



Alaska Snow Survey Report



United States Department of Agriculture
Natural Resources Conservation Service

March 1, 2018

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Cover photo: Black Spruce covered in snow in the Copper River Basin. Even with light snowfall during February, the snowpack in the Copper Basin has been well above normal this winter, with a few locations recording new record highs for the month.

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General Overview

SnowPack

The snowpack across the state made gains during February. Some areas like most of the Kenai Mountains, the Koyukuk and the Copper Valley made less than average gains while most of Southeast, Cook Inlet, Southwest and the lower Tanana Basin had above average gains.

Snowpack in the Arctic, Northwest Alaska, Copper Valley, most of the Tanana Valley, and Koyukuk remain above normal. Snowpack in the White Mountains, near Fairbanks, is much above normal, with several sites having twice the median amount of snow. The Copper and upper Koyukuk Basins snowpacks are around 150% of normal.

Snowpacks in Southeast Alaska and in much of Southcentral are below normal with several sites only near half of median snowpack.

Alaska Statewide Snowpack	# of Sites	Basin Index	
		Current Percent of Median	Last Year Percent of Median
Upper Yukon Basin	18	97	86
Central Yukon Basin	10	142	120
Tanana Basin	25	166	116
Koyukuk Basin	6	145	109
Kuskokwim Basin	—	—	—
Copper Basin	11	125	86
Matanuska-Susitna Basin	17	99	70
Northern Cook Inlet	11	59	69
Kenai Peninsula	20	56	87
Western Gulf of Alaska	9	70	96
Southeast Alaska	8	56	70

Precipitation

Precipitation was varied across the state during February. Regions flanking the Gulf of Alaska along with portions of the western Interior saw below normal precipitation during the month. Southeast locations reported about half of average February precipitation while the sites in Prince William Sound were near 21% of average. This paucity of precipitation extends to include much of the Kenai Peninsula. Low monthly precipitation also characterized the Copper River Valley, Koyukuk Basin and the eastern-upper Tanana Basin.

Two large storm systems, one mid-month and one towards the end, brought bountiful amounts of precipitation and snow to the eastern side of Cook Inlet and up through to the Fairbanks area. Many precipitation sites in this track measured two to three times the average February precipitation. The Arctic, Northwest Alaska, and Southwest Alaska also received above normal precipitation.

Temperature

Temperatures were mixed across Alaska during February. Stations in Southeast and Southcentral reported below to near normal monthly temperatures while the Interior and Northern Alaska were much above normal.

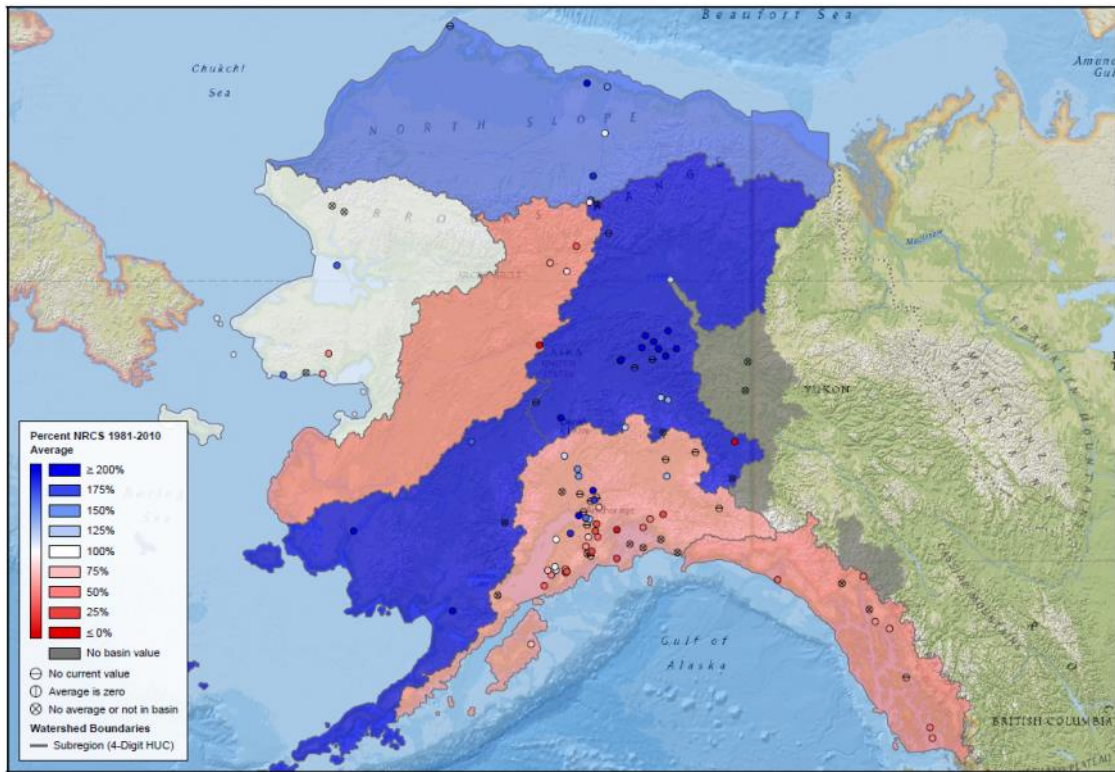
Juneau, Gulkana, and Whitehorse all reported below normal temperatures and had -6°F, -7°F, and -8°F departures from normal for the month, respectively.

Anchorage, Homer, Talkeetna, and Cordova were all nominally near normal for the month.

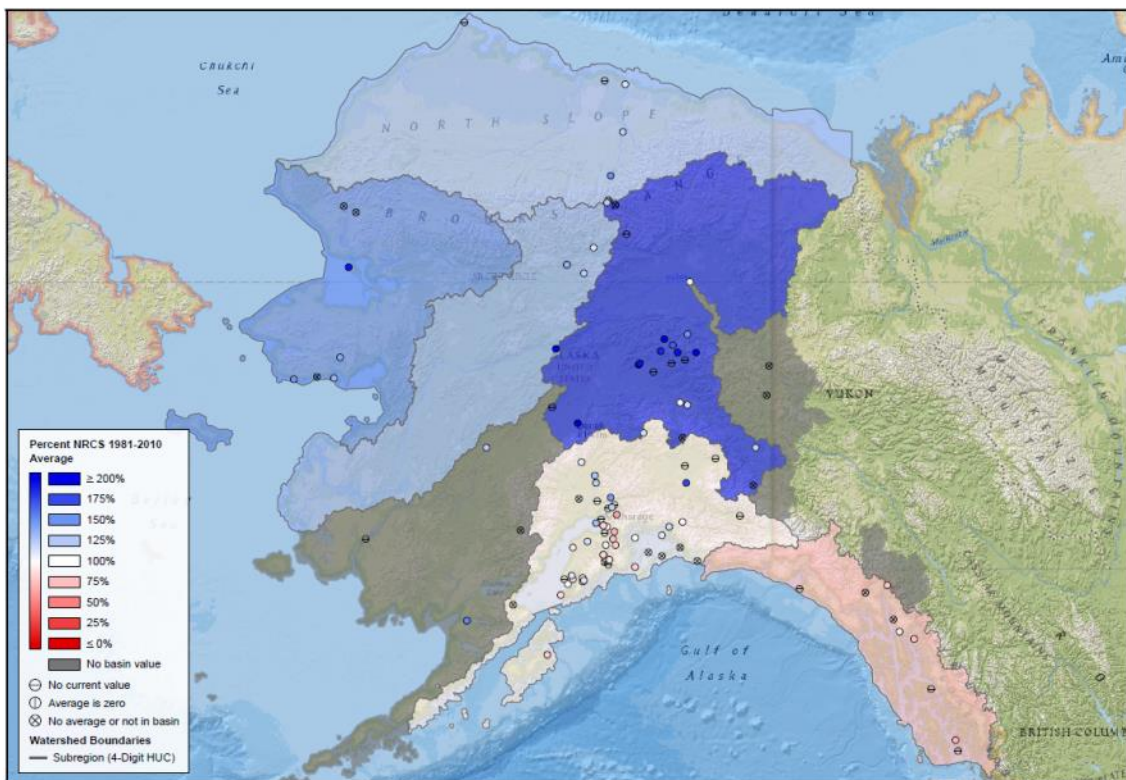
In the Interior, the February started chilly, but Bettles, Fort Yukon and Fairbanks ended up 8 to 10°F above normal for February.

Alaska Statewide Precipitation Maps

Monthly Precipitation for February, 2018 (% of NRCS 81-2010 Average)



Water Year-to-date Precipitation (Oct. 1-Feb. 28, 2018) (% of NRCS 81-2010 Average)

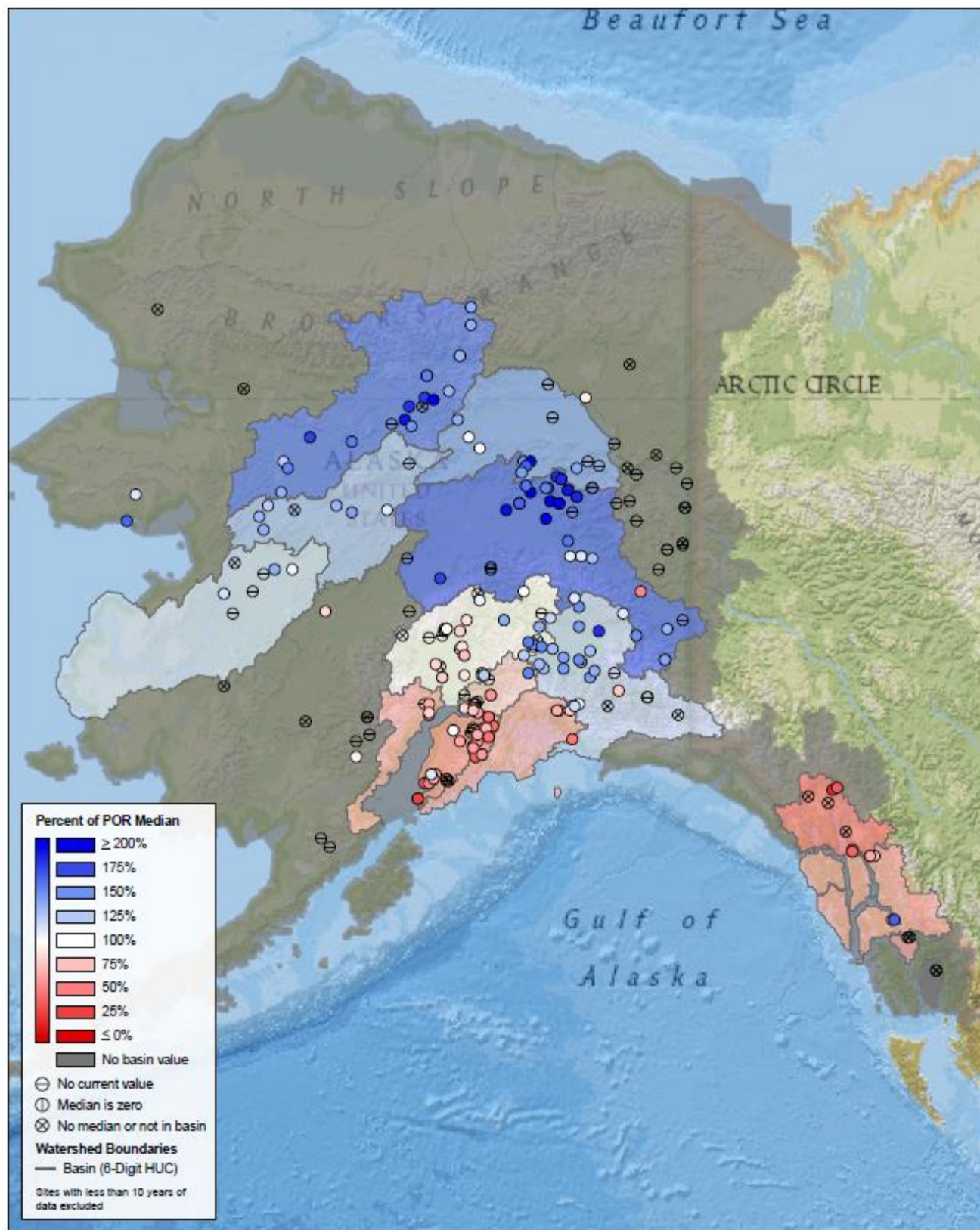


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Alaska Statewide Snowpack Map

Based on March 1st, 2018 Snow Water Equivalent



Streamflow Forecasts

FORECAST POINT*	Percent of	Period
Yukon River at Eagle	94	April - July
Porcupine River nr Int'l Boundary.....	115	April - July
Yukon River near Stevens Village	104	April - July
Tanana River at Fairbanks	105	April - July
Tanana River at Nenana	112	April - July
Little Chena River near Fairbanks	154	April - July
Chena River near Two Rivers	146	April - July
Salcha near Salchaket	136	April - July
Sagvanirktok River near Pump Station 3	141	April - July
Kuparuk River near Deadhorse	137	April - July
Gulkana River at Sourdough	133	April - July
Little Susitna River near Palmer	105	April - July
Talkeetna River near Talkeetna	101	April - July
Ship Creek near Anchorage	72	April - July
Kenai River at Cooper Landing	83	April - July
Taiya River near Skagway	84	April - July

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

FORECAST POINT	INDEX	Index	Key:
Koyukuk River at Hughes.....	0		
MF Koyukuk R near Wiseman	1.7		
Slate Creek at Coldfoot.....	1.8		
Beaver Creek above Victoria Creek.....	1		
Birch Creek below South Fork.....	—		
Caribou Creek at Chatanika.....	1.6		
Susitna River near Gold Creek.....	-0.8	-2 to -3	much below average snowmelt runoff
Chulitna River near Talkeetna.....	-3		
Deshka River at mouth near Willow.....	—		
Montana Creek at Parks Highway.....	-2		
Willow Creek near Willow.....	-1.3	-1 to -2	below average snowmelt runoff
Skwentna River at Skwentna.....	-2.2		
Chuitna River near Tyonek.....	-2.3		
Campbell Creek near Spenard.....	—		
Indian Creek at Indian.....	-3	-1 to +1	average snowmelt runoff
Bird Creek at Bird Creek	-3		
Glacier Creek nr Girdwood	-2.5		
Six Mile Creek near Hope.....	-2.5	+1 to +2	above average snowmelt runoff
Resurrection Creek near Hope.....	—		
Grouse Ck at Grouse Lake Outlet nr Seward	-2		
Anchor River near Anchor Point	-2.5		
Deep Creek near Ninilchik.....	-2.5	+2 to +3	much above average snowmelt runoff
Ninilchik River near Ninilchik.....	-2.5		
Fritz Creek near Homer.....	-3		
Skagway River at Skagway.....	-1.2		
Municipal Watershed C nr Petersburg	-1.5		
Gold Creek near Juneau.....	-2.7		

HOW FORECASTS ARE MADE

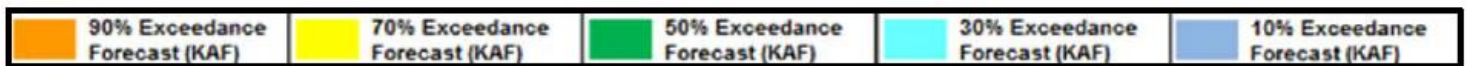
Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual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

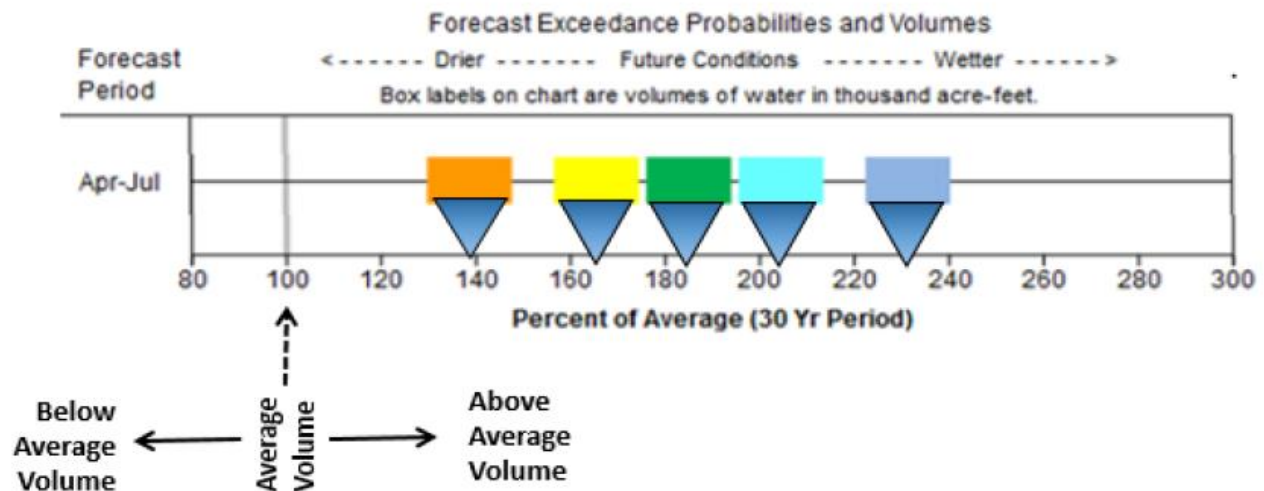
The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast.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

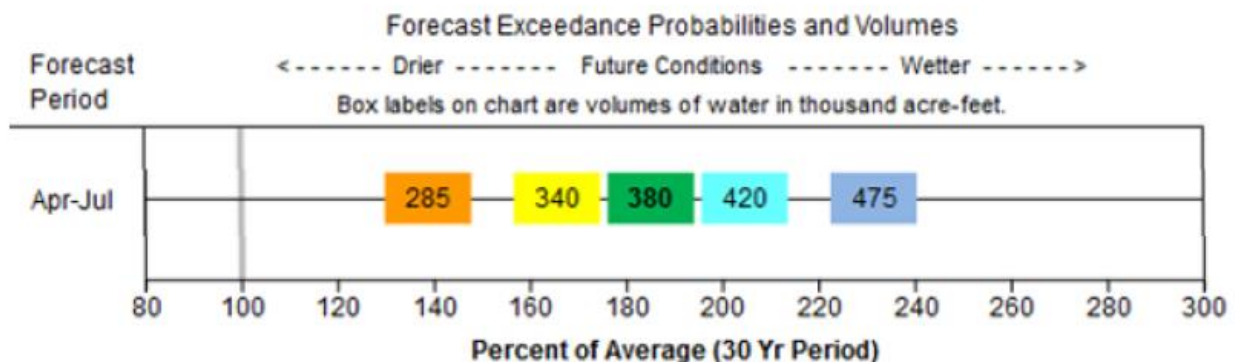
This graphic provides a visual alternative to the forecast tables the NRCS has presented for years. It gives both the volume and percent of average of each of the five forecast exceedances. The five colored boxes represent each forecast's five exceedances.



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.

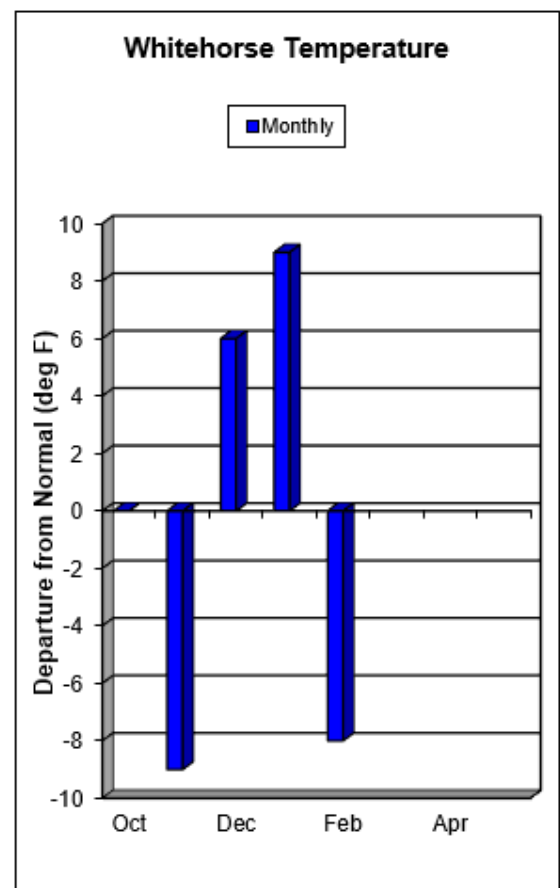
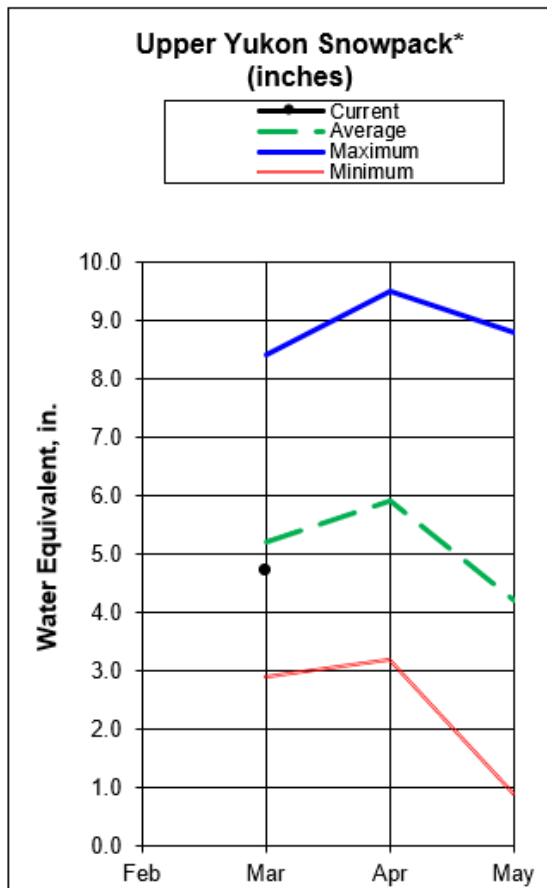


Boxes to the right of the gray 100% of average line represent above average volumes. Conversely, any boxes to the left of the gray 100% line represent below average volumes. In this case all forecast exceedances are for above average April-July volumes. Averages are based on the 1981-2010 period. The 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

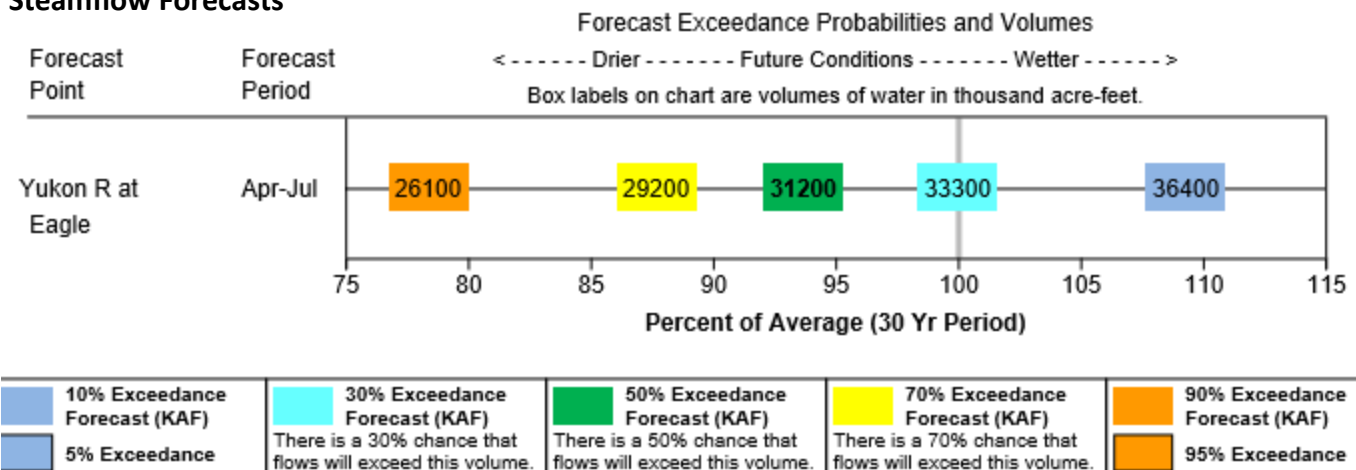


Snowpack

The snowpack in the Upper Yukon Basin is variable, ranging from 60% normal to 160% of normal with the 33 measured sites in this area averaging 98% of median.

All Basins in this area reported more snow than last year. The Pelly River Basin along with the Basin upriver from Whitehorse were somewhat below normal, while around Dawson was near normal and the White River Basin was somewhat above normal.

Steamflow Forecasts



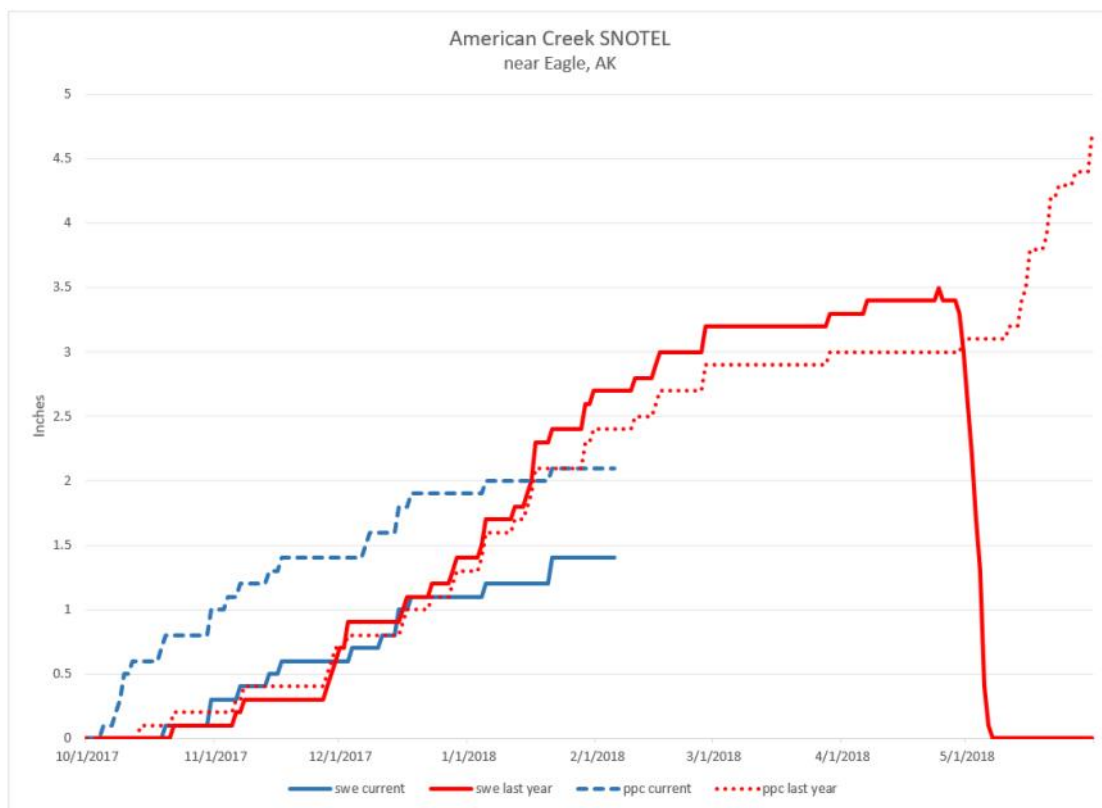
Upper Yukon Basin

Snowpack Data

Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Atlin	2395	15	16	20	2.8	3.4	4.4
Beaver Creek	2150	22	15	16	3.9	2.4	2.4
Blackstone River	1020	26	21	---	4.1*	3.9	---
Burns Lake	3650	33	---	33	6.0	---	7.4
Burwash Airstrip	2660	11	20	10	1.8	1.6	1.7
Calumet	4300	33	27	34	5.6	5.9	6.8
Canyon Mine	1160	19	16	---	3.2	3.0	---
Casino Creek	3495	31	---	24	5.1	---	4.0
Chair Mountain	3500	30	20	20	5.1	3.1	3.0
Eagle Plains	2330	36	35	28	8.8	6.5	5.6
Eagle River	1115	37	32	25	6.4	4.8	4.1
Edwards Lake	2720	24	---	30	4.0	---	5.4
Finlayson Airstrip	3240	25	14	20	4.1	2.0	3.6
Francis River	730	27	17	---	4.1	2.8	---
Fuller Lake	3695	28	---	31	4.6	---	6.7
Grizzly Creek	3200	29	28	28	4.6	5.0	5.9
Hoole River	3400	30	---	24	4.8*	---	4.6
Hyland	855	30	25	---	5.2	5.1	---
Jordan Lake	3050	23	---	24	4.1	---	4.8
King Solomon Dome	3540	30	30	29	5.5	5.2	5.6
Log Cabin (B.C.)	2900	37	52	48	9.7	14.5	13.3
Macintosh	3805	26	---	19	4.2	---	3.3
Mayo Airport	1770	16	16	20	2.5*	2.9	3.8
Meadow Creek	4050	37	30	40	8.2	7.1	9.4
Midnight Dome	2805	29	24	26	5.9	4.3	5.0
Montana Mtn.	3350	25	22	24	5.7	4.3	5.2
Morley Lake	2700	24	12	24	4.6	2.3	5.1
Mt. Berdoe	3395	22	21	22	3.4	4.6	3.8
Mt. McIntyre B	3600	32	26	26	5.9	5.0	5.2
Mt. Nansen	3350	18	---	17	2.8	---	2.6
Ogilvie River	550	21	22	---	3.4*	3.9	---
Old Crow	980	28	---	24	4.5	---	3.8
Pelly Farm	1550	17	13	16	2.7	3.2	2.8
Pine Lake Airstrip	995	33	17	---	6.2	3.1	---
Plata Airstrip	2725	28	---	30	5.2	---	6.2
Rackla Lake	3410	25	---	31	3.9	---	6.4
Riffs Ridge	2130	28	30	28	5.7	4.6	4.7
Rose Creek (Faro)	1080	25	18	---	4.1	3.7	---
Russell Lake	3480	37	---	35	6.9	---	7.0
Satasha Lake	3630	19	---	18	3.1	---	3.1
Summit	985	26	41	34	5.7	9.4	9.2
Tagish	3540	31	20	25	6.4	3.9	5.1
Twin Creeks	2950	27	---	30	4.6	---	6.3
Watson Lake Airport	685	31	14	---	4.7	2.2	---
Whitehorse Airport	2300	26	13	19	4.2	2.0	3.6
Williams Creek	3000	20	---	18	3.0	---	3.1
Withers Lake	3200	33	---	34	6.3	---	7.4

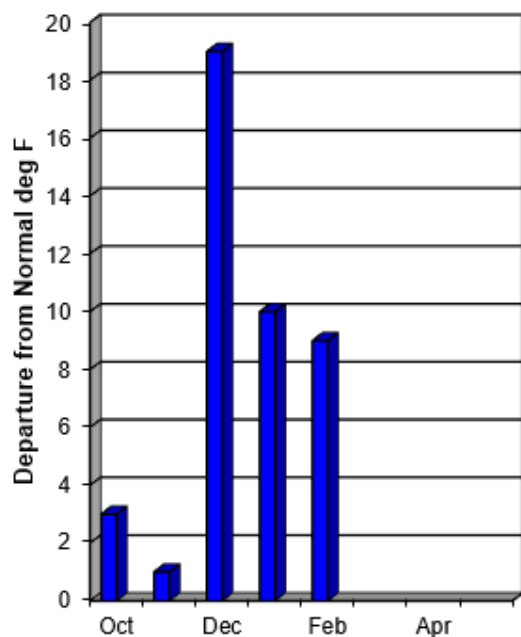
*Estimate

Central Yukon Basin



Fort Yukon Temperature

■ Monthly



Snowpack

The snowpack in the Central Yukon Basin is mixed. Snowpack in the upper Porcupine River is much above normal as is the snowpack in the White Mountains. However, the measured snowpack near Yukon Crossing and in the Yukon flats are near normal and the upper portion of the basin is slightly below 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	17	16	---	2.4	3.2	---
Atigun Pass	4800	53	50	---	---	---	---
Borealis	1330	34	26	23	6.4	5.1	4.0
Eagle Summit	3650	20	10	---	---	---	---
Fort Yukon	430	22	17	---	---	---	---
Fort Yukon	430	19	17	18	2.8	2.8	3.0
Fossil	1400	37	---	22	7.0	---	3.8
Hess Creek	1000	20	26	24	4.6	5.6	4.5
Jack Wade Jct	3585	24	21	---	4.0	3.0	---
Old Crow	980	28	---	24	4.5	---	3.8
Ptarmigan Creek	2270	35	30	23	5.8	5.0	3.6
Seven Mile	600	22	22	26	4.6	5.2	4.6
Thirty Mile	1350	37	32	34	9.6	7.3	7.0
Upper Nome Creek	2520	51	33	---	---	---	---
Windy Gap	1900	46	32	24	10.3	7.4	4.8
Wolf	1200	32	27	21	6.0	6.0	3.6

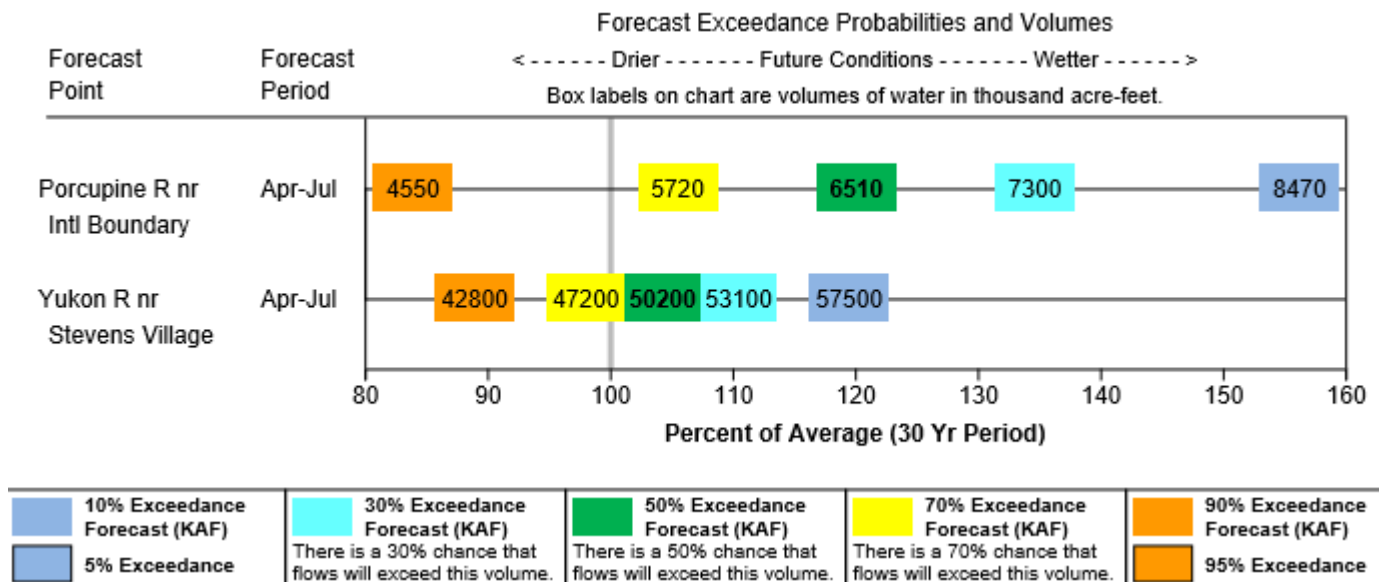
**Estimate*

Precipitation

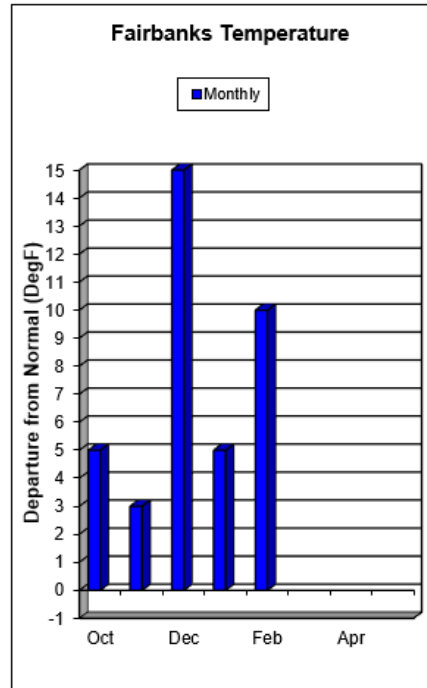
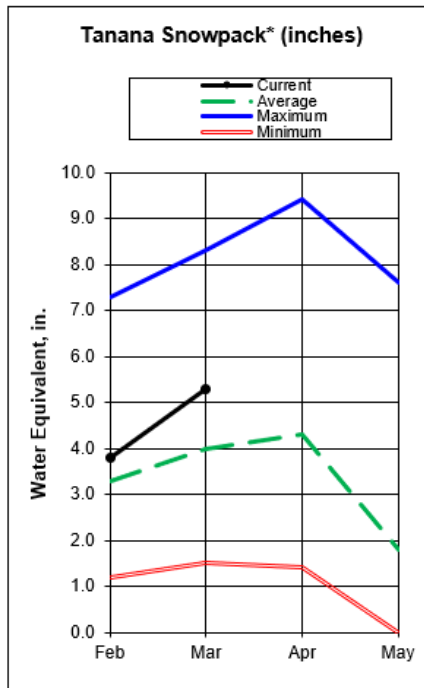
Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
American Creek	1050	3.0	2.9	---	---
Atigun Pass	4800	5.9	3.7	4.8	123%
Eagle Summit	3650	7.0	3.4	4.7	149%
Fort Yukon	430	3.2	2.7	3.1	103%
Jack Wade Jct	3585	4.1	2.7	---	---
Upper Nome Creek	2520	10.7	6.2	4.3	249%

Streamflow Forecasts



Tanana Basin



Snowpack

The lower Tanana basin received abundant snowfall during February, but the upper Valley was left with meager rations.

Several sites in the upper Chena Basin reported their stoutest snowpacks since, and second only to, 1993. The seven sites in the Chena Basin average 209% of normal. However, Fairbanks FO SNOTEL site reported the same depth and only 0.1" more water content than it did last year at this time.

This deep snow trend continues up-valley somewhat, where both French Creek, above Salcha, and Shaw Creek Flats post the wettest snowpack also since 1993. But the snowpacks starts declining and Fort Greely Snow Course, near Delta Junction, is just above normal with 20" on snow and 3.2" of water content, similar to 2015 and less than 2012. Further up valley, most sites reported above normal snowpack, but Tok Junction Snow Course is measured at only 53% of normal with 14" of snow and 1.6" of water content.

Precipitation

Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Chisana	3320	5.1	2.4	---	---
Fairbanks F.O.	450	7.8	6.4	4.0	195%
Granite Crk	1240	4.2	2.9	3.6	117%
Kantishna	1550	10.6	4.3	3.8	279%
Little Chena Ridge	2000	8.9	4.9	4.8	185%
Nenana	415	5.3	3.9	---	---
Tok	1630	2.7	---	---	---
Upper Chena	2850	13.0	7.4	5.9	220%

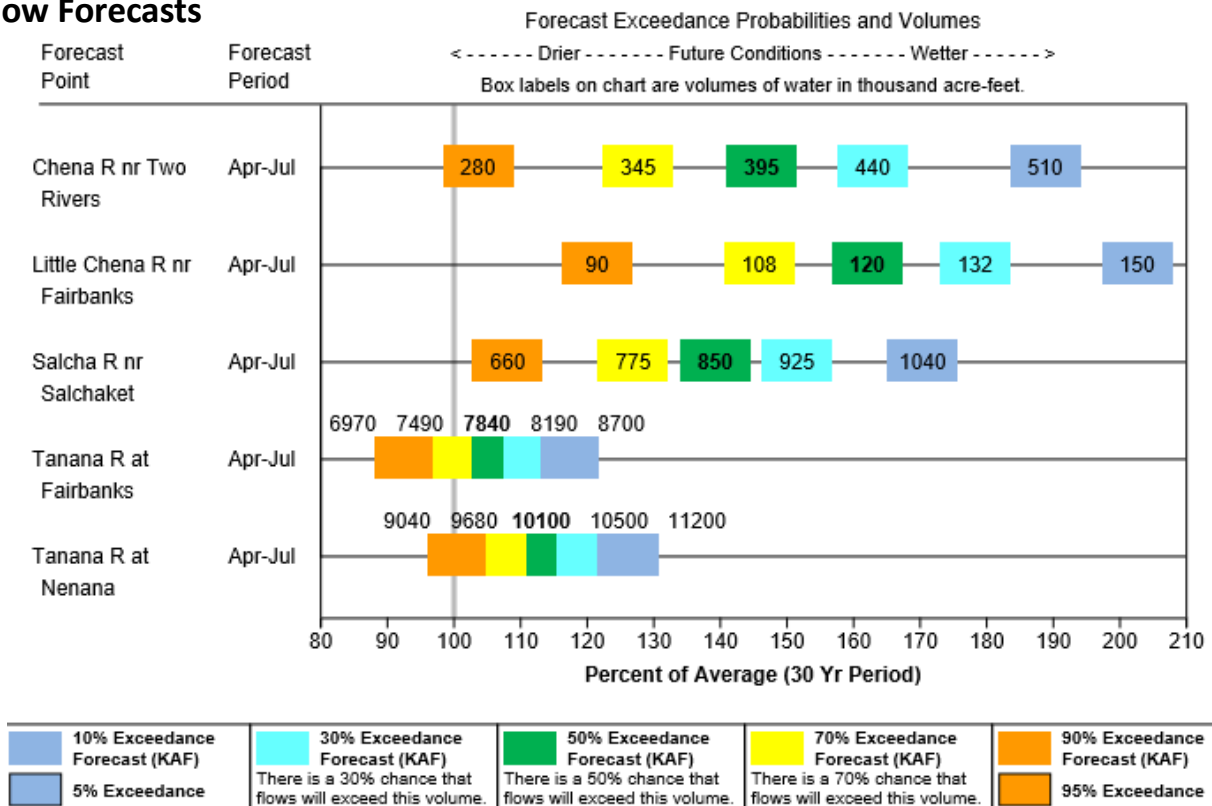
Tanana Basin

Snowpack Data

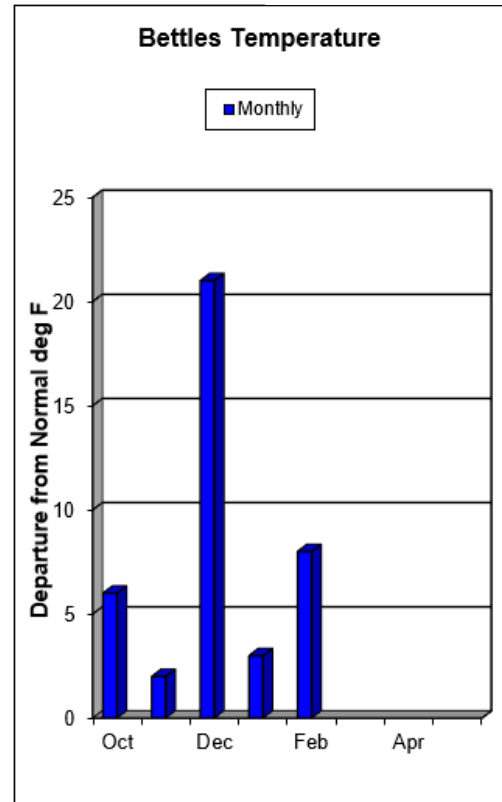
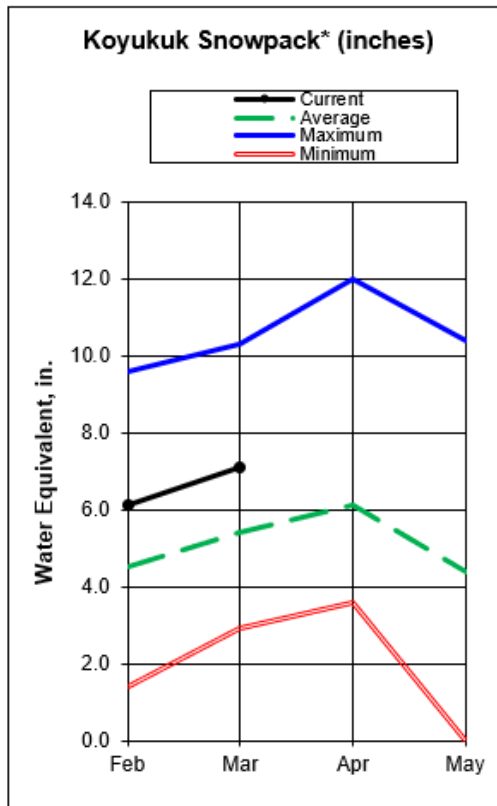
Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Bonanza Creek	1150	36	31	20	8.0	6.4	3.9
Caribou Creek	1250	30	27	20	6.4	5.1	3.6
Caribou Snow Pillow	900	31	28	21	6.8	5.3	3.6
Chisana	3320	22	12	---	4.4	2.3	4.1
Cleary Summit	2230	51	33	26	10.2	5.9	4.6
Colorado Creek	700	40	32	20	7.4	5.3	3.4
Fairbanks F.O.	450	30	30	---	5.3	5.2	3.1
Faith Creek	1750	41	28	24	7.7	4.6	4.2
Fielding Lake SNOTEL	3000	40	20	---	9.0	4.9	---
Fielding Lake	3000	48	27	37	9.9	5.5	8.6
Fort Greely	1500	20	15	17	3.2	2.4	3.0
French Creek	1800	53	33	24	10.7	4.8	4.6
Gerstle River	1200	23	16	18	3.6	2.6	2.9
Granite Crk	1240	19	15	---	3.7	3.0	3.5
Jatahmund Lake	2180	20	16	16	3.5	2.0	2.8
Kantishna	1550	40	25	24	7.8*	4.2	4.4
Lost Creek	3030	28	14	17	4.5	2.2	3.0
Mentasta Pass	2430	34	20	24	5.4	3.6	5.1
Monument Creek	1850	42	38	---	8.3	7.9	4.0
Mt. Ryan	2800	39	27	---	9.1	5.1	4.4
Munson Ridge	3100	63	45	---	14.2	9.7	5.9
Shaw Creek Flats	980	25	23	14	4.0	3.7	2.5
Teuchet Creek	1640	29	26	---	6.4	5.0	3.3
Tok Junction	1650	14	16	18	1.6	2.7	3.0

*Estimate

Streamflow Forecasts



Western Interior Basins



Snowpack

Koyukuk

Despite below normal precipitation, the upper Koyukuk continues to have much above normal snowpack. The upper Basin sites report a snowpack that is near 150% of normal. In the lower basin the Hozatka Lake SCAN site gained 10" of snow during the month which came with 0.9" of water content.

Kuskokwim

The Kuskokwim received a couple of storms during February which came as snow. Aniak SCAN reported 24" of snow depth on March 1st which is the most since 2013. McGrath is considered to have somewhat below normal snowpack.

Lower Yukon

The Galena Snow Course was measured with 23" of depth with 3.9" of water content, its deepest March measurement since it started in 2015. Several sites along the lower Yukon gained nearly a foot of snowpack during the month and now have above normal snowpack.

Streamflow Forecasts

The forecast for the Kuskokwim River at Crooked Creek was not made this month due to a lack of data.

Western Interior Basins

Snowpack Data

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	32	24	---	8.6	4.6	5.6
Bonanza Forks	1200	30	28	26	6.6	6.4	4.8
Cloverleaf	170	32	19	---	6.8	3.3	---
Coldfoot	1040	34	32	---	7.5	5.4	5.3
Colville Bend	170	33	24	---	5.9	4.2	---
Disaster Creek	1550	22	21	22	4.8	4.0	3.2
East Chalatna	430	33	21	---	7.4	3.6	---
Gobblers Knob	2030	10	14	---	---	---	---
Hozatka Lake	206	21	---	---	3.6*	---	---
Huggins Creek	290	39*	27	---	8.1*	4.6	---
Jr Slough	160	32	19	---	6.6	3.2	---
Kaldoyeit	750	46	31	20	9.9	5.8	3.7
Kanuti Chalatna	670	45	28	28	9.7	5.2	5.2
Kanuti Kilolitna	550	26	26	21	6.4	4.5	4.0
Minnkokut	580	48	32	32	10.7	5.8	5.7
Nolitna	560	47	38	28	10.4	7.0	5.0
Table Mountain	2200	23	24	21	5.2	4.2	3.3
Treat Island	190	36	33	---	8.2	5.9	---
Kuskokwim							
Aniak	80	23	14	---	5.7*	3.5	---
Mcgrath	340	25	13	27	4.4	2	5.4
Telaquana Lake SNOTEL	1275	22	18	---	5.3	4	---
Lower Yukon							
Bullfrog	100	42	30	---	9.6	5.3	---
Deer Creek	195	40	33	---	7.5	5.6	---
Galena Ecological Site	128	23	16	---	3.9	---	2.8
Little Mud River	855	24	27	---	4.4	4.7	---
Lower Nowitna River	205	27	33	---	5.7	5.9	---
Ninemile Island	140	36	31	---	7.7	5.9	---
Pike Trap Lake	130	18	16	---	3.9	2.9	---
Squirrel Creek	150	36	29	---	7.7	5.2	---
Upper Innoko	180	36	---	33	7.5	---	7.2
Wapoo Hills	220	45	36	33	10.0	6.6	6.8
Yankee Slough	100	42	---	38	9.1	---	8.4

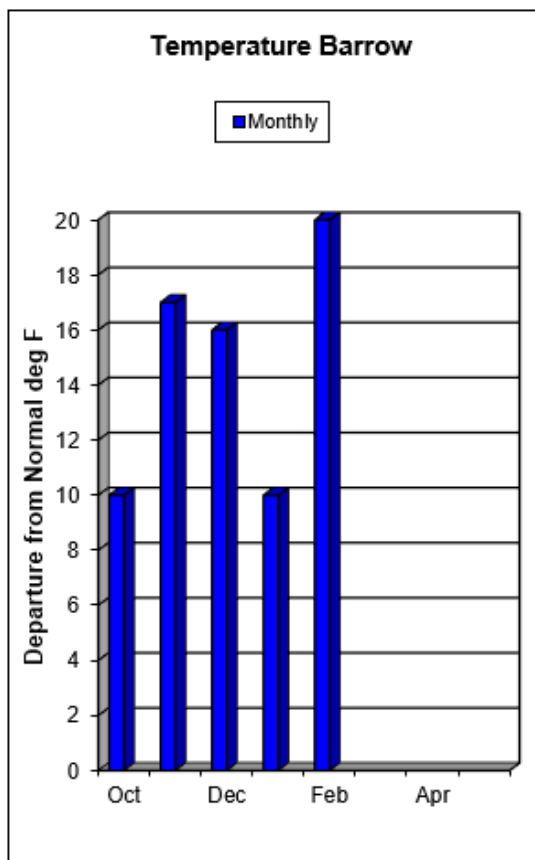
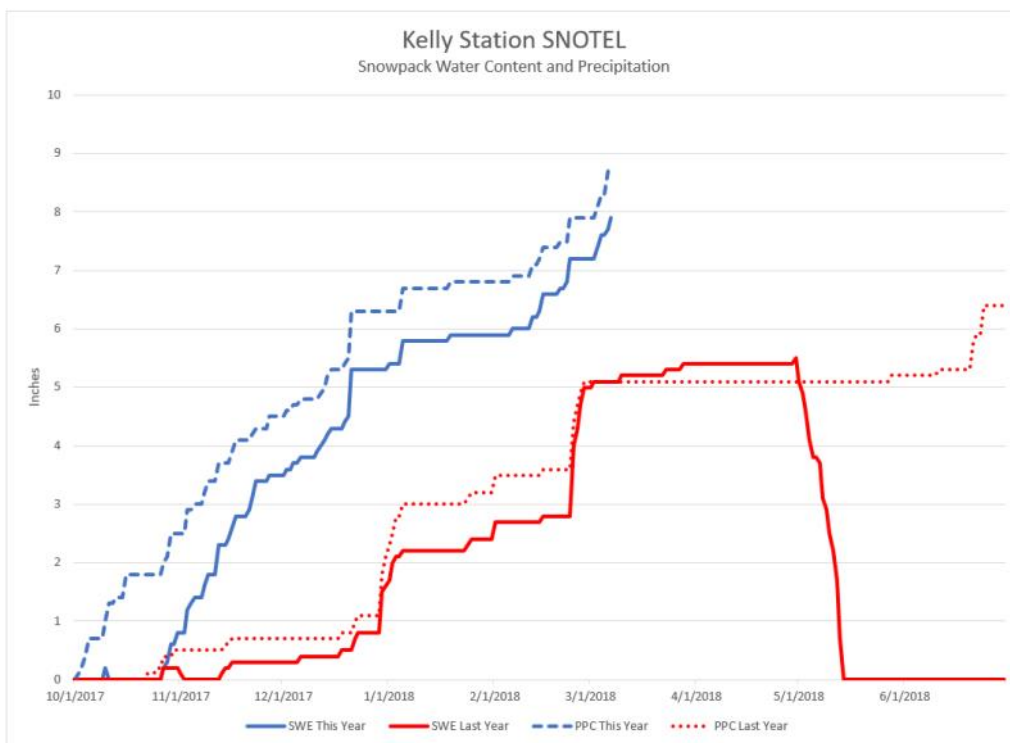
*Estimate

Precipitation

Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Koyukuk					
Bettles Field	640	7.8	3.5	5.8	134%
Coldfoot	1040	6.4	4.4	5.7	112%
Gobblers Knob	2030	7.5	4.8	6.1	123%
Kuskokwim					
Aniak	80	11.6	5.7	---	---
Telaquana Lake	1275	9.7	4.2	---	---
Lower Yukon					
Hozatka Lake	206	6.6	---	---	---

Arctic and Kotzebue Sound



Snowpack

Arctic

The Arctic had above normal precipitation during February. The snowpack at the measurement sites along the Dalton Highway is above normal.

Kotzebue

Kotzebue received above normal precipitation for the month. Kelly Station SNOTEL, on the Noatak River, reported 31" of snow with 7.2" of water content, the most snow recorded since the site was reinstalled in 2011.

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	53	50	---	---	---	---
Imnaviat Creek	3050	35	26	---	---	---	---
Kelly Station	310	31	32	---	7.2	5.0	---
Prudhoe Bay	30	19	16	---	---	---	---
Sagwon	1000	14	16	---	---	---	---

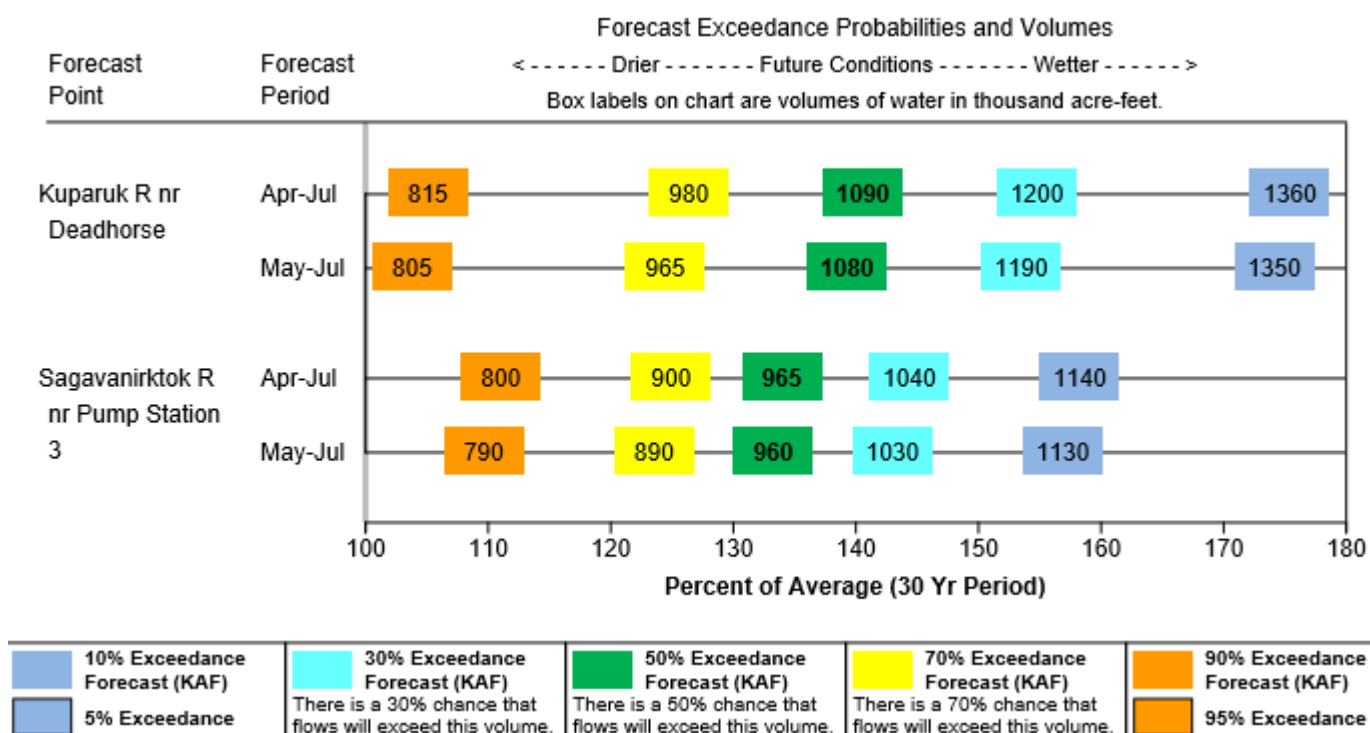
*Estimate

Precipitation

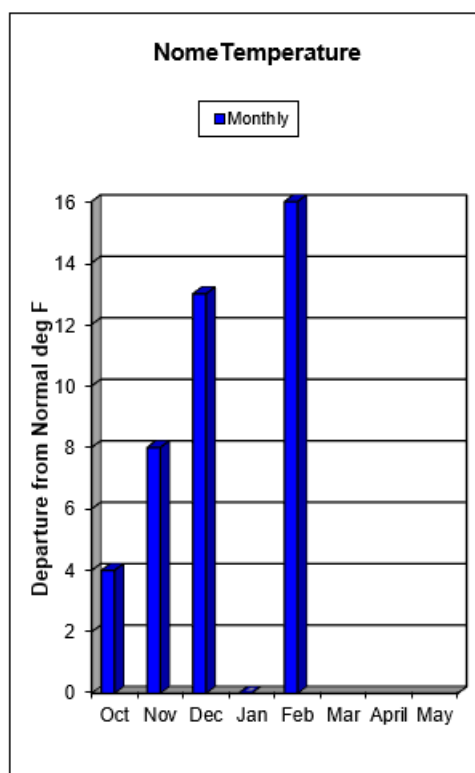
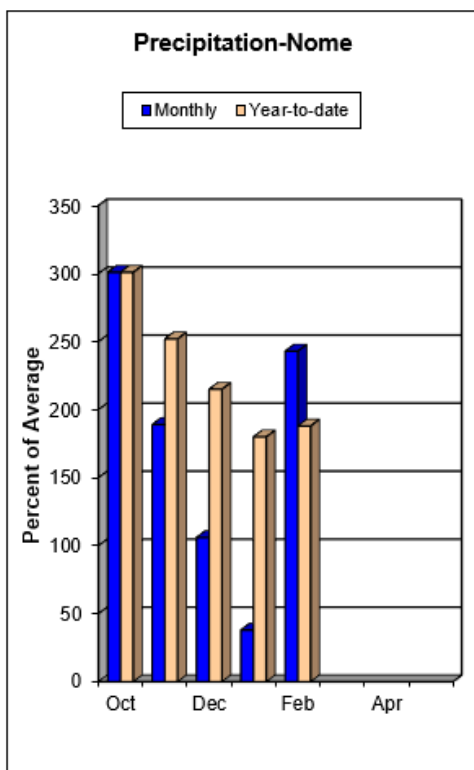
Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Arctic					
Atigun Pass	4800	5.9	3.7	4.8	123%
Imnaviat Creek	3050	3.9	2.4	2.6	150%
Prudhoe Bay	30	3.0	2.8	2.6	115%*
Sagwon	1000	3.2	2.2	2.6	123%
Kotzebue Sound					
Port Red Dog	50	9.1	5.7	3.1	294%
Red Dog Mine	950	5.7	6.0	3.9	146%
Kelly Station	310	7.9	5.1	---	---

Streamflow Forecasts



Norton Sound/Y-K Delta/Bristol Bay



Snowpack

Norton Sound

The Norton Sound Area received variable snowfall during the month with the western side of the Seward Peninsula making greater gains than other regions. The area generally has above normal snowpack.

Yukon-Kuskokwim Delta

The Y-K Delta received above normal precipitation during the month which mainly came as a couple of snow storms. The Bethel NWS site recorded up to 8" of snow on the ground.

Bristol Bay

The snowpack in Bristol Bay made gains in February. Port Alsworth snow course had less snow than last year at this time, but more than previous years since 2011. The area received above normal precipitation during the month.

Precipitation

Inches Accumulated since October 1st

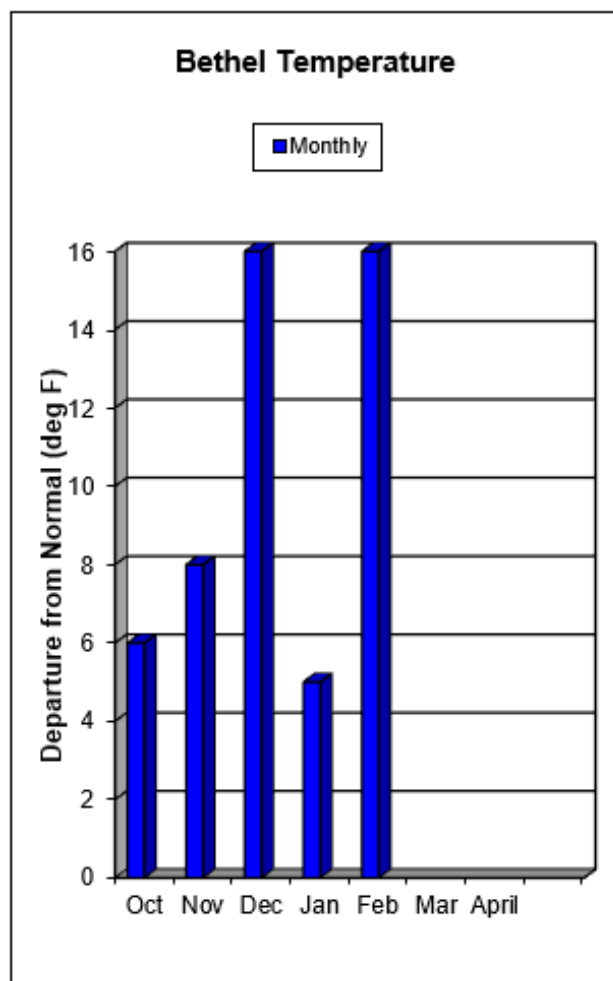
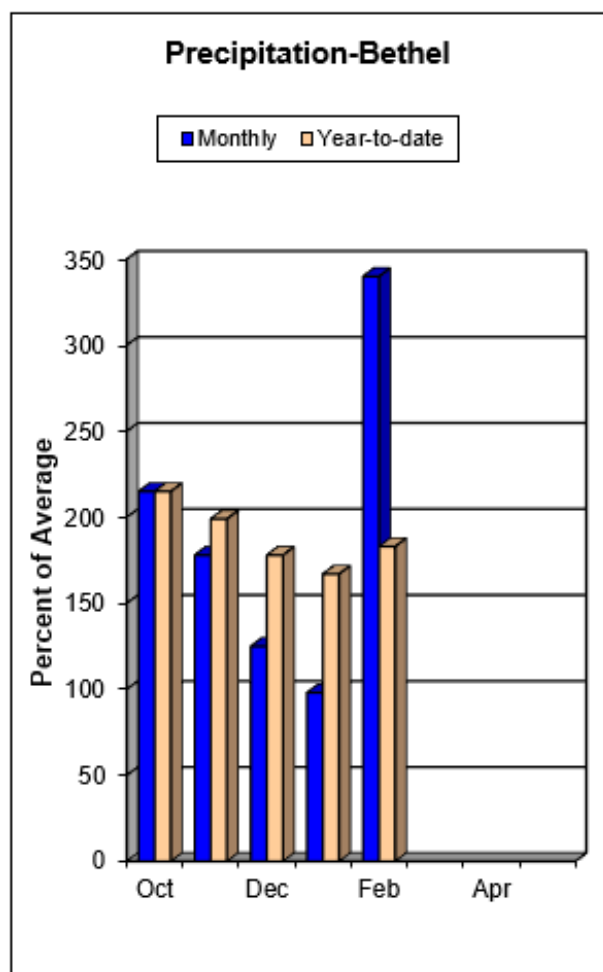
Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Norton Sound					
Pargon Creek	100	7.2	5.0	5.1	141%
Rocky Point	250	6.4	3.2	4.8	133%

Norton Sound/Bristol Bay

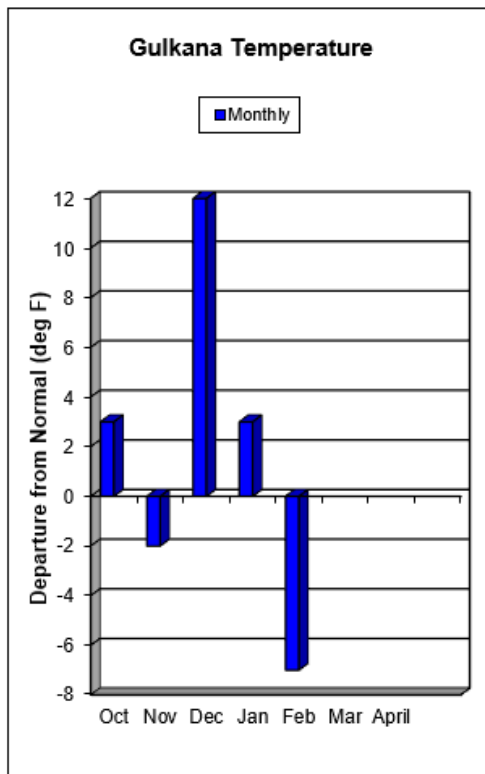
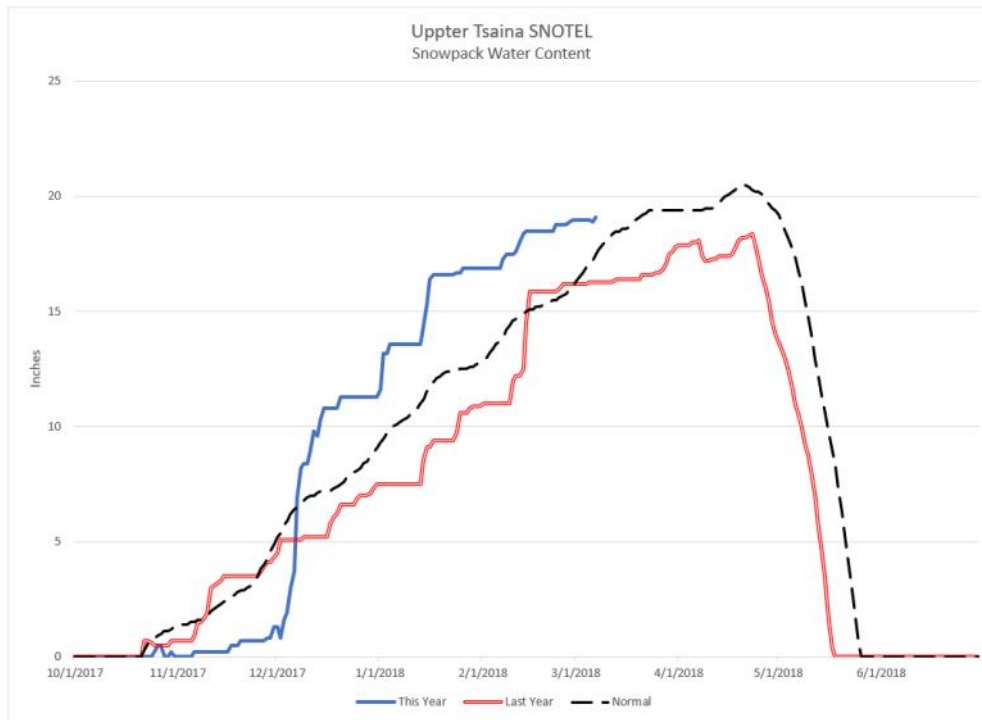
Snowpack Data

		Snow Depth (in)			Water Content (in)		
Site Name	Elev.	Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Bristol Bay							
Port Alsworth	270	11	21	18	3.2	3.7	3.6
Norton Sound							
Johnsons Camp	25	30	9	---	---	---	---
Pargon Creek	100	21	15*	---	3.7	2.4*	---
Rocky Point	250	40	30*	---	6.4	4.5*	---

*Estimate



Copper Basin



Snowpack

The Copper Basin snowpack continues to have much above normal snowpack. Several sites recorded near record snowpacks. Haggard Creek snow course, north of Sourdough, measured its wettest March 1 snowpack since 1990 with 36" of snow and 7.4" of water content.

Sites across the basin ranged from near normal in the Chugach Mountains to almost twice normal at Chistochina. The basin gained roughly between 2 and 10 inches of depth during the month and between 0.3 and 1.5" inches of water content.

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	29	17	20	6.1	2.8	3.2
Chokosna	1550	14	14	16	2.6	2.7	3.2
Copper Center	1264	30	21	---	5.5	3.6	---
Dadina Lake	2160	36	---	27	7.4	---	5.4
Fielding Lake	3000	48	27	37	9.9	5.5	8.6
Fielding Lake	3000	40	20	---	9.0	4.9	---
Haggard Creek	2540	36	20	26	7.4	3.5	5.2
Kenny Lake School	1300	27	18	17	4.8	3.3	3.0
Little Nelchina	2650	31	17	24	5.7	2.7	4.7
Lost Creek	3030	28	14	17	4.5	2.2	3.0
Mentasta Pass	2430	34	20	24	5.4	3.6	5.1
Monsoon Lake	3100	35	---	28	6.6*	---	5.4
Nicks Valley	4280	87	82	---	---	---	---
Paxson	2650	44	24	30	8.9	4.5	5.9
Sanford River	2280	34	---	28	6.9*	---	5.2
St. Anne Lake	1990	30	---	23	6.1	---	4.2
Tazlina	1250	27	19	16	5.3	3.6	3.4
Tolsona Creek	2000	28	19	20	5.6	3.2	3.8
Tsaina River	1650	58*	49	53	14.2*	12.5	14.1
Twin Lakes	2400	32	---	28	7.2	---	5.6
Upper Tsaina River	1750	70	56	---	19.0	16.2	16.3
Worthington Glacier	2100	62*	64	69	21.2*	19.9	21.6

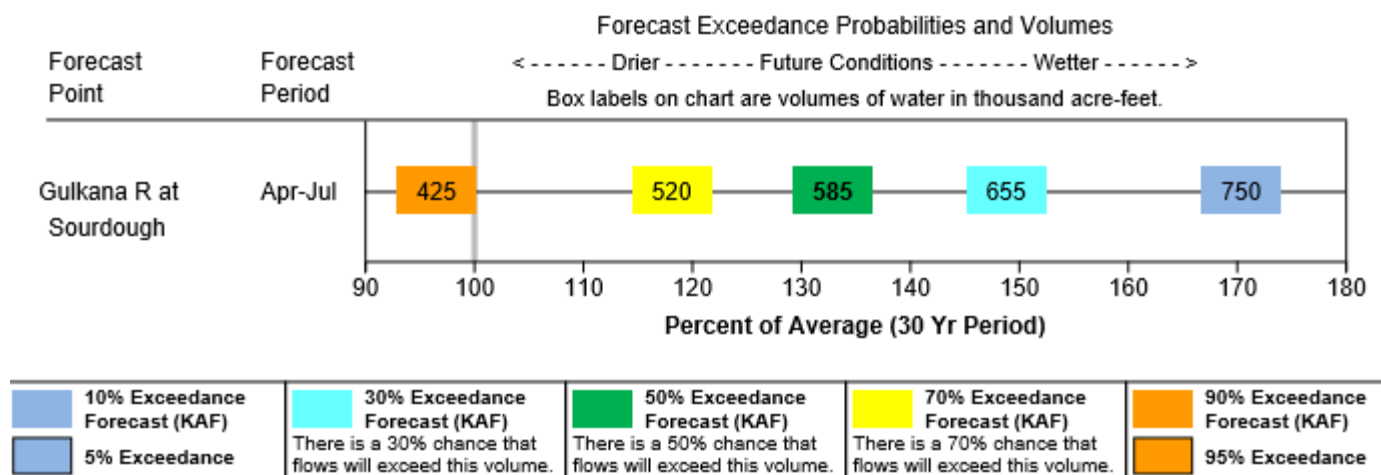
*Estimate

Precipitation

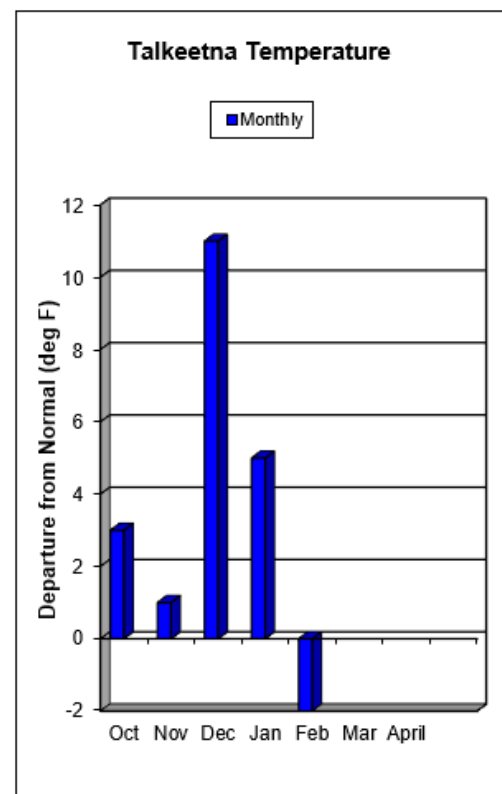
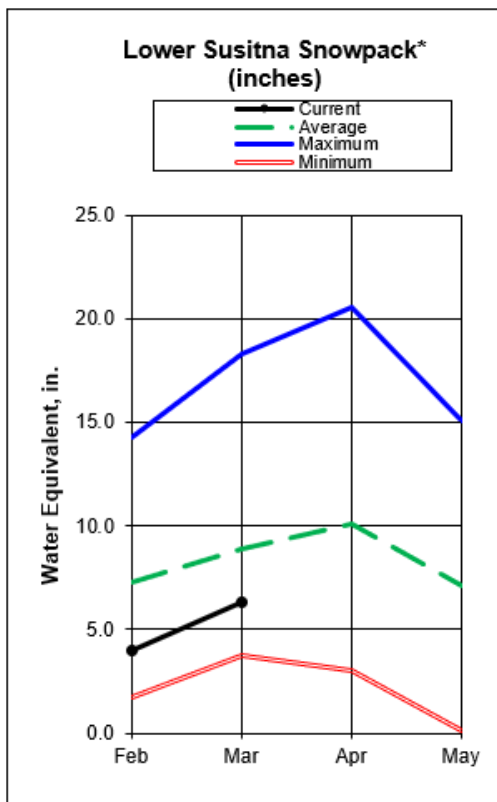
Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
May Creek	1610	Site offline	4.2	5.5	---
Upper Tsaina River	1750	23.5	15.0	24.1	98%

Streamflow Forecasts



Matanuska—Susitna Basin



Snowpack

A series of storms brought above normal February precipitation to much of the Matanuska and Susitna Basins. Still, the snowpacks in the lower basin are below normal with most sites reporting 70-80% of normal snowpack. Sites in the Western Susitna are more robust than last year while those along the Parks Highway on the eastern side are lower than last year. The snowpack in the upper Susitna basin on the east side of the Talkeetna Mountains is much above normal with sites ranging from 120 to 150% of normal. Some measurement sites have nearly twice the amount of snow as they did last year.

The Matanuska and Little Susitna Basins saw above normal gains during the month which has yielded snowpacks which are now near or above normal. Sheep Mountain has 33" of snow with 7.1" of water content, the most since 2012 for a March 1st reading. The five sites in this area average 110% of normal

Precipitation

Site Name	Elev.	This Year	Inches Accumulated since October 1st		
			Last Year	1981-2010 Normal	% of Normal
Alexander Lake	160	12.2	7.8	---	---
Independence Mine	3550	19.4	10.4	13.3	146%
Monahan Flat	2710	8.1	4.3	7.1	114%
Susitna Valley High	375	12.8	6.4	10.5	122%
Tokositna Valley	850	18.4	9.7	17.1	108%

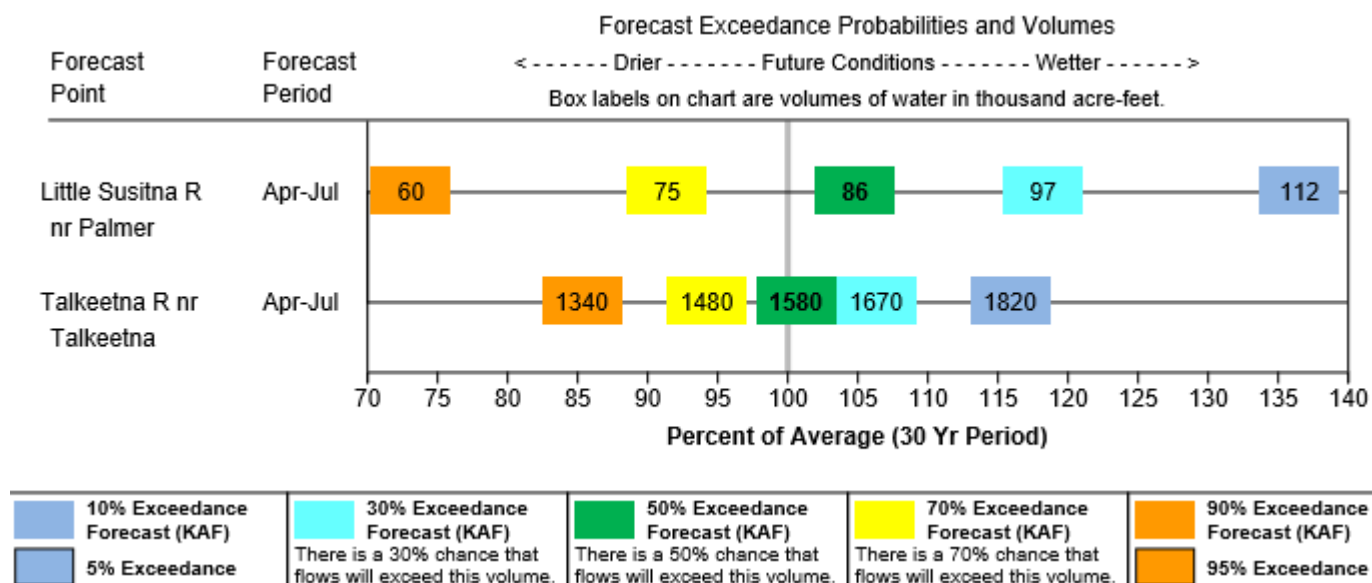
Snowpack Data

Matanuska—Susitna Basin

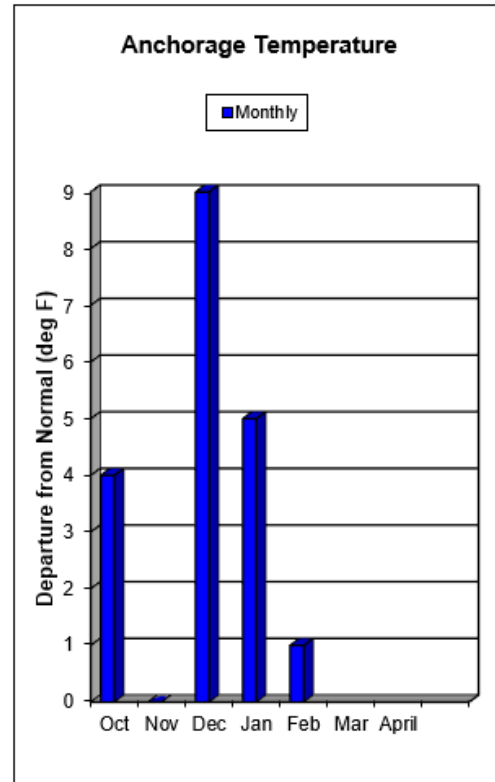
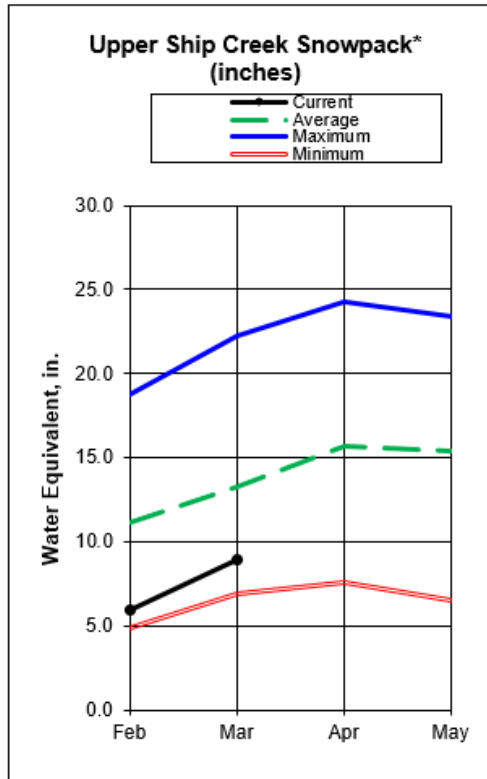
Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Alexander Lake	160	35	28	44	7.5	5.8	11.0
Alexander Lake SNOTEL	160	28	24	---	6.0	4.9	---
Archangel Road	2200	52	39	42	12.8	8.9	11.7
Birthday Pass	4020	90	55	---	26.5	15.6	---
Blueberry Hill	1200	47	37	45	10.6	8.3	12.8
Curtis Lake	2850	32	---	21	6.1*	---	4.0
Denali View	700	40	29	38	7.9	6.2	10.9
E. Fork Chulitna	1770	48	36	46	11.7	7.2	11.2
Fishhook Basin	3300	64	43	53	16.0	10.3	15.6
Fog Lakes	2120	35	---	22	6.2	---	4.3
Horsepasture Pass	4300	33	---	28	6.6	---	5.5
Independence Mine	3550	78	47	62	21.9	11.0	18.6
Independence Mine SNOTEL	3550	60	41	---	13.8	9.8	10.2
Lake Louise	2400	27	17	21	5.0	2.5	3.8
Little Susitna	1700	44	36	37	9.5	7.7	9.7
Monahan Flat	2710	33	23	33	6.7*	4.7	6.8
Sheep Mountain	2900	33	22	24	7.1	3.6	4.8
Skwentna	160	33	29	42	7.4	6.1	10.6
Square Lake	2950	29	---	21	5.5	---	3.5
Susitna Valley High	375	28	27	---	5.3	6.0	7.2
Talkeetna	350	30	22	28	5.2	4.5	6.2
Tokositna Valley	850	46	37	---	11.6	9.4	10.4
Tyone River	2400	30	---	24	5.9*	---	4.4
Upper Oshetna River	3150	29	---	20	5.8*	---	4.0
Willow Airstrip	200	30	28	27	5.1*	5.4	5.7

*Estimate

Streamflow Forecasts



Northern Cook Inlet



Snowpack

Despite plentiful precipitation during February, snowpacks in the area remain below normal, with most sites only 50-70% of median conditions. The eleven sites in this area average 59% of normal, less than the 69% of last year.

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	27	30	---	5.9	7.6	8.3
Congahbuna Lake	550	28	27	34	7.3	6.1	9.0
Granite Point	250	9	14	20	1.9*	2.8	4.7
Indian Pass	2350	59	48	---	13.1	10.7	19.3
Kincaid Park	250	19	22	17	3.2	4.7	3.9
Lone Ridge	1675	64	62	76	18.1*	16.1	29.0
Moraine	2100	14	23	---	3.3	5.5	6.8
Mt. Alyeska	1540	46	51	---	11.8	15.4	26.6
Portage Valley	50	22	51	36	4.6	13.8	11.0
South Campbell Creek	1200	18	27	24	3.0	5.5	5.8

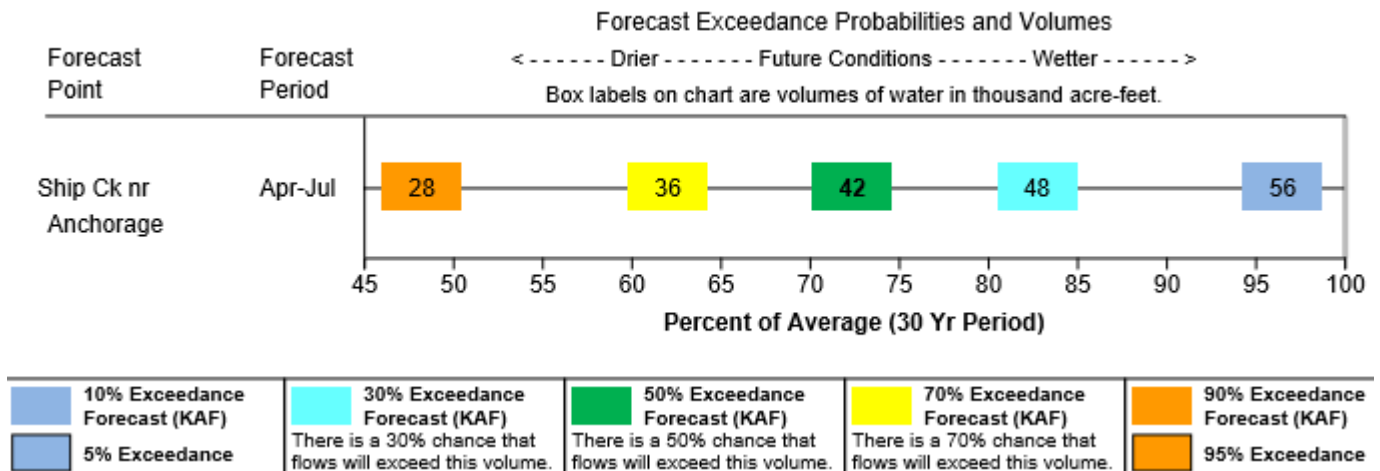
*Estimate

Precipitation

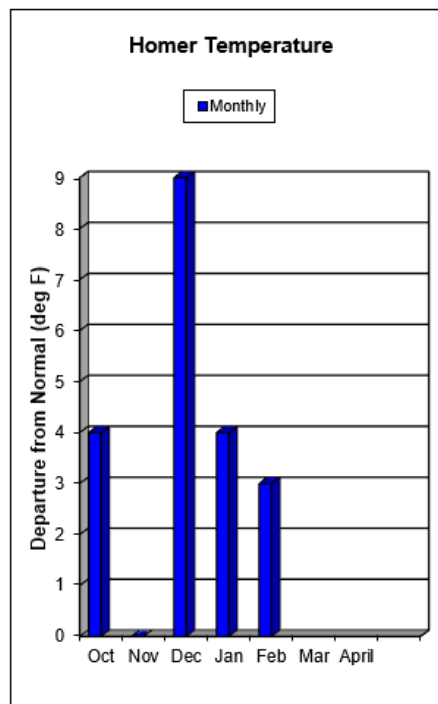
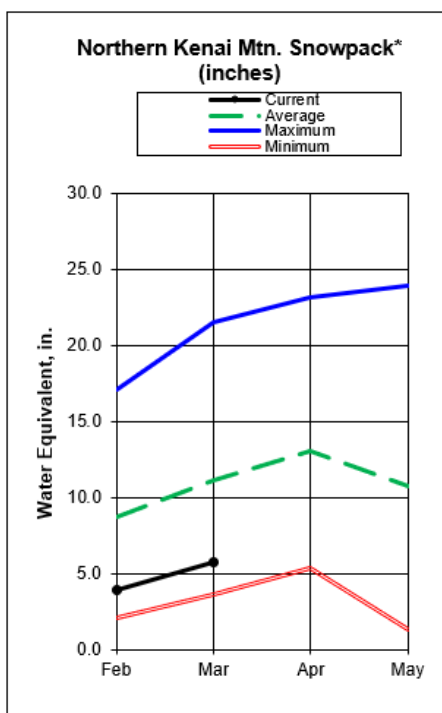
Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Anchorage Hillside	2080	10.3	7.9	11.9	87%
Indian Pass	2350	21.3	17.8	22.0	97%
Moraine	2100	6.6	6.4	10.1	65%
Mt. Alyeska	1540	28.8	25.6	39.9	72%

Streamflow Forecasts



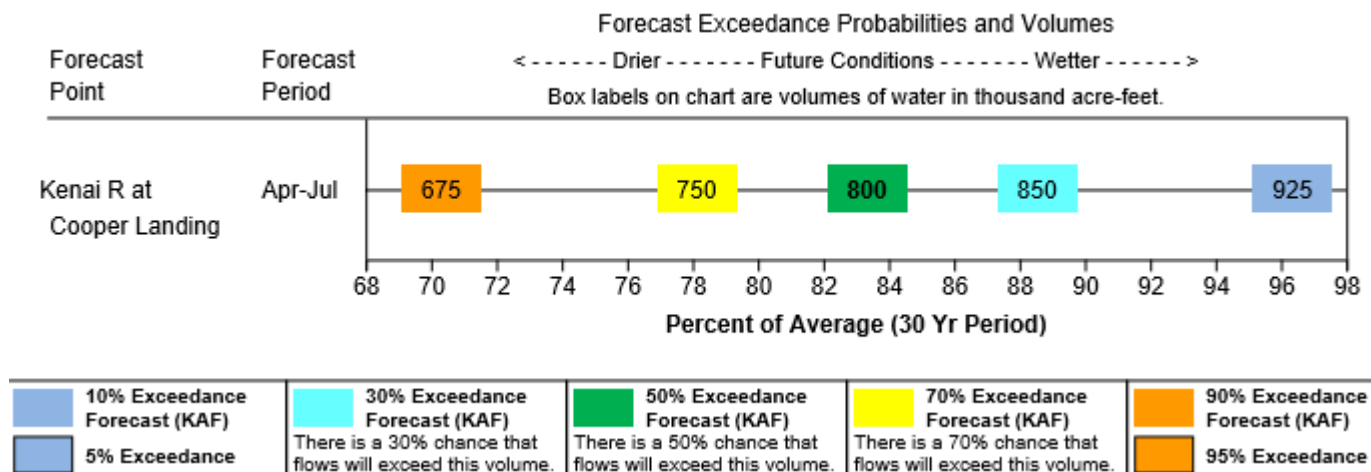
Kenai Peninsula



Snowpack

Most of the Kenai Peninsula received between 1 and 2 inches of precipitation during February. This is near to above normal for areas near Cook Inlet on the western side, but a quarter to half normal for areas on the eastern side near the Gulf of Alaska. As a result, only some areas on the western portion of the Kenai have near normal snowpacks, while the vast majority of the Peninsula have lackluster snowpacks, ranging from 25 to 70% of normal. The 12 sites in the Kenai Mountains average 53% of normal.

Streamflow Forecasts



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	43	37	---	11.0	9.0	10.1
Bertha Creek	950	32	36	47	6.4	8.1	14.7
Bridge Creek	1300	20	39	34	5.2	9.6	9.6
Cooper Lake	1200	27	45	---	8.1	12.5	13.1
Demonstration Forest	780	8	27	23	2.2	6.5	6.6
Eagle Lake	1400	31	42	40	6.1	10.7	10.4
Exit Glacier	400	22	60	48	5.4	16.8	15.9
Exit Glacier	400	23	60	---	6.5	16.0	15.9
Grandview	1100	46	---	---	11.5	16.1	26.5
Grouse Creek Divide	700	28	54	---	8.9	18.4	14.6
Indian Pass	2350	59	48	---	13.1	10.7	19.3
Jean Lake	620	14	23	14	2.1	3.5	3.2
Kenai Moose Pens	300	21	21	---	3.8	4.3	4.0
Kenai Summit	1390	33	36	45	7.6	8.1	12.3
Lower Kachemak Creek	1915	36	13	---	---	---	---
Mcneil Canyon	1320	23	37	---	5.8	8.5	9.0
Middle Fork Bradley	2300	39	62	---	---	---	---
Moose Pass	700	22	40	20	3.2	9.6	6.0
Mt. Alyeska	1540	46	51	---	11.8	15.4	26.6
Port Graham	300	6	29	---	1.5	7.7	6.7
Portage Valley	50	22	51	36	4.6	13.8	11.0
Snug Harbor Road	500	9	25	17	1.3	6.5	5.2
Summit Creek	1400	30	29	---	6.6	6.9	10.0
Turnagain Pass	1880	72	65	---	19.4	17.8	27.9

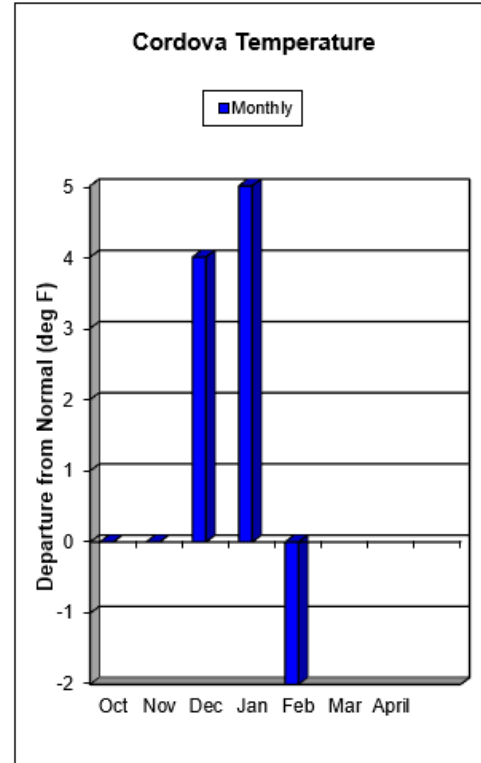
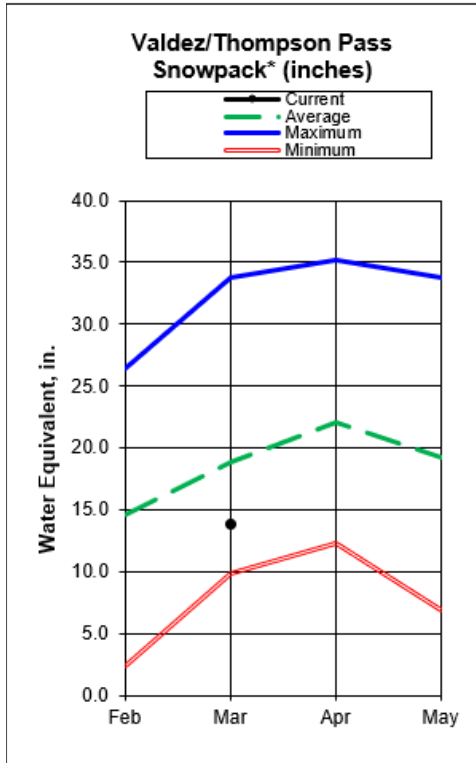
**Estimate*

Precipitation

Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Anchor River Divide	1653	16.0	13.8	14.4	111%
Cooper Lake	1200	19.5	18.7	22.9	85%
Grandview	1100	28.2	29.1	34.8	81%
Grouse Creek Divide	700	30.4	31.3	33.3	91%
Kachemak Creek	1660	38.9	32.5	34.7	112%
Kenai Moose Pens	300	8.4	5.0	7.3	115%
Mcneil Canyon	1320	12.9	13.5	14.9	87%
Middle Fork Bradley	2300	26.7	27.9	29.0	92%
Nuka Glacier	1250	42.2	38.1	48.2	88%
Port Graham	300	37.5	26.7	43.5	86%
Summit Creek	1400	14.5	10.0	14.0	104%
Turnagain Pass	1880	26.4	27.7	34.3	77%

Western Gulf – Prince William Sound



Snowpack

Precipitation across Prince William Sound was less than half of average for February. Snowpacks are mixed with most sites having below normal snowpacks, though Worthington Glacier Snow Course is right near normal with 62" of snow and 21.2 inches of water content. Esther Island SNOTEL is reporting 28" of snow, down from 35" last year and up from no snow the year before.

Western Gulf — Prince William Sound

Snowpack Data

Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Exit Glacier	400	22	60	48	5.4	16.8	15.9
Exit Glacier	400	23	60	---	6.5	16.0	15.9
Grouse Creek Divide	700	28	54	---	8.9	18.4	14.6
Lowe River	600	42*	43	50	11.0*	11.5	14.8
Mt. Eyak	1405	33	57	---	9.0	20.6	22.1
Nicks Valley	4280	87	82	---	---	---	---
Sugarloaf Mountain	550	41	59	70	14.4	19.2	21.1
Tsaina River	1650	58*	49	53	14.2*	12.5	14.1
Upper Tsaina River	1750	70	56	---	19.0	16.2	16.3
Valdez	50	32*	42	46	9.0*	12.0	14.0
Worthington Glacier	2100	62*	64	69	21.2*	19.9	21.6

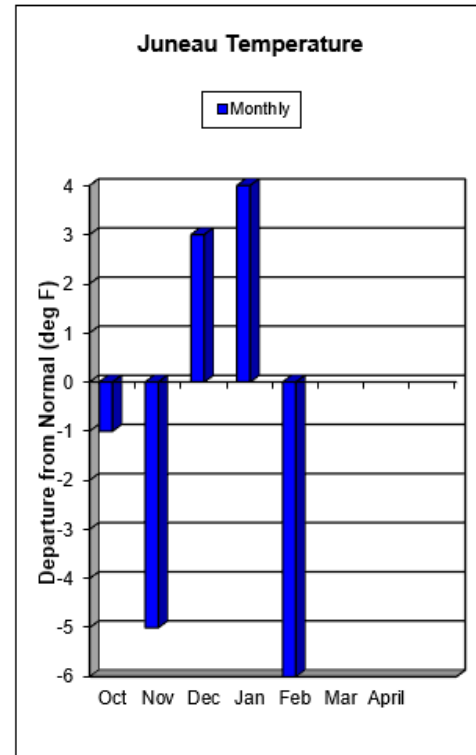
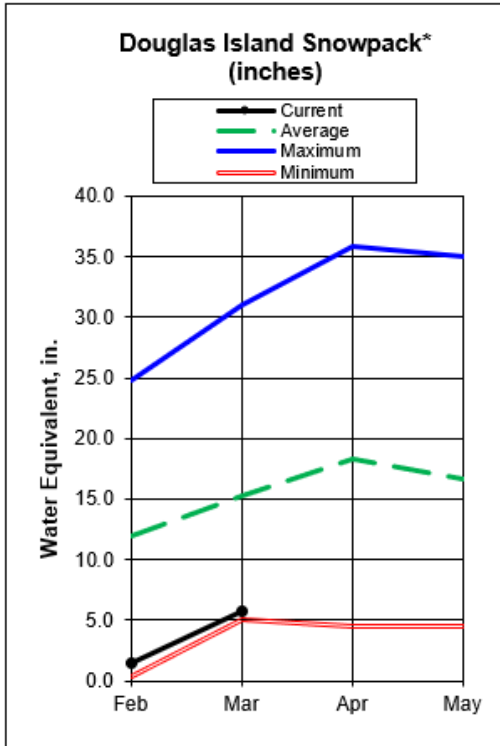
*Estimate

Precipitation

Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Esther Island	50	72.5	52.3	71.9	101%
Grouse Creek Divide	700	30.4	31.3	33.3	91%
Mt. Eyak	1405	63.2	42.5	---	---
Nuchek	50	69.3	49.6	---	---
Nuka Glacier	1250	42.2	38.1	48.2	88%
Port Graham	300	37.5	26.7	43.5	86%
Seal Island	20	30.6	21.7	---	---
Strawberry Reef	30	35.3	31.2	---	---
Sugarloaf Mtn	550	40.5	24.4	34.5	117%
Tatitlek	50	38.6	25.6	35.7	108%

Southeast



Snowpack

February precipitation in Southeast Alaska was near half the average amount at most reporting stations, however many snowpack measurement sites reported above normal gains for the month. With the colder than normal temperatures, precipitation fell mainly as snow, greatly aiding the development of lower elevation snowpacks. The Petersburg snow courses were hit the heaviest and (at 550ft and 1650ft of elevation) both gained over 5" of SWE – the lower Reservoir site gained 5.5" of SWE and stood at 8.1" of water content on March 1st, 200% of normal while the upper site gained 5.2" and had 11.2" of water content, 52% of normal.

In the northern part of the panhandle, northeast of Haines, the new SNOTEL site Flower Mountain at 2510ft of elevation had 38" of snow with 9.5" of water content.

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	42	57	71	9.1	21.3	23.1
Eagle Crest	1200	34	44	45	5.3	7.6	16.5
Fish Creek	500	20	2	20	3.1	0.2	6.5
Flower Mountain	2510	38	---	---	9.5	---	---
Heen Latinee	2065	32	45	---	7.0	12.7	---
Institute Creek	1350	39	26	---	10.9	9.4	---
Long Lake	850	74	55	---	18.1	19.6	27.2
Moore Creek Bridge	2250	25	51	64	6.0	14.6	18.9
Petersburg Reservoir	550	31	14	18	8.1	2.4	4.0
Petersburg Ridge, S.	1650	46	47	65	11.2	15.9	21.4
Rainbow Falls	500	21	0	---	3.4	0.0	---
Speel River	280	65	42	68	18.9*	17.0	23.7
West Creek	475	14	19	---	2.0	5.6	---

*Estimate

Precipitation Data

Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Long Lake	850	64.7	72.0	85.9	75%
Heen Latinee	2065	30.5	30.7	---	---
Moore Creek Bridge	2250	18.7	23.5	23.7	79%

Streamflow Forecasts

Forecast Point	Forecast Period	% of Average	Maximum(%)	Minimum(%)	50% Exceedance (KAF)	30yr Average (KAF)
Taiya River near Skagway	Apr-Jul	84	106	62	390	464

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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