

# Utah Water Supply Briefing

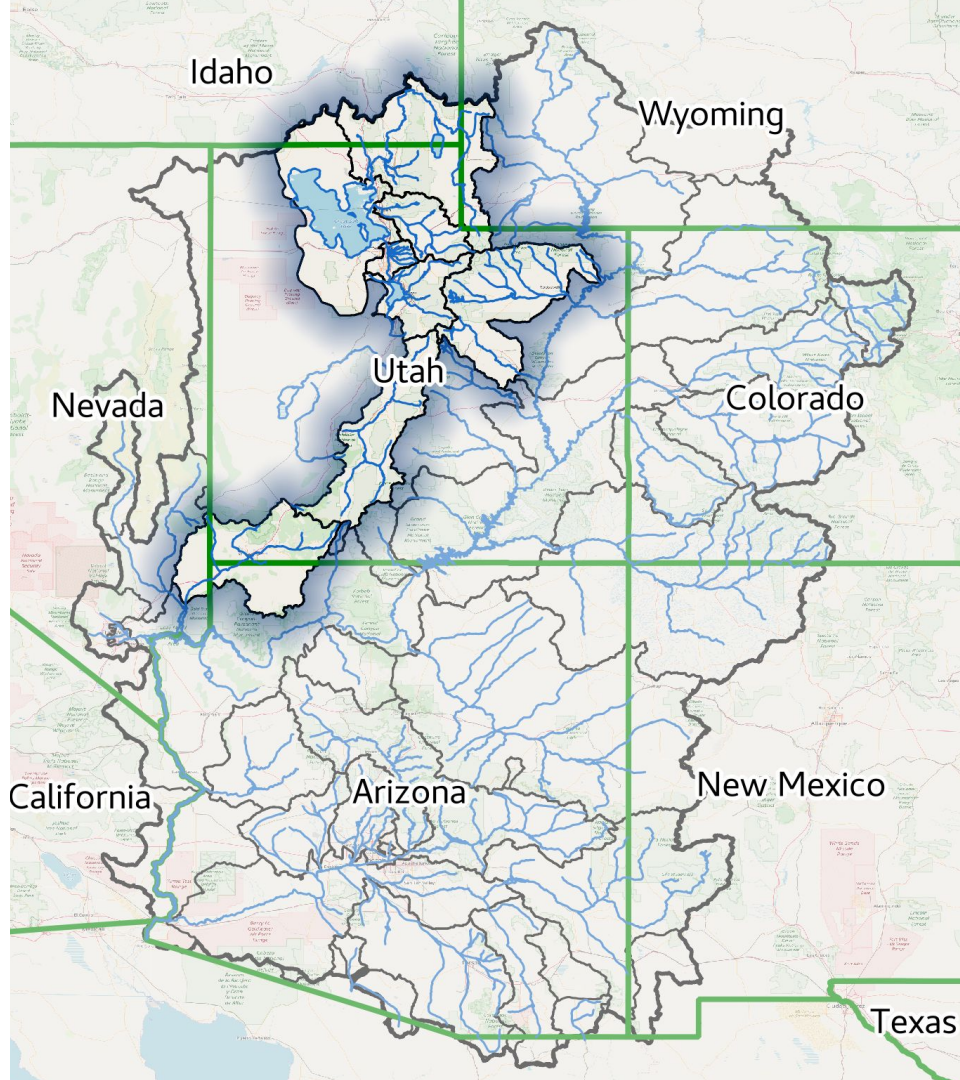
April 7<sup>th</sup>, 2020

Colorado Basin River Forecast Center  
Patrick Kormos- Hydrologist

!!! Revert to Using Conference Line  
Audio (Sorry) !!!

- Phone number: **1-877-929-0660**
- Participant passcode: **1706374**

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



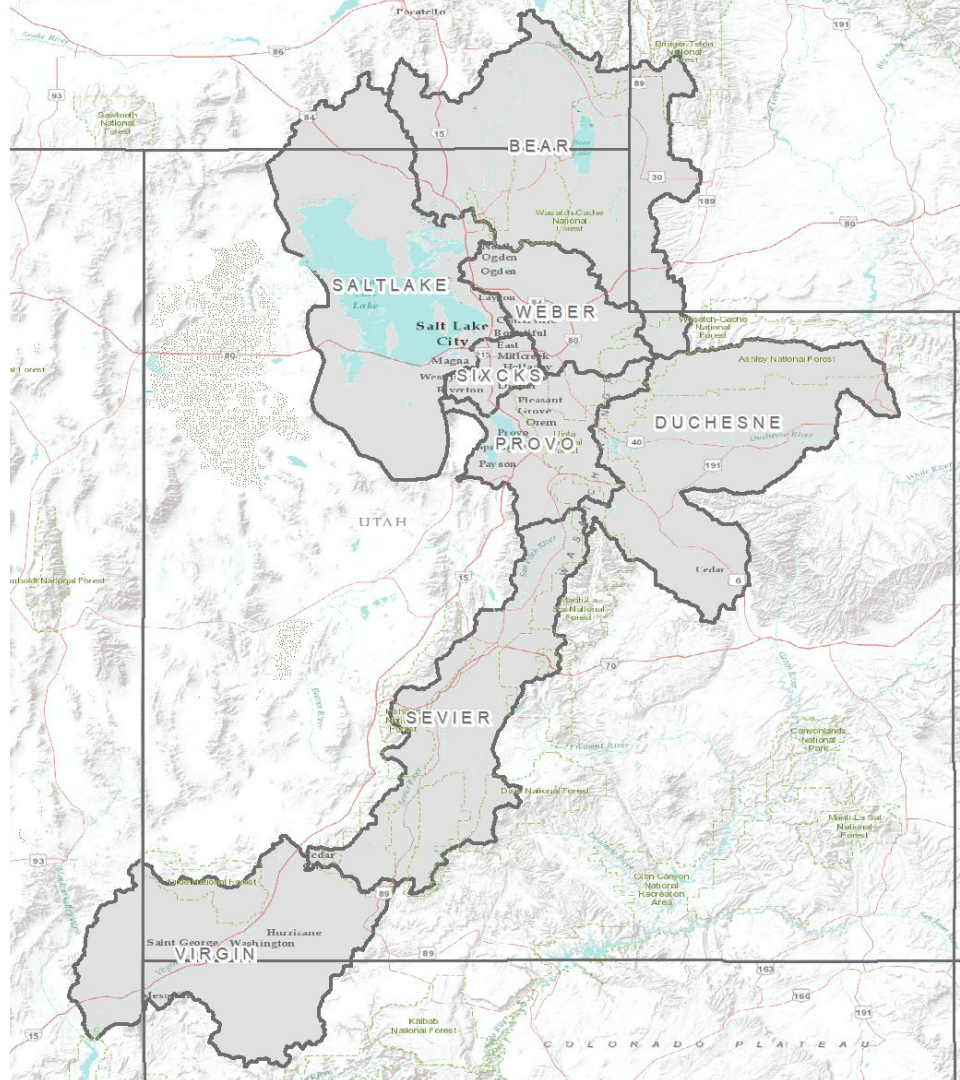
# Utah Water Supply Briefing

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

**!!! Revert to Using Conference Line  
Audio (Sorry) !!!**

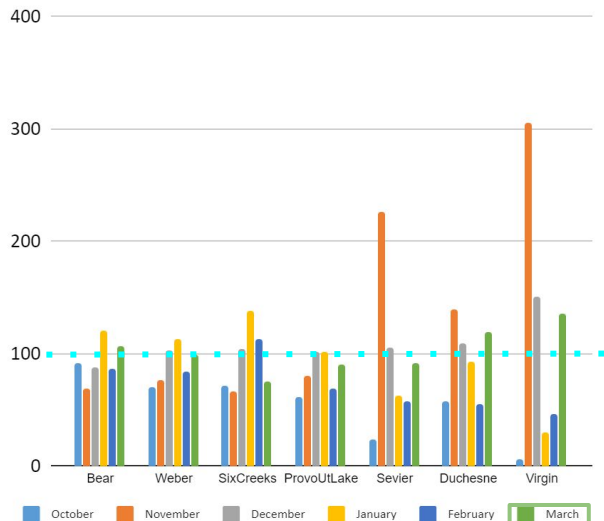
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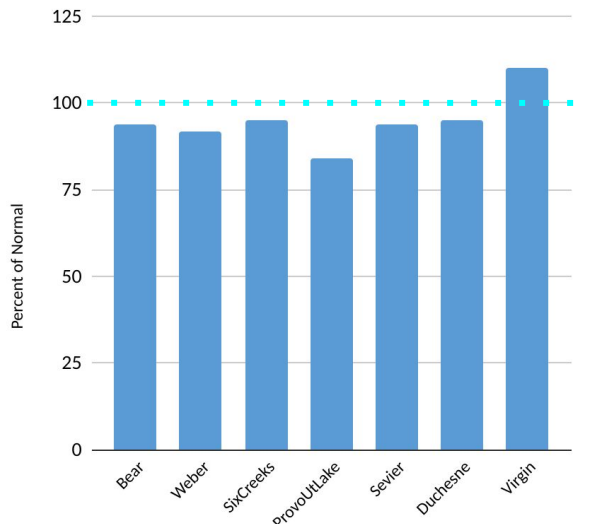


# Utah Precipitation Review - Precipitation up to April 1, 2020

Monthly Precipitation Percent of Normal



Water Year Precipitation Percent of Normal



## March Precipitation

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

## Water Year Precipitation

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

- Bear: 94%
- Weber: 92%
- Six Creeks: 95%
- Provo: 84%
- Sevier: 94%
- Duchesne: 95%
- Virgin: 110%

**!!! Revert to Using Conference Line Audio (Sorry) !!!**

Phone number: **1-877-929-0660** - Participant passcode: **1706374**

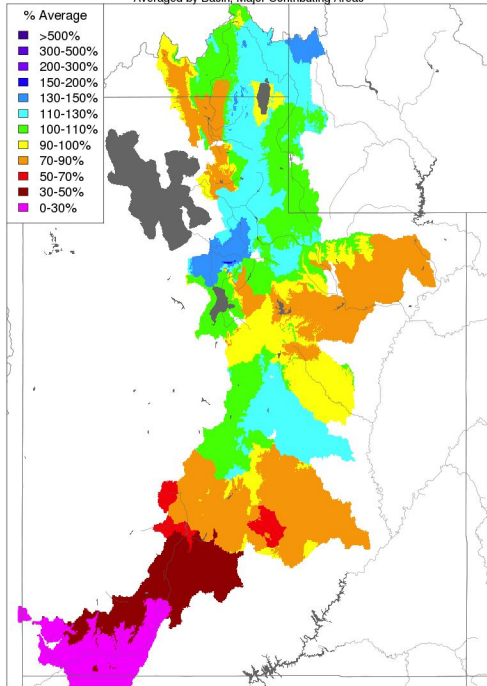


# Utah Precipitation Review - Monthly Precipitation

## January

Monthly Precipitation - January 2020

Averaged by Basin, Major Contributing Areas

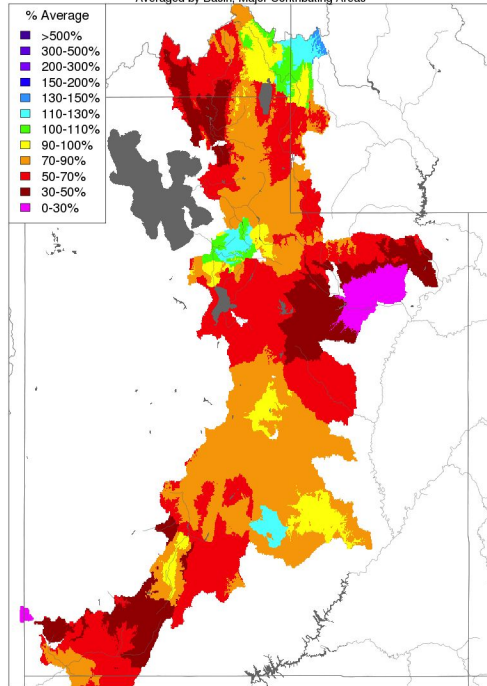


Prepared by NOAA, Colorado Basin River Forecast Center  
Salt Lake City, Utah, [www.cbrfc.noaa.gov](http://www.cbrfc.noaa.gov)

## February

Monthly Precipitation - February 2020

Averaged by Basin, Major Contributing Areas

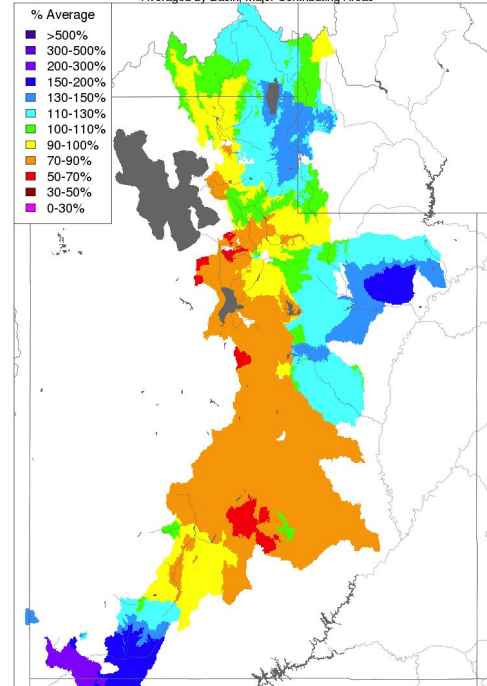


Prepared by NOAA, Colorado Basin River Forecast Center  
Salt Lake City, Utah, [www.cbrfc.noaa.gov](http://www.cbrfc.noaa.gov)

## March

Monthly Precipitation - March 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)

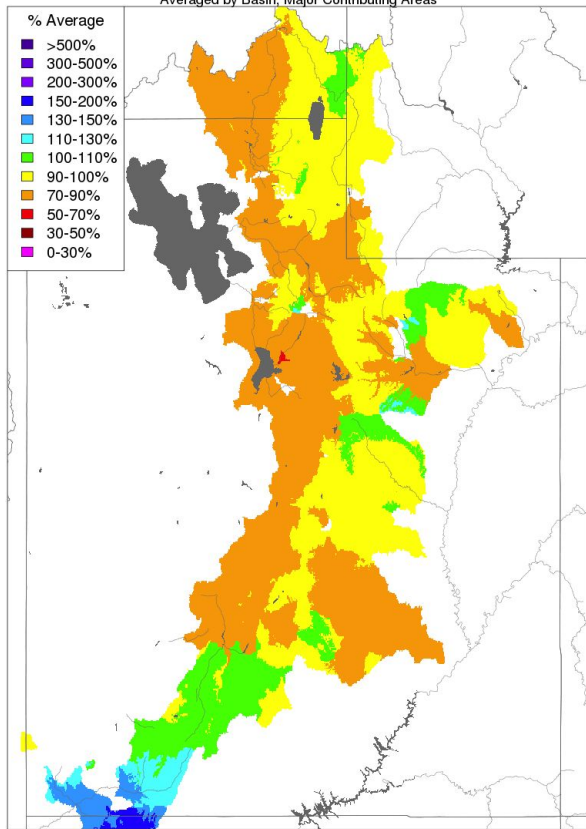
% Average

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

# Utah Precipitation Review - Water Year Precipitation

Water Year Precipitation, October 2019 - March 2020

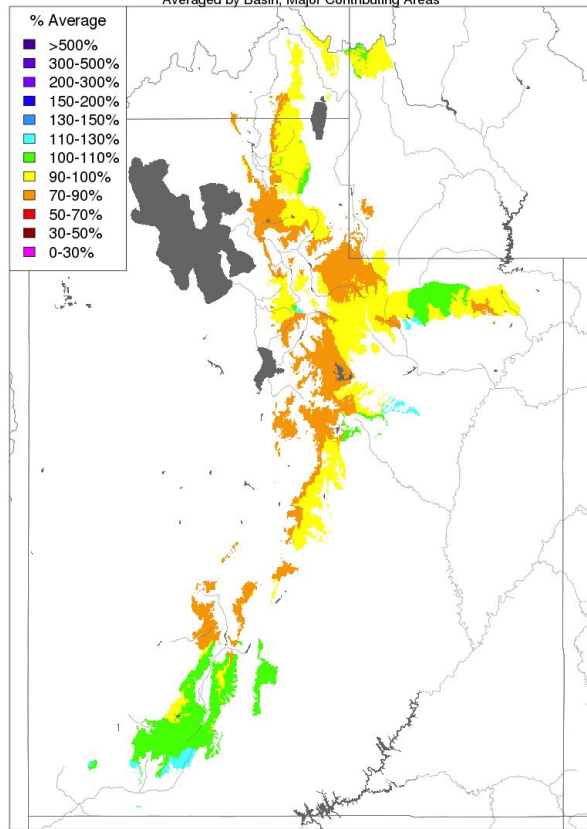
Averaged by Basin, Major Contributing Areas



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

Water Year Precipitation, October 2019 - March 2020

Averaged by Basin, Major Contributing Areas

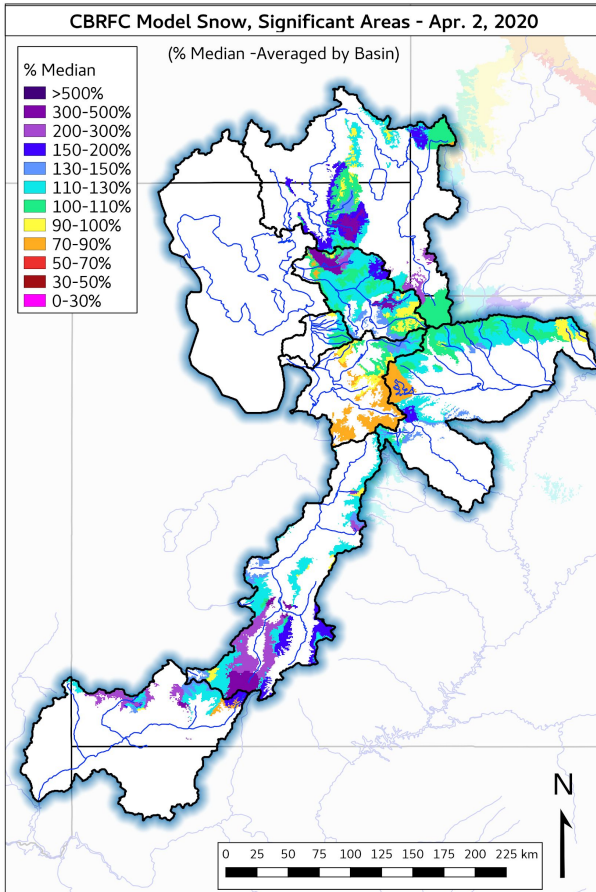
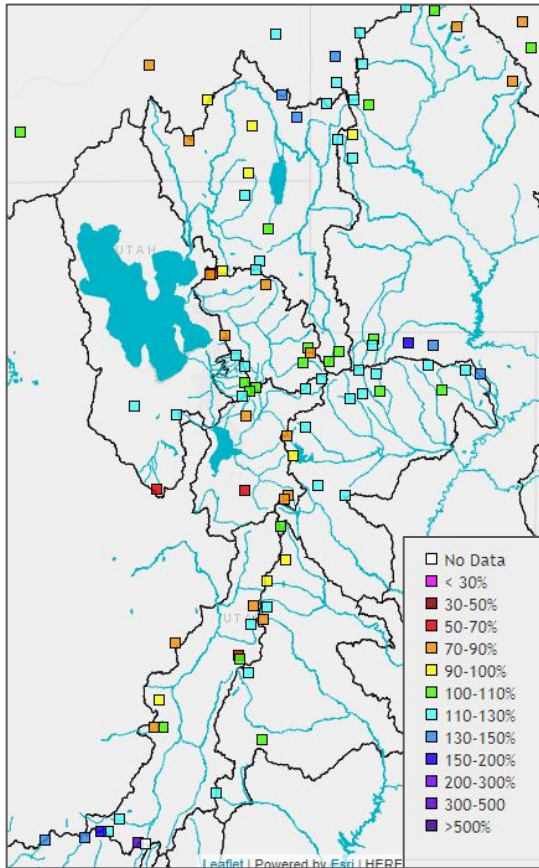


Prepared by NOAA, Colorado Basin River Forecast Center  
Salt Lake City, Utah, [www.cbrfc.noaa.gov](http://www.cbrfc.noaa.gov)

- Although snowpack numbers are at and above normal...
- ...water year precipitation is at or below normal...
- ...except in SW corner of Utah.

# Early April Utah Snowpack

SNOTEL (Observed Apr. 2, 2020)

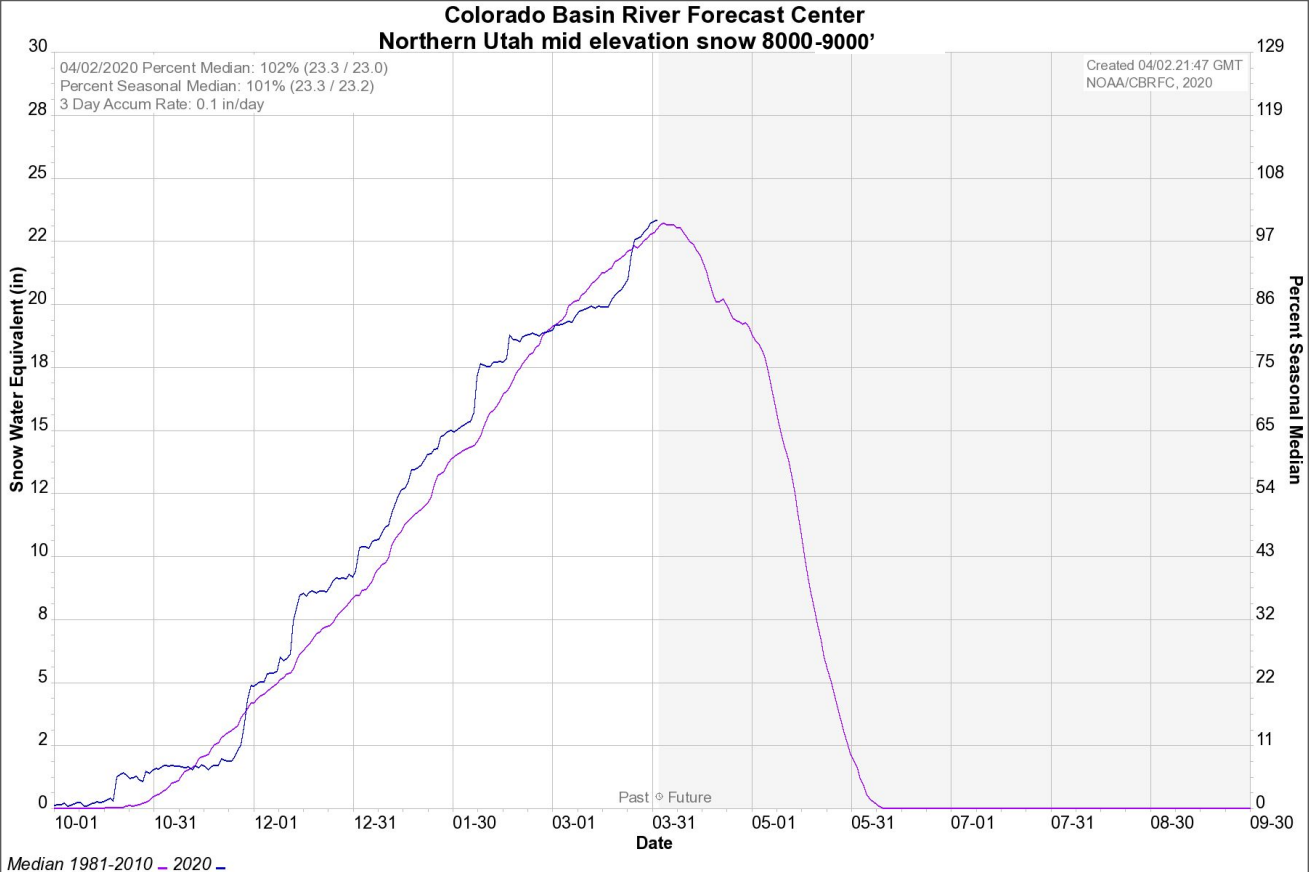
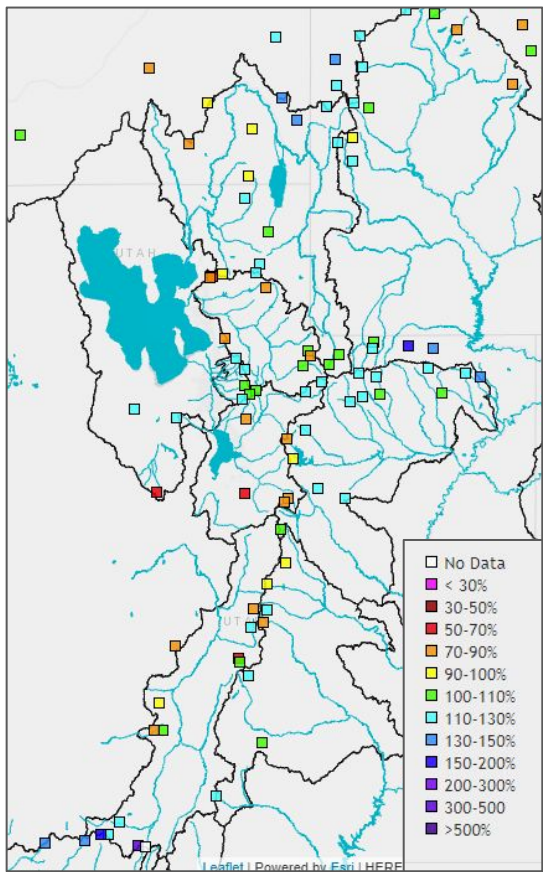


As of April 1, 2020  
CBRFC Snow Groups (SNOTEL Stations)  
SWE % Median

- Bear: 105%
- Weber: 100%
- Six Cr: 115%
- Provo: 95%
- Duchesne: 110%
- Sevier: 105%
- Virgin: 140%
- Price : 100%

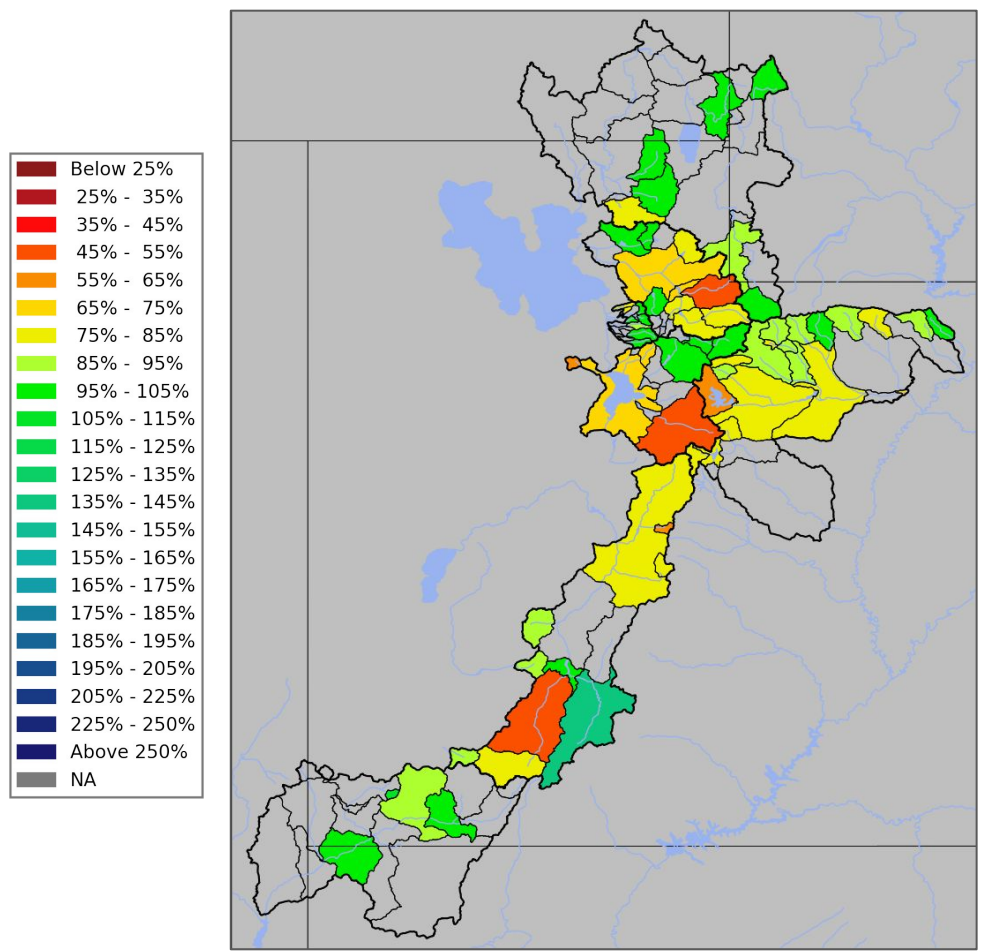
# Early April Utah Snowpack: Now is peak snowpack time

SNOTEL (Observed Apr. 2, 2020)





# Utah Water Supply Forecasts - April 1 Overview



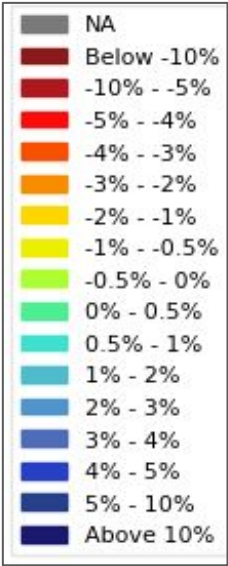
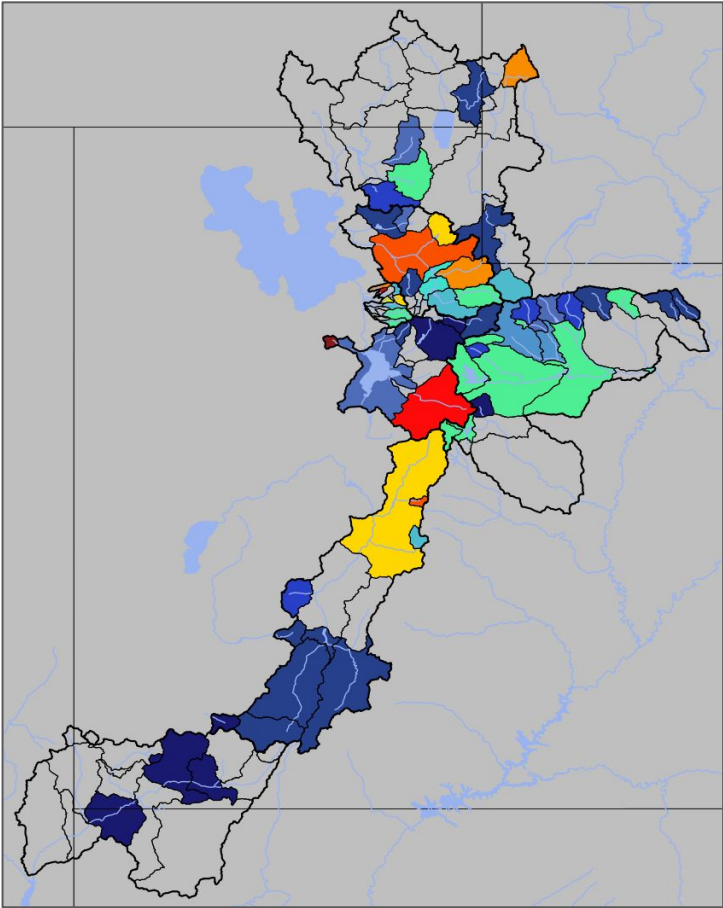
- April 1 Forecasts for April-July Volume in 1000's acre feet (KAF)
- April-July Forecast Streamflow Volumes are in percent of 1981-2010 average

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

Bear	100%
Weber	80%
Six Creeks	95%
Provo / Utah Lake	70%
Sevier	85%
Duchesne	85%
Virgin	105%



# Utah Water Supply Forecasts - April Overview

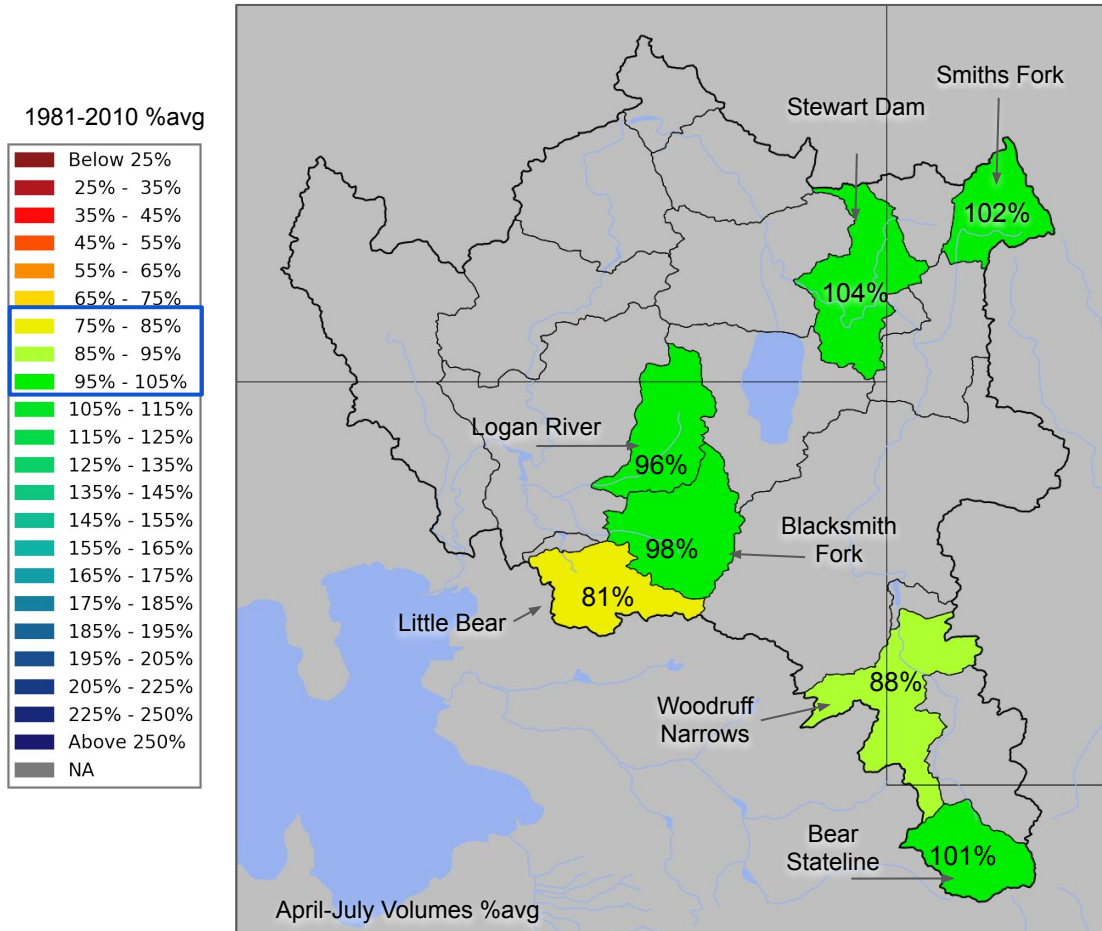


- April 1 Forecasts for April-July Volume in 1000's acre feet (KAF)
- April-July Forecast Streamflow Volumes are in percent of 1981-2010 average

Change in Median Forecast  
from March to April

Bear	+-%
Weber	+-%
Six Creeks	+-%
Provo / Utah Lake	+-%
Sevier	+5%
Duchesne	+-%
Virgin	+25%

# Utah Water Supply Forecasts - Bear



## Bear River Basin Forecasts

### Median Forecast

January: 90%

February: 100%

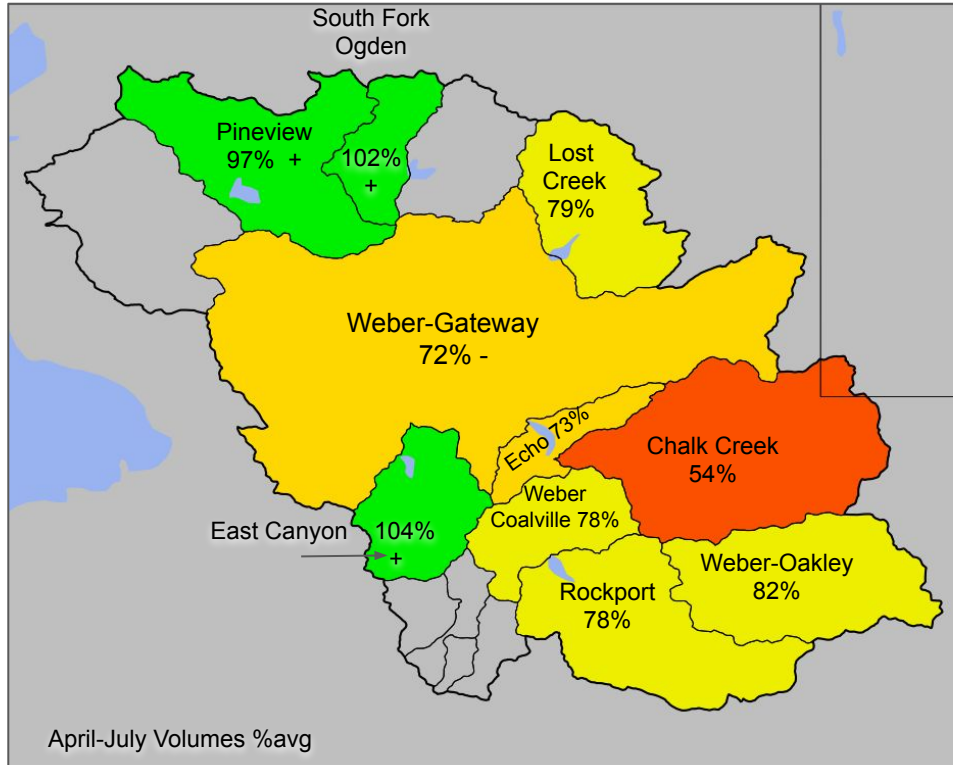
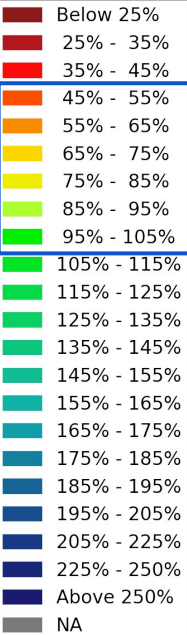
March: 100%

April: 100%

- Forecast Range: 80%-105% avg
- Increases of >5%:
  - Woodruff
  - Stewart

# Utah Water Supply Forecasts - Weber

1981-2010 %avg



## Weber River Basin Forecasts

### Median Forecast

January: 85%

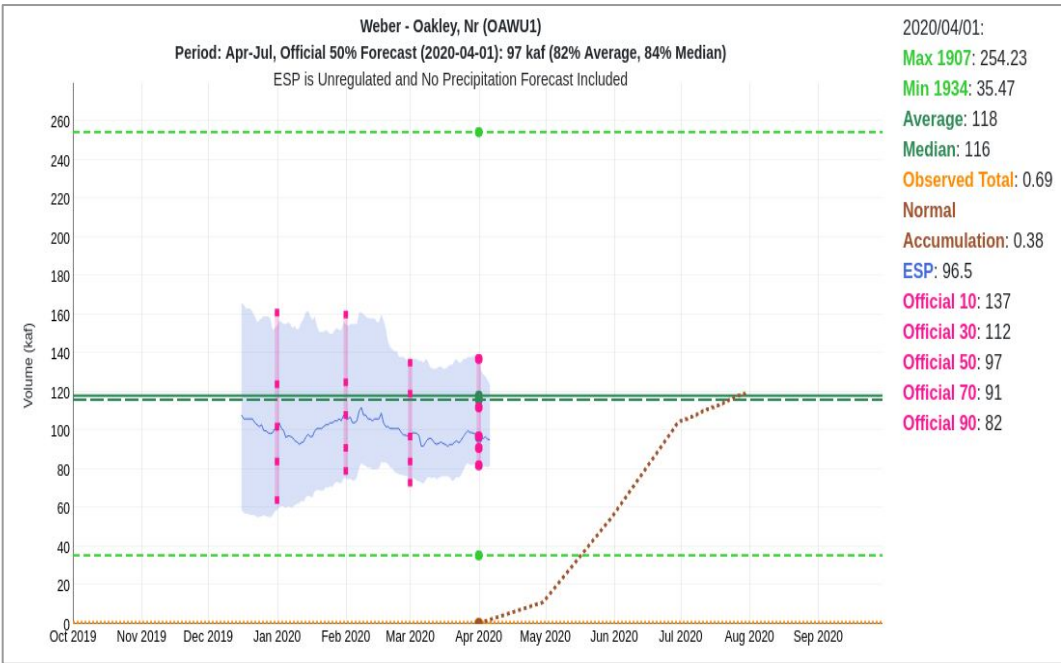
February: 85%

March: 80%

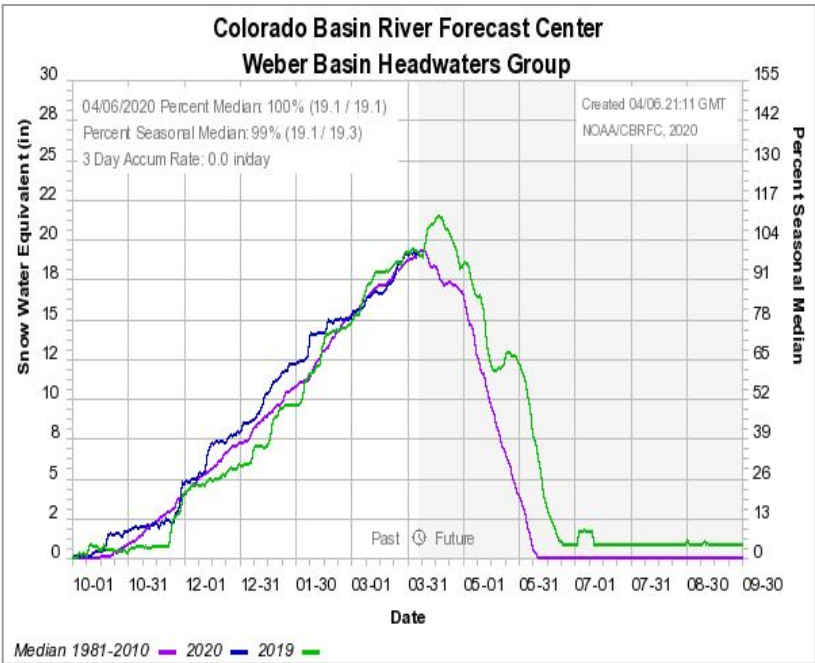
April: 80%

- Forecast Range: 50% - 105%
- Increases >5%:
  - Pineview
  - East Canyon

# Utah Water Supply Forecasts - Weber River- Oakley



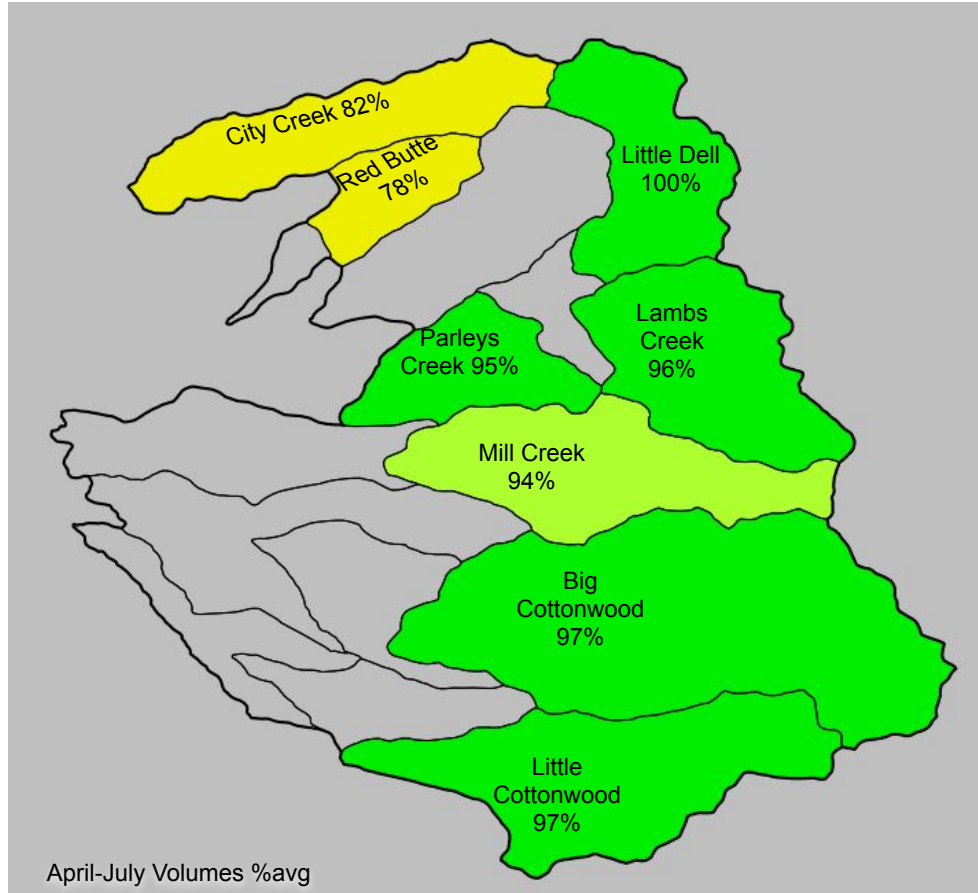
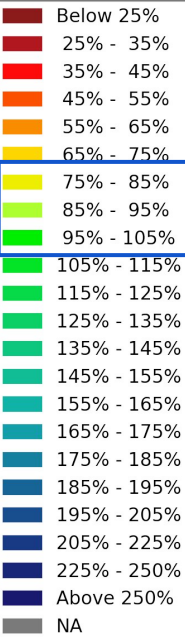
The April-July runoff forecast did not change from March to April and is expected to be below average. March precipitation was near average (98%).





# Utah Water Supply Forecasts - Six Creeks

1981-2010 %avg



## Six Creeks Basin Forecasts

### Median Forecast

January: 90%

February: 100%

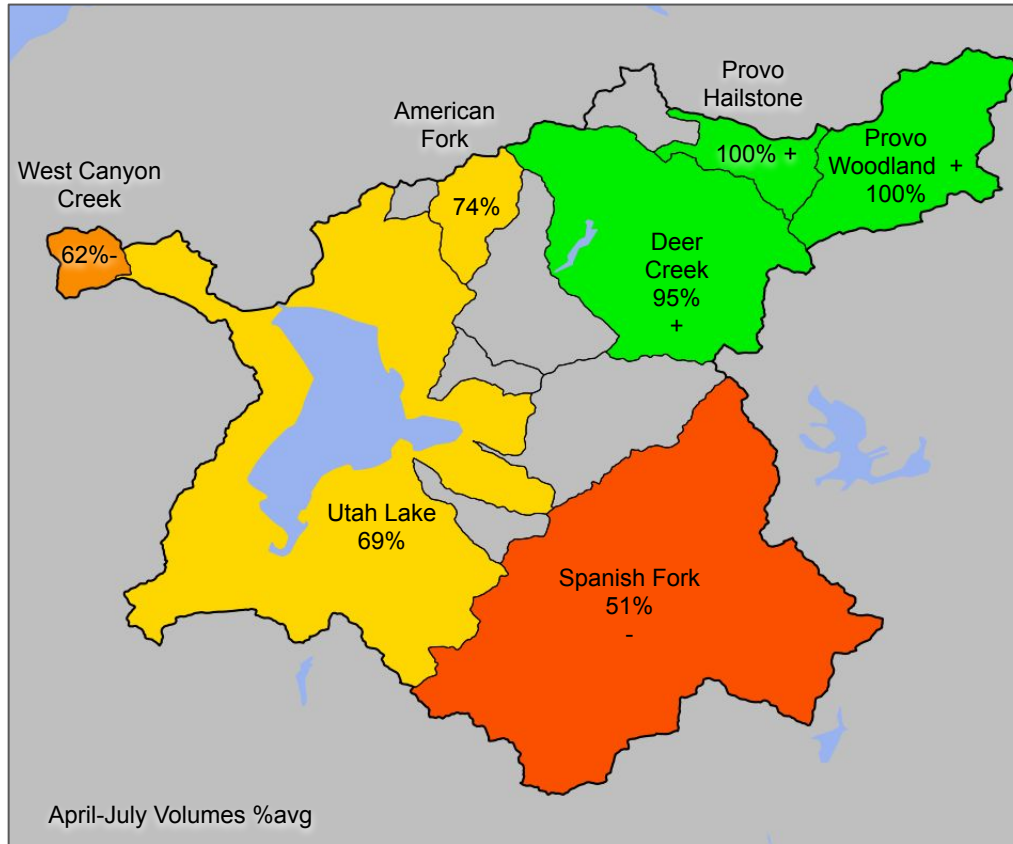
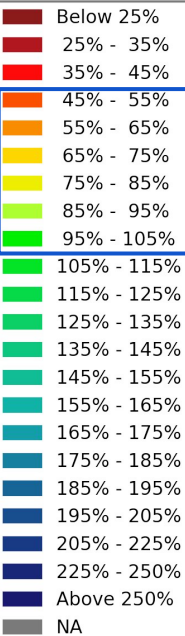
March: 95%

April: 95%

- Forecast Range: 80% - 100%
- Decreases >5%:
  - Red Butte Creek

# Utah Water Supply Forecasts - Provo - Utah Lake

1981-2010 %avg



## Provo River Basin Forecasts

### Median Forecast

January: 90%

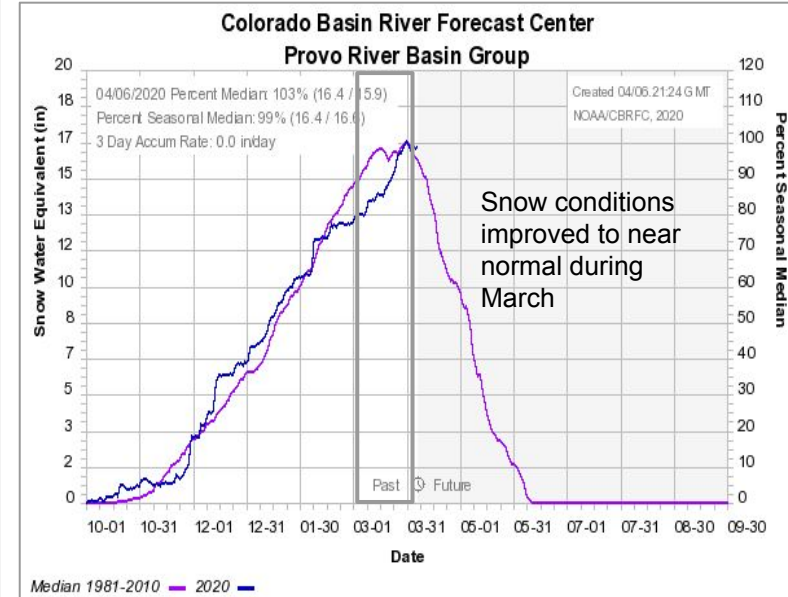
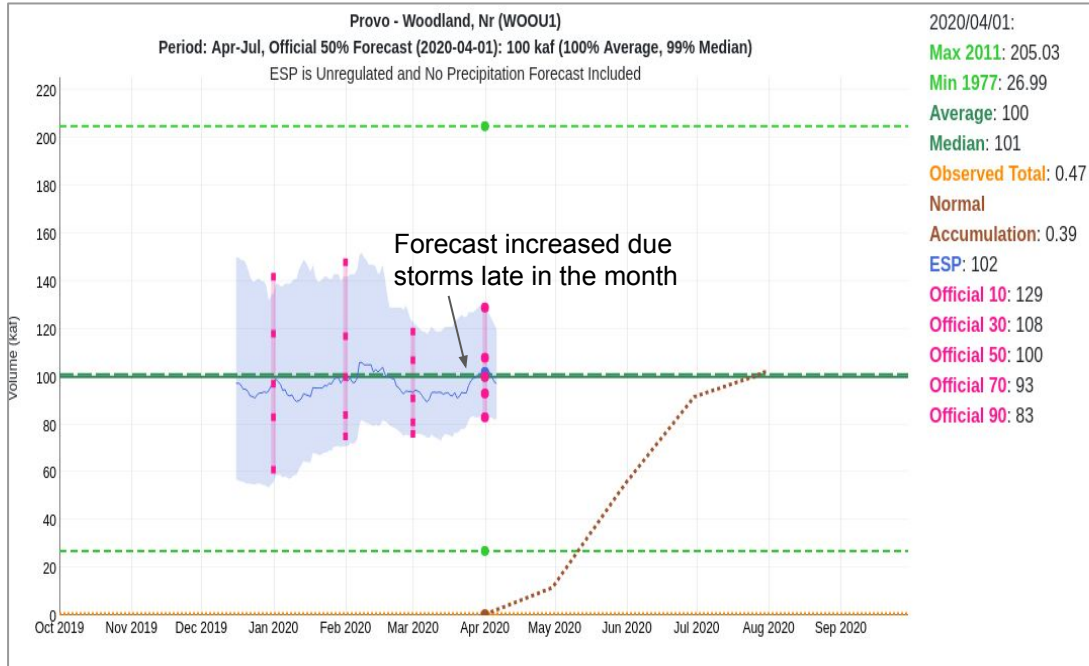
February: 95%

March: 70%

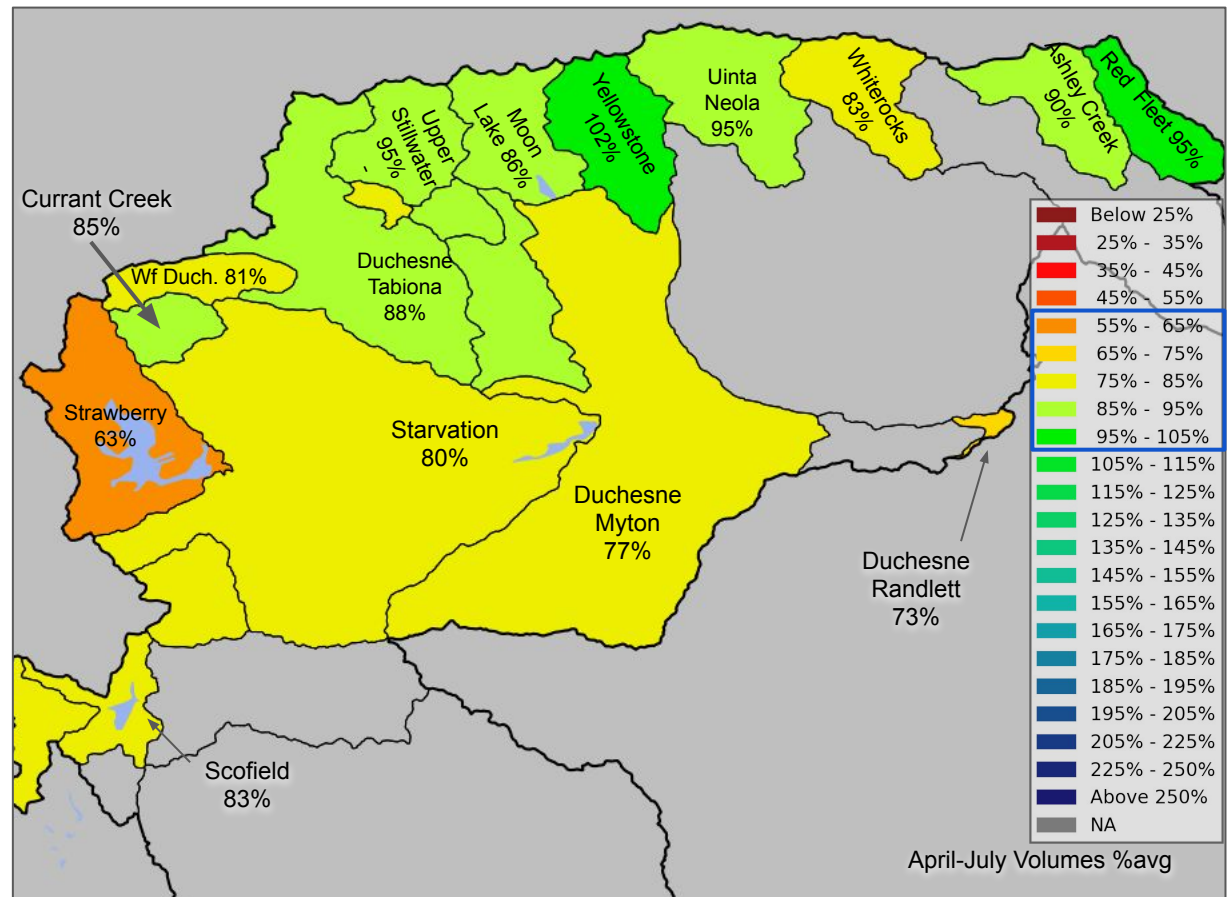
April: 70%

- Forecast Range: 50% - 100%
- Increases ~10%:
  - Provo Woodland
  - Provo Hailstone
  - Deer Creek
- Decreases 5-10%:
  - West Canyon
  - Spanish Fork

# Utah Water Supply Forecasts - Provo at Woodland



# Utah Water Supply Forecasts - Duchesne and Price



## Duchesne River Basin

### Median Forecast

January: 95%  
February: 90%  
March: 85%  
April: 85%

- Forecast Range: 60% - 100%
- Increases ~5%:
  - Upper Stillwater
  - Lake Fork
  - Yellowstone

## Price River Basin

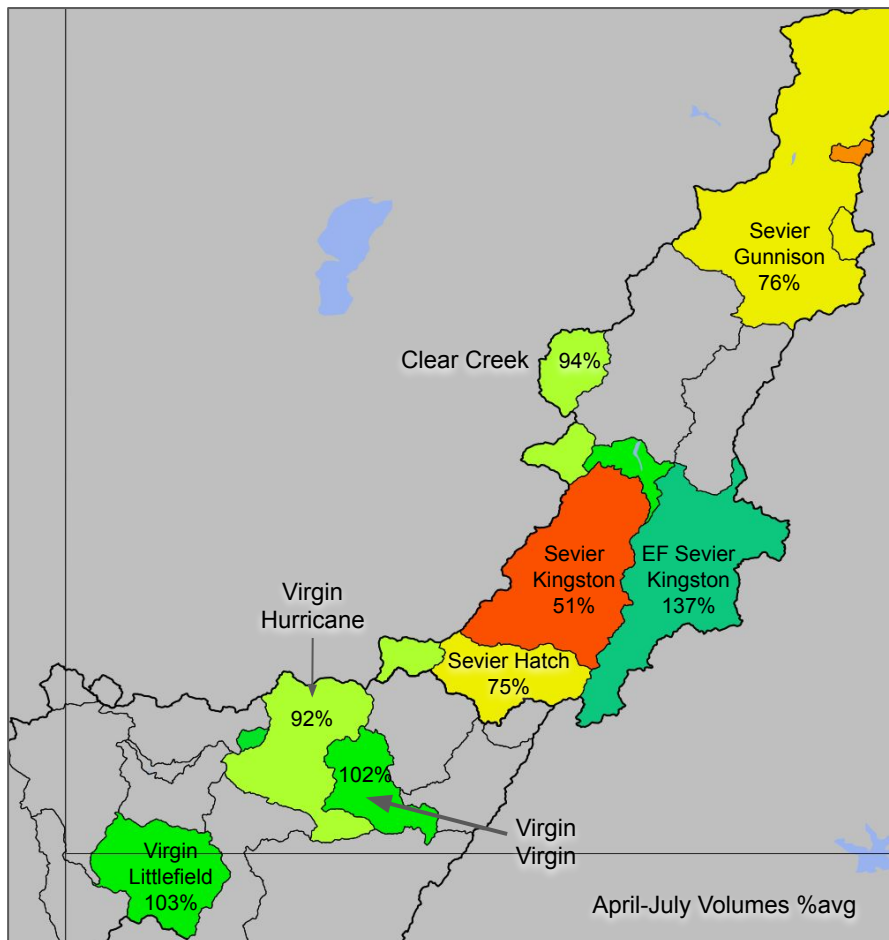
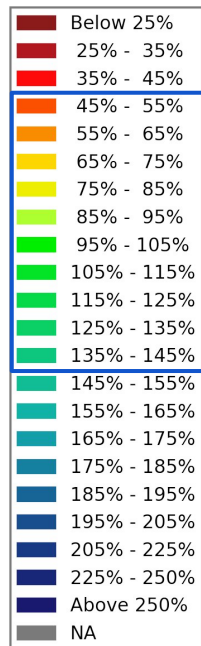
### Median Forecast

January: 90%  
February: 85%  
March: 85%  
April: 85%



# Utah Water Supply Forecasts - Sevier and Virgin

1981-2010 %avg



## Sevier River Basin

### Median Regulated Forecast

January: 115%

February: 110%

March: 80%

April: 85%

- Forecast Range: 50% - 140%
- Increases: 5-10%

## Virgin River Basin Forecasts

### Median Forecast

January: 100%

February: 95%

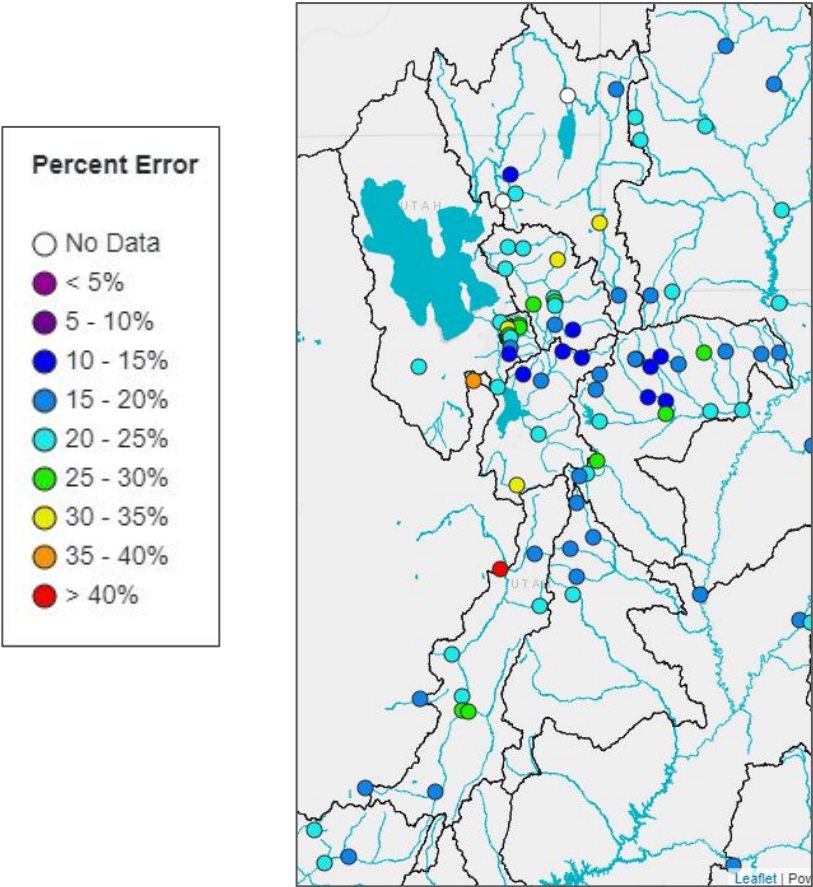
March: 80%

April: 105%

- Forecast Range 92% - 114%
- Increases: 20% - 35%

# Historical (1981-2010) Forecast Verification

Forecast Error: April-July Volume



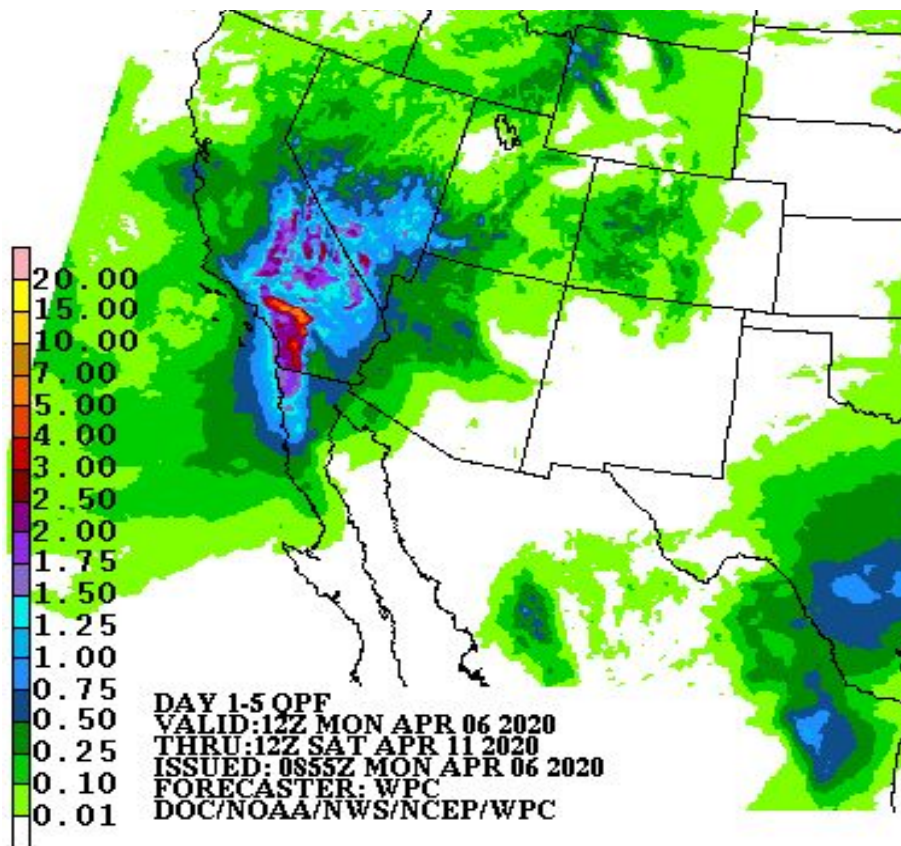
<u>Location</u>	<u>Forecast Error</u>			
	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>
BEAR - UTAH-WYOMING STATE	21%	20%	18%	15%
BEAR - WOODRUFF NARROWS	40%	38%	36%	31%
LOGAN - LOGAN- NR	27%	22%	19%	14%
WEBER - OAKLEY- NR	23%	19%	17%	14%
WEBER - ROCKPORT RES	30%	25%	24%	19%
BIG COTTONWOOD CK	21%	18%	19%	16%
PARLEYS CK	39%	32%	32%	25%
PROVO - WOODLAND- NR	25%	20%	16%	13%
PROVO - DEER CK RES	33%	26%	23%	19%
VIRGIN - VIRGIN	44%	34%	31%	17%

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

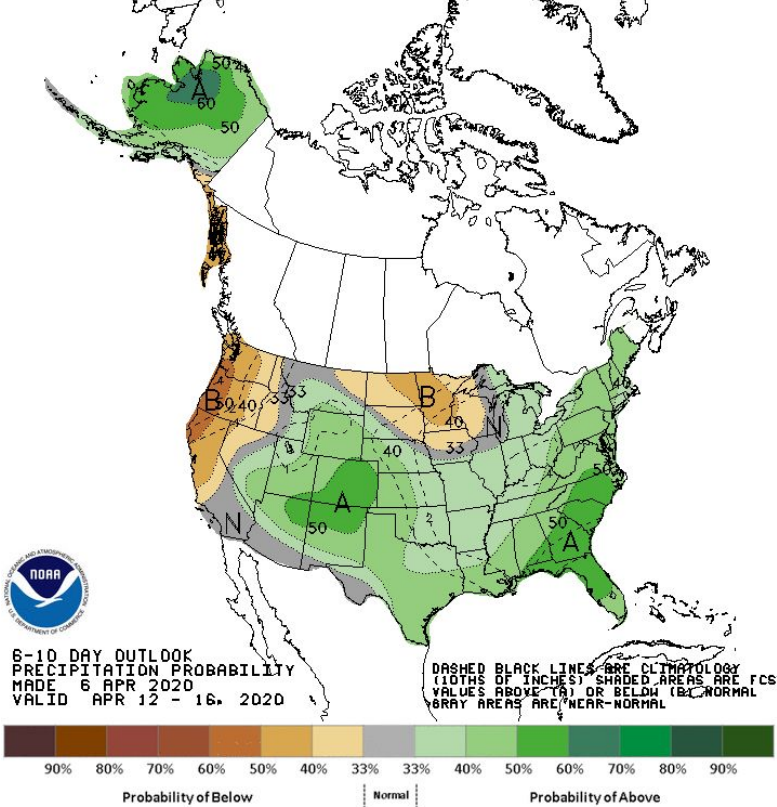
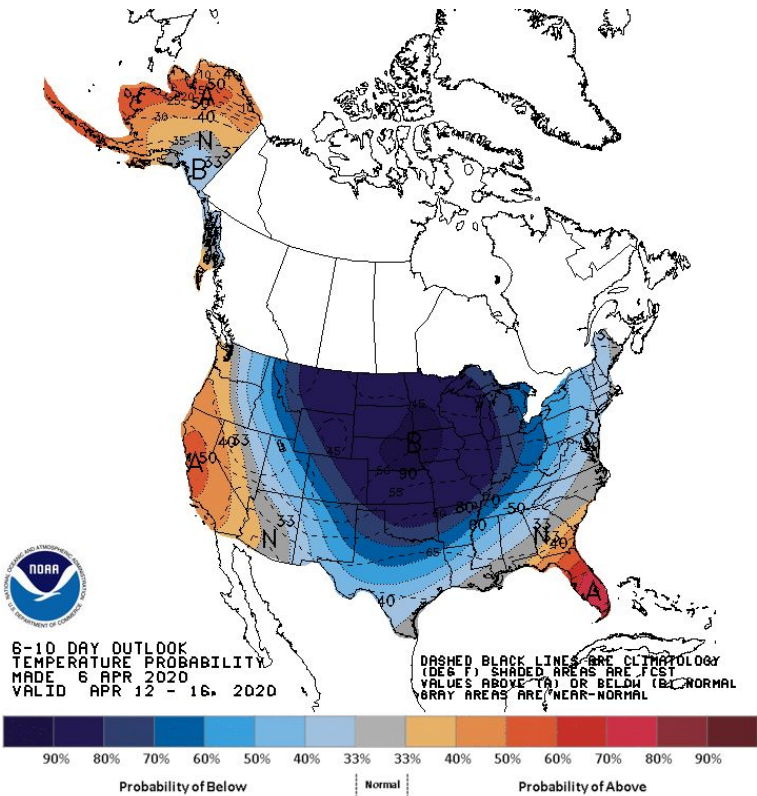
# Upcoming Weather: Precip Forecast through Saturday



- A cutoff low currently off the southern California coast will move eastward across Arizona over the next few days and then weaken.
- Highest precip amounts (0.5-1.5 inches) are expected Wednesday/Thursday over the southern half of Utah (Virgin). Generally light precipitation elsewhere across Great Basin.
- Temperatures will be **5-10 degrees above normal** over much of the Great Basin through Saturday.

# Upcoming Weather: 6 to 10 day Outlook (April 12-16)

The models are in general agreement showing a storm system dropping into the Intermountain West late this weekend into early next week. This would bring cooler temperatures and increase precipitation chances over the Great Basin, although heavy precipitation amounts appear unlikely at this time.





# Summary

- March precipitation in the Virgin, Duchesne and parts of the Bear River was above average.
- March precipitation in the Six Creeks Basins was below average
- All Utah Forecast groups have recieved near normal Water Year Precipitation, except for Provo/Utah Lake, which is below normal.
- Snow conditions are near normal, except for Six Creeks and Virgin River Basins, which are above median values.
- Water Supply Forecasts
  - Bear, Six Creeks, and Virgin are near normal
  - Weber, Provo/Utah Lake, Sevier, Price, Duchesne are below normal
- With temperatures above normal through Saturday, snowmelt will increase, especially across the northern Utah basins. A cold front moving across the Great Basin on Sunday/Monday will act to slow down melt, and maybe provide some modest precipitation amounts.

# 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	

Additional briefings may be scheduled as needed.

All registration information is available on the CBRFC web page.

# COVID-19 Operations at CBRFC

- Still staffed 7 days a week 6:30 am - 4:00 pm
- Minimal staff in the office each day
  - Others working from home, but not necessarily every day
- Water Supply forecasts may be delayed slightly
  - Please contact Operations if you don't hear back from your normal contact(s)
  - They can either answer your question or get a hold of someone who can

## Operational Hydrologist

- 801-524-4004
- [cbrfc.operations@noaa.gov](mailto:cbrfc.operations@noaa.gov)

# 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

[patrick.kormos@noaa.gov](mailto:patrick.kormos@noaa.gov)

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?