

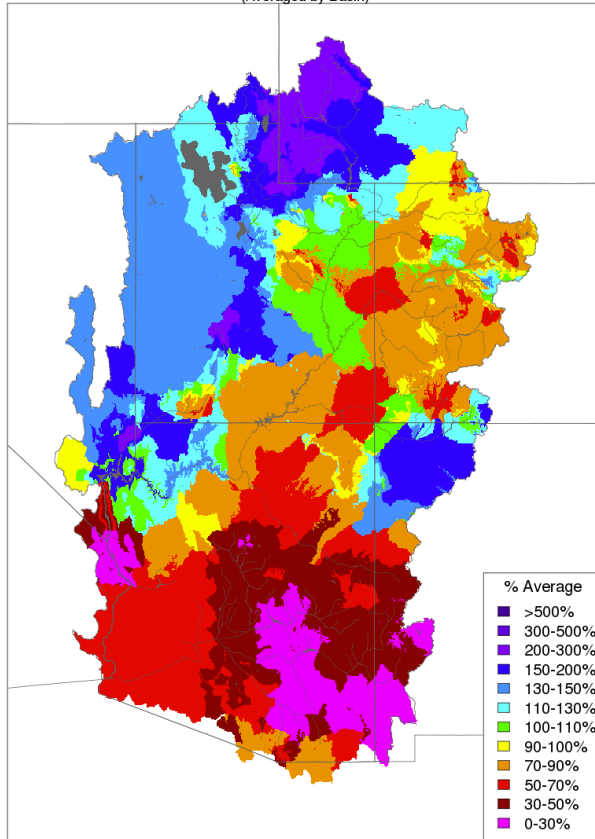
CBRFC Water Year 2018 Outlook

CRFS November 16, 2017

Ashley Nielson
Senior Hydrologist

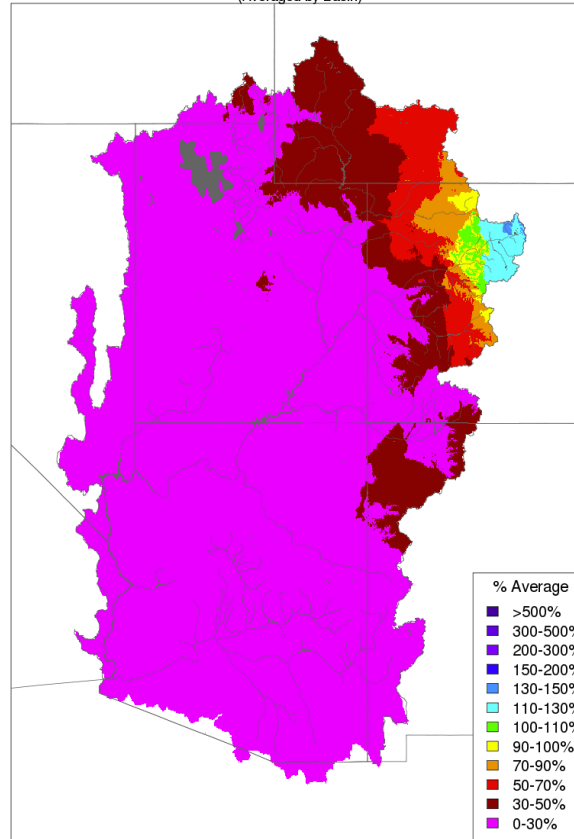
Observed Fall Precipitation

Monthly Precipitation - September 2017
(Averaged by Basin)



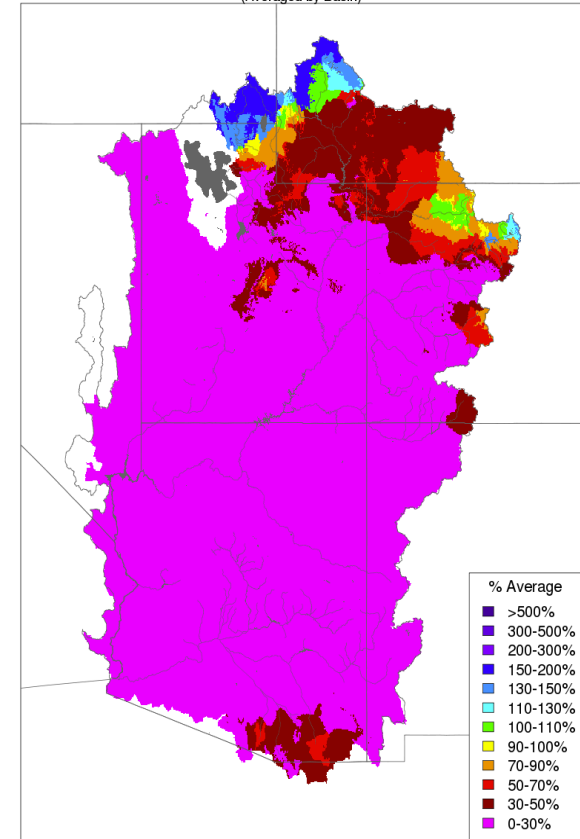
Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

Monthly Precipitation - October 2017
(Averaged by Basin)



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

Month to Date Precipitation - November 15 2017
(Averaged by Basin)



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

Modeled Soil Moisture

SAC-SMA Model

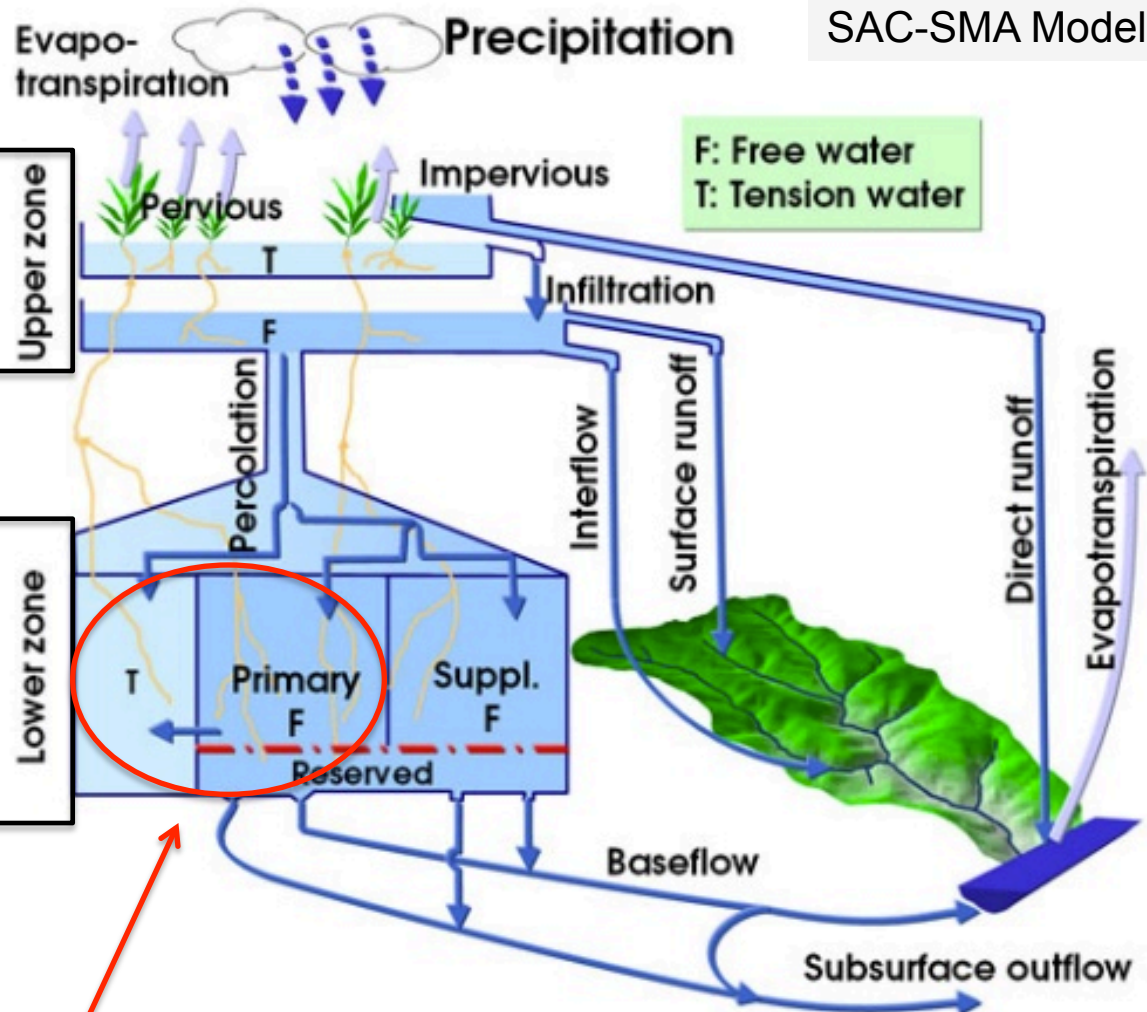
Upper Zone

- Active, permeable layer near surface
- Source of most storm runoff
- Time Delay=Days

Lower Zone

- Deep soil layer
- Source of baseflow
 - Supplemental (weeks)
 - Primary (months/years)

-IMPACTS SPRING RUNOFF



Fall adjustments made to Lower Zone parameters

Fall Adjustment to Soil Moisture States

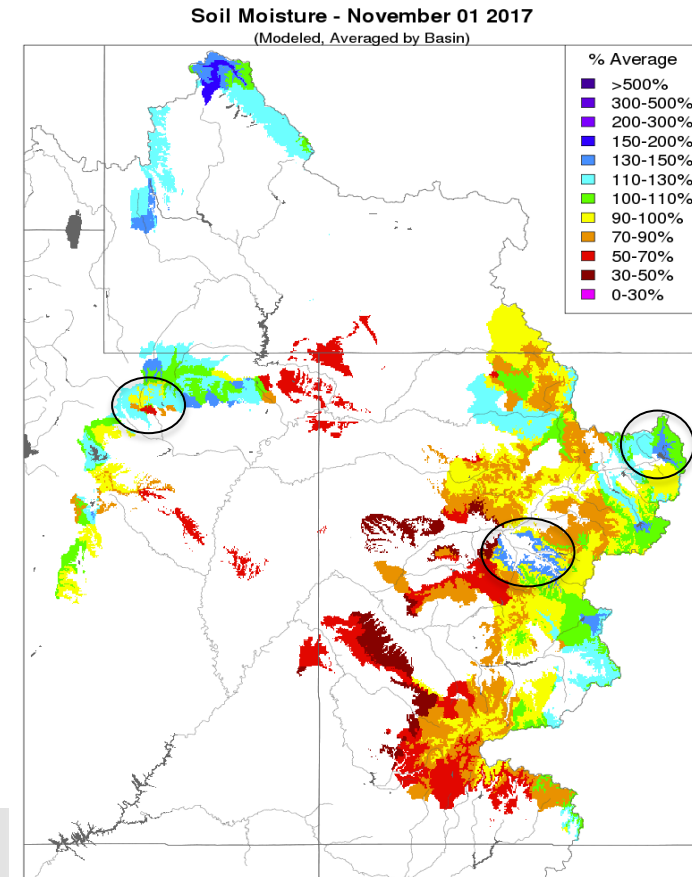
Goal: Guarantee soil moisture states are as accurate and representative as possible prior to winter/snowmelt.

Why are the adjustments done in the fall?

- Snowmelt runoff and the summer monsoon, two major seasonal water inputs, are over.
- Fall rain events may have significant impacts to the soil moisture conditions.
- Irrigation and diversions are finished for the season.
- Streamflow gages are still ice free.

How are the adjustments made?

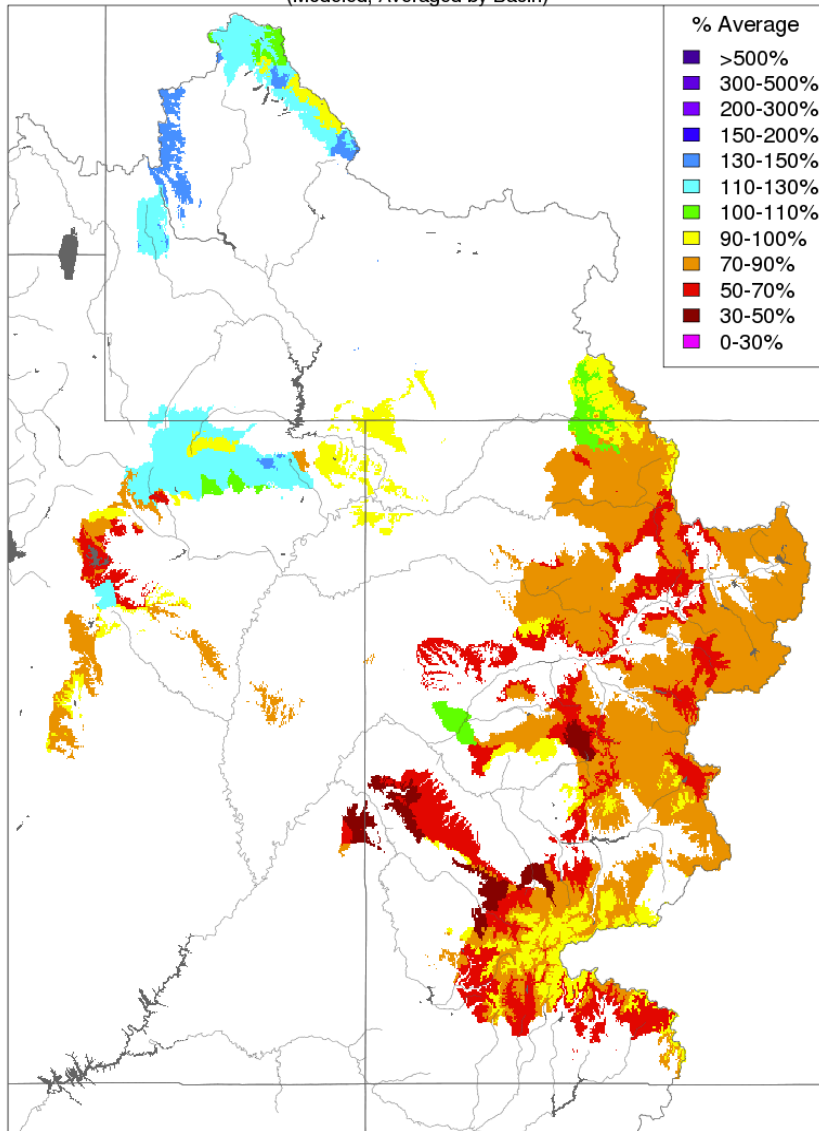
- Observed streamflow is used to adjust the model baseflow.
- Lower zone tension water is adjusted based on summer and fall precipitation.



Fall Modeled Soil Moisture

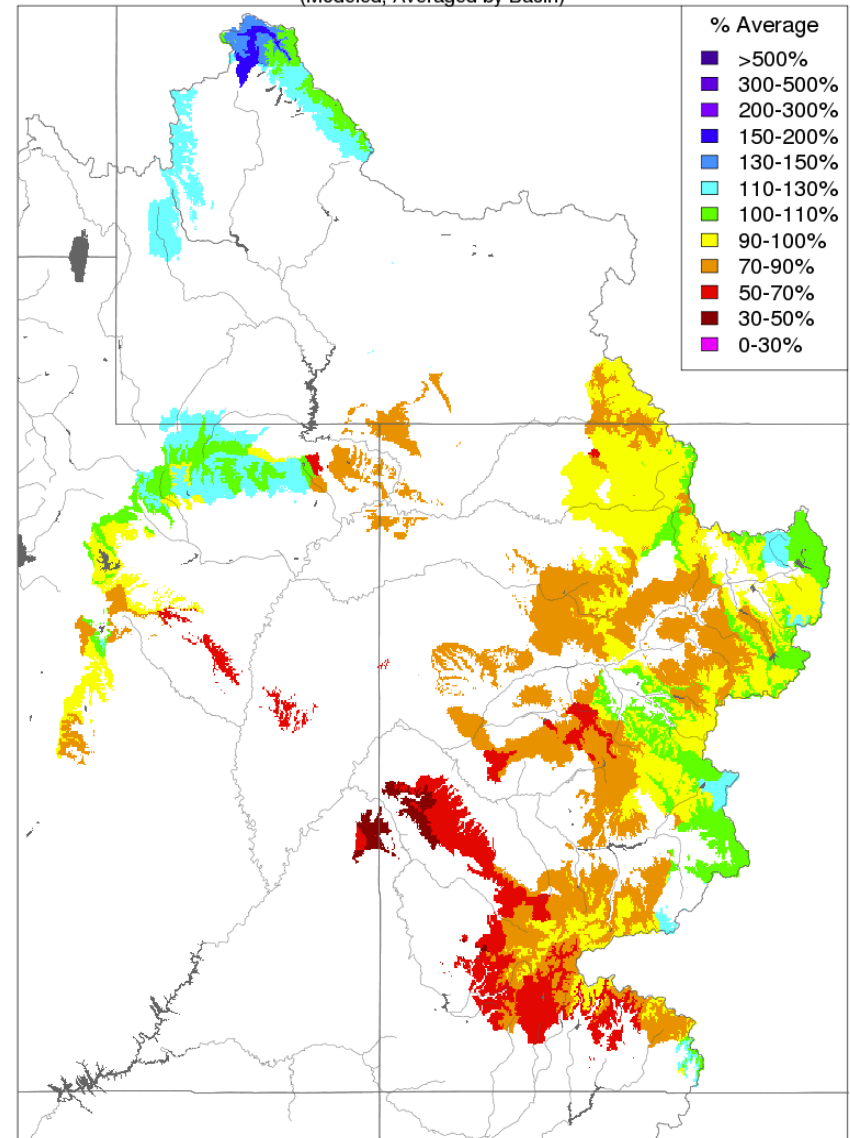
Soil Moisture - November 16 2016

(Modeled, Averaged by Basin)



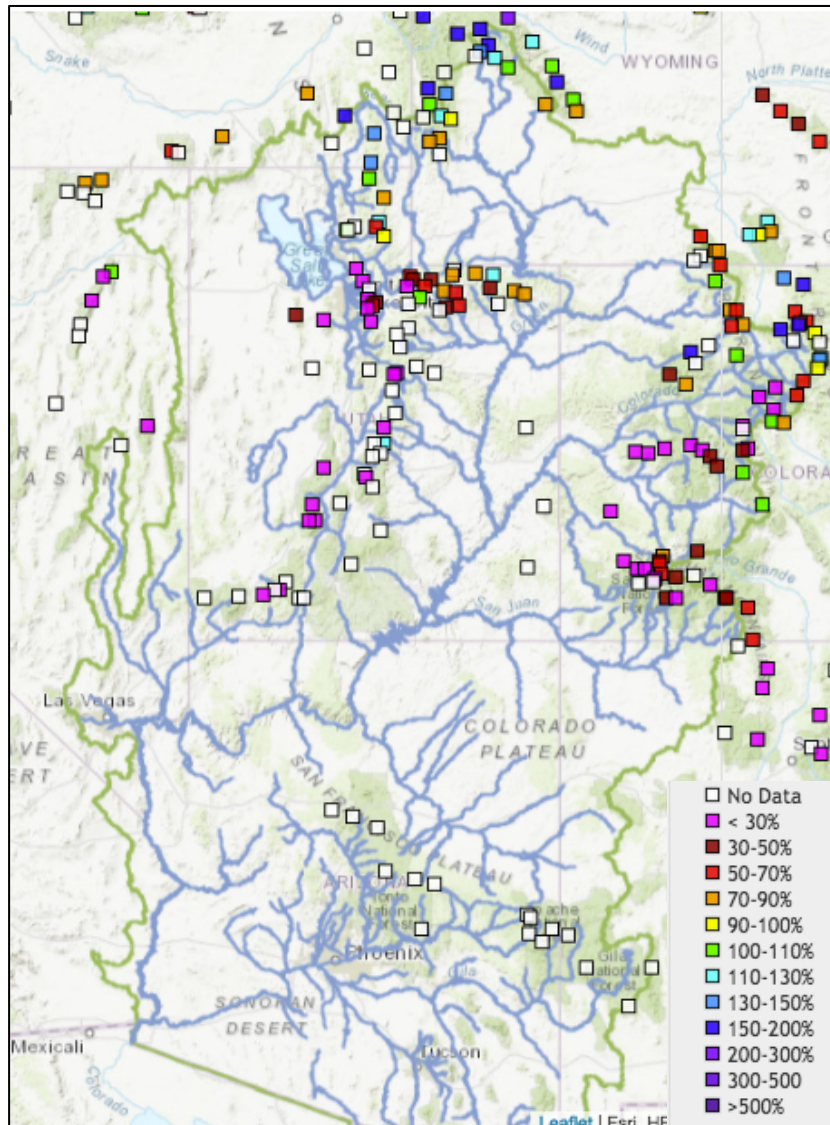
Soil Moisture - November 15 2017

(Modeled, Averaged by Basin)

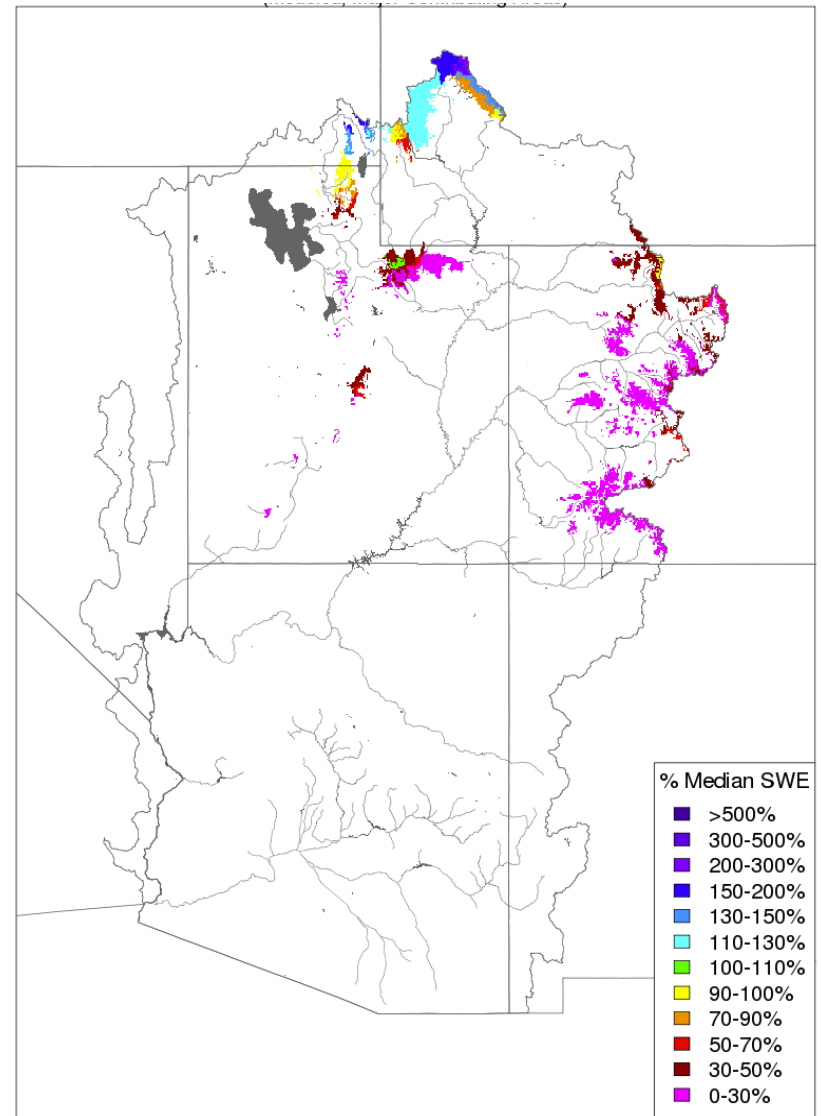


Current Snow Conditions

SNOTELS % Median: November 14



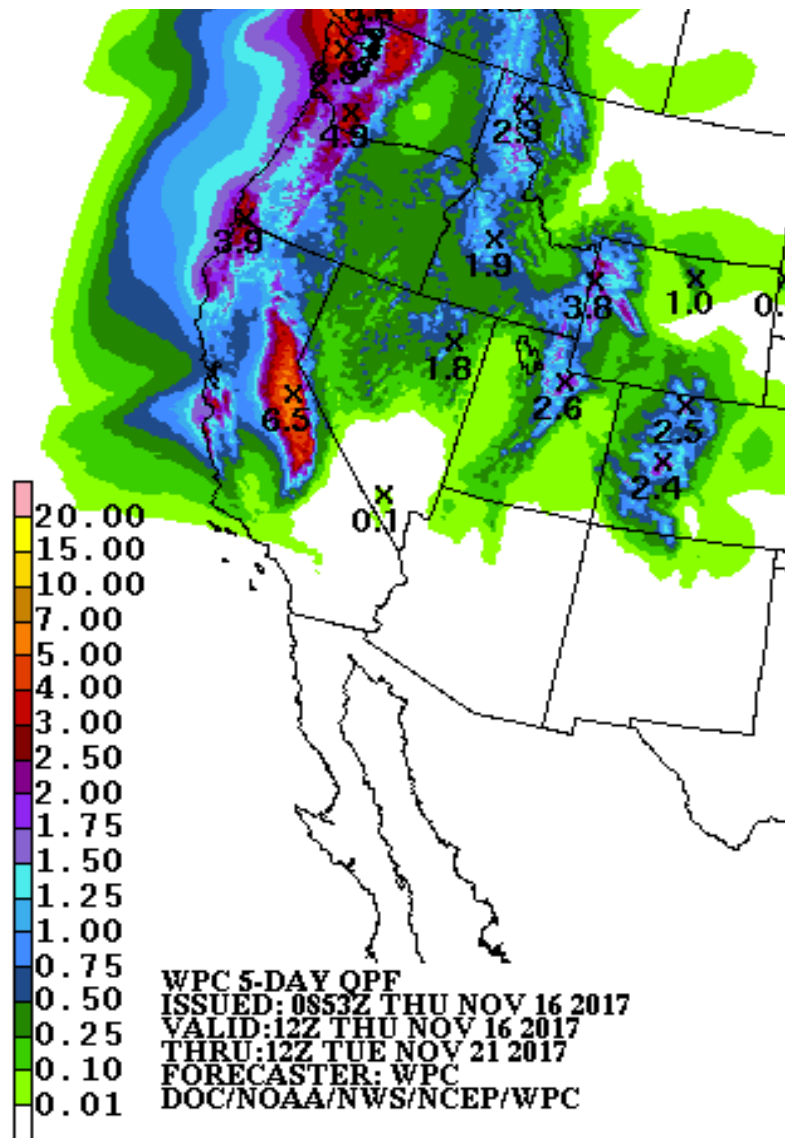
Modeled Snow % Median: November 14



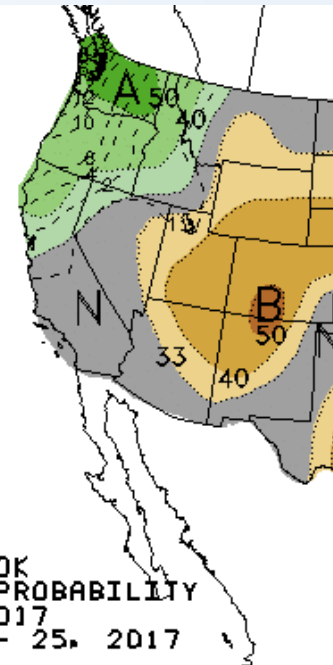
ESP Outlooks: 2018 April-July Volumes

Location	Nov 1 Raw ESP	Mid-Nov Raw ESP	% Change Raw ESP
Fontenelle	719 / 100%	817 / 112%	+14%
Flaming Gorge	875 / 89%	973 / 99%	+11%
Blue Mesa	520 / 77%	470 / 70%	-10%
Navajo	565 / 76%	500 / 68%	-11%
Lake Powell	4950 / 69%	4800 / 67%	-3%

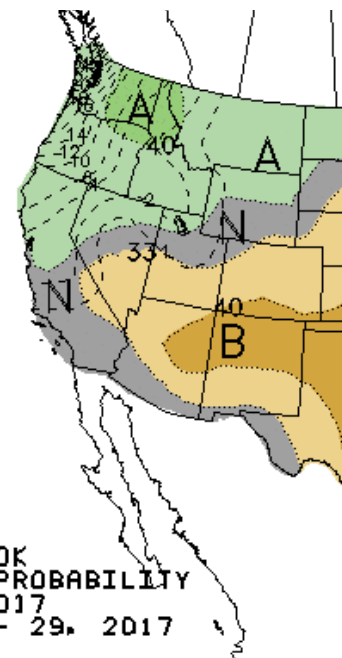
Future Weather: Short Term



6-10 DAY OUTLOOK
 PRECIPITATION PROBABILITY
 MADE 15 NOV 2017
 VALID NOV 21 - 25, 2017



8-14 DAY OUTLOOK
 PRECIPITATION PROBABILITY
 MADE 15 NOV 2017
 VALID NOV 23 - 29, 2017



Climate Forecasts: Dec-Jan-Feb

