



Fall look back WY 2020



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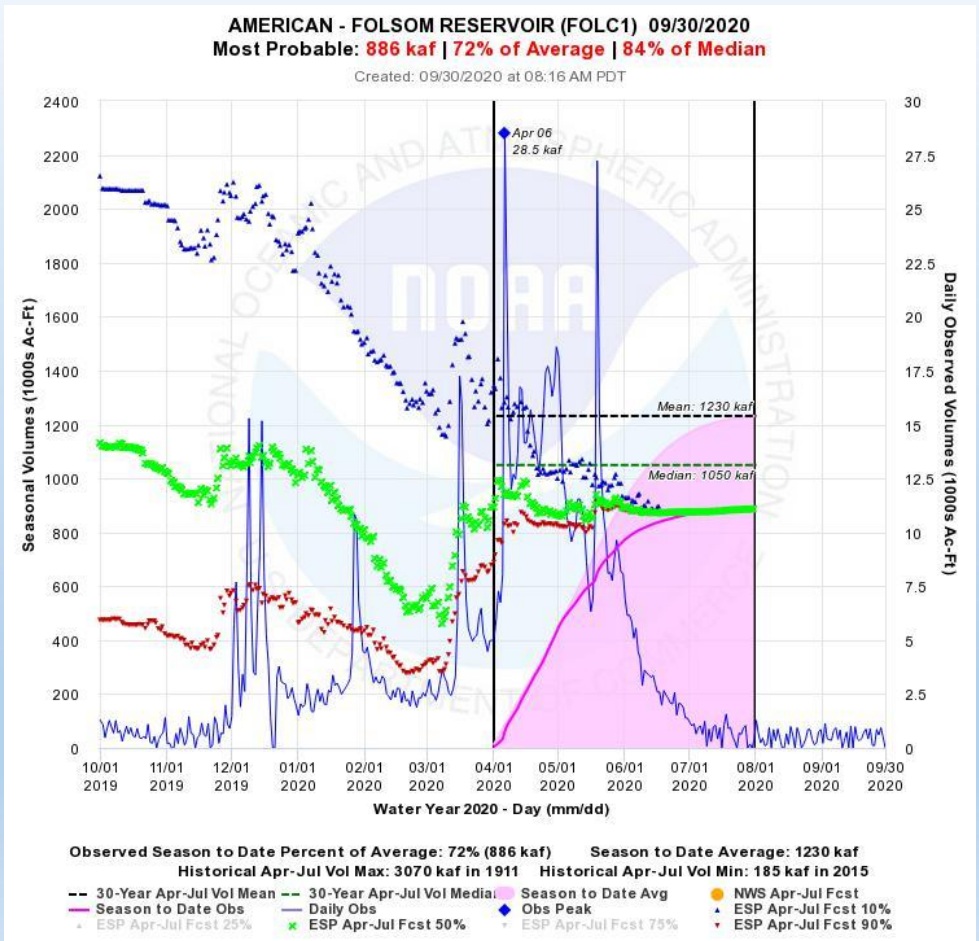
California-Nevada River Forecast Center

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Trend plot example

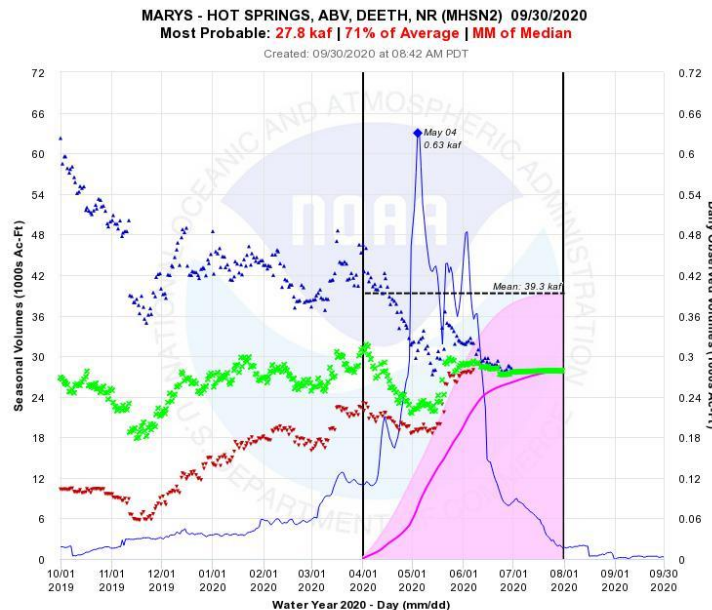
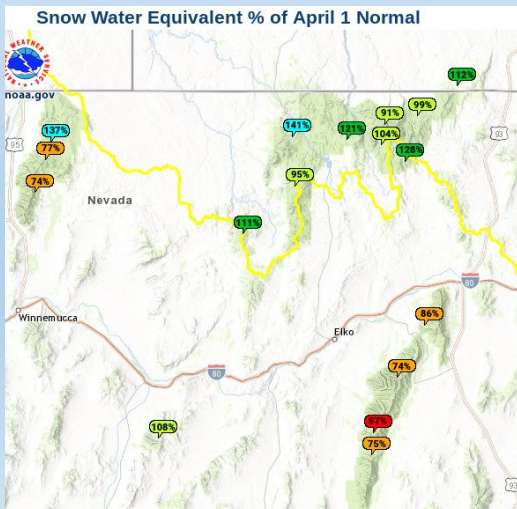




Upper Humboldt trib AJ forecasts

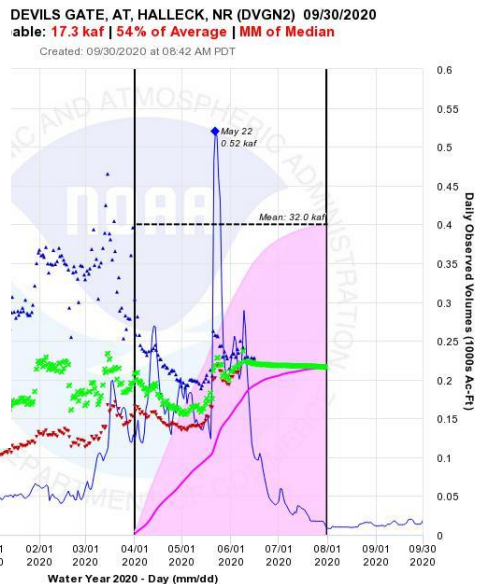


- Above average snowpack in the NF of the Humboldt and Marys
- Below average snowpack in the Ruby Mnts
- Dry spring led to declining AJ runoff
- AJ rebounded during late May/early June storms



Observed Season to Date Percent of Average: 71% (27.8 kaf) Season to Date Average: 39.3 kaf
 Historical Apr-Jul Vol Max: 118 kaf in 1984 Historical Apr-Jul Vol Min: 8.16 kaf in 1992

--- 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 ● Obs Peak ● 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%

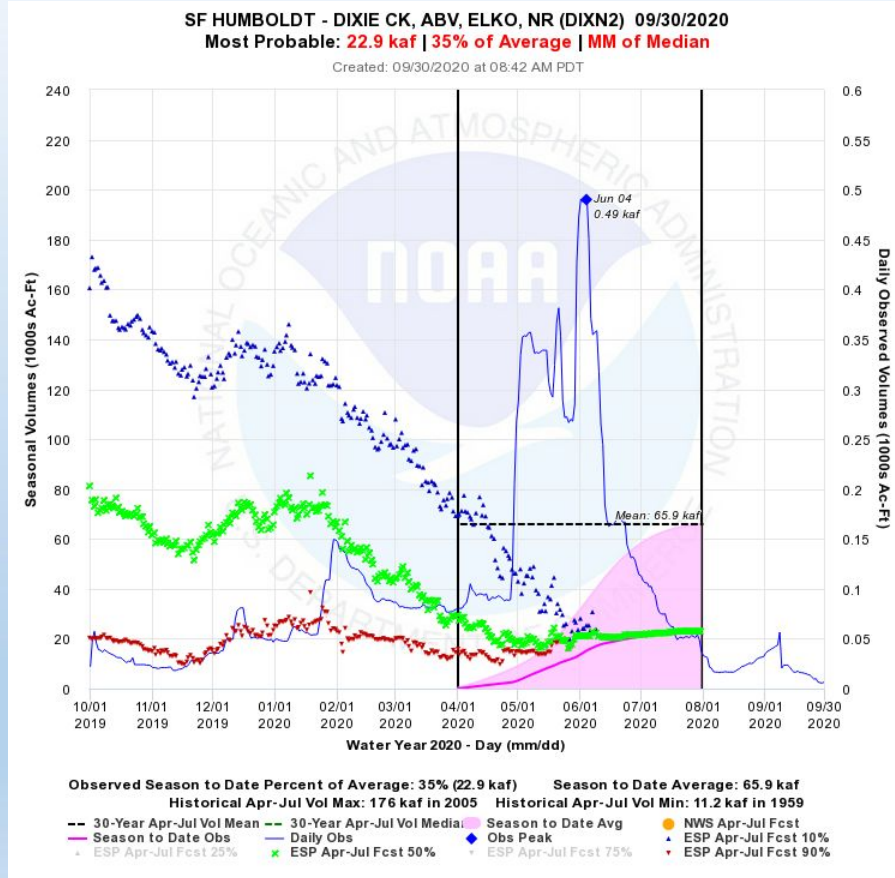
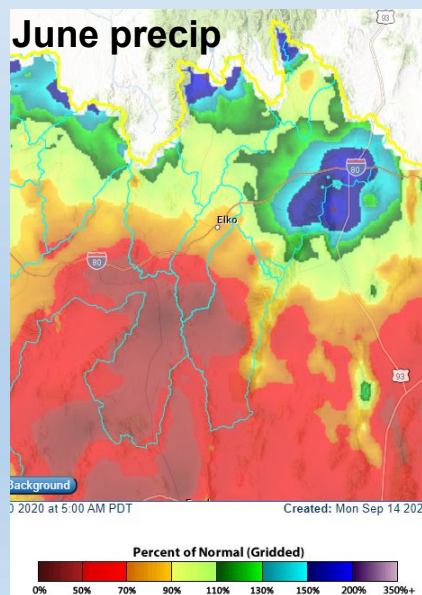
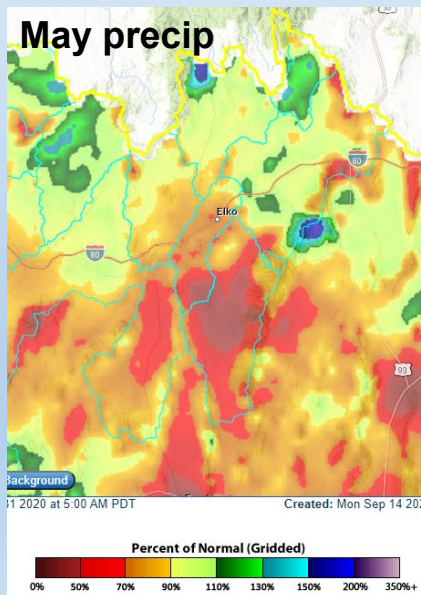


Observed Season to Date Percent of Average: 54% (17.3 kaf) Season to Date Average: 32.0 kaf
 Historical Apr-Jul Vol Max: 133 kaf in 1952 Historical Apr-Jul Vol Min: 2.51 kaf in 2014

--- 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 ● Obs Peak ● 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%

SF Humboldt AJ forecasts

- No volume loss on the SF as was observed at Elko
- AJ forecast mostly steady from April through July
- No big benefits from late season rain

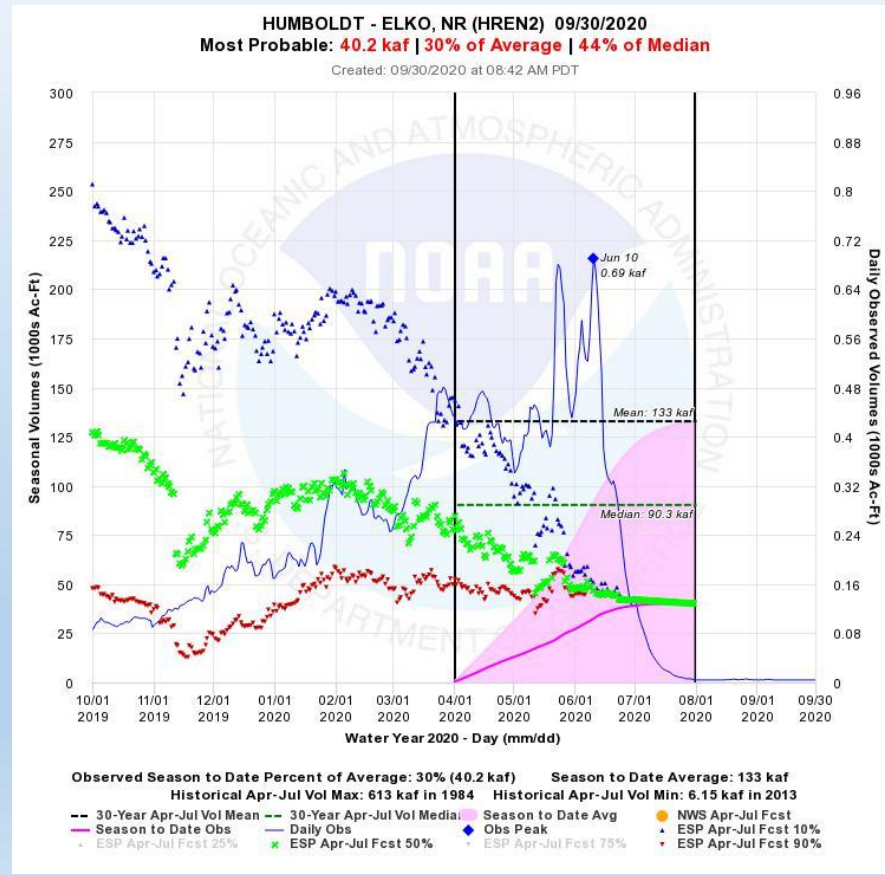
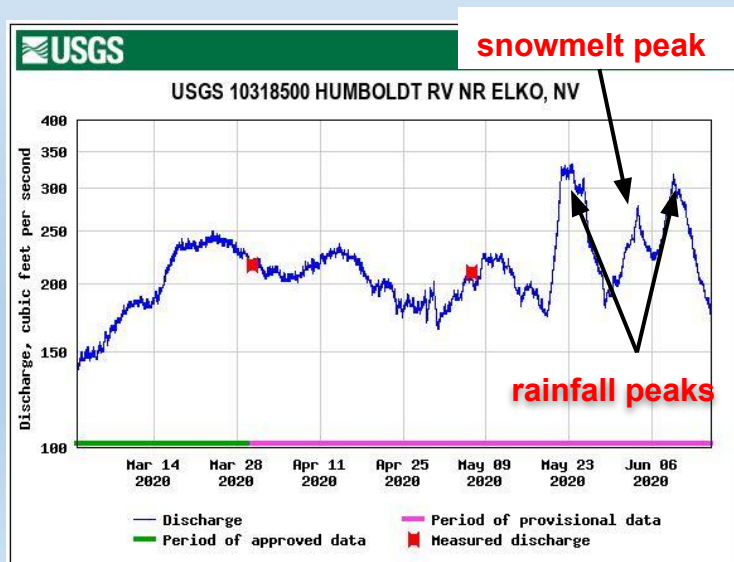




Where did the water go at Elko?



- AJ volume 50% of April 1st forecast
- MHSN2 + DVG2 = 45kaf
 - HREN2 = 40kaf
- Volume loss downstream highlights dry Ruby Mnts & losses from tributaries

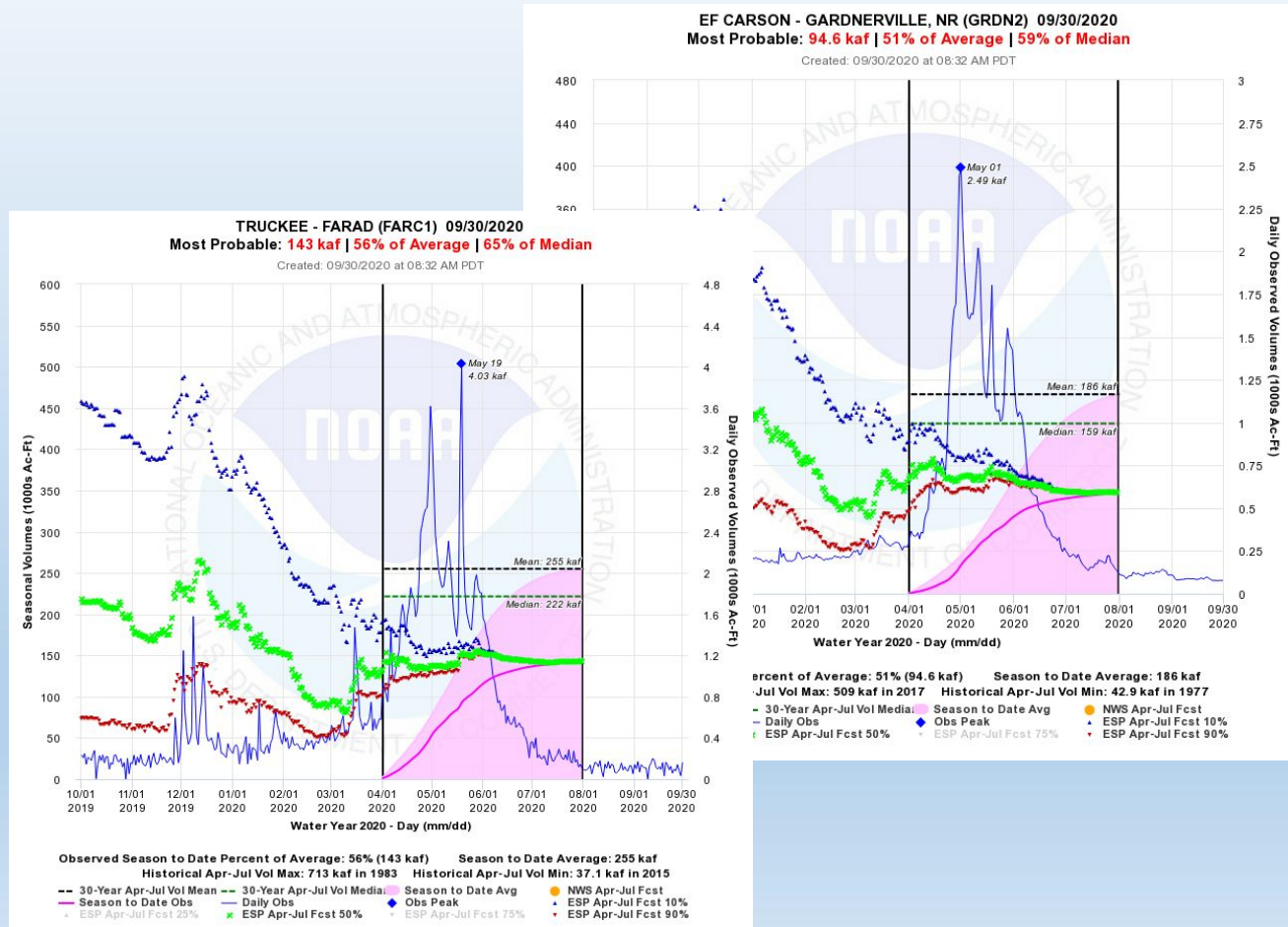




Truckee/Carson AJ forecasts



- Below average spring precip in the Truckee & near average in the Carson
- Both basins show a small, steady decline during the latter half of the AJ period





Walker AJ forecasts

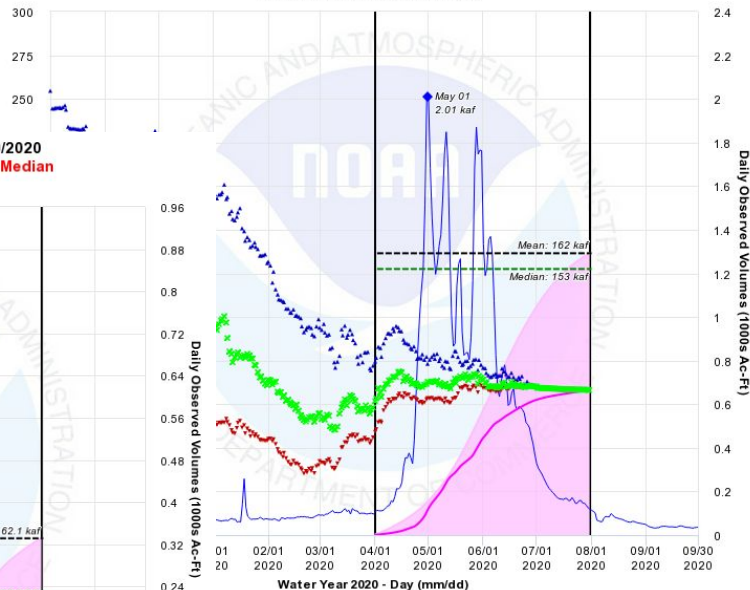


- Overall forecasts were good
- East Walker was a little high with mid-April forecast

WEST WALKER - LTL WALKER, BLO, COLEVILLE, NR (WWBC1) 09/30/2020

Most Probable: 83.1 kaf | 51% of Average | 54% of Median

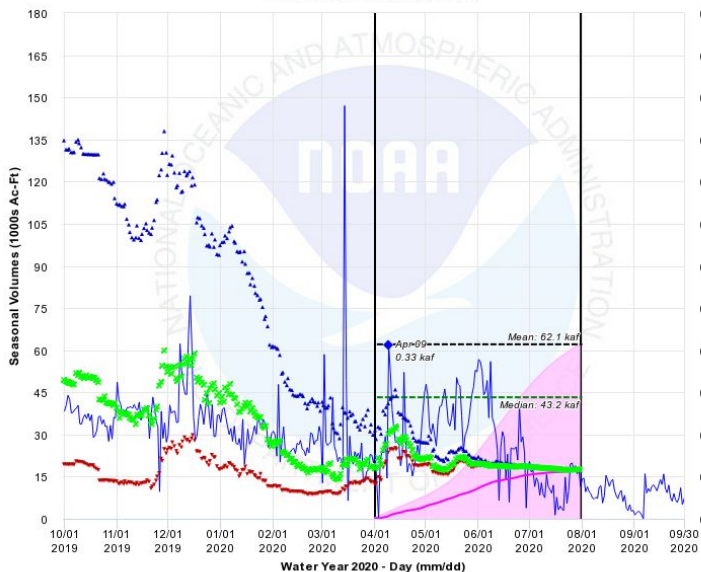
Created: 09/30/2020 at 08:32 AM PDT



EAST WALKER - BRIDGEPORT, NR (BPRC1) 09/30/2020

Most Probable: 17.5 kaf | 28% of Average | 41% of Median

Created: 09/30/2020 at 08:32 AM PDT



Observed Season to Date Percent of Average: 28% (17.5 kaf) Season to Date Average: 62.1 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 - Obs Peak ● 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%

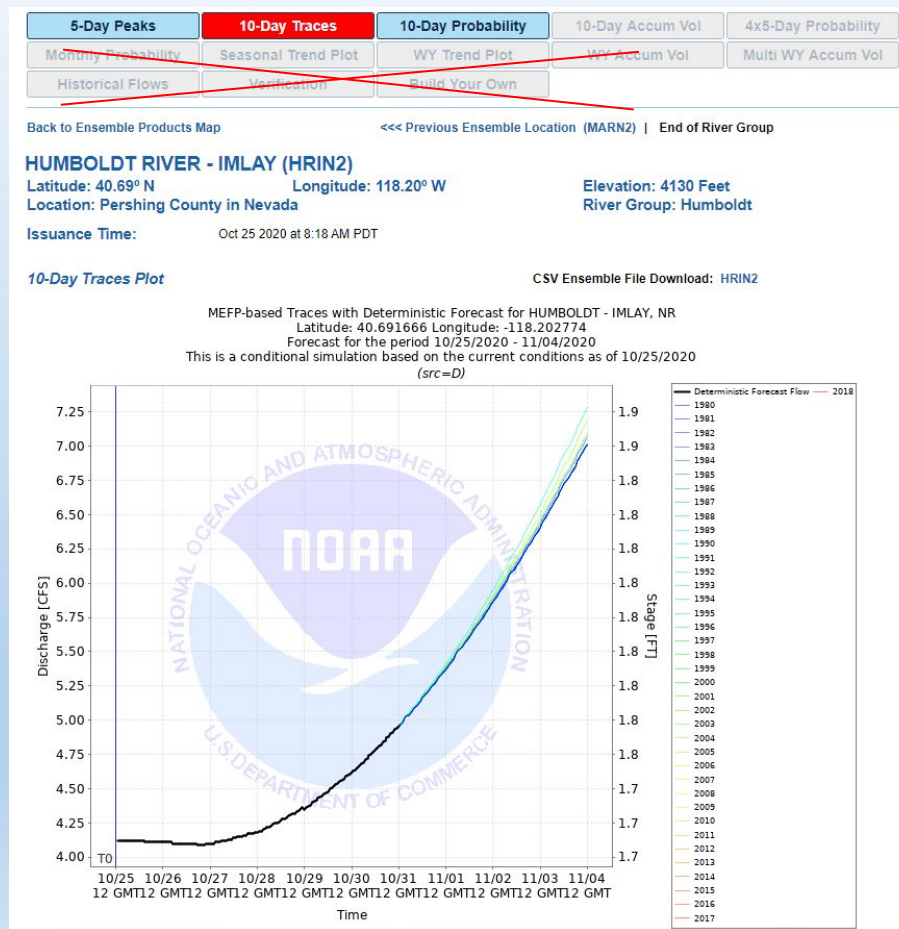
Percent of Average: 51% (83.1 kaf) Season to Date Average: 161 kaf
Jul Vol Max: 410 kaf in 2017 Historical Apr-Jul Vol Min: 35.1 kaf in 1977
● 30-Year Apr-Jul Vol Media ● Season to Date Avg ● NWS Apr-Jul Fcst
- Daily Obs - Obs Peak ● ESP Apr-Jul Fcst 10%
- ESP Apr-Jul Fcst 50% - ESP Apr-Jul Fcst 75% - ESP Apr-Jul Fcst 90%



New for WY 2021



- No longer producing trend plots at Imlay
- Too many diversions, too little information
- Provide forecast at Comus and let operators determine what volume will make it to Imlay.





New for WY 2021



- New calibration forcings
 - Moving from sparse, but high quality station-based data (temperature, precipitation) to a gridded dataset.
 - Underlying calibration data will be more like the operational dataset.
- New set of HEFS traces with 39 members (WY 1980-2018)

Variable	Legacy Data Sources	New Data Sources
Precipitation (MAP)	NWS COOP stations; SNOTEL;	CNRF Operational MAPs ('04-'19) + Legacy MAPs (WY1980-2004)
Temperature (MAT)	NWS COOP stations	AORC MAT data (WY1980-2019)
Freezing Level (ZELV)	Derived from MAT timeseries	ERA5 (European reanalysis) (WY1980-2019)