

Utah Water Supply Briefing

(The water supply briefing formerly known as the
Great Basin Water Supply Briefing.)

January 8th, 2020

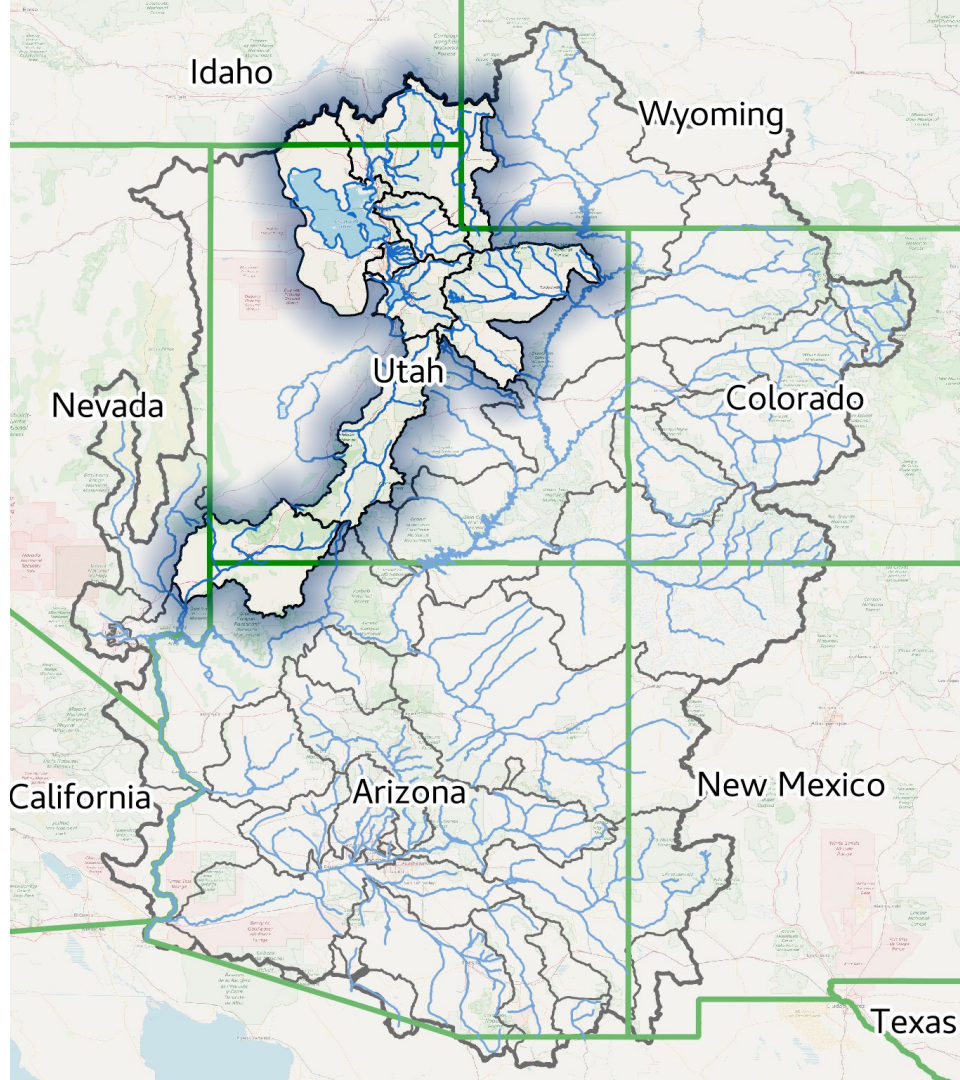
Colorado Basin River Forecast Center
Patrick Kormos - Hydrologist

For audio, please dial

Phone: 1-877-929-0660

Passcode: 1706374

**Please mute your phone until ready to ask
questions**



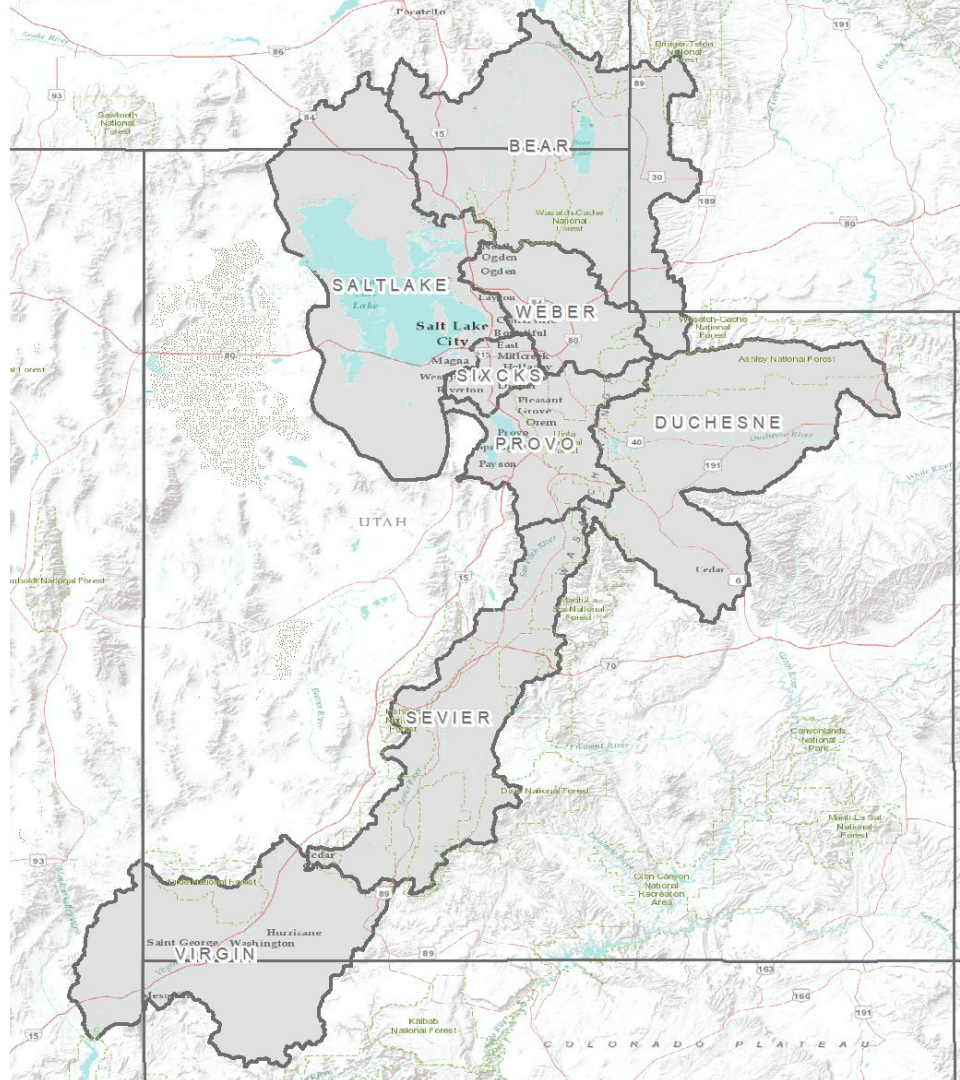
Utah Water Supply Briefing

1. Weather Review
2. Current Snowpack
3. Soil Moisture Conditions
4. 2020 Water Supply Forecasts
5. Early Season Forecast Error
6. Upcoming Weather
7. Contacts & Questions

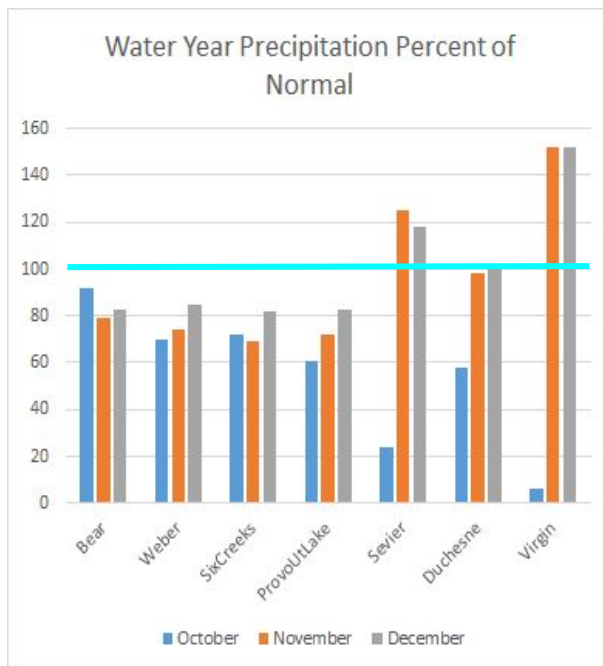
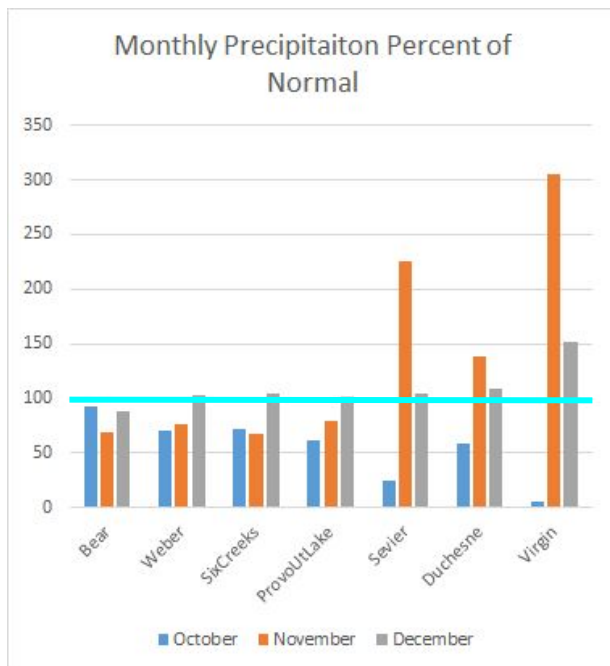
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Utah Weather Review - Precipitation up to Jan. 1, 2020



- Bear, Weber, Six Creeks and Utah Lake:
 - Below normal precip.
 - WY precip. over 80% of normal
- Sevier, Duchesne, and Virgin:
 - Low October
 - Very High November
 - High December
- Bear: 83% of WY normal
- Weber: 85% of WY normal
- Six Cr: 82% of WY normal
- Provo: 83% of WY normal
- Sevier: 118% of WY normal
- Duchesne: 101% of WY normal
- Virgin: 152% of WY normal

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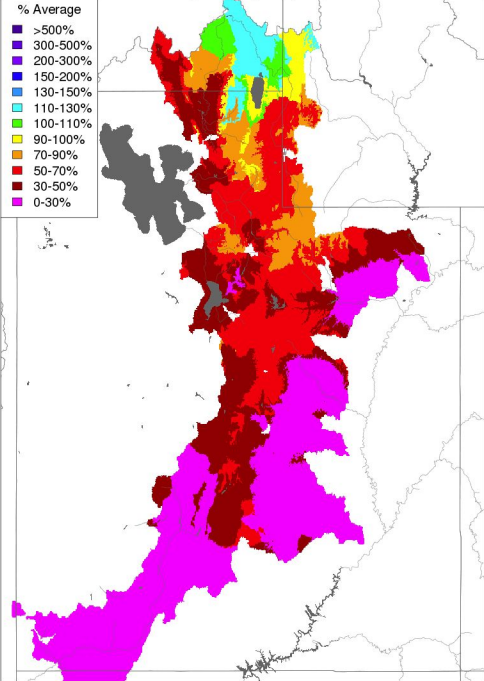
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Utah Weather Review - Monthly Precipitation

October

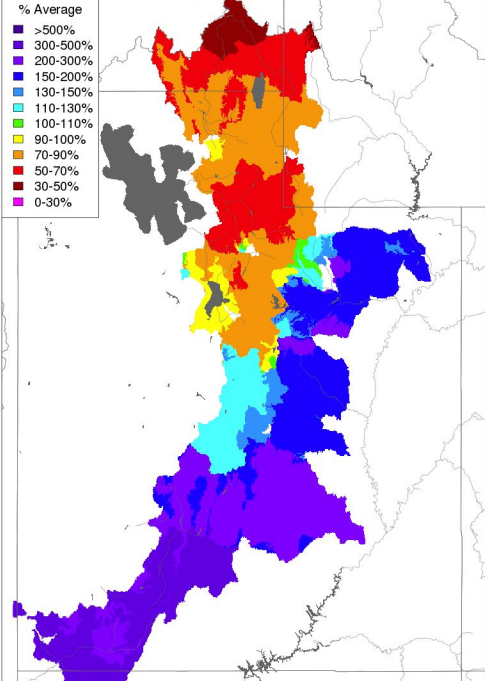
Monthly Precipitation - October 2019
(Averaged by Basin)



Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

November

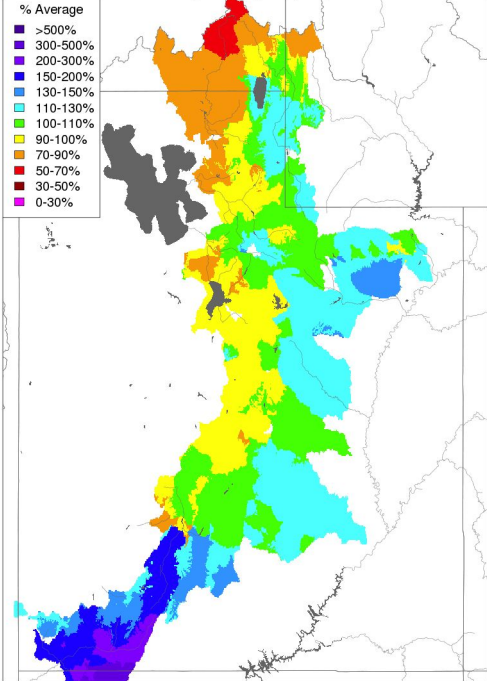
Monthly Precipitation - November 2019
(Averaged by Basin)



Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

December

Monthly Precipitation - December 2019
(Averaged by Basin)



Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

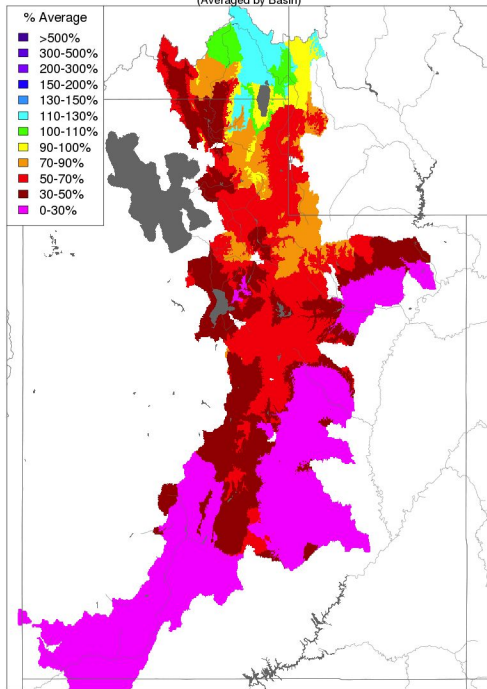
- % Average
- >500%
 - 300-500%
 - 200-300%
 - 150-200%
 - 130-150%
 - 110-130%
 - 100-110%
 - 90-100%
 - 70-90%
 - 50-70%
 - 30-50%
 - 0-30%

Utah Weather Review - Water Year Precipitation

October

Water Year Precipitation, October 2019 - October 2019

(Averaged by Basin)

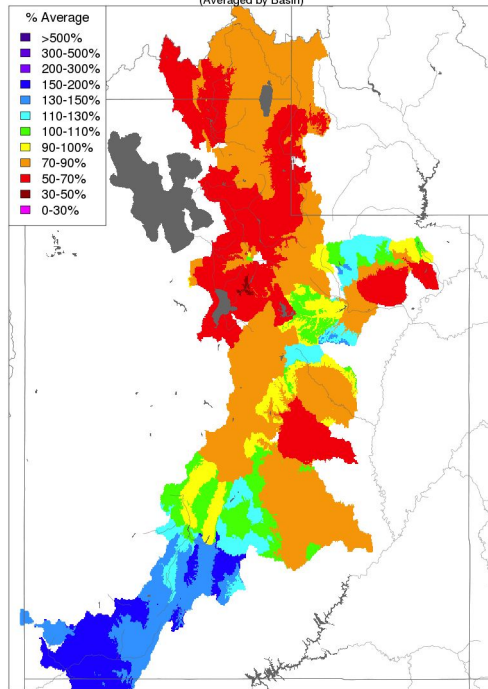


Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

November

Water Year Precipitation, October 2019 - November 2019

(Averaged by Basin)

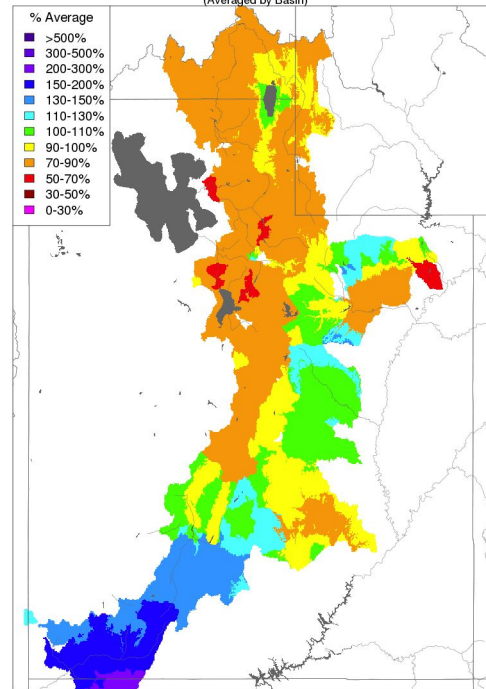


Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

December

Water Year Precipitation, October 2019 - December 2019

(Averaged by Basin)



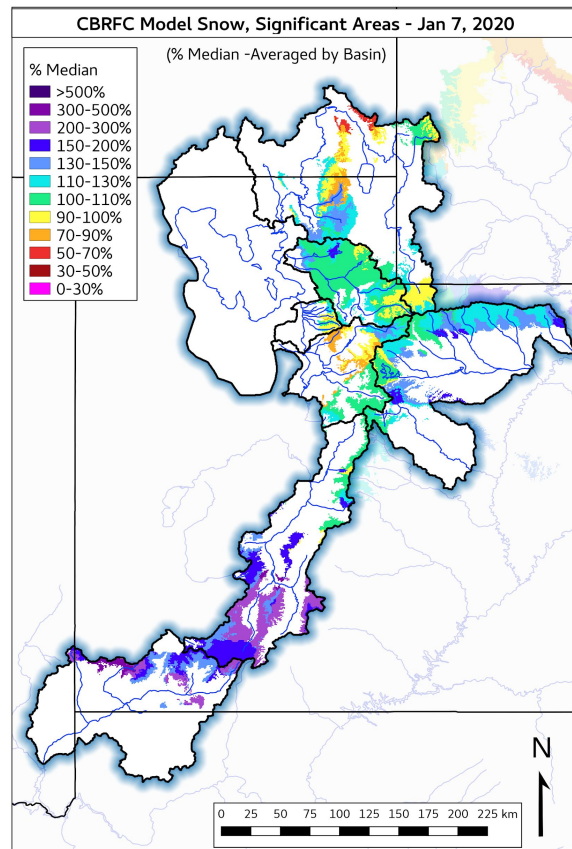
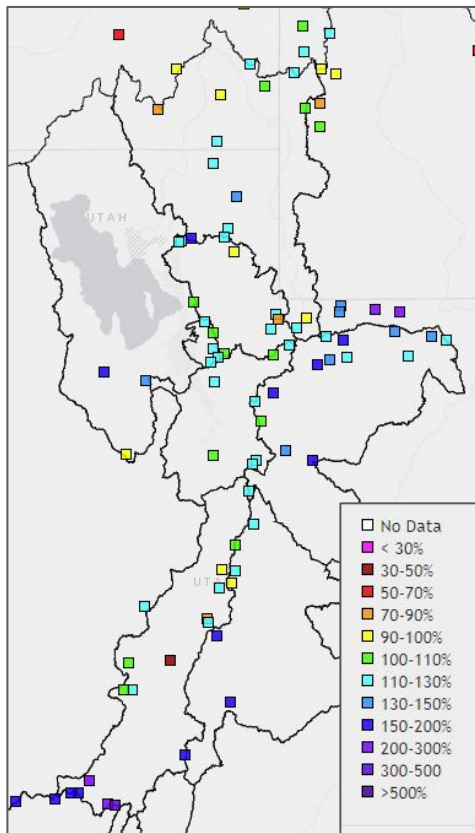
Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

% Average

- >500%
- 300-500%
- 200-300%
- 150-200%
- 130-150%
- 110-130%
- 100-110%
- 90-100%
- 70-90%
- 50-70%
- 30-50%
- 0-30%

Utah Current Snowpack

SNOTEL (Observed)

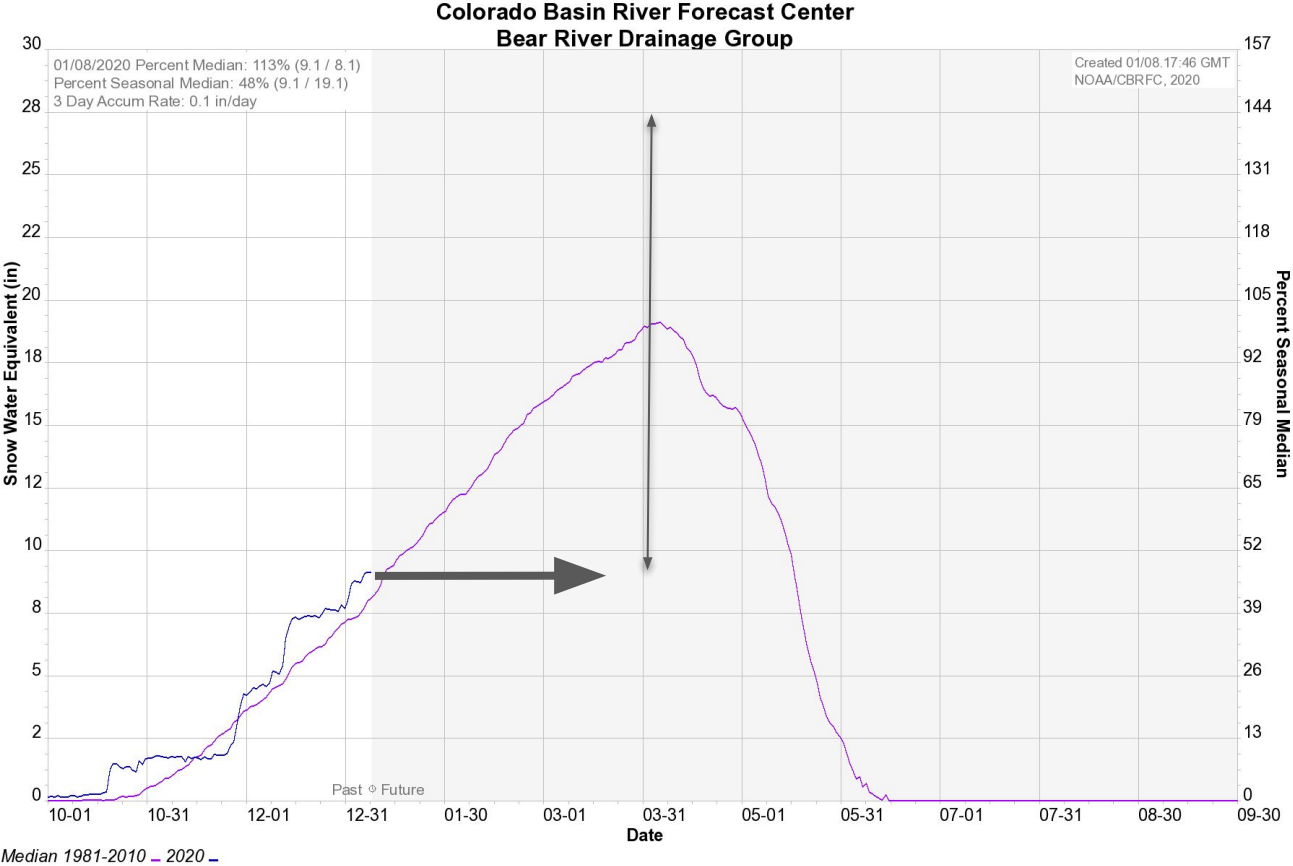
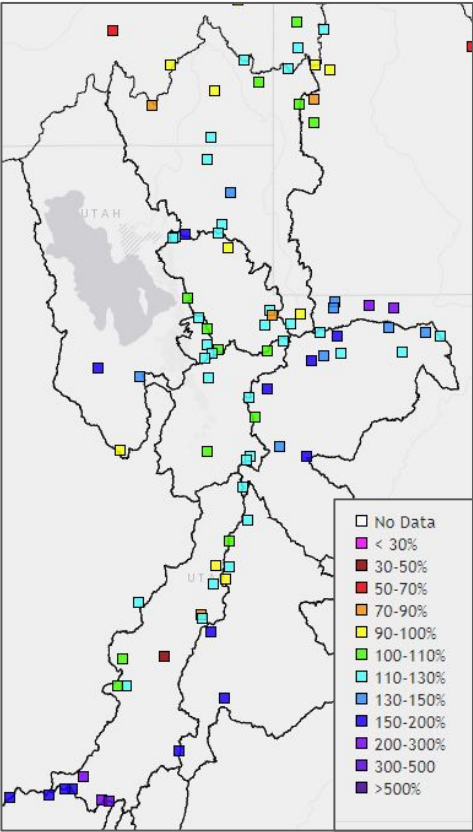


As of January 1, 2020
CBRFC Snow Groups (SNOTEL Stations)

- Bear: 115% of WY normal
- Weber: 105% of WY normal
- Six Cr: 120% of WY normal
- Provo: 115% of WY normal
- Duchesne: 140% of WY normal
- Sevier: 130% of WY normal
- Virgin: 205% of WY normal

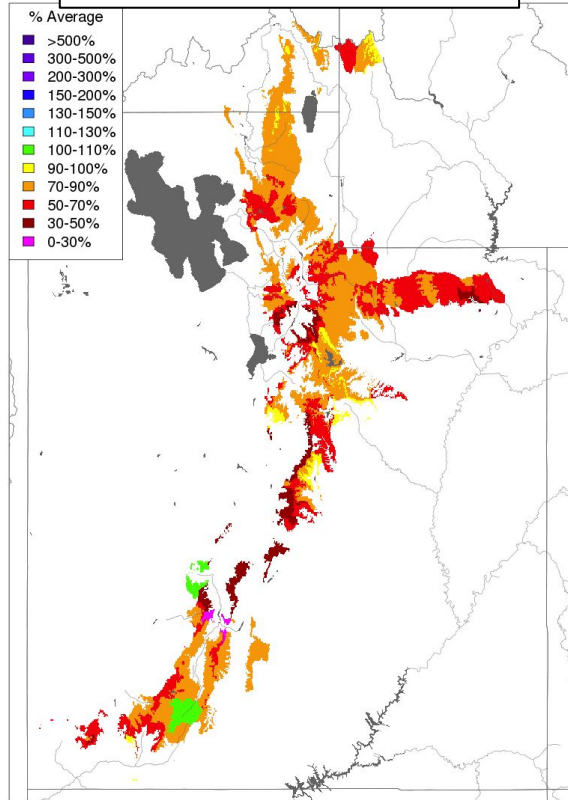
Utah Current Snowpack

SNOTEL (Observed)



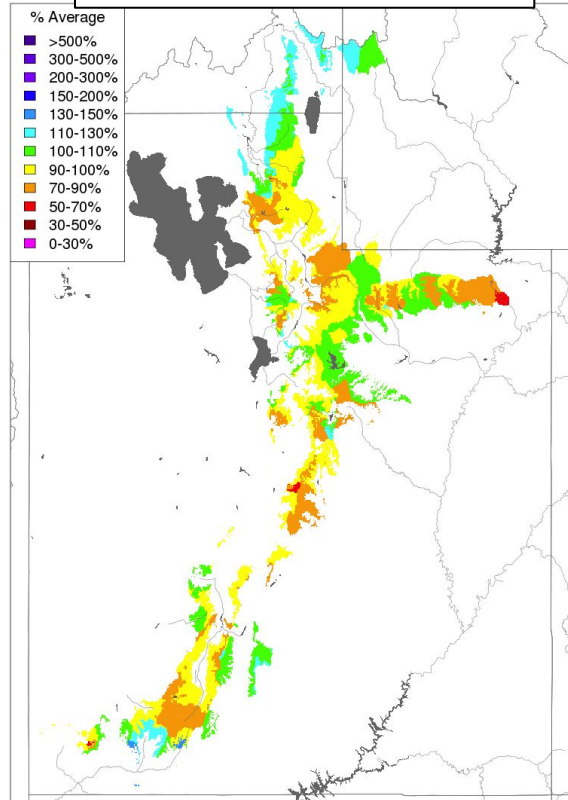
Utah - Soil Moisture Conditions

Start to 2019 Water Year



Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

Start to 2020 Water Year

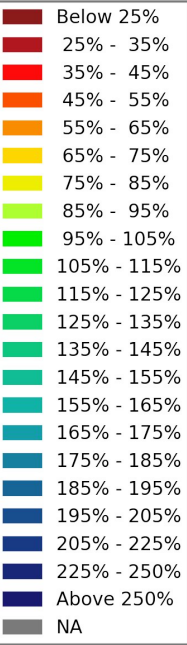
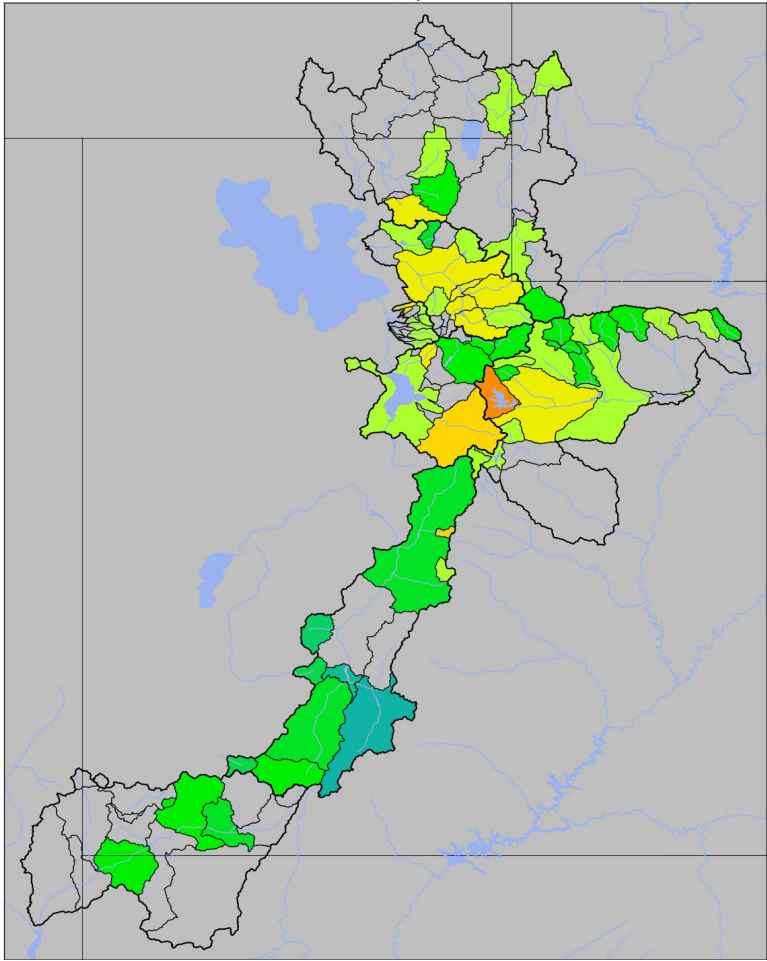


Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

Most Basins are starting out the year between 70-110% of normal.

- Bear: Above normal
- Weber: Below normal
- Six Creeks: Mixed
- Provo: Mixed
- Sevier: Mixed
- Duchesne: Mixed
- Virgin: Mixed

Utah Water Supply Forecasts - Overview

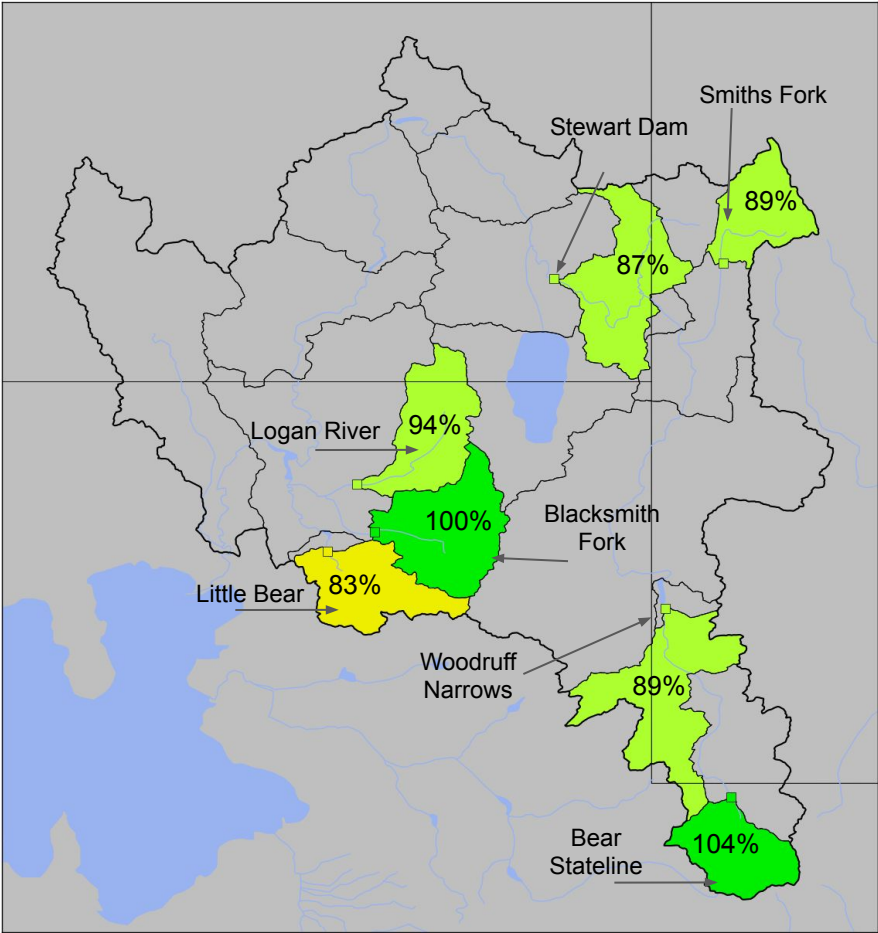


- January 1 Forecast for April-July Volume in 1000's acre feet (KAF)
- April-July Forecast Streamflow Volumes are in percent of 1981-2010 average

Median value of the...
...individual forecasts (in % of average)
...by Forecast Group.

Bear	90
Weber	85
Six Creeks	90
Provo / Utah Lake	90
Sevier	115
Duchesne	95
Virgin	100

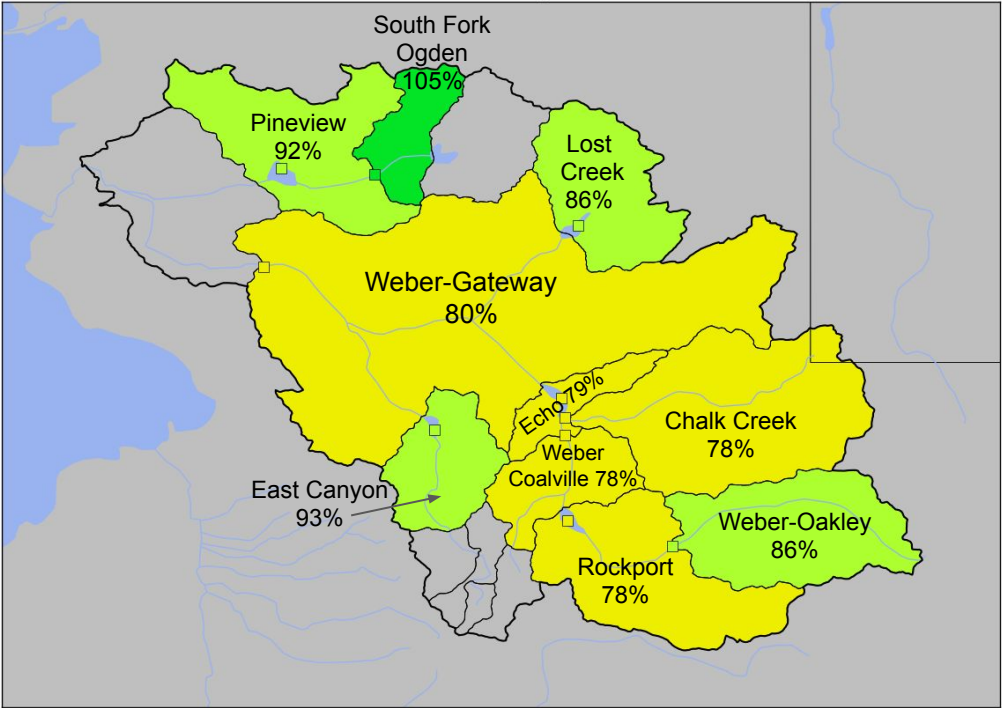
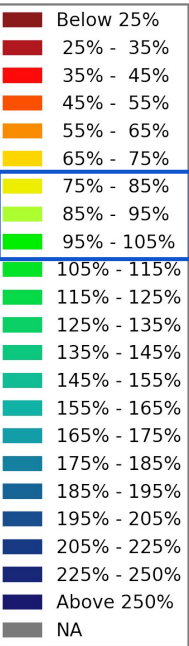
Utah Water Supply Forecasts - Bear



Bear River Basin Forecasts

January: **90%** of Normal

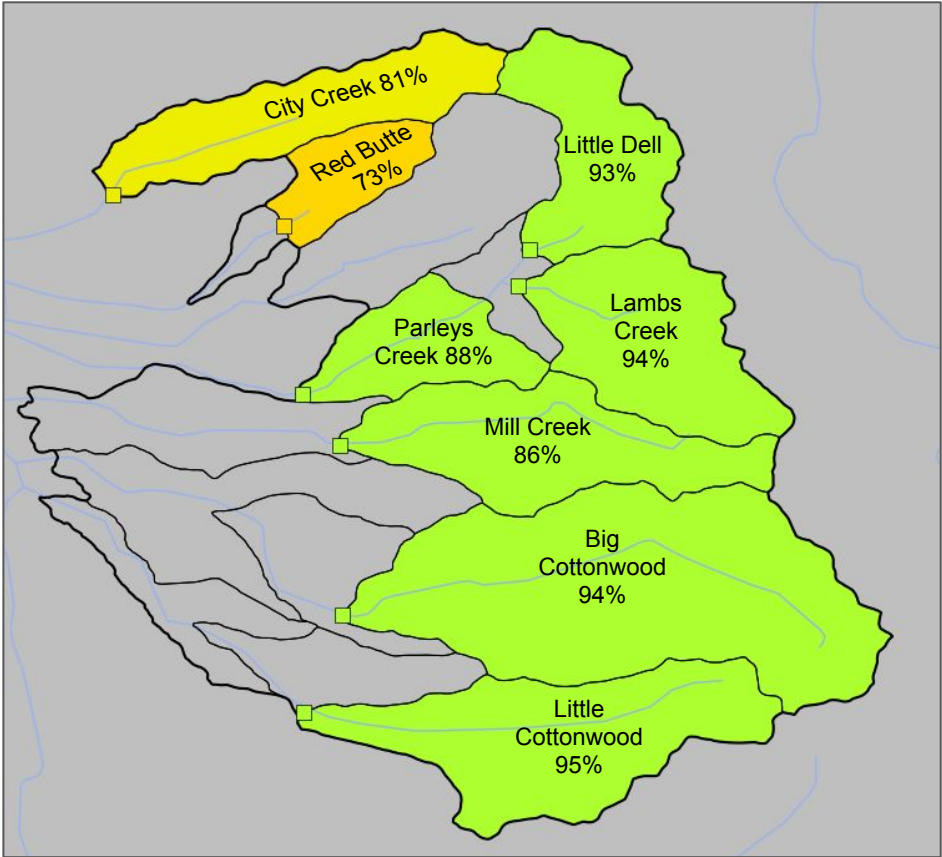
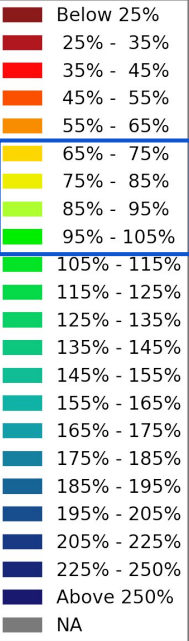
Utah Water Supply Forecasts - Weber



Weber River Basin Forecasts

January: **85%** of Normal

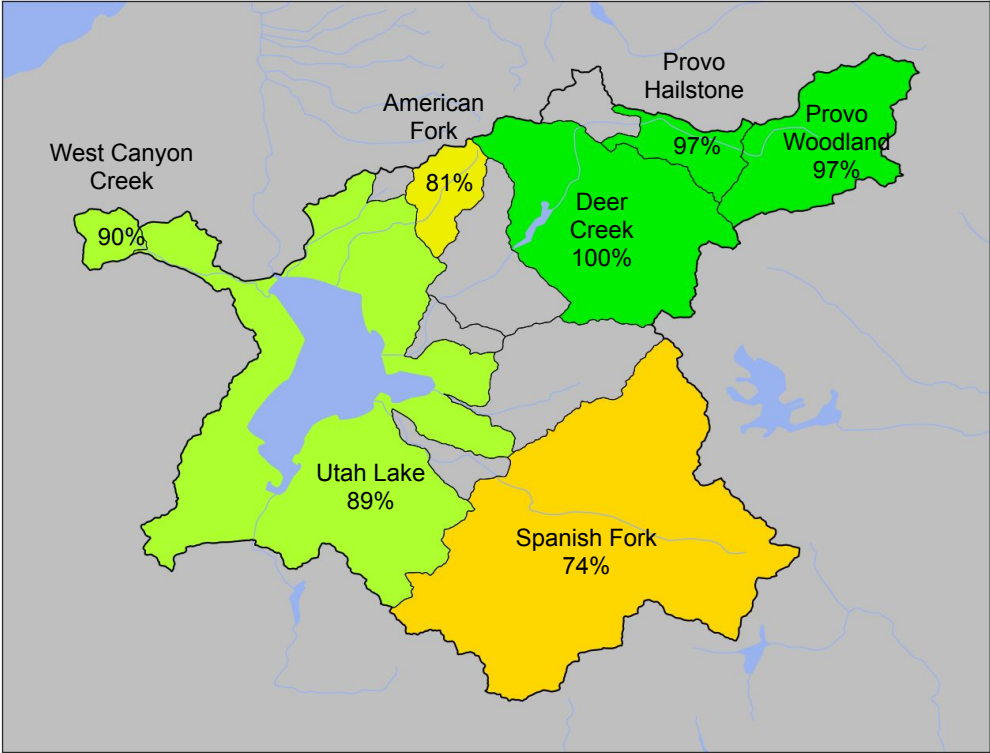
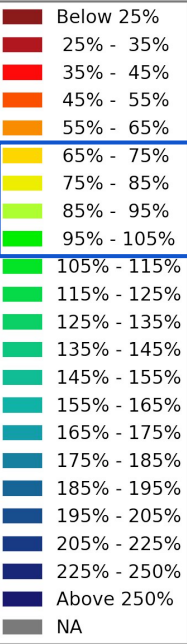
Utah Water Supply Forecasts - Six Creeks



Six Creeks Basin Forecasts

January: **90%** of Normal

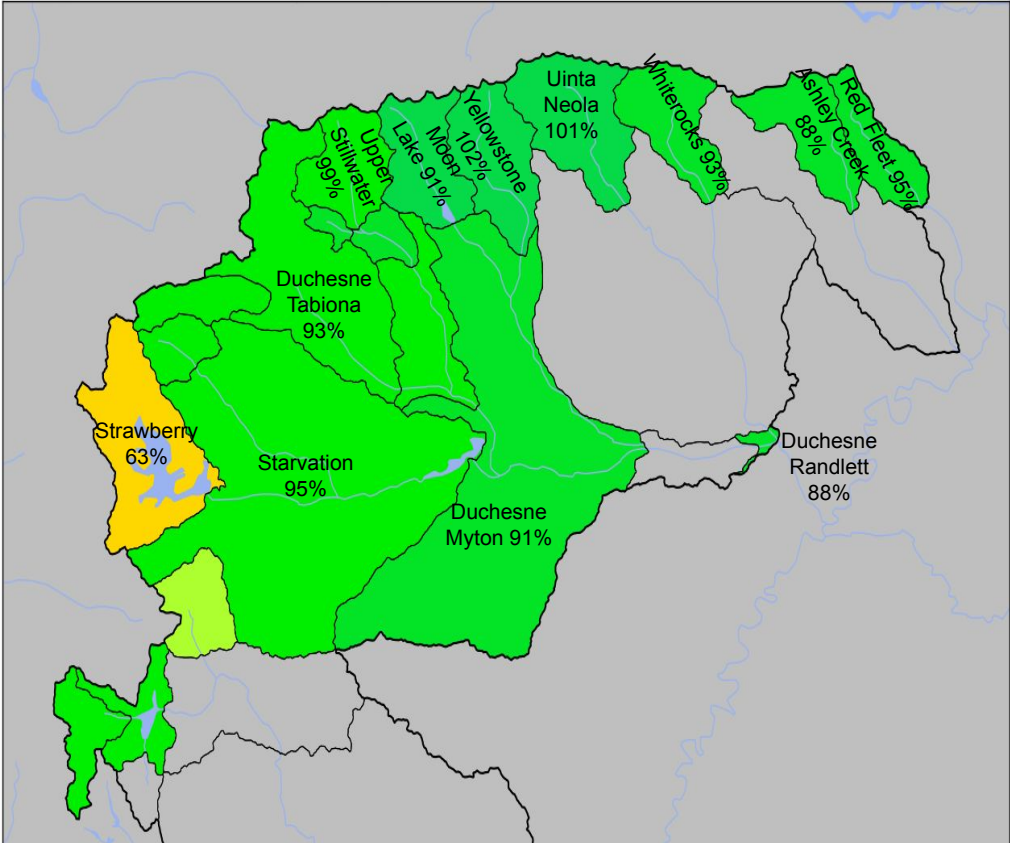
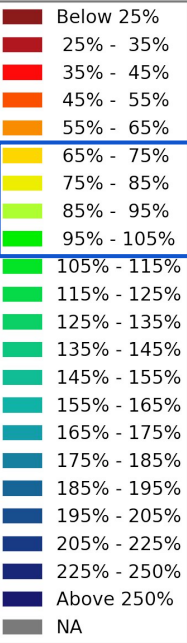
Utah Water Supply Forecasts - Provo - Utah Lake



Provo River Basin Forecasts

January: **90%** of Normal

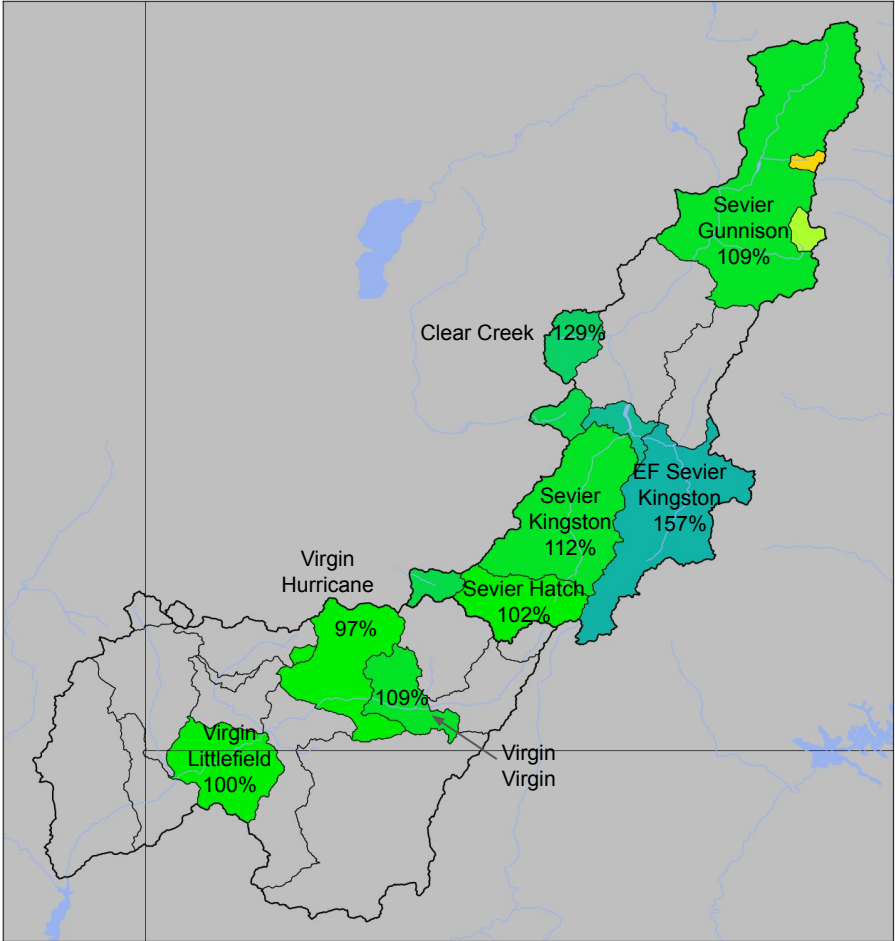
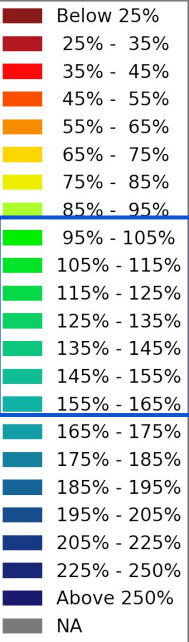
Utah Water Supply Forecasts - Duchesne



Duchesne River Basin Forecasts

January: **95%** of Normal

Utah Water Supply Forecasts - Sevier and Virgin



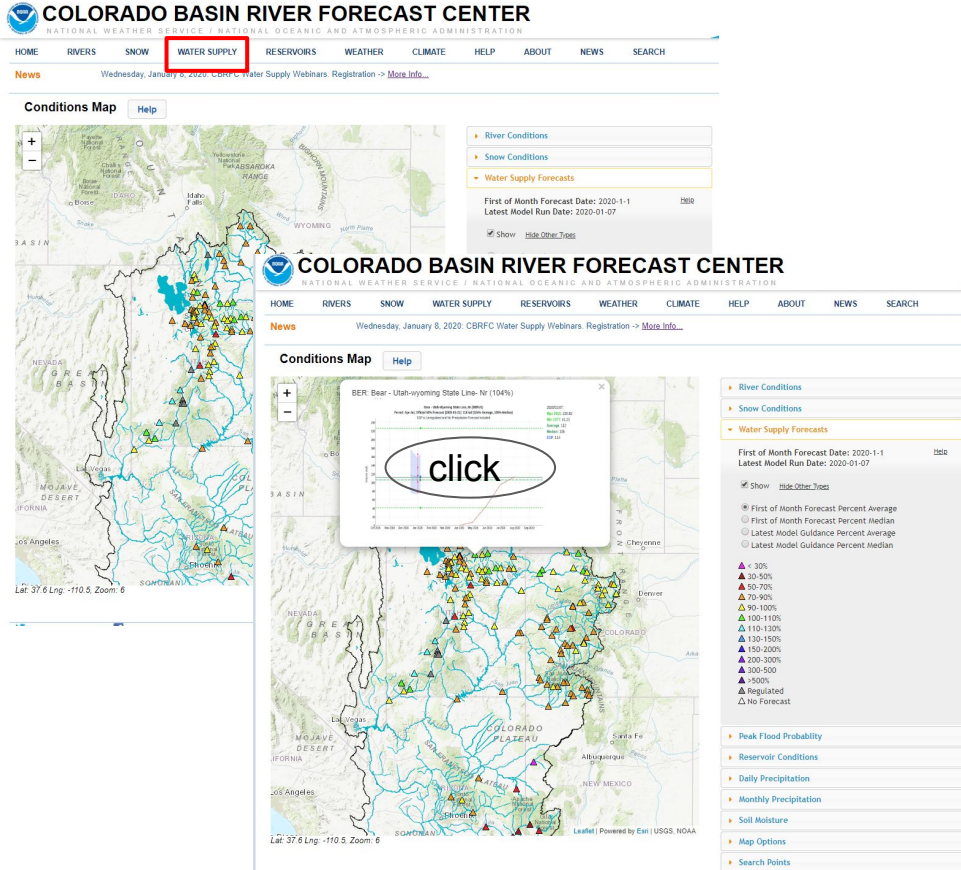
Sevier River Basin Forecasts

January: **115%** of Normal

Virgin River Basin Forecasts

January: **100%** of Normal

Utah Water Supply Forecasts - Evolution Plots



Evolution Plots allow one to:

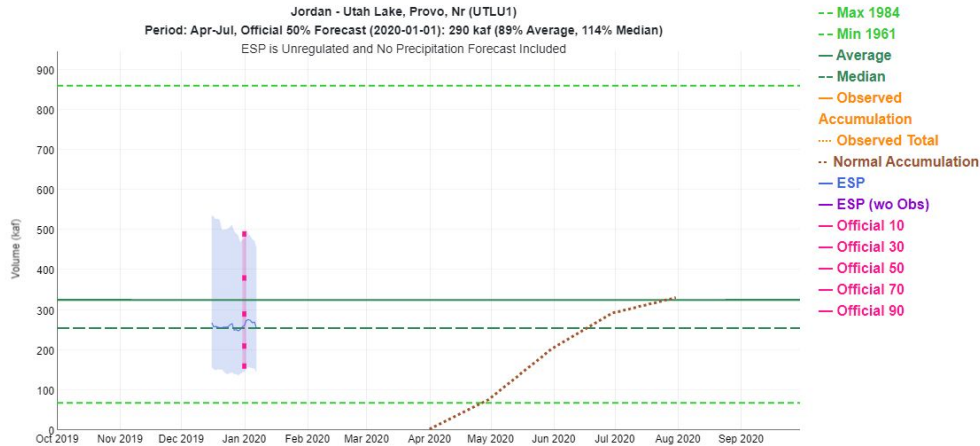
- Follow daily changes to WS Forecast Guidance
- Follow daily changes to exceedance values
- Review previous years
- Compare current values to Min., Max., Avg. Median values
- Follow observed and Avg. volume (accumulation)

Utah Water Supply Forecasts - Evolution Plots



Colorado Basin
River Forecast Center
National Oceanic and Atmospheric Administration

Water Supply Forecast



Water Year

2020
2019
2018
2017
2016
2015
2014
2013
2012
2011
2010
2009
2008
2007

Plot Options

- ☐ QPF
- ☒ ESP
- ☒ Official Forecasts
- ☒ Average
- ☒ Median
- ☒ Observations
- ☒ Max/Min
- ☐ Probability Traces
- ☐ Unapproved
- [Enable Unapproved \(local only\)](#)

Plot Tools

[Select Latest ESP](#)

[Select Latest Official](#)

[Snap Shot](#)

Plot Help

Hover for values.
Click and drag to zoom.
Double click to zoom out.
Shift-click and drag to pan.

[Product Description](#)
[ESP Model Description](#)

Data

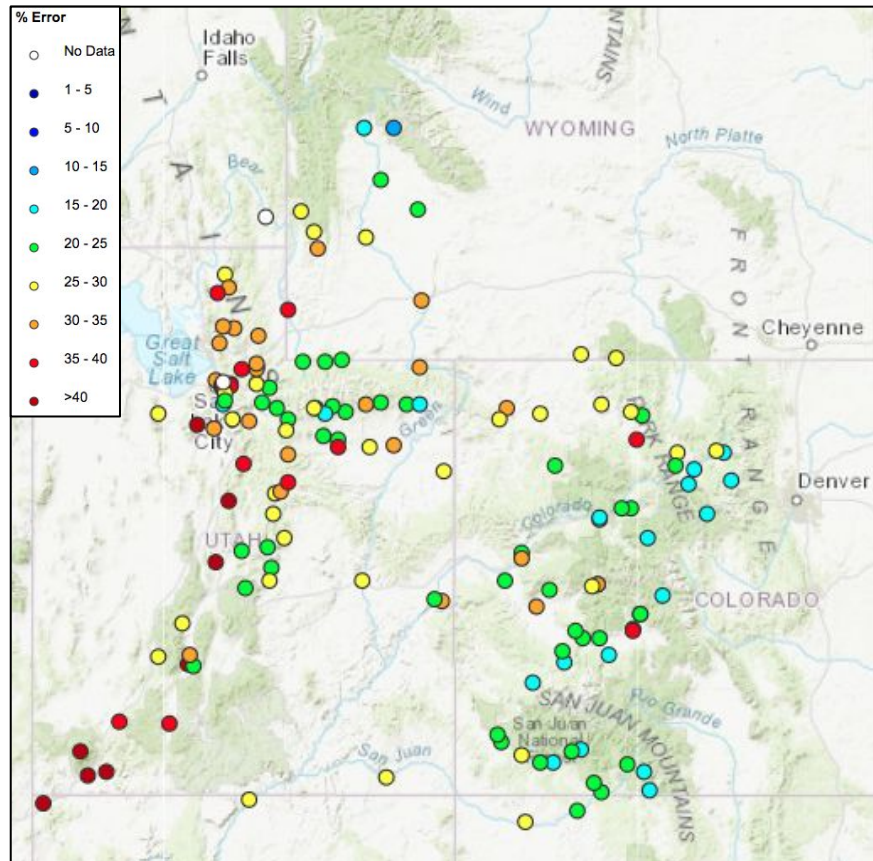
[Graph Data](#)
[Forecasts](#)
[Observations](#)
[Historical Volumes](#)
[Verification](#)
[Old Graph](#)
[Snow](#)

Evolution Plots allow one to:

- Follow daily changes to WS Forecast Guidance
- Follow daily changes to exceedance values
- Review previous years
- Compare current values to Min., Max., Avg. Median values
- Follow observed and Avg. volume (accumulation)

Historical (1981-2010) Forecast Verification

January Forecast Error: April-July Volume



Location

BEAR - UTAH-WYOMING STATE
BEAR - WOODRUFF NARROWS
LOGAN - LOGAN- NR
WEBER - OAKLEY- NR
WEBER - ROCKPORT RES
BIG COTTONWOOD CK
PARLEYS CK
PROVO - WOODLAND- NR
PROVO - DEER CK RES
VIRGIN - VIRGIN

January Forecast Error

21%
40%
27%
23%
30%
21%
39%
25%
33%
44%

Forecasts are better than just going with average
Error tends to decrease each month into the spring

Where Forecasts are Better:

- Headwaters
- Primarily snow melt basins
- Known diversions / demands

Where Forecasts are Worse:

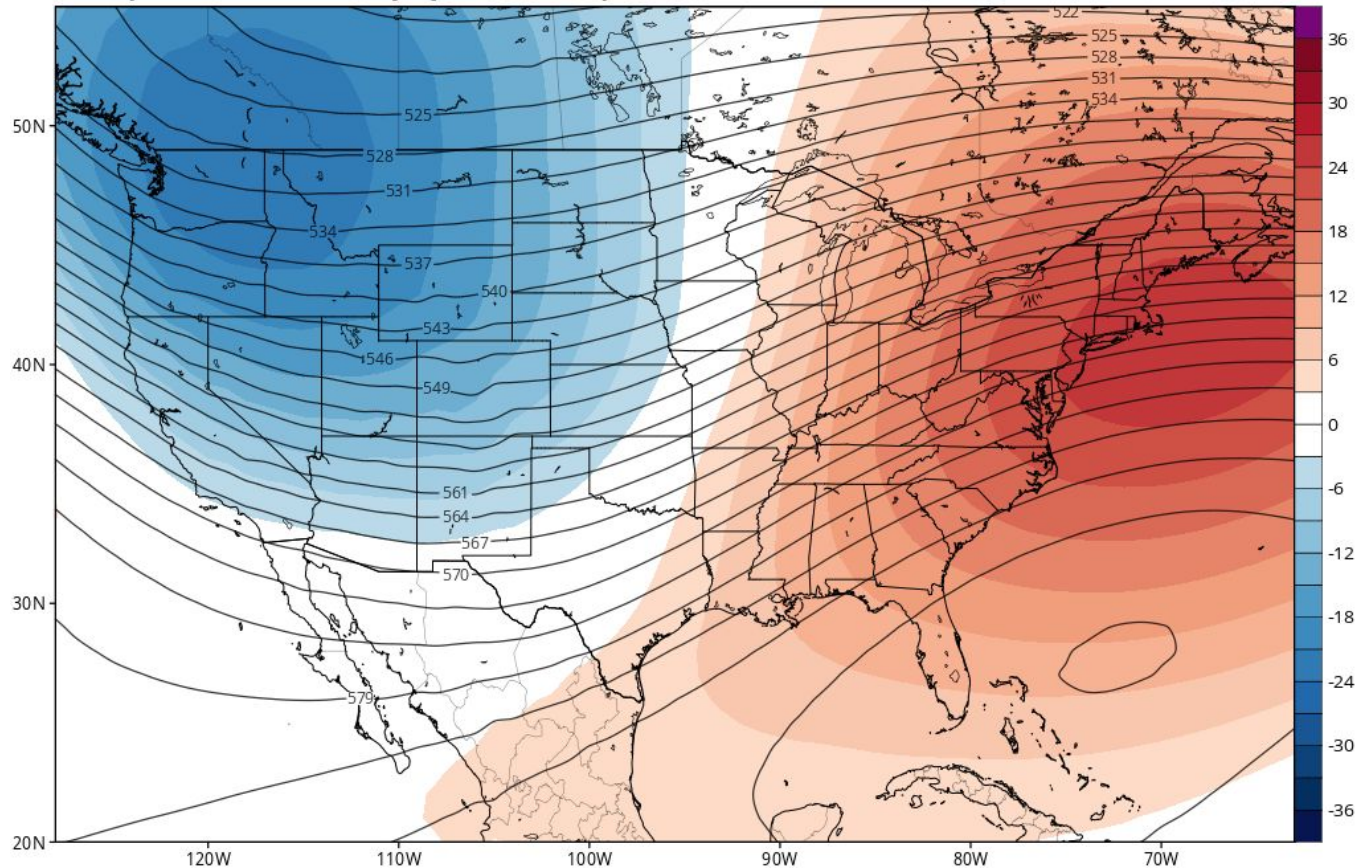
- Lower elevations (rain or early melt)
- Downstream of diversions / irrigation
- Little is known about diversions / demands

Upcoming Weather: next 7-10 days

GEFS Mean 500mb GPH & Anomaly (dam) from 00z11Jan2020 to 00z16Jan2020 (Days 4-8)

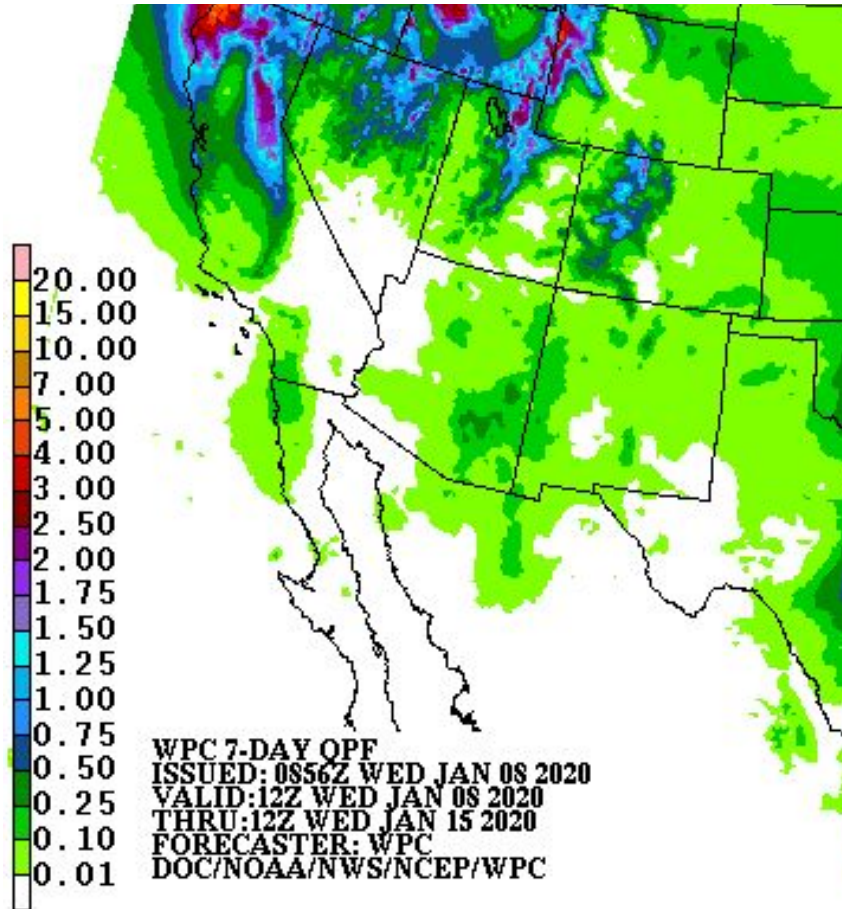
Init: 00z Jan 08 2020 Forecast Hour: [192] valid at 00z Thu, Jan 16 2020

TROPICALTIDBITS.COM



- Trough over the Western U.S. may persist through January
- Northwest flow continues

Upcoming Weather: WPC January 8 - 14 Precipitation Outlook

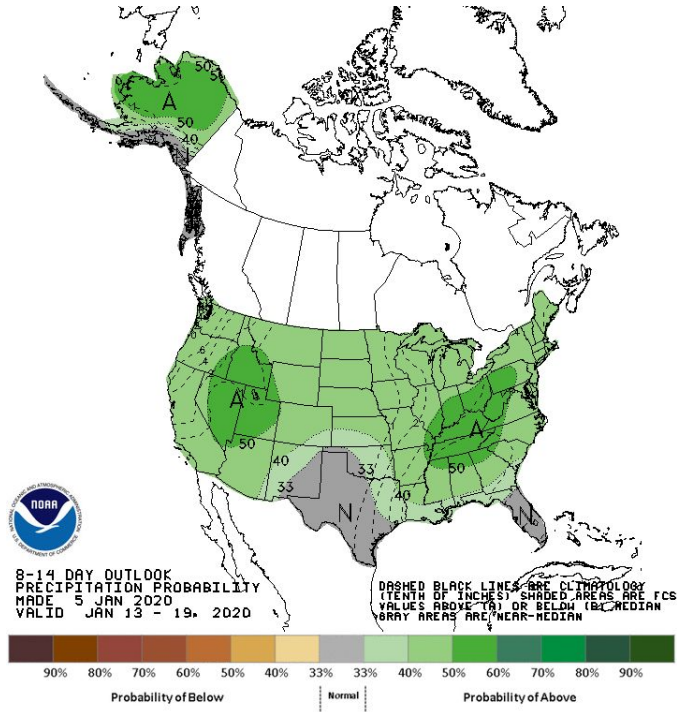


- Models indicate a more active weather pattern for the Great Basin over the next two weeks
- Week 1: Multiple storms bring significant precipitation to the mountains of northern Utah, with the possibility of some precipitation spreading south into Arizona as well.
- Week 2: Continuing wet pattern and chances for above normal precipitation across the entire Colorado Basin River Forecast Center area.

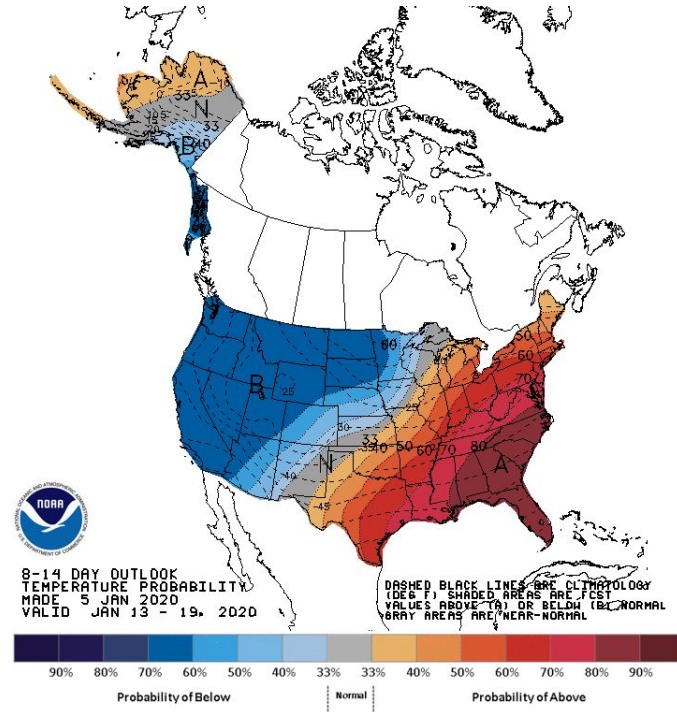
Upcoming Weather: 8-14 Day Outlook

Increased probability of above average precipitation & below average temperature

Precipitation Outlook



Temperature Outlook



Summary

- Current soil moisture is improved compared to last year.
- Snow conditions are above normal.
- It is still relatively early in the snow accumulation season.
- Water Supply Forecasts
 - Great Basin is slightly below average
 - Duchesne and Virgin Basins are about average
 - Sevier is above average
- An active weather period is forecast to bring additional precipitation for the coming weeks.

2020 Water Supply Briefing Schedule

**All Times Mountain Time (MT)*

Colorado River Basin

Wednesday	Jan 8 th	10 am
Friday	Feb 7 th	10 am
Friday	Mar 6 th	10 am
Tuesday	Apr 7 th	10 am
Thursday	May 7 th	10 am

Utah (formerly Great Basin)

Wednesday	Jan 8 th	11:30 am
Friday	Feb 7 th	11:30 am
Friday	Mar 6 th	11:30 am
Tuesday	Apr 7 th	11:30 am
Thursday	May 7 th	11:30 am



Peak flow forecast webinar Wednesday, March 18th, 10 am MT

Additional briefings scheduled as needed

All registration information has been posted to the CBRFC web page.

CBRFC Webinar Registration & Email List



COLORADO BASIN RIVER FORECAST CENTER

NATIONAL WEATHER SERVICE / NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

[HOME](#) [RIVERS](#) [SNOW](#) [WATER SUPPLY](#) [RESERVOIRS](#) [WEATHER](#) [CLIMATE](#) [HELP](#) [ABOUT](#) [NEWS](#) [SEARCH](#)

News Wednesday, January 8, 2020: CBRFC Water Supply Webinars. Registration - [More Info...](#)

CBRFC Water Supply Forecast Webinars - Water Year 2020

The Colorado Basin River Forecast Center (CBRFC) produces water supply forecasts for the Colorado River and eastern Great Basins. CBRFC conducts December through June webinars explaining the forecasts and current conditions.

The webinar is composed of two parts - (1) a telephone conference call and (2) a web-based presentation. The conference call can be joined by dialing the number below prior to the start of the webinar and entering the provided access code when prompted.

Webinar Dial-In Information (same for all webinars):

Conference Call Phone Number: 1-877-929-0660

Access Code: 1706374

To view the web-based presentation, you will need to register prior to each webinar. Follow the links below to register for a webinar.

Early Season Water Supply Outlook Webinar (click to register):

[Wednesday, December 18 @ 10 am MT](#)

Colorado River Basin Water Supply Webinars:

[Wednesday, January 8 @ 10 am MT](#)

[Friday, February 7 @ 10 am MT](#)

[Friday, March 6 @ 10 am MT](#)

[Tuesday, April 7 @ 10 am MT](#)

[Thursday, May 7 @ 10 am MT](#)

Great Basin Water Supply Webinars:

[Wednesday, January 8 @ 11:30 am MT](#)

[Friday, February 7 @ 11:30 am MT](#)

[Friday, March 6 @ 11:30 am MT](#)

[Tuesday, April 7 @ 11:30 am MT](#)

[Thursday, May 7 @ 11:30 am MT](#)

Peak Flow Webinar:

[Wednesday, March 18 @ 10 am MT](#)

A notification email will be sent if a date or time change occurs. Additional webinars are scheduled as needed. The webinar slides will be available from the [CBRFC presentations page](#) soon after each briefing.

Utah

<https://www.cbrfc.noaa.gov/>



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News Wednesday, December 18th, 10 am MT: CBRFC Early Season Water Supply Outlook Webinar. Registration -> [More Info...](#)
2020 Water Supply Forecast Webinar Schedule and Registration -> [More Info...](#)

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RSS

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Or you can request to join by sending an email to cbrfc.webmasters@noaa.gov

In the subject line please include: **email notification list**

If you would like to add any information about your area of interest and association or agency you represent please do so in the body of the email.

This information would help us maintain a more comprehensive contact list.

This list is used to provide notification when webinars are scheduled, water supply forecasts are updated, and for other news of interest to our stakeholders regarding CBRFC operations.

For questions or comments, including suggestions on additional CBRFC products or services we might provide, please contact us at cbrfc.webmasters@noaa.gov.

CBRFC Contacts

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CBRFC Webpage

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CBRFC Water Supply Presentations

<https://www.cbrfc.noaa.gov/present/present.php>

Questions?