

# Utah Water Supply Briefing

(Previously the Great Basin Water Supply Briefing.)

February 7<sup>th</sup>, 2020

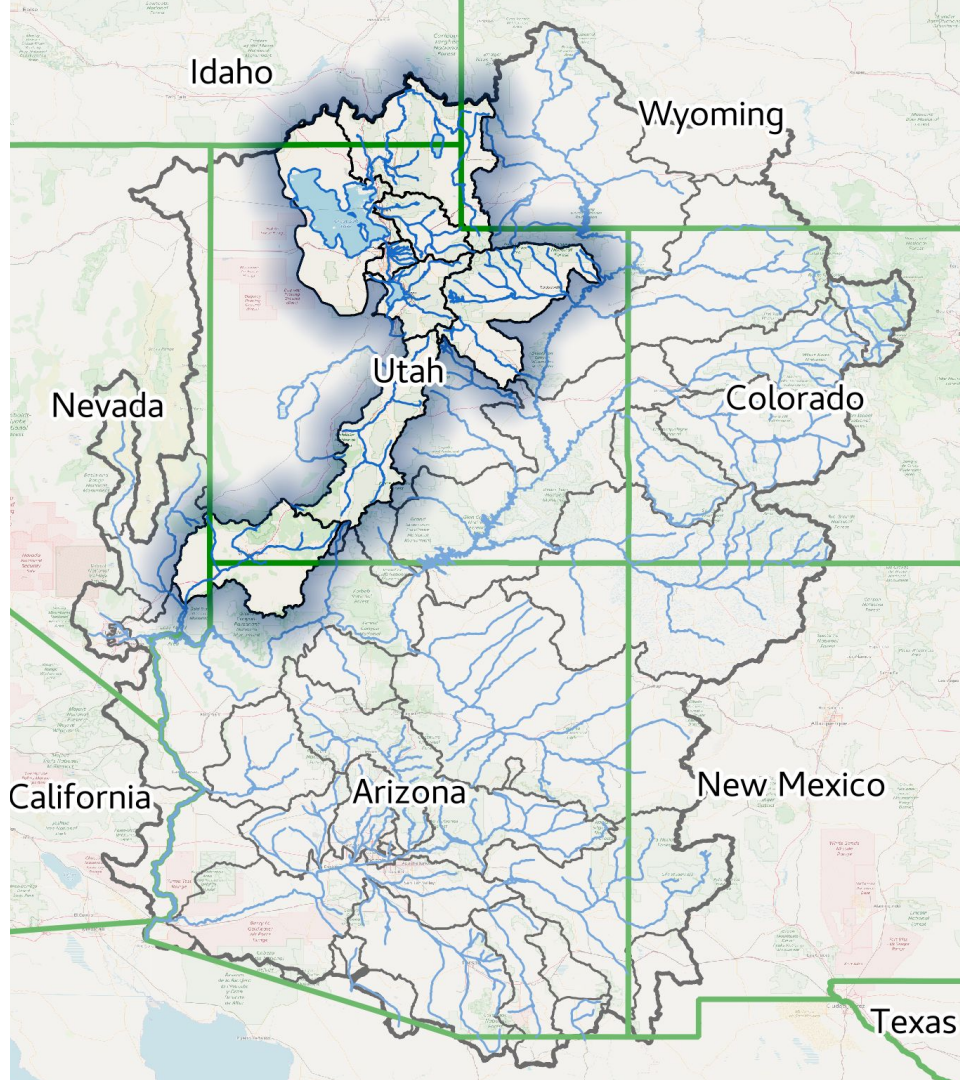
Colorado Basin River Forecast Center  
Patrick Kormos - Hydrologist

For audio, please dial

**Phone: 1-877-929-0660**

**Passcode: 1706374**

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



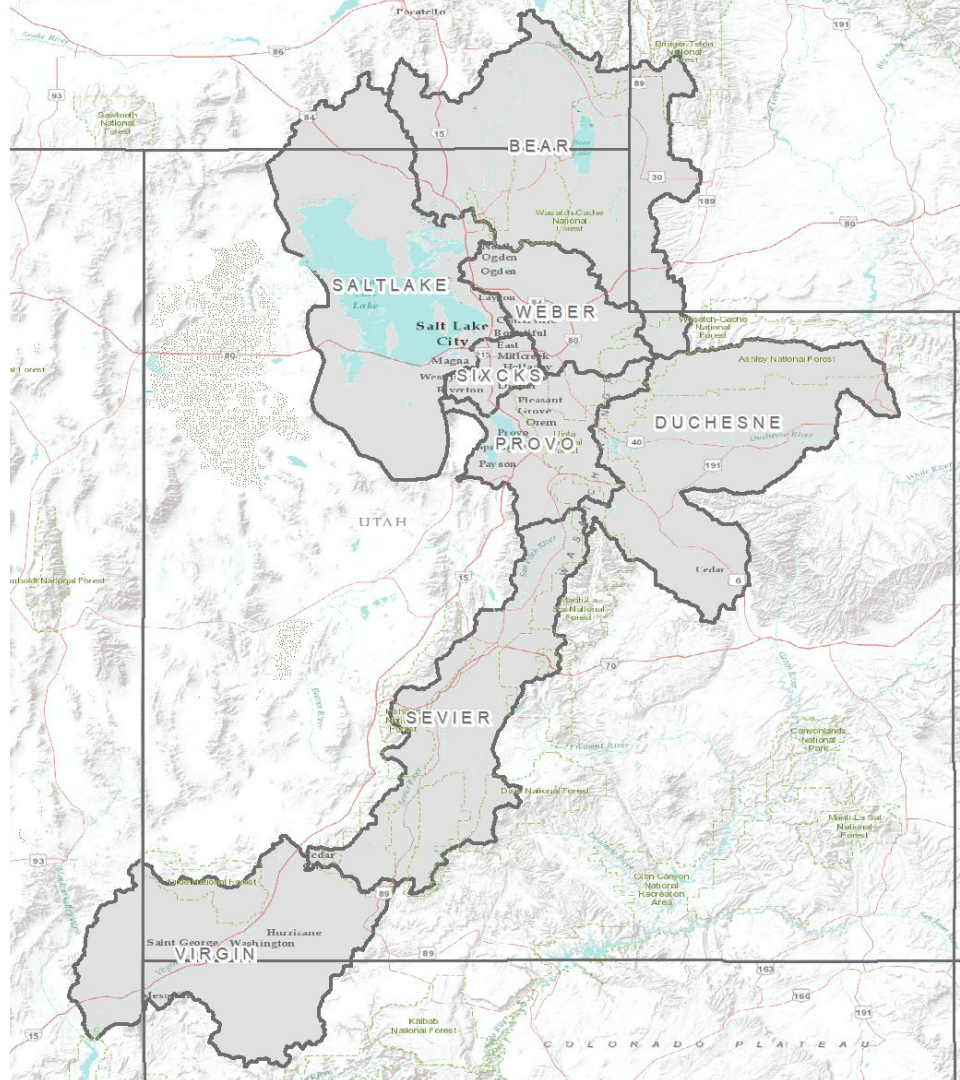
# Utah Water Supply Briefing

1. Precipitation Review
2. Current Snowpack
3. 2020 Water Supply Forecasts
4. Evolution Plot Review
5. Forecast Error
6. Upcoming Weather
7. Contacts & Questions

**Phone: 1-877-929-0660**

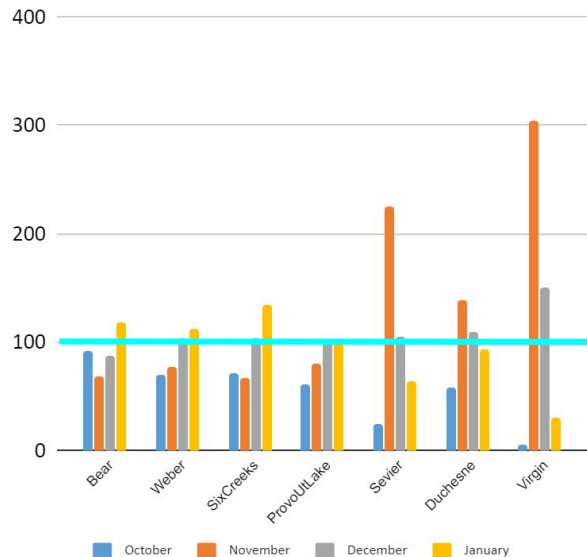
**Passcode: 1706374**

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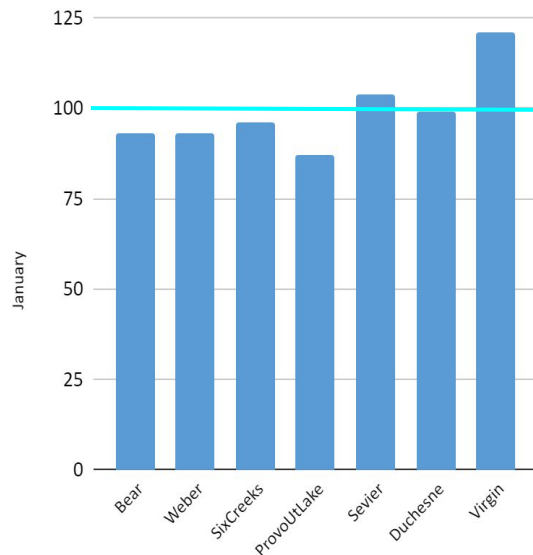


# Utah Precipitation Review - Precipitation up to Feb. 1, 2020

Monthly Precipitation Percent of Normal



Water Year Precipitation Percent of Normal



## January Precipitation

- Six Creeks: Much above Normal
- Bear, Weber: Above Normal
- Duchesne and Provo: Normal
- Sevier: Below Normal
- Virgin: Much Below Normal

## Water Year Precipitation

- Virgin: Above Normal
- Bear, Six Creeks, Weber, Sevier, Duchesne: Normal
- Provo: Below Normal

- Bear: 93%
- Weber: 93%
- Six Creeks: 97%
- Provo: 88%
- Sevier: 104%
- Duchesne: 99%
- Virgin: 121%

Phone: 1-877-929-0660

Passcode: 1706374

Please mute your phone until the question period

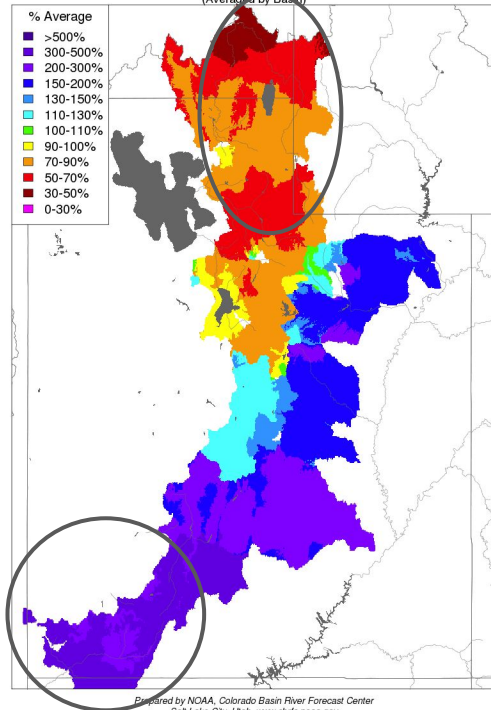


# Utah Precipitation Review - Monthly Precipitation

## November

Monthly Precipitation - November 2019

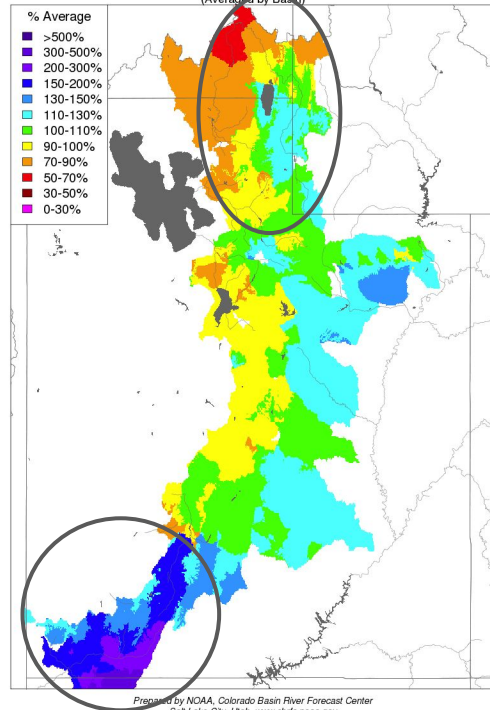
(Averaged by Basin)



## December

Monthly Precipitation - December 2019

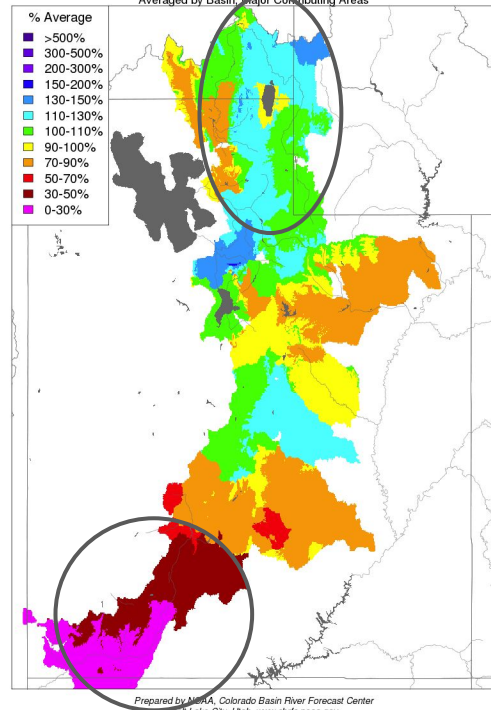
(Averaged by Basin)



## January

Monthly Precipitation - January 2020

(Averaged by Basin, Major Contributing Areas)

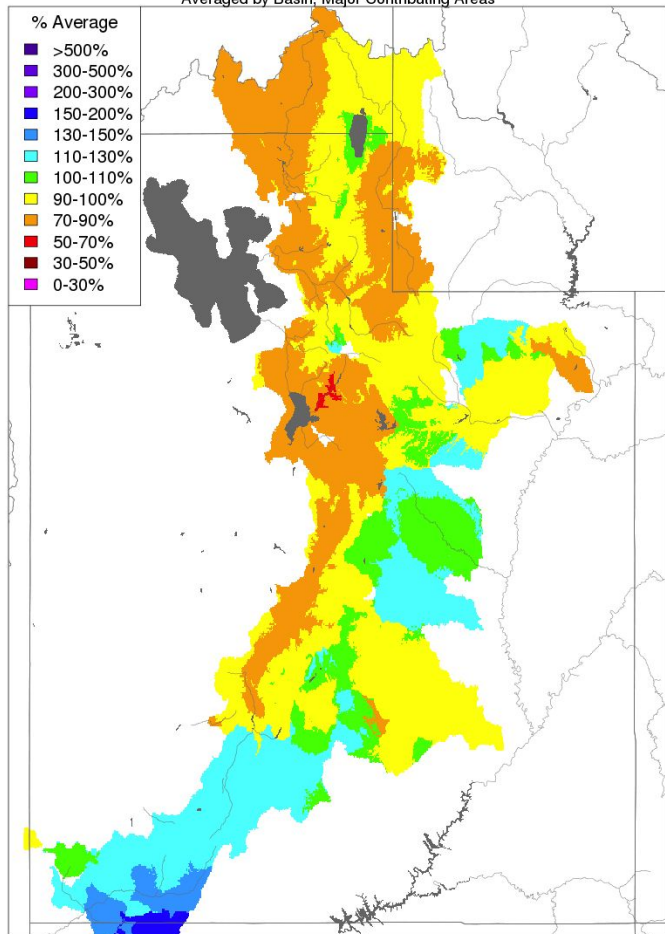


% Average

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

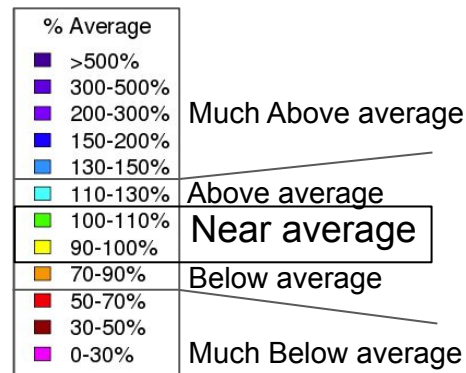
## Water Year Precipitation, October 2019 - January 2020

Averaged by Basin, Major Contributing Areas



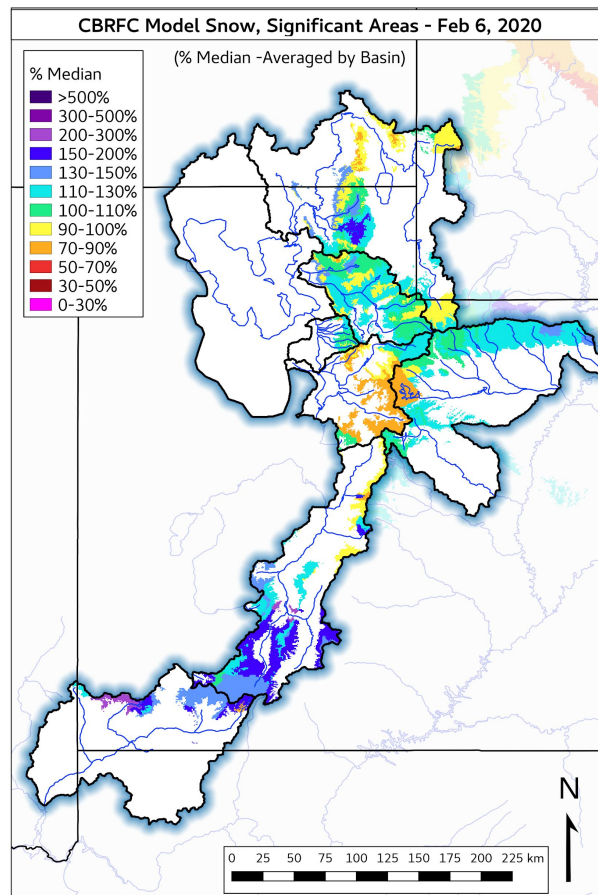
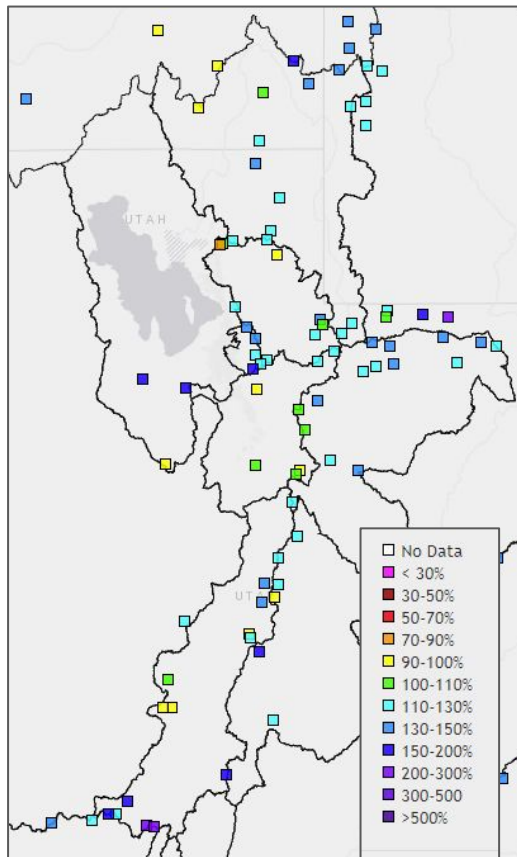
Prepared by NOAA, Colorado Basin River Forecast Center  
Salt Lake City, Utah, [www.cbrfc.noaa.gov](http://www.cbrfc.noaa.gov)

## Utah Precipitation Review - Water Year Precipitation



# Utah Current Snowpack

SNOTEL (Observed Feb. 7, 2020)

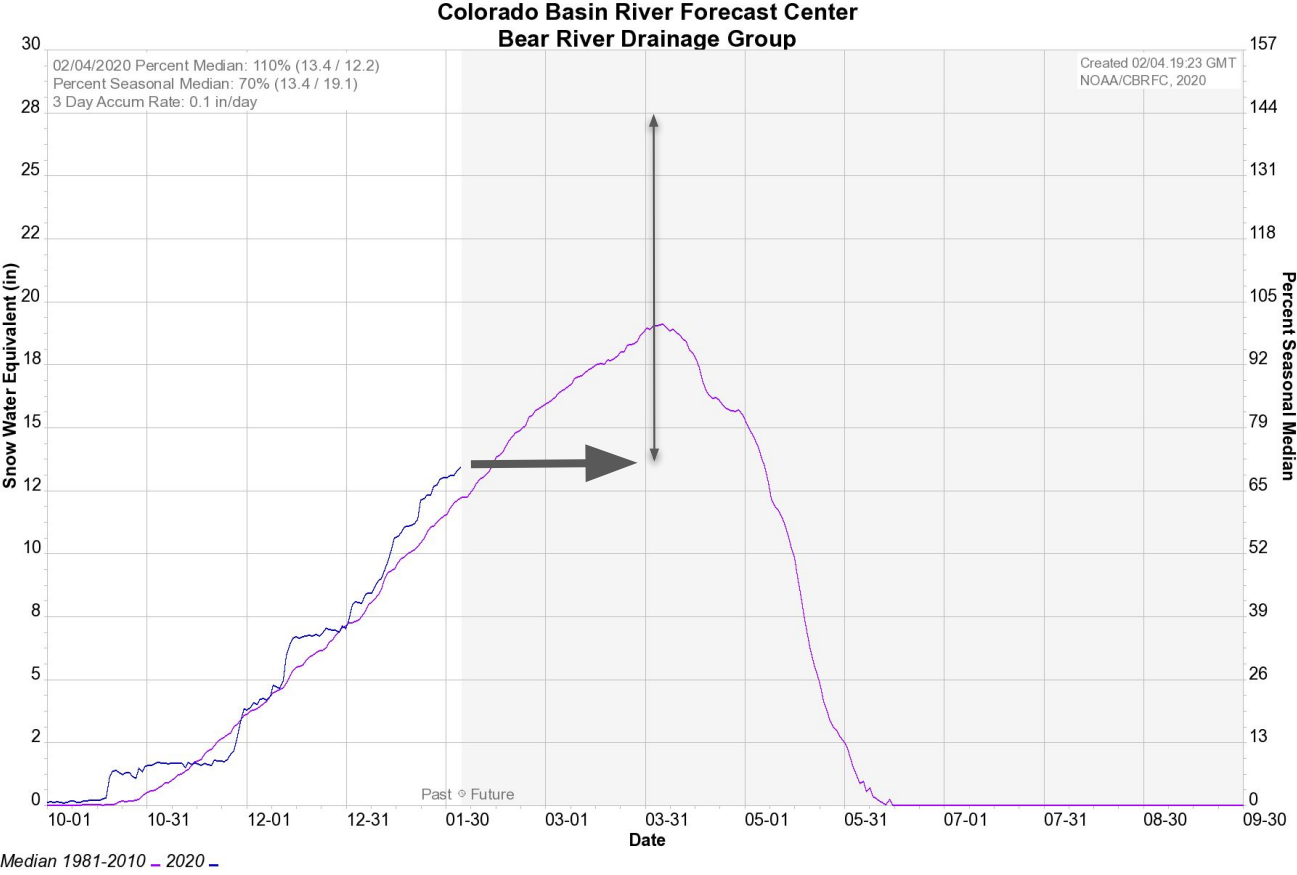
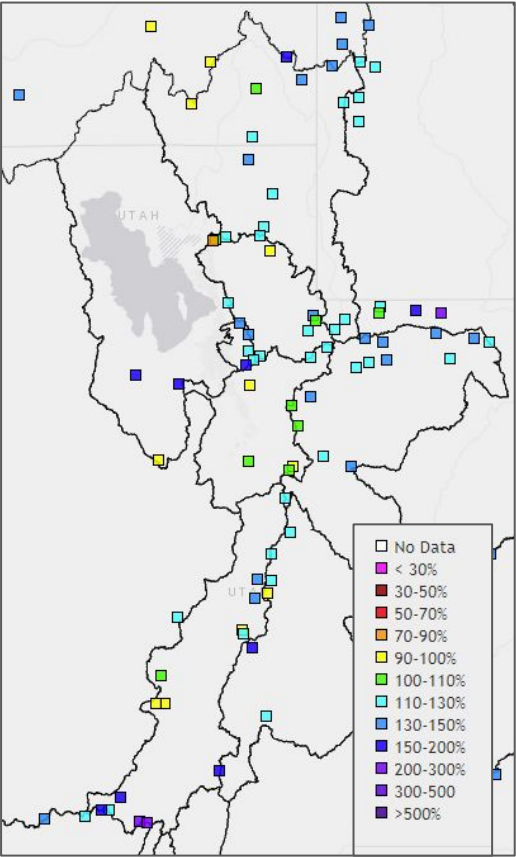


As of February 1, 2020  
CBRFC Snow Groups (SNOTEL Stations)

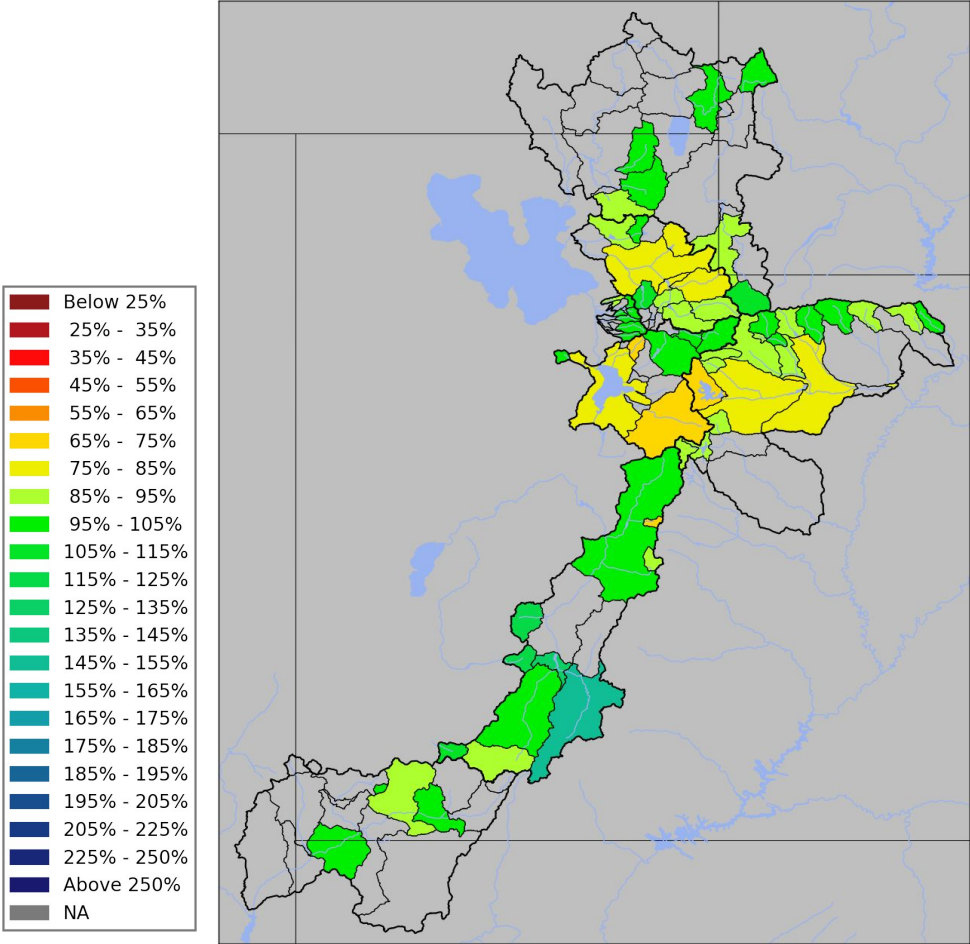
- Bear: 110%
- Weber: 105%
- Six Cr: 120%
- Provo: 105%
- Duchesne: 125%
- Sevier: 110%
- Virgin: 150%

# Utah Current Snowpack: Words of Caution

SNOTEL (Observed Feb. 7, 2020)



# Utah Water Supply Forecasts - Overview



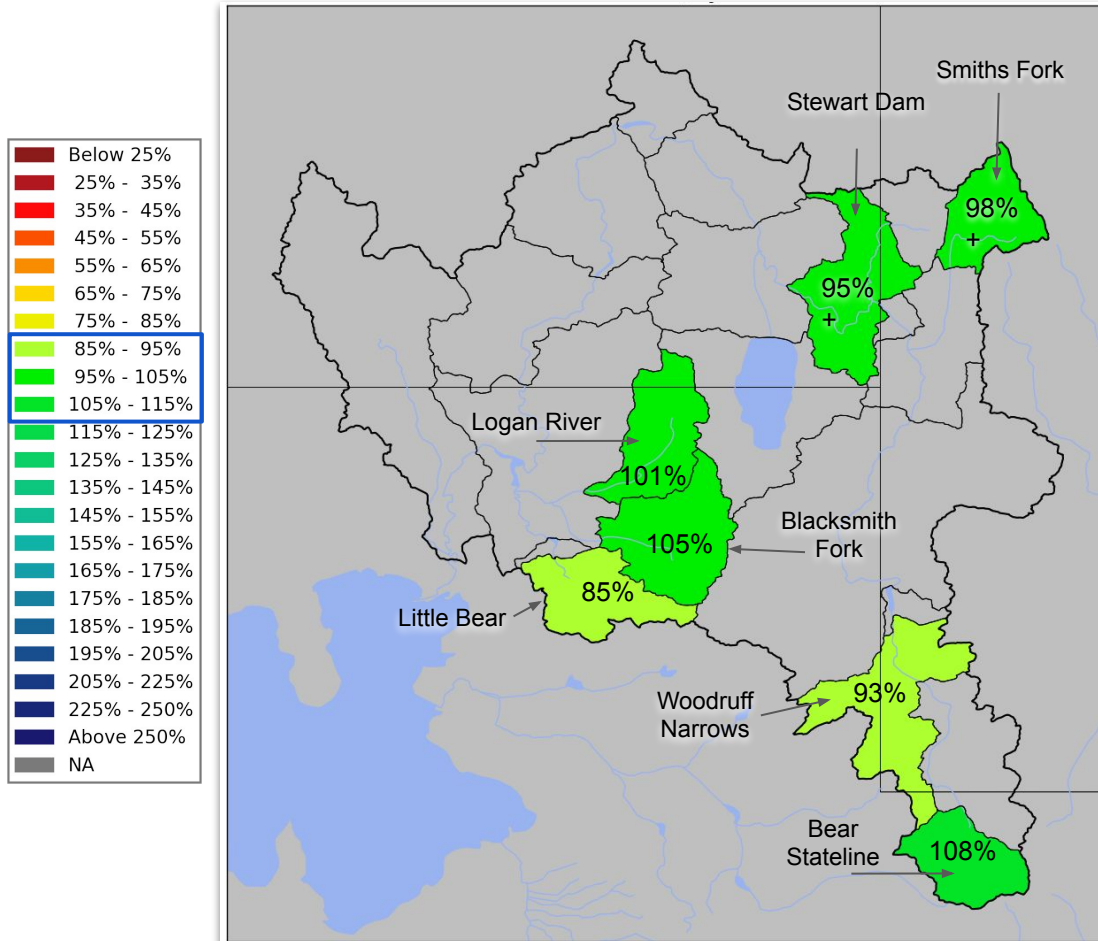
- February 1 Forecasts for April-July Volume in 1000's acre feet (KAF)
- April-July Forecast Streamflow Volumes are in percent of 1981-2010 average

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

Bear	100%
Weber	85%
Six Creeks	100%
Provo / Utah Lake	95%
Sevier	110%
Duchesne	90%
Virgin	95%



# Utah Water Supply Forecasts - Bear



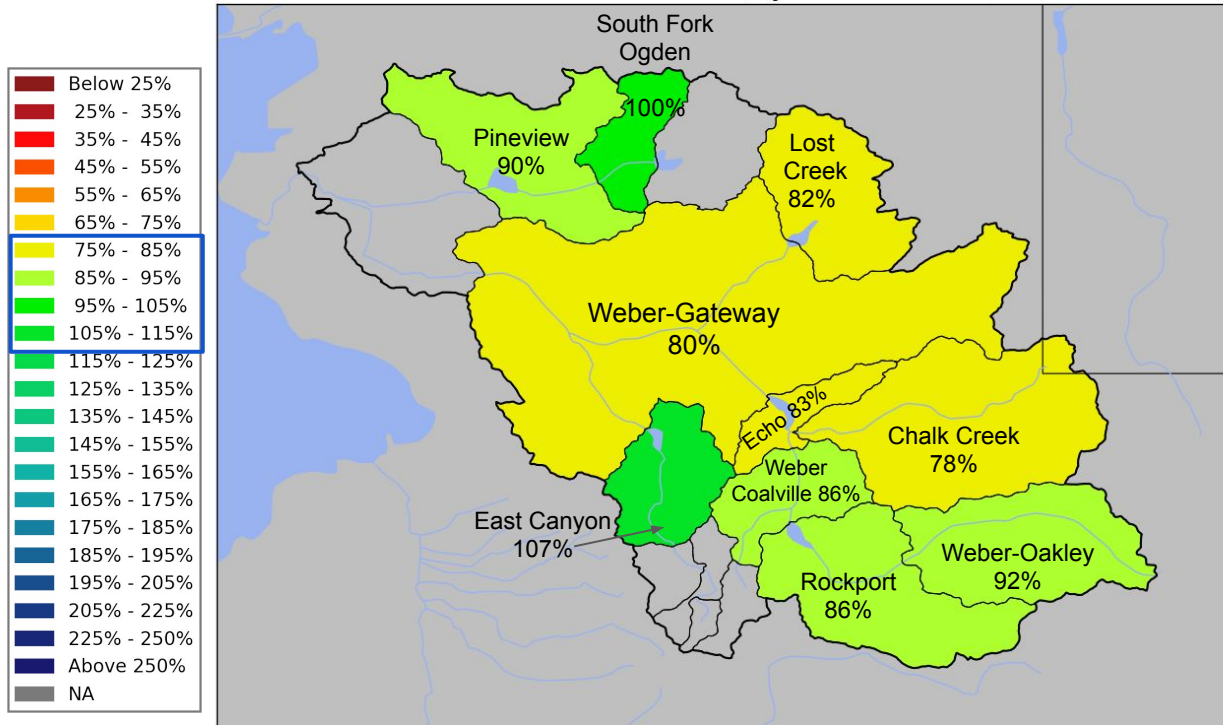
## Bear River Basin Forecasts

January: 90%

February: 100%

- Between 85% and 108%
- Forecasts increased in all basins

# Utah Water Supply Forecasts - Weber



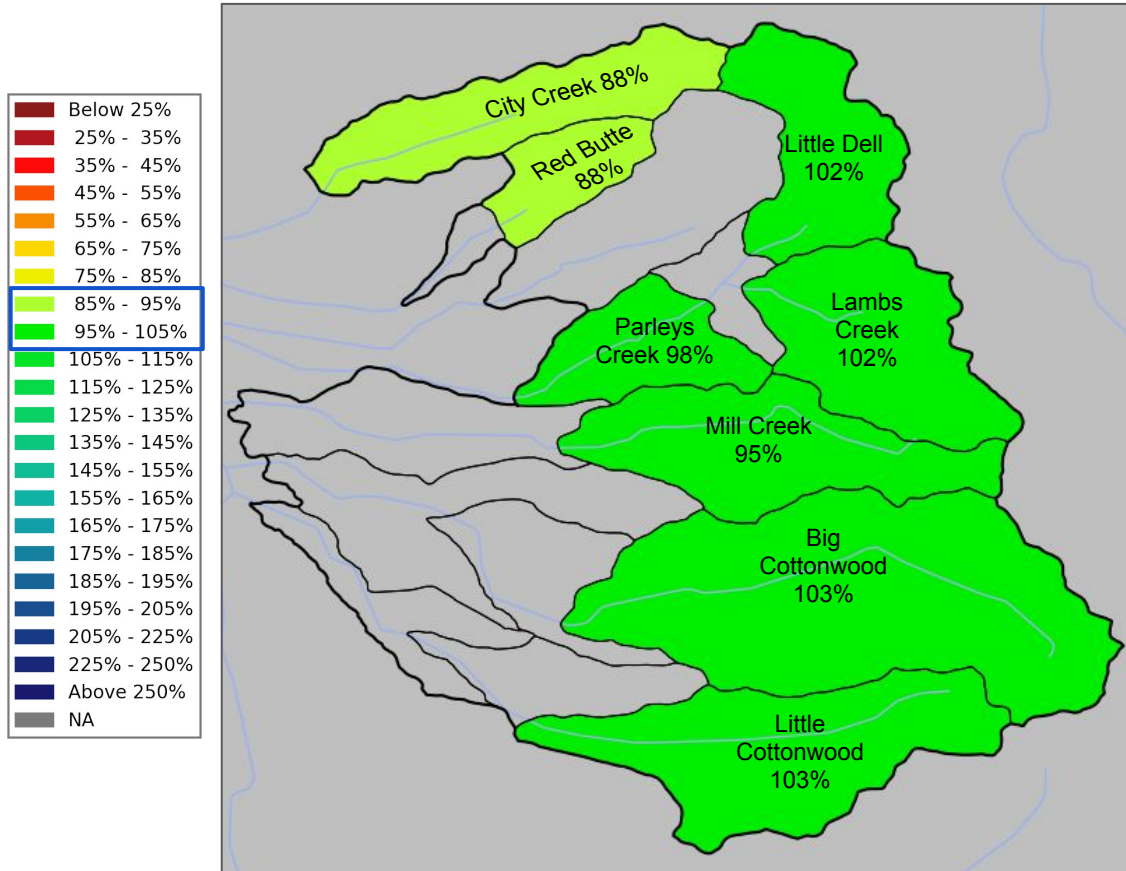
## Weber River Basin Forecasts

January: 85%

February: 85%

- Slight Decrease in North Basin
- Slight Increase in South Basin
- Between 78% and 107%

# Utah Water Supply Forecasts - Six Creeks



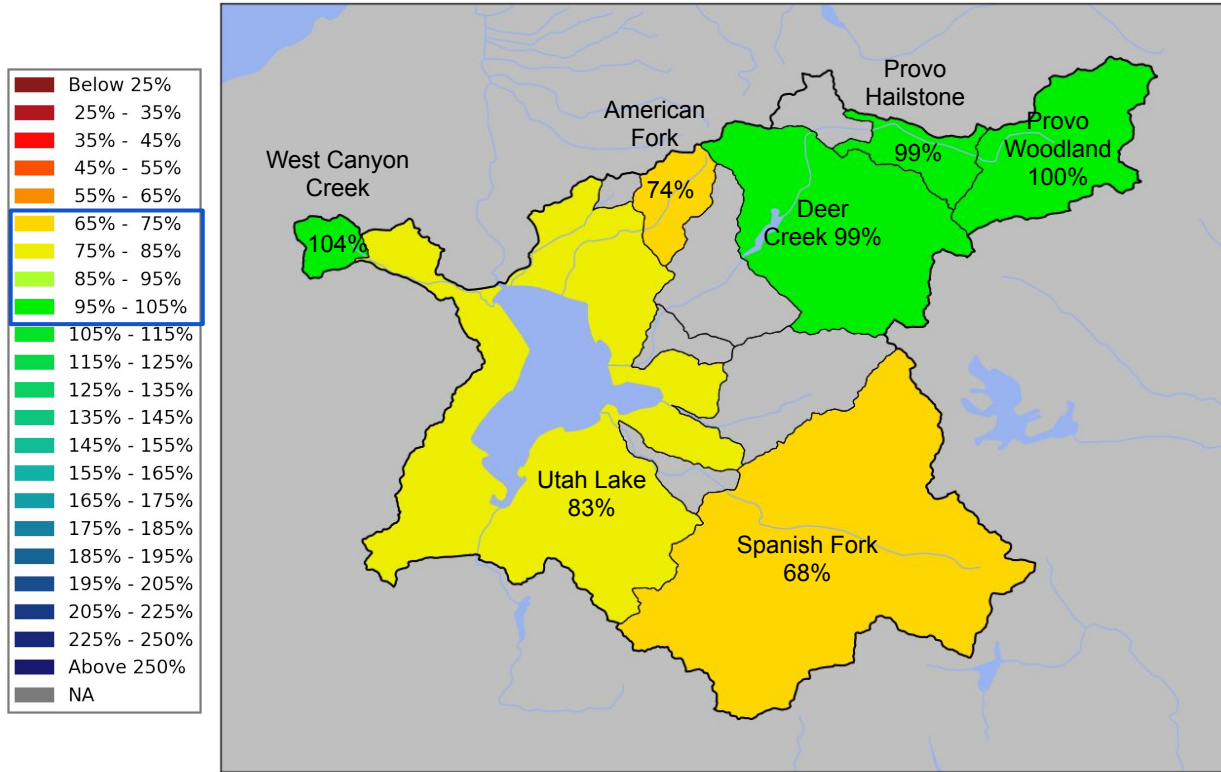
## Six Creeks Basin Forecasts

January: 90%

February: 100%

- Between 88% and 103%
- Forecasts increased in all basins

# Utah Water Supply Forecasts - Provo - Utah Lake



## Provo River Basin Forecasts

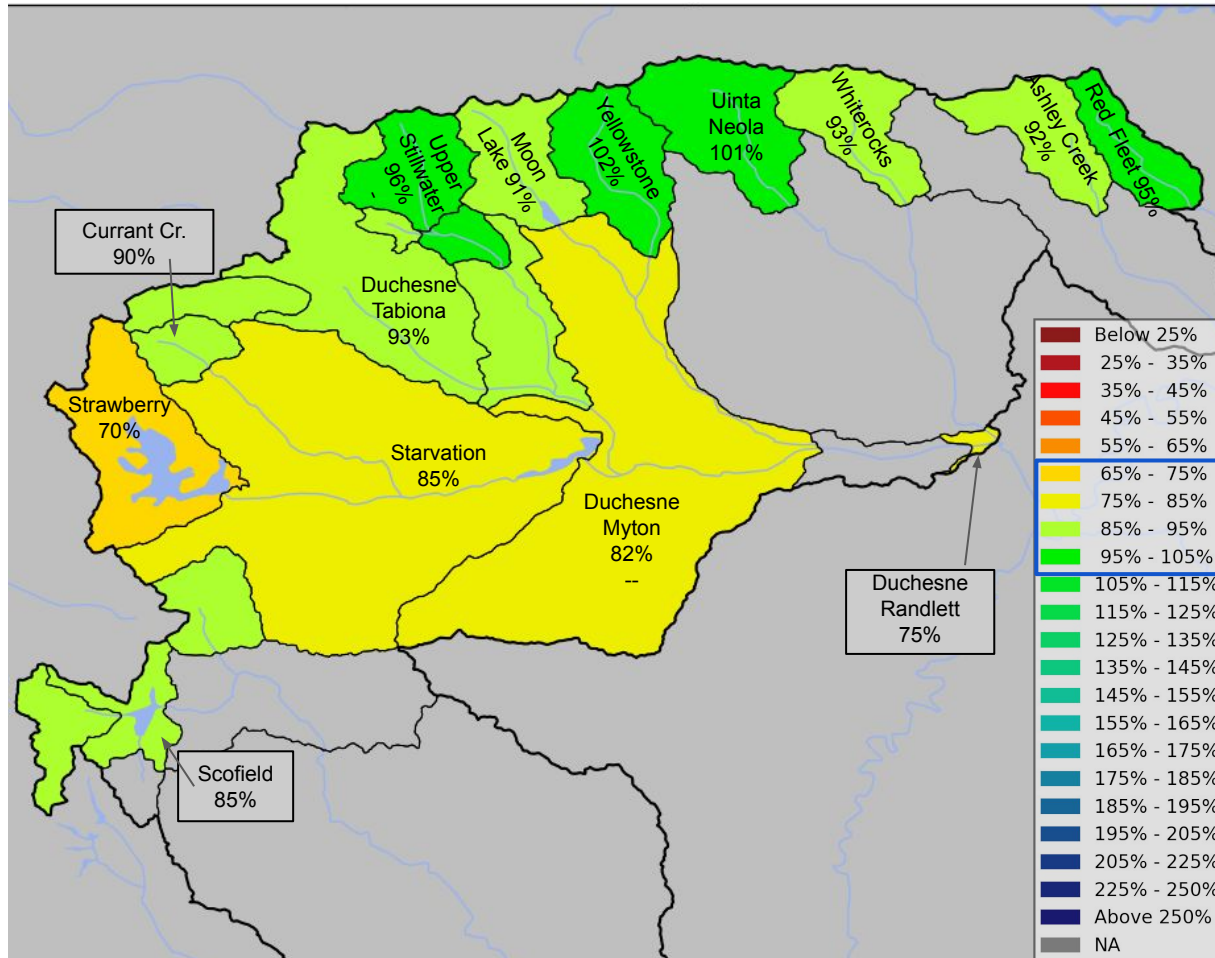
January: 90%

February: 95%

- Slight Increase in North Basin
- Slight Decrease in South Basin
- Between 68% and 104%



# Utah Water Supply Forecasts - Duchesne and Price



## Duchesne River Basin

January: 95%

February: 90%

- Mixed increases and decreases
- Between 70% and 102%

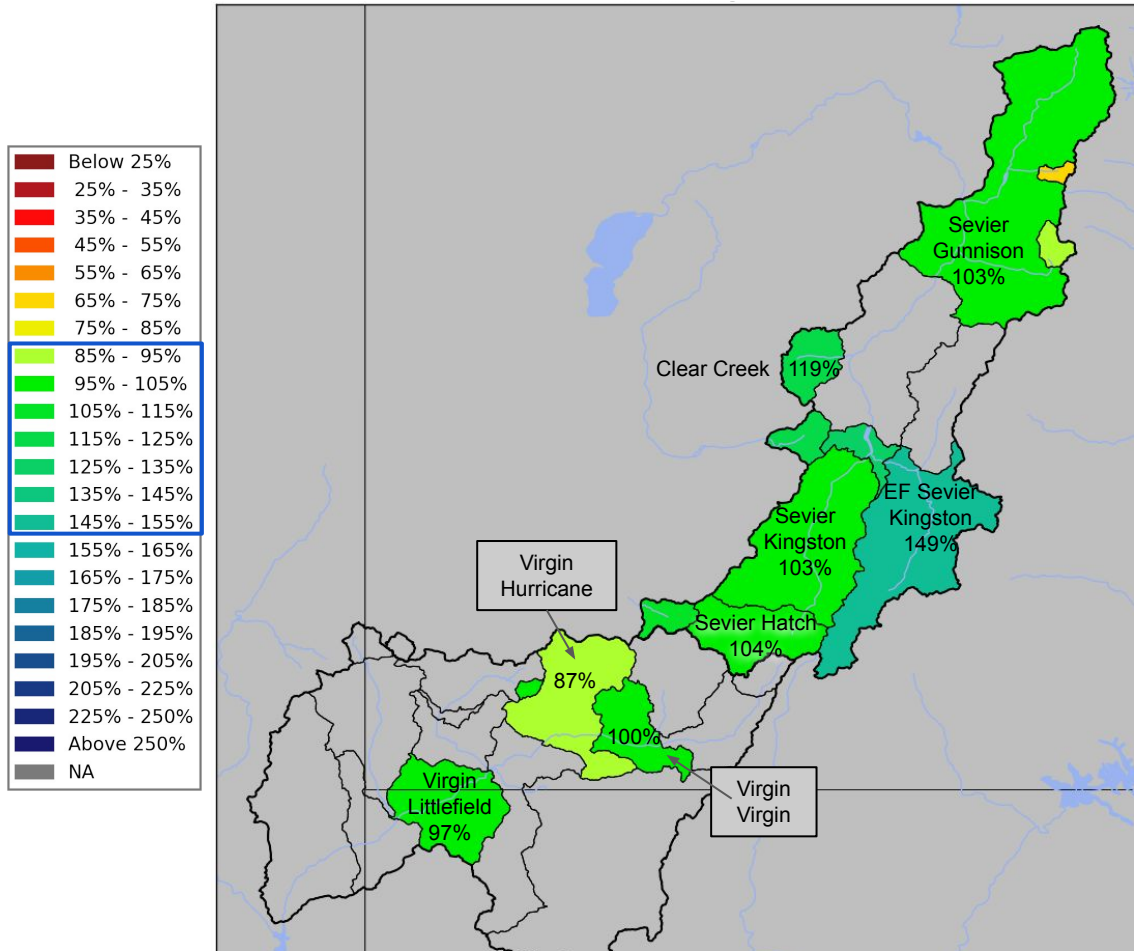
## Price River Basin

January: 90%

February: 87%

- Slight Decrease in Forecasts
- Between 85% and 90%

# Utah Water Supply Forecasts - Sevier and Virgin



## Sevier River Basin

January: 115%

February: 110%

- Between 103% and 149%
- Decreases except for Hatch

## Virgin River Basin Forecasts

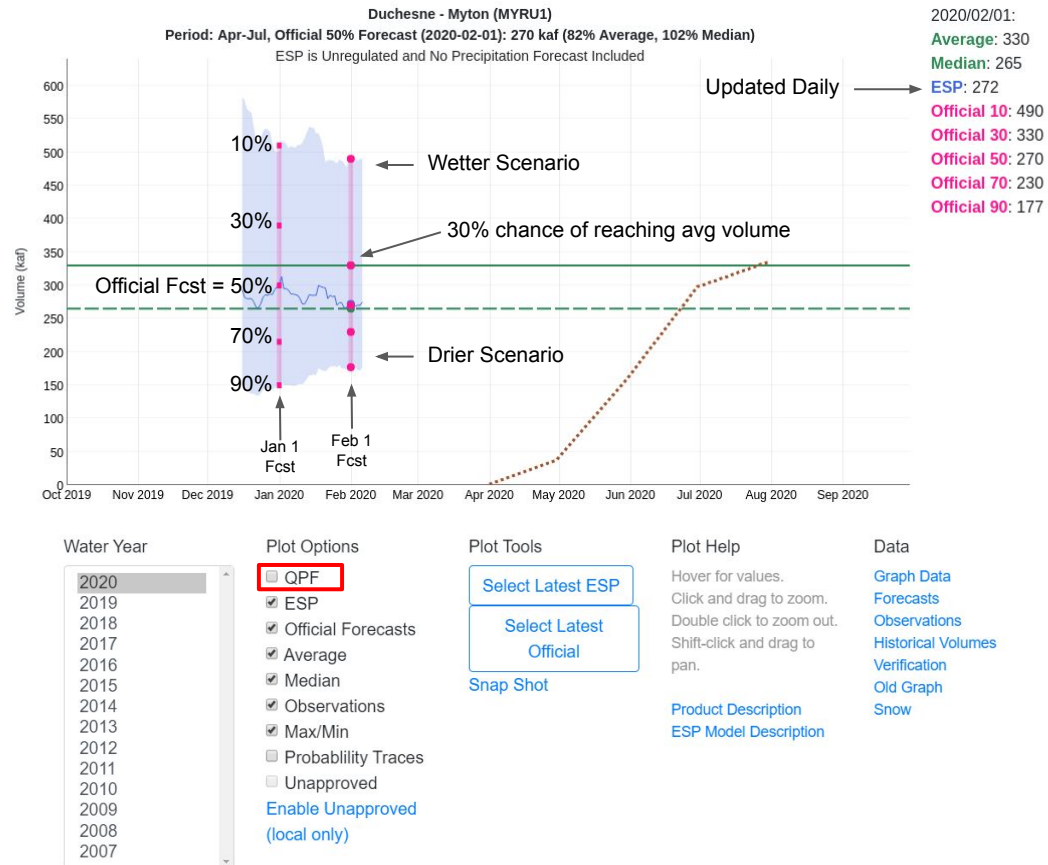
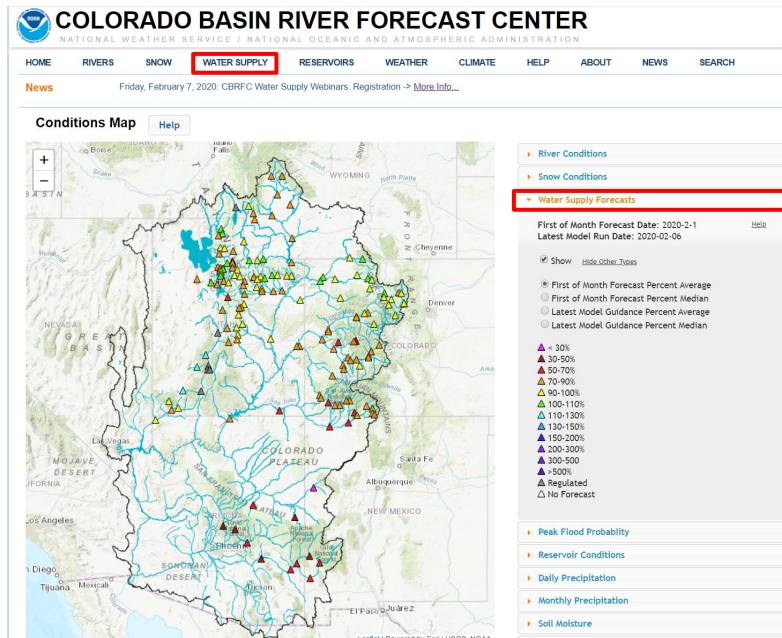
January: 100%

February: 95%

- Between 87% and 100%
- Decreases in all basins

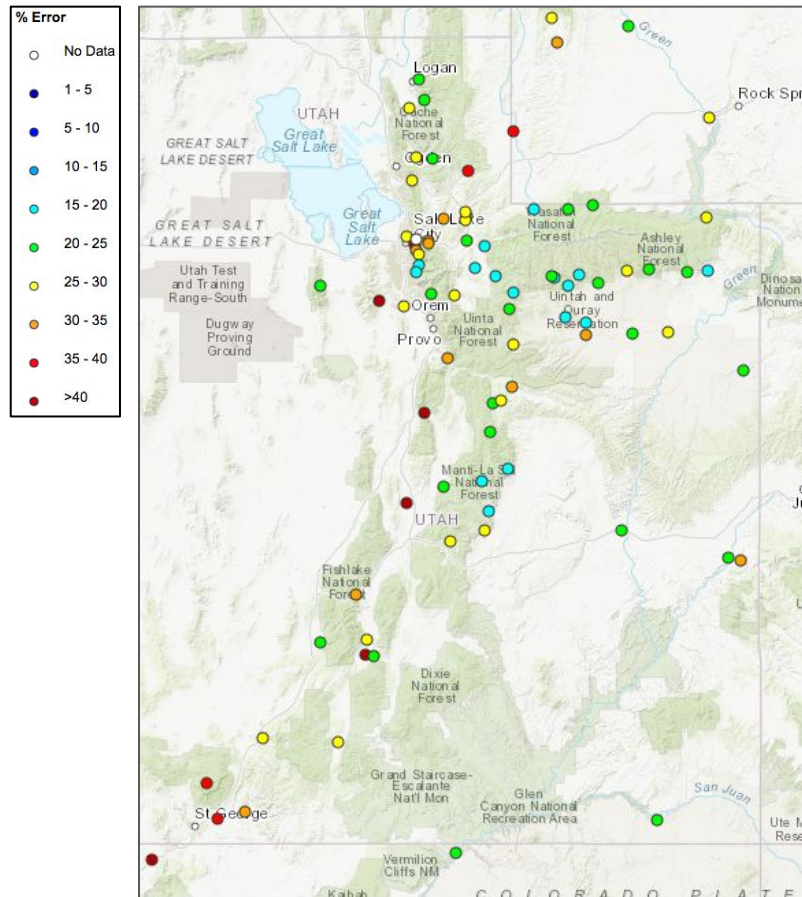
# Water Supply Forecast Evolution Plot Overview

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



# Historical (1981-2010) Forecast Verification

## January & February 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

### **Forecast Error**

#### Jan. Feb.

21% 20%  
 40% 38%  
 27% 22%  
 23% 19%  
 30% 25%  
 21% 18%  
 39% 32%  
 25% 20%  
 33% 26%  
 44% 34%

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:

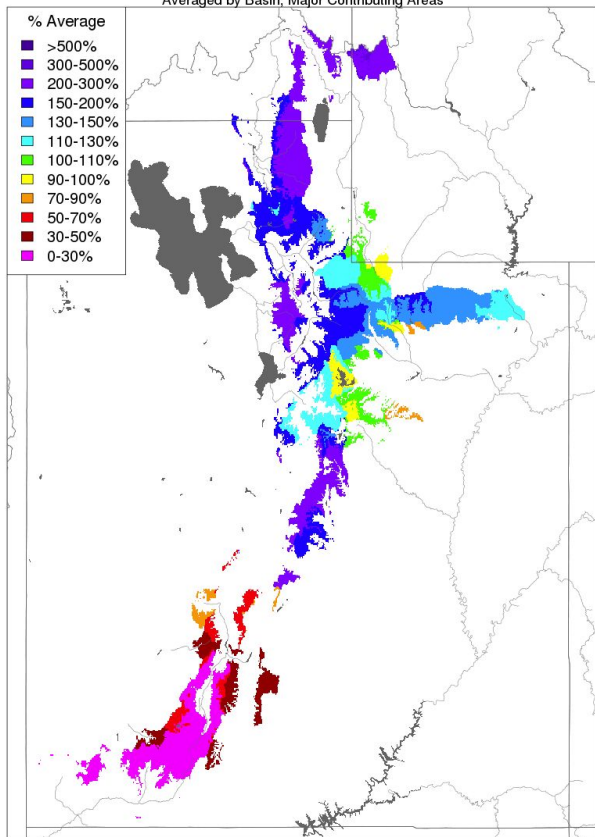
- Lower elevations (rain or early melt)
- Downstream of diversions / irrigation
- Little is known about diversions / demands



# February 2020 Month-To-Date Precipitation

## Month to Date Precipitation - February 07 2020

Averaged by Basin, Major Contributing Areas



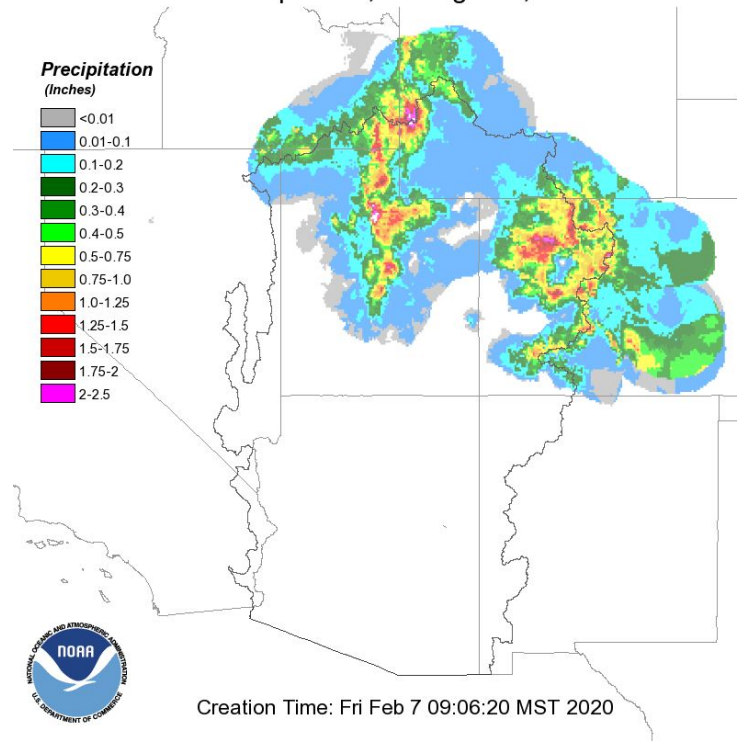
Precipitation during the first week of February has had a positive impact to water supply guidance across northern basins.

Basins to the south have been dry during the first week of February.

Prepared by NOAA, Colorado Basin River Forecast Center  
Salt Lake City, Utah, [www.cbrfc.noaa.gov](http://www.cbrfc.noaa.gov)

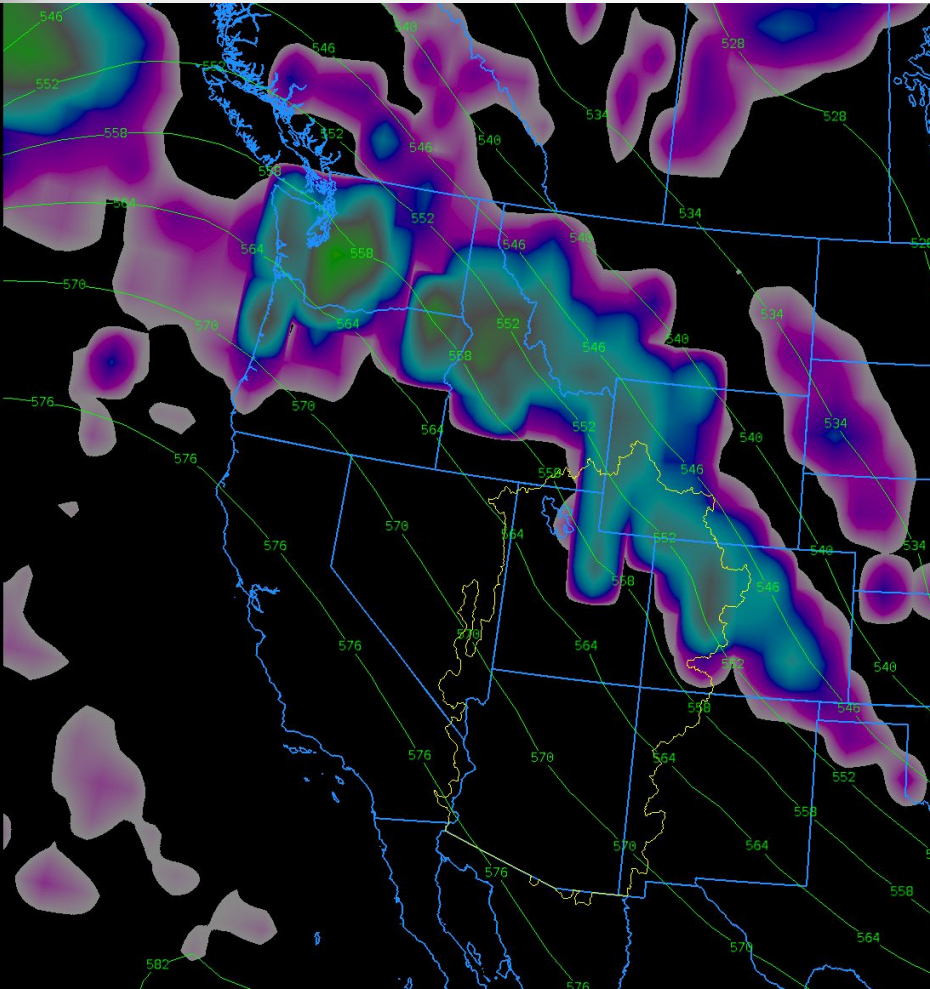
## 2+” new SWE last 24 hours in some areas

Observed 24hr Precipitation, Ending 12Z, 02/07/2020



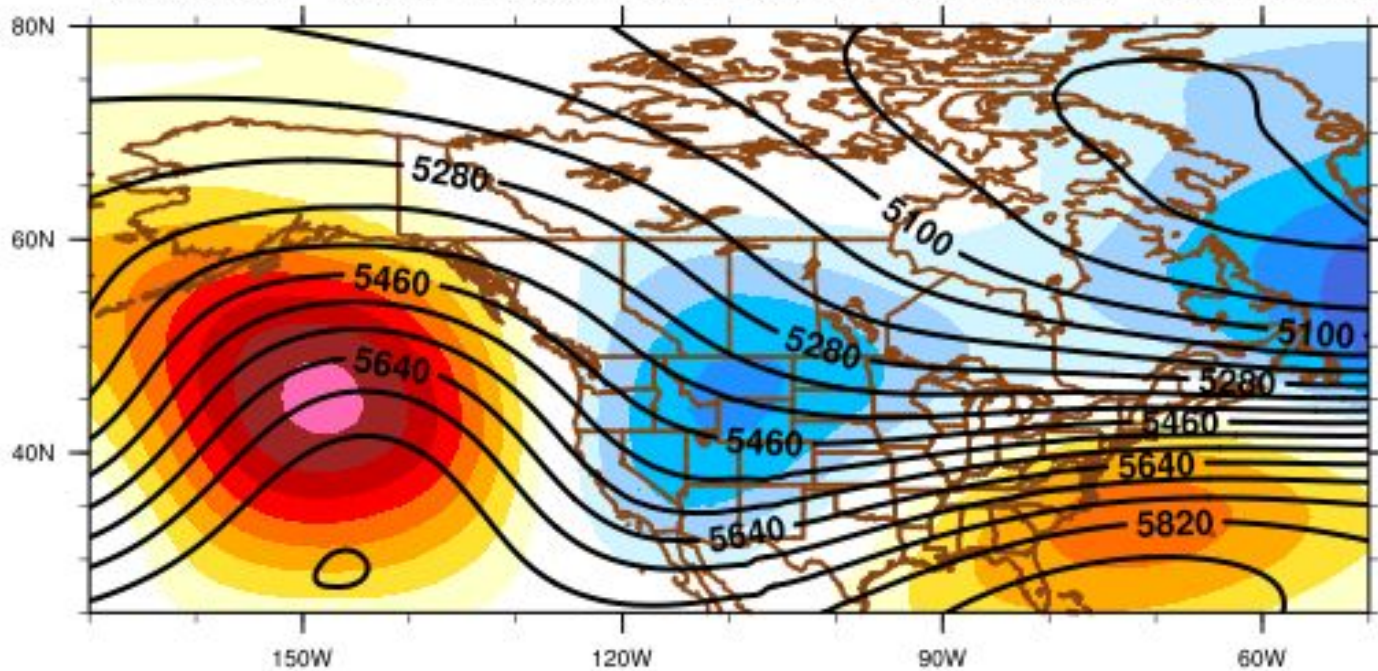
Creation Time: Fri Feb 7 09:06:20 MST 2020

# Upcoming Weather: today



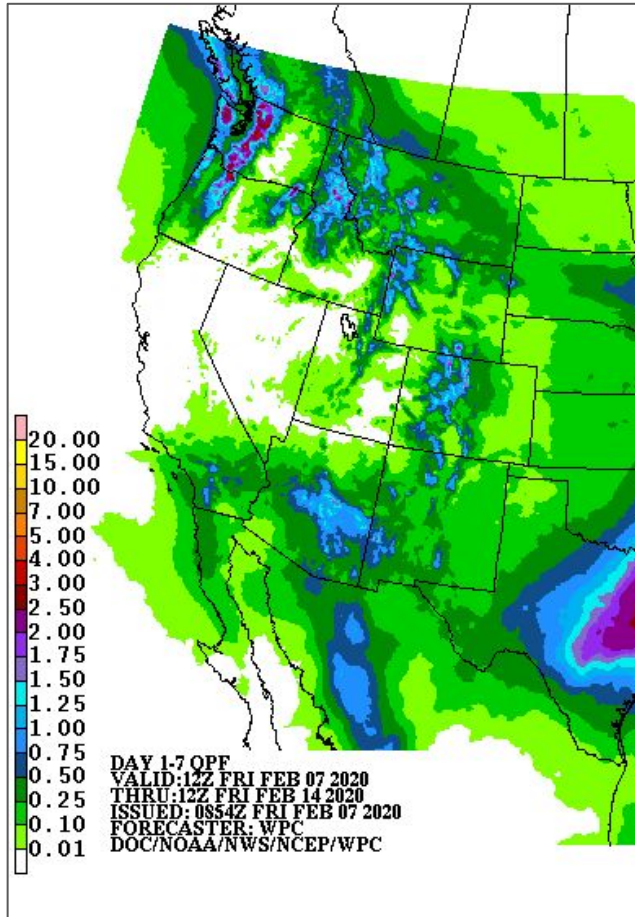
- Trough over the Colorado River Basin
- Northwest flow

## Upcoming Weather: next 8-10 days



- Trough over the Colorado River Basin
- Northwest flow continues

# Upcoming Weather: 7 day precipitation forecast



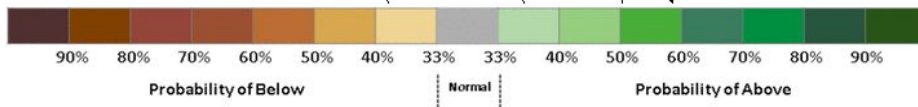
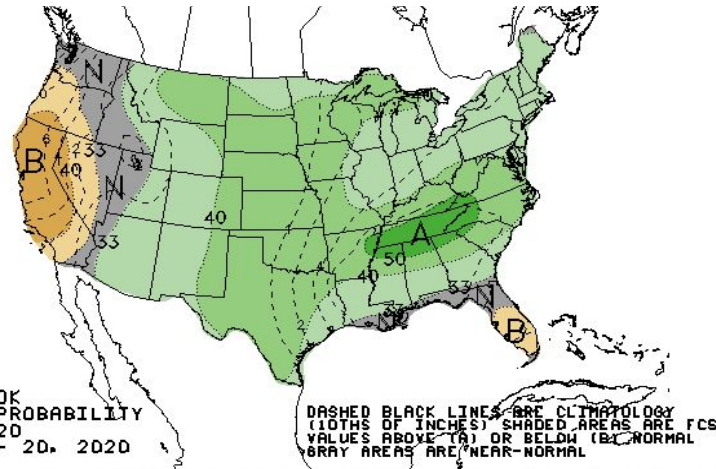
- WPC: up to 1.5" in higher terrain, widespread 0.25" - 0.5"
- Continued Active Pattern for the next 10 days.



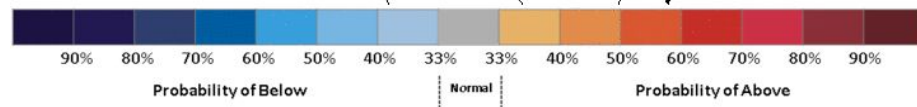
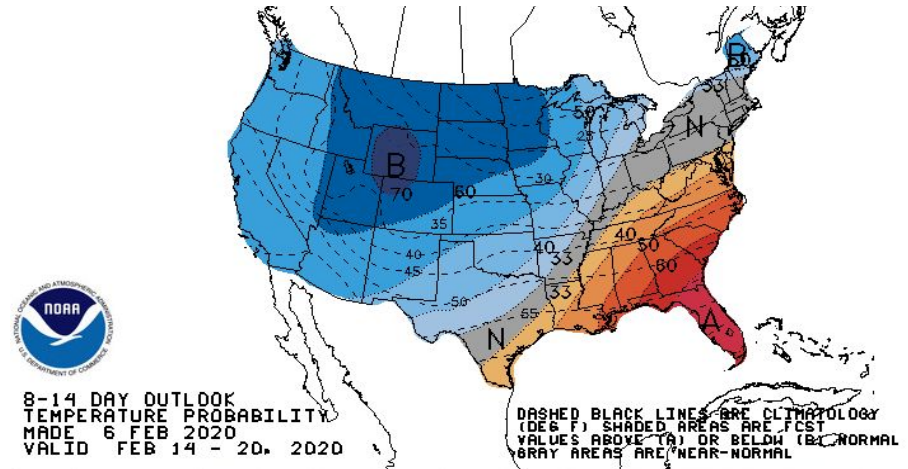
# Upcoming Weather: 8-14 Day Outlook

Increased probability of above average precipitation & below average temperature

## Precipitation Outlook



## Temperature Outlook



# Summary

- As of the end of January, Water Year Precipitation was near to below normal, except in the Virgin, which is above normal.
- Snow conditions are above normal.
- There is still 2 months in the snow accumulation season in the northern basins.
- Water Supply Forecasts
  - Bear, Six Creeks, and Provo/Utah Lake have increased to near normal.
  - Weber is the same at 85%
  - Sevier, Virgin, Price, Duchesne have declined slightly.
- February has seen above average precipitation, and...  
...an active weather period is forecast to bring additional precipitation for the coming weeks.
- Next Webinar, we will try to use GoTo Meeting Audio instead of our conference line.
  - You will still have the option to use your computer audio or dialing in.

# 2020 Water Supply Briefing Schedule

*\*All Times Mountain Time (MT)*

## Colorado River Basin

Wednesday	Jan 8 <sup>th</sup>	10 am
Friday	Feb 7 <sup>th</sup>	10 am
Friday	Mar 6 <sup>th</sup>	10 am
Tuesday	Apr 7 <sup>th</sup>	10 am
Thursday	May 7 <sup>th</sup>	10 am

## Utah (formerly Great Basin)

Wednesday	Jan 8 <sup>th</sup>	11:30 am	✓
Friday	Feb 7 <sup>th</sup>	11:30 am	✓
Friday	Mar 6 <sup>th</sup>	11:30 am	
Tuesday	Apr 7 <sup>th</sup>	11:30 am	
Thursday	May 7 <sup>th</sup>	11:30 am	

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

Additional briefings may be scheduled as needed.

All registration information is available on the CBRFC web page.

# CBRFC Contacts

## **Basin Focal Points (Forecasters)**

Brenda Alcorn - Upper Green, White, Yampa, Duchesne

[brenda.alcorn@noaa.gov](mailto:brenda.alcorn@noaa.gov)

Tracy Cox - San Rafael, Price

[tracy.cox@noaa.gov](mailto:tracy.cox@noaa.gov)

Cody Moser – Upper Colorado Mainstem

[cody.moser@noaa.gov](mailto:cody.moser@noaa.gov)

Ashley Nielson – San Juan, Gunnison, Dolores, Lake Powell

[ashley.nielson@noaa.gov](mailto:ashley.nielson@noaa.gov)

Zach Finch – Virgin, Lower Colorado Basin

[zach.finch@noaa.gov](mailto:zach.finch@noaa.gov)

Patrick Kormos – Bear, Weber

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Brent Bernard – Six Creeks, Provo , Sevier

[brent.bernard@noaa.gov](mailto:brent.bernard@noaa.gov)

Michelle Stokes – Hydrologist In Charge

[michelle.stokes@noaa.gov](mailto:michelle.stokes@noaa.gov)

Paul Miller– Service Coordination Hydrologist

[paul.miller@noaa.gov](mailto:paul.miller@noaa.gov)

John Lhotak – Development and Operations Hydrologist

[john.lhotak@noaa.gov](mailto:john.lhotak@noaa.gov)

Craig Peterson - Senior Hydro/Met

[craig.peterson@noaa.gov](mailto:craig.peterson@noaa.gov)

CBRFC Webpage

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

CBRFC Operations

[cbrfc.operations@noaa.gov](mailto:cbrfc.operations@noaa.gov)

801-524-4004

CBRFC Water Supply Presentations

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

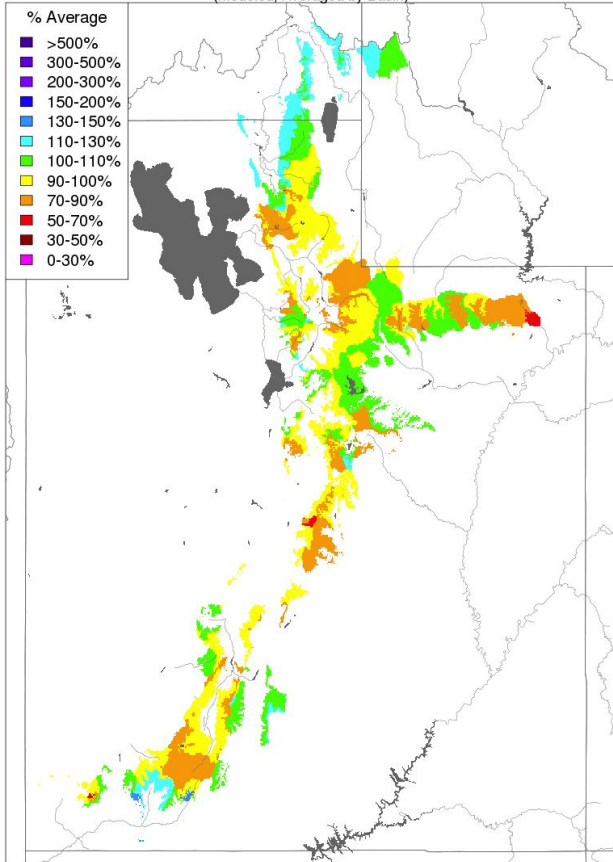
Questions?



# Utah - Current Snow, Starting Soil Moisture, Seasonal Precipitation

Soil Moisture - Fall - 2019 (November 15)

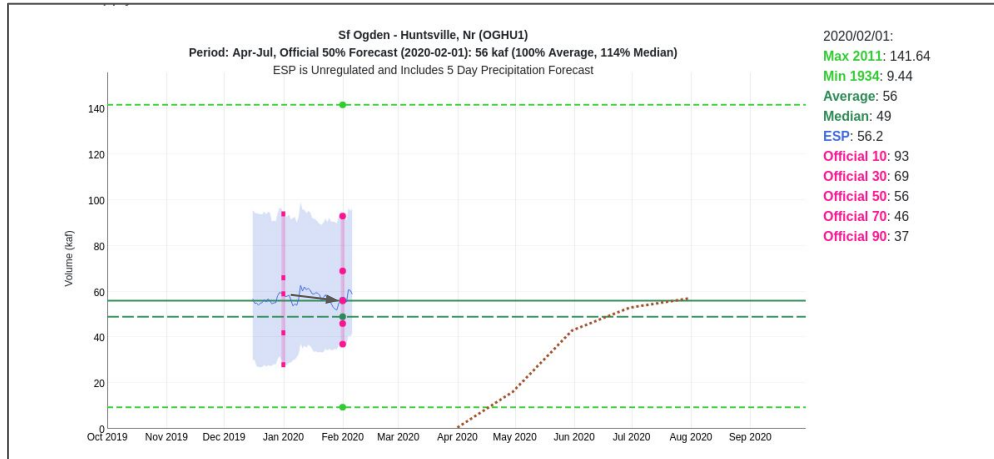
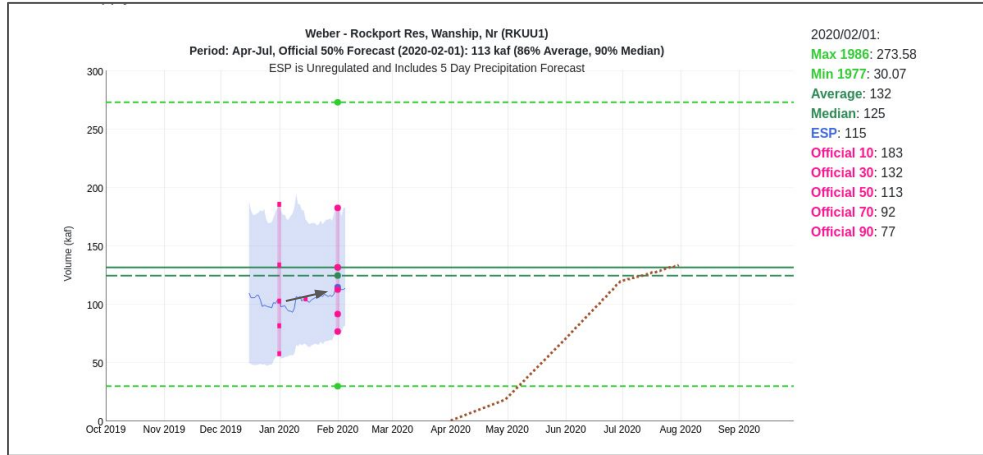
(Modeled, Averaged by Basin)



Prepared by NOAA, Colorado Basin River Forecast Center  
Salt Lake City, Utah, [www.cbrfc.noaa.gov](http://www.cbrfc.noaa.gov)

Basin	Soil Moisture Start	Current Snow Pack	Seasonal Precipitation	Water Supply Forecast
Bear	Normal	Normal	Normal	Normal
Weber	Normal-	Normal+	Normal	Below
Six Creeks	Normal	Above	Normal	Normal
Provo	Normal	Normal	Below	Normal
Duchesne	Normal	Above	Normal	Normal
Virgin	Normal	Above	Above	Normal
Sevier	Normal	Normal	Normal	Normal

# Utah Water Supply Forecasts - Weber



## Weber River Basin Forecasts

January: 85%

February: 85%

- Decreases in North Basin
- Increases in South Basin
- Between 78% and 107%

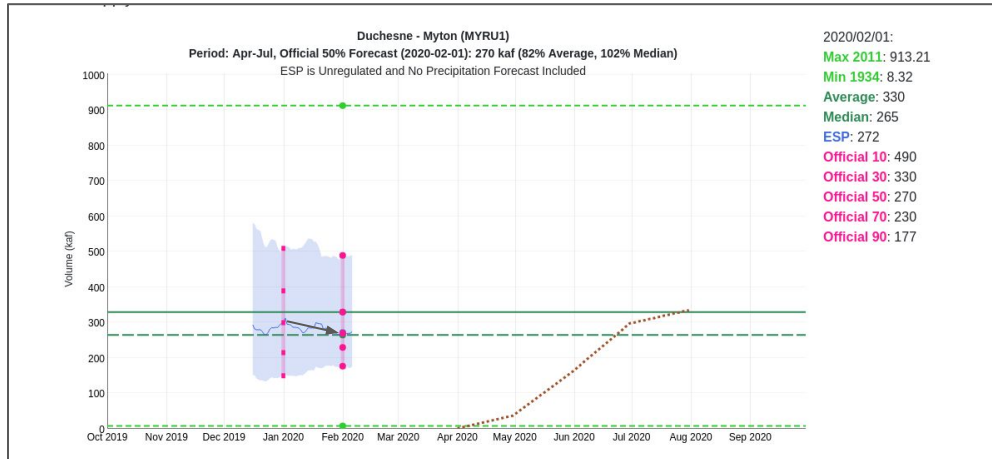
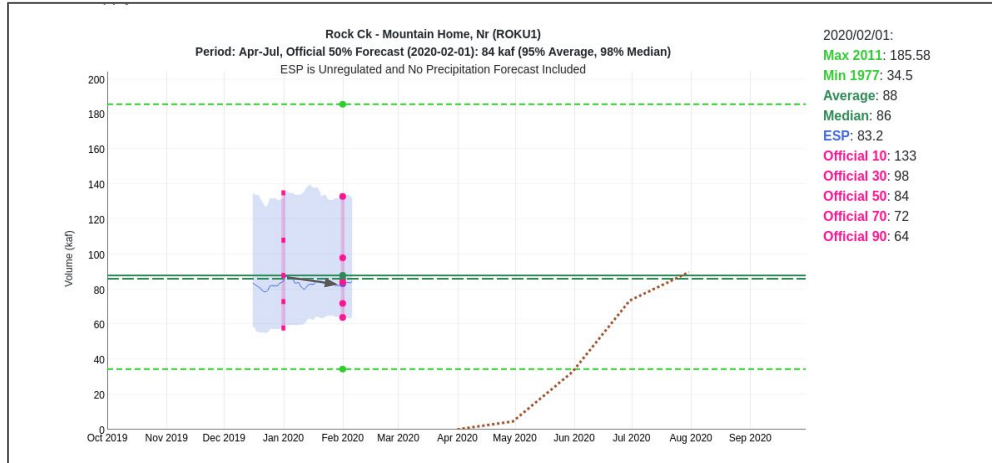
Rockport:

- Up to 113 KAF
- Below Avg, but Increased

S.F. Ogden:

- Down to 56 KAF
- Average

# Utah Water Supply Forecasts - Duchesne and Price



## Duchesne River Basin

January: 95%

February: 90%

- Mixed increases and decreases
- Decrease on Rock Creek and Current Creek
- Between 70% and 102%

## Rock Creek - Mountain Home:

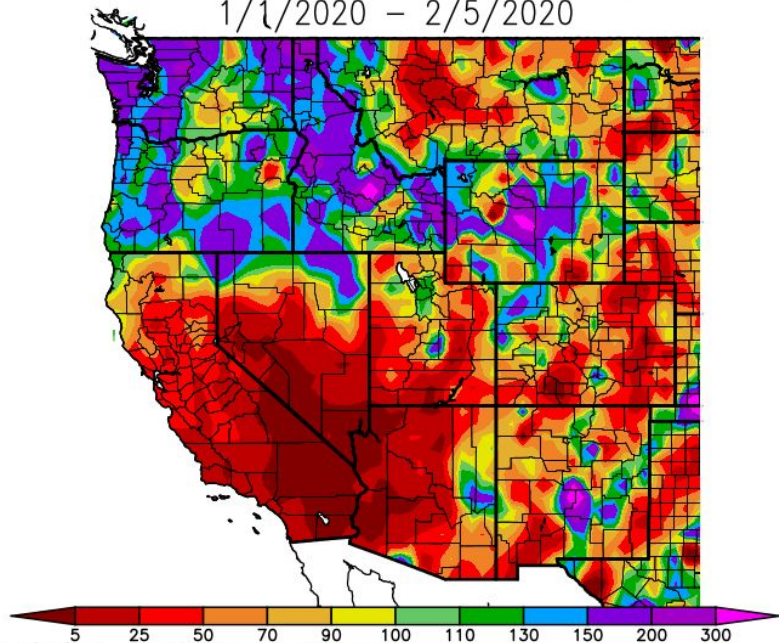
- 84 KAF
- Decrease below Average

## Duchesne - Myton:

- 207 KAF
- Decrease below Average

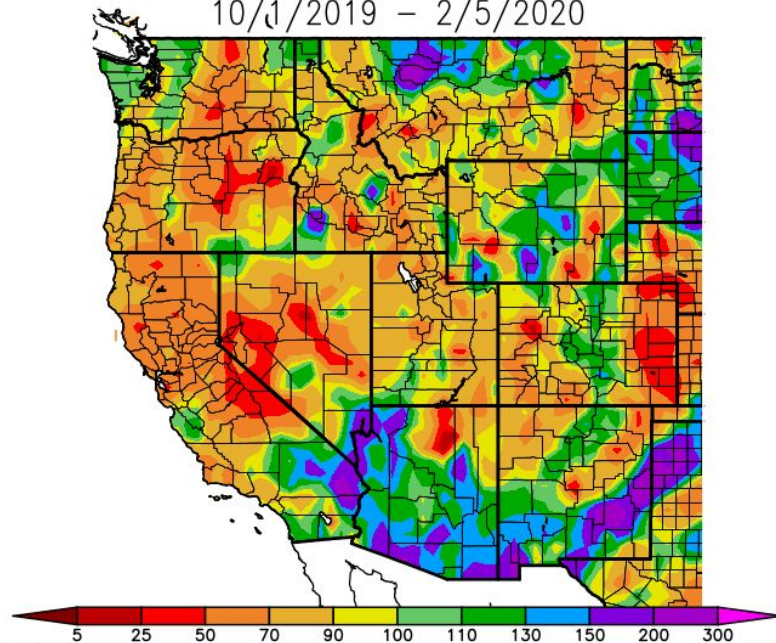
# Precipitation Accumulations - NOAA Regional

Percent of Average Precipitation (%)  
1/1/2020 – 2/5/2020



Generated 2/ 6/2020 at WRCC using provisional data.  
NOAA Regional Climate Centers

Percent of Average Precipitation (%)  
10/1/2019 – 2/5/2020



Generated 2/ 6/2020 at WRCC using provisional data.  
NOAA Regional Climate Centers