

Alaska Snow Survey Report



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 Climate
 Monitoring and Diagnostics Laboratory
U.S. Department of Defense
 U.S. Army Corps of Engineers
 U.S. Army Cold Regions Research and
 Engineers Laboratory
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
 Fairbanks SWCD
 Homer SWCD
 Salcha-Big Delta SWCD
University of Alaska
 Agriculture and Forestry
 Experiment Station
 Geophysical Institute
 Water and Environment Research
 Reindeer Research Program
 Institute of Arctic Biology LTER

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

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

United States Department of Agriculture



Issued by:

Leonard Jordan, Acting Chief
Natural Resources Conservation Service
Washington, D.C.

Released by:

Robert Jones
State Conservationist
Natural Resources Conservation Service
Palmer, Alaska

Published by:

Daniel Fisher, Hydrologist
Tony DeMarco, Hydrologist
Dan Kenney, Hydrologic Technician
Snow, Water and Climate Staff
Natural Resources Conservation Service
Palmer, Alaska

Cover photo: Snow Surveyor Dan Kenney measures the Independence Mine Snow Course on April 30, 2018. The snow course had 100 inches of snow depth with 32.8 inches of water content. This is the most snow at the site on May 1st since 2005.

Table of Contents

State General Overview.....	5-6
State Precipitation Maps.....	7
State Snowpack Map.....	8
Streamflow Forecasts.....	9
How Forecasts are Made.....	10
How to Interpret Graphical Forecasts.....	11
Basin Conditions and Data	
Upper Yukon Basin.....	12,13
Central Yukon Basin.....	14,15
Tanana Basin.....	16,17
Western Interior Basins.....	18,19
Arctic and Kotzebue Basin.....	20,21
Norton Sound, Southwest, and Bristol Bay.....	22,23
Copper Basin.....	24,25
Matanuska - Susitna Basins.....	26,27
Northern Cook Inlet.....	27,29
Kenai Peninsula.....	30,31
Western Gulf	32,33
Southeast	34,35
Telephone Numbers and other contact information	36

General Overview

SnowPack

Snowpack trends from last month continue into May. Southeast and much of Southcentral endure paltry snowpacks while much of the Interior and northwest Alaska preserved vigorous snowpacks.

April started with enough sunshine and warmth to start the meltout process over much of the state by mid-month. The weather changed later in the month and stalled the meltout process in many of the mountains while the lowlands continued to melt. Several mountain locations across the state had snowpacks which have started to accumulate snow again after losing some to the early melt.

Southeast and Southcentral snowpacks are near half normal for this time of year. In Southcentral, the snowpack changes rapidly towards inland. The upper Susitna basin and Copper Basin both have above normal snowpacks. Several mountains sites have not reached peak snowpack yet. In the Interior, the valleys have either melted out or are closing in on it while the mountains have near record snowpacks. Many sites in the upper Chena Basin have their portliest snowpack since 1991.

Alaska Statewide Snowpack	# of Sites	Basin Index	
		Current Percent of Median	Last Year Percent of Median
Upper Yukon Basin	30	109	95
Central Yukon Basin	7	132	120
Tanana Basin	22	352	117
Koyukuk Basin	0	167	94
Kuskokwim Basin	3	—	—
Copper Basin	10	155	51
Matanuska-Susitna Basin	15	126	39
Northern Cook Inlet	7	46	52
Kenai Peninsula	18	43	55
Western Gulf of Alaska	5	59	74
Southeast Alaska	4	51	57

General Overview– Continued

Precipitation

Many regions across the state switch precipitation patterns from March to April. The Gulf of Alaska Coast, which had below normal precipitation in March, had above normal precipitation in April. Much of the Interior which had above normal precipitation in March, had below normal precipitation in April.

Areas along the Gulf of Alaska from Ketchikan to the Kenai received between 87 and 139% of normal precipitation. Other areas with above normal precipitation includes the Susitna Basin and western Alaska, from the Seward Peninsula, southward. The four measurement sites in the Susitna Basin average 166% of normal April precipitation, while sites on the Seward Peninsula average 118% of normal.

Regions with below normal precipitation include the Copper River basin, the Cook Inlet area, and most of the Interior and Arctic. Much of this area received between a third to one half of normal April precipitation. An early May storm has been dropping snow and rain across the Interior, however, in the meantime

Temperature

Like March, temperatures stations across Alaska reported near normal to much above normal monthly temperatures for April. Stations in Southeast the Interior reported close to normal monthly temperatures while the Southcentral, Arctic and western Alaska above normal. A large

Fairbanks, Fort Yukon, Gulkana, Juneau, Cordova and Whitehorse all reported near normal monthly temperatures.

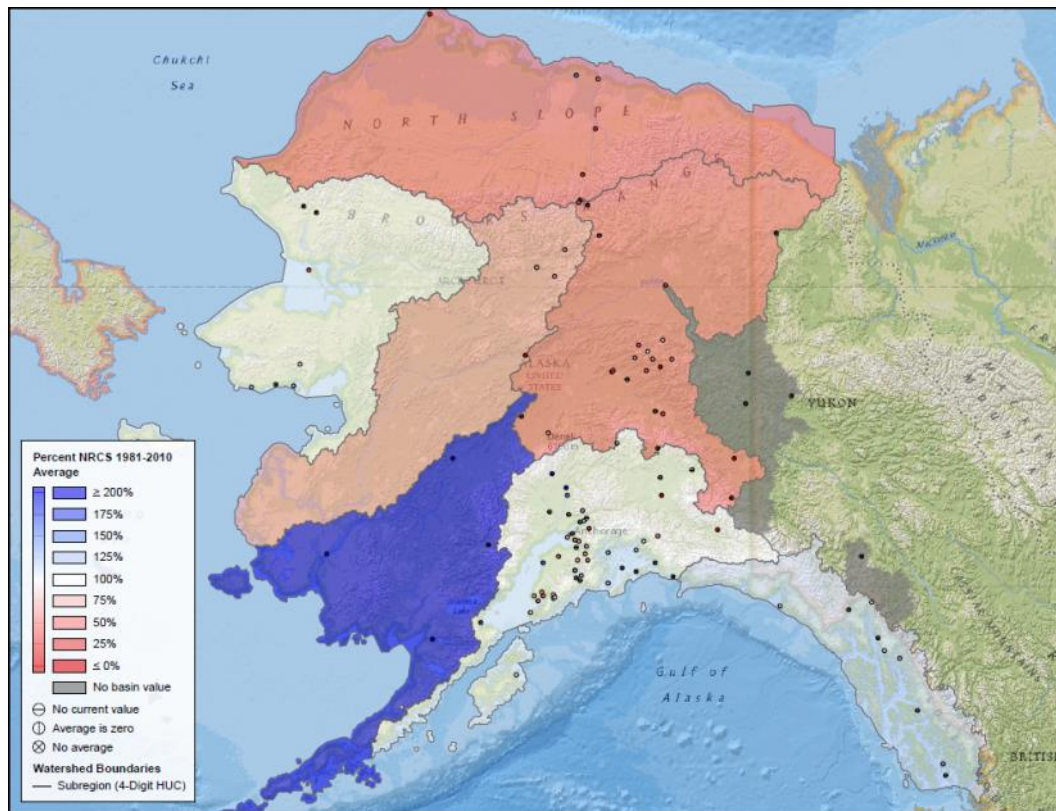
Anchorage, Homer, and Talkeetna were all 4 to 5°F above normal for the month.

Like last month, both Bethel and Nome were well above normal. They, along with Utqiagvik (Barrow) were 9°F above normal for the month.

Alaska Statewide Precipitation Maps

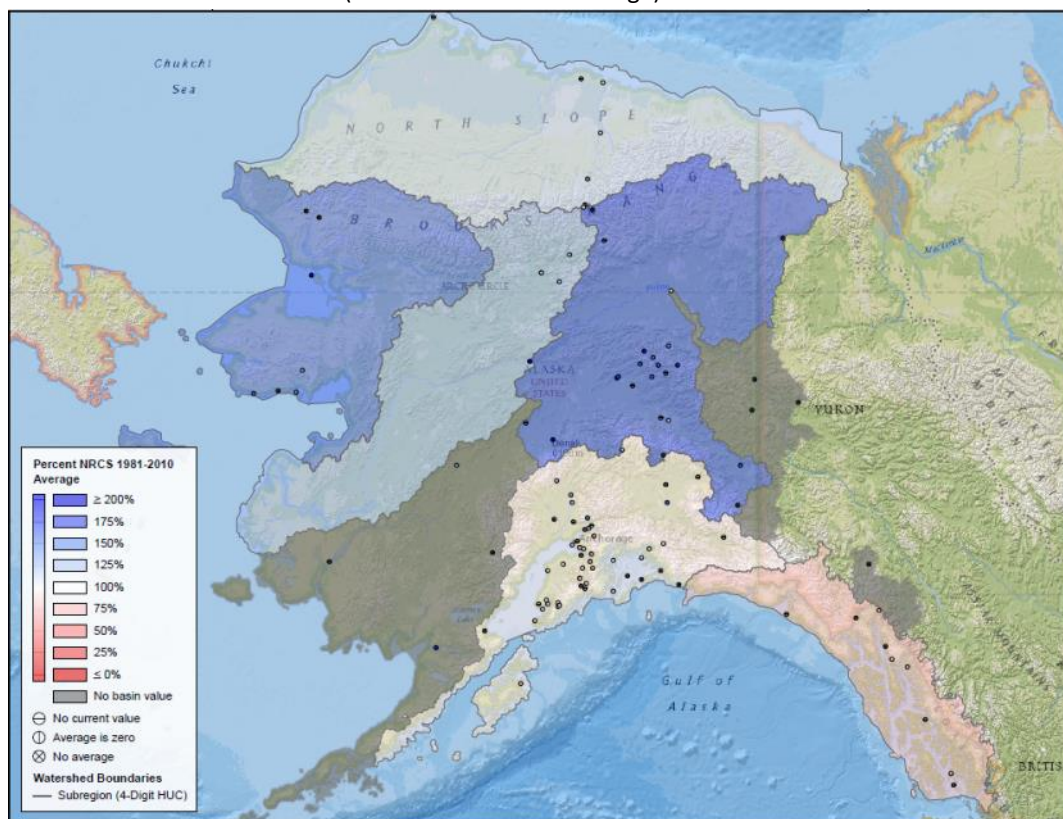
Monthly Precipitation for the month of April, 2018

(% of NRCS 81-2010 Average)



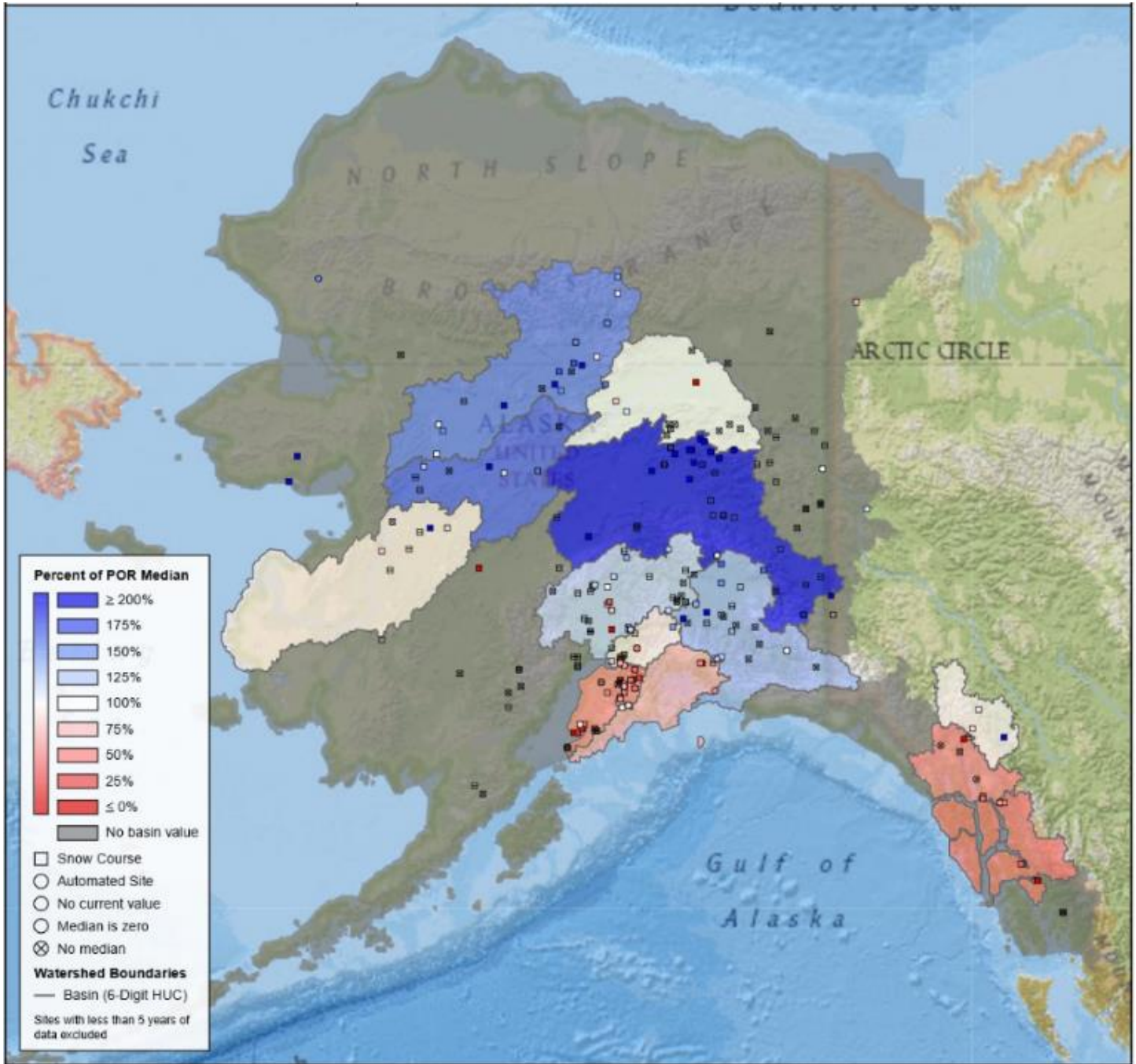
Water Year-to-date Precipitation (Oct. 1-April 30th, 2018)

(% of NRCS 81-2010 Average)



Alaska Statewide Snowpack Map

Based on May 1st, 2018 Snow Water Equivalent



Streamflow Forecasts

FORECAST POINT*	Percent of Ave. Flow	Period
Yukon River at Eagle	95	May - July
Porcupine River nr Int'l Boundary.....	111	May - July
Yukon River near Stevens Village	102	May - July
Tanana River at Fairbanks	103	May - July
Tanana River at Nenana	113	May - July
Little Chena River near Fairbanks	151	May - July
Chena River near Two Rivers	163	May - July
Salcha near Salchaket	148	May - July
Kuskokwim R at Crooked Creek	114	May - June
Sagvanirktok River near Pump Station 3	151	May - July
Kuparuk River near Deadhorse	123	May - July
Gulkana River at Sourdough	131	May - July
Little Susitna River near Palmer	126	May - July
Talkeetna River near Talkeetna	121	May - July
Ship Creek near Anchorage	70	May - July
Kenai River at Cooper Landing	84	May - July
Taiya River near Skagway	87	May - July

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

FORECAST POINT	INDEX	Index	Key:
Koyukuk River at Hughes.....	1.2		
MF Koyukuk R near Wiseman	1.5		
Slate Creek at Coldfoot.....	1.5		
Beaver Creek above Victoria Creek.....	—		
Birch Creek below South Fork.....	—		
Caribou Creek at Chatanika.....	3.0	-2 to -3	much below aver- age snowmelt runoff
Susitna River near Gold Creek.....	-0.5		
Chulitna River near Talkeetna.....	-1.5		
Deshka River at mouth near Willow.....	-1.5		
Montana Creek at Parks Highway.....	-2.0	-1 to -2	below average snowmelt runoff
Willow Creek near Willow.....	1.0		
Skwentna River at Skwentna.....	—		
Chuitna River near Tyonek.....	—		
Campbell Creek near Spenard.....	—	-1 to +1	average snowmelt runoff
Indian Creek at Indian.....	-3.0		
Bird Creek at Bird Creek	-3.0		
Glacier Creek nr Girdwood	-2.8	+1 to +2	above average snowmelt runoff
Six Mile Creek near Hope.....	-2.5		
Resurrection Creek near Hope.....	—		
Grouse Ck at Grouse Lake Outlet nr Seward	-1.7		
Anchor River near Anchor Point	-2.8	+2 to +3	much above aver- age snowmelt runoff
Deep Creek near Ninilchik.....	-3.0		
Ninilchik River near Ninilchik.....	-3.0		
Fritz Creek near Homer.....	-2.5		
Skagway River at Skagway.....	-0.4		
Municipal Watershed C nr Petersburg	-1.7		
Gold Creek near Juneau.....	-2.6		

HOW FORECASTS ARE MADE

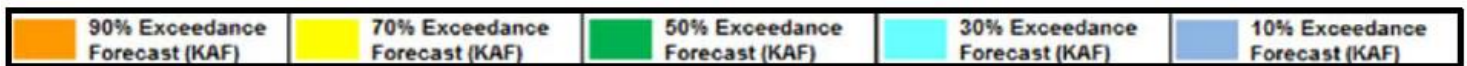
Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual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

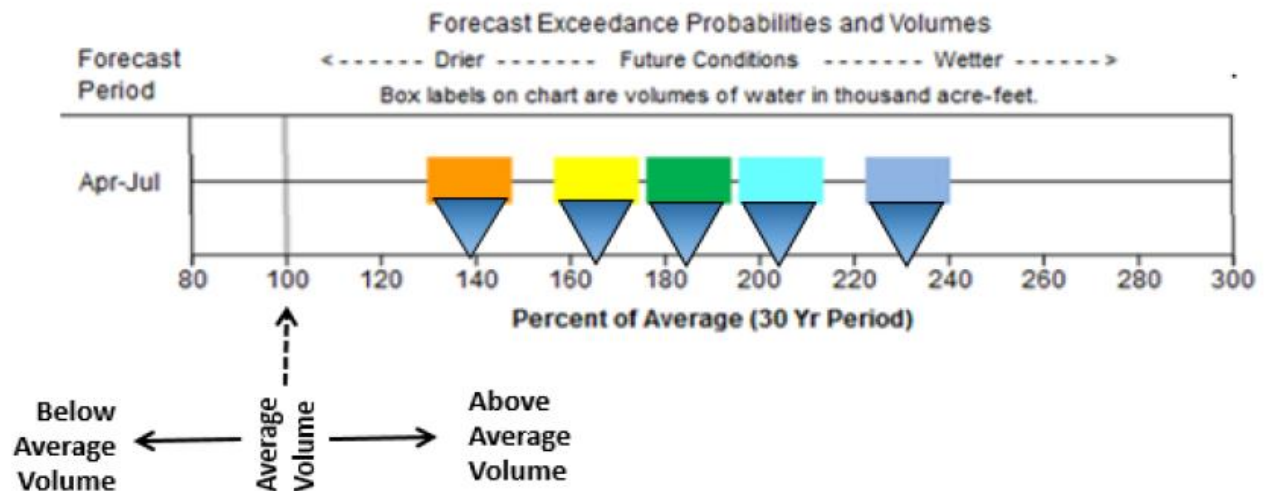
The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast.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

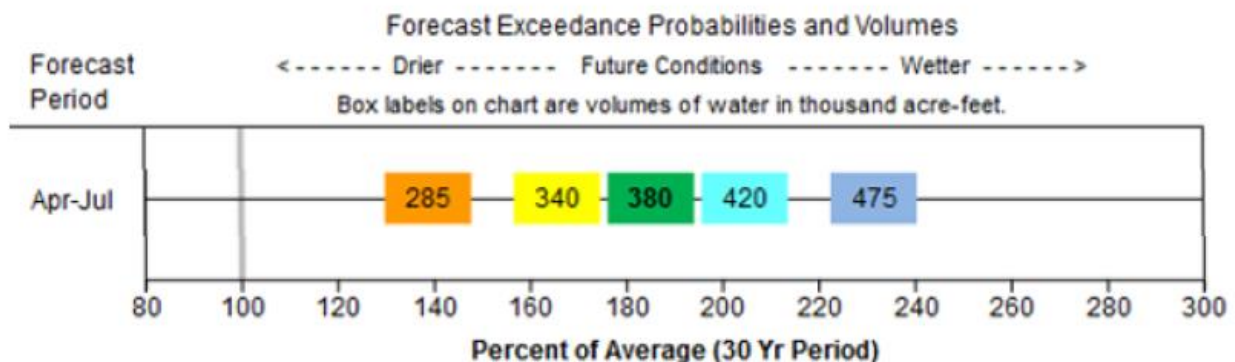
This graphic provides a visual alternative to the forecast tables the NRCS has presented for years. It gives both the volume and percent of average of each of the five forecast exceedances. The five colored boxes represent each forecast's five exceedances.



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.

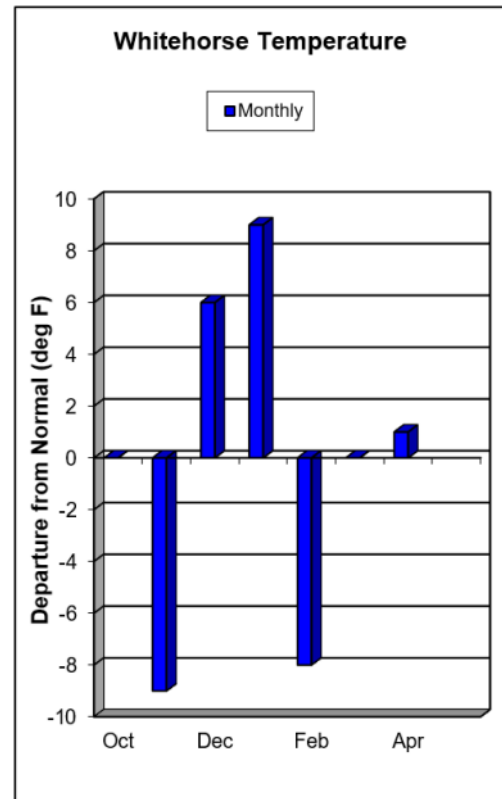
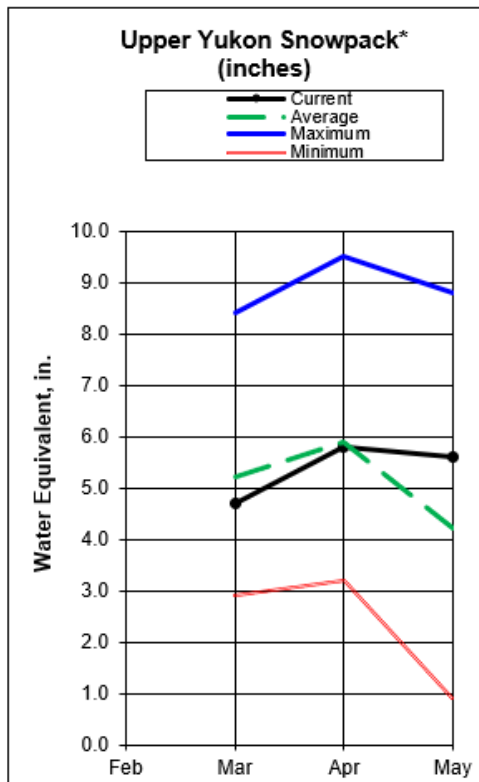


Boxes to the right of the gray 100% of average line represent above average volumes. Conversely, any boxes to the left of the gray 100% line represent below average volumes. In this case all forecast exceedances are for above average April-July volumes. Averages are based on the 1981-2010 period. The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



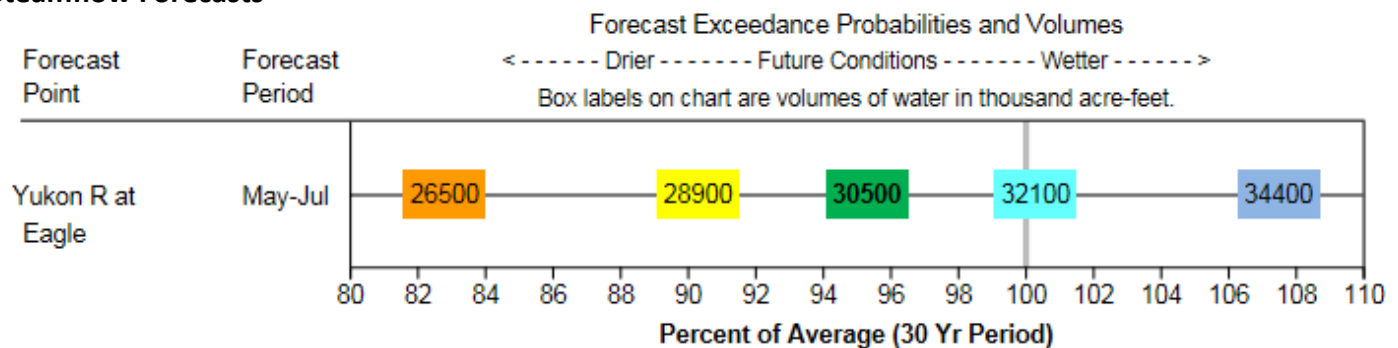
Snowpack

The snowpack in the Upper Yukon Basin remains variable this month. Some subbasins are much above normal and others are below normal. The thirty measurement sites average 109% of normal.

The White River Basin, in the southwestern portion of the Yukon Territory next to the border with Alaska, reported above normal snowpacks. Heading north along the border, the Dawson area also has above, but closer to, normal snowpacks.

To the east, the snowpack diminishes, but remains variable. The 12 snow measurement sites in the Pelly and Stewart drainages average 82%. The 10 sites upstream from Whitehorse average 111% of normal.

Steamflow Forecasts



10% Exceedance Forecast (KAF)	30% Exceedance Forecast (KAF)	50% Exceedance Forecast (KAF)	70% Exceedance Forecast (KAF)	90% Exceedance Forecast (KAF)
5% Exceedance	There is a 30% chance that flows will exceed this volume	There is a 50% chance that flows will exceed this volume	There is a 70% chance that flows will exceed this volume	95% Exceedance

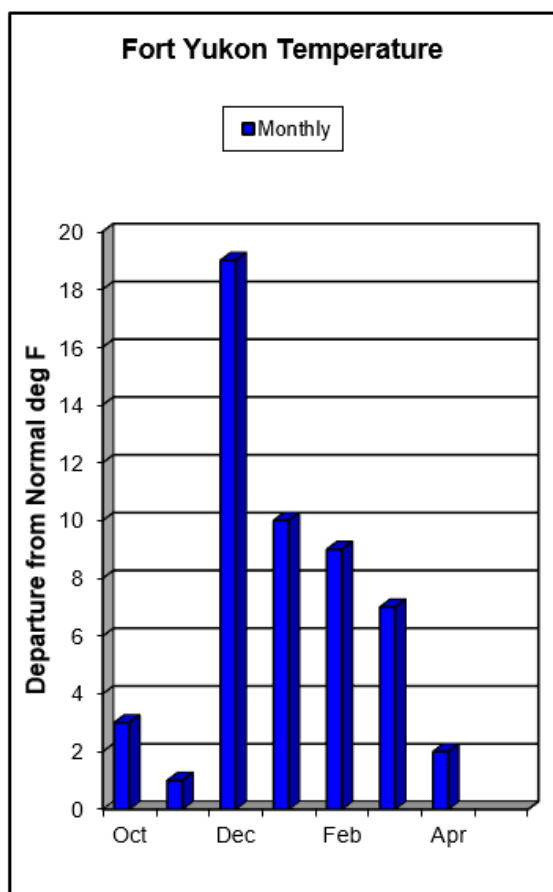
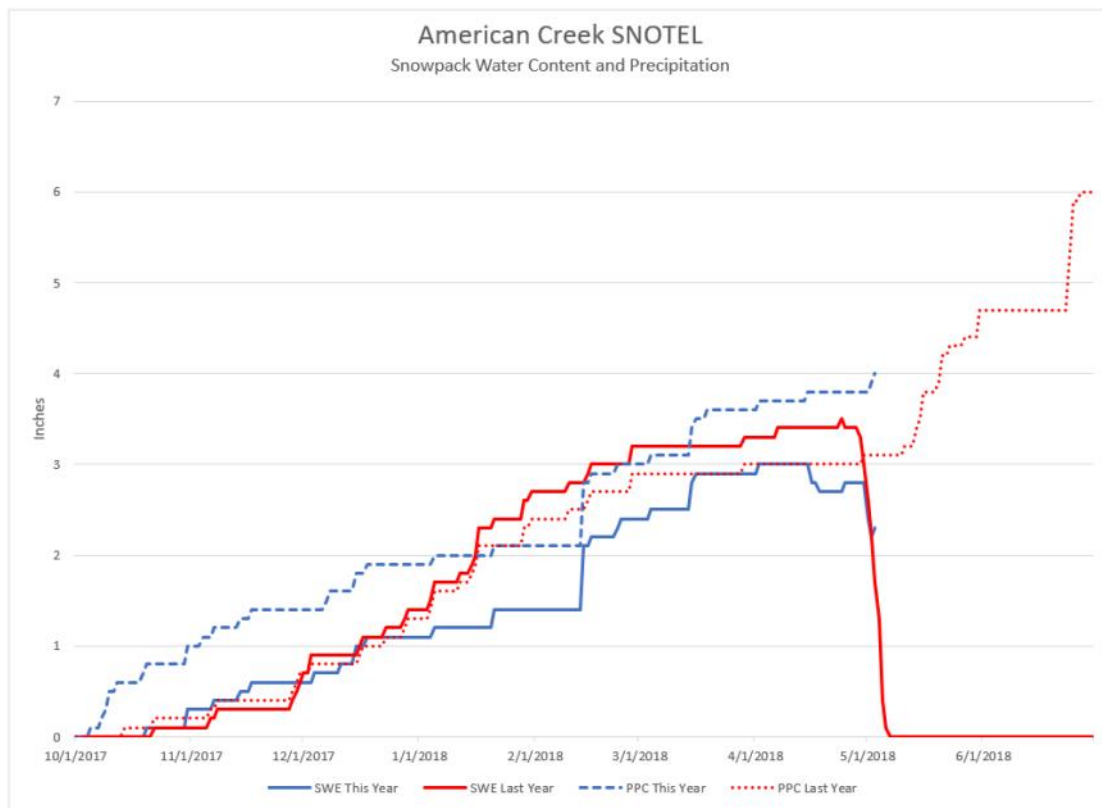
Upper Yukon Basin

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	4	---	0	1.5	---	0.0
Beaver Creek	2150	4	0	4	1.1	0.0	0.8
Blackstone River	1020	23	0	---	5.6	0.0	---
Burns Lake	3650	28	29	27	5.9	7.8	8.4
Burwash Airstrip	2660	5	0	0	1.4	0.0	0.0
Calumet	4300	28	23	33	6.7	6.5	7.3
Canyon Mine	1160	15	9	---	3.5	2.4	---
Casino Creek	3495	32	21	20	7.7	4.7	4.3
Chair Mountain	3500	24	---	---	5.8	---	---
Eagle Plains	2330	26	23	18	8.6	6.1	5.1
Eagle River	1115	24	17	17	5.5	4	4.0
Edwards Lake	2720	20	20	22	4.4*	4.3	6.0
Finlayson Airstrip	3240	18	10	8	3.6*	2.4	2.2
Francis River	730	16	7	---	3.1	1.7	---
Fuller Lake	3695	23	28	27	5.9	6.7	8.1
Grizzly Creek	3200	26	15	22	7.4	4.3	5.4
Hoole River	3400	19	16	14	3.8*	3.5	3.4
Hyland	855	19	18	---	6.1	5.3	---
Jordan Lake	3050	22	9	13	3.8	2.0	3.5
King Solomon Dome	3540	26	19	18	6.8	5.1	4.9
Log Cabin (B.C.)	2900	33	41	39	12.6	15.1	15.0
Macintosh	3805	21	17	6	4.7*	3.8	1.1
Mayo Airport	1770	0	0	0	0.0	0.0	0.0
Meadow Creek	4050	35	33	39	8.8	7.8	11.1
Midnight Dome	2805	24	17	20	5.8	4.3	5.2
Montana Mtn.	3350	17	18	17	4.4	4.7	4.9
Morley Lake	2700	12	3	11	3.1	0.8	3.3
Mt. Berdoe	3395	18	15	10	4.6	3.5	2.0
Mt. McIntyre B	3600	30	21	20	7.7	4.9	5.4
Mt. Nansen	3350	9	10	0	2.4	2.0	0.0
Ogilvie River	550	20	15	---	4.6	15.0	---
Old Crow	980	15	22	19	2.8	4.6	4.0
Pelly Farm	1550	2	0	0	0.6	0.0	0
Pine Lake Airstrip	995	30	15	---	6.9	3.7	---
Plata Airstrip	2725	15	16	19	4.6	5.1	5.9
Rackla Lake	3410	23	32	30	5.0	8.2	8.2
Riffs Ridge	2130	25	27	17	6.5	7.6	5
Rose Creek (Faro)	1080	12	6	---	2.6	1.8	---
Russell Lake	3480	32	27	30	7.1	7.3	8.6
Satasha Lake	3630	14	13	2	3.3	2.5	0.6
Summit	985	25	30	21	6.3	9.2	6.4
Tagish	3540	22	17	16	6.4	4	4.6
Twin Creeks	2950	17	---	20	4.0	---	6
Watson Lake Airport	685	13	2	---	3.3	0.6	---
Whitehorse Airport	2300	15	3	0	4.8	0.7	0.0
Williams Creek	3000	15	13	6	3.7	3.0	1.9
Withers Lake	3200	31	32	28	7.2	8.8	8.7

*Estimate

Central Yukon Basin



Snowpack

The snowpack in the Central Yukon Basin ranges between normal and above normal. Much of the Yukon Flats is melting out, leaving snow in the mountains. American Creek SNOTEL's snowpack (near Eagle, AK) peaked midmonth and will meltout on schedule.

Snowpack in the White Mountains likely remains much above normal, where Upper Nome Creek peaked with 53 inches of snow, its highest since it started in 2006.

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	10	9	---	2.4	2.6	---
Atigun Pass	4800	58	46	---	---	---	---
Eagle Summit	3650	24	9	---	---	---	---
Fort Yukon	430	10	9	---	---	---	---
Hess Creek	1000	13	21	10	4.0	5.6	2.6
Jack Wade Jct	3585	26	11	---	5.0	3.2	---
Old Crow	980	15	22	19	2.8	4.6	4.0
Seven Mile	600	9	16	12	2.7*	3.4	3.4
Thirty Mile	1350	32	21	28	10.1*	5.8	6.6
Upper Nome Creek	2520	43	15	---	---	---	---

*Estimate

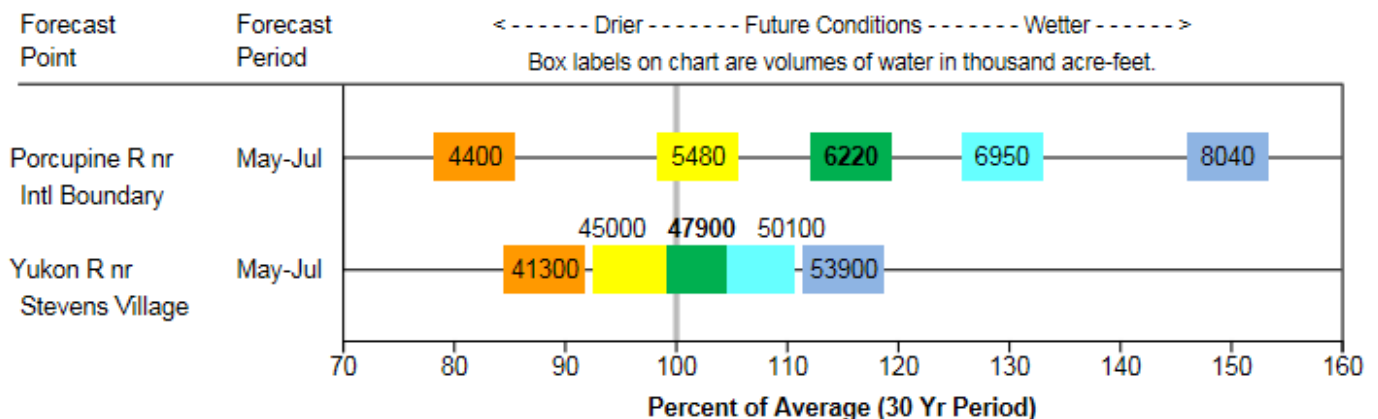
Precipitation

Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
American Creek	1050	3.8	3.1	---	---
Atigun Pass	4800	6.5	4.3	6.7	97%
Chandalar Camp	3300	5.9	4.2	5.2	113%
Eagle Summit	3650	8.9	4.0	5.9	151%
Fort Yukon	430	3.6	2.8	3.9	92%
Jack Wade Jct	3585	5.0	3.1	---	---
Upper Nome Creek	2520	12.4	7.0	6.5	191%

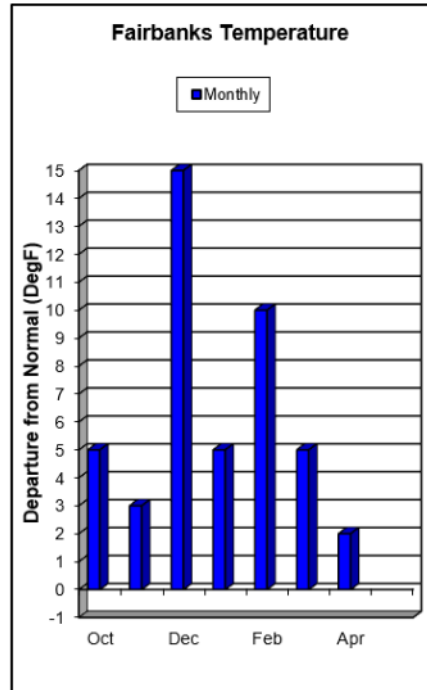
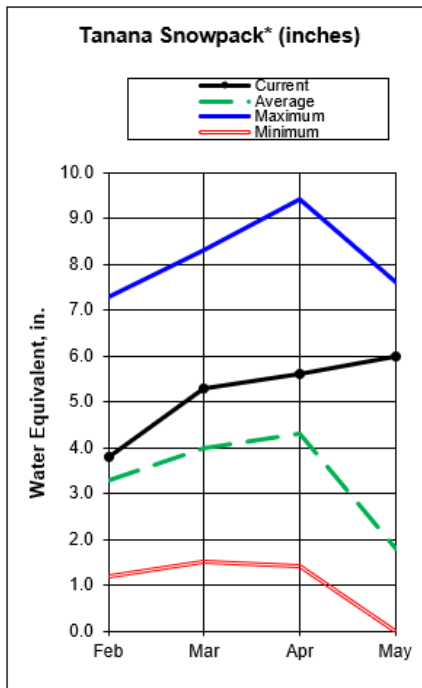
Streamflow Forecasts

Forecast Exceedance Probabilities and Volumes



10% Exceedance Forecast (KAF)	30% Exceedance Forecast (KAF)	50% Exceedance Forecast (KAF)	70% Exceedance Forecast (KAF)	90% Exceedance Forecast (KAF)
5% Exceedance	There is a 30% chance that flows will exceed this volume.	There is a 50% chance that flows will exceed this volume.	There is a 70% chance that flows will exceed this volume.	95% Exceedance

Tanana Basin



Snowpack

Even though the Tanana Basin only received half of normal monthly precipitation, its mountain snowpacks remain vigorous. The 22 measured sites in the Tanana average 354% of normal.

Several sites in the upper Chena Basin reported their second largest snowpacks on record, their deepest since 1991. And they continue to build snowpack towards a later-than-normal meltout. In the valleys, the snowpack is melting, or has melted out. Fairbanks SNOTEL started a slow meltout in midmonth and will likely be melted out a week to 10 days later than normal.

In the Chatanika Valley, Faith Creek snow course set a new 30-year record with 29 inches of snow and 8.5 inches of water content.

In the upper valley snowpack remains above normal. Granite Creek SNOTEL started to meltout two weeks later than normal. The Delta Junction area snow sites average 169% of normal for May 1st. Further up valley, Tok snow course has melted out, but the 10-year-old Chisana SNOTEL site posted its highest May 1 reading with 16 inches of snow and 4.8 inches of water content.

Precipitation

Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Chisana	3320	5.7	2.9	---	---
Fairbanks F.O.	450	8.6	6.5	4.9	176%
Granite Crk	1240	5.2	3.2	4.4	118%
Kantishna	1550	12.5	4.7	5.0	250%
Little Chena Ridge	2000	10.4	4.9	6.2	168%
Nenana	415	5.7	4.3	---	---
Tok	1630	3.5	---	---	---
Upper Chena	2850	14.8	8.5	7.9	187%

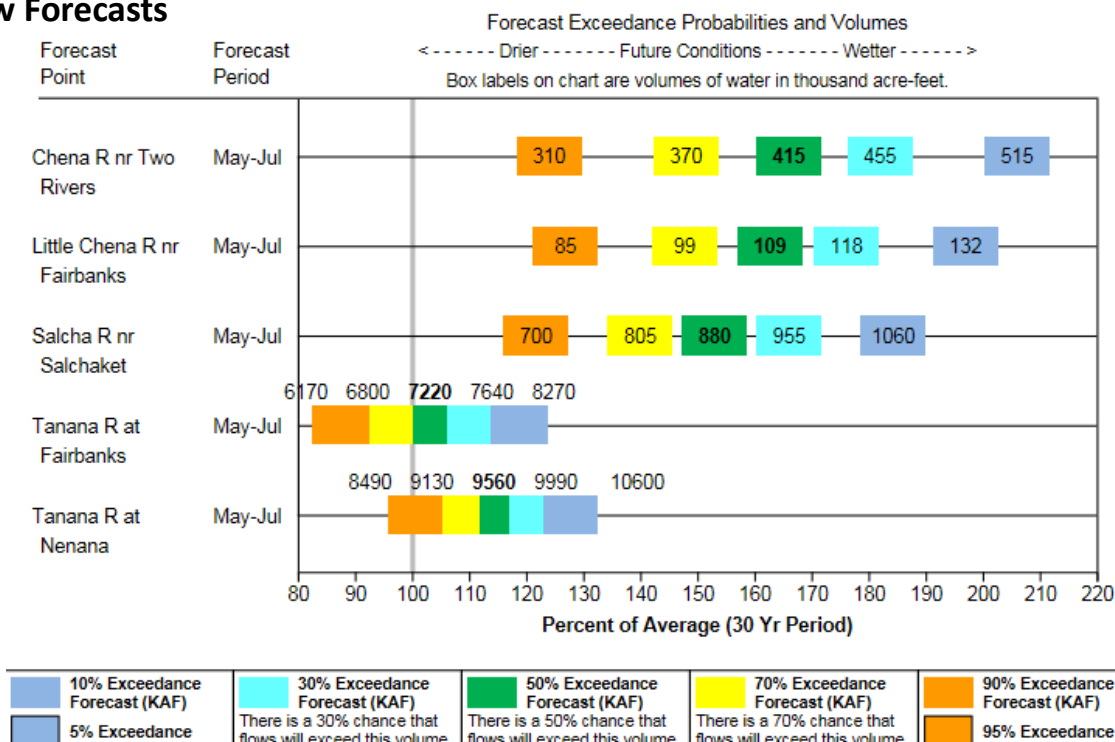
Tanana Basin

Snowpack Data

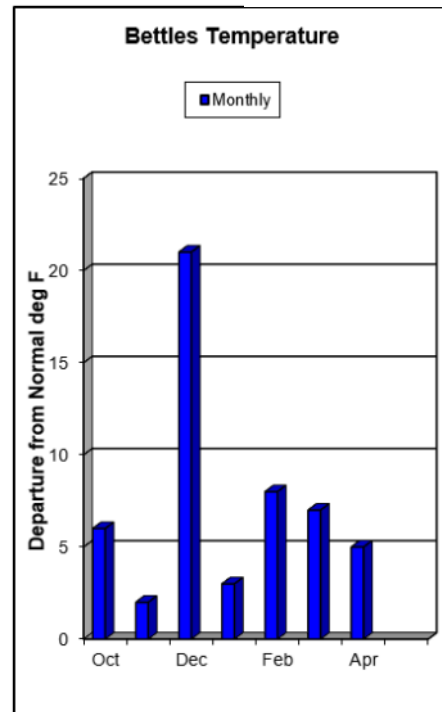
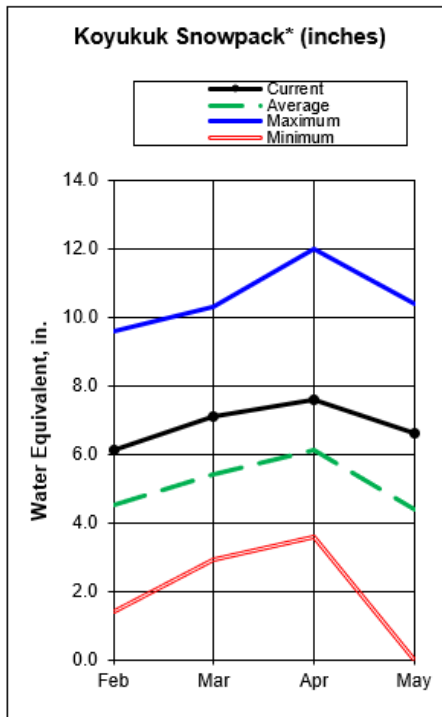
Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Bonanza Creek	1150	22	16	0	7.1	5.2	0.0
Caribou Creek	1250	14	0	0	4.7	0.0	0.0
Caribou Snow Pillow	900	19	0	0	6.1	0.0	0.0
Chisana	3320	16	3	---	4.8	1.0	2.8
Cleary Summit	2230	46	22	19	12.2	6.5	4.9
Colorado Creek	700	22	11	4	6.4	4.3	1.0
Fairbanks F.O.	450	13	9	---	3.0	3.1	0.0
Faith Creek	1750	29	15	7	8.5	4.2	2.0
Fielding Lake	3000	37	6	---	10.8	2.7	---
Fielding Lake	3000	43	16	34	12.1	4.6	10.2
Fort Greely	1500	7	0	0	1.6	0.0	0.0
French Creek	1800	43	18	13	13.0	4.9	3.6
Gerstle River	1200	8	0	2	2.0	0.0	0.6
Granite Crk	1240	4	0	---	1.8	0.0	0.0
Kantishna	1550	34	7	9	9.8*	2.0	2.2
Mentasta Pass	2430	23	0	14	6.7	0.0	3.9
Monument Creek	1850	33	12	---	7.7	3.2	2.1
Mt. Ryan	2800	41	13	---	10.8	4.6	4.7
Munson Ridge	3100	58	31	---	16.0	10.2	7.9
Shaw Creek Flats	980	4	0	0	0.8	0.0	0.0
Teuchet Creek	1640	14	4	---	5.0	2.1	1.3
Tok Junction	1650	0	0	0	0.0	0.0	0.0

*Estimate

Streamflow Forecasts



Western Interior Basins



Snowpack

Koyukuk

The snowpack in the Koyukuk remains above normal. The measurements sites in the basin average 167% of normal. Bettles Field SNOTEL snowpack peaked on April 29th with 9.8" of water content, the highest peak since 2005.

Kuskokwim

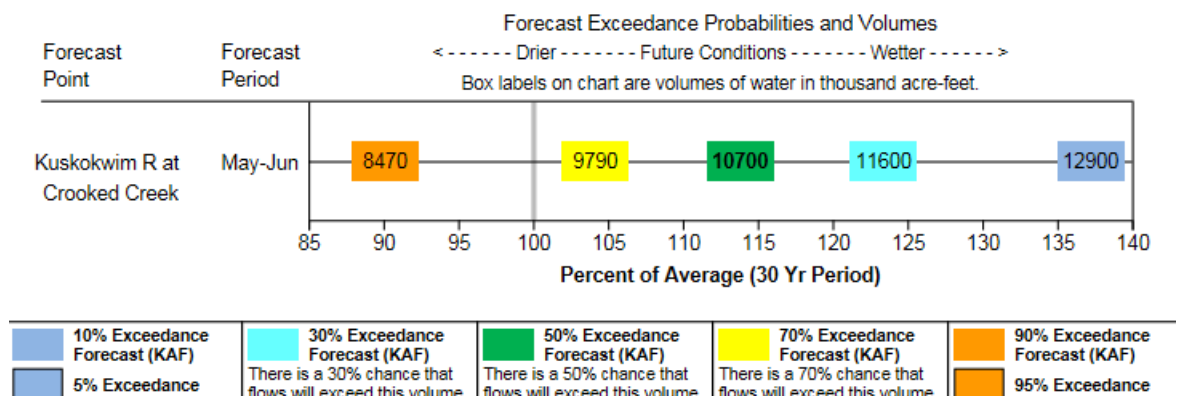
Snowpack in the upper basin is likely above normal, though hard to confirm. Telaquana Lake SNOTEL melted out on April 23rd and Aniak SCAN snowpack melted out on April 28th. Both 1-2 weeks later than the last few years.

Lower Yukon

The lower Yukon snowpack is rapidly melting out. The snowpack is still near or above normal in many locations, but less so in the lower basin where several sites are now below normal.

Streamflow

Forecasts



Snowpack Data

Western Interior Basins

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	24	19	---	9.2	5.2	6.6
Bonanza Forks	1200	13	---	16	3.8*	---	4.2
Cloverleaf	170	15	0	---	4.9*	0.0	---
Coldfoot	1040	23	21	---	7.9	5.6	6.1
Colville Bend	170	17	0	---	5.3*	0.0	---
Disaster Creek	1550	11	---	14	3.0*	---	3.4
East Chalatna	430	18	8	---	5.8*	2.3	---
Gobblers Knob	2030	16	11	---	---	---	---
Huggins Creek	290	27	6	---	8.9*	1.7	---
Jr Slough	160	15	0	---	4.8*	0.0	---
Kaldoyeit	750	31	23	10	10.5*	6.2	2.8
Kanuti Chalatna	670	20	9	16	6.2*	2.6	3.8
Kanuti Kilolitna	550	13	5	9	4.1*	1.6	2.8
Minnkokut	580	31	24	26	11.0*	6.3	6.6
Nolitna	560	29	26	14	10.4*	7.4	---
Table Mountain	2200	22	---	20	5.9*	---	4.8
Kuskokwim							
Aniak	80	0	0	---	0.0	0.0	---
Mcgrath	340	0	---	9	0.0	---	3.0
Telaquana Lake	1275	0	0	---	0.0	0.0	---
Lower Yukon							
Bullfrog	100	19	---	---	6.5*	---	---
Deer Creek	195	24	---	---	7.8*	---	---
Hozatka Lake	206	12	0	---	---	---	---
Little Mud River	855	5	---	---	2.4*	---	---
Lower Nowitna River	205	8	---	---	2.5*	---	---
Squirrel Creek	150	21	0	---	6.8*	0.0	---
Upper Innoko	180	0	0	0	0.0*	0.0	0.0
Wapoo Hills	220	6	0	0	2.1*	0.0	0.0
Yankee Slough	100	17	---	24	5.8*	---	8.0
*Estimate							

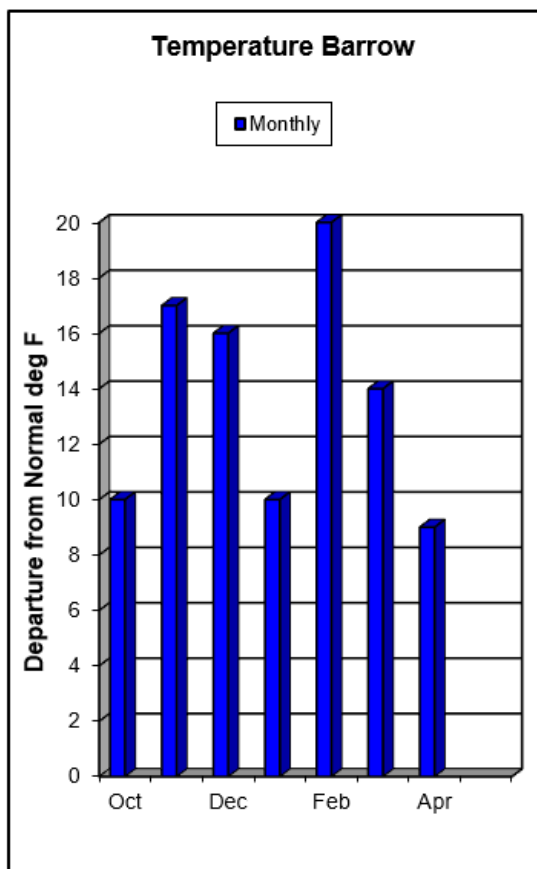
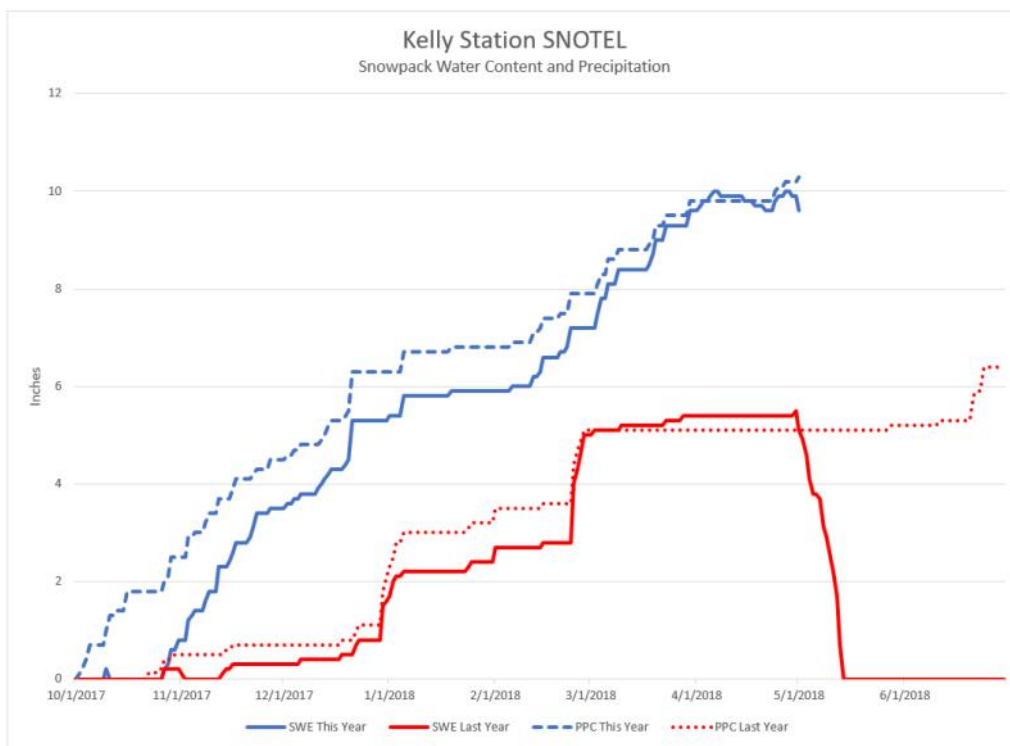
*Estimate

Precipitation

Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Koyukuk					
Bettles Field	640	8.8	4.3	7.6	116%
Coldfoot	1040	8.5	4.6	7.3	116%
Gobblers Knob	2030	9.1	5.4	7.6	120%
Kuskokwim					
Aniak	80	14.9	6.0	---	---
Telaquana Lake	1275	11.3	4.8	---	---
Lower Yukon					
Hozatka Lake	206	8.1	3.4	---	---

Arctic and Kotzebue Sound



Snowpack

Arctic

The Arctic had below normal precipitation during April. However, the snowpack continues to grow. Most sites along the Dalton Highway report slightly above normal snowdepths.

Kotzebue

The Kotzebue area received below normal precipitation for the month of April. Kelly Station SNOTEL, on the Noatak River, reported 30" of snow with 9.6" of water content-the same water content as last month, and its most robust snowpack since it's been reinstalled in 2011.

Arctic and Kotzebue Sound

Snowpack Data

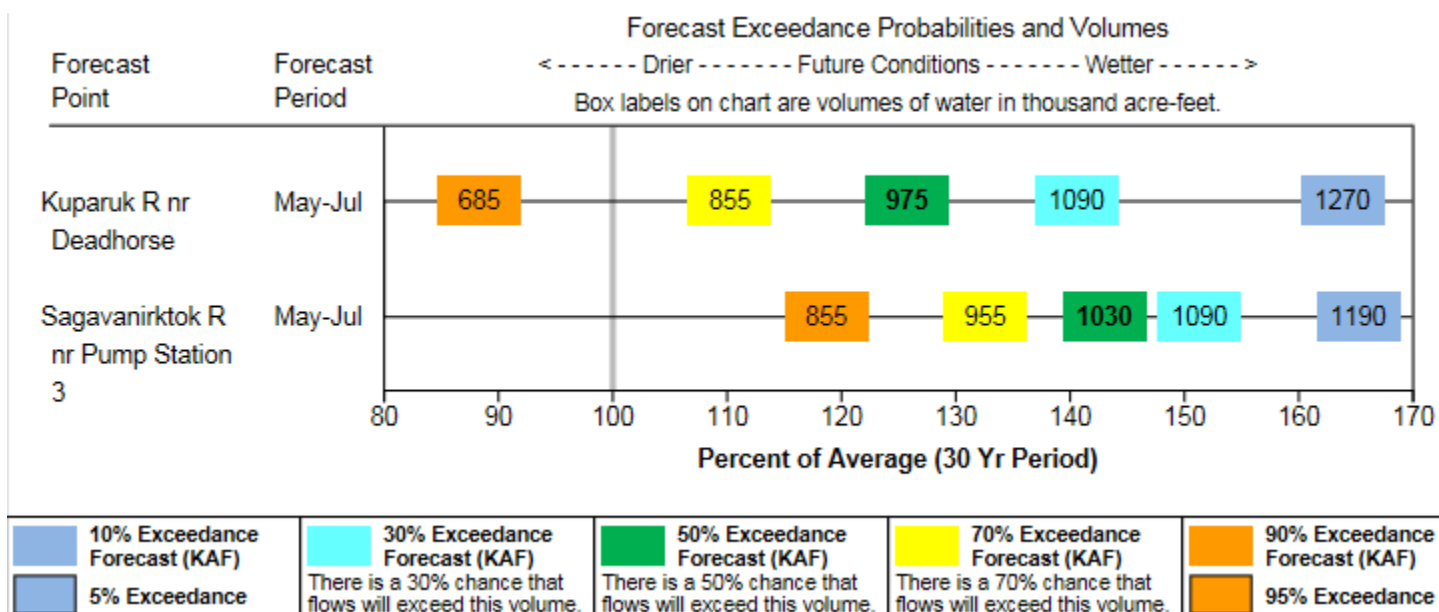
Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Atigun Pass	4800	58	46	---	---	---	---
Imnaviat Creek	3050	40	30	---	---	---	---
Kelly Station	310	30	17	---	9.6	5.1	---
Prudhoe Bay	30	24	20	---	---	---	---
Sagwon	1000	10	17	---	---	---	---
Umiat	267	19	---	---	4.0	---	---

**Estimate*

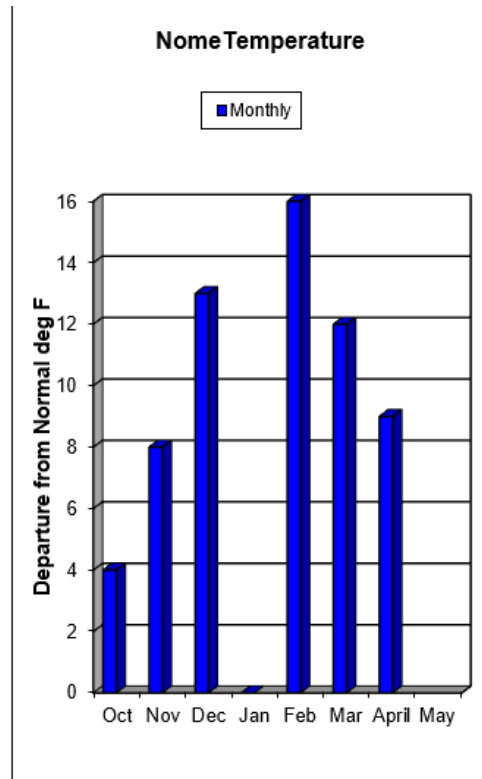
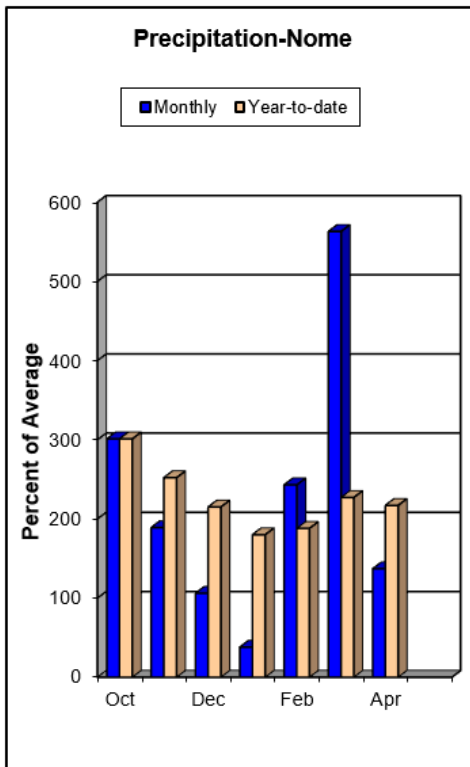
Precipitation

Site Name	Elev.	This Year	Inches Accumulated since October 1st		
			Last Year	1981-2010 Normal	% of Normal
Arctic					
Atigun Camp	3400	4.1	2.8	3.0	137%
Atigun Pass	4800	6.5	4.3	6.7	97%
Imnaviat Creek	3050	4.5	2.9	3.3	136%
Prudhoe Bay	30	4.4	3.9	4.1	107%
Sagwon	1000	3.5	3.0	3.4	103%
Kotzebue Sound					
Port Red Dog	50	11.6	5.8	4.2	276%
Red Dog Mine	950	8.0	7.0	5.3	151%
Kelly Station	310	10.3	5.1	---	---

Streamflow Forecasts



Norton Sound/Y-K Delta/Bristol Bay



Snowpack

Norton Sound

Snow in this region's measurement sites is the deepest it's been in 10 years. The beginnings of meltout was halted by a late month storm.

Yukon-Kuskokwim Delta

—

Bristol Bay

Much of lowlands have melted out.

Precipitation

Inches Accumulated since October 1st

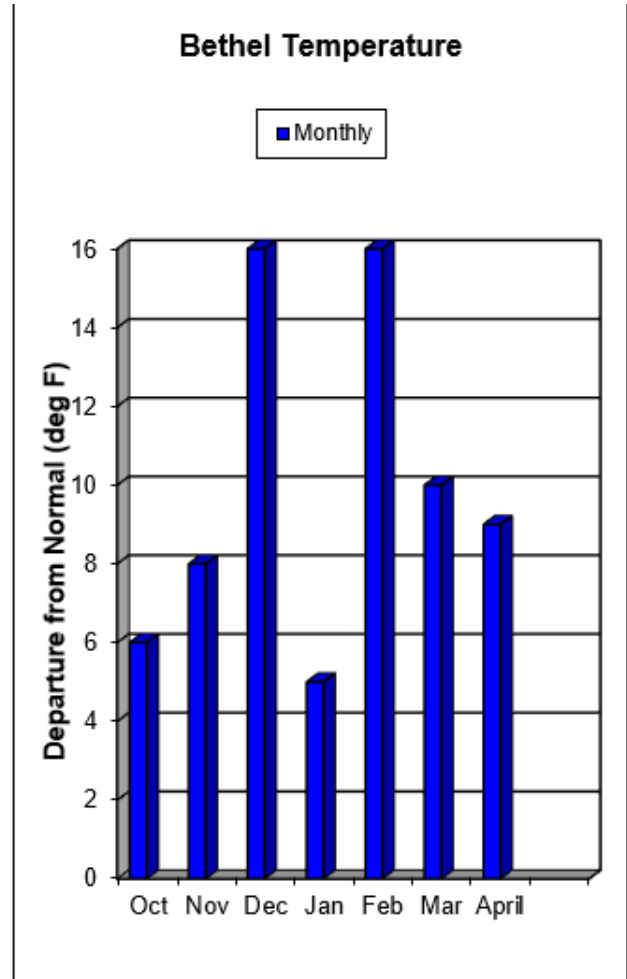
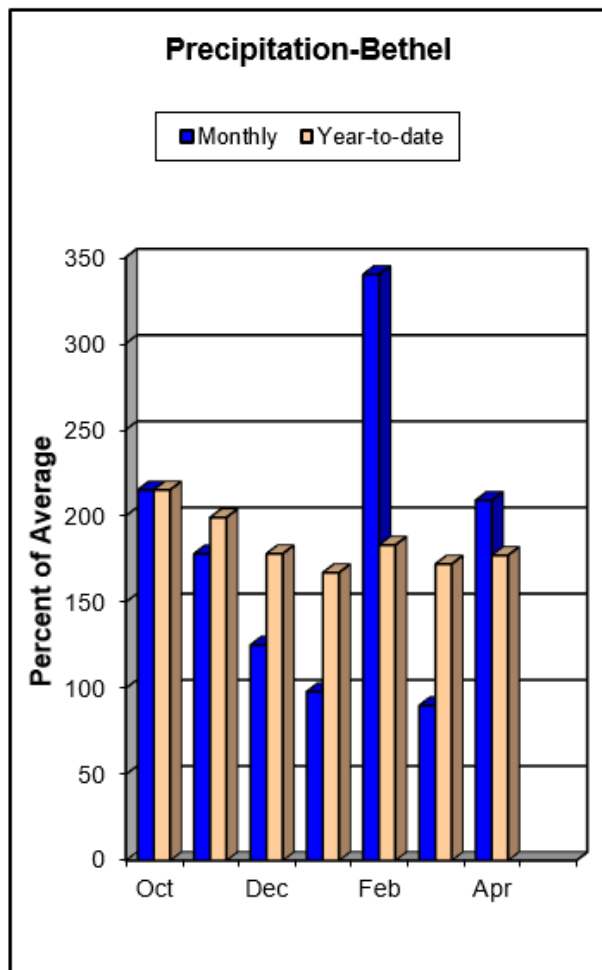
Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Norton Sound					
Pargon Creek	100	9.3	5.1	6.7	139%
Rocky Point	250	8.3	3.4	5.8	143%

Norton Sound/Y-K Delta/Bristol Bay

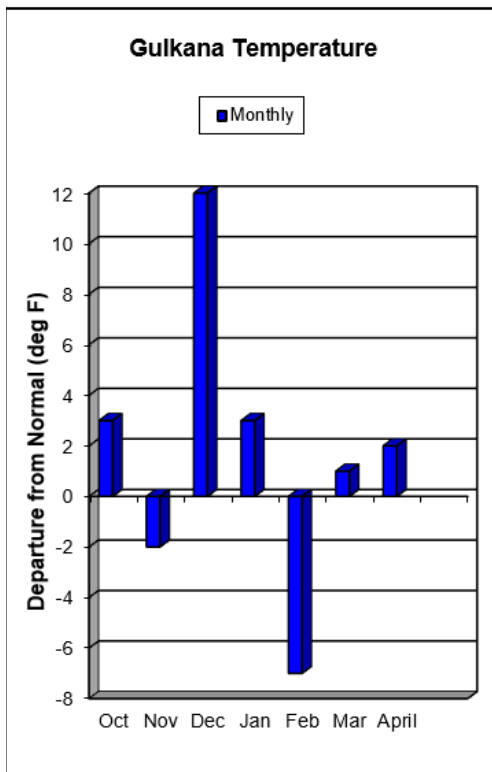
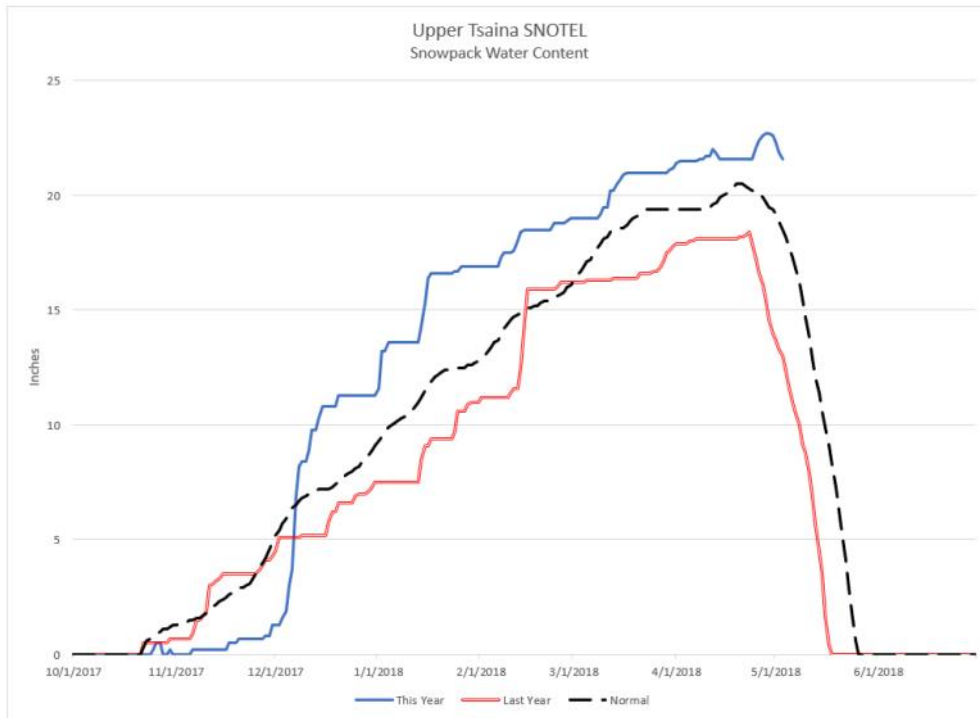
Snowpack Data

		Snow Depth (in)			Water Content (in)		
Site Name	Elev.	Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Norton Sound							
Johnsons Camp	25	32	---	---	---	---	---
Pargon Creek	100	21	2	---	6.0*	0.6	---
Rocky Point	250	40	10	---	9.8*	3.0	---

*Estimate



Copper Basin



Snowpack

The Copper Basin snowpack remains much above normal in most locations. The 10 measured sites average 155% of normal compared to 51% last year. Many sites have twice as much snow as they did last year at this time.

The basin floor snowpack has begun to meltout with a few sites already bare, in other areas the snowpack remains robust. Little Nelchina snow course recorded its second highest May snowpack in 25 years, it's wettest since 2000. Most sites reported their most hefty snowpacks in five years.

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	13	0	0	3.4	0.0	0.0
Fielding Lake	3000	43	16	34	12.1	4.6	10.2
Fielding Lake SNOTEL	3000	37	6	---	10.8	2.7	---
Haggard Creek	2540	28	6	14	6.8	2.2	4.3
Kenny Lake School	1300	0	0	0	0.0	0.0	0.0
Little Nelchina	2650	22	2	12	6.8	0.6	3.7
May Creek	1610	4	0	---	0.6	0.0	2.0
Mentasta Pass	2430	23	0	14	6.7	0.0	3.9
Paxson	2650	42	12	22	10.2	3.4	6.4
Tazlina	1250	0	0	0	0.0	0.0	0.0
Tolsona Creek	2000	14	1	0	4.4	0.2	0.0
Tsaina River	1650	40	---	42	16.0	---	14.0
Upper Tsaina River	1750	54	38	---	22.3	13.7	19.2
Worthington Glacier	2100	65	---	63	26.5	---	24.6

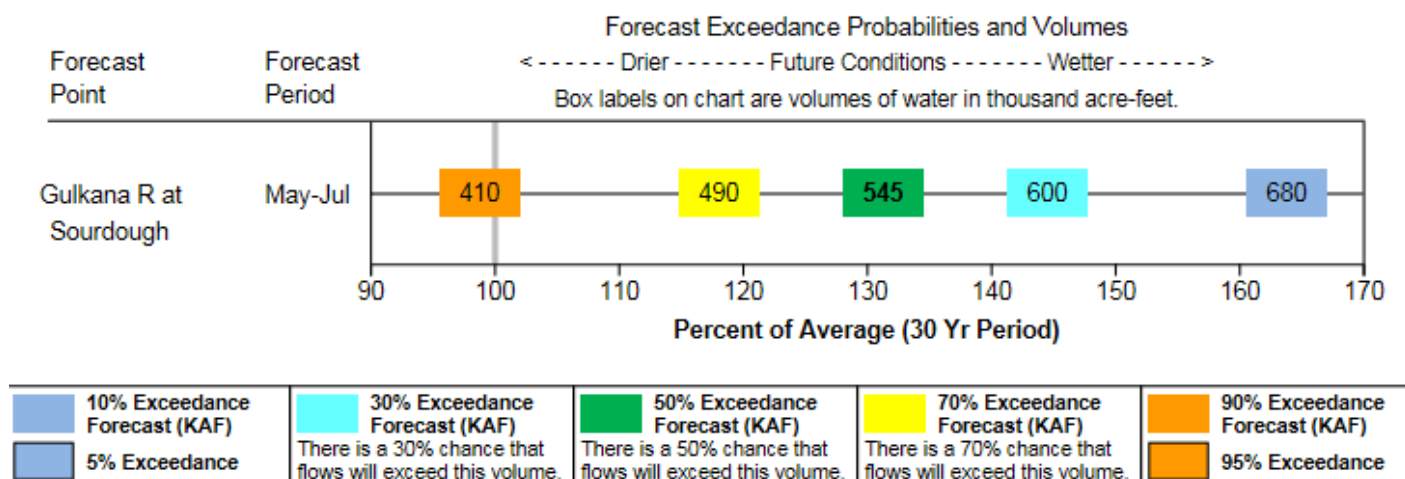
**Estimate*

Precipitation

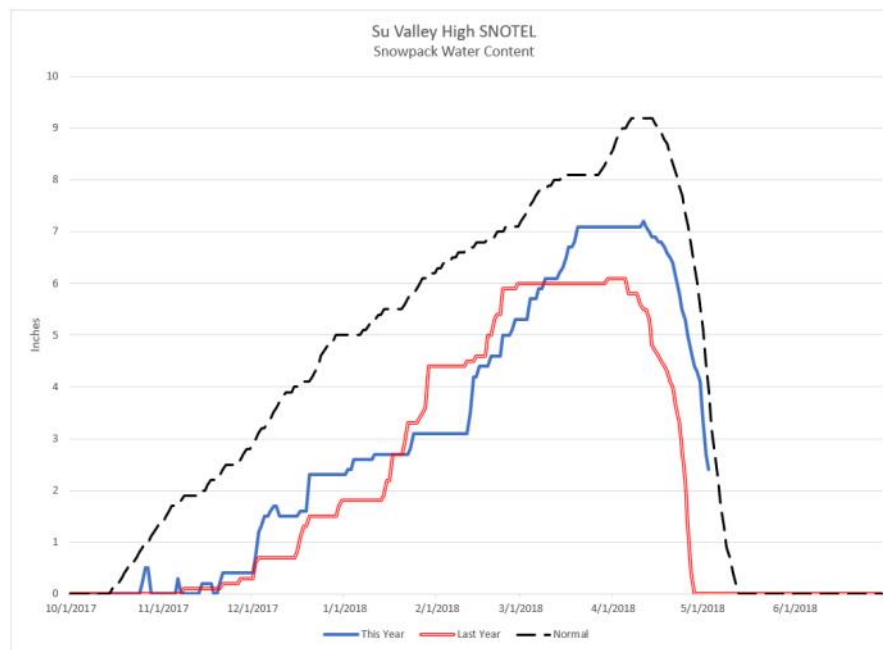
Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
May Creek	1610	11.5	4.7	6.5	177%
Upper Tsaina River	1750	25.9	16.5	27.0	96%

Streamflow Forecasts



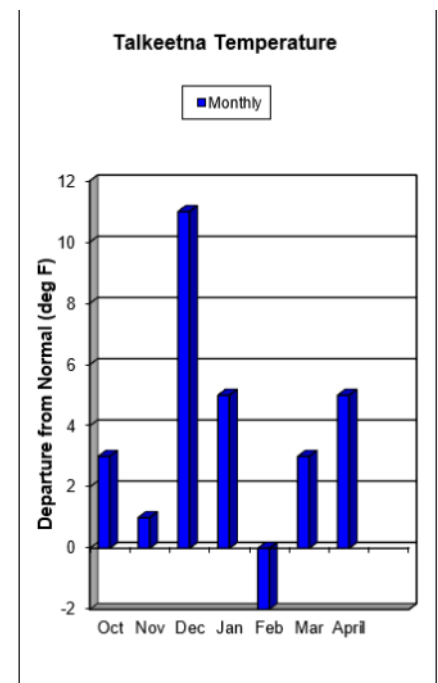
Matanuska—Susitna Basin



Snowpack

Late month storms brought rain to the lowlands which hasten meltout and snow to the mountains, stalling meltout. Tokositna Valley started melting out on April 10th, but stopped on the 20th and gained a new peak snowpack by the 30th. This was played out in multiple mountain locations, pushing snowpacks to peak later than normal. In the lowlands, snowpacks are melting out before normal, but later than last year.

As a result, the lower Susitna Basin has below normal snowpacks, while the upper basin is above normal. The five measurement sites in the Little Susitna Headwaters average 142% of normal. Independence Mine, at 3500' of elevation, had 100" of snow and 21.8" of water content, its highest reading since 2005.



Precipitation

Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Alexander Lake	160	16.7	8.5	---	---
Independence Mine	3550	27.8	11.6	18.0	154%
Monahan Flat	2710	10.3	5.2	8.6	120%
Susitna Valley High	375	16.9	7.0	13.4	126%
Tokositna Valley	850	20.3	10.2	19.0	107%

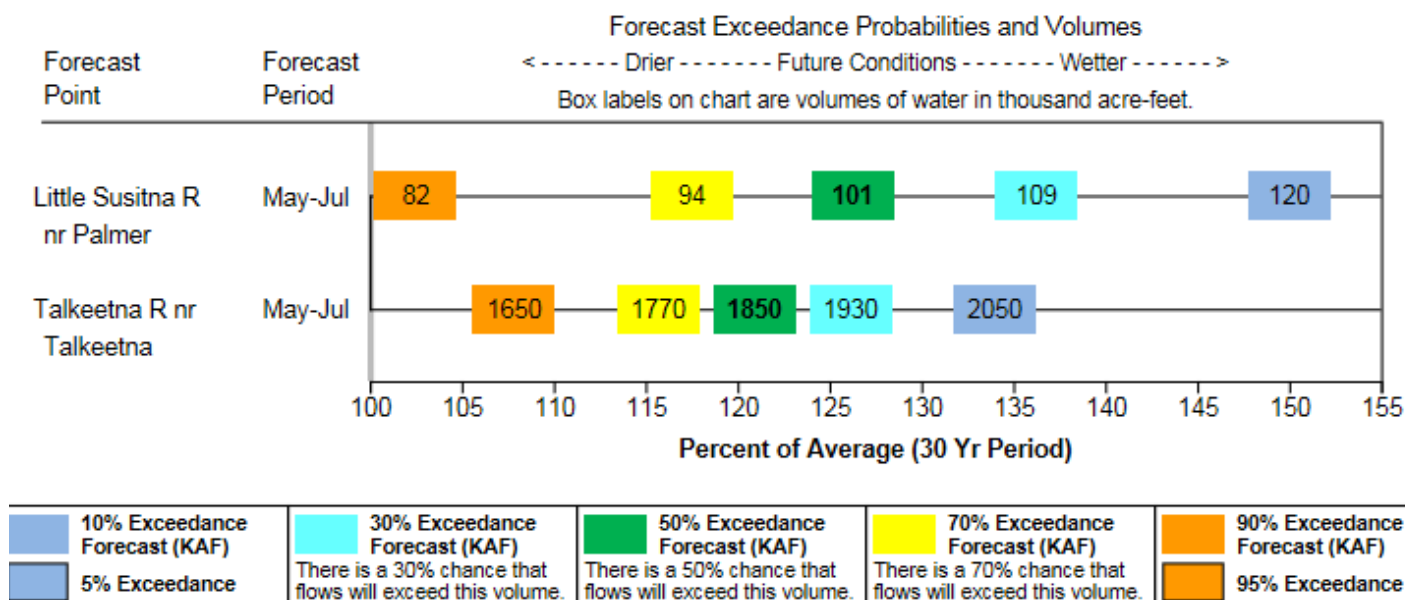
Matanuska—Susitna Basin

Snowpack Data

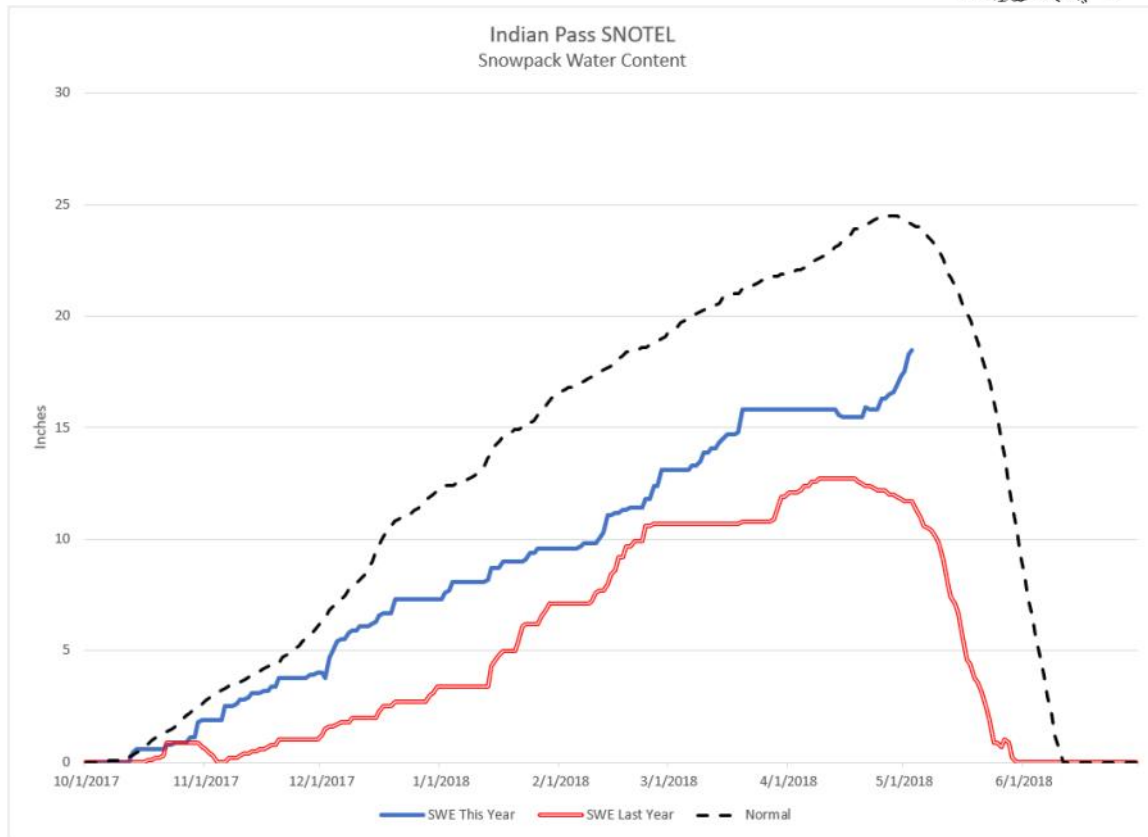
Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Alexander Lake	160	0	0	---	0.0	0.0	---
Archangel Road	2200	47	14	35	17.7	4.6	11.7
Birthday Pass	4020	116	47	---	37.7	15.1	---
Blueberry Hill	1200	45	11	40	16.1	4.1	14.1
Denali View	700	26	0	27	8.7	0.0	9.1
E. Fork Chulitna	1770	59	20	42	17.2	5.9	12.4
Fishhook Basin	3300	85	30	55	27.2	10.0	19.5
Horsepasture Pass	4300	27	12	---	7.6*	---	---
Independence Mine	3550	100	36	61	32.8	11.9	21.8
Independence Mine SNOTEL	3550	75	22	---	20.3	9.9	14.6
Lake Louise	2400	15	1	11	4.3	0.3	2.9
Little Susitna	1700	26	6	21	10.3	1.8	8.2
Monahan Flat	2710	26	15	30	8.9*	4.4	7.6
Sheep Mountain	2900	20	0	11	4.7	0.0	3.1
Susitna Valley High	375	8	0	---	3.4	0.0	5.1
Talkeetna	350	5	0	12	1.3	0.0	4.0
Tokositna Valley	850	40	11	---	14.7	4.9	11.8
Willow Airstrip	200	0	0	10	0.0	0.0	3.3

*Estimate

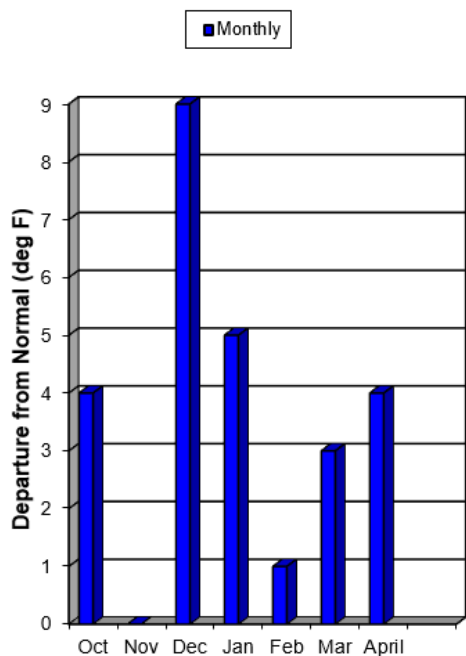
Streamflow Forecasts



Northern Cook Inlet



Anchorage Temperature



Snowpack

Snowpack in northern Cook Inlet is below normal. Lower areas have melted out and the higher snowpacks remain between 28-72% of normal. Mount Alyeska SNOTEL reported its fourth lowest May measurement in 41 years. Both Mt. Alyeska and Indian Pass SNOTEL started to meltout mid-month, but after late month storms brought additional snow, both continue to gain snowpack and will peak sometime in May, later than normal.

Northern Cook Inlet

Snowpack Data

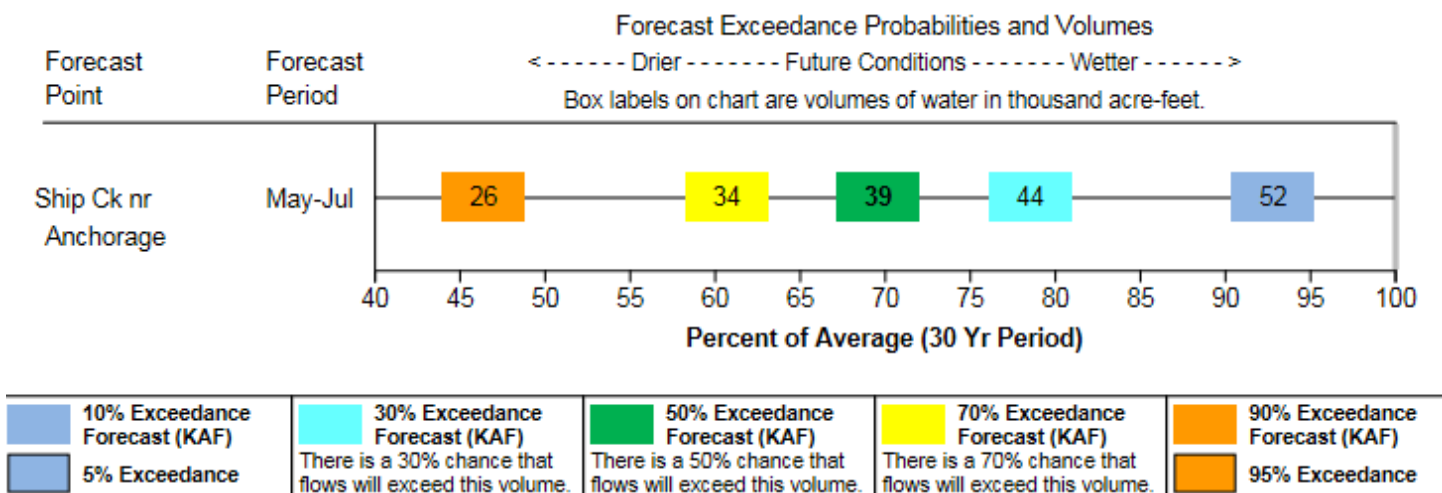
Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Anchorage Hillside	2080	11	8	---	4.3	4.0	10.8
Indian Pass	2350	58	31	---	17.5	11.7	24.3
Kincaid Park	250	0	0	0	0.0	0.0	0.0
Moraine	2100	5	6	---	1.8	3.4	6.5
Mt. Alyeska	1540	42	41	---	15.0	16.4	35.2
Portage Valley	50	4	23	14	1.1	9.4	6.2
South Campbell Creek	1200	0	0	10	0.0	0.0	3.4
<i>*Estimate</i>							

Precipitation

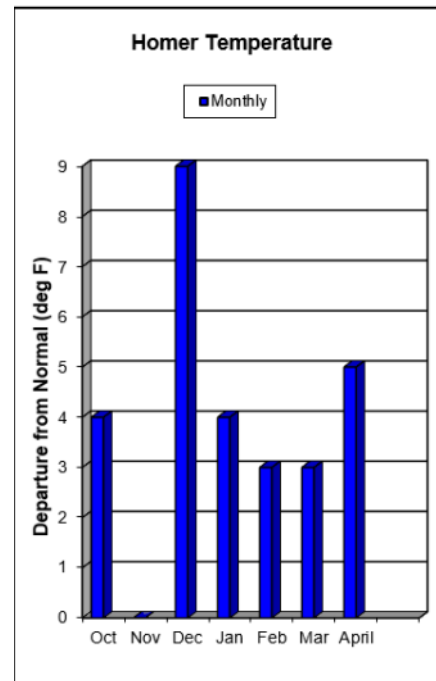
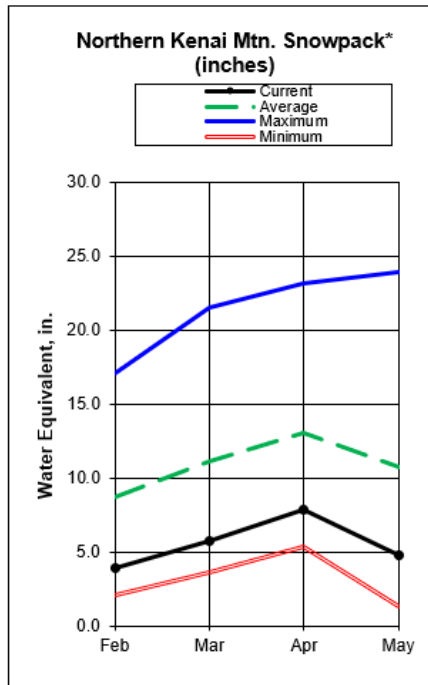
Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Anchorage Hillside	2080	12.9	9.6	15.5	83%
Indian Pass	2350	27.5	20.6	28.4	97%
Moraine	2100	8.7	7.6	12.7	69%
Mt. Alyeska	1540	37.0	32.1	52.9	70%

Streamflow Forecasts



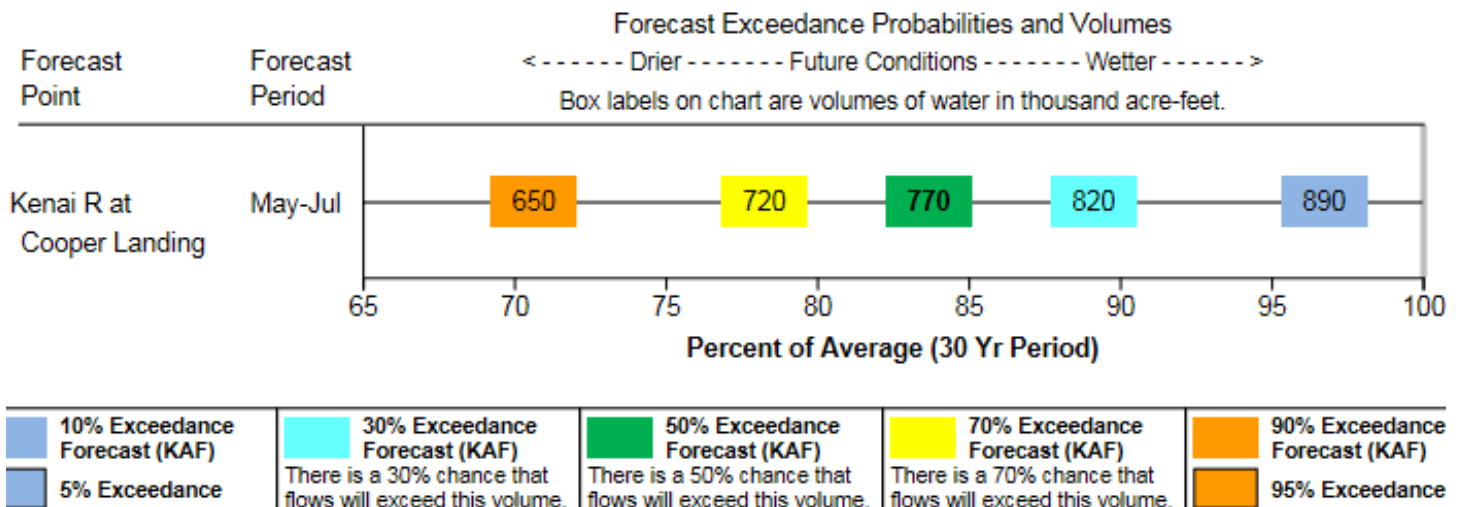
Kenai Peninsula



Snowpack

The snowpack across the Kenai broadly started melting out during April with most sites losing snow during the month. Meltout started earlier this winter, but some storms later in the month helped slow down the process. The 18 measurement sites averaged 43% of normal snowpack on May 1st, compared to 55% last year.

Streamflow Forecasts



Kenai Peninsula

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	24	13	---	8.5	4.2	10.0
Bertha Creek	950	22	32	50	7.8	10.0	17.7
Bridge Creek	1300	5	19	32	1.8	6.1	10.6
Cooper Lake	1200	19	18	---	6.2	5.8	12.0
Demonstration Forest	780	0	0	13	0.0	0.0	4.6
Eagle Lake	1400	10	18	24	3.7	6.1	9.0
Exit Glacier	400	8	25	26	3.8	9.8	10.8
Exit Glacier	400	---	25	---	2.1	9.7	11.0
Grandview	1100	39	50	---	15.8	21.2	34.6
Grouse Creek Divide	700	24	25	---	10.2	11.6	16.0
Indian Pass	2350	58	31	---	17.5	11.7	24.3
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	18	8	30	6.6	2.6	11.3
Lower Kachemak Creek	1915	44	0	---	---	---	---
Mcneil Canyon	1320	2	4	---	0.6	1.2	8.0
Middle Fork Bradley	2300	56	39	---	---	---	---
Moose Pass	700	0	0	0	0.0	0.0	0.0
Mt. Alyeska	1540	42	41	---	15.0	16.4	35.2
Port Graham	300	0	0	---	0.0	0.0	4.0
Portage Valley	50	4	23	14	1.1	9.4	6.2
Snug Harbor Road	500	0	0	0	0.0	0.0	0.0
Summit Creek	1400	16	9	---	4.5	3.6	6.7
Turnagain Pass	1880	63	49	---	---	21.1	39.8
Resurrection Pass	2250	36	32	38	8.7	10.4	---
Snug Harbor Road	500	5	24	16	1.3	4.5	---
Summit Creek	1400	30	31	---	7.8	11.1	---
Turnagain Pass	1880	76	75	---	22.2	33.4	---

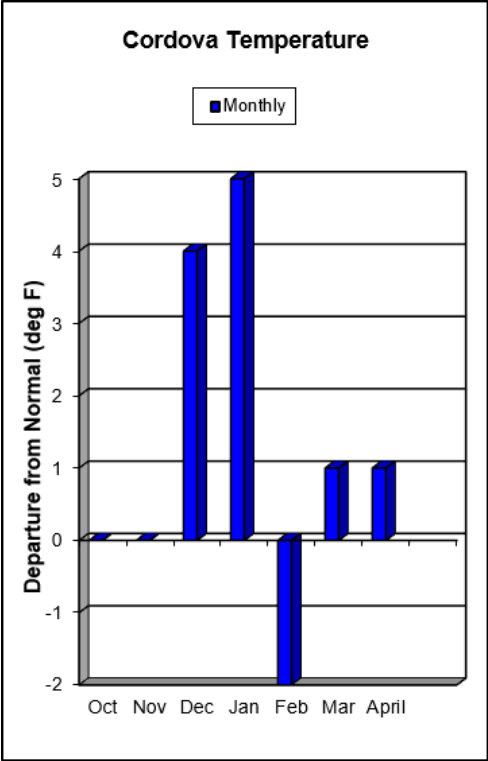
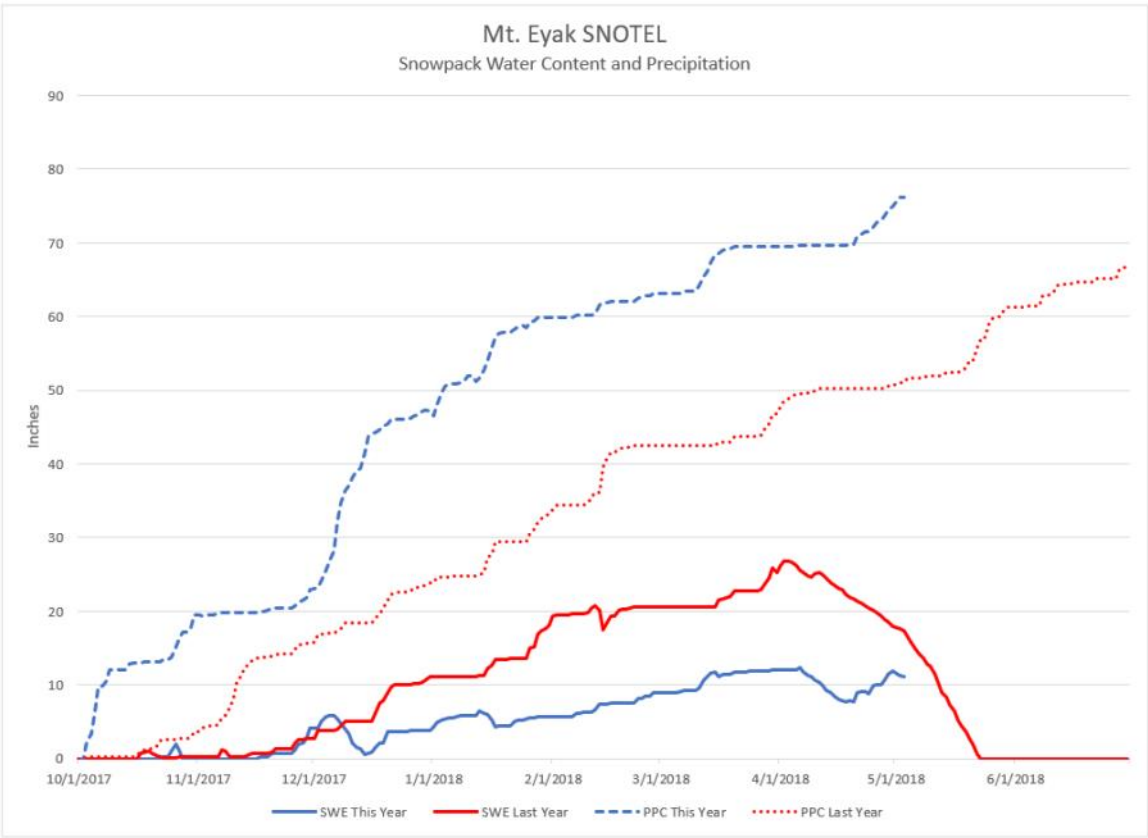
**Estimate*

Precipitation

Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Anchor River Divide	1653	18.3	14.3	18.5	99%
Cooper Lake	1200	23.4	19.3	27.1	86%
Grandview	1100	36.1	37.4	46.9	77%
Grouse Creek Divide	700	38.6	34.6	41.9	92%
Kachemak Creek	1660	45.3	35.2	41.7	109%
Kenai Moose Pens	300	9.3	5.7	8.9	104%
Mcneil Canyon	1320	14.7	14.2	17.9	82%
Middle Fork Bradley	2300	30.6	30.2	35.6	86%
Nuka Glacier	1250	51.1	45.3	60.8	84%
Port Graham	300	44.5	29.1	52.8	84%
Summit Creek	1400	16.9	13.6	17.1	99%
Turnagain Pass	1880	34.1	35.8	47.2	72%

Western Gulf – Prince William Sound



Snowpack

Prince William Sound had above normal precipitation during April. Snowpacks are mixed with low elevation areas having lost snow and some snow sites melting out during the month. Esther Island SNOTEL melted out on April 27th, 3 days earlier than last year.

Higher up, the rain turned to snow and kept mountain packs at near to above normal in eastern Prince William Sound, though mountain snow packs in the western edge remain well below normal. Upper Tsaina SNOTEL reached peak snowpack on April 28th, a week later than normal, while Nicks Valley SNOLITE, 2550' higher at 4275' of elevation, continues to build snowpack and had 131" of snow on May 1st, its deepest so far this year.

Western Gulf — Prince William Sound

Snowpack Data

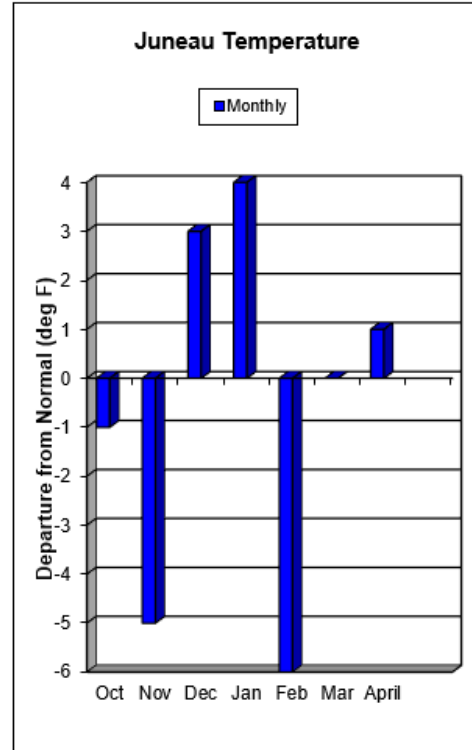
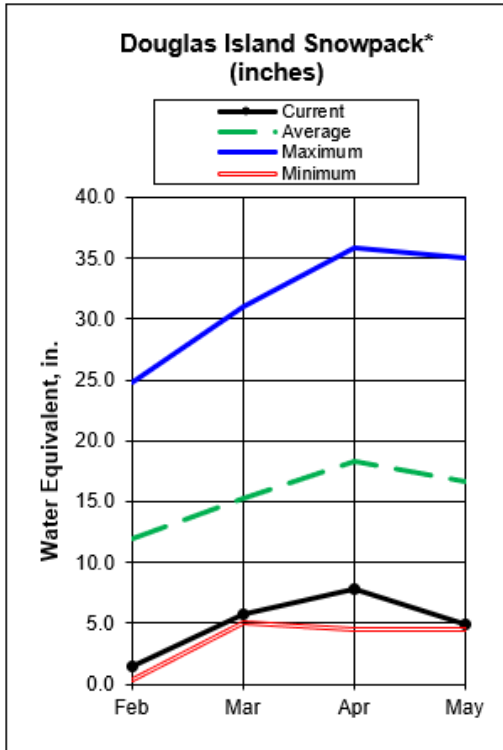
Site Name	Elev.	Snow Depth (in)			Water Content (in)		
		Current	Last Year	1981-2010 Normal	Current	Last Year	1981-2010 Normal
Exit Glacier	400	8	25	26	3.8	9.8	10.8
Exit Glacier	400	---	25	---	2.1	9.7	11.0
Grouse Creek Divide	700	24	25	---	10.2	11.6	16.0
Mt. Eyak	1405	28	41	---	11.6	17.8	28.1
Nicks Valley	4280	131	92	---	---	---	---
Sugarloaf Mountain	550	40	---	61	12.0	---	23.9
Tsaina River	1650	40	---	42	16.0	---	14.0
Upper Tsaina River	1750	54	38	---	22.3	13.7	19.2
Valdez	50	0	---	28	0.0	---	10.4
Worthington Glacier	2100	65	---	63	26.5	---	24.6
<i>*Estimate</i>							

Precipitation

Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Esther Island	50	88.9	64.3	89.0	100%
Grouse Creek Divide	700	38.6	34.6	41.9	92%
Mt. Eyak	1405	75.5	50.9	---	---
Nuchek	50	87.5	63.5	---	---
Nuka Glacier	1250	51.1	45.3	60.8	84%
Port Graham	300	44.5	29.1	52.8	84%
Seal Island	20	38.3	26.3	---	---
Strawberry Reef	30	44.6	39.5	---	---
Sugarloaf Mtn	550	47.4	28.2	44.4	107%
Tatitlek	50	47.6	30.2	44.1	108%

Southeast



Snowpack

Despite April storms which brought normal to above normal precipitation to Southeast, snowpacks in Southeast shrank during the month with most lower sites melting out. It is not uncommon for lower sites to be melted out by this time.

Higher elevation snowpacks remain below normal and most locations in the mountains have less than half of normal snowpack.

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	29	---	70	12.9	---	29.6
Eagle Crest	1200	5	---	34	1.9	---	12.2
Fish Creek	500	0	---	0	0.0	---	0.0
Heen Latinee	2065	18	31	---	5.3	10.3	---
Institute Creek	1350	0	9	---	0.0	3.6	---
Long Lake	850	41	54	---	19.0	22.9	35.8
Petersburg Reservoir	550	0	0	0	0.0	0.0	0.0
Petersburg Ridge, S.	1650	18	38	52	8.0	16.2	22.4
Rainbow Falls	500	0	0	---	0.0	0	---
Speel River	280	23	12	50	13.6	6.8	22.0
West Creek	475	0	---	---	0.0	---	---
<i>*Estimate</i>							

Precipitation Data

Inches Accumulated since October 1st

Site Name	Elev.	This Year	Last Year	1981-2010 Normal	% of Normal
Long Lake	850	80.1	89.3	104.6	77%
Heen Latinee	2065	36.1	37.1	---	---
Moore Creek Bridge	2250	23.7	26.1	29.6	80%

Streamflow Forecasts

Forecast Point	Forecast Period	% of Average	Maximum(%)	Minimum(%)	50% Exceedance (KAF)	30yr Average (KAF)
Taiya River near Skagway	May-Jul	87	107	68	400	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

NRCS Snow Survey Office

Daniel Fisher, Hydrologist

800 West Evergreen Avenue

Palmer, Alaska 99645

Telephone: (907) 761-7746

Facsimile: (907) 761-7790

E-mail: Daniel.Fisher@ak.usda.gov

Delta Junction Work Unit

Ryan Johnson , Conservationist

Telephone: (907) 895-4241 x 105

Facsimile: (855) 705-9787

E-mail: Ryan.S.Johnson@ak.usda.gov

Fairbanks Hub Office

Joanne Kuykendall, Conservationist

Telephone: (907) 479-3159 x 1010

Facsimile: (855) 833-8625

E-mail: Joanne.Kuykendall@ak.usda.gov

Homer Work Unit

Karin Sonnen, Range Management Specialist

Telephone: (907) 235-8177 x 103

Facsimile: (855) 711-9098

E-mail: Karin.Sonnen@ak.usda.gov

Central Hub Office

Michelle Jezeski

Telephone: (907) 373-6492 x 101

Facsimile: (855) 705-9788

E-mail: Michelle.Jezeski@ak.usda.gov