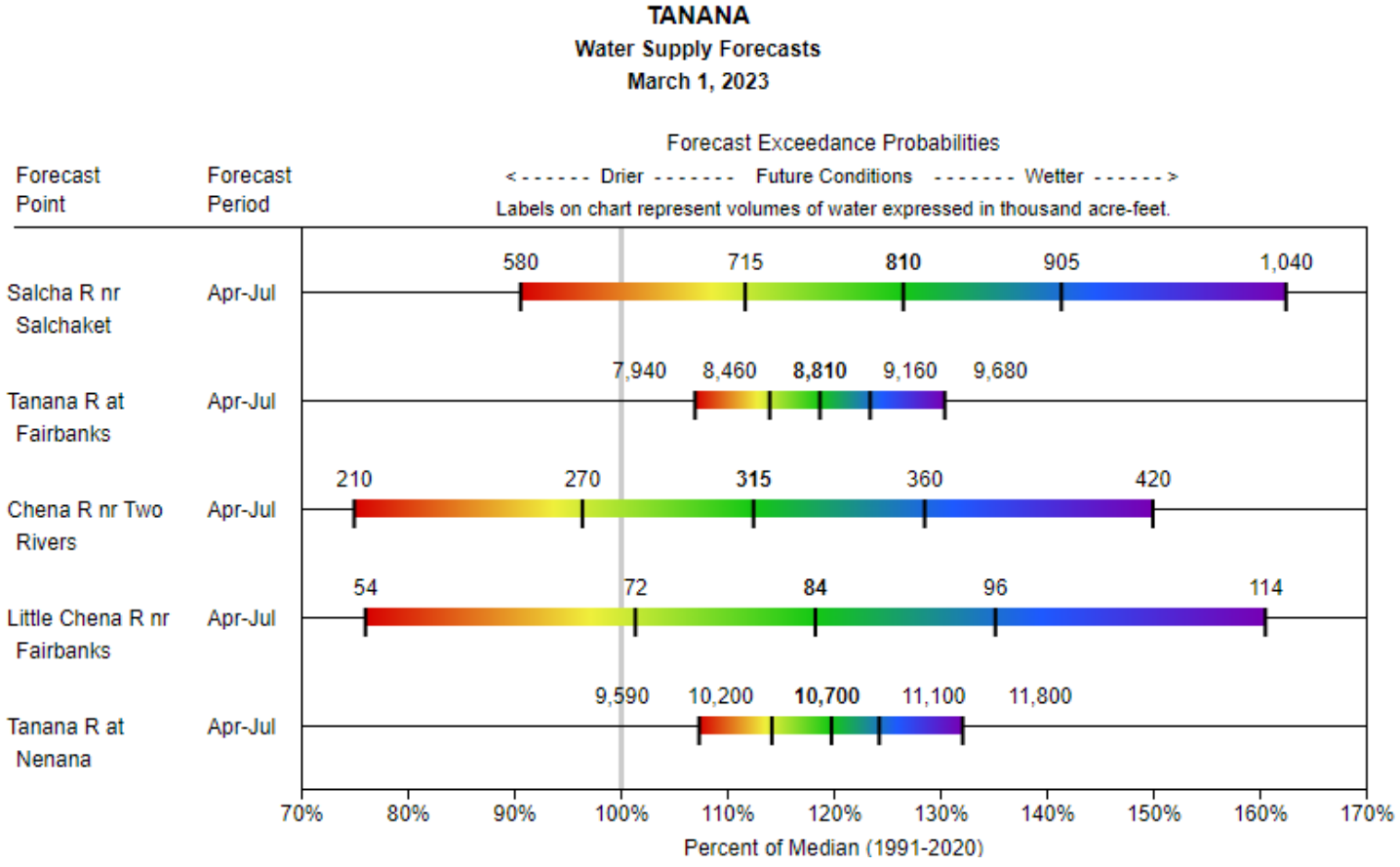


Tanana Basin

Temperature Chart



Streamflow Forecasts



Tanana Basin

Snowpack

Tanana has well above normal snowpack. Similar to the Central Yukon, the highest numbers come from the upper reaches of the basin. Despite only reporting a tenth of an inch increase in February, the Tok snow course recorded its second highest March 1 SWE in sixty-four years of observation, second to only last-year. Fort Greely snow course, near Delta Junction, reported its fourth highest observation in fifty-seven years of record. Downstream, the numbers are less outstanding but all snow measurements in the Tanana are above normal. As a whole the basin index for March 1 SWE is 143% of normal.

Snowpack Data

		Snow Depth (in)			Water Content (in)		
Site Name	**Elev.**	**Current**	**Last Year**	**1991-2020 Normal**	**Current**	**Last Year**	**1991-2020 Normal**
Bonanza Creek	1150	32	43	22	6.5	9.2	4.6
Caribou Creek	1250	27	35	22	5.4	7.6	4.2
Caribou Snow Pillow	900	33	37	23	6.0	8.1	3.8
Chena Lakes	500	25	33	---	5.2	8.0	---
Chisana	3320	26	20	---	5.6	3.8	3.2
Cleary Summit	2230	38	51	28	7.2	12.3	5.2
Colorado Creek	700	35	41	22	5.4	8.8	3.7
Creamers Field	440	21	31	---	4.7	6.6	---
Faith Creek	1750	31	40	24	5.4	8.5	4.2
Fielding Lake	3000	39	53	---	9.5	11.3	---
Fielding Lake	3000	45	64	37	10.2	15.2	8.6
Fort Greely	1500	27	35	16	5.3	7.5	2.9
French Creek	1800	37	52	24	7.6	13.4	4.6
Gerstle River	1200	22	33	16	4.2	6.6	2.8
Granite Crk	1240	22	31	---	4.9	8.8	3.2
Kantishna	1550	34	36	---	6.6	8.5	---
Little Chena Ridge	2000	25	32	---	5.5	8.8	4.4
Mt. Ryan	2800	30*	42	---	6.5	9.7	5.2
Munson Ridge	3100	40	66	---	8.1	16.8	6.9
Nenana	415	28	31	---	---	---	---
Paradise Hill	2010	21	31	---	4.2	7.1	---
Shaw Creek Flats	980	22	39	16	3.7	8.2	2.6
Teuchet Creek	1640	24	38	---	5.2	8.5	3.4
Tok Junction	1650	30	34	18	6.0	6.9	3.1
Upper Chena	2850	36	50	---	7.8	---	5.4

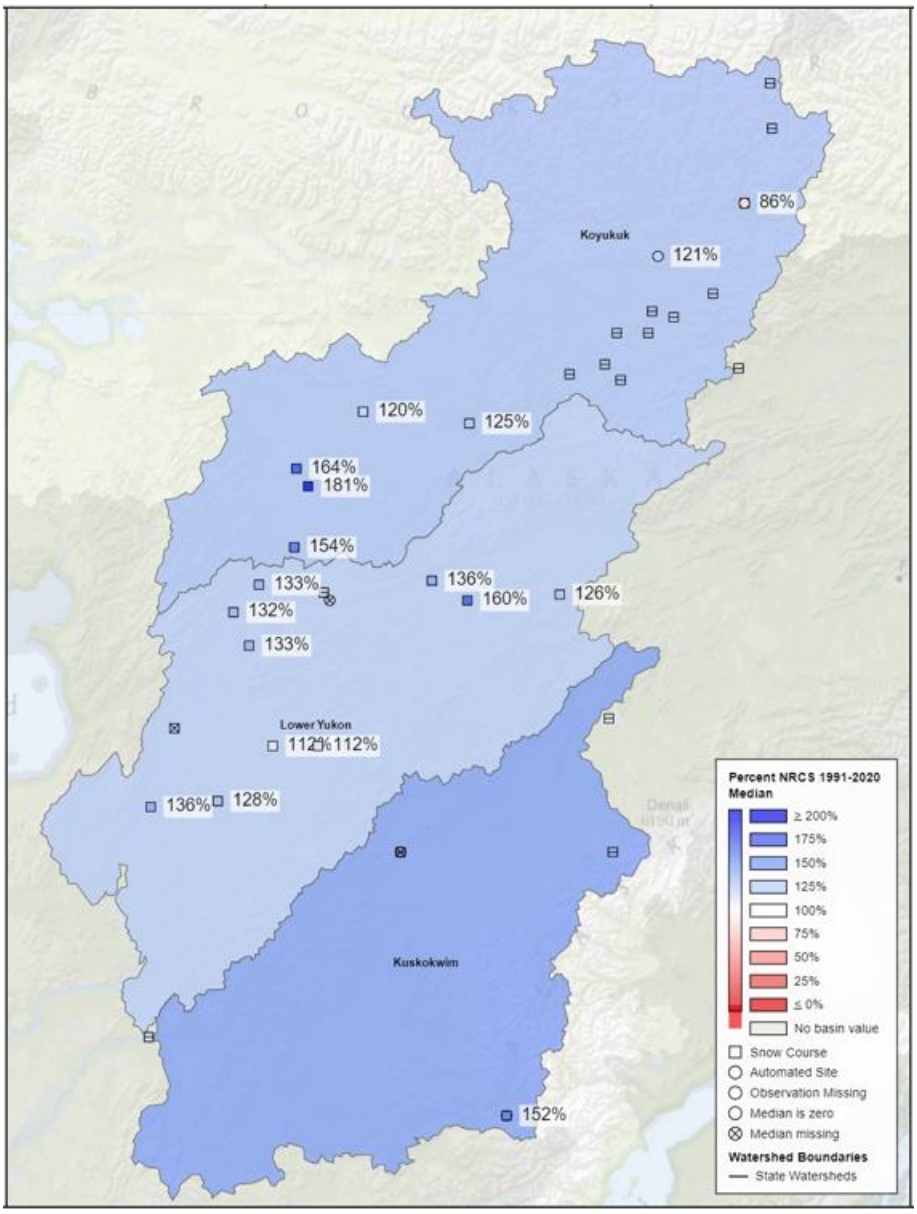
**Estimate*

Precipitation Data

		Inches Accumulated since October 1st			
Site Name	**Elev.**	**This Year**	**Last Year**	**1991-2020 Normal**	**% of Normal**
Chisana	3320	5.6	3.8	3.2	175%
Creamers Field	440	4.2	8.6	---	---
Fielding Lake	3000	11.5	12.6	---	---
Granite Crk	1240	4.8	7.5	3.4	141%
Kantishna	1550	7.2	11.6	5.0	144%
Little Chena Ridge	2000	5.9	8.6	4.4	134%
Mt. Ryan	2800	6.0	9.5	4.4	136%
Munson Ridge	3100	7.2	14.6	6.4	113%
Nenana	415	5.8	8.8	---	---
Paradise Hill	2010	5.0	6.8	---	---
Teuchet Creek	1640	4.8	8.6	3.8	126%
Tok	1630	5.7	5.5	---	---
Upper Chena	2850	6.4	7.7	5.3	121%

Western Interior Basins

Snowpack



Koyukuk

Snow in the Koyukuk basin is mostly above normal. Storms have come from the west and as such the lower portions of the basin have the deepest snowpacks. Bettles and Coldfoot have the same 1991-2020 normal SWE for March 1, yet on March 1 of this year Bettles is reporting 21% higher and Coldfoot is reporting 16% lower than normal. In fact, Coldfoot is the only monitoring station in the Koyukuk reporting below normal SWE. Downstream toward the confluence with the Yukon, aerial markers were reading the highest above normal. The 8.7 inches of SWE estimated at the Cloverleaf aerial marker is the highest observation in nineteen years of record. As a whole the basin index is 134% normal SWE on March 1.

Kuskokwim

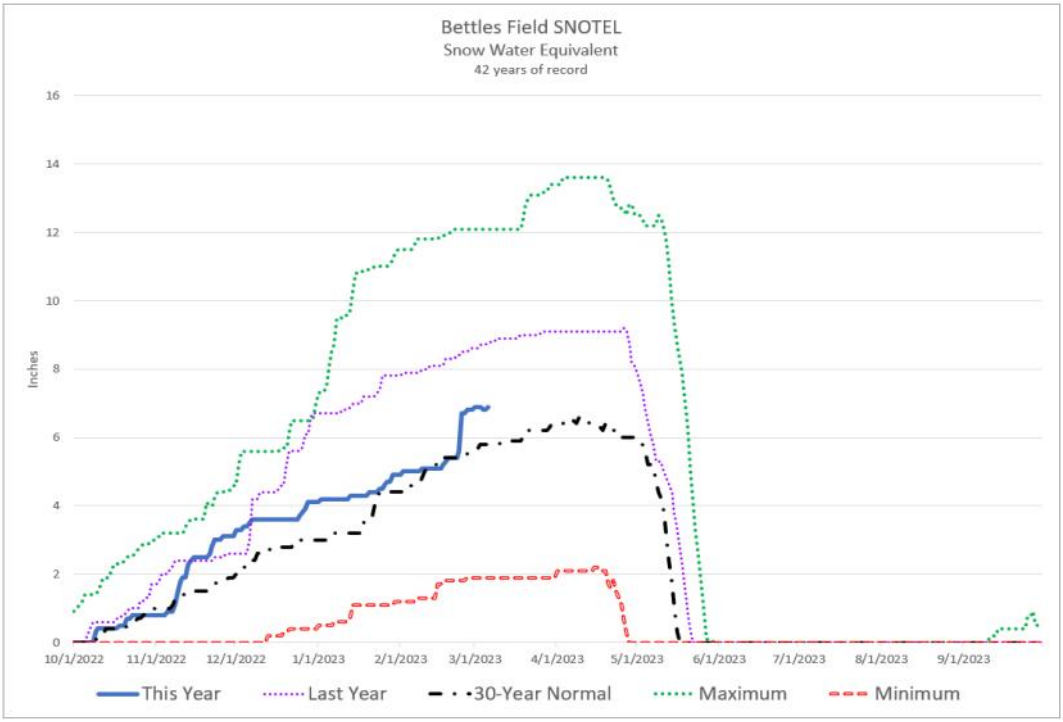
Snow in the Kuskokwim is likely above normal. There is a remarkable dearth of reporting stations for a basin that ranks as one of the largest rivers in the country. The only point in the network with enough data to calculate Normal from is the Telaquana Lake snow course. The 6.1 inches of SWE measured on March 1 is the fourth highest in twenty-five years of observation. The 9.5 inches reported by the McGrath SNOTEL is likely considerably above average. The unmeasured McGrath snow course's 30-year Normal is 5.2 inches of SWE.

Lower Yukon

The Lower Yukon snowpack is well above normal. There isn't a single measurement below Normal. The 6.7 inches SWE estimated at the Lower Nowitna aerial marker on March 1 is the third highest in seventeen observations, 160% of Normal. Interestingly the 5.7 inches of SWE reported at the Galena SNOTEL is the third highest in five years of observation. This is a testament to how robust the snowpacks in this region have been in the last three years.

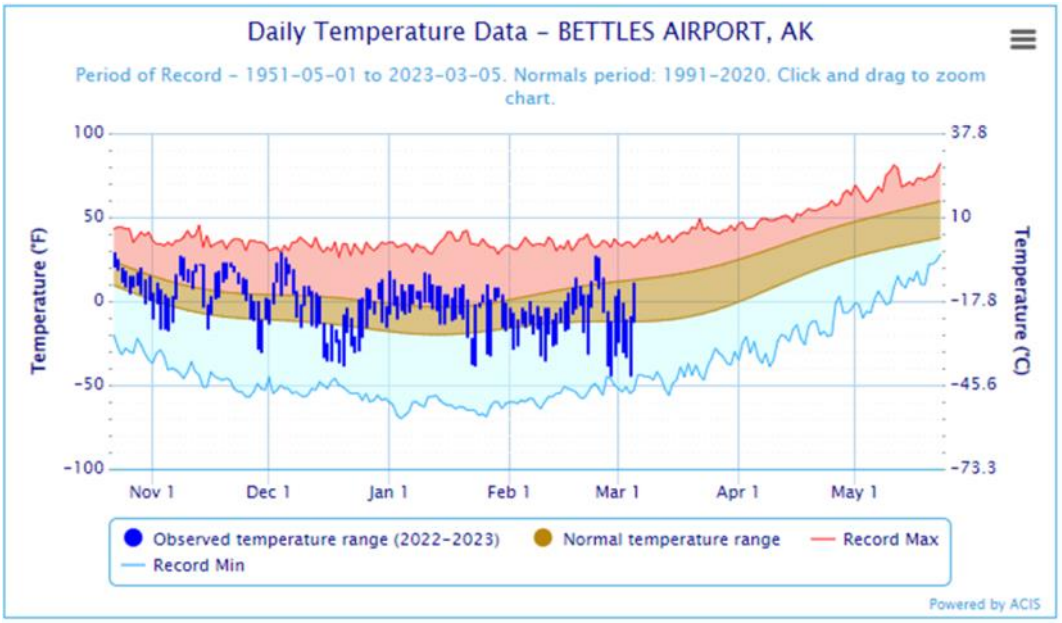
Western Interior Basins

Snowpack Chart

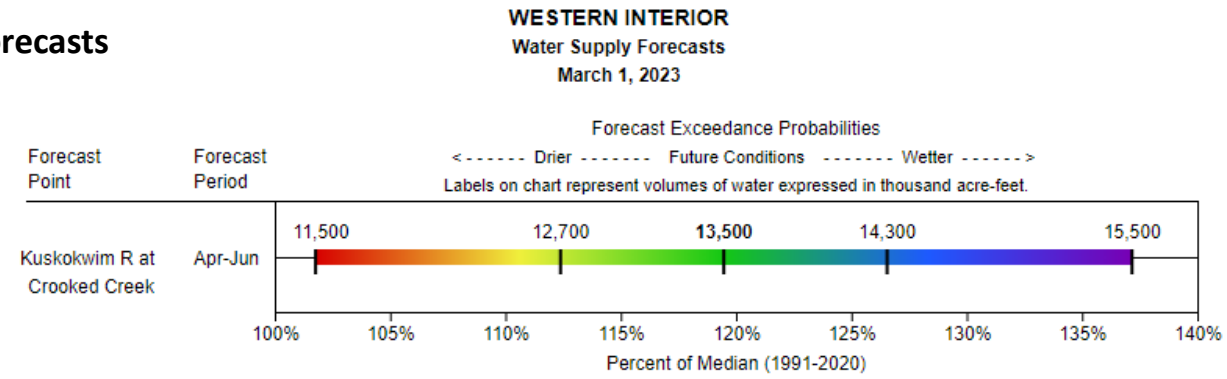


Temperature Data

Source: NOAA ACIS



Streamflow Forecasts



Western Interior Basins

Snowpack Data

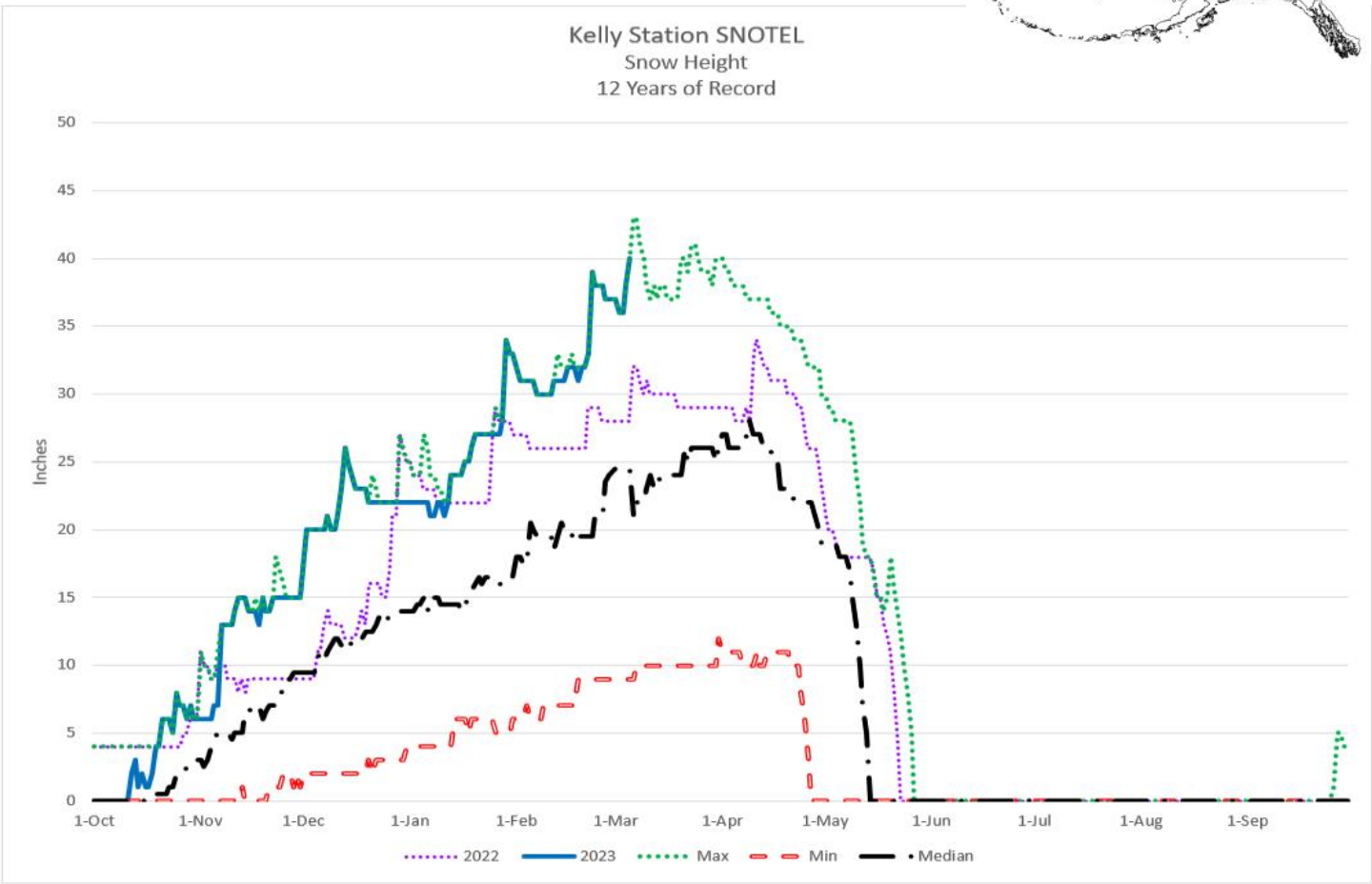
Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Koyukuk							
Bettles Field	640	32	35	---	6.9	8.6	5.7
Cloverleaf	170	44	32	23	8.7*	7.3*	4.8
Coldfoot	1040	28	31	---	4.9	7.0	5.8
Colville Bend	170	42	35	27	8.7*	8*	5.3
Gobblers Knob	2030	1	6	---	---	---	---
Huggins Creek	290	38	47	30	7.5*	10*	6.0
Jr Slough	160	38	34	27	7.7*	7.7*	5.0
Treat Island	190	30	33	26	5.9*	8.3*	4.9
Kuskokwim							
McGrath	340	45	38	---	9.5	10.9	---
Telaquana Lake	1550	32	22	21	6.1	7	4
Telaquana Lake SNOTEL	1275	29	19	---	6.4	6.3	---
Lower Yukon							
Bullfrog	100	44	51	---	9*	12.5*	---
Deer Creek	195	40	48	33	7.9*	12*	5.8
Galena AK	410	28	32	---	5.7	6.8	---
Hozatka Lake	206	29	24	---	---	---	---
Little Mud River	855	28	27	21	5.4*	7*	4.3
Lower Nowitna River	205	33	33	22	6.7*	9.1*	4.2
Middle Innoko	150	41	42	32	8.7*	10.8*	6.8
Ninemile Island	140	39	39	32	7.9*	8.6*	6.0
Pike Trap Lake	130	21	24	16	4*	5.3*	3.0
Squirrel Creek	150	44	---	31	8.9*	---	6.7
Upper Innoko	180	39	32	33	8.1*	9.1*	7.2
Wapoo Hills	220	43	41	33	8.3*	11.2*	7.4
Yankee Slough	100	52	48	39	11.3*	12.8*	8.3

**Estimate*

Precipitation Data

Site Name	Elev.	Inches Accumulated since October 1st			
		This Year	Last Year	1991-2020 Normal	% of Normal
Koyukuk					
Bettles Field	640	6.9	8.0	6.2	111%
Coldfoot	1040	6.4	5.9	4.8	133%
Gobblers Knob	2030	6.3	6.1	5.5	115%
Kuskokwim					
McGrath	340	10.9	11.6	---	---
Telaquana Lake	1275	7.7	11.8	---	---
Lower Yukon					
Galena AK	410	6.3	7.2	---	---
Hozatka Lake	206	6.3	5.9	---	---

Arctic and Kotzebue Sound



Snowpack

Arctic

Water year-to-date precipitation recorded at the North Slope stations along the Dalton highway are slightly above Normal. Historically, the majority of precipitation recorded since October first should be snow, so it is likely the snowpack in this region is slightly above Normal. Measuring snow in this environment is exceedingly difficult.

Kotzebue

Snowpack in the Kotzebue sound is likely well above Normal. Water Year-to-date precipitation measured at Kelly Station is the highest in sixteen years of observation. The snow pillow at Kelly Station was damaged this summer but making an estimate from the precipitation gauge and snow depth sensor would put 2023 as one of the highest observations on record. The 9.0 inches of SWE reported on March 1 at the newly installed Dahl Creek SNOTEL, near Kobuk, is likely well above normal for the date.

Precipitation in Northwest Alaska started slow, with October and November being about half of median. Similar to other regions in northern Alaska, big storms in December were the predominant driver for the snowpack, with a drier, yet still above Normal January. After significant gains in December, Kelly Station SNOTEL had 27” of snow with 5.0” of water content on February 1st, 135% of its 14-year average.

Arctic and Kotzebue Sound

Snowpack Data

Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Arctic							
Atigun Pass	4800	37	36	---	---	---	---
Dahl Creek	260	43	---	---	9.0	---	---
Imnaviat Creek	3050	18	18	---	---	---	---
Prudhoe Bay	30	11	17	---	---	---	---
Sagwon	1000	12	16	---	---	---	---
Kotzebue Sound							
Kelly Station	310	37	28	---	7.6*	6.3	4.6

**Estimate*

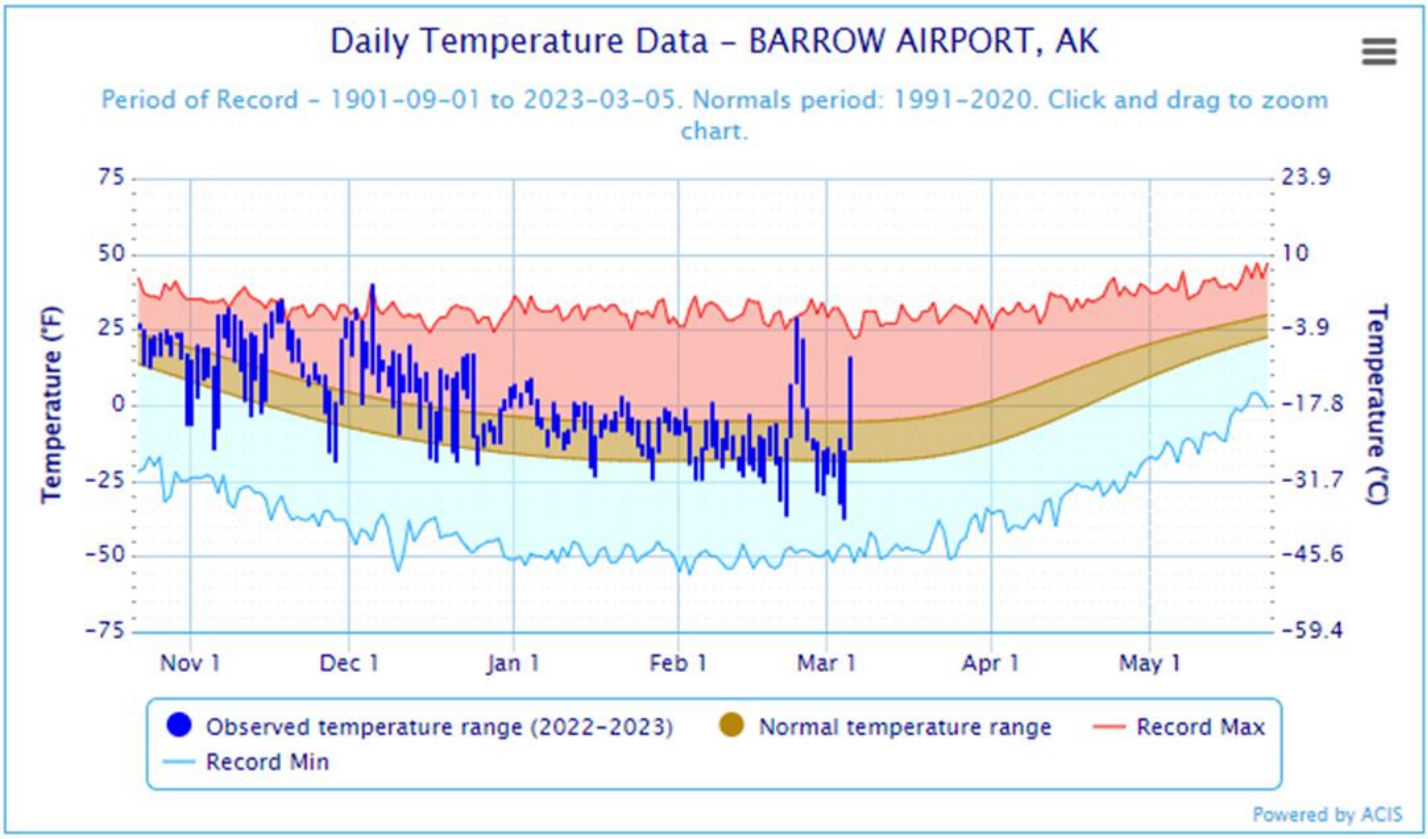
Precipitation Data

Site Name	Elev.	Inches Accumulated since October 1st			
		This Year	Last Year	1991-2020 Normal	% of Normal
Arctic					
Atigun Pass	4800	4.9	5.3	4.8	102%
Dahl Creek	260	9.8	---	---	---
Imnaviat Creek	3050	3.1	2.7	2.4	129%
Prudhoe Bay	30	2.0	2.3	2.3	87%
Sagwon	1000	2.9	3.1	2.5	116%
Kotzebue Sound					
Kelly Station	310	8.6	5.0	5.1	169%

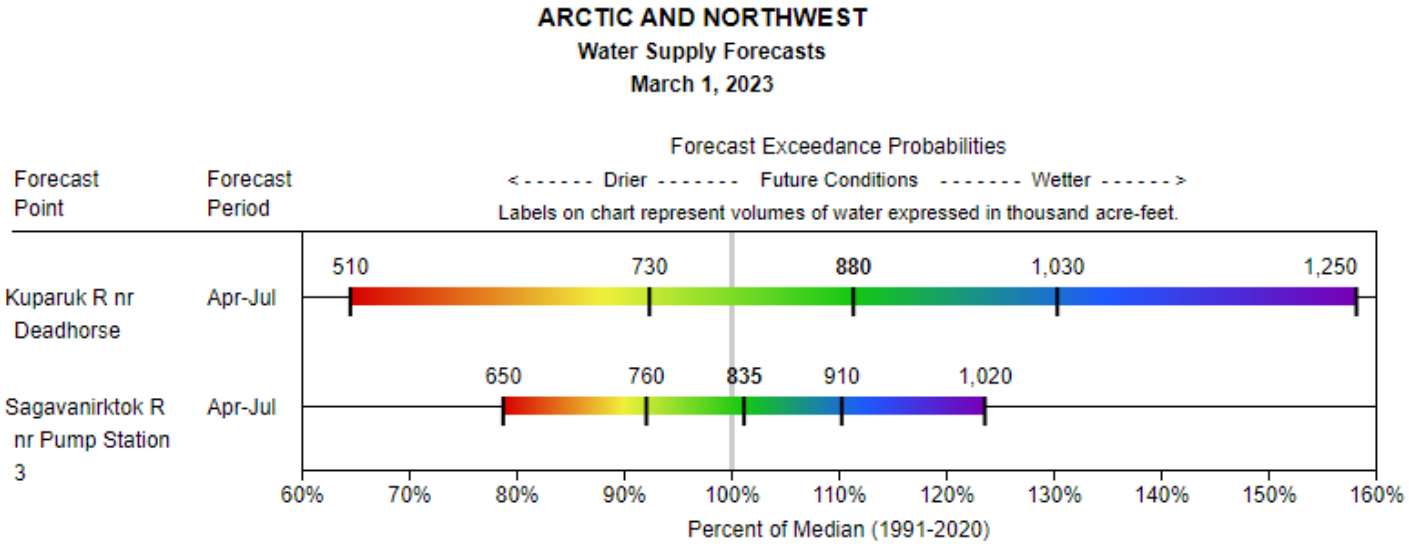
Arctic and Kotzebue Sound

Temperature Data

Source: NOAA ACIS



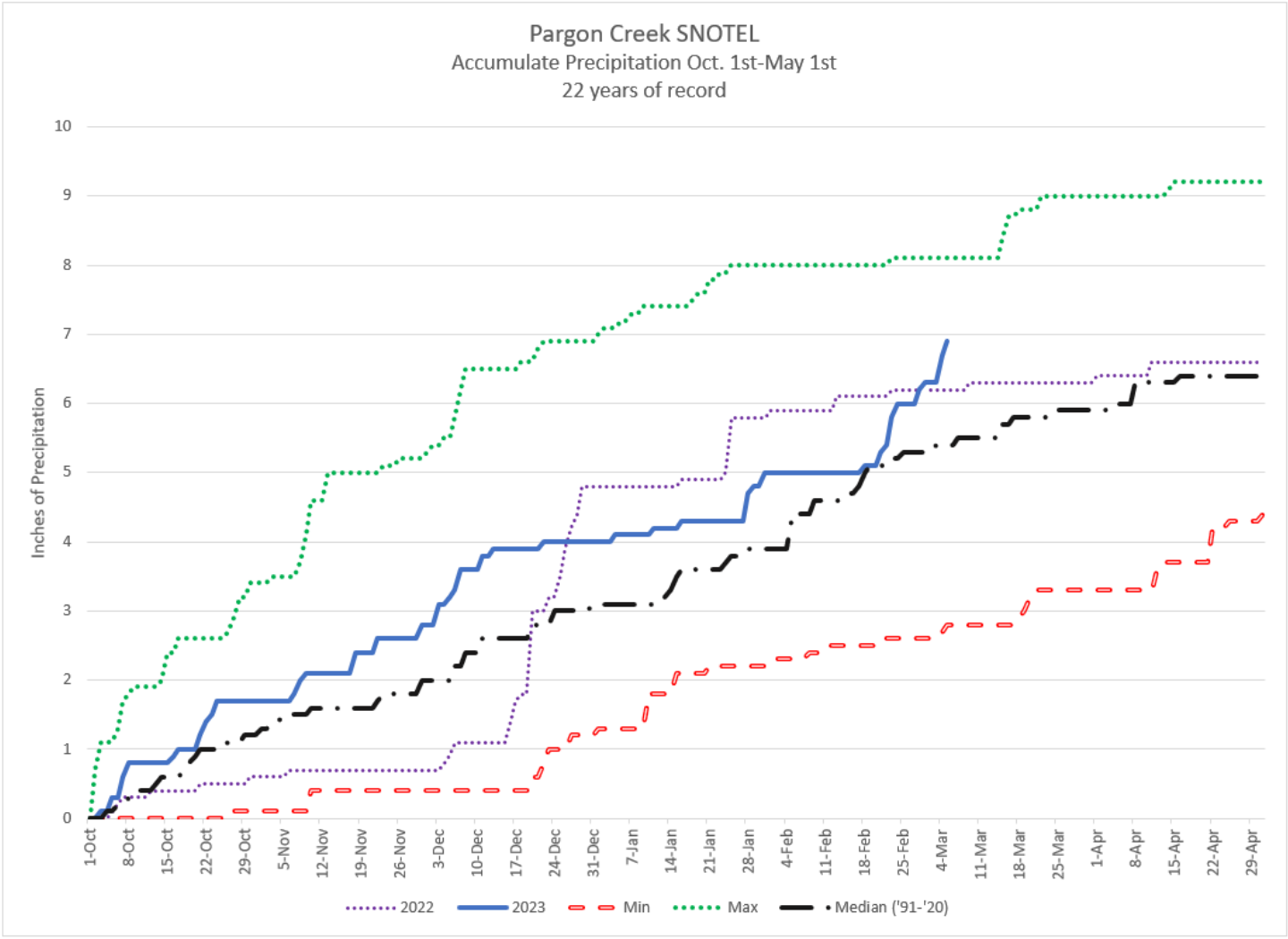
Streamflow Forecasts



Norton Sound/Y-K Delta/Bristol Bay

Snowpack

The Seward Peninsula received above average precipitation in February and has reported above average precipitation for the water year-to-date. It is likely that the snowpack on March 1 is above average, as well.



Norton Sound/Y-K Delta/Bristol Bay

Precipitation Data

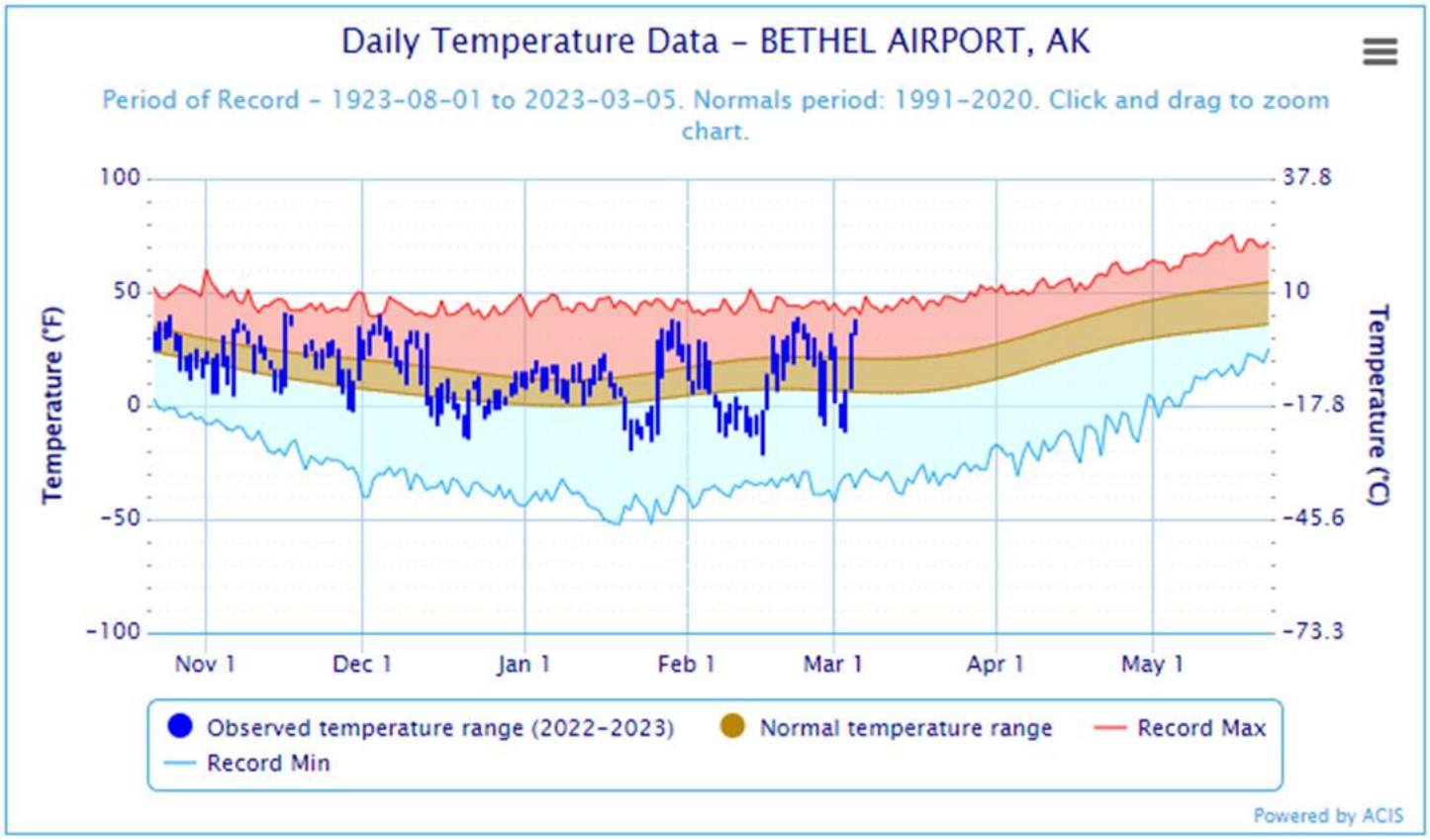
		Inches Accumulated since October 1st			
Site Name	**Elev.**	**This Year**	**Last Year**	**1991-2020 Normal**	**% of Normal**
Norton Sound					
Pargon Creek	100	6.2	6.2	5.3	117%
Rocky Point	250	4.2	5.1	5.1	82%

Snowpack Data

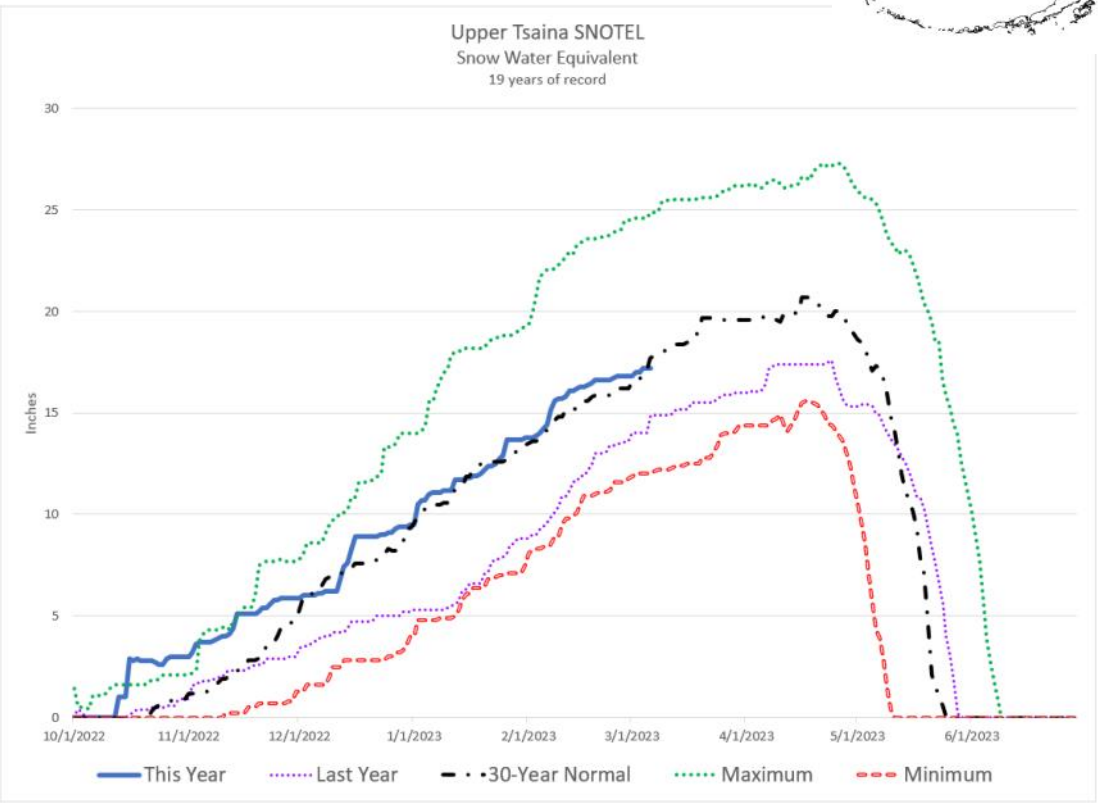
		Snow Depth (in)			Water Content (in)		
Site Name	**Elev.**	**Current**	**Last Year**	**1991-2020 Normal**	**Current**	**Last Year**	**1991-2020 Normal**
Checkers Creek	326	8	---	---	---	---	---
Johnsons Camp	25	11	13	---	---	---	---
Pargon Creek	100	14	15	---	---	---	---
Rocky Point	250	30	24	---	---	---	---

Temperature Data

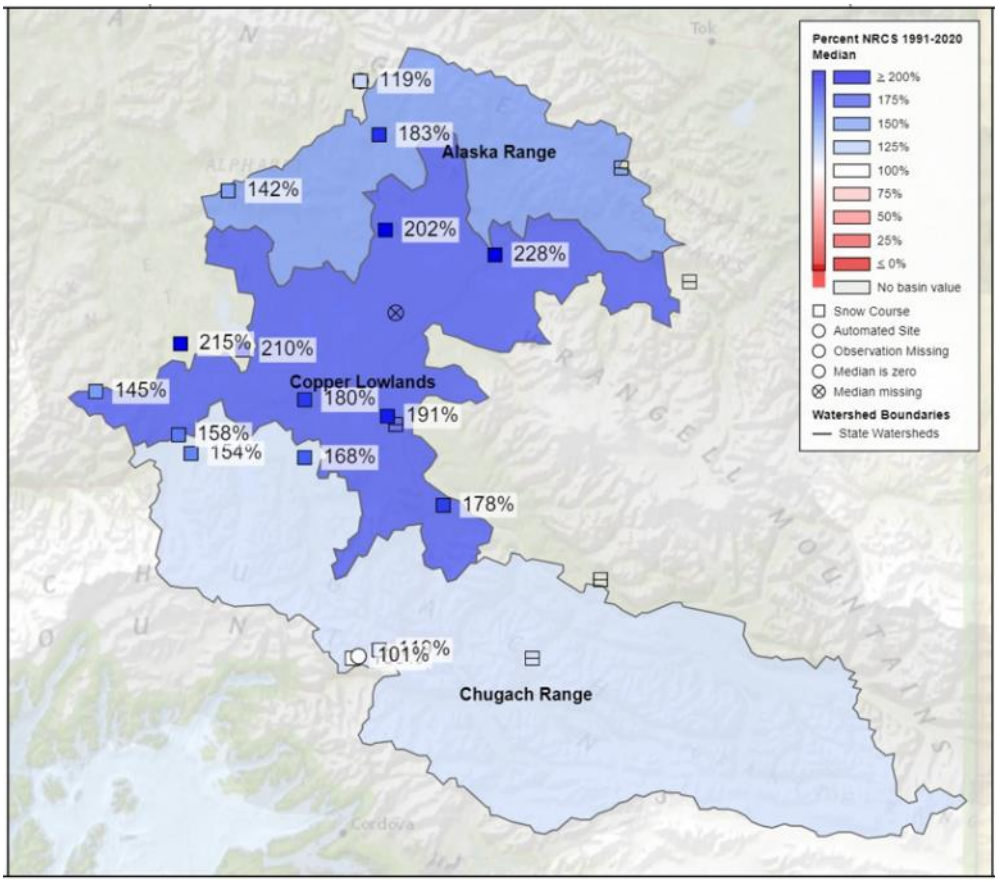
Source: NOAA ACIS



Copper Basin



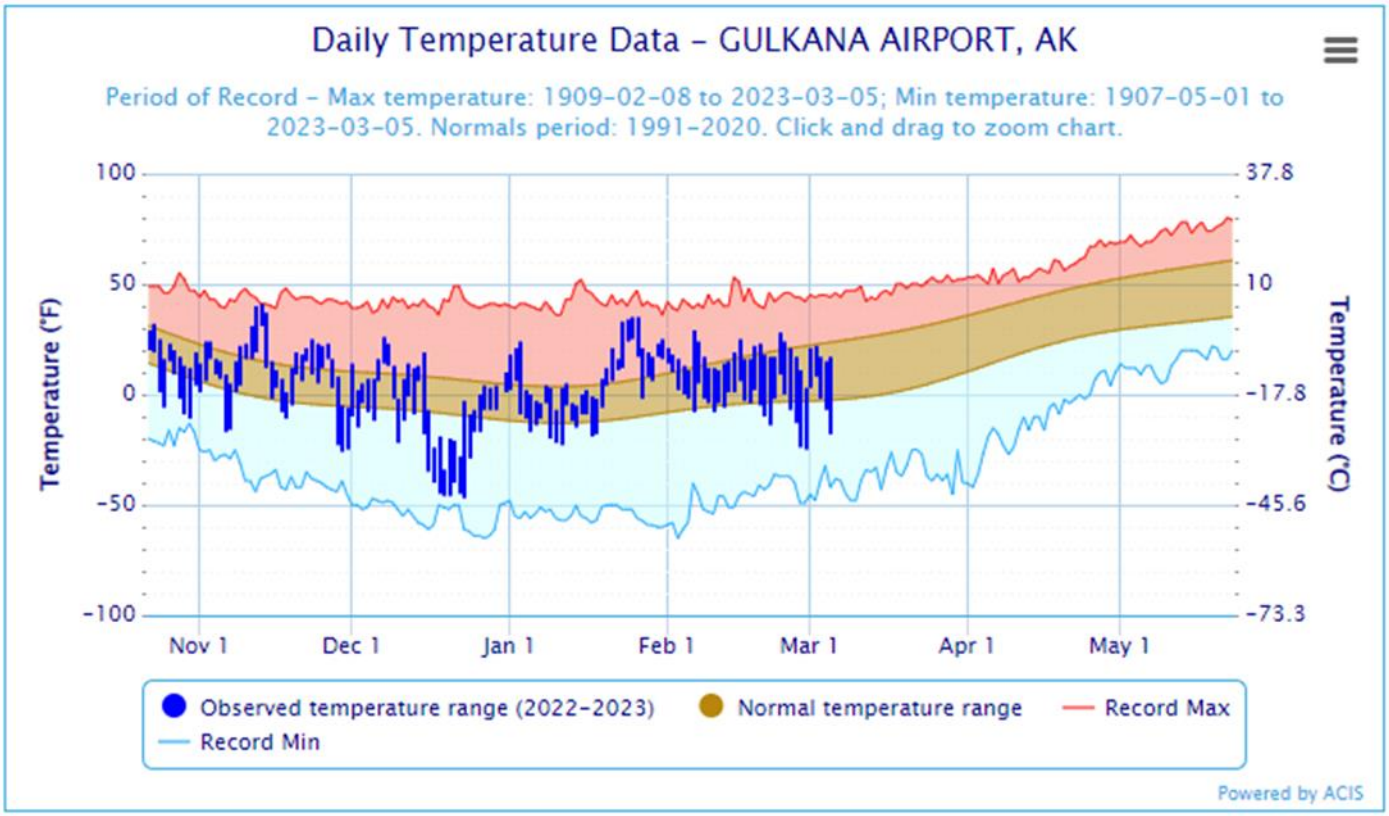
Snowpack Map



Copper Basin

Temperature Chart

Source: NOAA ACIS



Streamflow Forecasts

COPPER RIVER
Water Supply Forecasts
March 1, 2023

Forecast Exceedance Probabilities

Forecast Point	Forecast Period	< ------- Drier ------- Future Conditions ------- Wetter ------- >
		Labels on chart represent volumes of water expressed in thousand acre-feet.
Gulkana R at Sourdough	Apr-Jul	575 665 **725** 785 875

130% 140% 150% 160% 170% 180% 190% 200% 210%

Percent of Median (1991-2020)

Copper Basin

Snowpack

The Copper River basin snowpack is well above Normal. The March 1 snowpack is a result of a historic October snowstorm and near constant snowfall in the early winter. In mid-October, May Creek was reporting a snowpack that is normal for mid-January. Chisana SNOTEL hit its median peak SWE before December 1. There is not a single measurement in the basin that is below normal and there several measurements that are considerably above. The Tazlina snow course was measured as the highest in 28 years of observation. Paxson was the second highest in 41 years of observation. Haggard Creek was third highest in 60 years of observation. Similar to last month, the stations with the highest SWE in absolute numbers are the lowest in deviation from Normal. The 21.7 inches of SWE measured at the Worthington Glacier snow course is exactly the median value for the date. The 22 stations used to index this basin report the Copper River at 132% normal for March 1.

Snowpack Data

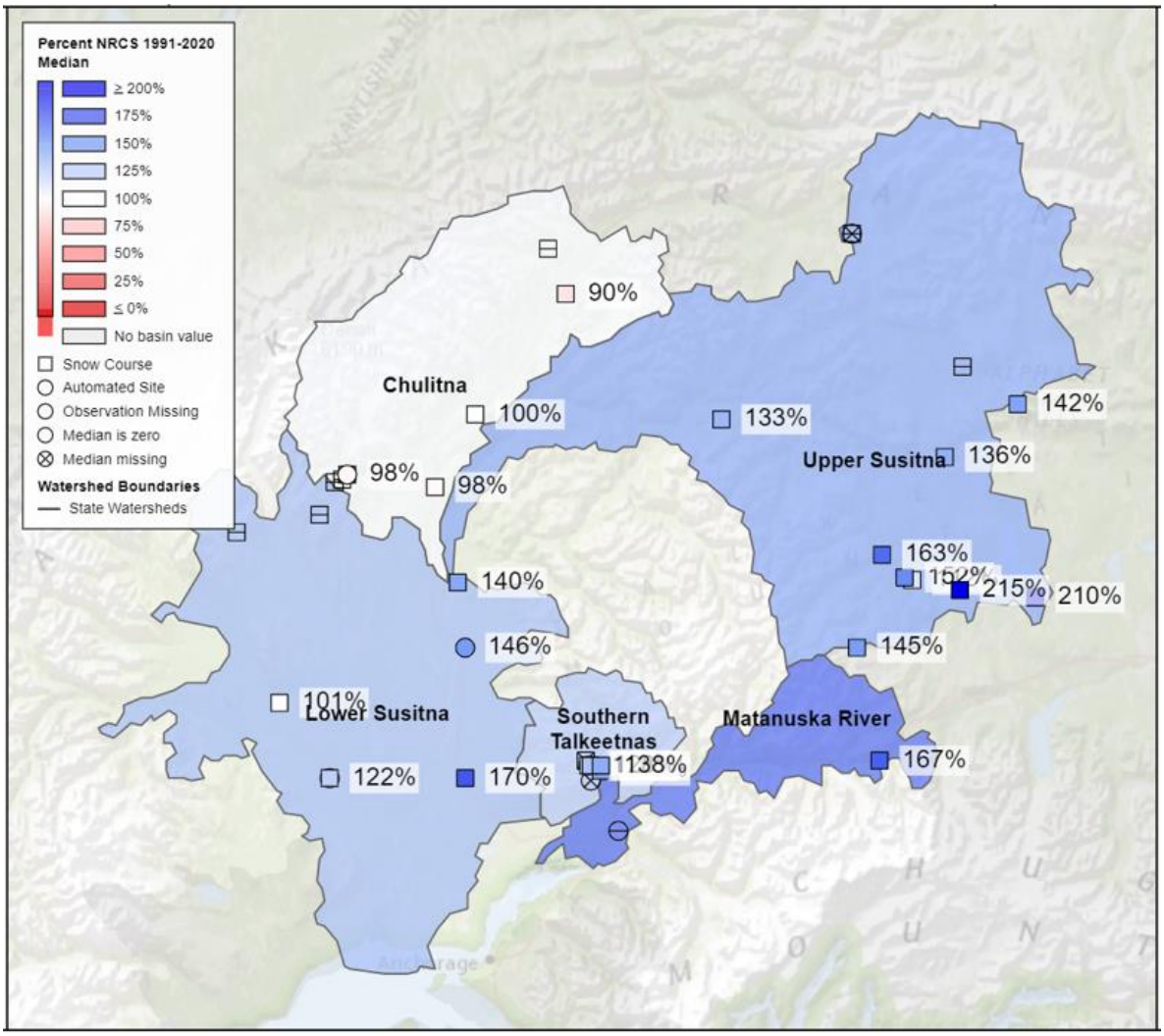
		Snow Depth (in)			Water Content (in)		
Site Name	Elev.	Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Chistochina	1950	33	39	20	7.3	8.6	3.2
Dadina Lake	2160	35	---	28	6.8*	---	5.4
Fielding Lake	3000	45	64	37	10.2	15.2	8.6
Fielding Lake SNOTEL	3000	39	53	---	9.5	11.3	---
Gulkana River	1830	36	32	---	8.5	7.5	---
Haggard Creek	2540	46	51	26	10.5	11.4	5.2
Kenny Lake School	1300	27	25	17	5.7	5.6	3.2
Little Nelchina	2650	37	32	24	6.8	7.5	4.3
May Creek	1610	35	34	---	7.3	7.4	4.4
Monsoon Lake	3100	38	---	28	7.8	---	5.5
Paxson	2650	47	52	30	10.6	11.4	5.8
Sanford River	2280	38	---	27	8.2	---	5.2
St. Anne Lake	1990	33	---	24	7.4	---	4.4
Tazlina	1250	29	28	19	6.7	6.1	3.5
Tolsona Creek	2000	35	29	22	7.2	6.7	4.0
Tsaina River	1650	55	54	51	16.1	14.0	13.5
Twin Lakes	2400	36	---	26	7.7*	---	5.0
Upper Tsaina River	1750	58	62	---	16.8	14.0	16.6
Worthington Glacier	2100	69	78	67	21.7	19.7	21.6

Precipitation Data

		Inches Accumulated since October 1st			
Site Name	Elev.	This Year	Last Year	1991-2020 Normal	% of Normal
Fielding Lake	3000	11.5	12.6	---	---
Gulkana River	1830	9.0	7.0	---	---
May Creek	1610	10.9	7.0	5.8	188%
Upper Tsaina River	1750	23.9	15.8	23.5	102%

Matanuska—Susitna Basin

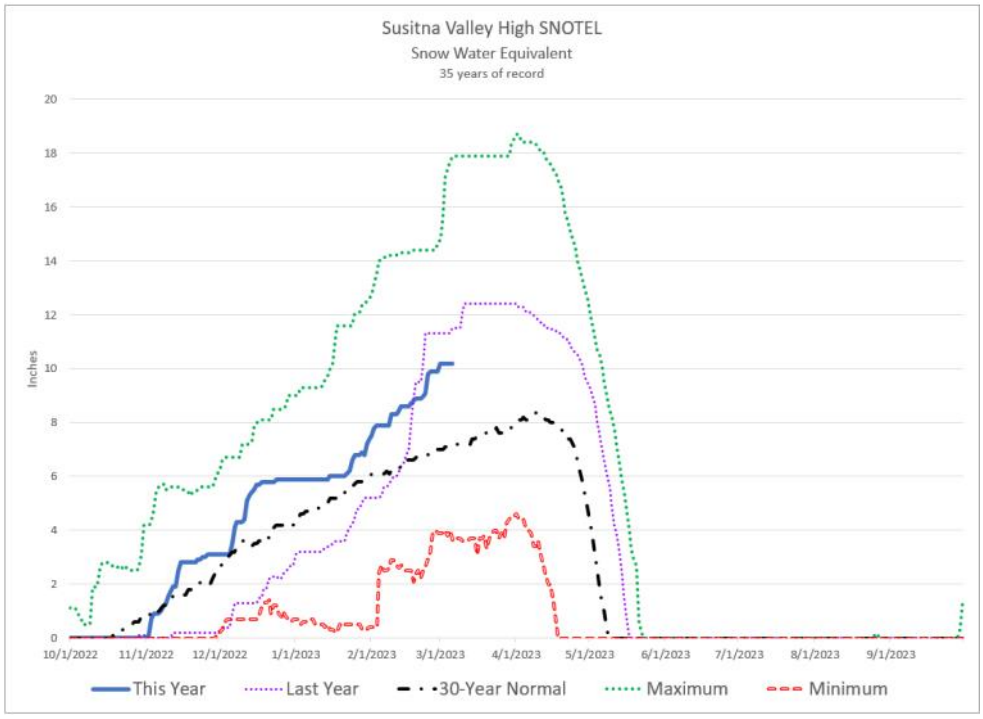
Snowpack Map



Snowpack

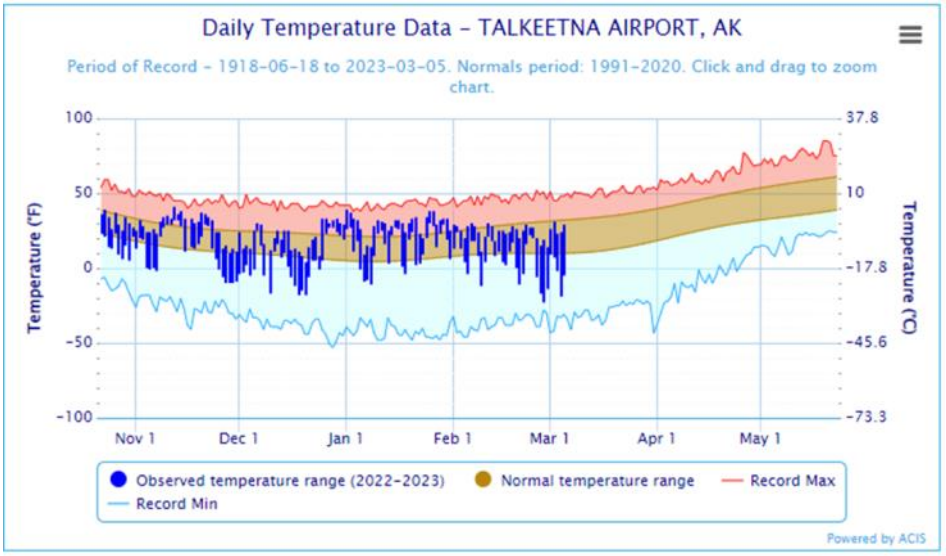
The snowpack in the Matanuska and Susitna is mostly above average. Storm tracks in the region are quite complex. The highest deviation above normal snowpack is in the Upper Susitna, on the east side of the Talkeetna Mountains, where the weather systems and snowpack behave more like the Copper River basin than the lower Susitna. The 8.4” measured at Lake Louise is a sixty-year record. The Curtis Lake snow course is also at a period-of-record maximum for March 1 SWE. Typically, west of the Talkeetna Mountains, higher in elevation—the deeper the snowpack. The 2023 snowpack bucks this trend with the Willow snow course reporting nearly the same water content as East Fork Chulitna, which is more than 1500’ higher. Expressed as a percentage of Normal the 9.7 inches of SWE in Willow is 170%, whereas the same value at East Fork Chulitna is 90% of normal. The snow courses in the southern Talkeetnas near Hatcher Pass mirror this trend with the lowest elevation snow course, Little Susitna (1700 feet ASL), measured at 143% and the highest elevation snow course, Independence Mine (3550 feet ASL), measured at 110% normal March 1 SWE. And in the Matanuska basin, the sole snow measurement in the basin, Sheep Mountain snow course, was measured at 167% normal and the sixth highest in sixty-six years of observation.

Matanuska—Susitna Basin



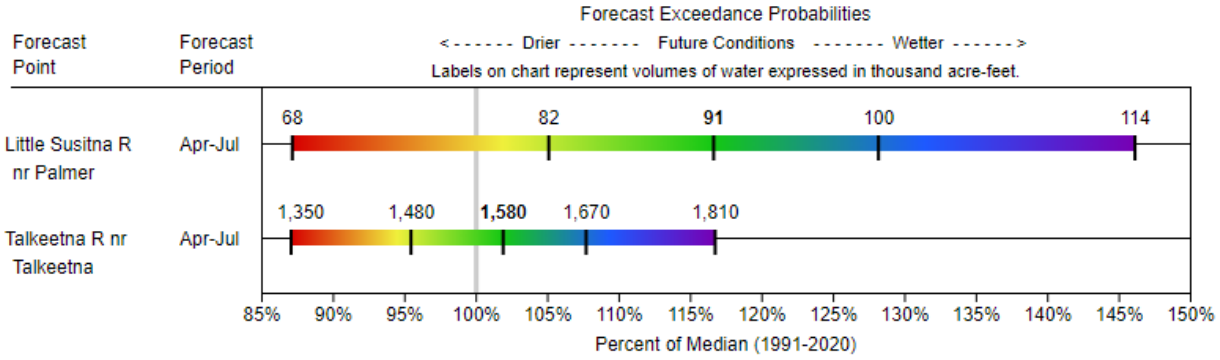
Temperature Data

Source: NOAA ACIS



Streamflow Forecasts

MATANUSKA-SUSITNA BASINS
Water Supply Forecasts
March 1, 2023



Matanuska—Susitna Basin

Snowpack Data

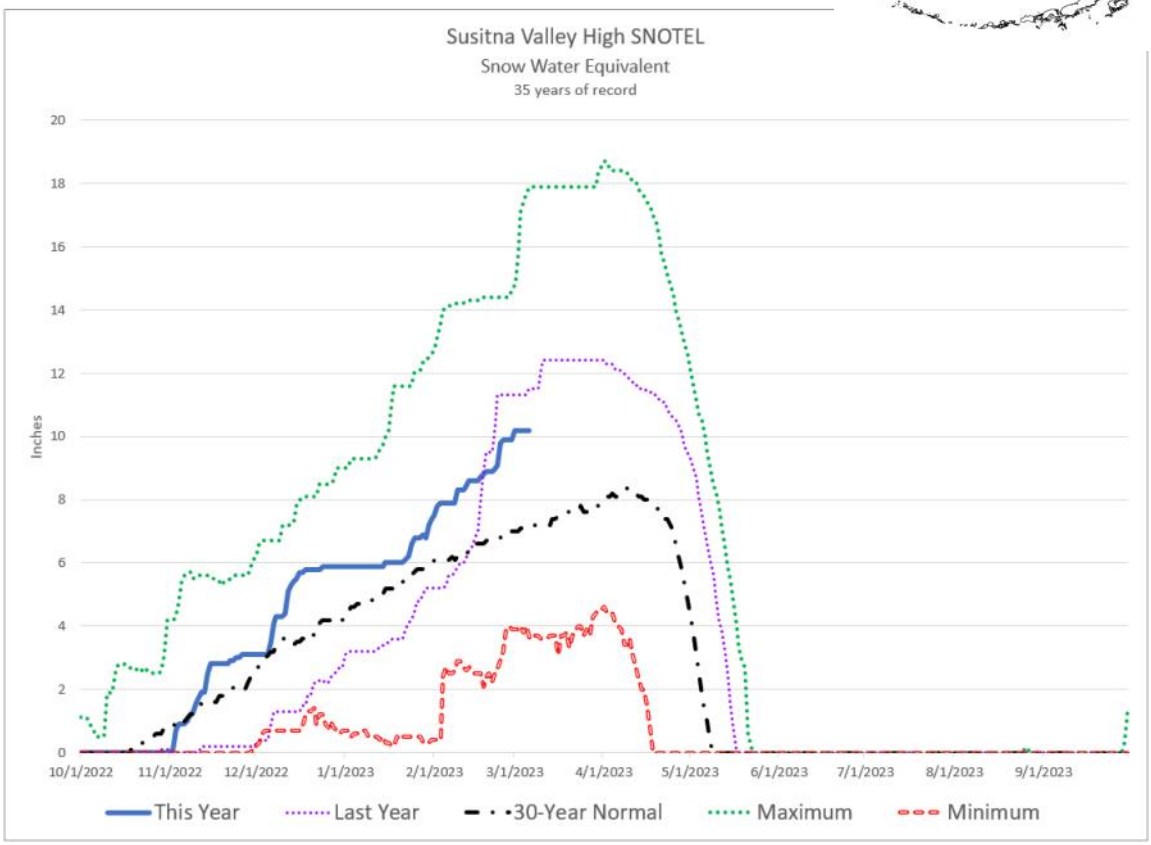
Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Alexander Lake	160	43	54	40	11.5	13.0	9.4
Alexander Lake SNOTEL	160	42	46	---	8.5	11.1	---
Archangel Road	2200	53	---	40	14.9	---	10.8
Birthday Pass	4020	82	134	---	25.6	43.8	---
Blueberry Hill	1200	52	69	44	11.6	14.6	11.6
Curtis Lake	2850	41	---	22	8.6*	---	4.0
Denali View	700	42	60	38	9.0	13.9	9.2
E. Fork Chulitna	1770	44	60	44	9.8	13.2	10.9
Fishhook Basin	3300	66	96	55	19.6	28.6	15.3
Fog Lakes	2120	32	---	25	6.0	---	4.5
Frostbite Bottom	2700	53	81	---	15.1	22.4	---
Horsepasture Pass	4300	32	31	29	8.1	6.4	5.6
Independence Mine	3550	69	105	62	20.9	31.5	19.0
Independence Mine SNOTEL	3550	69	100	---	21.2	29.6	---
Lake Louise	2400	38	34	24	8.4	8.2	4.0
Little Susitna	1700	50	67	36	13.2	16.4	9.2
Monahan Flat	2710	31	---	---	5.7	10.3	---
Sheep Mountain	2900	37	33	24	8.0	7.3	4.8
Skwentna	160	39	53	37	9.4	12.1	9.3
Spring Creek	580	7	18	---	---	---	---
Square Lake	2950	33	---	22	6.2	---	3.8
Susitna Valley High	375	42	48	---	10.2	11.3	7.0
Talkeetna	350	36	45	27	8.4	10.0	6.0
Tokositna Valley	850	51	67	---	12.1	---	12.3
Tyone River	2400	31	---	24	6.0*	---	4.4
Upper Oshetna River	3150	33	---	21	6.1*	---	4.0
Upper Sanona Creek	3100	30	---	26	5.4*	---	4.8
Willow Airstrip	200	44	42	27	9.7	10.4	5.7

**Estimate*

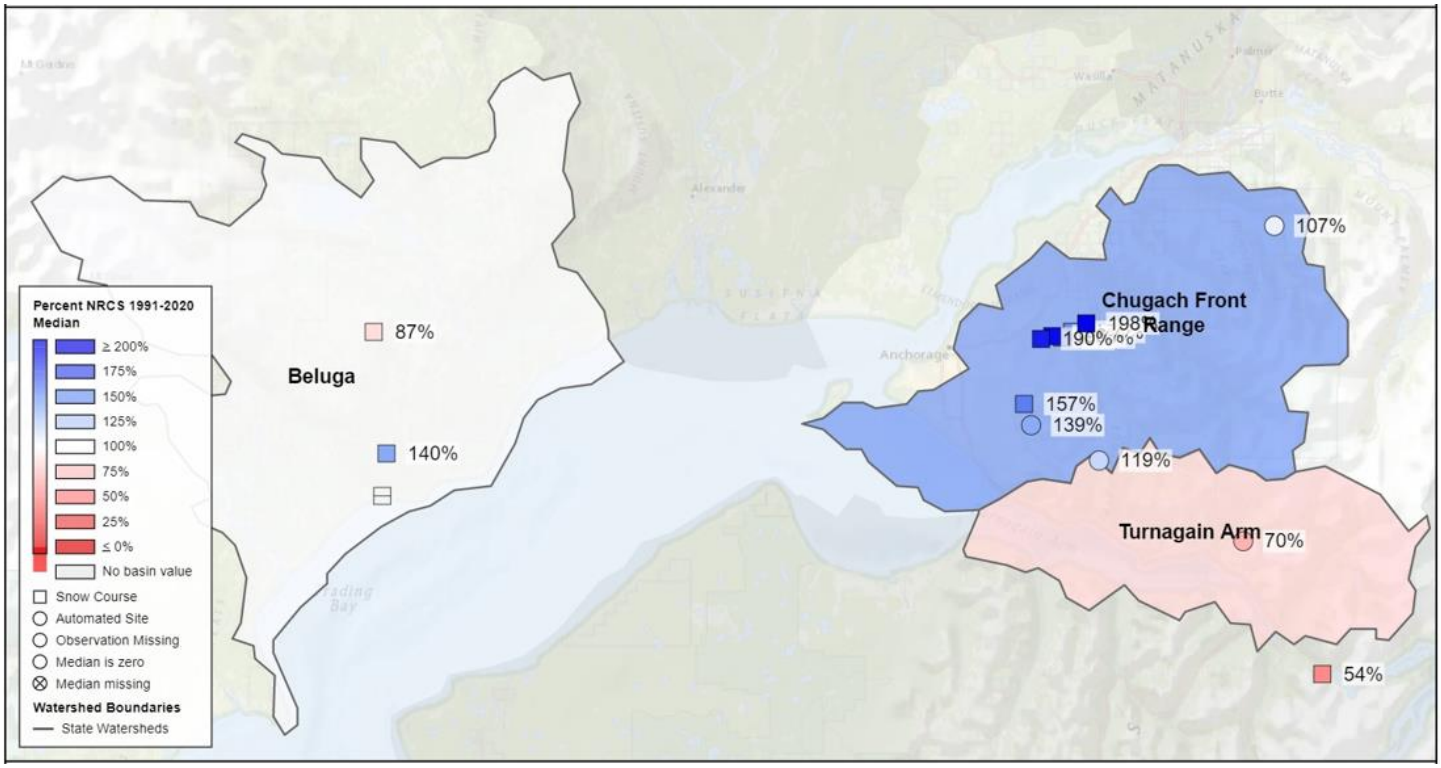
Precipitation Data

Site Name	Elev.	Inches Accumulated since October 1st			
		This Year	Last Year	1991-2020 Normal	% of Normal
Alexander Lake	160	14.4	16.5	---	---
Frostbite Bottom	2700	16.7	21.1	---	---
Independence Mine	3550	18.9	24.8	15.0	126%
Monahan Flat	2710	8.3	---	6.9	120%
Spring Creek	580	8.4	10.3	---	---
Susitna Valley High	375	13.8	15.5	10.1	137%
Tokositna Valley	850	20.0	19.3	18.1	111%

Northern Cook Inlet



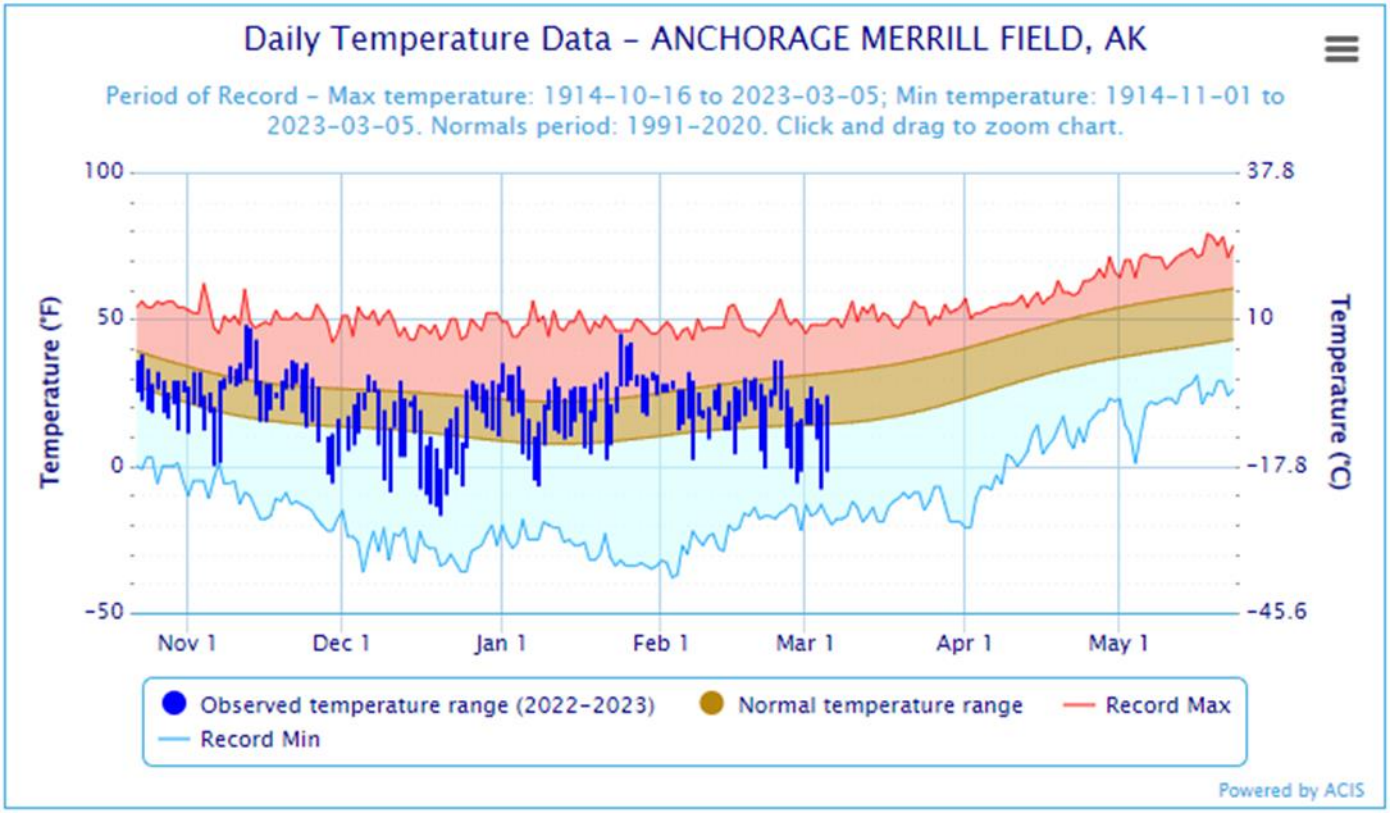
Snowpack Map



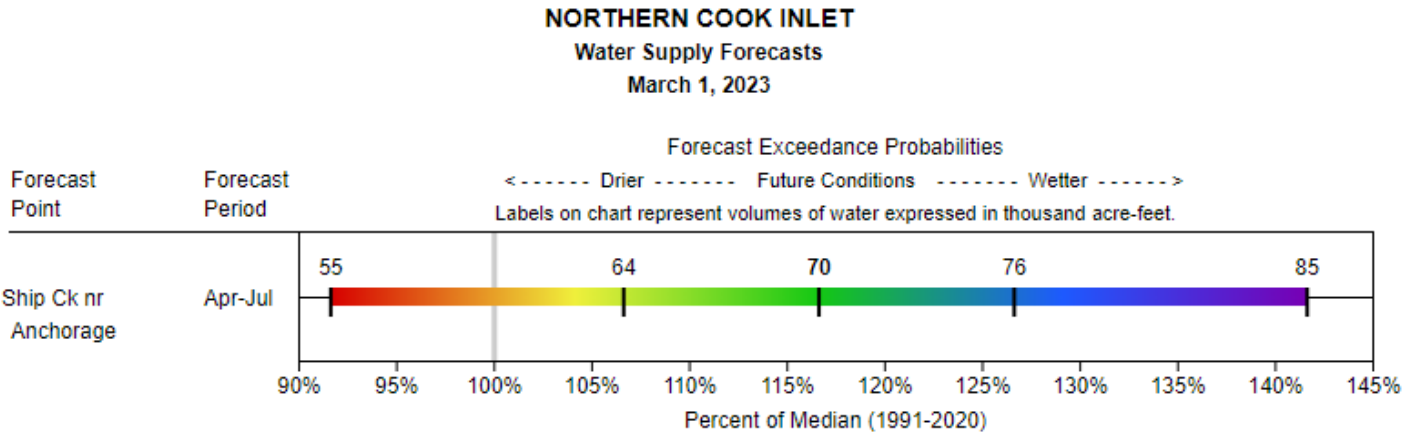
Northern Cook Inlet

Temperature Data

Source: NOAA ACIS



Streamflow Forecasts



Northern Cook Inlet

Snowpack

The snowpack of Northern Cook Inlet is mostly above Normal. The snowpacks closest in proximity to Cook Inlet have the most robust snowpacks, expressed as a percentage-of-Normal. Arctic Valley Ski bowl, near Anchorage, is reporting a snowpack that is nearly double normal and ranks fifth in fifty-eight years of observation. This trend continues to the lower elevations where the Kincaid snow course, at 250 feet ASL, is more than double Normal and ranks fourth in thirty-two years of observation. These snowpacks made considerable gains over February. Further from Cook Inlet, the snowpack increases in absolute numbers yet decreases dramatically in comparison to normal. Mt. Alyeska, in the mountains above Girdwood, is reporting a snowpack which is 70% normal.

Snowpack Data

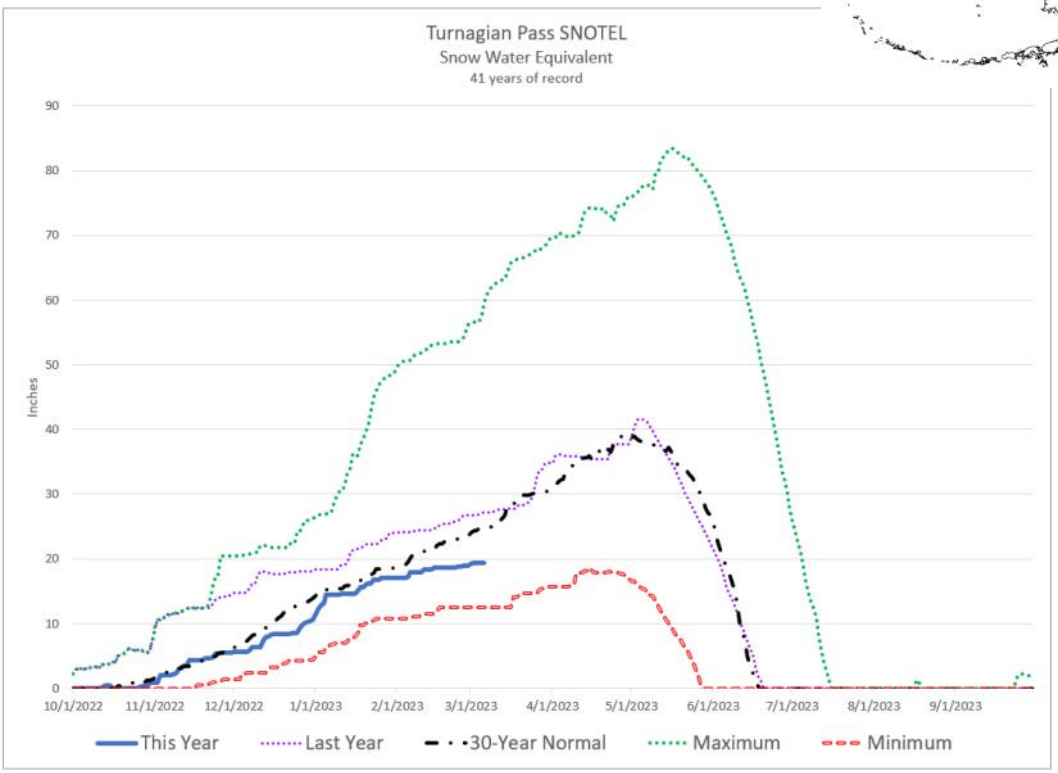
		Snow Depth (in)			Water Content (in)		
Site Name	**Elev.**	**Current**	**Last Year**	**1991-2020 Normal**	**Current**	**Last Year**	**1991-2020 Normal**
Anchorage Hillside	2080	41	45	---	10.6	12.3	7.6
Arctic Ski Bowl	3000	50	66	31	18.8	22.0	9.5
Arctic Valley 1	500	28	17	17	7.4	4.6	3.9
Arctic Valley 2	1000	34	23	22	8.8	6.5	4.5
Arctic Valley 3	1450	37	40	27	10.3	10.3	6.6
Arctic Valley 4	2030	35	42	26	9.6	11.8	6.4
Congahbuna Lake	550	43	51	33	11.9	13.0	8.5
Indian Pass	2350	67	94	---	20.2	29.8	17.0
Kincaid Park	250	30	21	17	7.7	5.8	3.8
Lone Ridge	1675	70	101	73	20.7*	31.3*	23.8
Moraine	2100	27	33	---	6.0	9.3	5.6
Mt. Alyeska	1540	56	82	---	16.6	25.8	23.8
Portage Valley	50	27	38	36	6.1	14.2	11.2
South Campbell Creek	1200	36	23	24	8.5	7.0	5.4
Spring Creek	580	7	18	---	---	---	---

**Estimate*

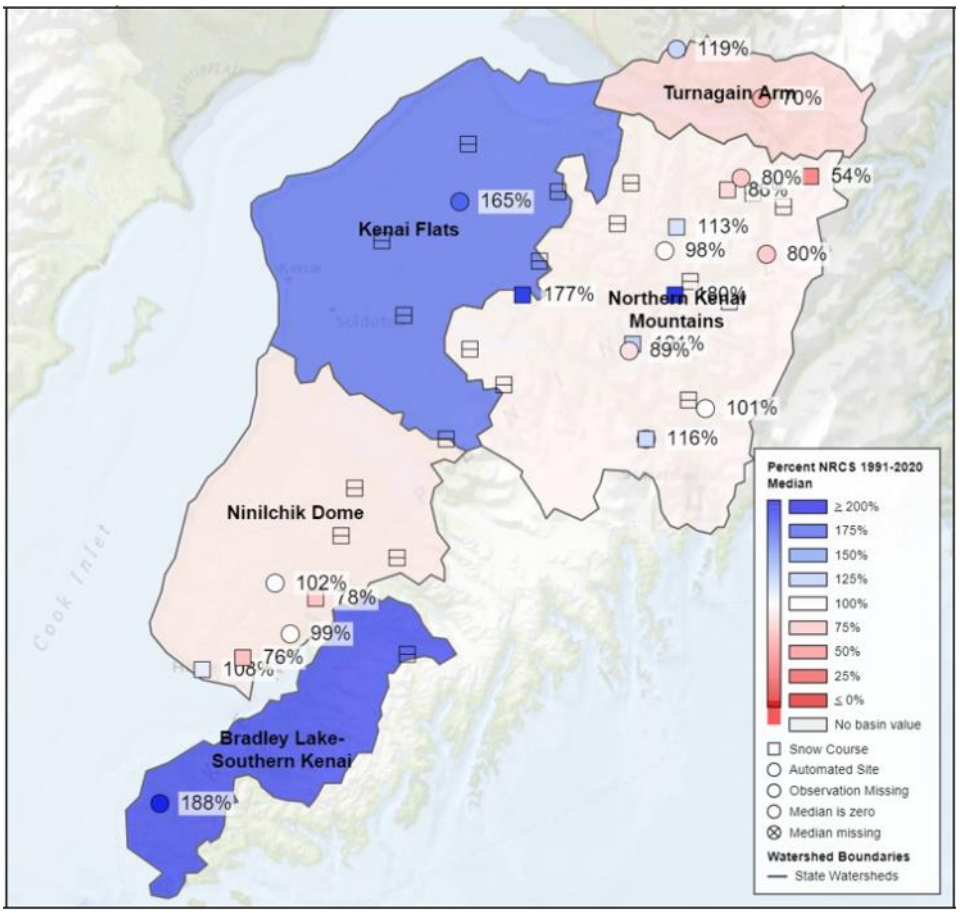
Precipitation Data

		Inches Accumulated since October 1st			
Site Name	**Elev.**	**This Year**	**Last Year**	**1991-2020 Normal**	**% of Normal**
Anchorage Hillside	2080	13.4	15.8	12.1	111%
Indian Pass	2350	25.2	27.8	21.6	117%
Moraine	2100	8.6	12.8	9.3	92%
Mt. Alyeska	1540	29.0	45.0	37.6	77%
Spring Creek	580	8.4	10.3	---	---

Kenai Peninsula



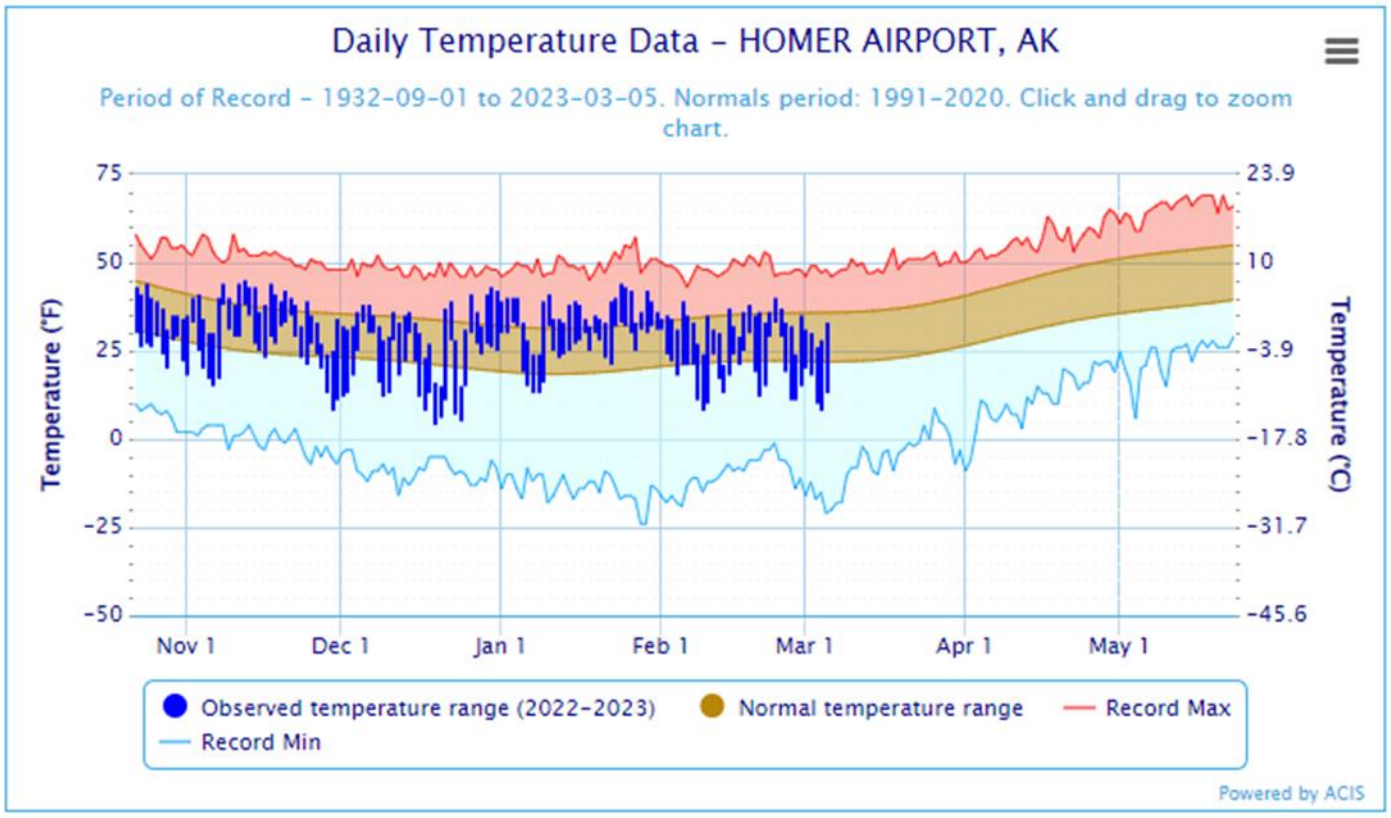
Snowpack Map



Kenai Peninsula

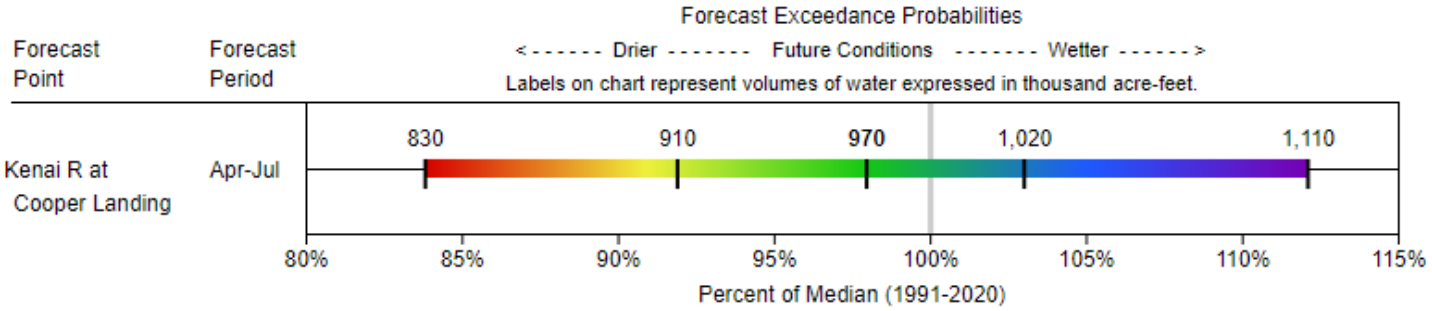
Temperature Chart

Source: NOAA ACIS



Streamflow Forecasts

KENAI PENINSULA
Water Supply Forecasts
March 1, 2023



Forecast Point	period	50% (KAF)	max (KAF)	30% (KAF)	70% (KAF)	min (KAF)
Bradley Lake Inflow	APR-JUL	197	240	215	179	152

Kenai Peninsula

Snowpack

Snowpack on the Kenai Peninsula is a mixed bag. Similar to trends noted in other regions of the state, the places with the most snowpack in absolute numbers are the least as expressed as a percentage or Normal. Turnagain Pass and Grandview SNOTELs are reporting 80% Normal snowpack. Whereas in the central Kenai, Moose Pass and Jean Lakes snow courses are reporting snowpacks almost double Normal. The stations around Kachemak Bay are reflect this. Bridge Creek at the head of the bay was measured at 78% Normal, while Port Graham SNOTEL near the entrance was at 178% normal.

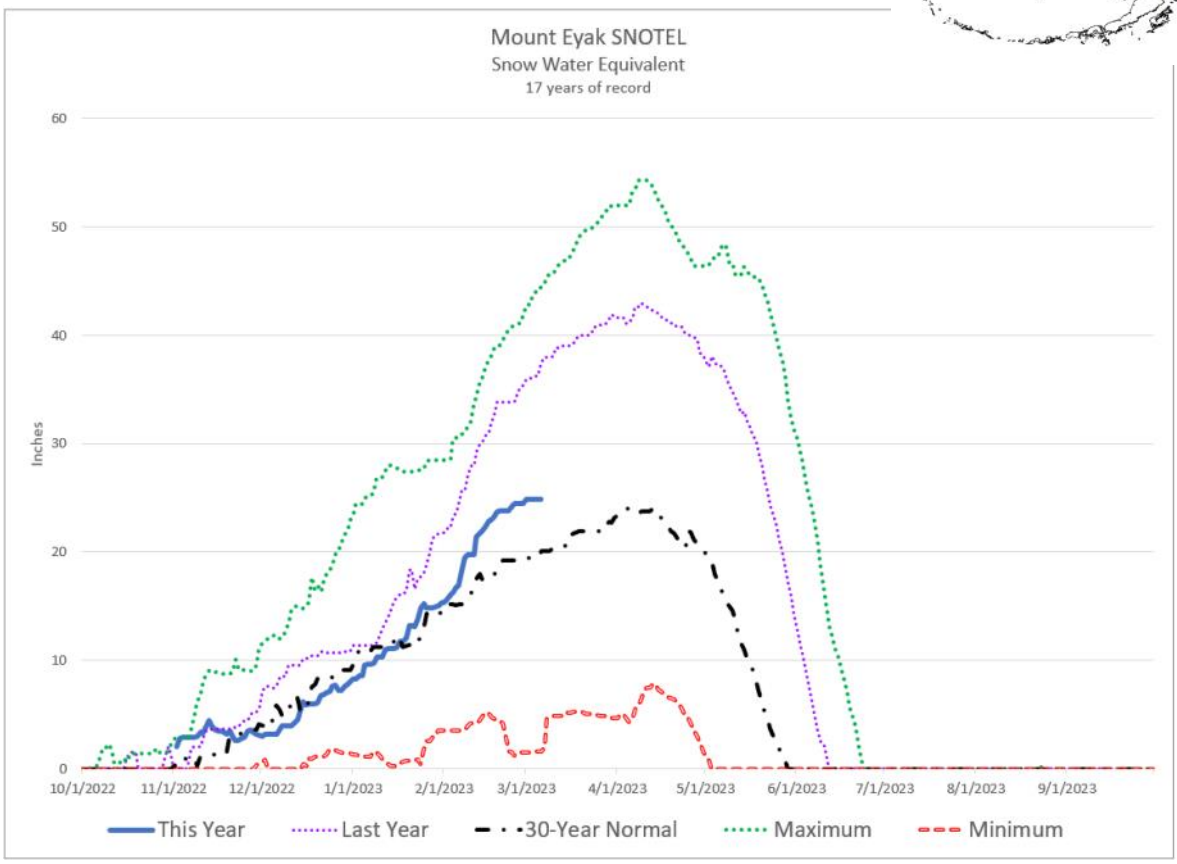
Snowpack Data

		Snow Depth (in)			Water Content (in)		
Site Name	**Elev.**	**Current**	**Last Year**	**1991-2020 Normal**	**Current**	**Last Year**	**1991-2020 Normal**
Anchor River Divide	1653	41	33	---	10.0	9.0	9.8
Bertha Creek	950	40	45	45	12.0	13.1	13.9
Bridge Creek	1300	31	36	32	7.2	11.3	9.5
Cooper Lake	1200	45	41	---	11.0	10.7	12.4
Demonstration Forest	780	30	31	22	6.8	10.3	6.3
Eagle Lake	1400	32	31	36	7.8	9.1	10.0
Exit Glacier	400	55	52	42	15.0	16.6	12.9
Exit Glacier SNOTEL	400	56	52	---	15.1	14.7	---
Grandview	1100	67	65	---	19.4	20.0	24.1
Grouse Creek Divide	700	46	52	---	13.3	14.8	13.2
Jean Lake	620	23	14	14	5.5	4.2	3.1
Kenai Moose Pens	300	28	20	---	6.6	5.3	4.0
Kenai Summit	1390	46	47	44	13.8*	12.0	12.2
Lower Kachemak Creek	1915	46	39	---	---	---	---
Mcneil Canyon	1320	33	25	---	8.6	9.8	8.7
Middle Fork Bradley	2300	26	37	---	---	---	---
Moose Pass	700	36	28	22	9.7*	9.8	5.4
Mt. Alyeska	1540	56	82	---	16.6	25.8	23.8
Port Graham	300	---	31	---	10.3	12.3	5.8
Portage Valley	50	27	38	36	6.1	14.2	11.2
Snug Harbor Road	500	22	16	16	5.1	4.9	4.2
Summit Creek	1400	41	41	---	9.0	9.8	9.2
Turnagain Pass	1880	68	94	---	19.2	26.8	24.0

Precipitation Data

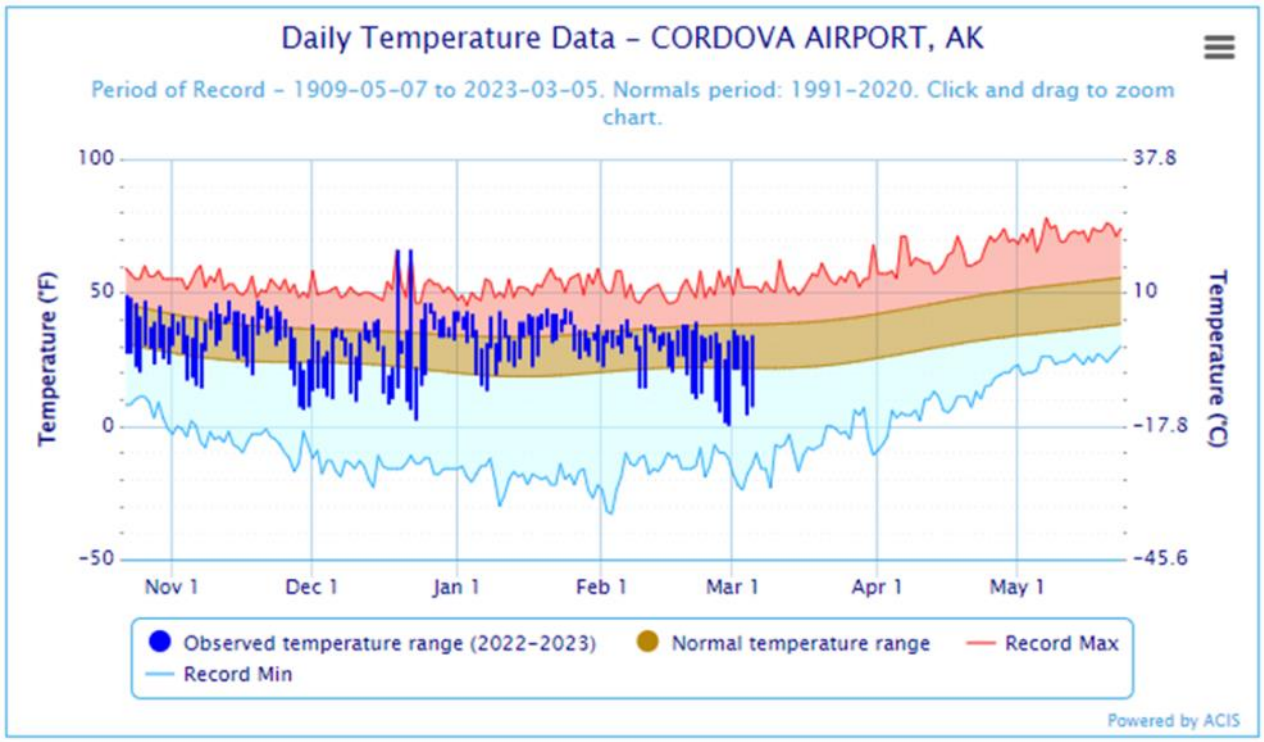
		Inches Accumulated since October 1st			
Site Name	**Elev.**	**This Year**	**Last Year**	**1991-2020 Normal**	**% of Normal**
Anchor River Divide	1653	12.1	17.1	16.4	74%
Cooper Lake	1200	17.2	25.2	22.4	77%
Exit Glacier	400	29.4	41.6	---	---
Grandview	1100	28.4	37.3	35.7	80%
Grouse Creek Divide	700	23.3	32.9	32.8	71%
Kenai Moose Pens	300	8.4	8.9	7.4	114%
Lower Kachemak Creek	1915	20.4	28.4	---	---
Mcneil Canyon	1320	10.1	13.9	15.2	66%
Middle Fork Bradley	2300	19.6	26.6	27.3	72%
Mt. Alyeska	1540	29.0	45.0	37.6	77%
Nuka Glacier	1250	27.9	33.9	44.8	62%
Port Graham	300	31.6	---	42.4	75%
Summit Creek	1400	13.0	17.2	15.0	87%
Turnagain Pass	1880	24.4	33.8	31.6	77%

Western Gulf – Prince William Sound



Temperature Chart

Source: NOAA ACIS

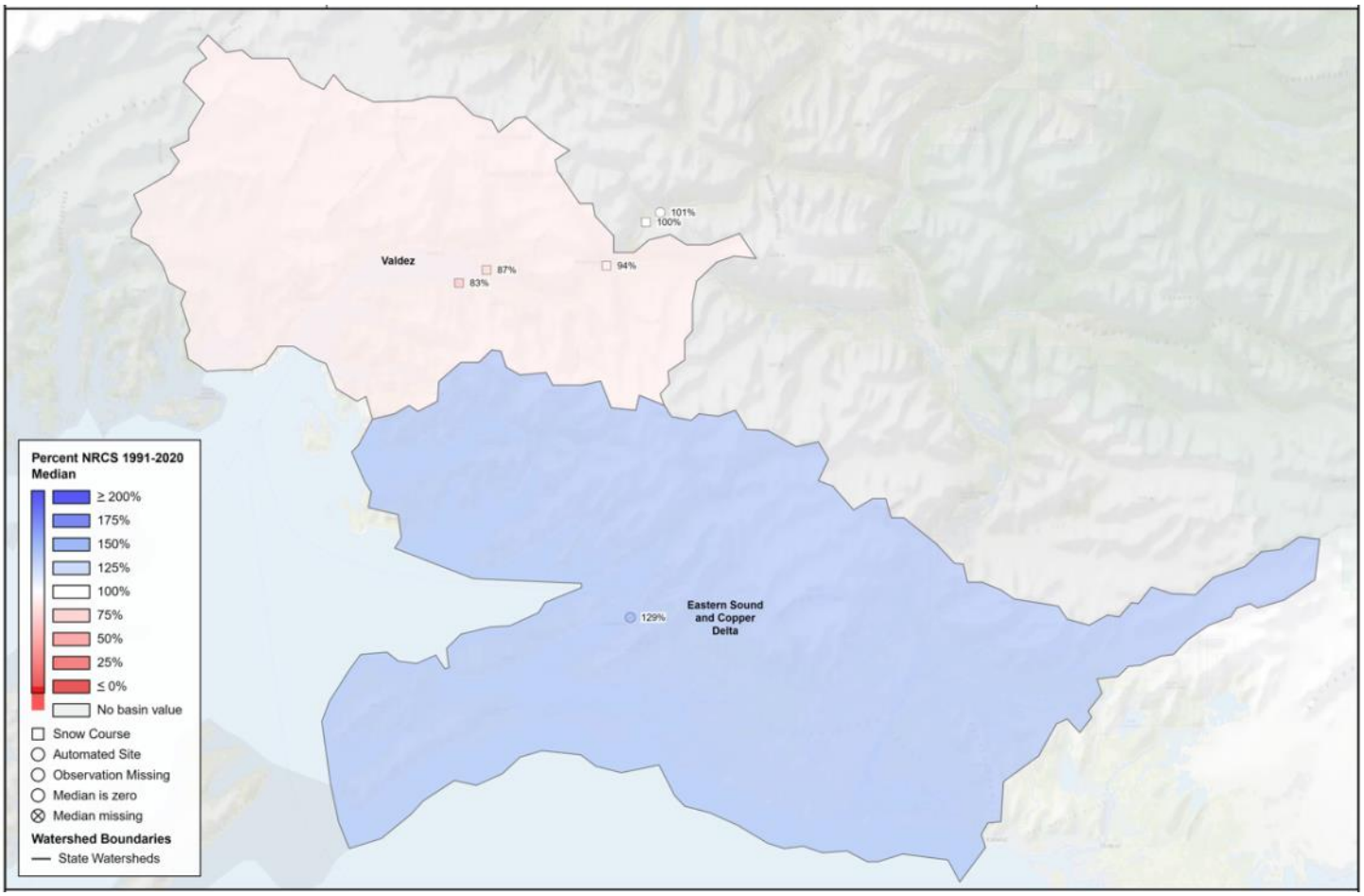


Western Gulf – Prince William Sound

Snowpack

Snowpack in the Western Gulf region is mixed. Similar to last year at this time, Mt. Eyak has the most robust snowpack in the region. The 24.9 inches SWE reported on March 1 is 129% of Normal for the date. Snowpack gains in February were most pronounced in the eastern portion of the region, with Mt. Eyak picking up nearly ten inches of SWE over February. Near Seward, Exit Glacier and Grouse Creek Divide are boasting snowpacks that are slightly above Normal. The snow measurements near Valdez were noted as being moderately below normal.

Snowpack Map



Western Gulf — Prince William Sound

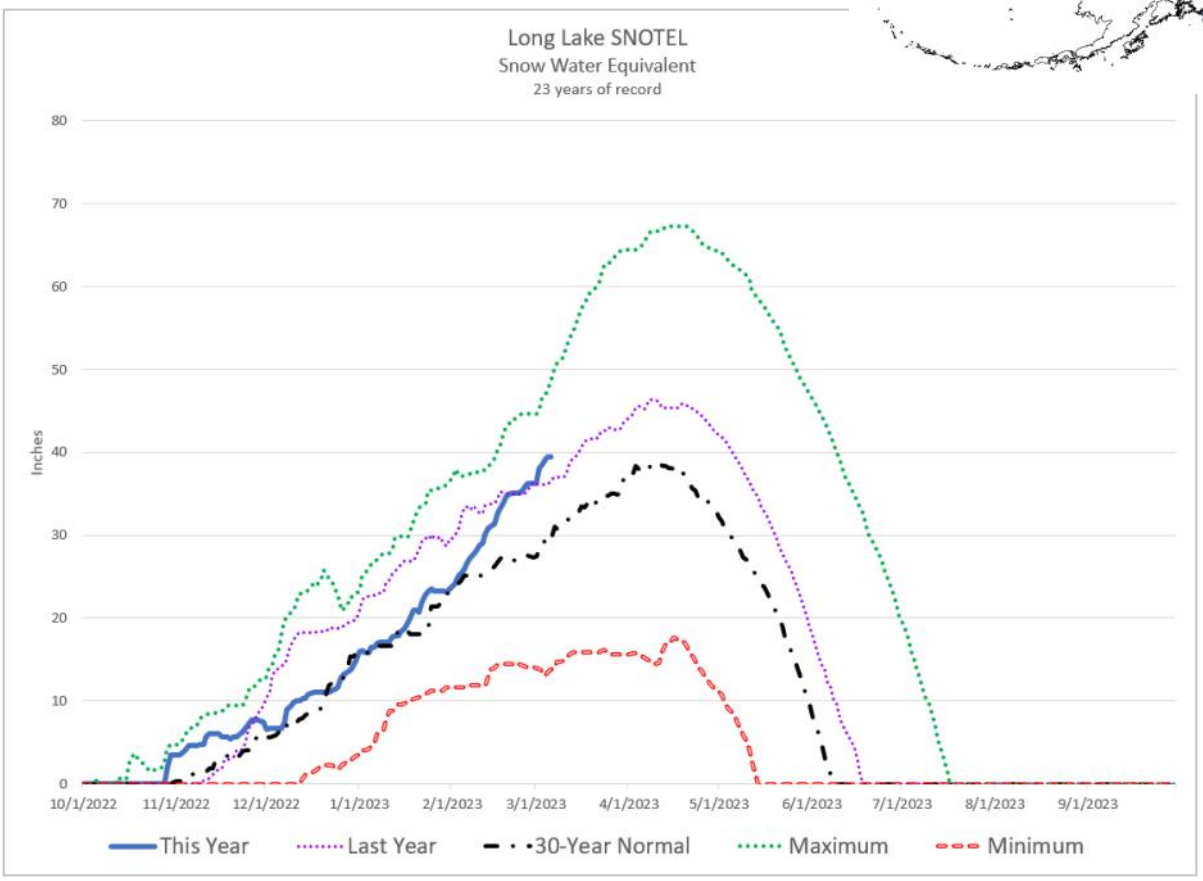
Snowpack Data

Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1991-2020 Normal	Current	Last Year	1991-2020 Normal
Esther Island	50	51	52	---	---	---	---
Exit Glacier	400	56	52	---	15.1	14.7	---
Exit Glacier	400	55	52	42	15.0	16.6	12.9
Grouse Creek Divide	700	46	52	---	13.3	14.8	13.2
Lowe River	600	48	55	47	13.7	14.4	14.6
Mt. Eyak	1405	73	95	---	24.9	35.9	19.3
Nicks Valley	4280	82	114	---	---	---	---
Sugarloaf Mountain	550	64	101	64	16.2	26.0	19.6
Tsaina River	1650	55	54	51	16.1	14.0	13.5
Upper Tsaina River	1750	58	62	---	16.8	14.0	16.6
Valdez	50	44	67	44	11.5	18.6	13.2
Worthington Glacier	2100	69	78	67	21.7	19.7	21.6

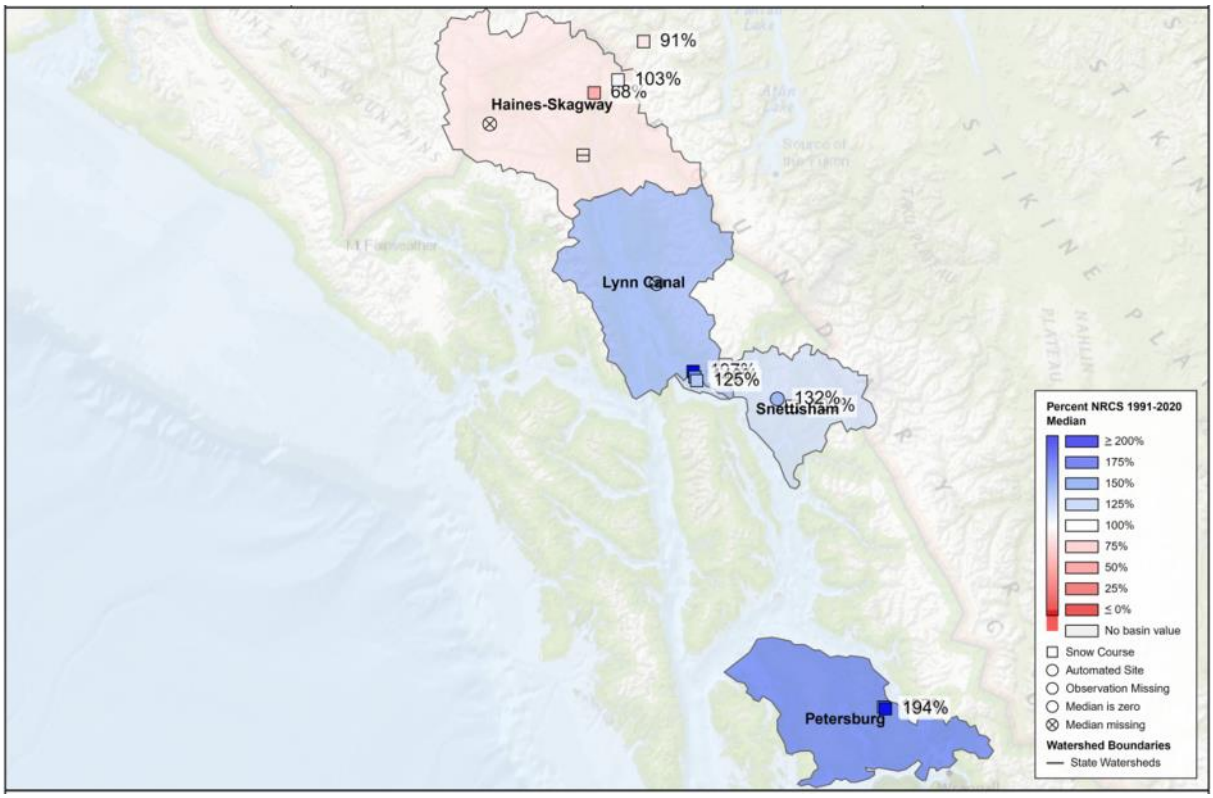
Precipitation Data

Site Name	Elev.	Inches Accumulated since October 1st			
		This Year	Last Year	1991-2020 Normal	% of Normal
Esther Island	50	65.4	82.8	76.4	86%
Exit Glacier	400	29.4	41.6	---	---
Grouse Creek Divide	700	23.3	32.9	32.8	71%
Mt. Eyak	1405	70.2	61.1	63.6	110%
Nicks Valley	4280	6.8	0.2	---	---
Nuchek	50	71.2	80.7	---	---
Port San Juan	50	59.2	65.3	---	---
Seal Island	20	28.1	34.8	---	---
Strawberry Reef	30	40.0	38.8	---	---
Tatitlek	50	44.5	40.6	---	---
Upper Tsaina River	1750	23.9	15.8	23.5	102%

Southeast



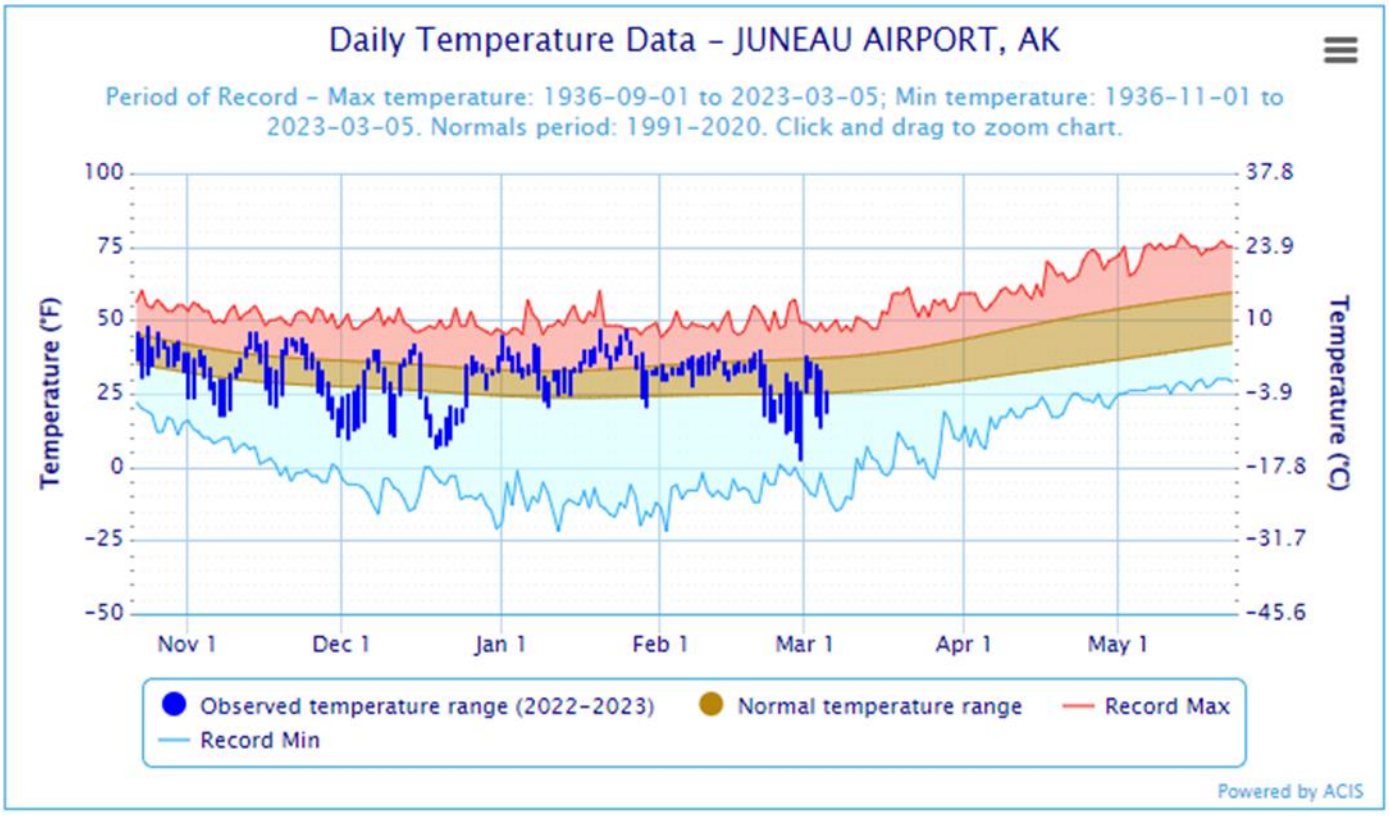
Snowpack Map



Southeast

Temperature Data

Source: NOAA ACIS



Streamflow Forecasts

SOUTHEAST
Water Supply Forecasts
March 1, 2023

Forecast Exceedance Probabilities

Forecast Point	Forecast Period	< ------ Drier ------- Future Conditions ------- Wetter ------ > Labels on chart represent volumes of water expressed in thousand acre-feet.
Taiya R nr Skagway	Apr-Jul	415 455 480 505 540

88% 90% 92% 94% 96% 98% 100% 102% 104% 106% 108% 110% 112% 114% 116% 118%

Percent of Median (1991-2020)

Southeast

Snowpack

The snowpack in Southeast Alaska made considerable gains over February. The snowpack whicht was noted as having below Normal SWE on February 1 is now above Normal on March 1. February precipitation patterns favored southern Southeast. The 23.2" of precipitation measured in Ketchikan is nearly double Normal for the month. Southeast Alaska is a region where mid-winter rain is normal. February 2023's precipitation came with cool temps and was recorded as snowfall in the region. Petersburg Reservoir, at 550 feet ASL, gained nearly seven times its Normal February SWE and was noted as being the third highest February gain in forty-three years of observation. Similarly, the February SWE gains reported at 500 feet ASL at the Fish Creek snow course near Juneau is the forth highest in forty six years of observation. All snow measurements made gains in February and the index for the region is 122% normal for the date.

Snowpack Data

		Snow Depth (in)			Water Content (in)		
Site Name	**Elev.**	**Current**	**Last Year**	**1991-2020 Normal**	**Current**	**Last Year**	**1991-2020 Normal**
Cropley Lake	1650	100	103	74	28.7*	44.7	23.0
Eagle Crest	1200	77	68	44	19.4*	26.3	13.1
Fish Creek	500	23*	15	13	6.1*	5.1	3.1
Flower Mountain	2510	57	77	---	18.5	22.4	---
Heen Latinee	2065	66	79	---	19.6	25.0	---
Long Lake	850	112	88	---	36.2	36.2	27.4
Moore Creek Bridge	2250	58	71	61	17.3	22.1	16.8
Moore Creek Bridge SNOTEL	2250	57	72	---	---	---	---
Petersburg Reservoir	550	39	24	21	9.3	11.2	4.8
Petersburg Ridge, S.	1650	96	84	56	28.5*	32.5	18.2
Speel River	280	83	74	66	26.8	26.0	26.6
West Creek	475	29	26	35	6.9	10.2	10.2

**Estimate*

Precipitation Data

		Inches Accumulated since October 1st			
Site Name	**Elev.**	**This Year**	**Last Year**	**1991-2020 Normal**	**% of Normal**
Long Lake	850	100.2	99.4	85.3	117%
Moore Creek Bridge	2250	26.3	21.8	23.8	111%

For further information contact:

NRCS Alaska web site: **https://www.nrcs.usda.gov/wps/portal/nrcs/ak/snow/**
NRCS Water and Climate Center web site: **https://www.nrcs.usda.gov/wps/portal/wcc/home/**

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