

# 2020 Water Year so far

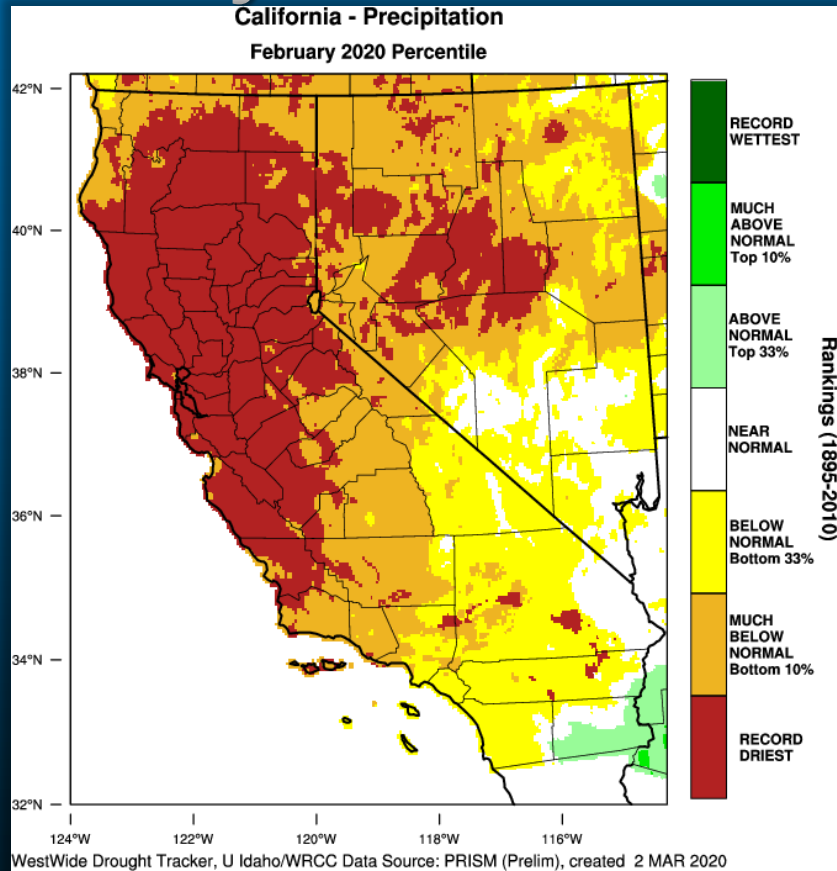
## What Winter? Odds of a Miracle March?

*Tim Bardsley*  
Senior Service Hydrologist – NWS Reno  
[tim.bardsley@noaa.gov](mailto:tim.bardsley@noaa.gov)

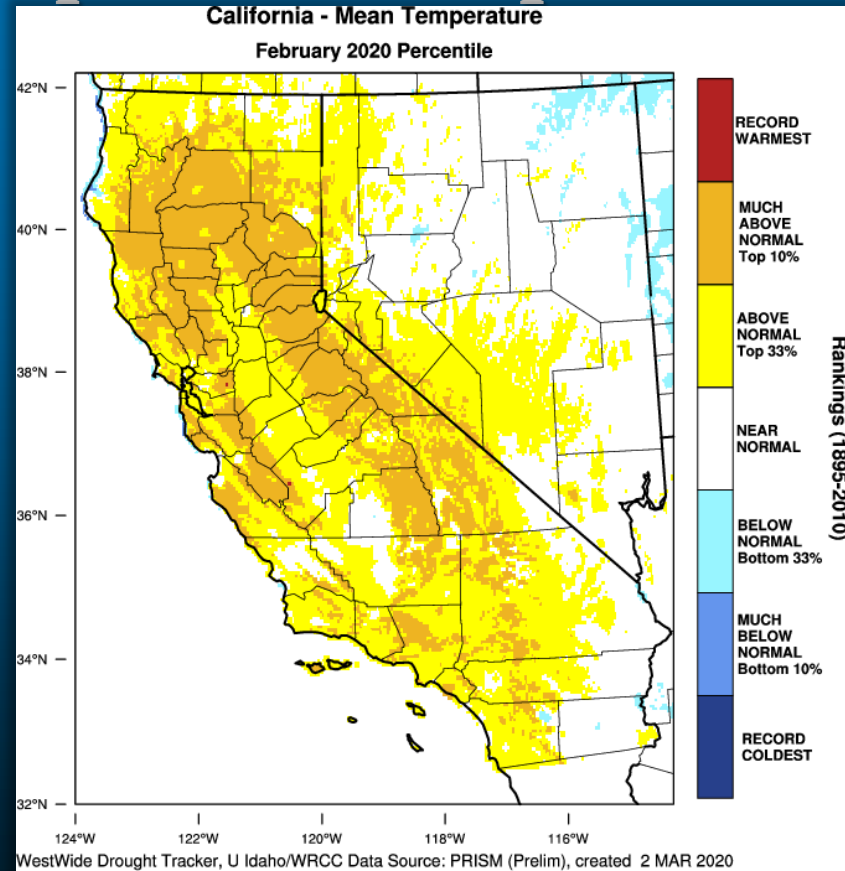


*Peavine burn area*  
*February 27 2020*

# Water year 2020 Precip and Temp



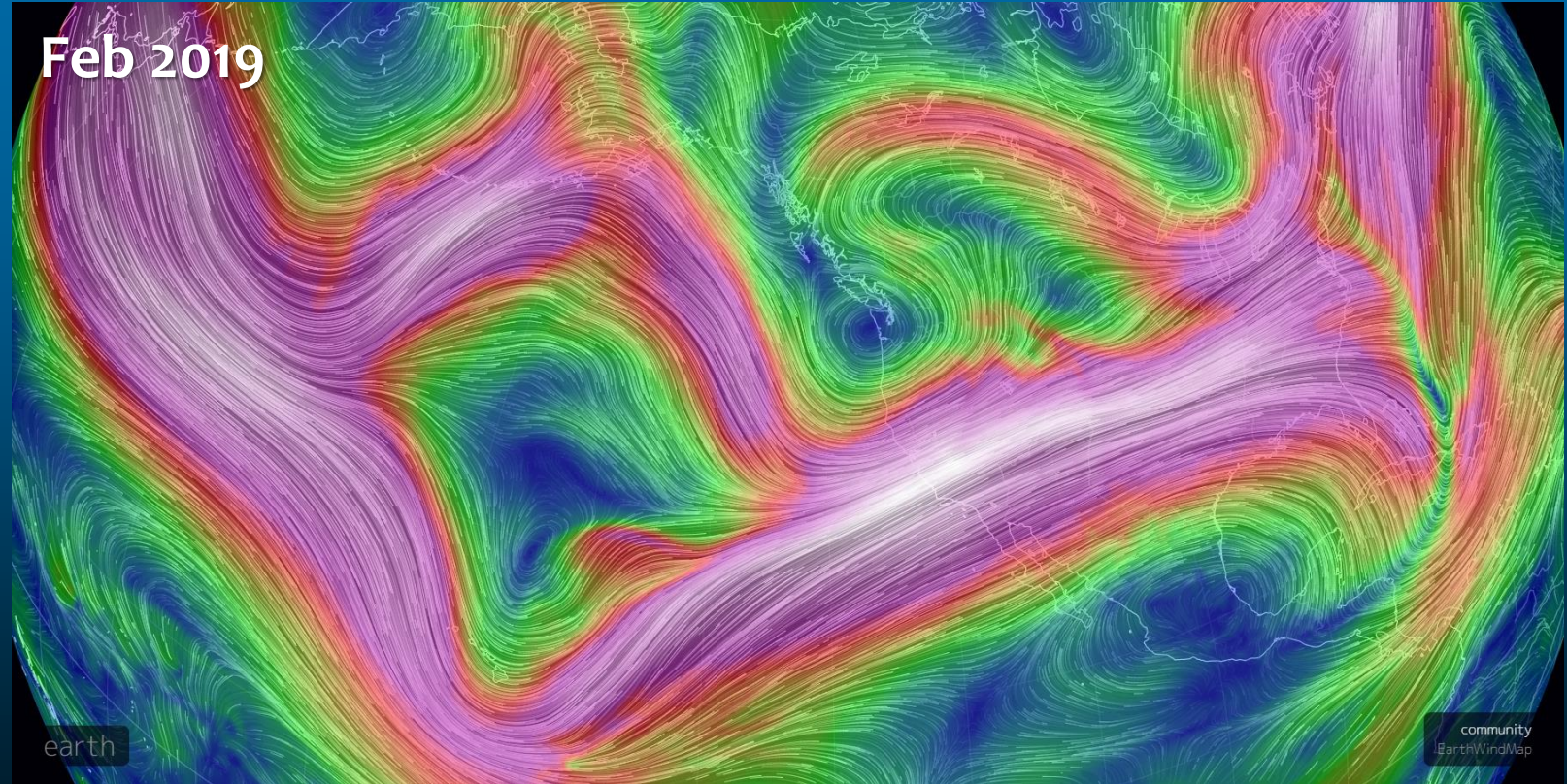
WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 2 MAR 2020



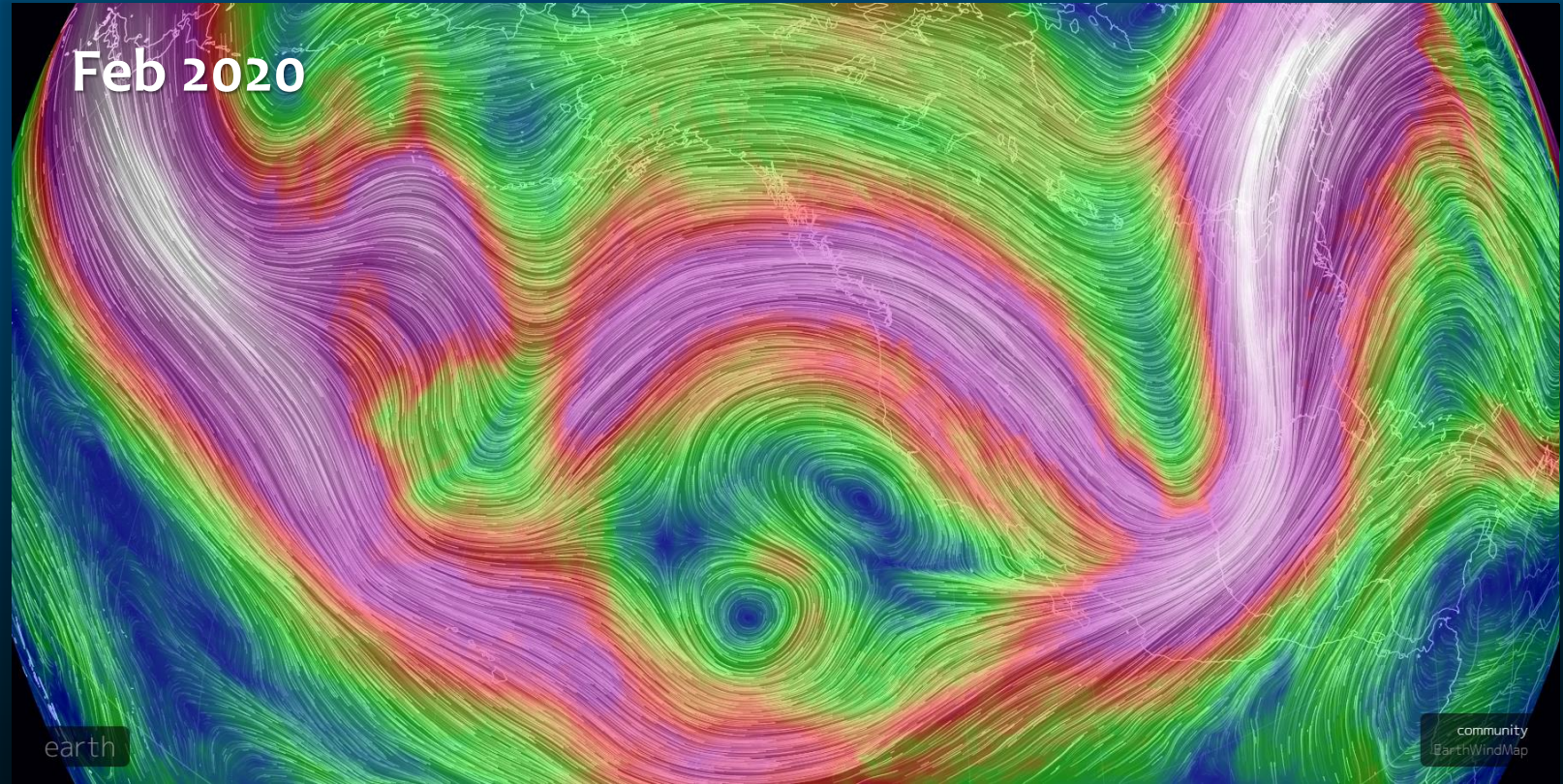
WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 2 MAR 2020



# 2018-19 vs 2019-20 – Storm Track



# 2018-19 vs 2019-20 – Storm Track



# Situational Awareness - When Should I Freak Out?

NWS Reno 7-14 Day Scan for Unusual Upcoming Weather across the Eastern Sierra and Western Nevada

	Mon <sup>3/9</sup>	Tues <sup>3/10</sup>	Wed <sup>3/11</sup>	Thurs <sup>3/12</sup>	Fri <sup>3/13</sup>	Sat <sup>3/14</sup>	Sun <sup>3/15</sup>	W2 <sup>3/16-22</sup>	
Wind	Not seeing any significant winds, but won't be calm either.					Looking windy, impacts to travel, aviation	Still breezy, but not looking bad	Storms remain possible with wind/precip impacts. However, still no big wet storm signals.	
Snow	Mountain snow showers, minor travel impact possible.	Some mountain snow, mainly E Sierra. Modest pickup for Mammoth, White Mtns area. Travel impacts likely Hwy 395 late Tuesday - Wednesday morning.		Not seeing anything.		Chances for snow starting to increase.	Impactful snow likely for Sierra, possible into lower valleys.		
Flooding	None, unless you have a pipe break!								
Unusual Cold or Heat	Continued near average	Above average North. E Sierra colder with clouds and precipitation.	Warmer. About 5-10 degrees above normal.			Cooler, closer to average.	Continued cooling to 10 degrees below average.		Near to below normal temps favored.
Ventilation, Fog	Light transport winds but mixing is decent to balance out.				Good ventilation, especially for the weekend with the wind.				
Fire Weather	Nothing we're worrying about that the moment, but Saturday will be watched if RH is low enough.							TBD.	

What Does This Mean? Integrates impacts and confidence

No worries



Low freakoutness



Moderate freakoutness



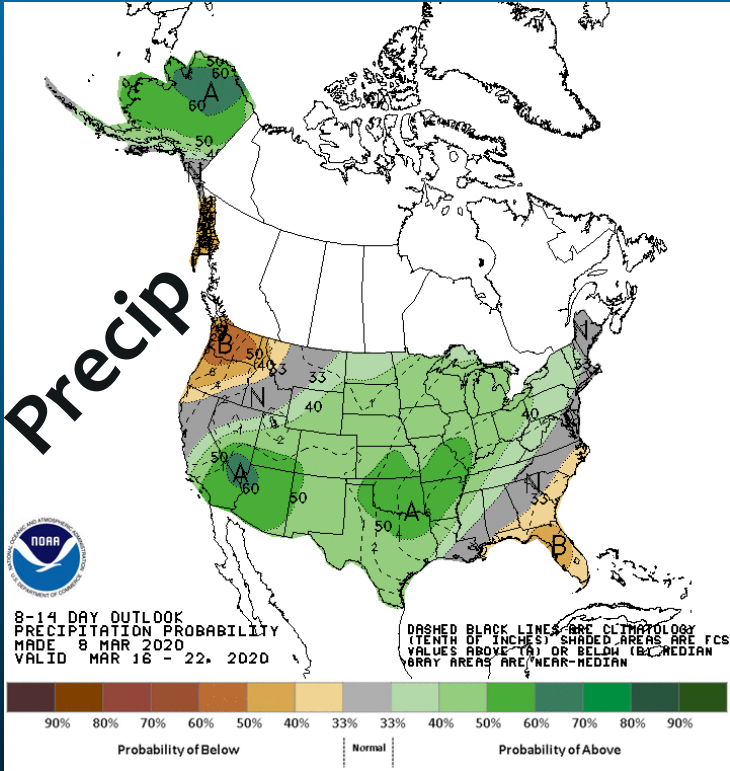
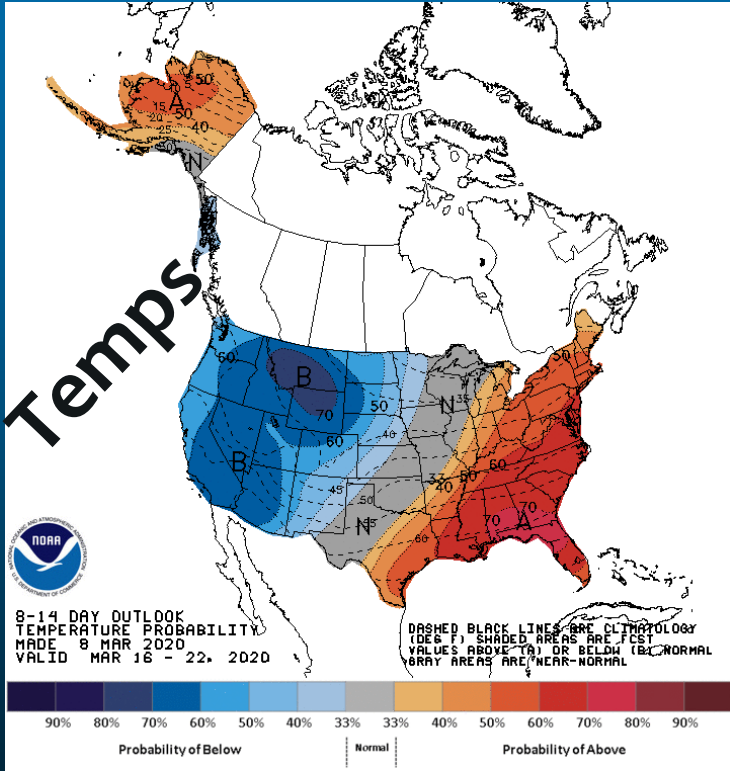
High freakoutness



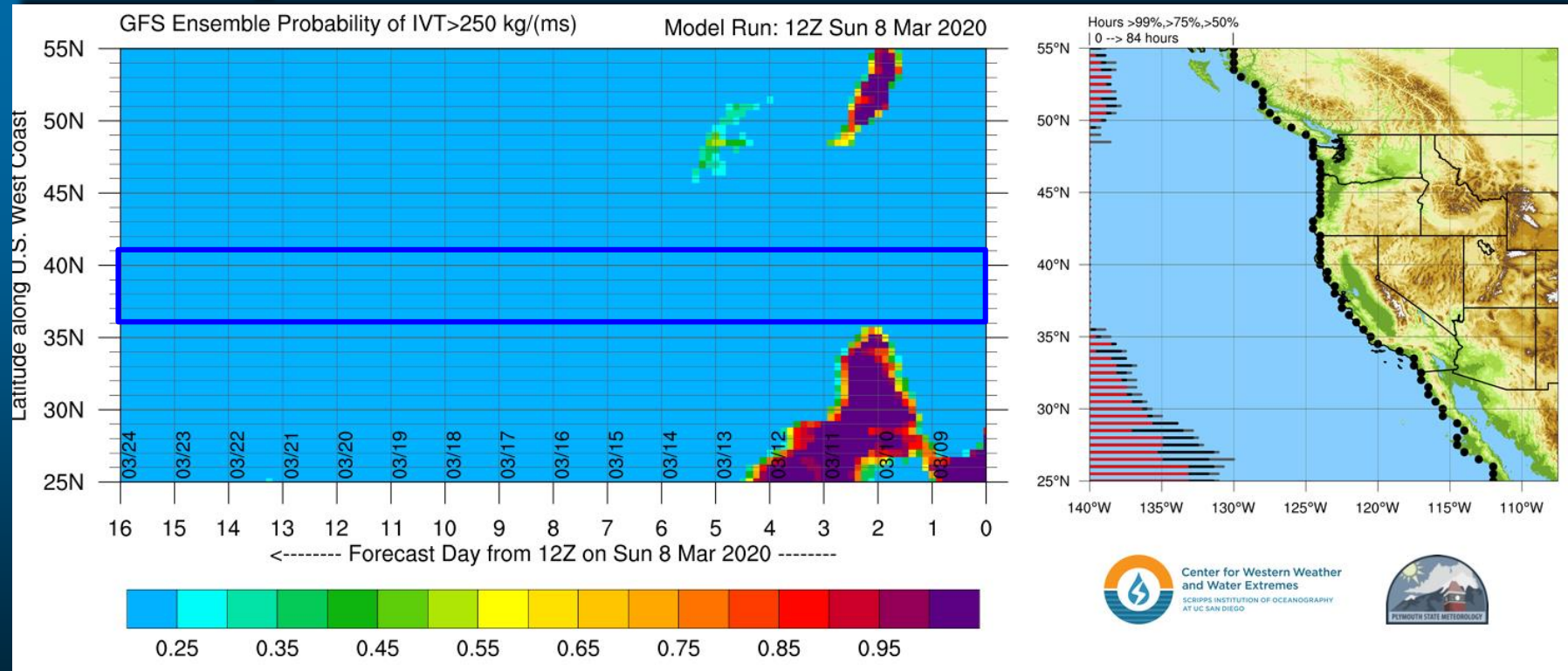
Really bad



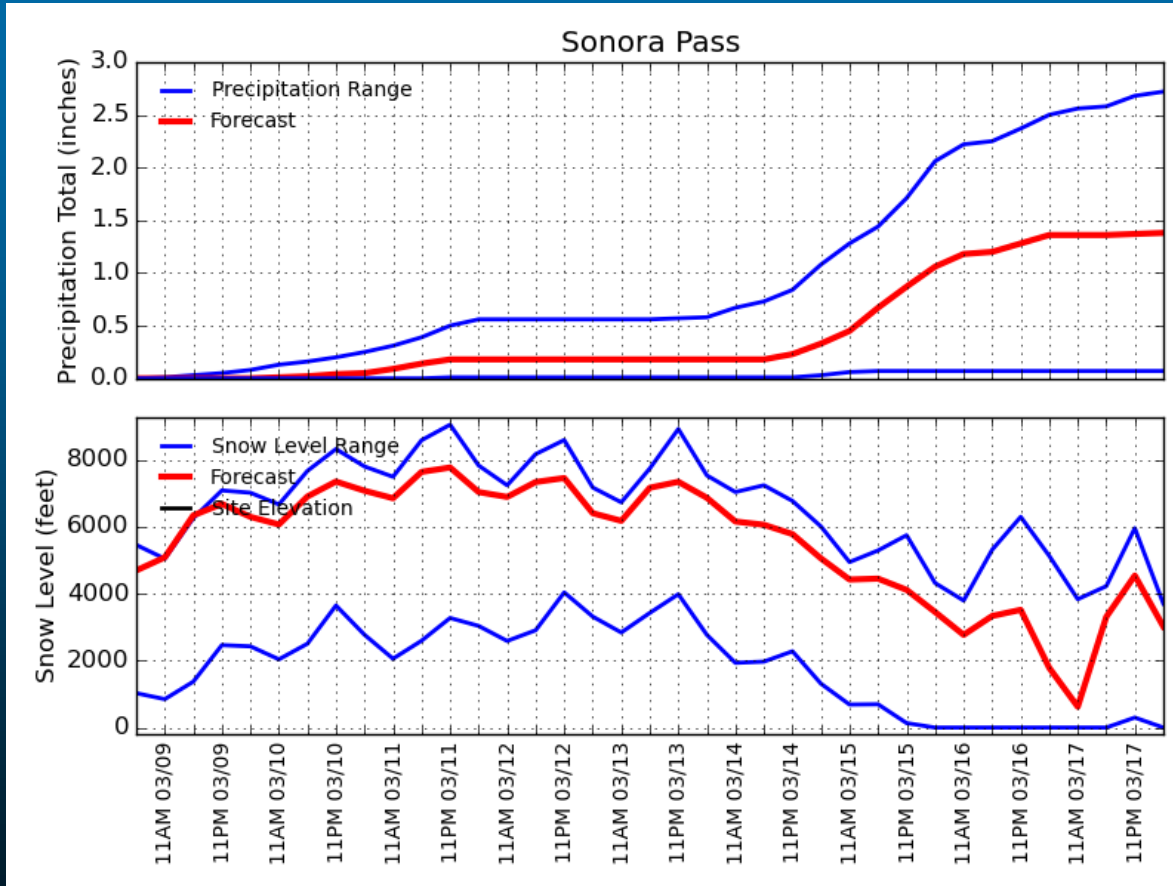
# So, How About Week Two?



# Atmospheric River Outlook



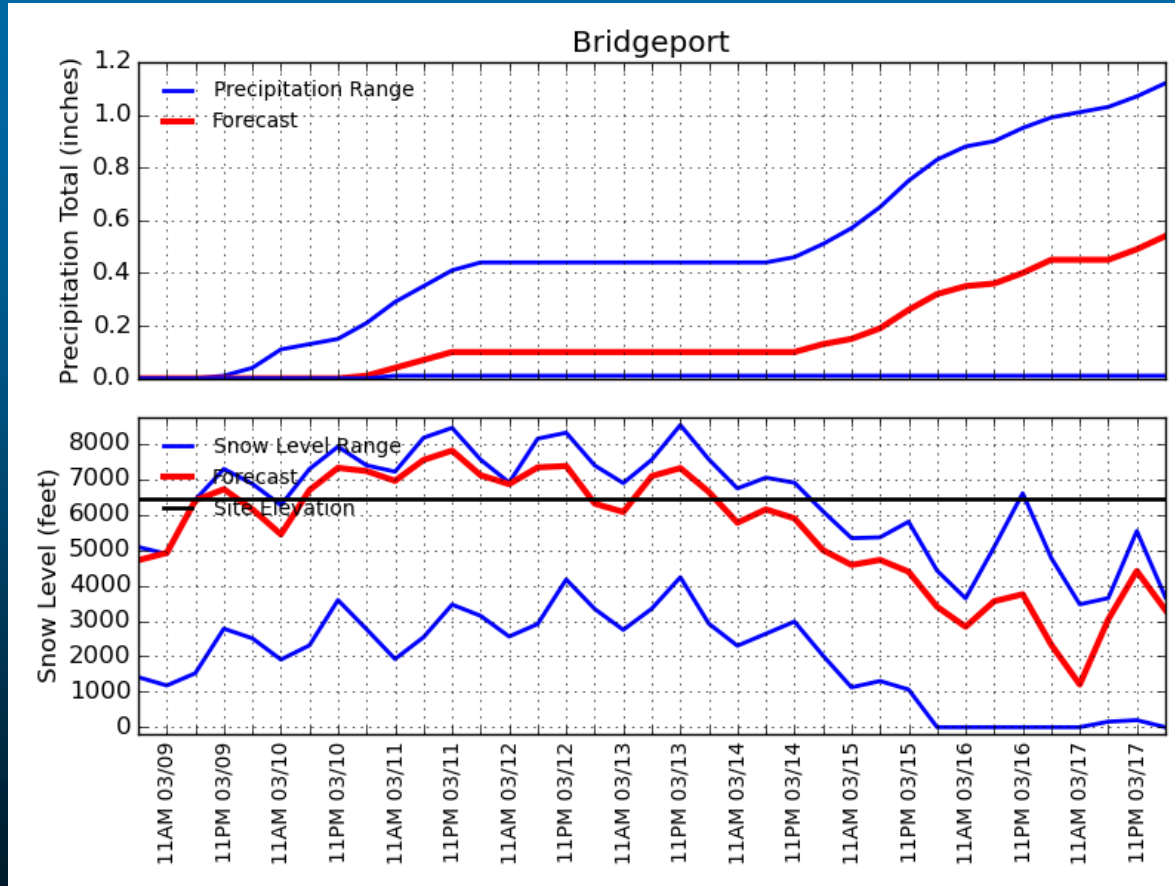
# Water & Snow Level Scenarios



**10 Day Scenarios** - Graphs compare NWS operational forecast (red) with recent model simulation scenarios in blue. Greater spread between the lines - means less forecast certainty.

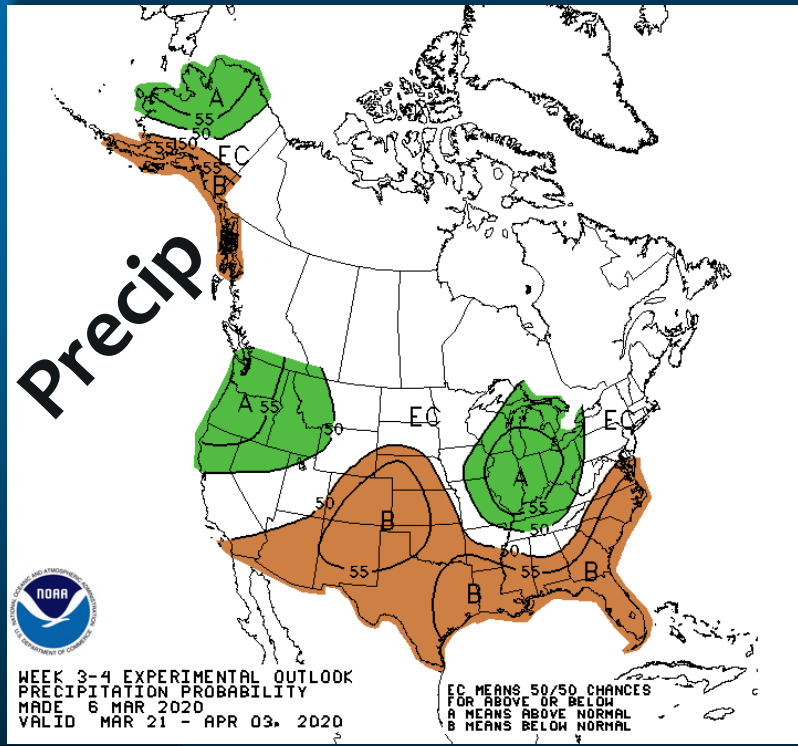
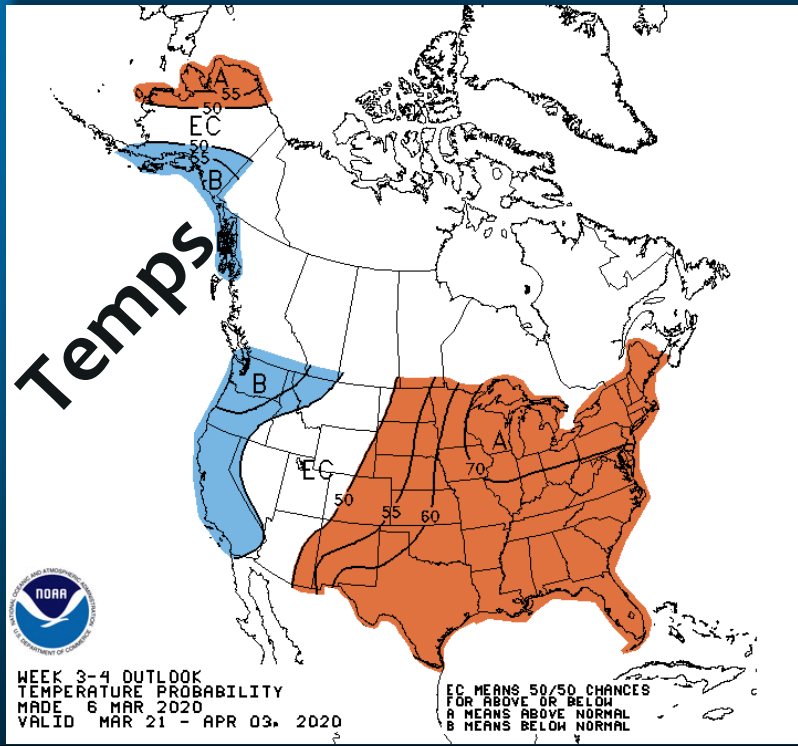


# Water & Snow Level Scenarios



**10 Day Scenarios** - Graphs compare NWS operational forecast (red) with recent model simulation scenarios in blue. Greater spread between the lines - means less forecast certainty.

# End of March - Weeks 3-4?

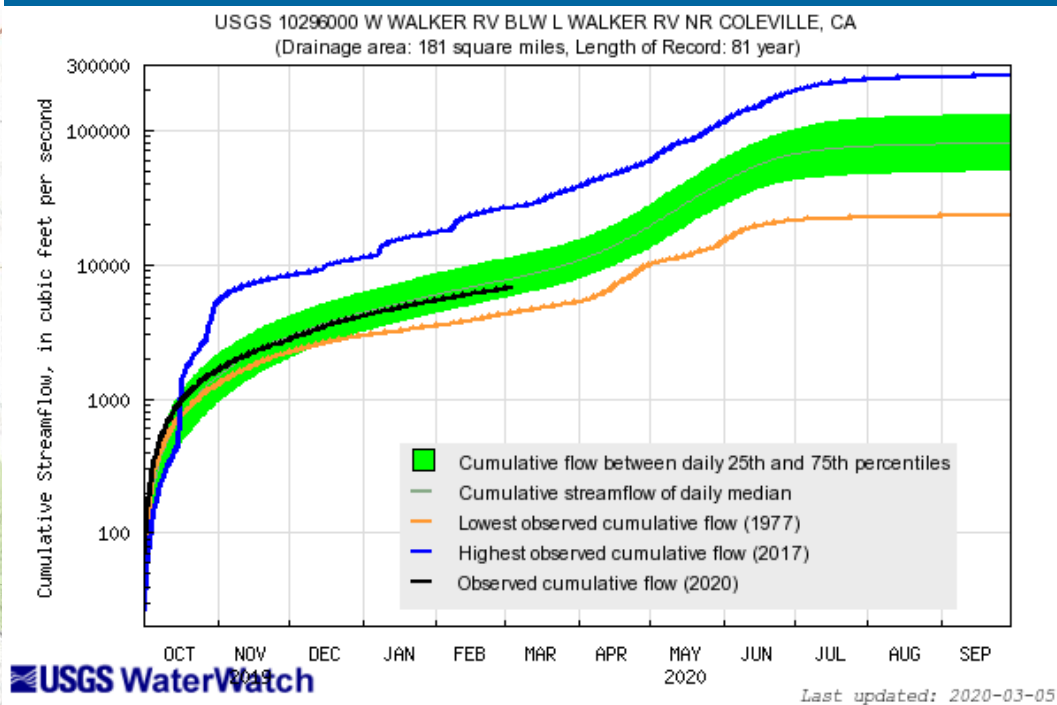
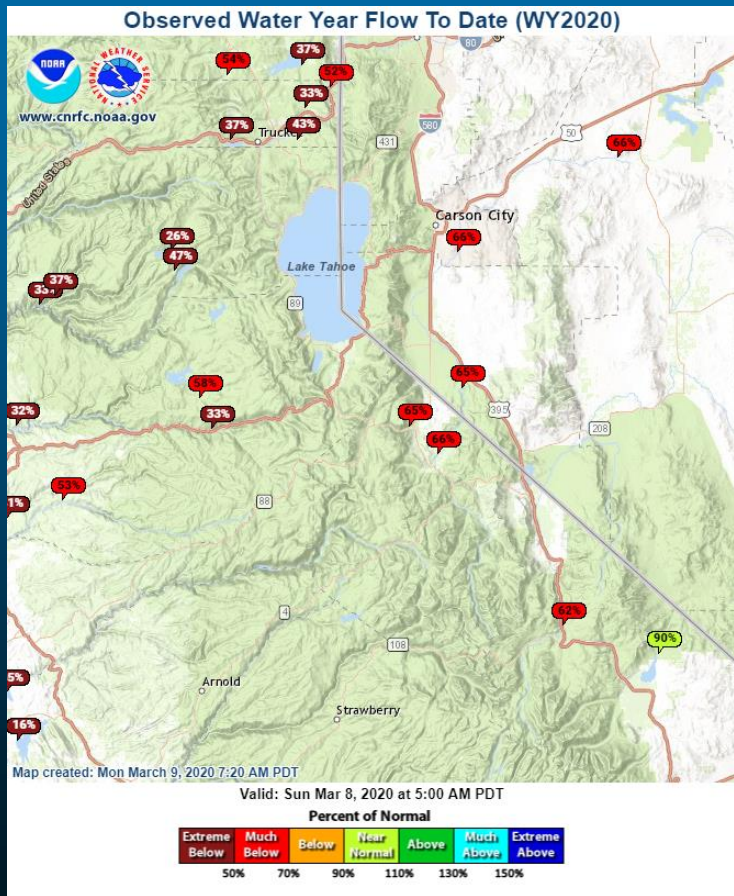


**3-4 Week Forecasts** – Lean toward cooler. No favored outcome or strong signal for precip in the Sierra. Slight lean towards wet for Northern CA and NV.

# Rest of Spring into Summer?



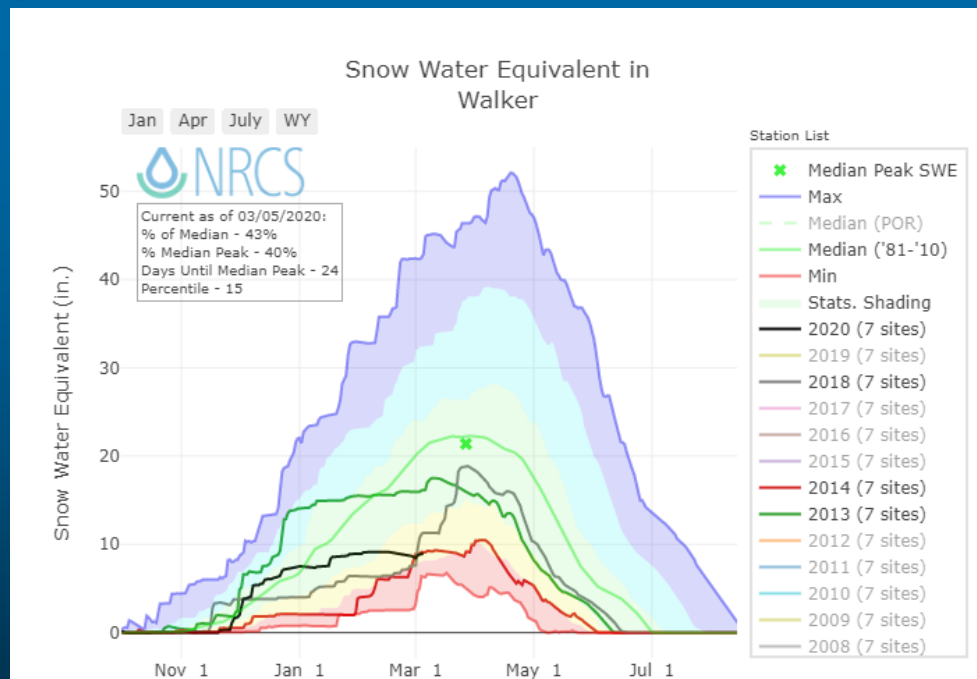
# Water Year flow to date



Last updated: 2020-03-05

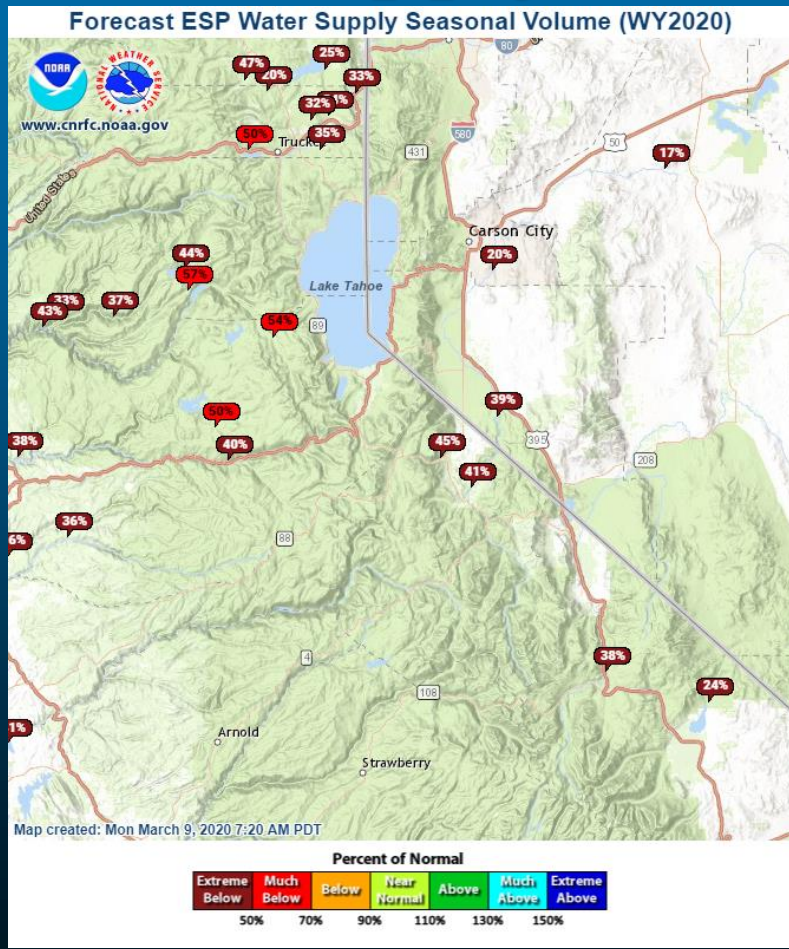


# Snowpack Analog years?



	2013	2014	2018	2020	Average
AJ Volume	54%	35%	98%	~43%	163KAF
WY volume	54%	35%	97%	~45%	206KAF
WY centroid	13-May	17-May	15-May	~ 18 May	1-Jun

# Water Supply Count on Reservoirs, Not on Snowpack!



## RFC Page Demo

- WW and East Walker AJ plots
- WW and East Walker WY plots
- WW and East Walker Verification
- WW and East Walker analog years 2018, 2014, 2013

# Summary



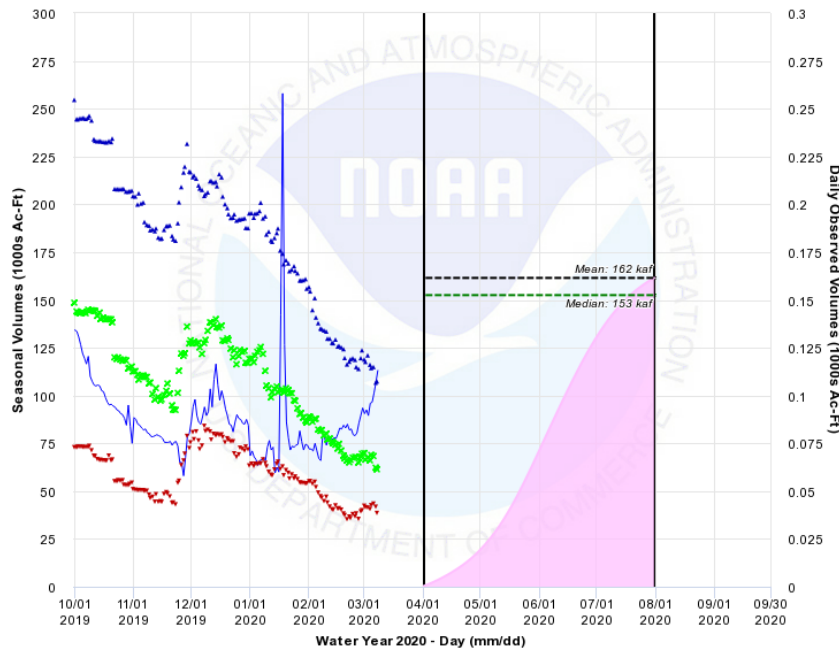
- Record to near record low January and February Precipitation.
- Snowpack in bad shape, especially sunny aspects and low elevations not well represented by measurement network
- CNRFC April-July Runoff 24 to 38% of average, some improvement possible, but full recovery very unlikely.
- Spring Flood Risk is Low!

# Bonus Material

## WEST WALKER - LTL WALKER, BLO, COLEVILLE, NR (WWBC1) 03/08/2020

Most Probable: 61.4 kaf | 38% of Average | 40% of Median

Created: 03/08/2020 at 09:02 AM PDT



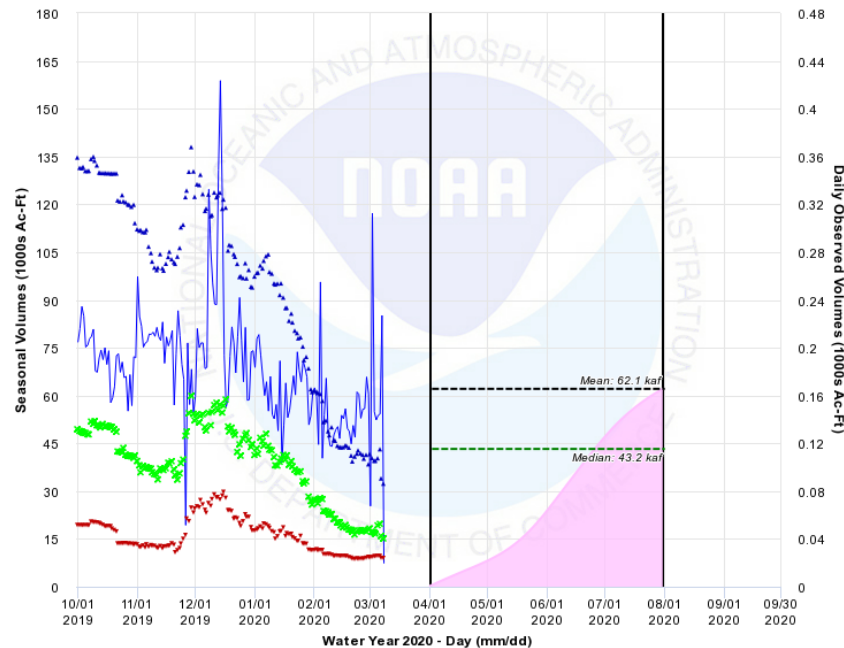
Observed Season to Date Percent of Average: N/A% (M kaf)    Season to Date Average: kaf  
 Historical Apr-Jul Vol Max: 410 kaf in 2017    Historical Apr-Jul Vol Min: 35.1 kaf in 1977

-- 30-Year Apr-Jul Vol Mean    - - 30-Year Apr-Jul Vol Media    Season to Date Avg    ● NWS Apr-Jul Fcst  
 - - Season to Date Obs    - - Daily Obs    ● ESP Apr-Jul Fcst 10%    ● ESP Apr-Jul Fcst 25%  
 × ESP Apr-Jul Fcst 50%    ● ESP Apr-Jul Fcst 75%    ● ESP Apr-Jul Fcst 90%

## EAST WALKER - BRIDGEPORT, NR (BPRC1) 03/08/2020

Most Probable: 15.1 kaf | 24% of Average | 35% of Median

Created: 03/08/2020 at 09:02 AM PDT



Observed Season to Date Percent of Average: N/A% (M kaf)    Season to Date Average: kaf  
 Historical Apr-Jul Vol Max: 209 kaf in 1969    Historical Apr-Jul Vol Min: 6.67 kaf in 1976

-- 30-Year Apr-Jul Vol Mean    - - 30-Year Apr-Jul Vol Media    Season to Date Avg    ● NWS Apr-Jul Fcst  
 - - Season to Date Obs    - - Daily Obs    ● ESP Apr-Jul Fcst 10%    ● ESP Apr-Jul Fcst 25%  
 × ESP Apr-Jul Fcst 50%    ● ESP Apr-Jul Fcst 75%    ● ESP Apr-Jul Fcst 90%



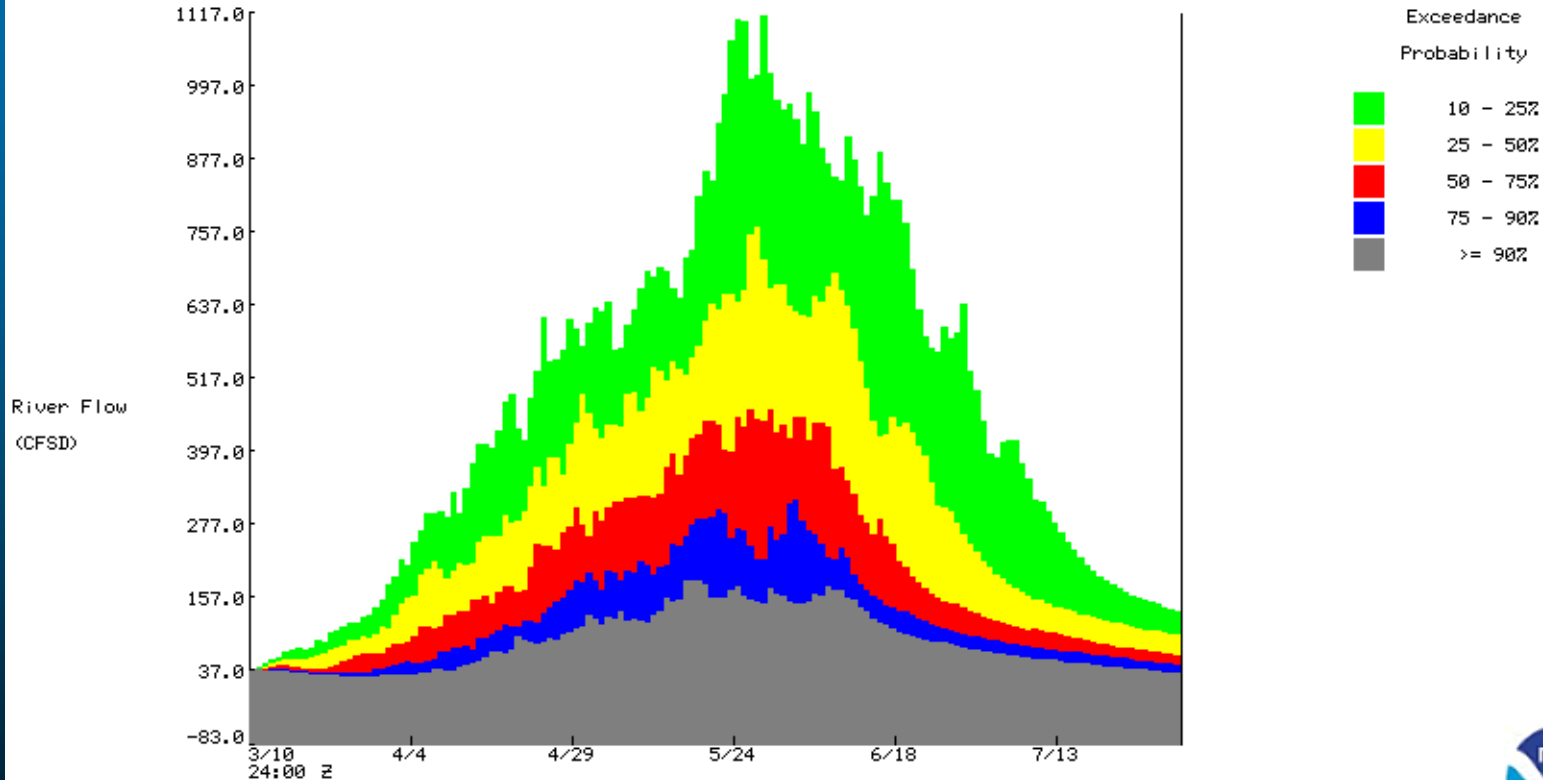


WEST WALKER RIVER - HWY 395 BELOW LITTLE WALKER (WMBC1) - 1 Day Chances of Exceeding River Levels

Latitude: -999.0 Longitude: -999.0

Forecast for the period 3/10/2020 24h - 7/31/2020 24h

This is a conditional simulation based on the current conditions as of 3/9/2020

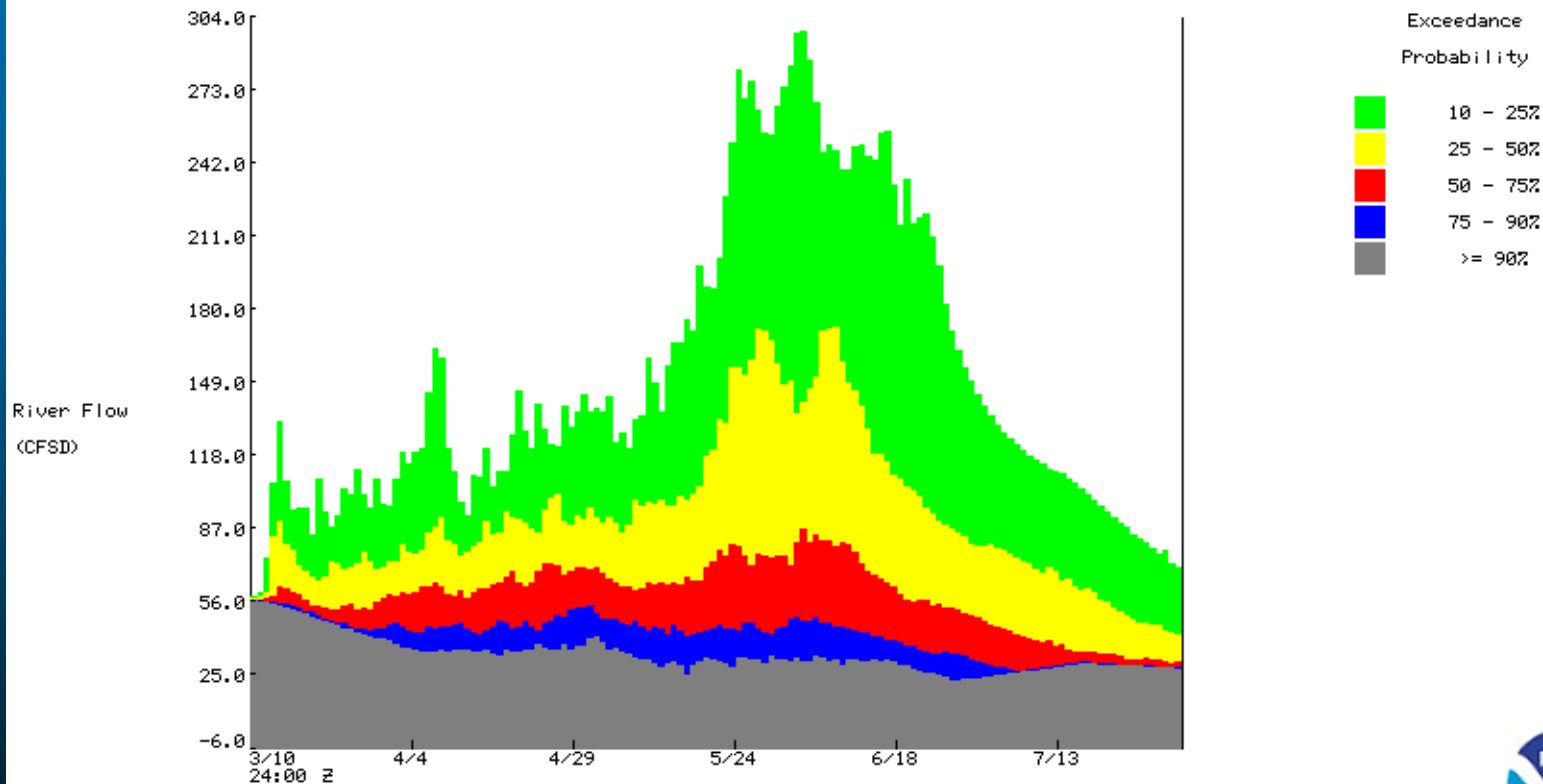


EAST WALKER RIVER - BRIDGEPORT RESERVOIR (BPRC1) - 1 Day Chances of Exceeding River Levels

Latitude: -999.0 Longitude: -999.0

Forecast for the period 3/10/2020 24h - 7/31/2020 24h

This is a conditional simulation based on the current conditions as of 3/9/2020



# Recent Years Snowpack Comparison

