Alaska Snow Survey Report

May 1, 2020

USDA NRCS

United States Department of Agriculture

Natural Resources Conservation Service

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Cover photo: NRCS Civil Engineering Technician Brant Dallas, combines snow tubes in preparation to measuring the Upper Mill Creek Snow Course. This is the first year the snow course was measured. It was measured with 90" of snow depth with 40.6" of water content.

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General Overview

SnowPack

Even though the snowpack in Alaska experienced faster than normal meltout, snowpack around the state remains generally above normal. Similar to last month, the Interior, western Alaska, Southeast Alaska, and the Susitna Basin all have above normal snowpacks. The Kenai Peninsula has below normal snowpack, as do other isolated portions of Southcentral Alaska.

The Kenai Peninsula continues to have the most meager snowpack in the state. The 19 index sites here averaged 24% of normal, compared to 60% last year. 2013 was the last year the Kenai measurement sites had an above average snowpack.

Strikingly, Southeast Alaska has its most robust snowpack since 2013. Sites here range from near average to 150% of average water content.

The Upper Yukon Basin in the Yukon Territory has above normal snowpack. The 30 sites in this region average 136% of normal and two snow courses near Dawson City logged two new 46-year record highs.

Downriver, from Eagle to the Yukon Flats, the Central Yukon Basin also had above normal snowpack. Snowpack at the Upper Nome Creek SNOTEL, in the White Mountains, peaked on April 19th with 11.7" of water content.

The Tanana River Basin likewise had above normal snow conditions. The very top of the basin near the Wrangell Mountains had low snowpack, but conditions changed quickly downriver. After gains during April snowstorms, the Cleary Summit Snow Course, in the Chatanika River watershed, set a new 61-year record high.

Further west, the lower Yukon, Koyukuk, and Kuskokwim Basins all retained above normal snowpack, despite higher than average April melt. The snowpack at the Galena AK SNOTEL site peaked on April 13th with 7.5" of water content.

Further north, in the Noatak River basin, Kelly Station SNOTEL recorded slightly below normal snowpack.

The Arctic measurement sites appear to have near normal snow depths.

In Southcentral, Northern Cook Inlet has below normal snowpack, similar to last year. The Susitna Valley, on the other hand, preserved above normal snowpack during April. The Independence Mine Snow Course, in the Talkeetna Mountains, experienced its second greatest May 1st snowpack in its 31-year record, second only to 1990.

The Copper Valley has a variety of conditions, but is generally above normal. Lower elevation sites experienced advanced meltout and are considered below normal, but the snowpack approaching the Alaska Range is around 150% of normal and the sites in the eastern Chugach Mountains are near normal.

		Basin Index	
		Current	Last Year
Alaska Statewide Snowpack	# of Sites	Percent of Median	Percent of Median
Upper Yukon Basin	30	136	53
Central Yukon Basin	4	156	143
Tanana Basin	24	256	93
Koyukuk Basin	2	132	178
Kuskokwim Basin	1	240	90
Copper Basin	9	129	81
Matanuska-Susitna Basin	15	151	79
Northern Cook Inlet	5	57	54
Kenai Peninsula	19	24	60
Western Gulf of Alaska	5	52	54
Southeast Alaska	6	130	34

General Overview Continued

Precipitation

Much of the precipitation patterns Alaska experienced in March were experienced in April, too. Like March, much of the Interior and western Alaska received above to much above monthly precipitation during April. Also, like March, regions along the northern Gulf of Alaska, contrastingly, caught below normal amounts.

Locations in the Central Yukon drainage and Tanana Valley caught between 200%-400% of normal precipitation. The 9 measured sites in the Tanana averaged 275% of normal. This above normal trend continued west and north. The 4 sites in the Koyukuk averaged 258% of normal, while sites on the west coast caught 200-500% of normal precipitation.

Upper Cook Inlet and the Matanuska-Susitna Basins were generally above normal, too. Sites in this region varied from 80% to 200% of normal.

However, most of the Kenai Peninsula received well below normal March precipitation. The ten reporting sites on the Peninsula averaged only 37% of normal. Similarly, to the east, Prince William Sound sites averaged 53% of normal.

Regions with precipitation differences between March and April include the Arctic, which was variable in March and in April was generally above normal. Southeast Alaska also went from experiencing below normal precipitation in March to April seeing above normal precipitation in the northern panhandle.

Temperature

Most sites across the state reported near or above average April temperatures. In many areas April started cooler and then “popped” mid-month with a trend of above normal temperatures. These warmer mid-month temperatures really accelerated snowmelt in many locations.

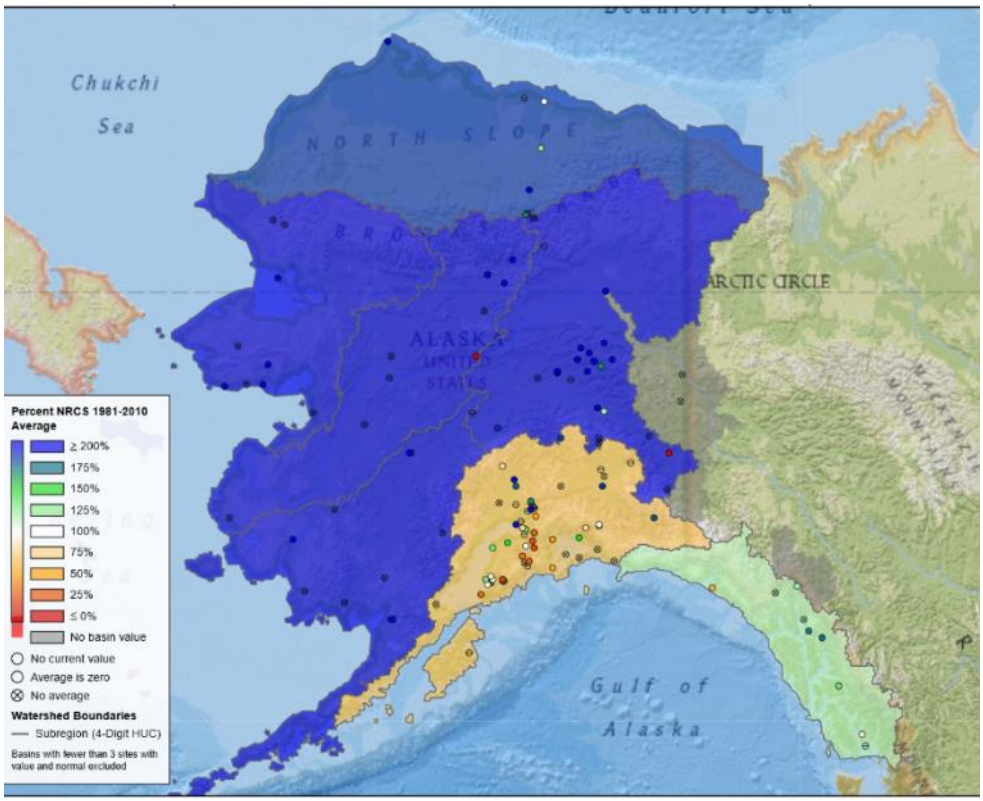
Locations that averaged near normal for April include Anchorage, Cordova, Juneau, Gulkana and Fairbanks. Homer and Talkeetna experienced a 2°F and 3°F above normal monthly April average.

Several locations were above normal for April. Bettles was 4°F above for the month, Nome was 7°F above, Bethel was 9°F above, and Barrow was 10°F above.

Alaska Statewide Precipitation Maps

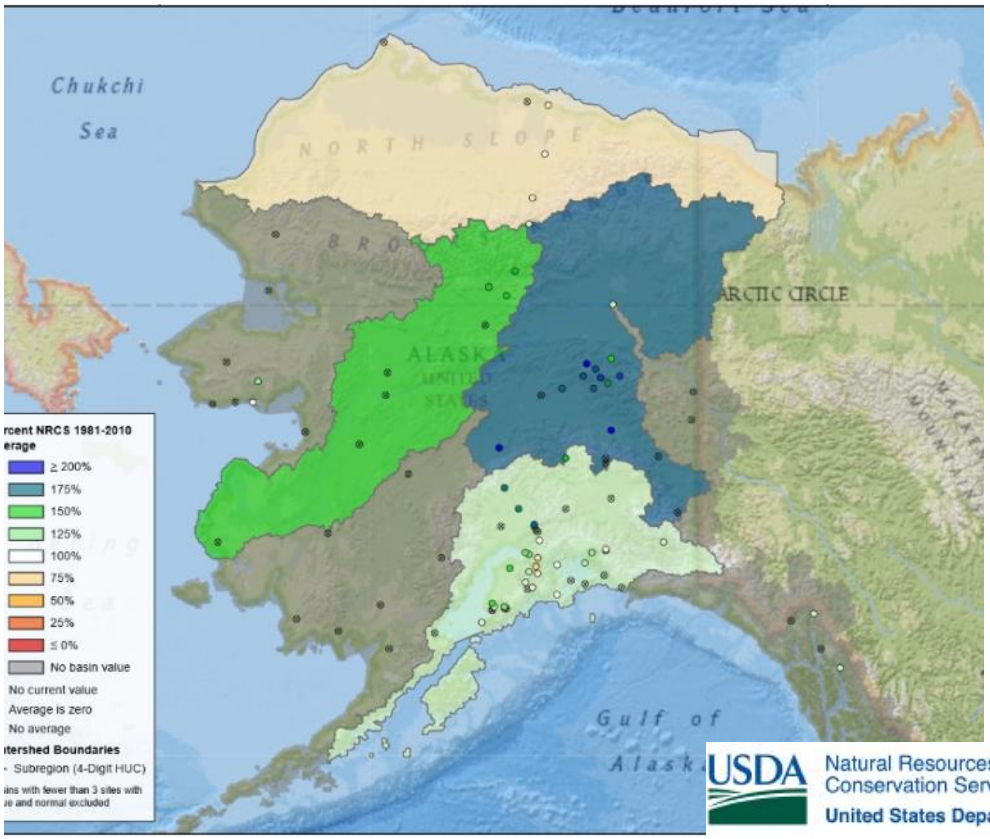
Monthly Precipitation for April, 2020

(% of NRCS 81-2010 Average)



Water Year-to-date Precipitation (Oct. 1. 2019 –April 30, 2020)

(% of NRCS 81-2010 Average)



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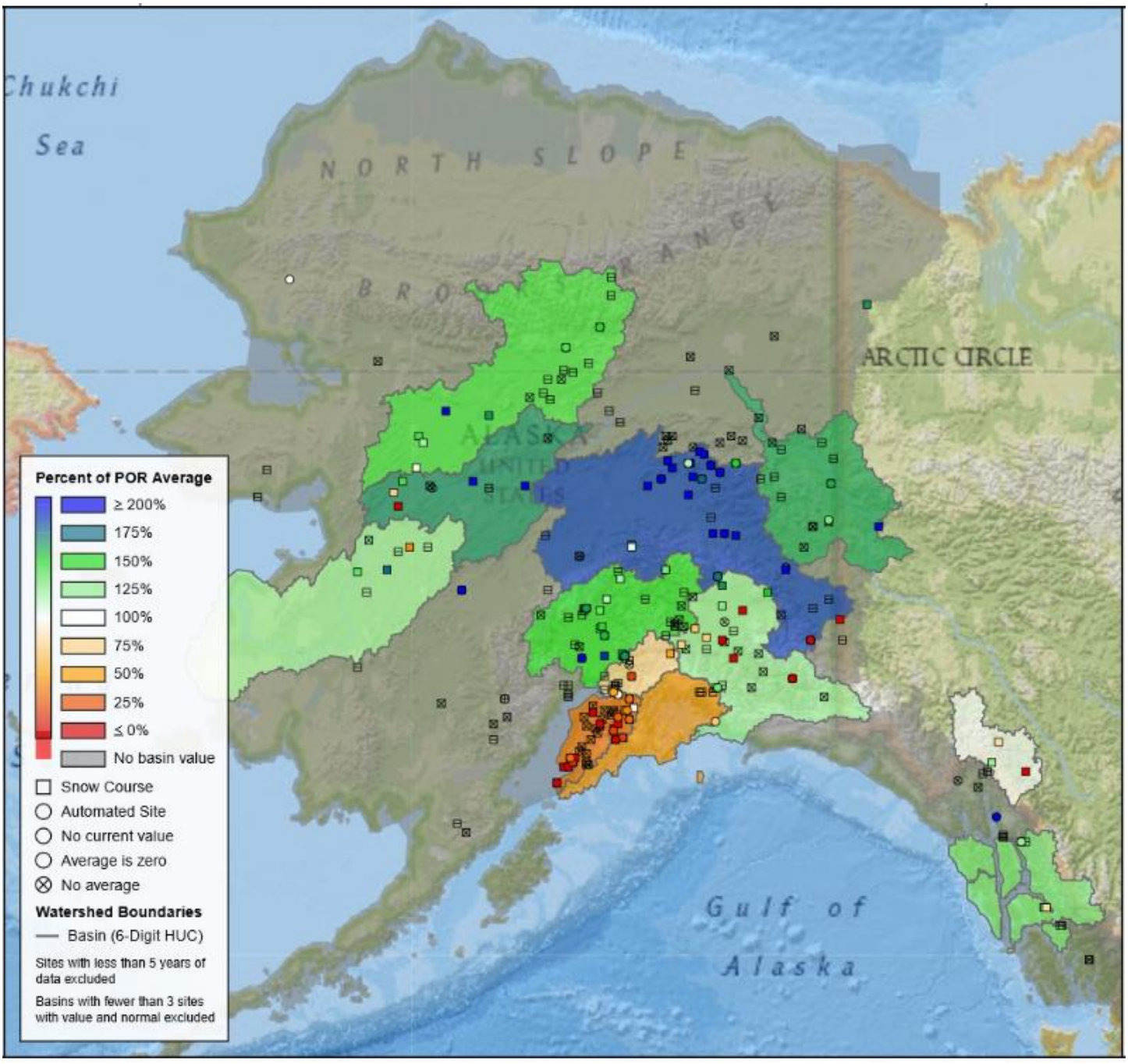
Alaska Statewide Snowpack Map

Based on May 1st, 2020 Snow Water Equivalent



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Streamflow Forecasts

FORECAST POINT*	Percent of Ave. Flow	Period
Yukon River at Eagle	111	April - July
Porcupine River nr Int'l Boundary……	107	April - July
Yukon River near Stevens Village	108	April - July
Tanana River at Fairbanks	108	April - July
Tanana River at Nenana	122	April - July
Little Chena River near Fairbanks	150	April - July
Chena River near Two Rivers	159	April - July
Salcha near Salchaket	152	April - July
Kuskokwim River at Crooked Creek	128	April - July
Sagvanirktok River near Pump Station 3	124	April - July
Kuparuk River near Deadhorse	130	April - July
Gulkana River at Sourdough	140	April - July
Little Susitna River near Palmer	143	April - July
Talkeetna River near Talkeetna	135	April - July
Ship Creek near Anchorage	84	April - July
Kenai River at Cooper Landing	89	April - July
Bradley Lake Inflow	105	April - July
Taiya River nr Skagway	110	April - July

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

FORECAST POINT	INDEX
Koyukuk River at Hughes……..	2.5
MF Koyukuk R near Wiseman ……..	2.5
Slate Creek at Coldfoot……..	2.5
Beaver Creek above Victoria Creek……..	—
Birch Creek below South Fork……..	—
Caribou Creek at Chatanika……..	2.5
Susitna River near Gold Creek……..	0
Chulitna River near Talkeetna……..	1
Deshka River at mouth near Willow……..	1.5
Montana Creek at Parks Highway……..	1
Willow Creek near Willow……..	2
Skwentna River at Skwentna……..	—
Chuitna River near Tyonek……..	—
Campbell Creek near Spenard……..	—
Indian Creek at Indian……..	-2.5
Bird Creek at Bird Creek ……..	-3
Glacier Creek nr Girdwood ……..	-2.5
Six Mile Creek near Hope……..	-3
Resurrection Creek near Hope……..	-3
Grouse Ck at Grouse Lake Outlet nr Seward ……..	-2.5
Anchor River near Anchor Point ……..	-3
Deep Creek near Ninilchik……..	-3
Ninilchik River near Ninilchik……..	-3
Fritz Creek near Homer……..	-3
Skagway River at Skagway……..	-3
Municipal Watershed C nr Petersburg ……..	1.5
Gold Creek near Juneau……..	0.5

Index	Key:
-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

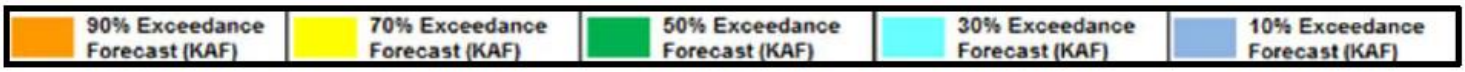
Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual 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.

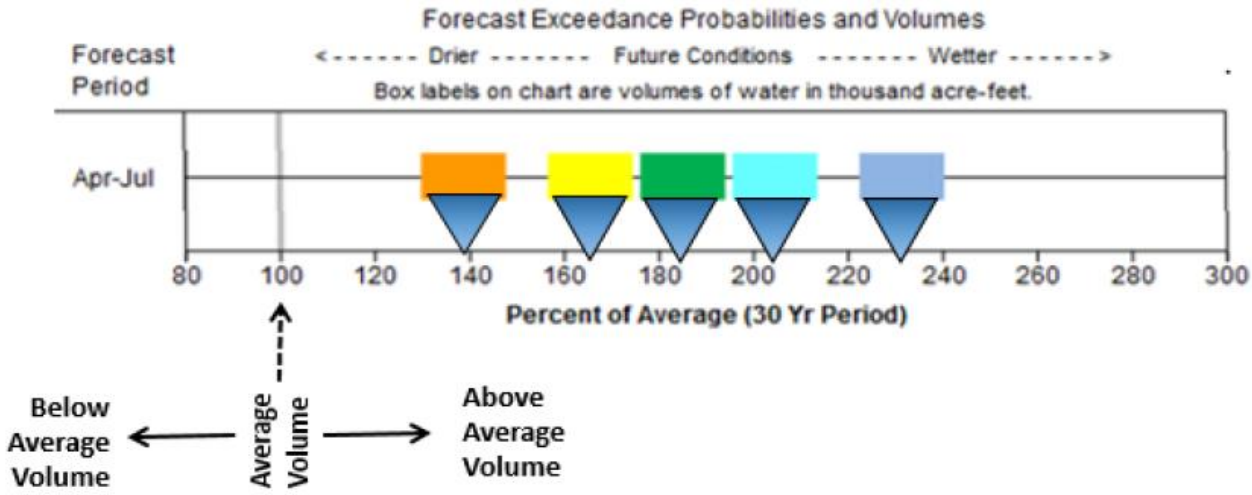
The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. 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:

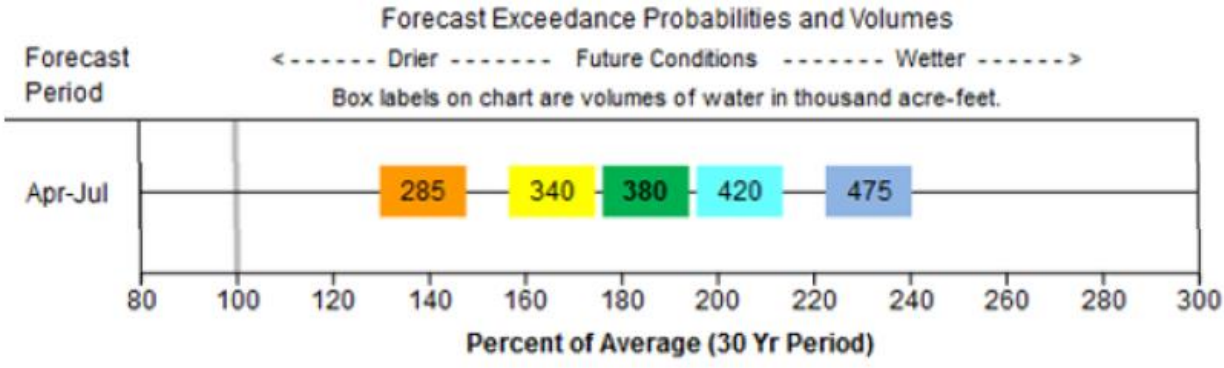
This graphic provides a visual alternative to the forecast tables the NRCS has presented for years. It gives both the volume and percent of average of each of the five forecast exceedances. The five colored boxes represent each forecast's five exceedances.



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.

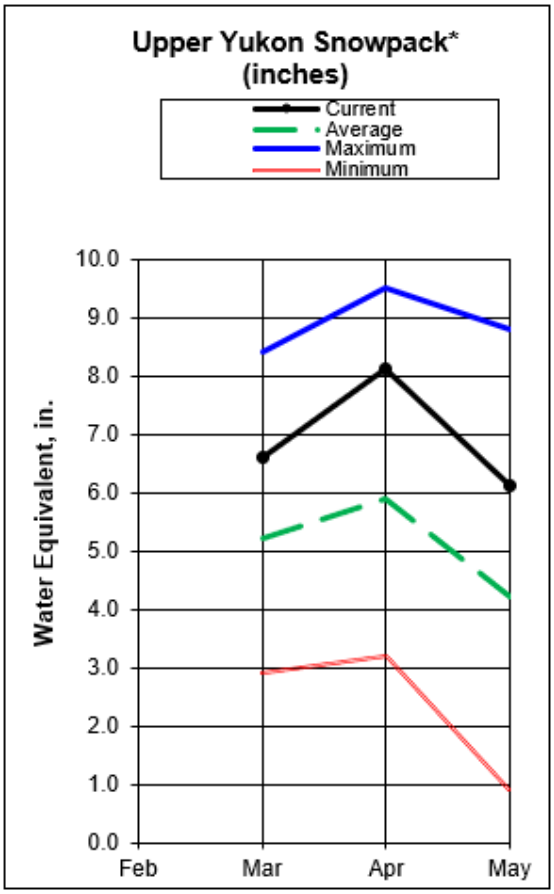


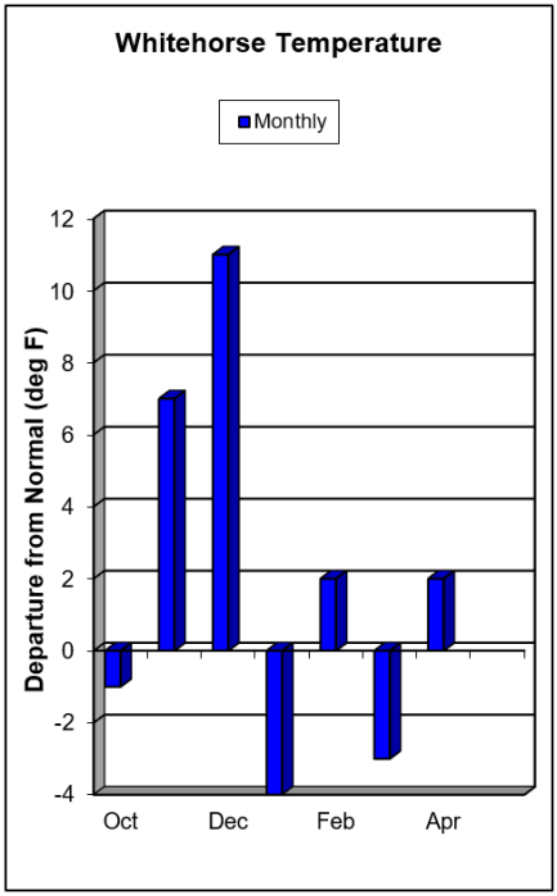
Boxes to the right of the gray 100% of average line represent above average volumes. Conversely, any boxes to the left of the gray 100% line represent below average volumes. In this case all forecast exceedances are for above average April-July volumes. Averages are based on the 1981-2010 period. The 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/
This is an new product. Please submit likes, dislikes and questions to Daniel.Fisher@ak.usda.gov

Upper Yukon Basin





Snowpack

Even after experiencing above normal meltout rates, the Upper Yukon Basin retains above normal snowpack going into May and has more than twice the amount of snow as it did last year at this time. The 30 measurement sites average 136% of average. All basins in the upper Yukon reported above normal snow-pack conditions.

Of special note, the three snow courses near Dawson average 175% of normal with Midnight Dome and King Solomon Dome Snow Courses etching new 46-year record highs.

Upper Yukon Basin

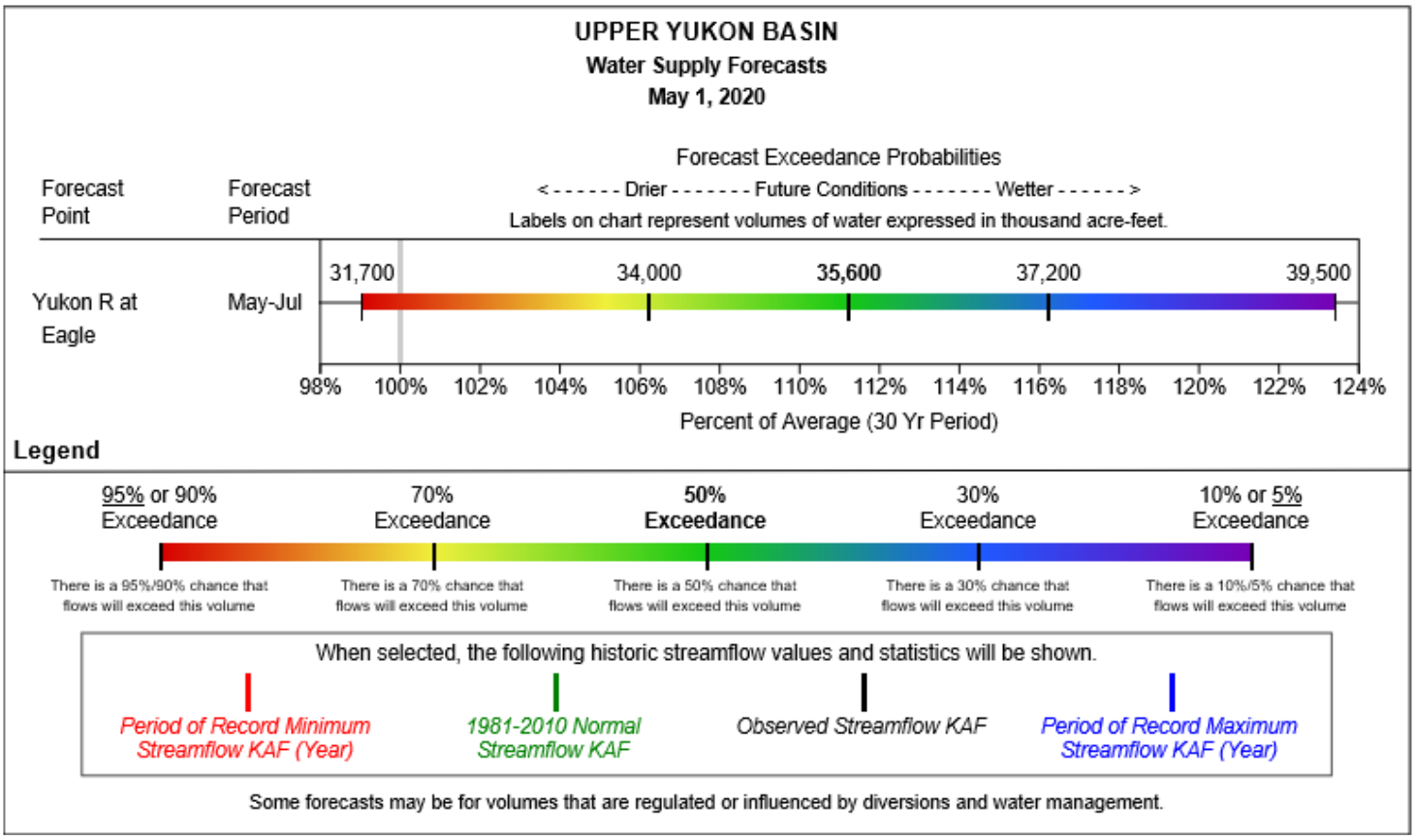
Snowpack Data

Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Beaver Creek	2150	0	0	4	0.0	0.0	0.8
Blackstone River	1020	19	0	---	4.9	0.0	---
Burns Lake	3650	34	24	27	12.0	7.7	8.4
Burwash Airstrip	2660	0	0	0	0.0	0.0	0.0
Calumet	4300	39	13	33	9.0	3.1	7.3
Canyon Mine	1160	6	0	---	1.5	0.0	---
Casino Creek	3495	24	15	20	6.9	4.1	4.3
Eagle Plains	2330	32	27	18	8.2	8.0	5.1
Eagle River	1115	22	25	17	6.3	6.1	4.0
Edwards Lake	2720	22	7	22	6.8	1.7	6.0
Finlayson Airstrip	3240	15	6	8	4.6	1.7	2.2
Francis River	730	12	5	---	3.5	1.4	---
Fuller Lake	3695	29	26	27	9.0	6.1	8.1
Grizzly Creek	3200	28	0	22	7.6	0.0	5.4
Hyland	855	25	11	---	9.2	3.2	---
King Solomon Dome	3540	28	0	18	9.5	0.0	4.9
Macintosh	3805	14	0	6	3.5	0.0	1.1
Mayo Airport	1770	14	0	0	4.1*	0.0	0.0
Meadow Creek	4050	43	26	39	13.6	6.5	11.1
Midnight Dome	2805	33	22	20	10.1	5.6	5.2
Montana Mtn.	3350	13	4	17	3.6	1.4	4.9
Morley Lake	2700	8	0	11	2.2	0.0	3.3
Mt. Berdoe	3395	15	0	10	4.1	0.0	2.0
Mt. Mcintyre B	3600	22	15	20	6.5	4.1	5.4
Mt. Nansen	3350	6	0	0	2.1	0.0	0.0
Ogilvie River	550	19	0	---	4.5	0.0	---
Old Crow	980	22	20	19	6.2	5.7	4.0
Pelly Farm	1550	6	0	0	2.2	0.0	0.0
Pine Lake Airstrip	995	31	15	---	10.8	4.5	---
Plata Airstrip	2725	23	5	19	7.7	1.7	5.9
Rackla Lake	3410	32	24	30	10.2	6.2	8.2
Riffs Ridge	2130	25	23	17	7.1	5.6	4.7
Rose Creek Faro	1080	10	0	---	2.7	0.0	---
Russell Lake	3480	39	21	30	10.2	5.4	8.6
Satasha Lake	3630	9	0	2	2.4	0.0	0.6
Tagish	3540	13	10	16	3.7	3.2	4.6
Twin Creeks	2950	21	8	20	6.6	2.2	6.1
Watson Lake Airport	685	3	0	---	0.6	0.0	---
Whitehorse Airport	2300	2	0	0	0.6	0.0	0.0
Williams Creek	3000	10	0	6	2.6	0.0	1.9
Withers Lake	3200	34	20	28	11.5	5.9	8.7

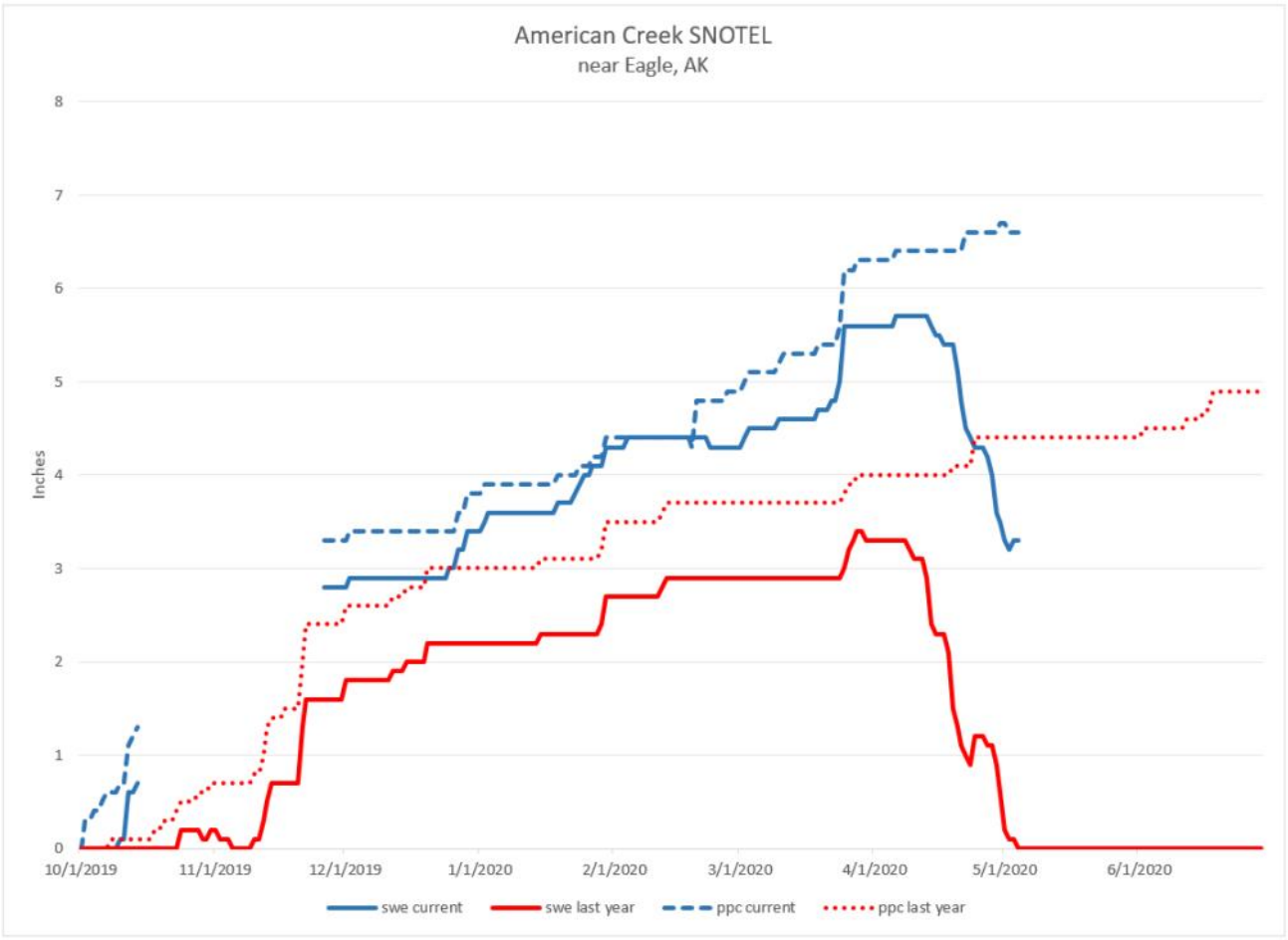
**Estimate*

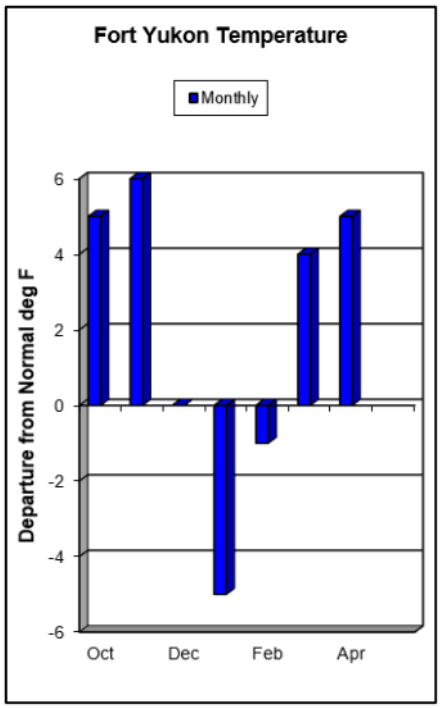
Upper Yukon Basin

Streamflow Forecasts



Central Yukon Basin





Snowpack

The measured snowpack in the Central Yukon Basin remains above normal, though data is scant. Jack Wade Junction SNOTEL had started melt-tout on April 13th, but a series of late month storms stopped that process and the site has made gains at the end of the month. It is now experiencing its latest melt out in its five-year record.

Snowpack in the Upper Porcupine Basin made gains during April and the four snow courses index to 156% of normal.

Central Yukon Basin

Snowpack Data

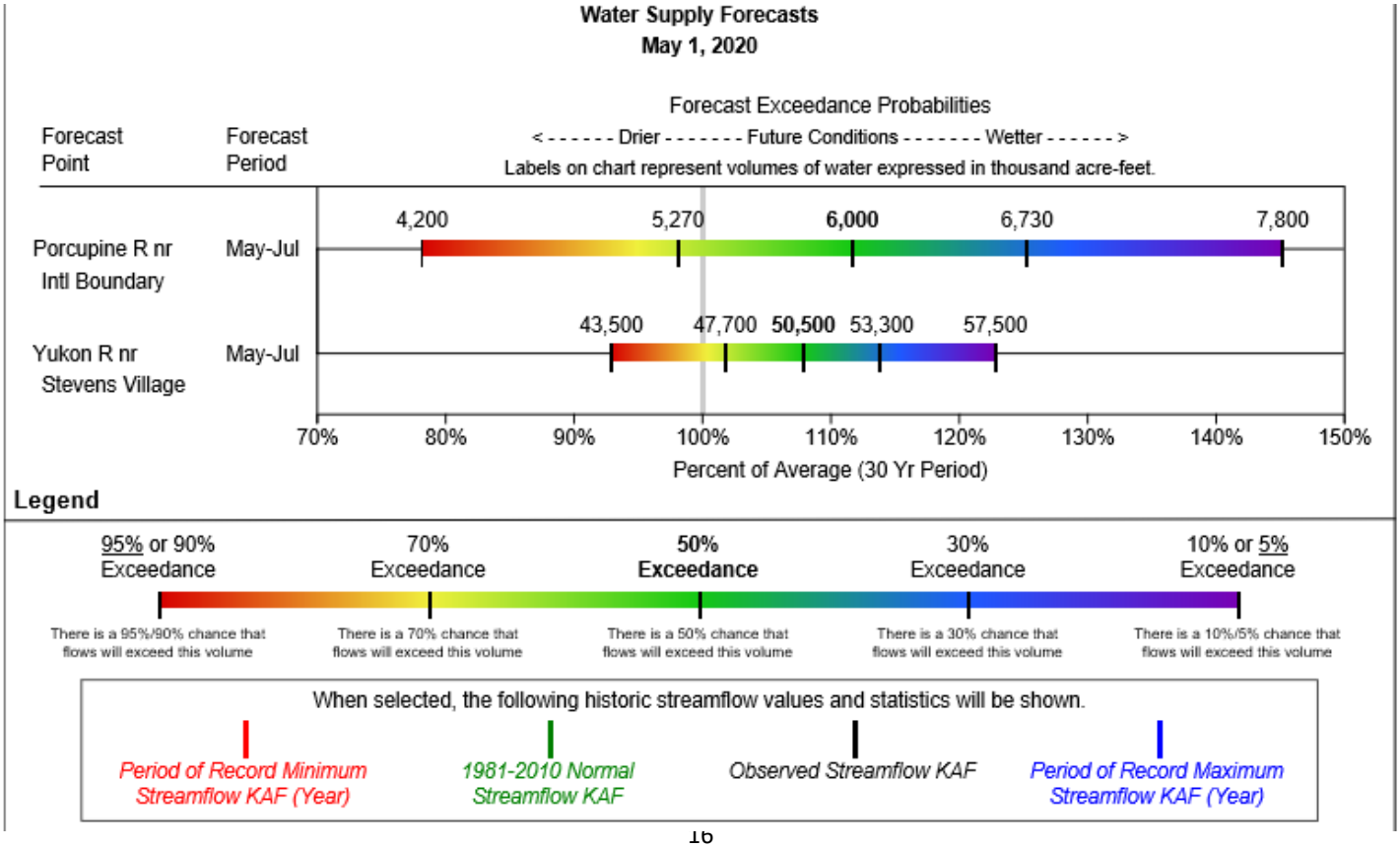
Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
American Creek	1050	13	4	---	3.3	0.2	---
Atigun Pass	4800	47	48	---	---	---	---
Eagle Summit	3650	12	17	---	---	---	---
Fort Yukon	430	2	8	---	---	---	---
Jack Wade Jct	3585	30	29	---	6.9	5.3	---
Old Crow	980	22	20	19	6.2	5.7	4.0
Upper Nome Creek	2520	40	23	---	10.1	---	---

**Estimate*

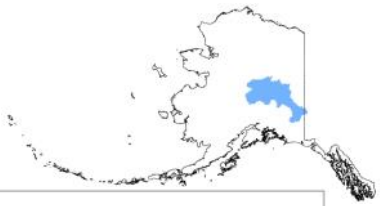
Precipitation

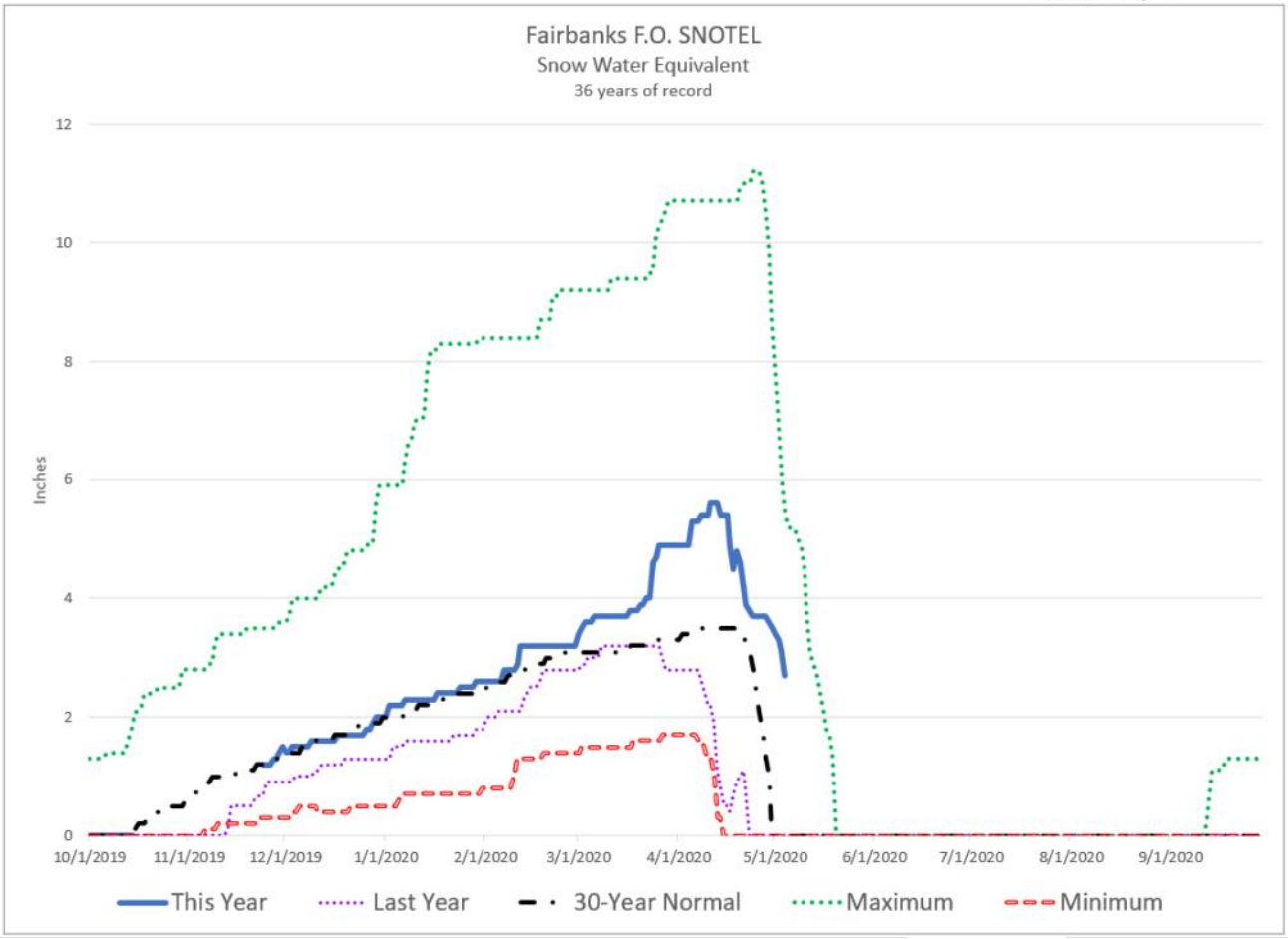
Site Name	Elev.	Inches Accumulated since October 1st			
		This Year	Last Year	1981-2010 Normal	% of Normal
American Creek	1050	6.7	4.4	---	---
Atigun Pass	4800	7.7	7.1	6.7	115%
Chandalar Shelf	3300	8.0	7.8	5.2	154%
Eagle Summit	3650	9.4	5.9	5.9	159%
Fort Yukon	430	4.8	4.1	3.9	123%
Jack Wade Jct	3585	8.5	6.2	---	---
Upper Nome Creek	2520	15.4	8.1	6.5	237%

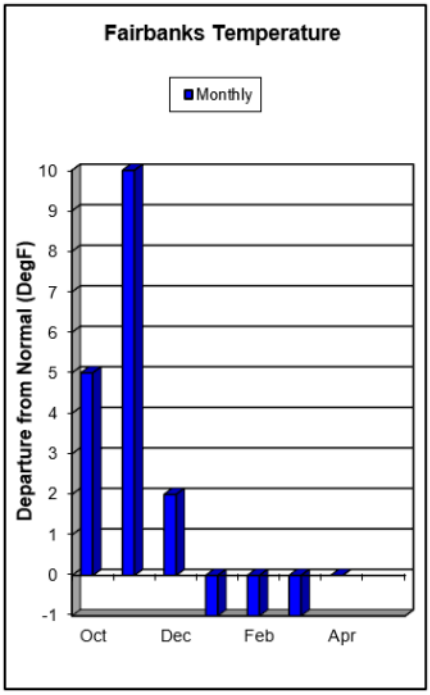
Streamflow Forecasts



Tanana Basin







Snowpack

The Tanana Basin continues to have much above normal snowpack.
The only part of the basin with below normal snowpack continues to be the very upper basin near the Wrangell Mountains in the Nabesna River Valley where snow measurement sites have melted out ahead of schedule.
The five sites indexed near Delta Junction average 227% of normal, though most sites have begun meltout in earnest. The Look Eyrie Snolite site, above the Canwell Glacier in the Alaska Range, still retains 150" of snow depth.
The lower Tanana snowpack benefitted from early April storms. While lower open areas have melted out, snowpack remains hearty in the region.
The Chena basin sites averaged 234% of normal snowpack and the Chatanika Valley sites were even higher. With 14.4" of water content, Cleary Summit Snow Course set a new 60-year all-time record high snowpack, surpassing the previous record of 13.8" set in April of 1993.

Tanana Basin

Snowpack Data

Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Bonanza Creek	1150	18	---	0	5.5	---	0.0
Caribou Creek	1250	13	---	0	5.0	---	0.0
Caribou Snow Pillow	900	17	---	0	6.1	---	0.0
Chisana	3320	0	11	---	0.0	2.7	2.8
Cleary Summit	2230	43	---	19	14.4	---	4.9
Colorado Creek	700	15	---	4	4.6	---	1.0
Fairbanks F.O.	450	10	0	---	3.4	0.0	0.0
Faith Creek	1750	19	---	7	6.8	---	2.0
Fielding Lake S.C.	3000	54	---	34	16.0	---	10.2
Fielding Lake SNOTEL	3000	49	29		16.1	7.7	---
Fort Greely	1500	10	---	0	3.4	---	0.0
French Creek	1800	30	---	13	9.8	---	3.6
Gerstle River	1200	8	---	2	2.1	---	0.6
Granite Crk	1240	9	0	---	3.0	0.0	0.0
Kantishna	1550	12	---	9	3.2	---	2.2
Little Chena Bottom	1100	15	---	8	4.7	---	1.7
Little Chena Ridge S.C.	2000	22	---	12	6.4	---	3.2
Little Chena Ridge SNOTEL	2000	14	6	---	3.2	1.8	2.3
Look Eyrie	5040	150	---	---	---	---	---
Mentasta Pass	2430	21	---	14	6.8	---	3.9
Monument Creek S.C.	1850	25	---	10	7.5	---	2.4
Monument Creek SNOTEL	1850	21	2	---	7.2	0.3	2.1
Mt. Ryan S.C.	2800	38	---	20	10.3	---	5.0
Mt. Ryan SNOTEL	2800	35	24	---	10.5	6.3	4.7
Munson Ridge S.C.	3100	43	---	32	14.6*	---	9.1
Munson Ridge SNOTEL	3100	54	28	---	14.9	7.2	7.9
Rock Creek Bottom	2250	6	---	4	1.8	---	0.8
Teuchet Creek S.C.	1640	12	---	6	4.2	---	1.8
Teuchet Creek SNOTEL	1640	5	0		4.2	0.0	1.3
Tok Junction	1650	8	---	0	2.0	---	0.0
Upper Chena S.C.	3000	40	---	21	12.2	---	6.0
Upper Chena SNOTEL	2850	41	21	---	7.9	---	5.2

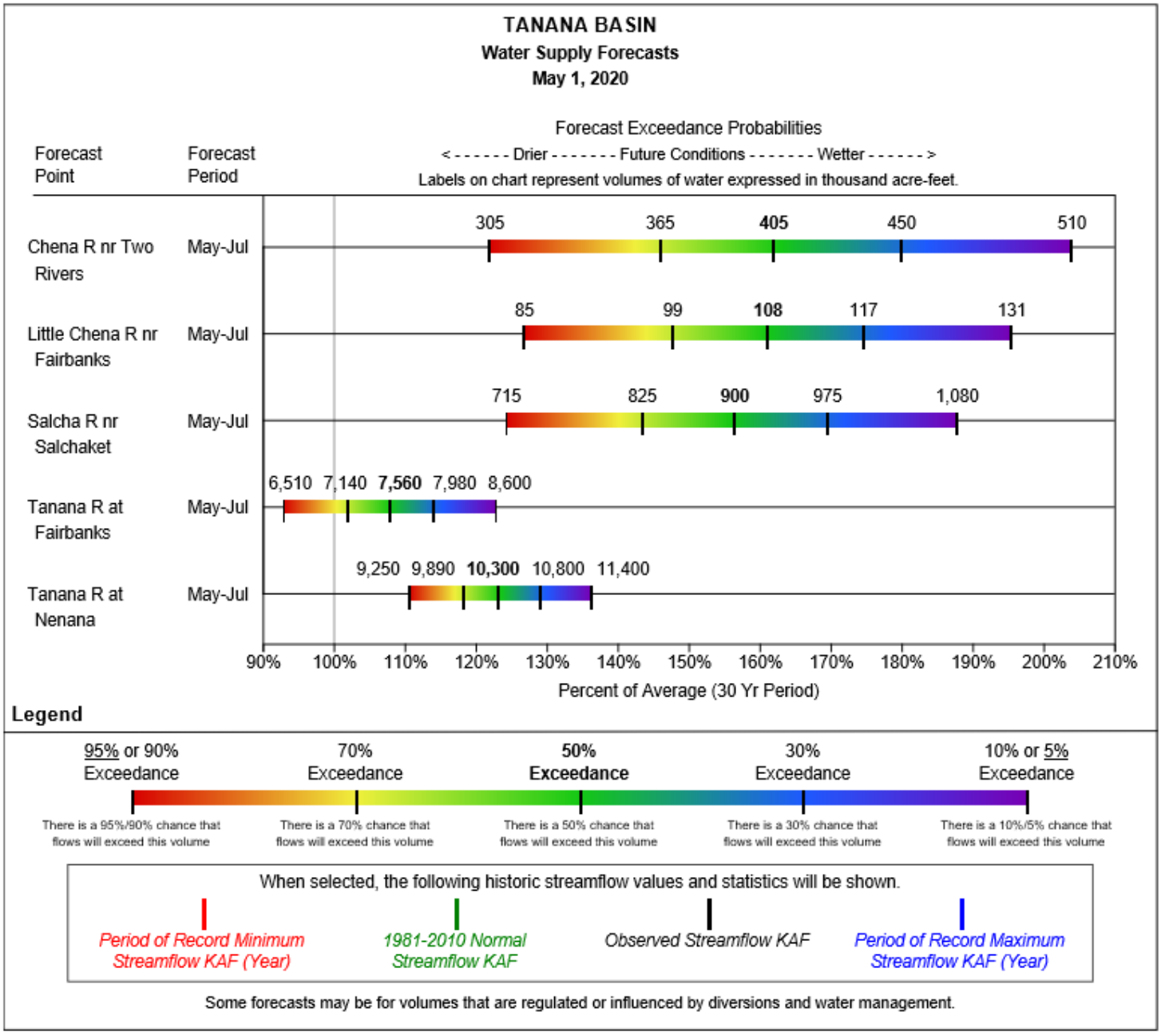
**Estimate*

Precipitation

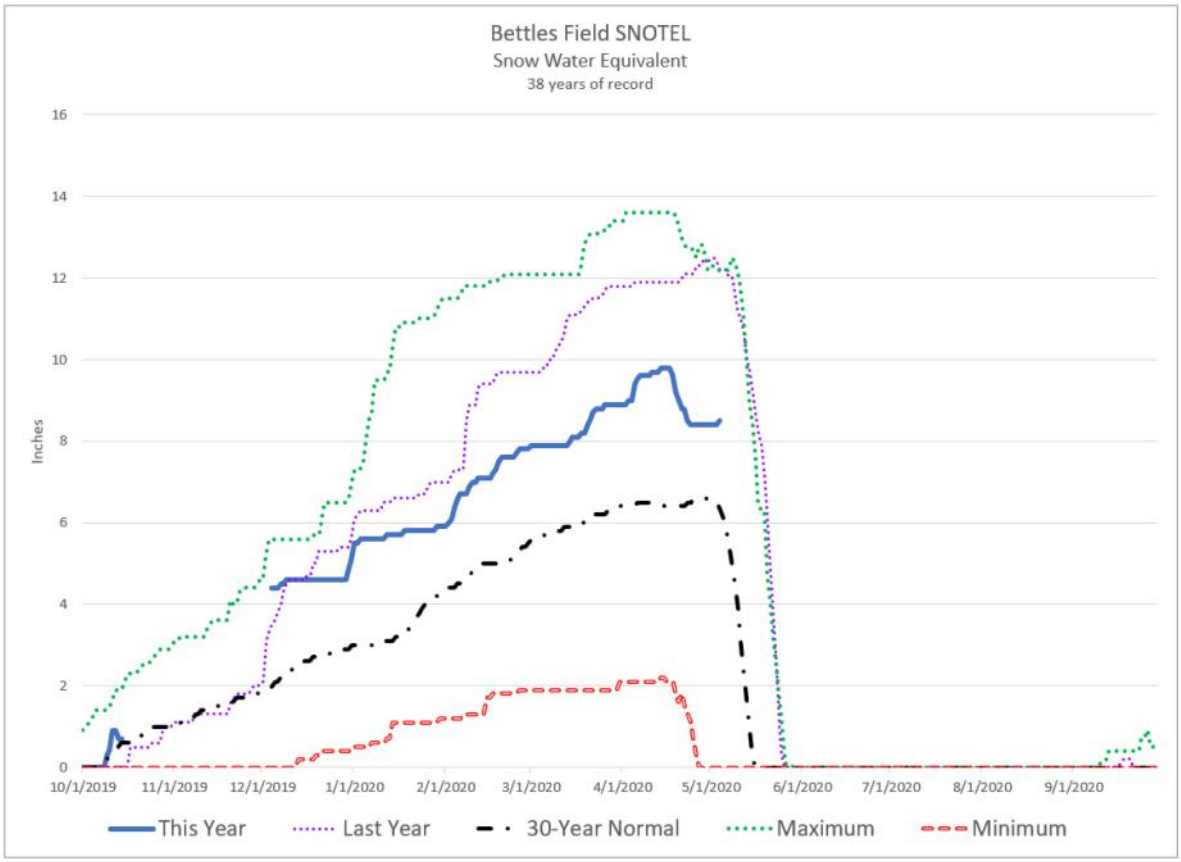
Site Name	Elev.	Inches Accumulated since October 1st			
		This Year	Last Year	1981-2010 Normal	% of Normal
Chisana	3320	5.0	3.8	---	---
Fairbanks F.O.	450	8.9	4.1	4.9	182%
Fielding Lake	3000	18.6	10.3	---	---
Granite Crk	1240	8.6	3.1	4.4	195%
Kantishna	1550	10.6	5.5	5.0	212%
Little Chena Ridge	2000	12.3	6.1	6.2	198%
Monument Creek	1850	12.2	6.0	6.1	200%
Mt. Ryan	2800	12.8	6.7	6.3	203%
Munson Ridge	3100	16.1	8.2	8.6	187%
Nenana	415	8.5	4.3	---	---
Teuchet Creek	1640	8.4	4.8	5.0	168%
Upper Chena	2850	14.6	7.5	7.9	185%

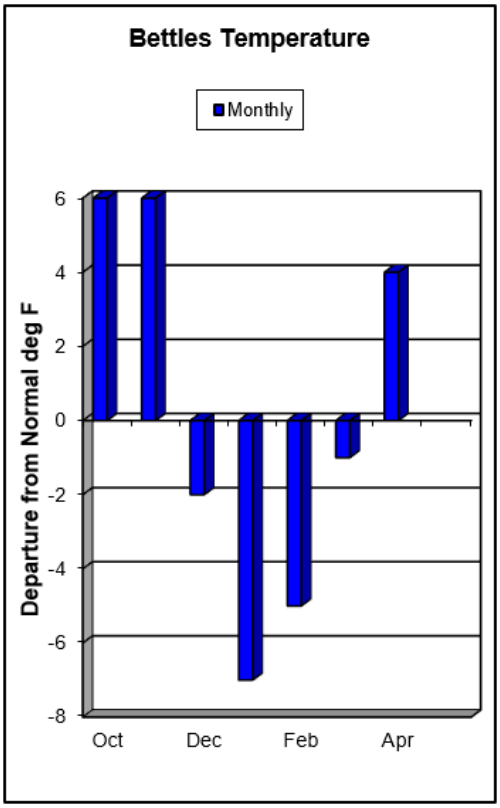
Tanana Basin

Streamflow Forecasts



Western Interior Basins





Snowpack

Koyukuk

The Koyukuk Basin continues to have above normal snowpack across the basin, but less than last year.

Kuskokwim

Portions of the Kuskokwim basin continue to have much above normal snowpack, McGrath has twice normal snowpack. However, lower measurement sites have melted out. Aniak SCAN melted out on April 20th, nearly a week later than average.

Lower Yukon

The Lower Yukon has above normal snowpack, though some locations have lost considerable snow during April. The Aerial Markers between Galena and Tanana are reporting their deepest May 1 snowpack in their 14-year record (except for the one drowned in an ice-dammed lake).

Western Interior Basins

Snowpack Data

Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Koyukuk							
Bettles Field	640	28	37	---	8.4	12.5	6.6
Cloverleaf	170	12	---	---	4.3*	---	---
Coldfoot	1040	29	33	---	8.4	10.1	6.1
Colville Bend	170	19	---	---	6.3*	---	---
Gobblers Knob	2030	9	9	---		---	---
Huggins Creek	290	24	---	---	7.9	---	---
Jr Slough	160	12	---	---	4*	---	---
Treat Island	190	21	---	---	6.3*	---	---
Kuskokwim							
Aniak	80	0	0	---	0.0	0.0	---
Mcgrath S.C.	340	---	8	9	7.2	2.7	3.0
McGrath SNOTEL	340	21	---	---	12.6	---	---
Telaquana Lake SNOTEL	1275	0	0	---	0.0	0.0	---
Lower Yukon							
Bullfrog	100	24	---	---	7.9*	---	---
Deer Creek	195	27	---	---	9.2*	---	---
Hozatka Lake	206	6	15	---	---	---	---
Little Mud River	855	24	---	---	8.0*	---	---
Middle Innoko	150	23	---	0	7.9*	---	0.0
Ninemile Island	140	12	---	---	4.1*	---	---
Pike Trap Lake	130	0	---	---	0.0	---	---
Squirrel Creek	150	21	---	---	7.1*	---	---
Wapoo Hills	220	6	---	0	1.8*	---	0.0
Yankee Slough	100	24	---	24	8.4*	---	7.5

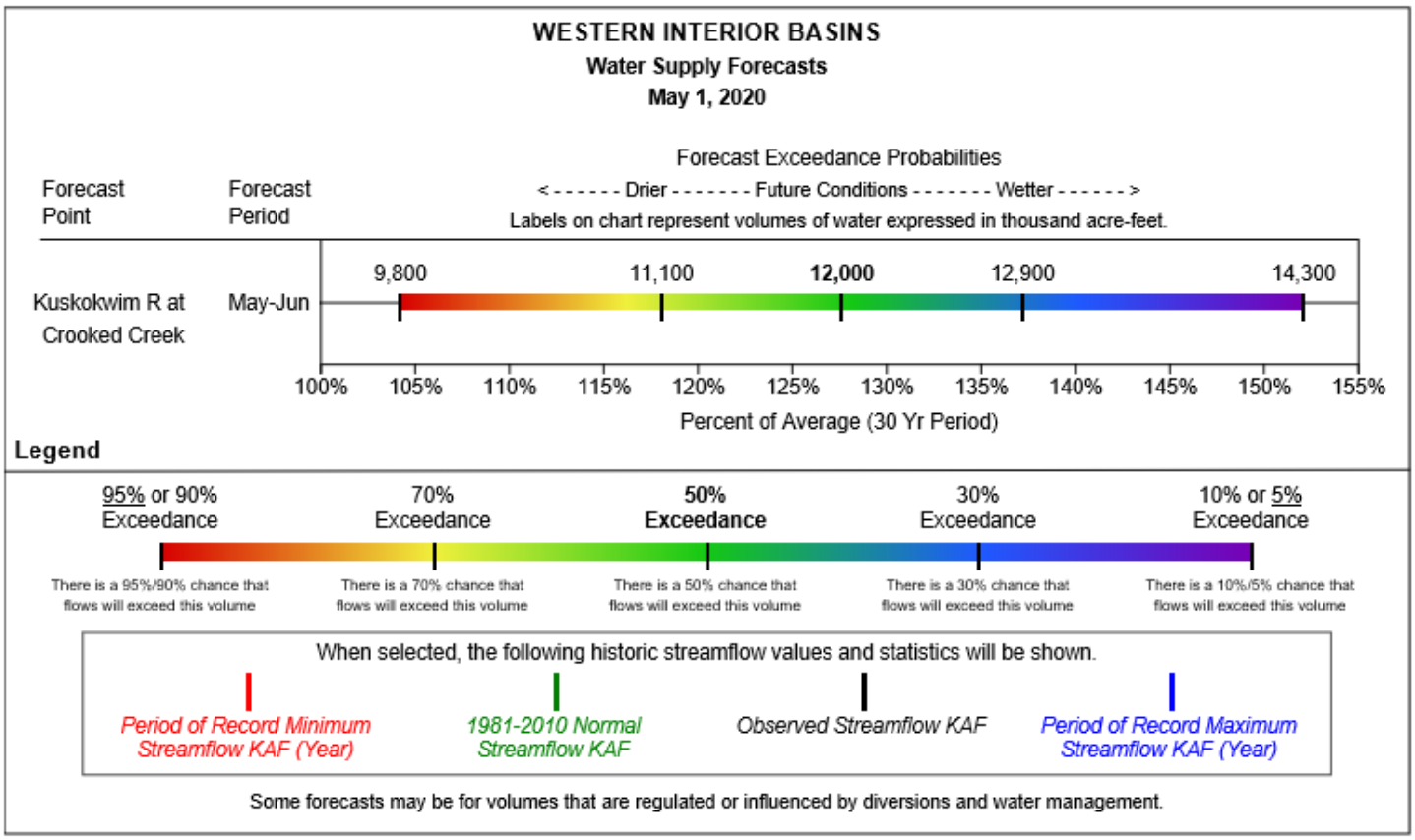
**Estimate*

Precipitation

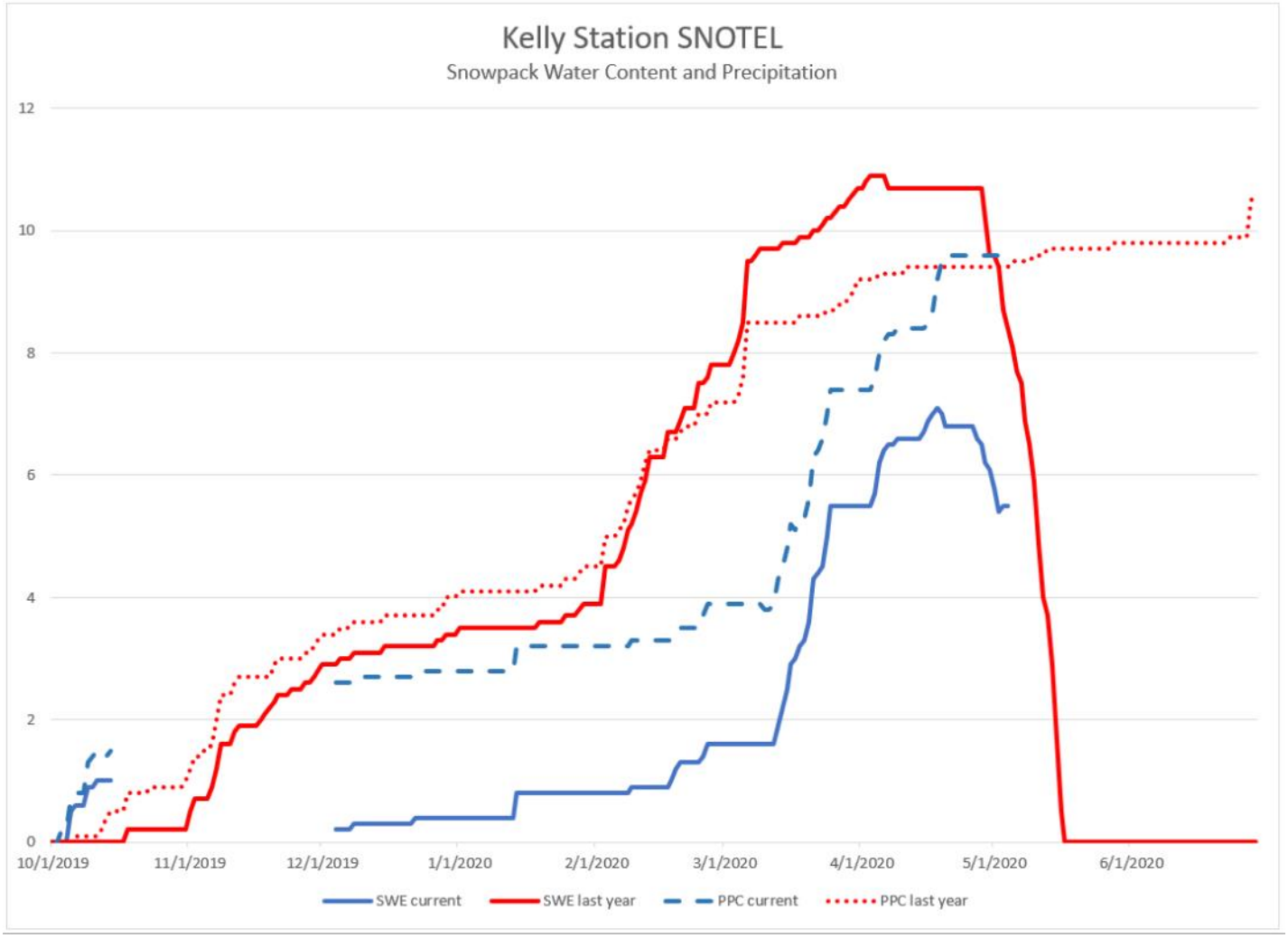
Site Name	Elev.	Inches Accumulated since October 1st			
		This Year	Last Year	1981-2010 Normal	% of Normal
Koyukuk					
Bettles Field	640	12.0	10.9	7.6	158%
Coldfoot	1040	11.6	11.6	7.3	159%
Gobblers Knob	2030	13.0	10.9	7.6	171%
Kuskokwim					
Aniak	80	14.3	10.0	---	---
McGrath	340	17.9	---	---	---
Telaquana Lake	1275	14.0	7.2	---	---
Lower Yukon					
Galena AK	410	9.9	6.4	---	---
Hozatka Lake	206	9.3	7.1	---	---

Western Interior Basins

Streamflow Forecasts



Arctic and Kotzebue Sound



Snowpack

Arctic

The Arctic gained near to much above normal precipitation during April. Snow depths at the SNOTEL sites along the Dalton Highway are near average.

Kotzebue

Kotzebue Sound had much above normal precipitation during April. Kelly Station SNOTEL has started to melt out and is currently at 92% of the station's 12-year median.

Arctic and Kotzebue Sound

Snowpack Data

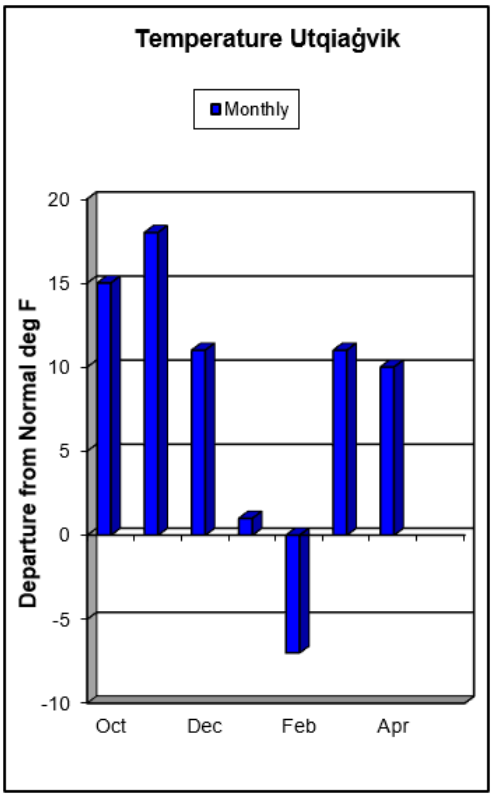
Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Atigun Pass	4800	47	48	---	---	---	---
Imnaviat Creek	3050	33	20	---	---	---	---
Kelly Station	310	19	29	---	5.8	9.6	---
Prudhoe Bay	30	15	13	---	---	---	---
Sagwon	1000	17	19	---	---	---	---

**Estimate*

Precipitation

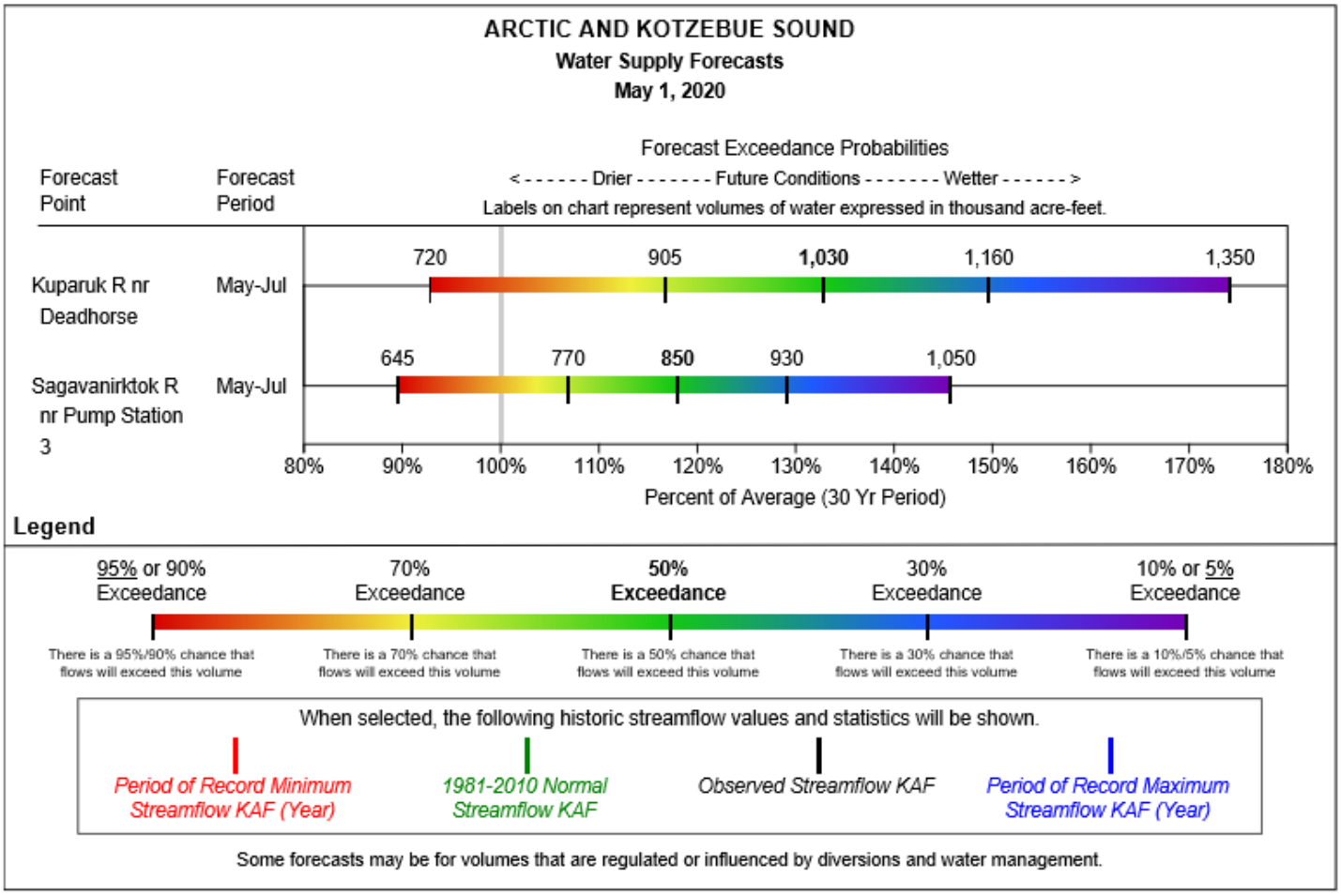
Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Arctic					
Atigun Camp	3400	3.8	3.8	3.8	100%
Atigun Pass	4800	7.7	7.1	6.7	115%
Imnaviat Creek	3050	3.6	3.3	3.3	109%
Prudhoe Bay	30	3.6	3.2	4.1	88%
Sagwon	1000	3.3	3.2	3.4	97%
Kotzebue Sound					
Kelly Station	310	9.6	9.4	---	---

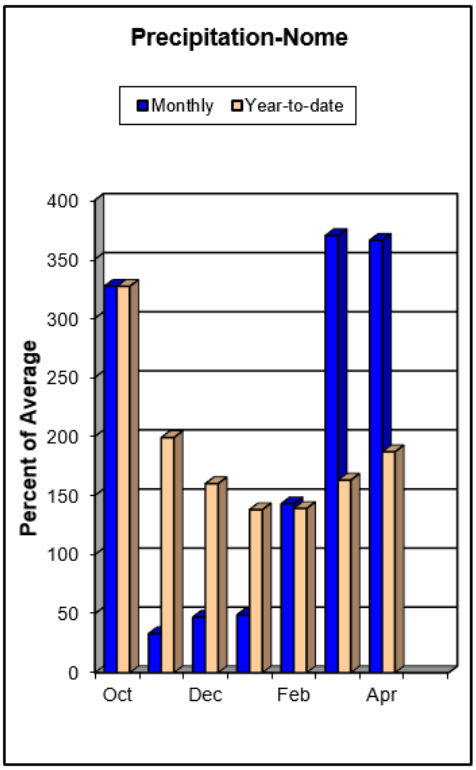


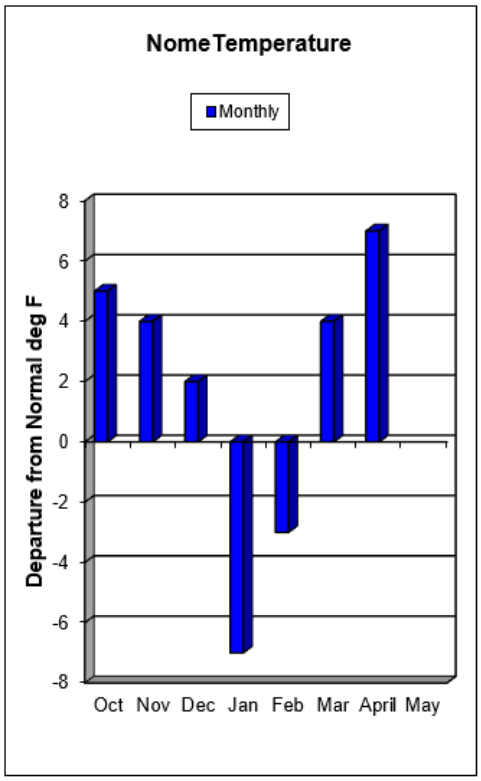
Arctic and Kotzebue Sound

Streamflow Forecasts



Norton Sound/Y-K Delta/Bristol Bay





Snowpack

The Seward Peninsula received much above normal precipitation during April. Snowpack is less than the last two years.

Precipitation

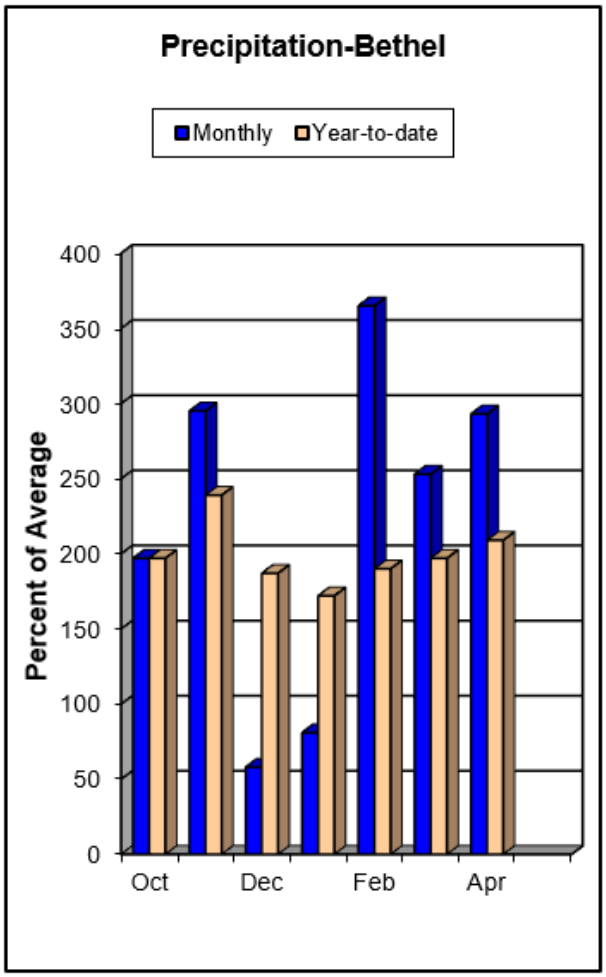
		Inches Accumulated since October 1st			
Site Name	**Elev.**	**This Year**	**Last Year**	**1981-2010 Normal**	**% of Normal**
Norton Sound					
Pargon Creek	100	8.5	8.1	6.7	127%
Rocky Point	250	7.6	6.9	5.8	131%

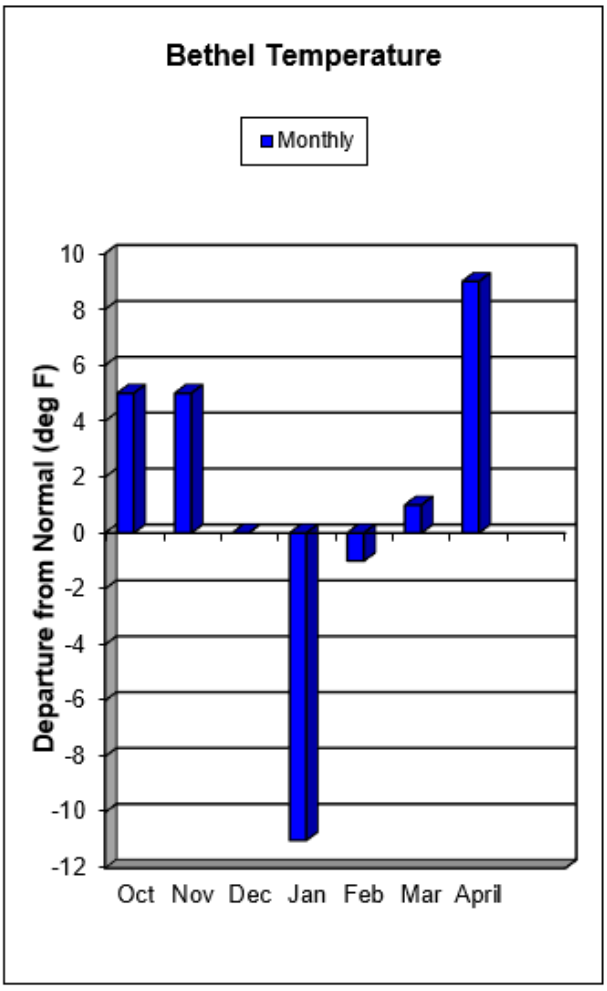
Norton Sound/Bristol Bay

Snowpack Data

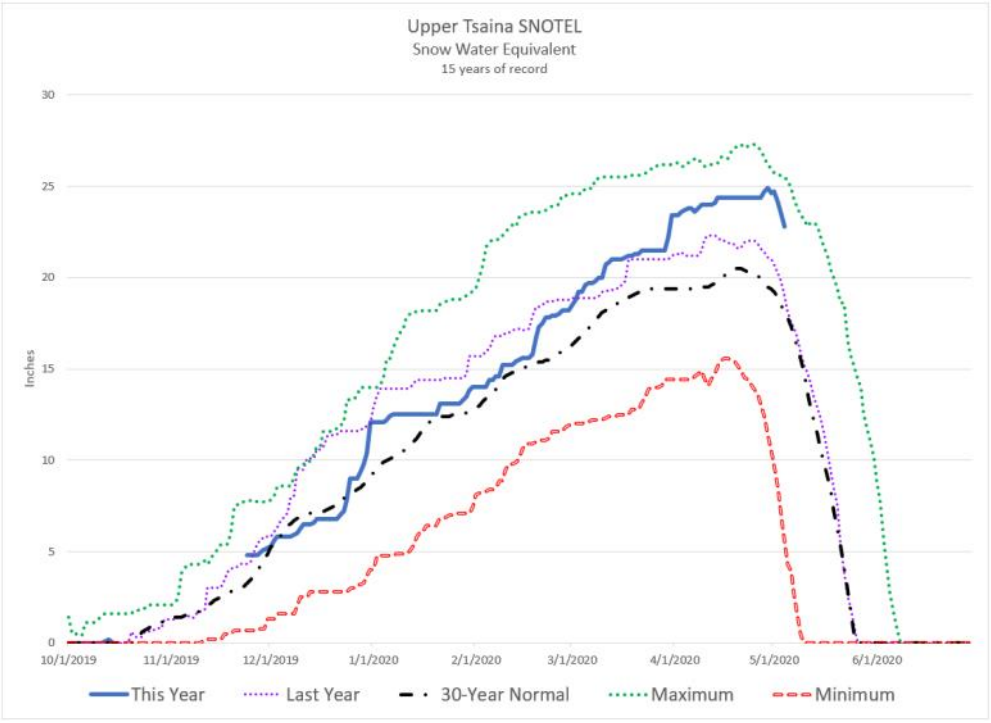
Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Norton Sound							
Johnsons Camp	25	14	36	---	---	---	---
Pargon Creek	100	---	20	---	---	---	---
Rocky Point	250	---	40	---	---	---	---

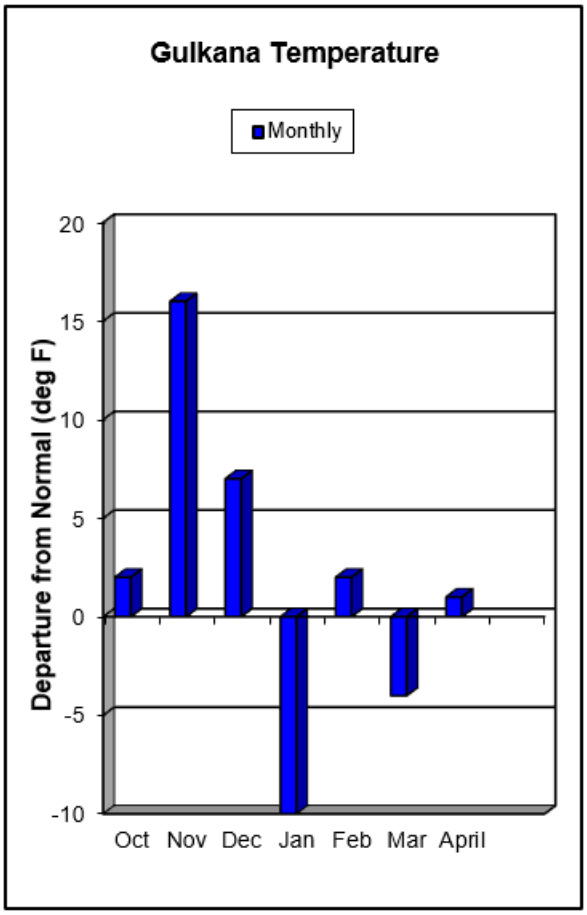
**Estimate*





Copper Basin





Snowpack

Snowpack in the Copper Basin continues to vary from below to much above normal. Many of the lower sites in the valley floor have melted out. Snowpack increases towards the various surrounding mountains. After losing twice as much snow as average during April, snowpack along the eastern Talkeetna Mountains is now below normal. Snowpack near the Alaska Range is much above normal. Sites here were measured with over 150% of normal snowpack.

Copper Basin

Snowpack Data

Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Chistochina	1950	0	---	0	0.0	---	0.0
Fielding Lake S.C.	3000	54	27	34	16.0	7.5	10.2
Fielding Lake SNOTEL	3000	49	29	---	16.1	7.7	---
Gulkana River	1830	0	0	---	0.0	0.0	---
Haggard Creek	2540	16	12	14	5.8	3.6	4.3
Kenny Lake School	1300	0	0	0	0.0	0.0	0.0
Little Nelchina	2650	8	0	12	2.4	0.0	3.7
May Creek	1610	0	0	---	0.0	0.0	2.0
Mentasta Pass	2430	21	3	14	6.8	1.2	3.9
Paxson	2650	31	26	22	10.2	6.3	6.4
Tazlina	1250	0	0	0	0.0	0.0	0.0
Tolsona Creek	2000	4	0	0	1.2	0.0	0.0
Upper Tsaina River	1750	59	49	---	24.7	20.7	19.2

**Estimate*

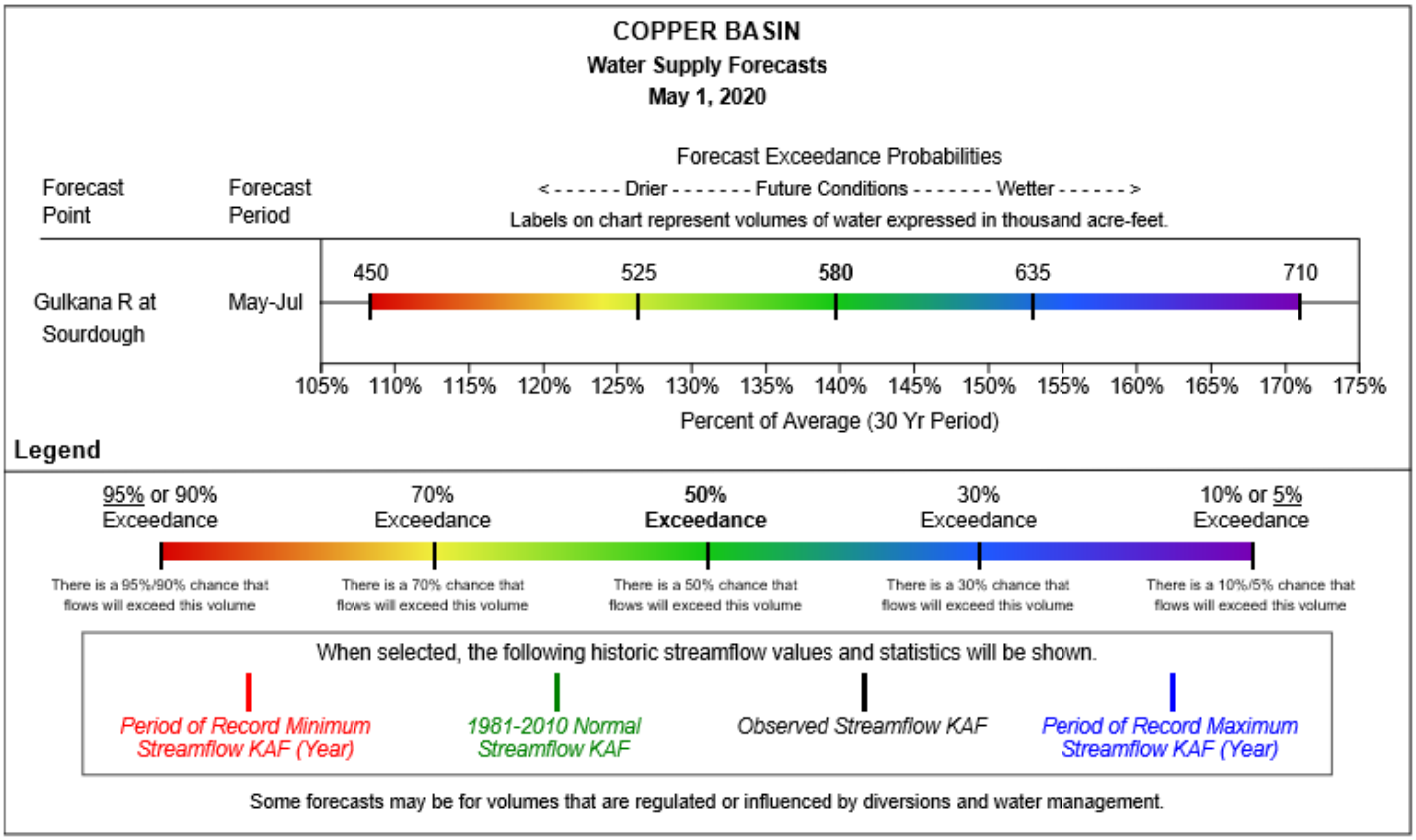
Precipitation

Inches Accumulated since October 1st

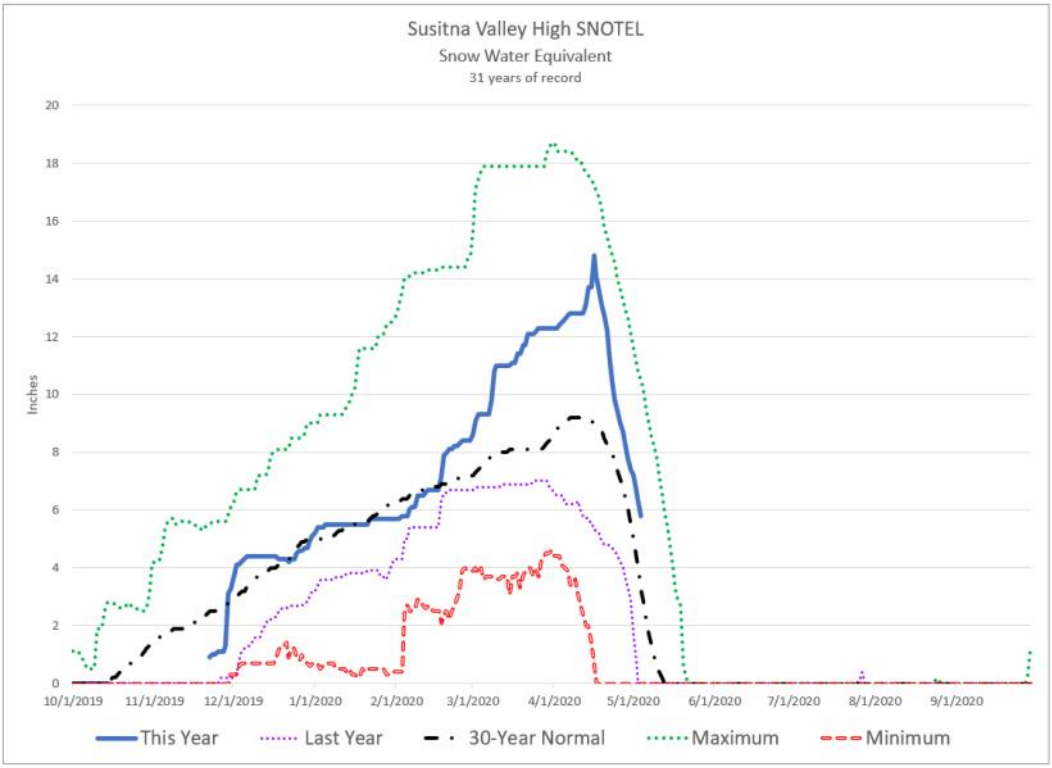
Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Gulkana River	1830	6.8	3.9	---	---
May Creek	1610	7.4	6.1	6.5	114%
Upper Tsaina River	1750	27.0	34.2	28.5	95%

Copper Basin

Streamflow Forecasts



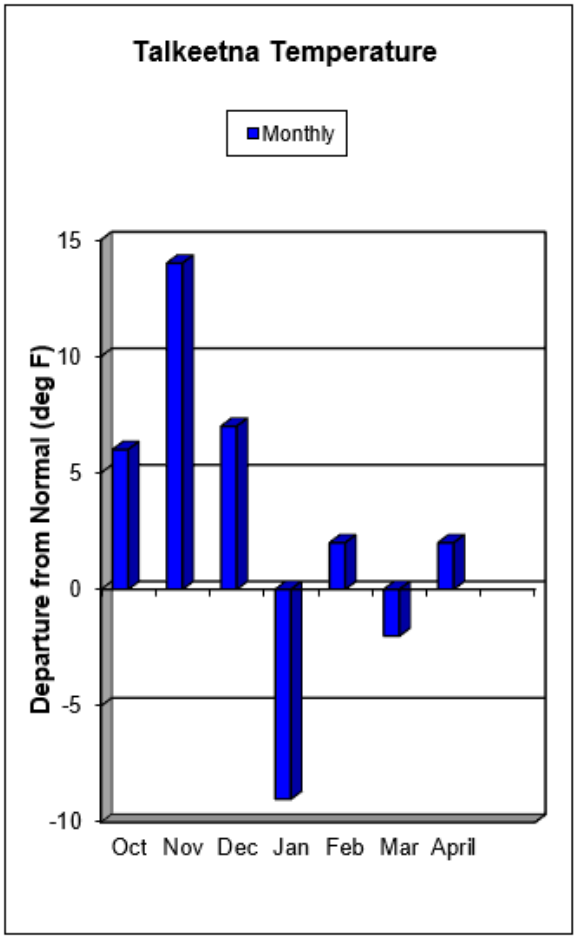
Matanuska—Susitna Basin



Snowpack

Storms hit the Susitna Valley during the beginning of April, before most locations commence melting out. This kept snowpacks at above normal levels for the rest of the month as most locations experienced greater than normal loss of snow. The 15 snow sites in this area averaged 151% of normal snowpack. Independence Mine Snow Course experienced its second greatest May 1st snowpack in its 31-year record, second only to 1990.

The upper Susitna, on the eastern side of the Talkeetna Mountains, still had above normal snowpack, but less so than the lower basin. The four sites in the upper basin average 123% of normal.



Matanuska—Susitna Basin

Precipitation

		Inches Accumulated since October 1st			
Site Name	**Elev.**	**This Year**	**Last Year**	**1981-2010 Normal**	**% of Normal**
Alexander Lake	160	21.5	21.3	---	---
Frostbite Bottom	2700	27.6	---	---	---
Independence Mine	3550	32.1	20.0	18.0	178%
Monahan Flat	2710	13.7	9.1	8.6	159%
Spring Creek	580	10.5	8.9	---	---
Susitna Valley High	375	22.8	13.7	13.4	170%
Tokositna Valley	850	35.3	30.0	21.4	165%

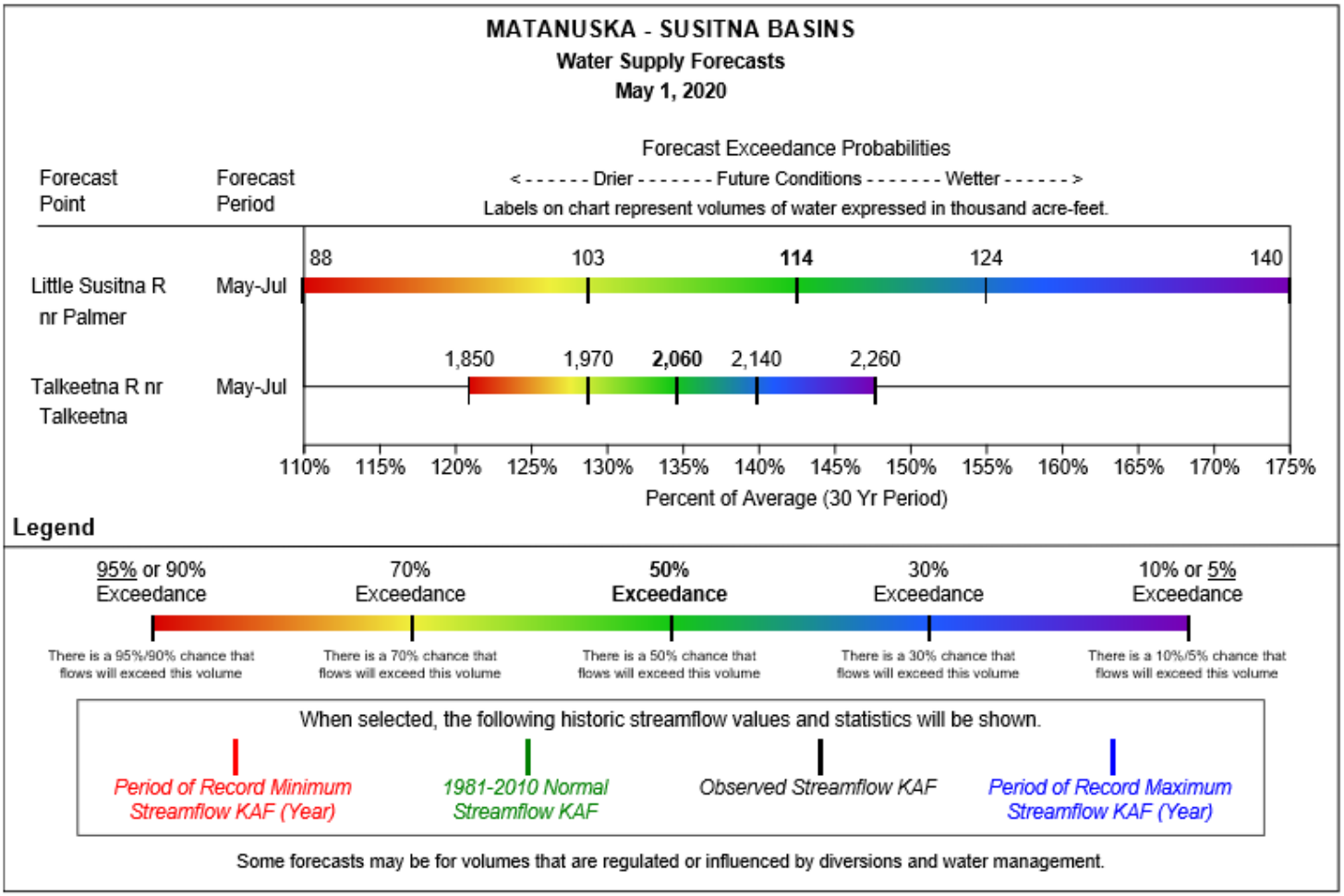
Snowpack Data

		Snow Depth (in)			Water Content (in)		
Site Name	**Elev.**	**Current**	**Last Year**	**1981-2010 Normal**	**Current**	**Last Year**	**1981-2010 Normal**
Alexander Lake	160	12	0	---	4.4	0.0	---
Archangel Road	2200	40	30	35	15.6	11.9	11.7
Birthday Pass	4020	117	73	---	49.3	25.4	---
Blueberry Hill	1200	51	28	40	16.9	11.8	14.1
Denali View	700	33	6	27	12.5	2.2	9.1
E. Fork Chulitna	1770	52	36	42	16.8	12.6	12.4
Fishhook Basin	3300	83	50	55	33.5	17.3	19.5
Frostbite Bottom	2700	51	---	---	21.4	---	---
Independence Mine S.C.	3550	94	57	61	40.8	20.2	21.8
Independence Mine SNOTEL	3550	76	45	---	27.1	12.3	14.6
Lake Louise	2400	6	0	11	2.0	0.0	2.9
Little Susitna	1700	28	17	21	9.5	5.8	8.2
Monahan Flat	2710	30	22	30	9.7	7.6	7.6
Sheep Mountain	2900	6	4	11	1.7	1.4	3.1
Susitna Valley High	375	20	5	---	7.2	1.7	5.1
Talkeetna	350	19	0	12	6.7	0.0	4.0
Tokositna Valley	850	55	30	---	19.9	13.0	11.8
Willow Airstrip	200	18	0	10	6.0	0.0	3.3

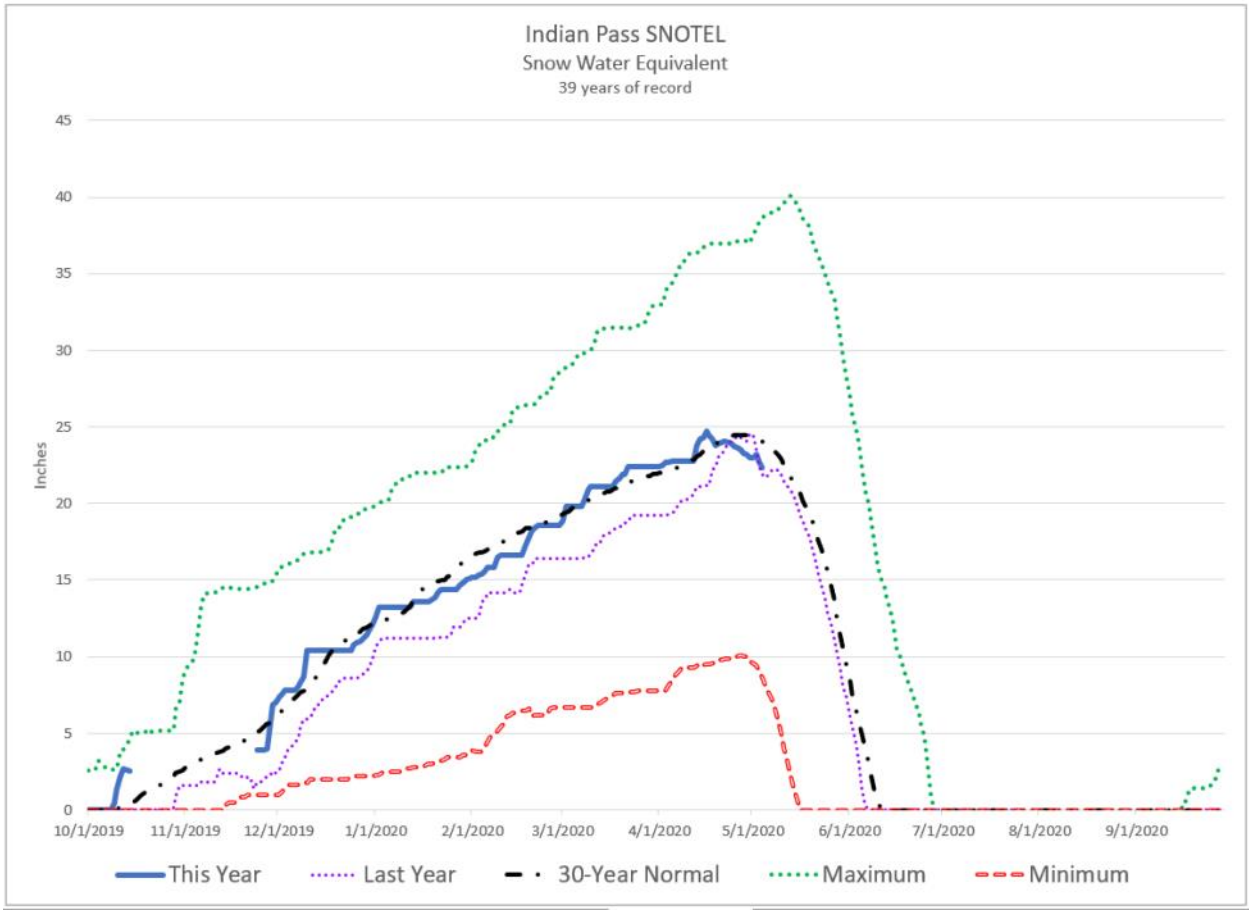
**Estimate*

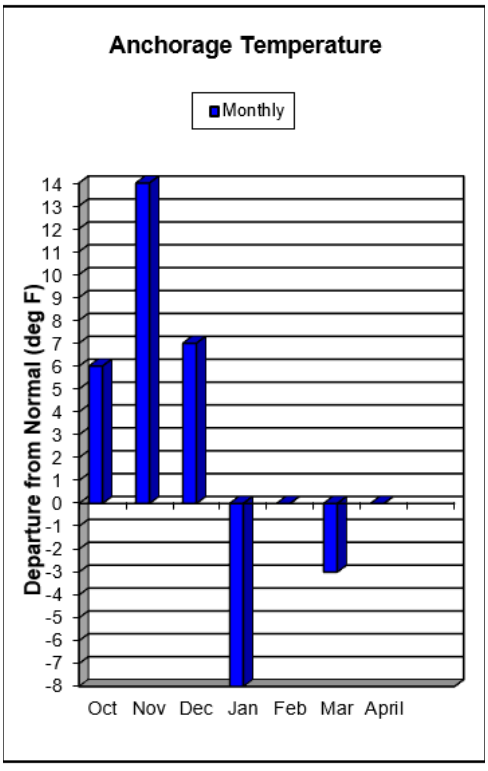
Matanuska—Susitna Basin

Streamflow Forecasts



Northern Cook Inlet





Snowpack

The Northern Cook Inlet area has received uneven precipitation during April with some locations receiving either well below or well above average monthly precipitation. In general, the snowpack melted out at an accelerated rate during April and is well below normal, similar to last year. The five measured sites averaged 57% of normal.

Northern Cook Inlet

Snowpack Data

Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Anchorage Hillside	2080	12	15	---	3.6	5.3	10.8
Indian Pass	2350	53	54	---	23.0	24.4	24.3
Kincaid Park	250	0	0	0	0.0	0.0	0.0
Moraine	2100	3	0	---	0.8	0.0	6.5
Mt. Alyeska	1540	31	38	---	12.2	15.3	35.2
Portage Valley	50	18	0	14	7.7	0.0	6.2
South Campbell Creek	1200	0	0	10	0.0	0.0	3.4

**Estimate*

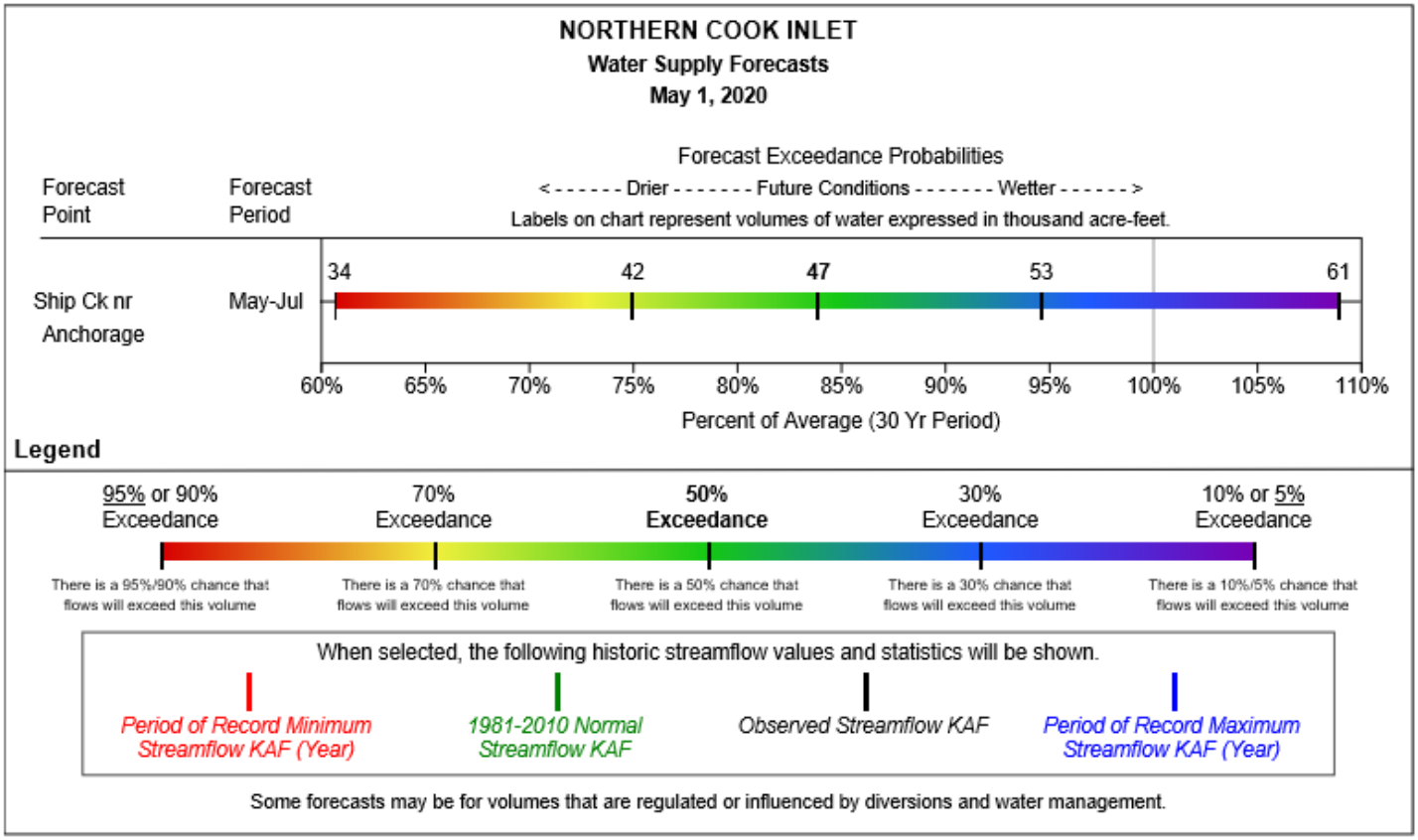
Precipitation

Inches Accumulated since October 1st

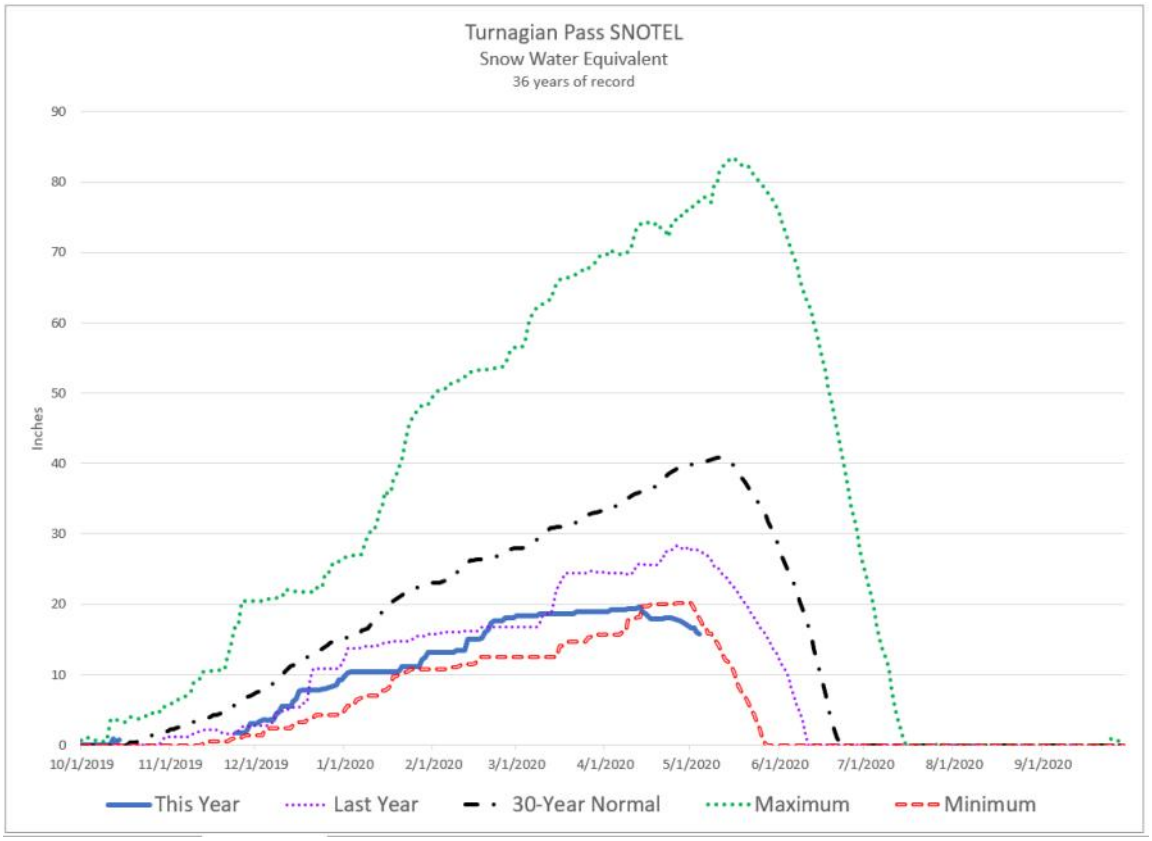
Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Anchorage Hillside	2080	19.4	18.4	15.5	125%
Indian Pass	2350	36.7	28.5	28.4	129%
Moraine	2100	12.2	15.7	12.7	96%
Mt. Alyeska	1540	42.2	62.9	52.9	80%
Spring Creek	580	10.5	8.9	---	---

Northern Cook Inlet

Streamflow Forecasts

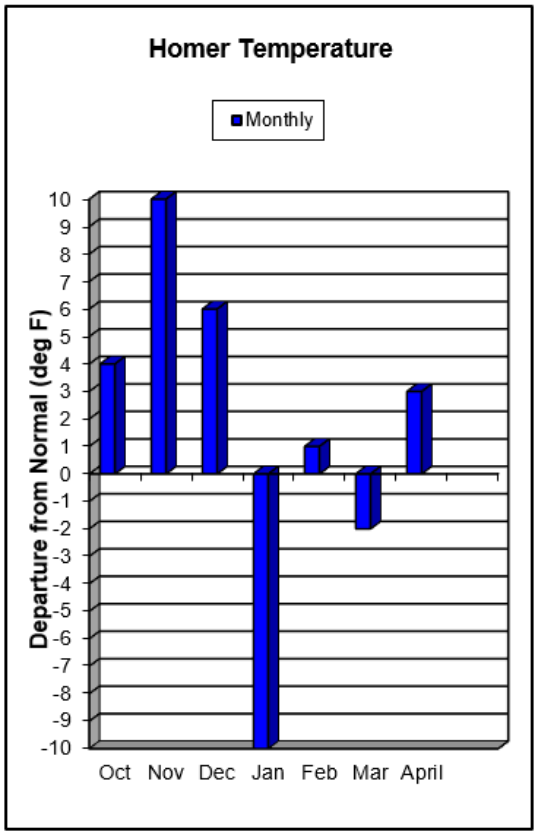


Kenai Peninsula



Snowpack

The snowpack on the Kenai Peninsula remains the most anemic across the state. Below average April precipitation did not help the snowpack. The nineteen indexed sites averaged 24% of normal water content. Turnagain Pass SNOTEL is at a new record low and is on track to potentially have its earliest melt out on record.



Kenai Peninsula

Snowpack Data

Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Anchor River Divide	1653	13	27		3.4	11.5	10.0
Bertha Creek	950	21	34	50	7.6	11.9	17.7
Bridge Creek	1300	0	23	32	0.0	8.8	10.6
Cooper Lake	1200	14	29		2.3	10.6	12.0
Demonstration Forest	780	0	0	13	0.0	0.0	4.6
Eagle Lake	1400	0	21	24	0.0	8.5	9.0
Exit Glacier S.C.	400	4	4	26	1.2	1.5	10.8
Exit Glacier SNOTEL	400	0	2	---	0.0	0.6	11.0
Grandview	1100	27	41	---	10.0	17.6	34.6
Grouse Creek Divide	700	6	24	---	2.4	10.7	16.0
Hanging Paradise	3130	100	143	---	50.9	63.1	---
Jean Lake	620	0	0	0	0.0	0.0	0.0
Kenai Moose Pens	300	0	0	---	0.0	0.0	0.0
Kenai Summit	1390	11	23	30	3.5	7.4	11.3
Lark Valley	3350	59	107	---	26.3	43.5	---
Lost Lake	2130	54	99	---	23.4	93.5	---
Lower Kachemak Creek	1915	0	35	---	---	---	---
Mcneil Canyon	1320	1	5	---	0.8	1.6	8
Middle Fork Bradley	2300	0	45	---	---	---	---
Moose Pass	700	0	0	0	0	0.0	0.0
Mt. Alyeska	1540	31	38		12.2	15.3	35.2
Port Graham	300	0	0		0	0.0	4.0
Portage Valley	50	18	0	14	7.7	0.0	6.2
Snug Harbor Road	500	0	0	0	0.0	0.0	0.0
Summit Creek	1400	5	16	---	2	5.3	6.7
Turnagain Pass	1880	39	67	---	16.6	27.8	39.8
Upper Mill Creek	3750	90	---	---	40.6	---	---
Upper Primrose Creek	3000	113	148	---	33.8	65.1	---
Upper Spencer Bench	2430	109	142	---	49.6	41.8	---
Upper Turnagain	3400	95	---	---	44.6	---	---

**Estimate*

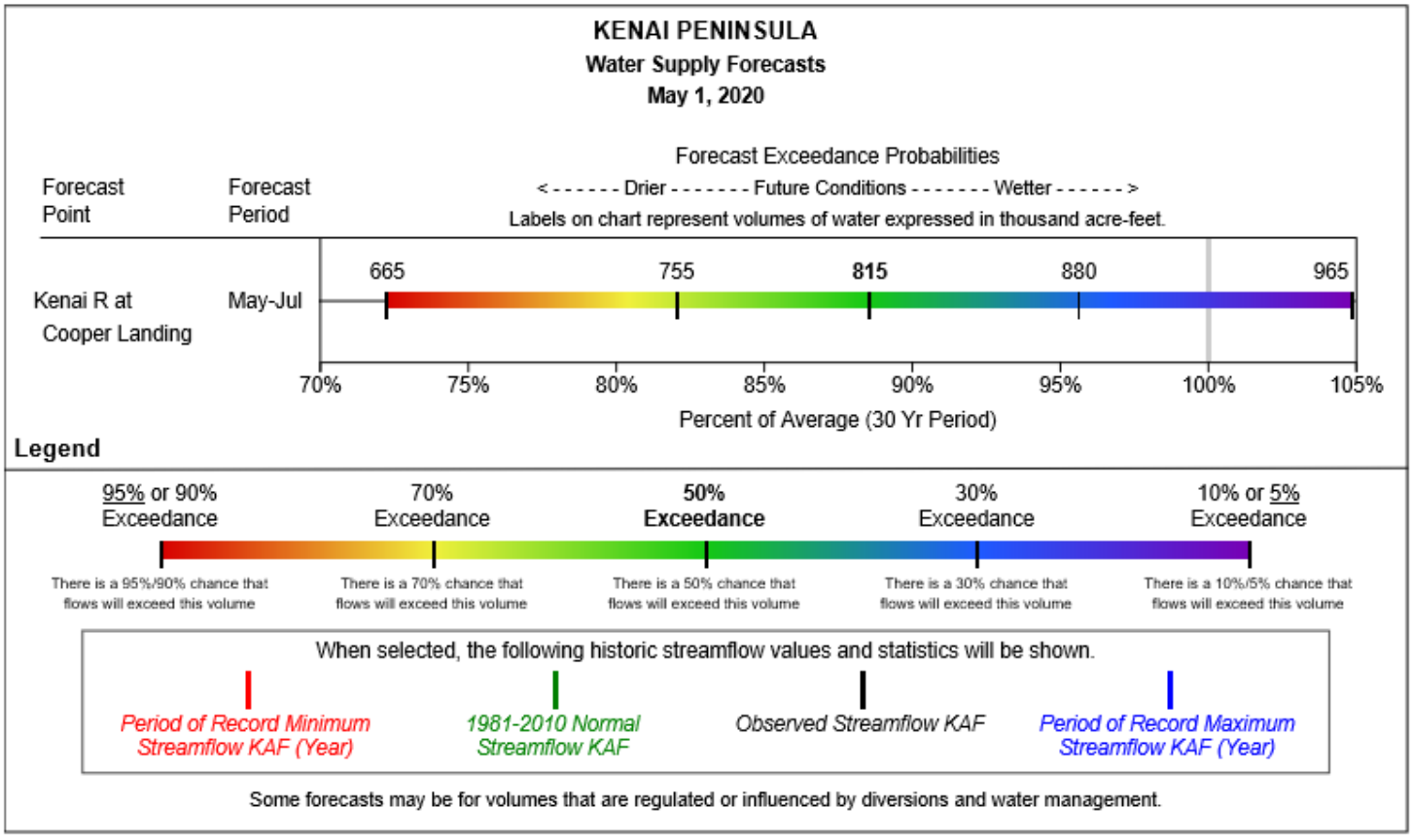
Kenai Peninsula

Precipitation

Inches Accumulated since October 1st

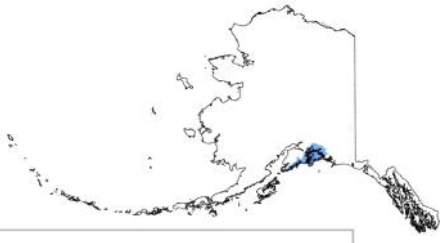
Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Anchor River Divide	1653	25.0	25.4	18.5	135%
Cooper Lake	1200	28.4	41.1	27.1	105%
Exit Glacier	400	50.9	75.0	---	---
Grandview	1100	38.5	60.4	46.9	82%
Grouse Creek Divide	700	36.5	56.4	41.9	87%
Kenai Moose Pens	300	12.7	10.9	8.9	143%
Lower Kachemak Creek	1915	---	52.4	---	---
Mcneil Canyon	1320	20.0	21.8	17.9	112%
Middle Fork Bradley	2300	43.2	51.8	35.6	121%
Nuka Glacier	1250	---	79.1	60.8	---
Port Graham	300	54.2	56.5	52.8	103%
Summit Creek	1400	19.5	23.8	17.1	114%
Turnagain Pass	1880	33.1	55.5	47.2	70%

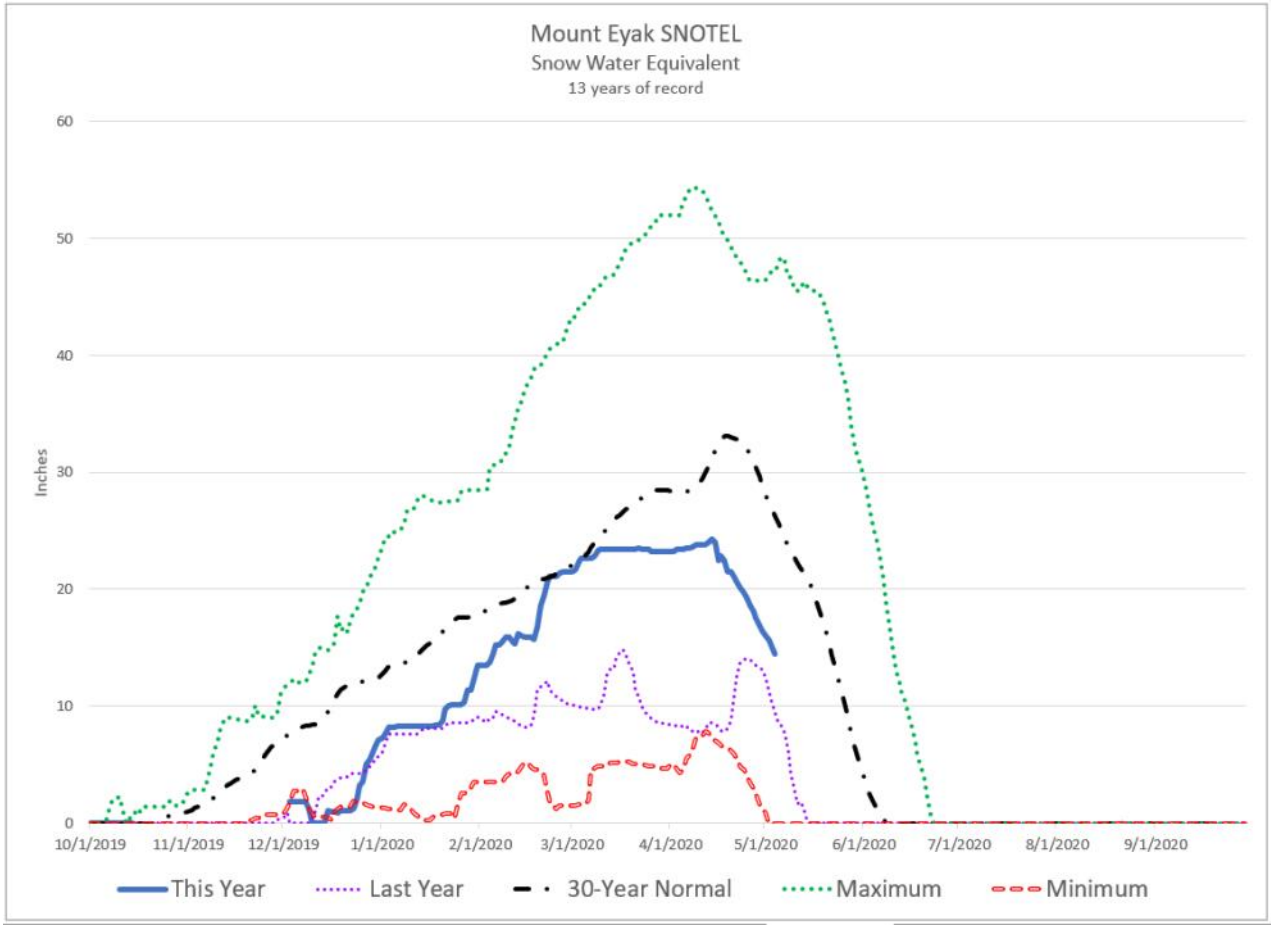
Streamflow Forecasts

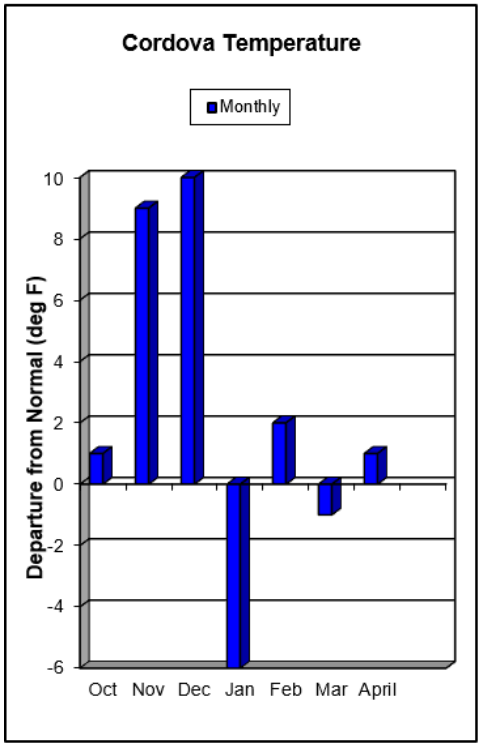


Forecast Point	Forecast Period	% of Average	Maximum(%)	Minimum(%)	50% Exceedance (KAF)	30yr Average (KAF)
Bradley Lake Inflow	May-Jul	105	122	87	200	191

Western Gulf – Prince William Sound







Snowpack

Prince William Sound had less than normal precipitation during April, ranging from near normal around Valdez to less than half normal on the western side. Snowpack is likewise variable, from below to near normal.

Western Gulf — Prince William Sound

Snowpack Data

		Snow Depth (in)			Water Content (in)		
Site Name	**Elev.**	**Current**	**Last Year**	**1981-2010 Normal**	**Current**	**Last Year**	**1981-2010 Normal**
Exit Glacier S.C.	400	4	4	26	1.2	1.5	10.8
Exit Glacier SNOTEL	400	0	2	---	0.0	0.6	11.0
Grouse Creek Divide	700	6	24	---	2.4	10.7	16.0
Hanging Paradise	3130	100	143	---	50.9	63.1	---
Lost Lake	2130	54	99	---	23.4	93.5	---
Mt. Eyak	1405	40	33	---	16.0	12.3	28.1
Nicks Valley	4280	130	130	---	---	---	---
Upper Primrose Creek	3000	113	148	---	33.8	65.1	---
Upper Tsaina River	1750	59	49	---	24.7	20.7	19.2

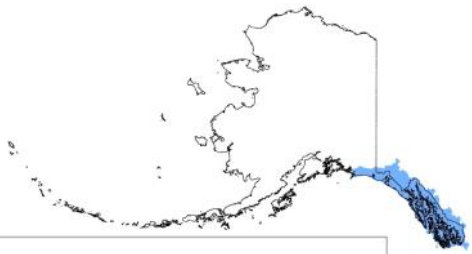
**Estimate*

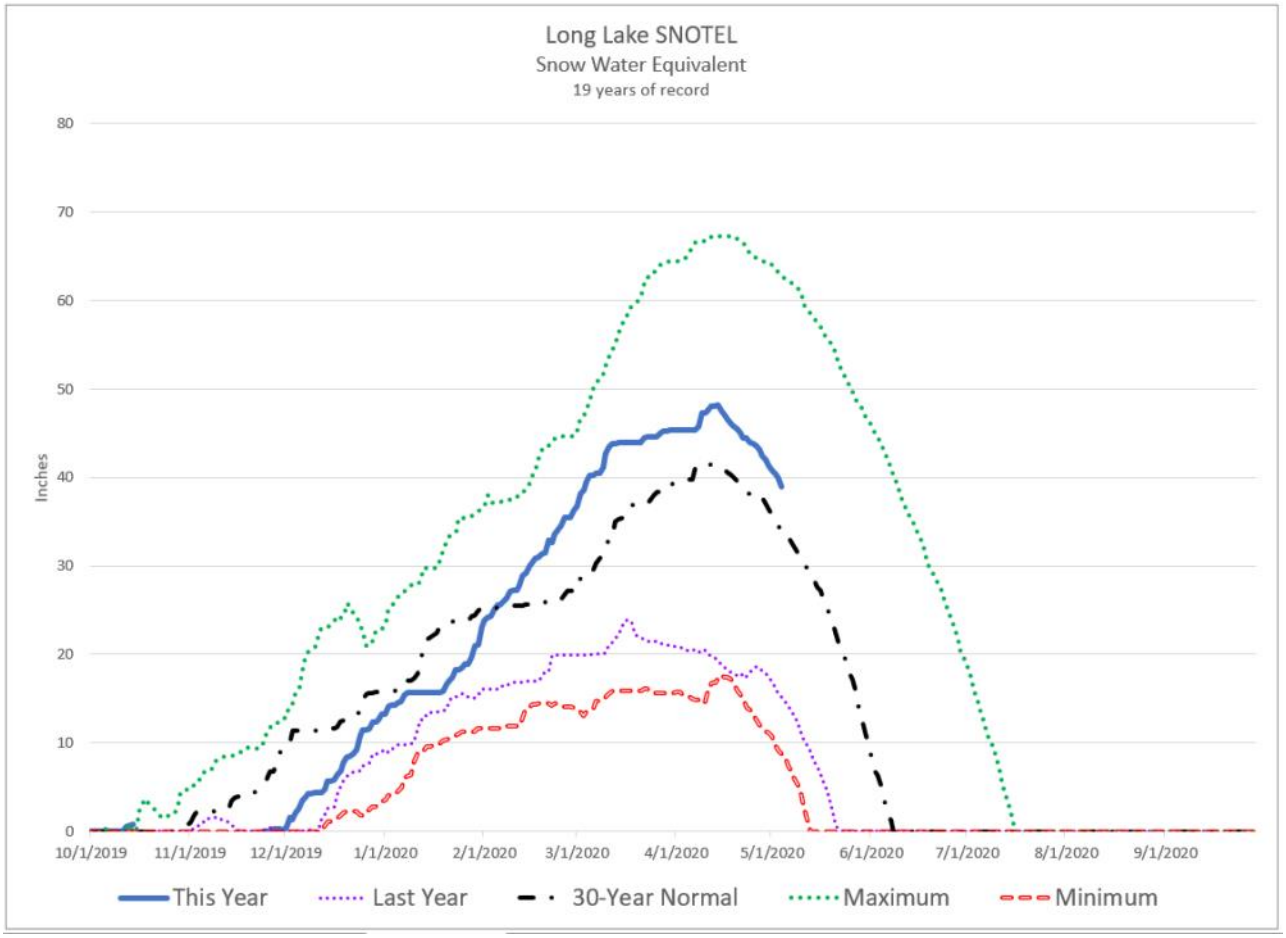
Precipitation

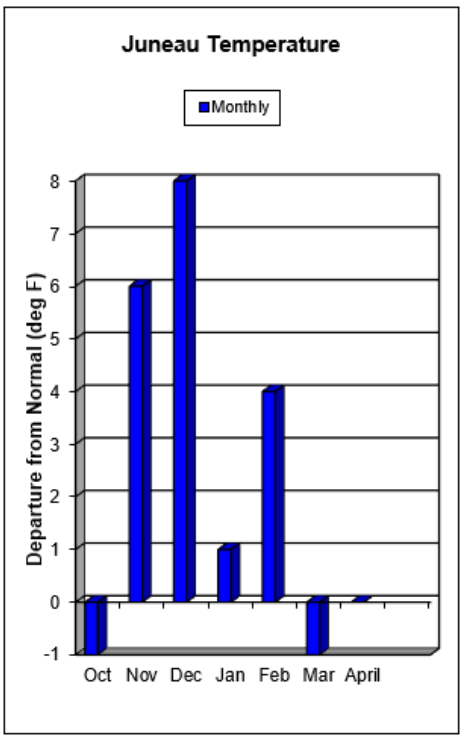
		Inches Accumulated since October 1st			
Site Name	**Elev.**	**This Year**	**Last Year**	**1981-2010 Normal**	**% of Normal**
Esther Island	50	83.0	129.5	89.0	93%
Exit Glacier	400	50.9	75.0	---	---
Grouse Creek Divide	700	36.5	56.4	41.9	87%
Mt. Eyak	1405	82.4	105.2	---	---
Nuchek	50	89.6	124.0	---	---
Port San Juan	50	77.5	113.4	85.4	91%
Strawberry Reef	30	46.0	66.7	---	---
Sugarloaf Mtn	550	53.4	58.8	44.4	120%
Tatitlek	50	54.0	63.6	44.1	122%

**Estimate*

Southeast







Snowpack

Southeast Alaska continues to retain above normal snowpack, even after accelerated melt out rates during April. The 6 measurement sites in Southeast average 130% of normal compared to 34%, last year. Snowpack readings remain the highest since 2013.

Southeast

Snowpack Data

Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Cropley Lake	1650	72	---	70	31.8	---	29.6
Eagle Crest	1200	49	---	34	21.8	---	12.2
Fish Creek	500	0	---	0	0.0	---	0.0
Flower Mountain	2510	58	57	---	25.8	20.1	---
Heen Latinee	2065	46	8	---	21.6	3.1	---
Long Lake	850	96	39	---	40.7	16.8	35.8
Petersburg Reservoir	550	7	---	0	2.4	---	0.0
Petersburg Ridge, S.	1650	73	---	52	33.4	---	22.4

**Estimate*

Precipitation Data

Site Name	Elev.	Inches Accumulated since October 1st			
		This Year	Last Year	1981-2010 Normal	% of Normal
Heen Latinee	2065	39.7	41.2	---	---
Long Lake	850	122.2	91.1	104.6	117%
Moore Creek Bridge	2250	33.6	27.2	29.6	114%

Streamflow Forecast

Forecast Point	Forecast Period	% of Average	Maximum(%)	Minimum(%)	50% Exceedance (KAF)	30yr Average (KAF)
Taiya River near Skagway	May-Jul	110	130	92	505	459

For further information contact:

NRCS Alaska web site: **www.nrcs.usda.gov/wps/portal/nrcs/main/ak/snow/**
NRCS Water and Climate Center web site: **http://www.wcc.nrcs.usda.gov/**
Alaska Meteor Burst Communication System (AMBCS) web site: **www.ambcs.org**

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