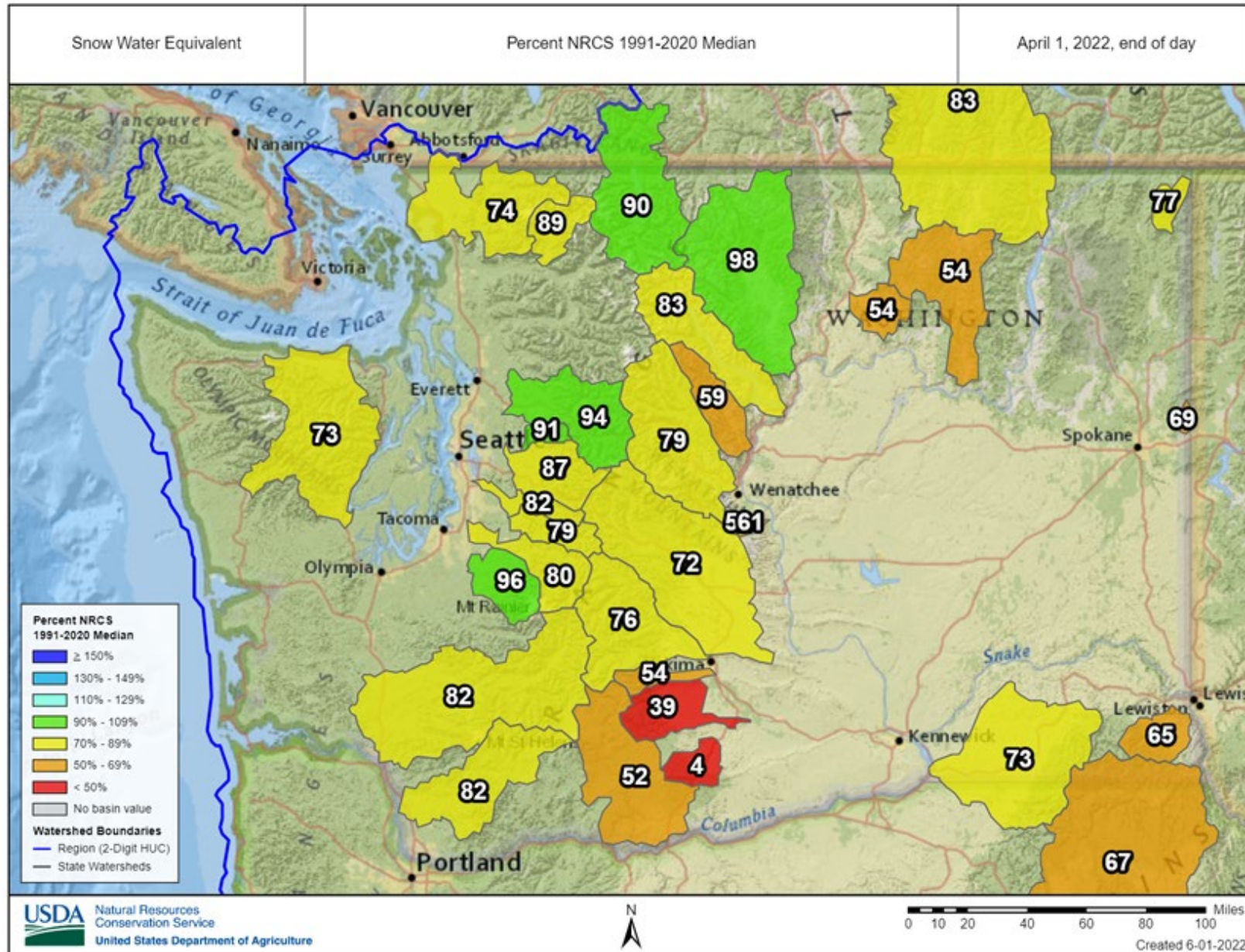


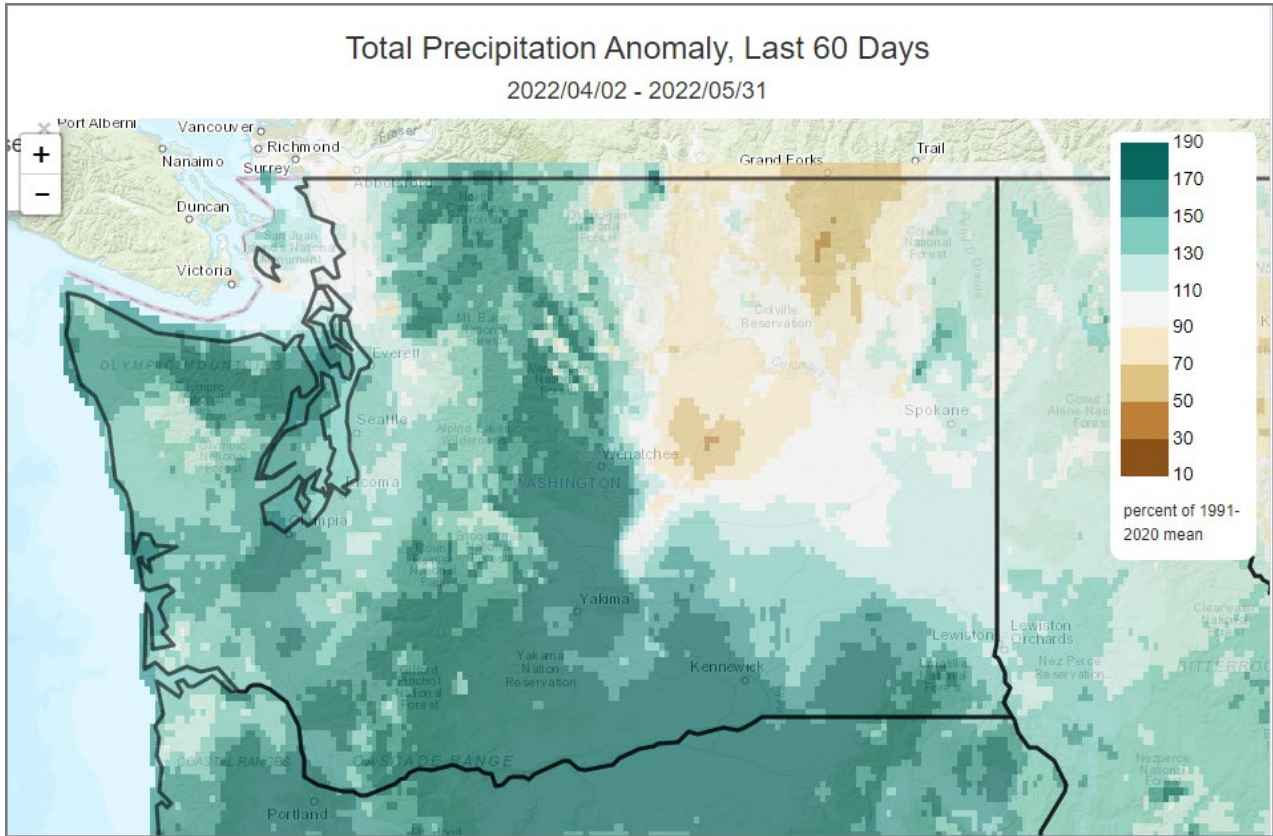
DEPARTMENT OF  
**ECOLOGY**  
State of Washington

# Water Supply/Drought Declaration Update

Columbia River Policy Advisory Group  
June 02, 2022

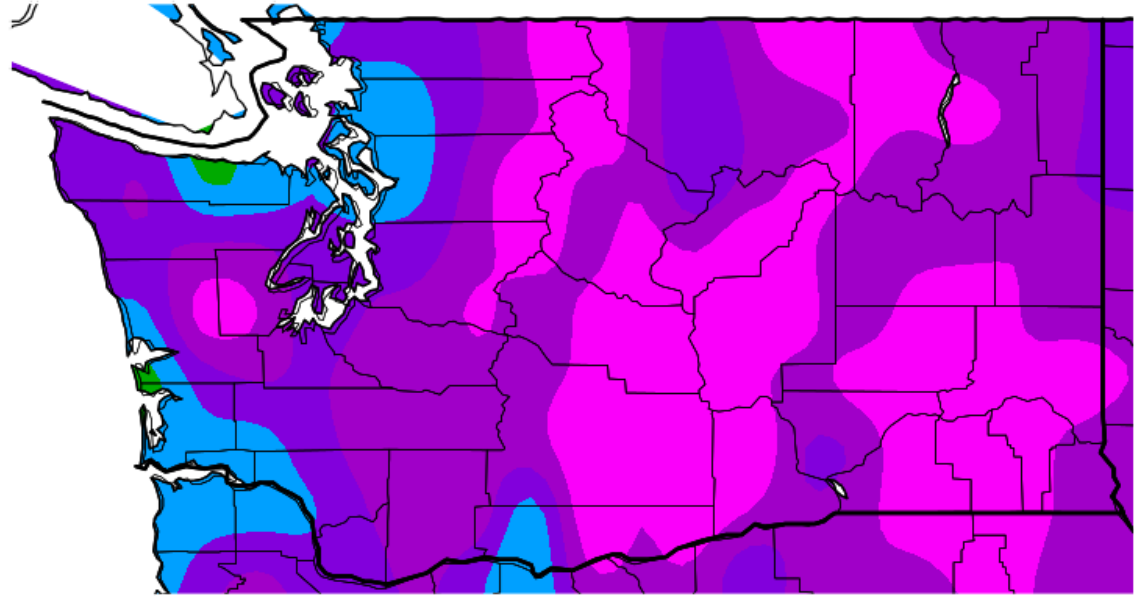
Jeff Marti, Water Resources Planner

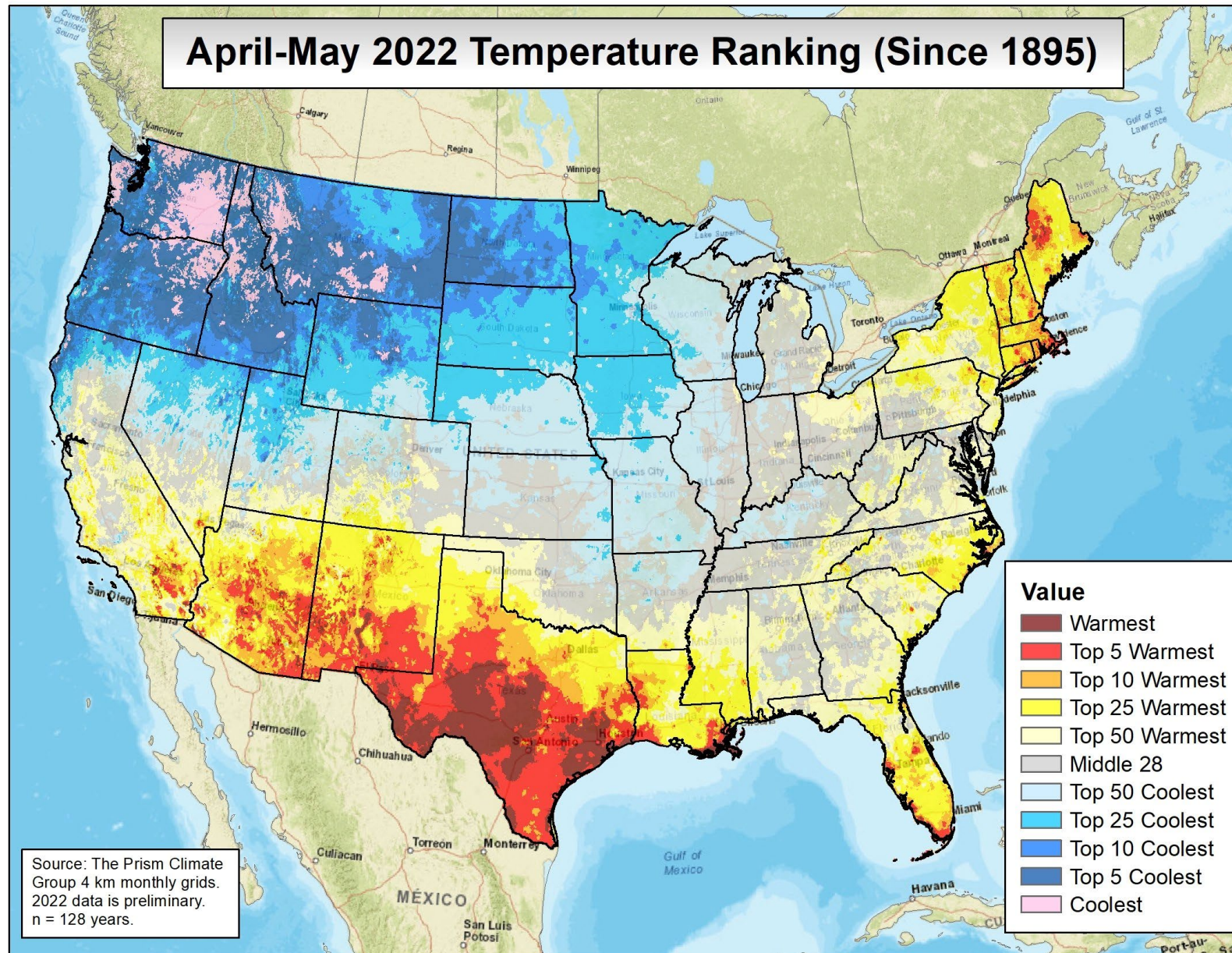




April 2022: 3<sup>rd</sup> coldest, 10<sup>th</sup> wettest since 1895

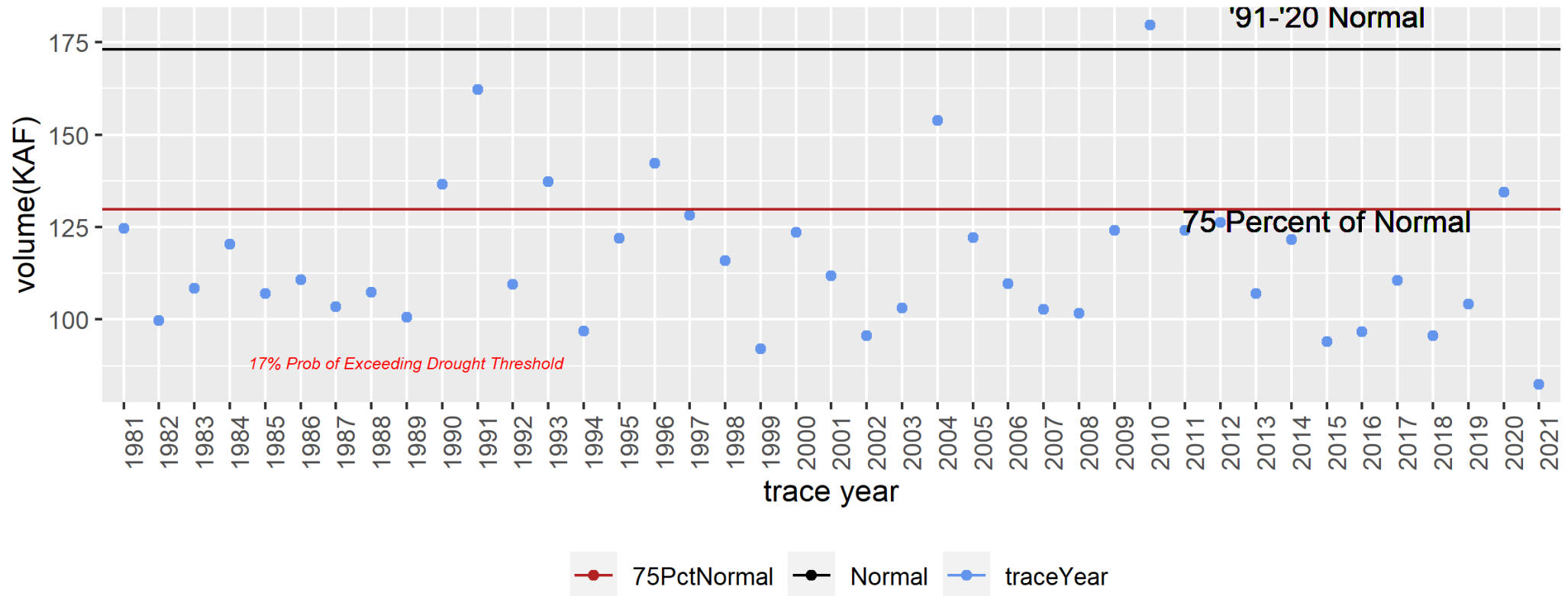
Ave. Temperature dep from Ave (deg F)  
4/2/2022 - 5/31/2022



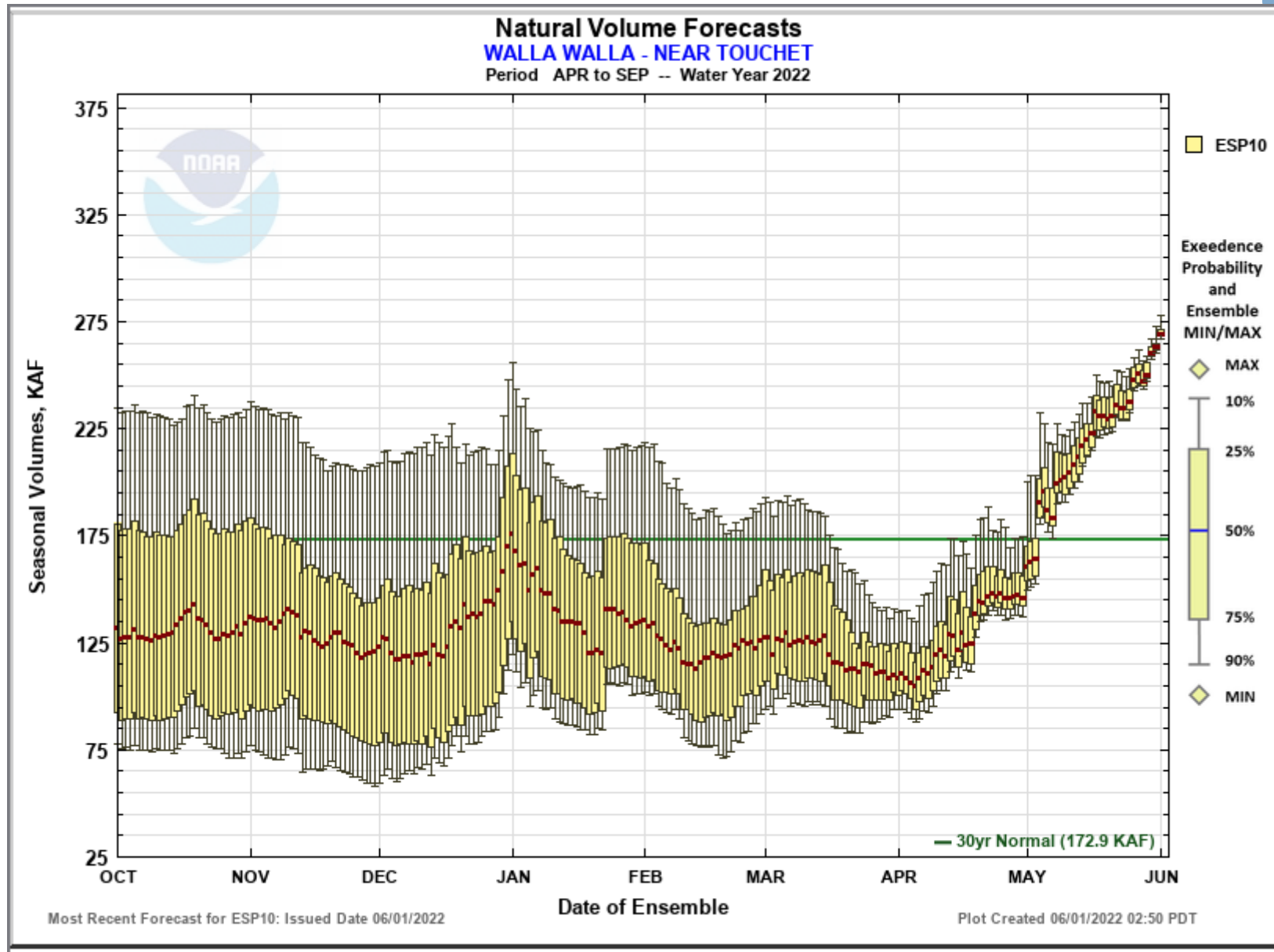


Source: Brian Brettschneider

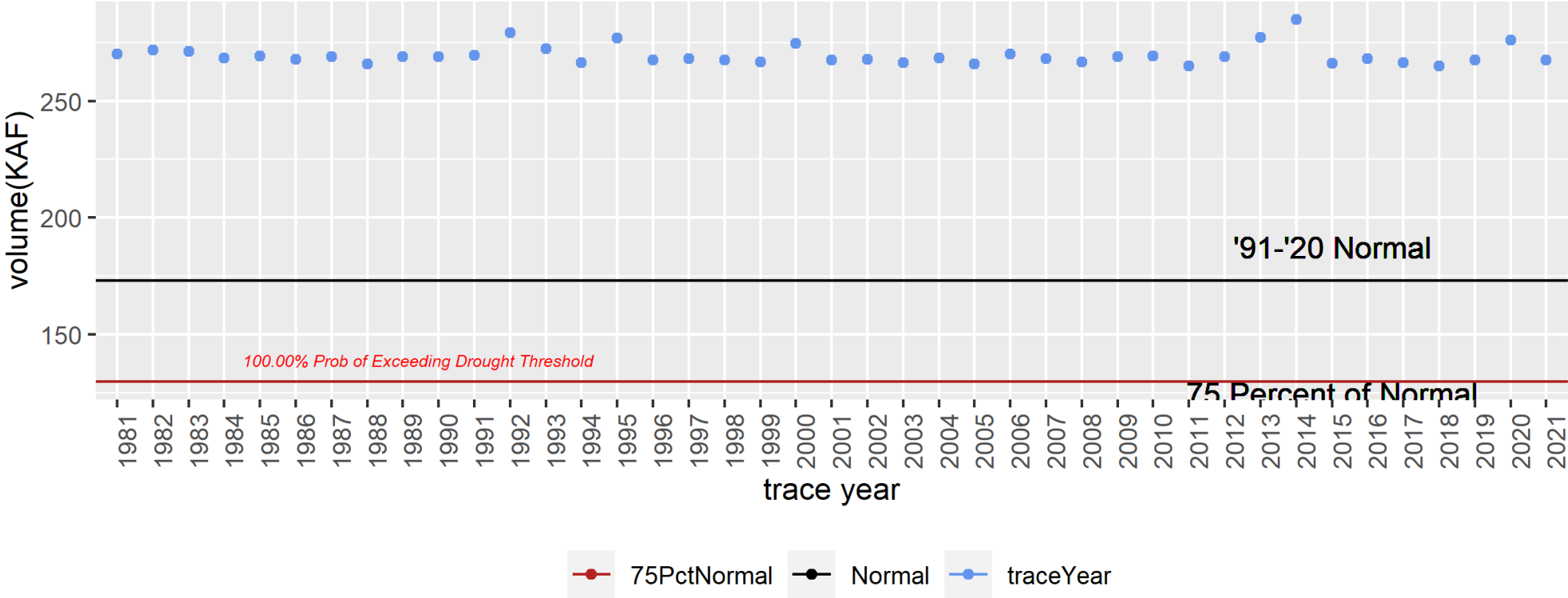
## WALLA WALLA NEAR TOUCHET ENSEMBLE TRACES vs DROUGHT THRESHOLD, APR-SEPT



based on NWRFC data  
TCHW1 ESPF10 ISSUED:2022-04-01\_17:50\_GMT



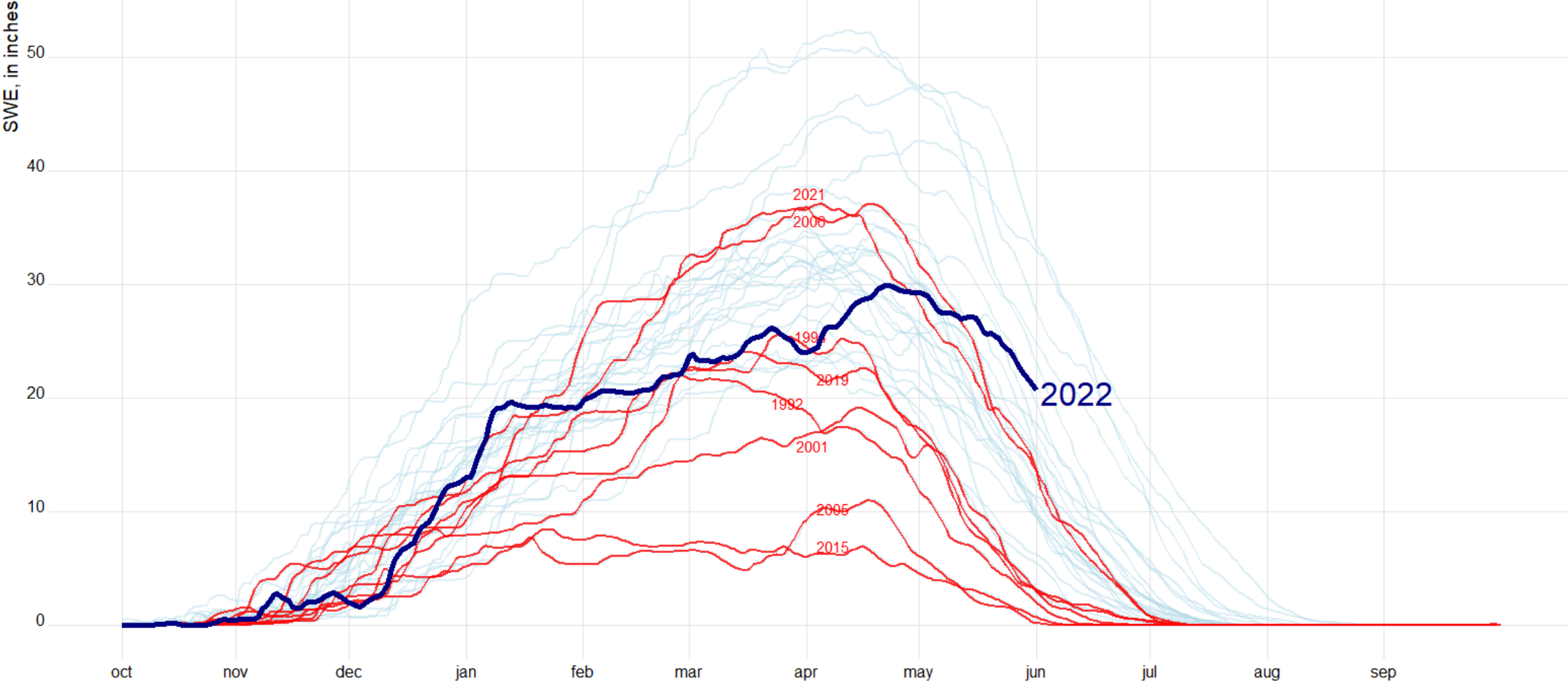
# WALLA WALLA NEAR TOUCHET ENSEMBLE TRACES vs DROUGHT THRESHOLD, APR-SEPT



based on NWRFC data  
TCHW1 ESPF10 ISSUED:2022-06-01\_18:27\_GMT

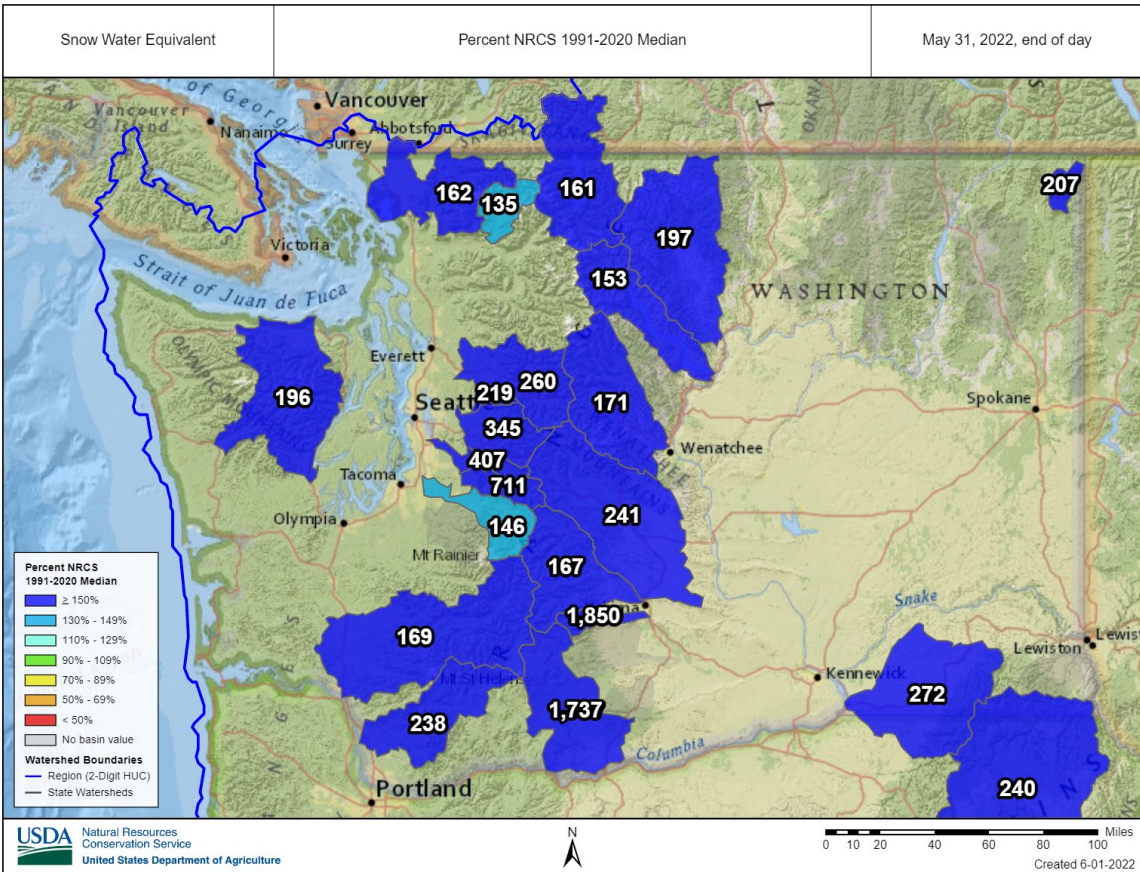
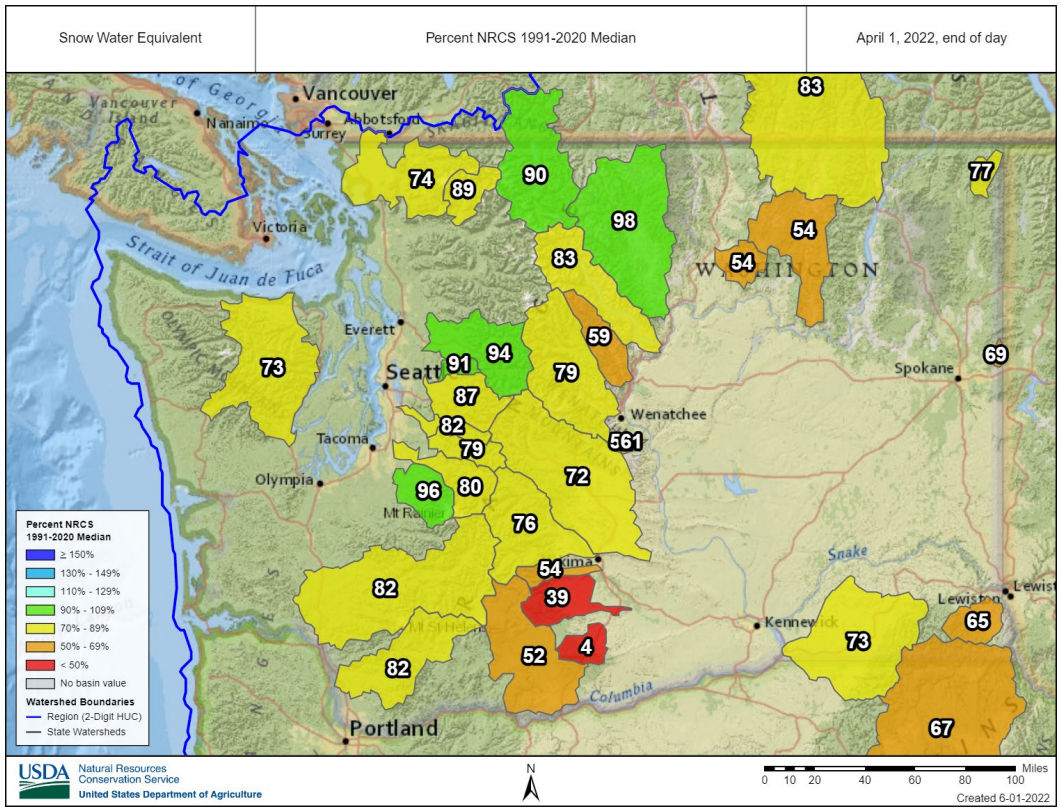
### Average Washington State SWE (SNOTEL)

Water Years: 1990 - 2022 Created on: 2022-06-01



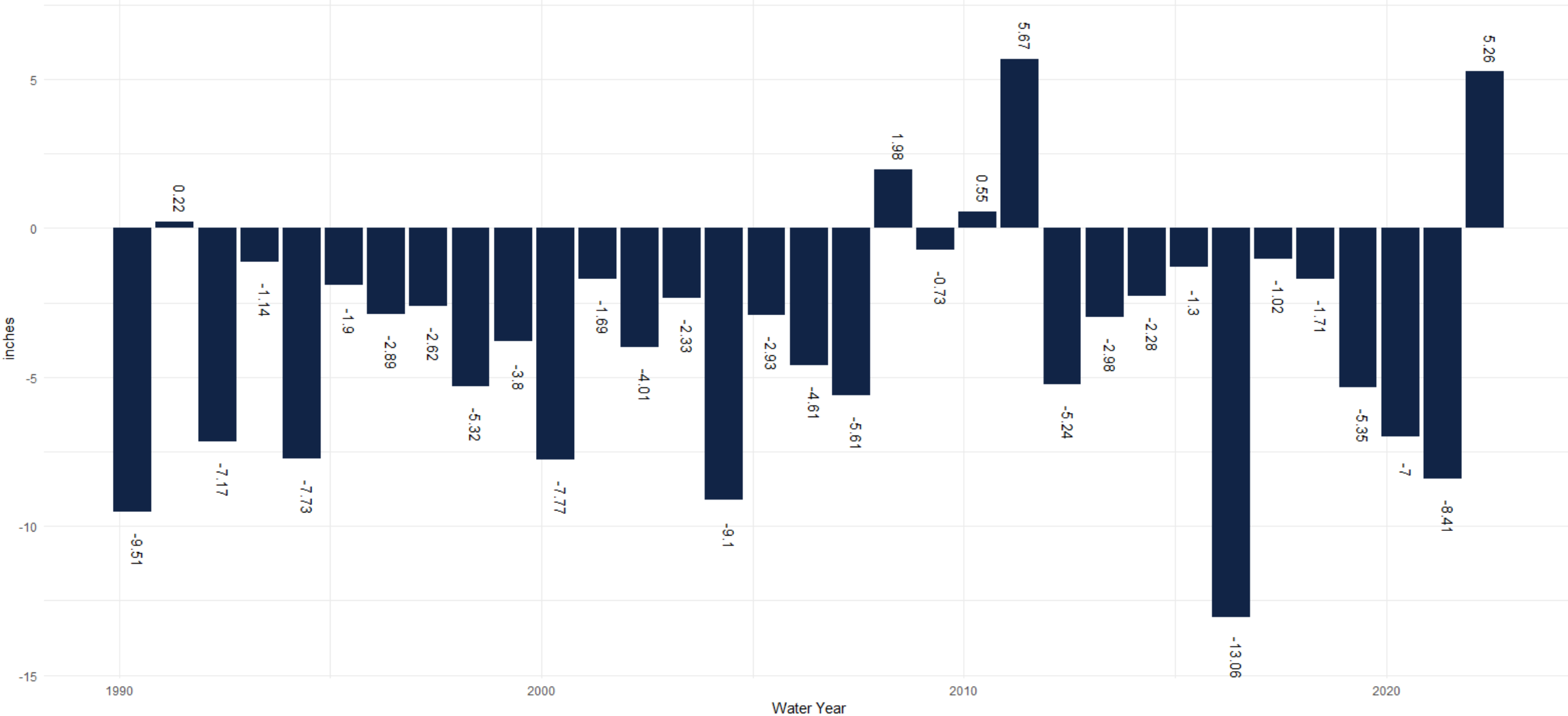
month  
Data: NRCS





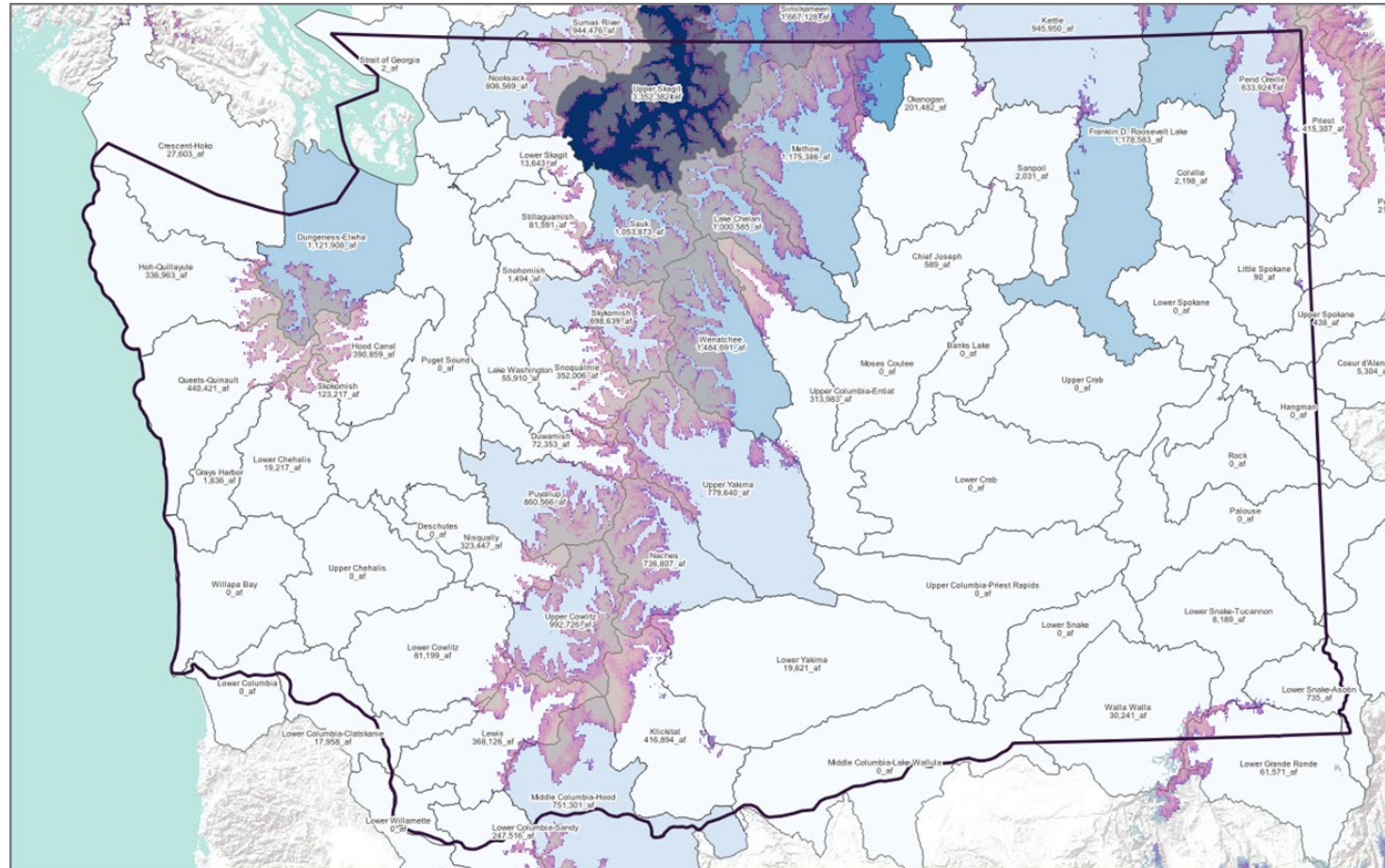
Changes in Monthly Statewide Average SWE for April

Water Years 1990 -



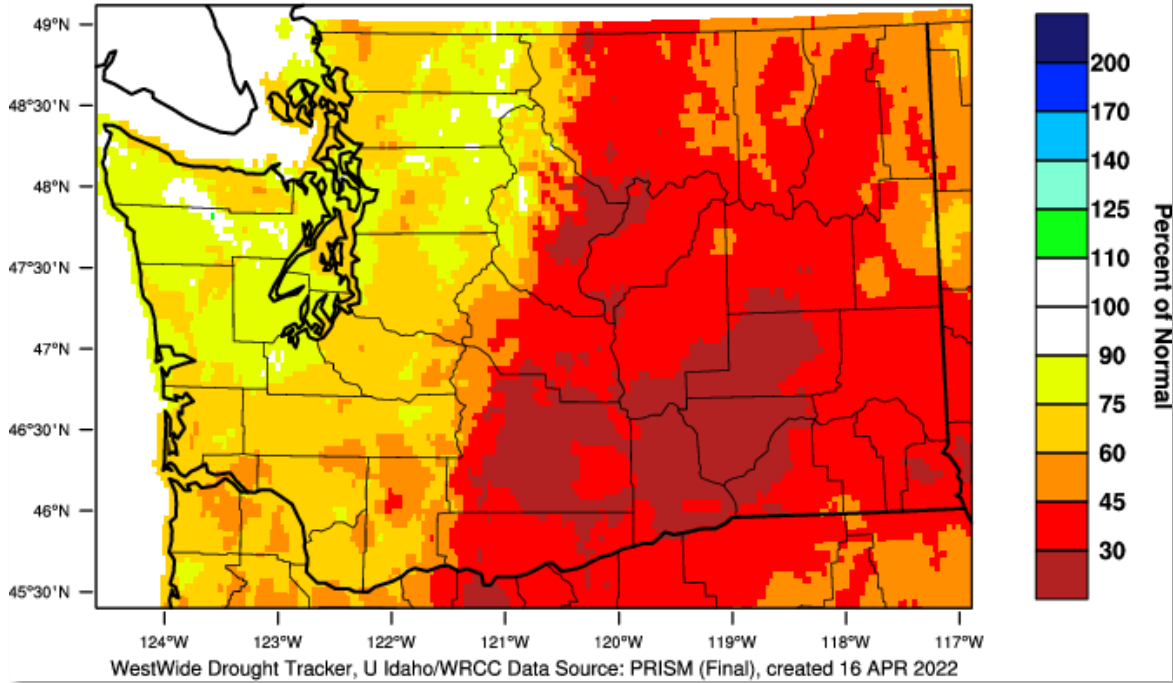
Data: NRCS SNOTEL

# Snow storage (acre-feet) by watershed (HUC8) May 31, 2022



### Washington - Precipitation

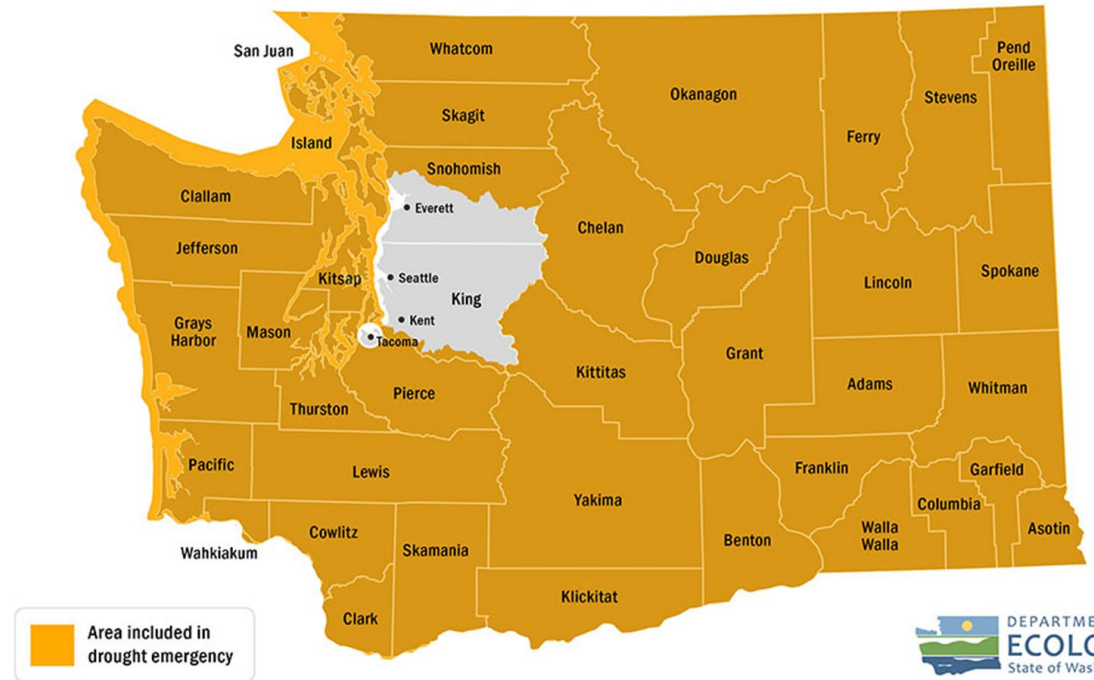
March-September 2021 Percent of 1981-2010 Normal



Mar – September 2021

4<sup>th</sup> driest since 1895; driest since 1939

### Washington Drought Declaration Areas



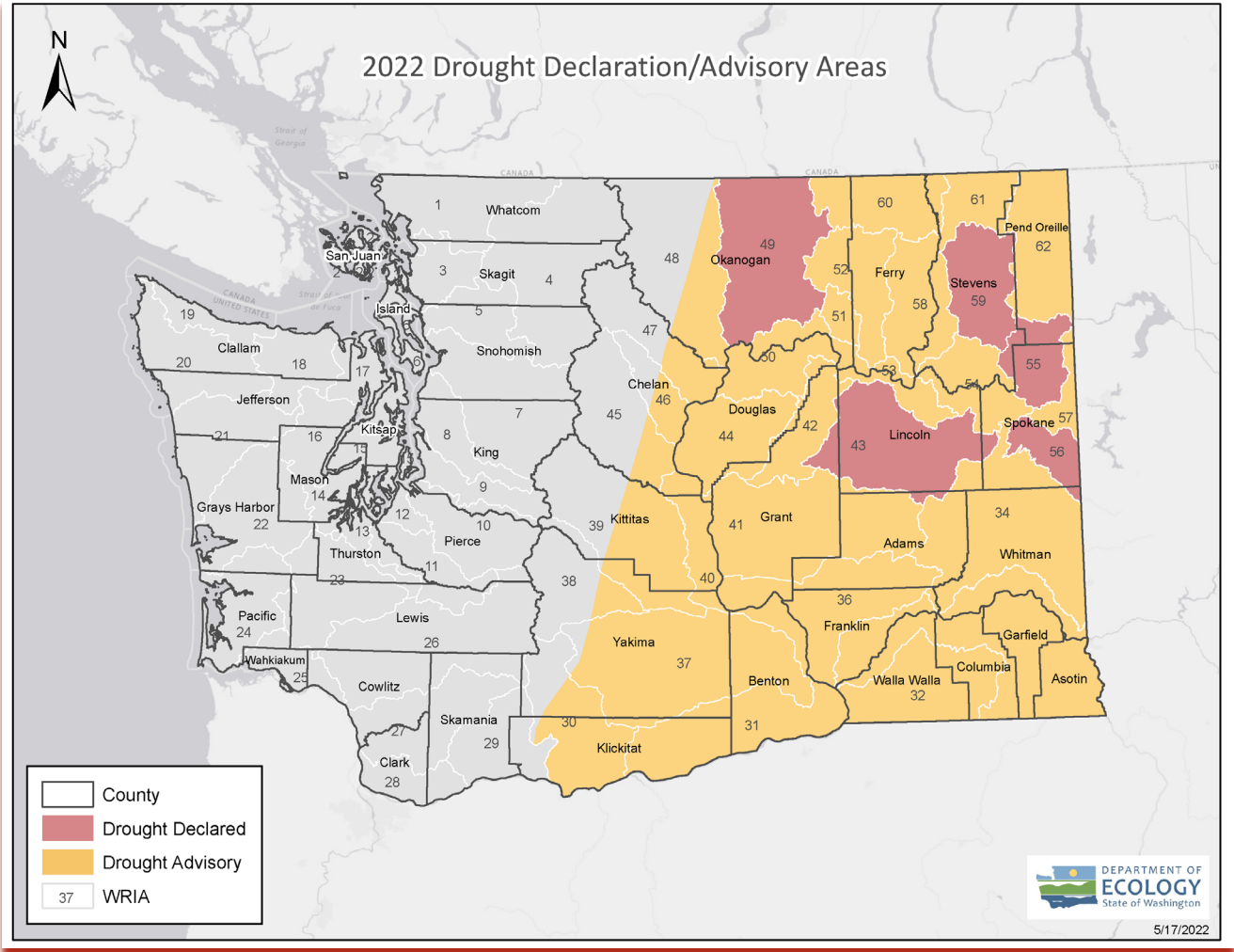
Declaration Date: July 14, 2021

Expiration Date: June 1, 2022

# Amendment and Extension of 2021 Declaration

- May 5, 2022: Executive Water Emergency Committee recommendation
- Lift declaration for western Washington
  - Downgrade most of eastern Washington to Drought Advisory status where there are longer term precipitation deficits.
  - Sustain and extend declaration for five watersheds in eastern Washington where forecasted runoff falls below the statutory drought threshold.
- State area in declaration reduced from 96 percent to 9 percent of state
- New declaration takes effect June 1 and will terminate June 1, 2023, unless terminated earlier.

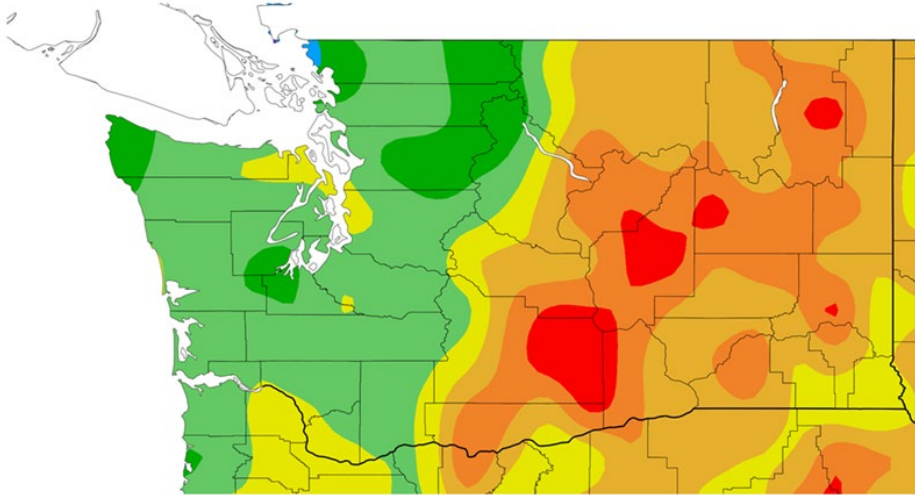
# Amended Drought Areas (June 1, 2022)



# Precipitation anomalies

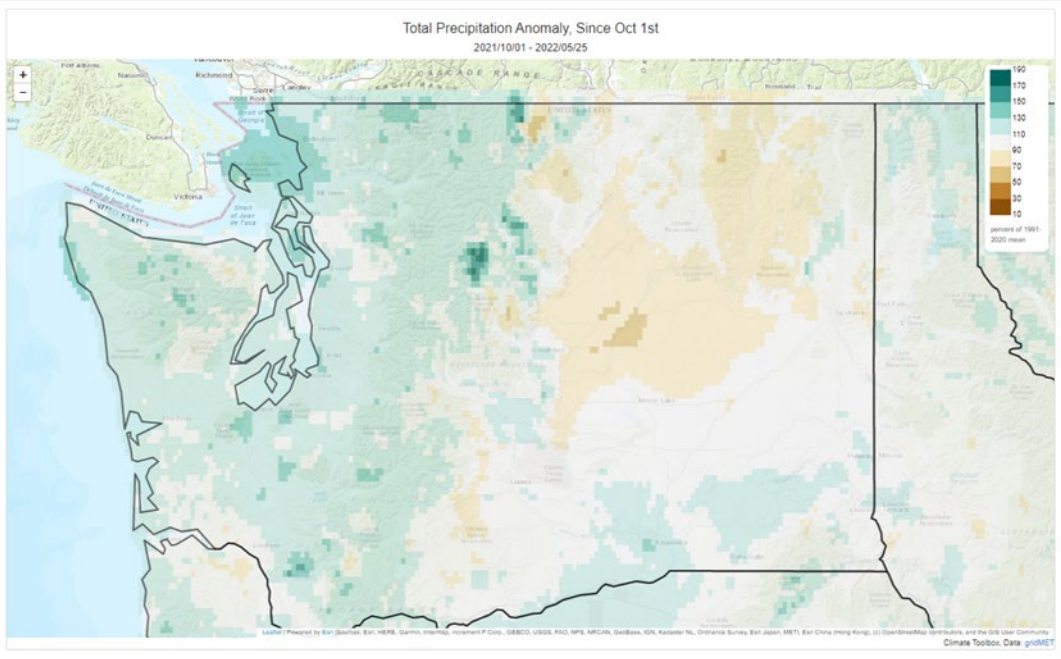
Over past two years

Percent of Normal Precipitation (%)  
5/27/2020 – 5/26/2022

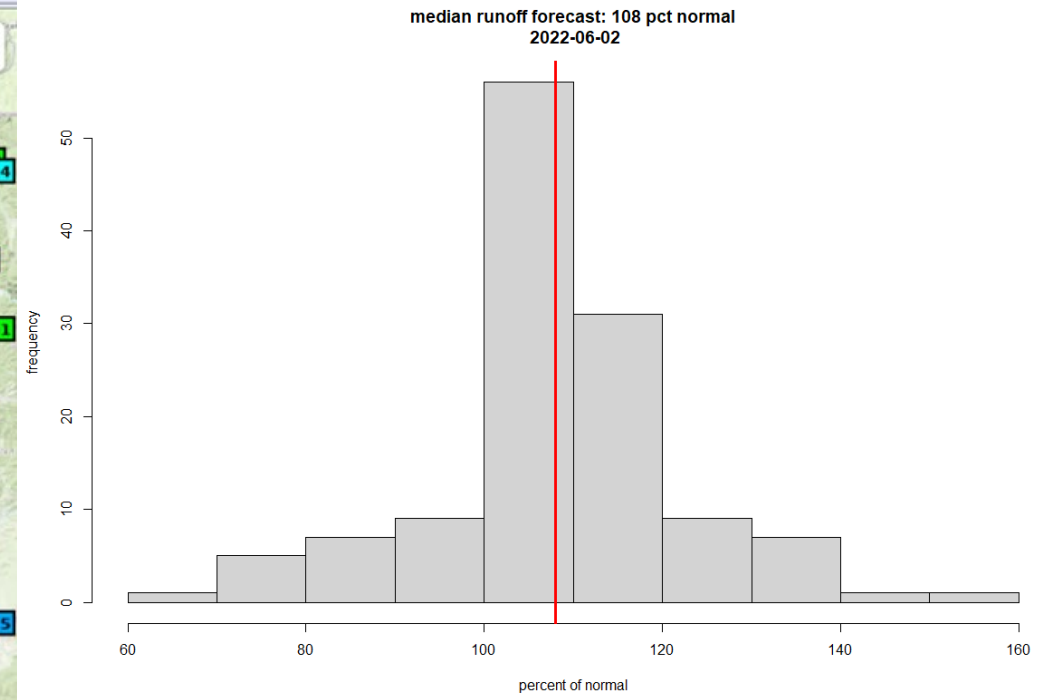
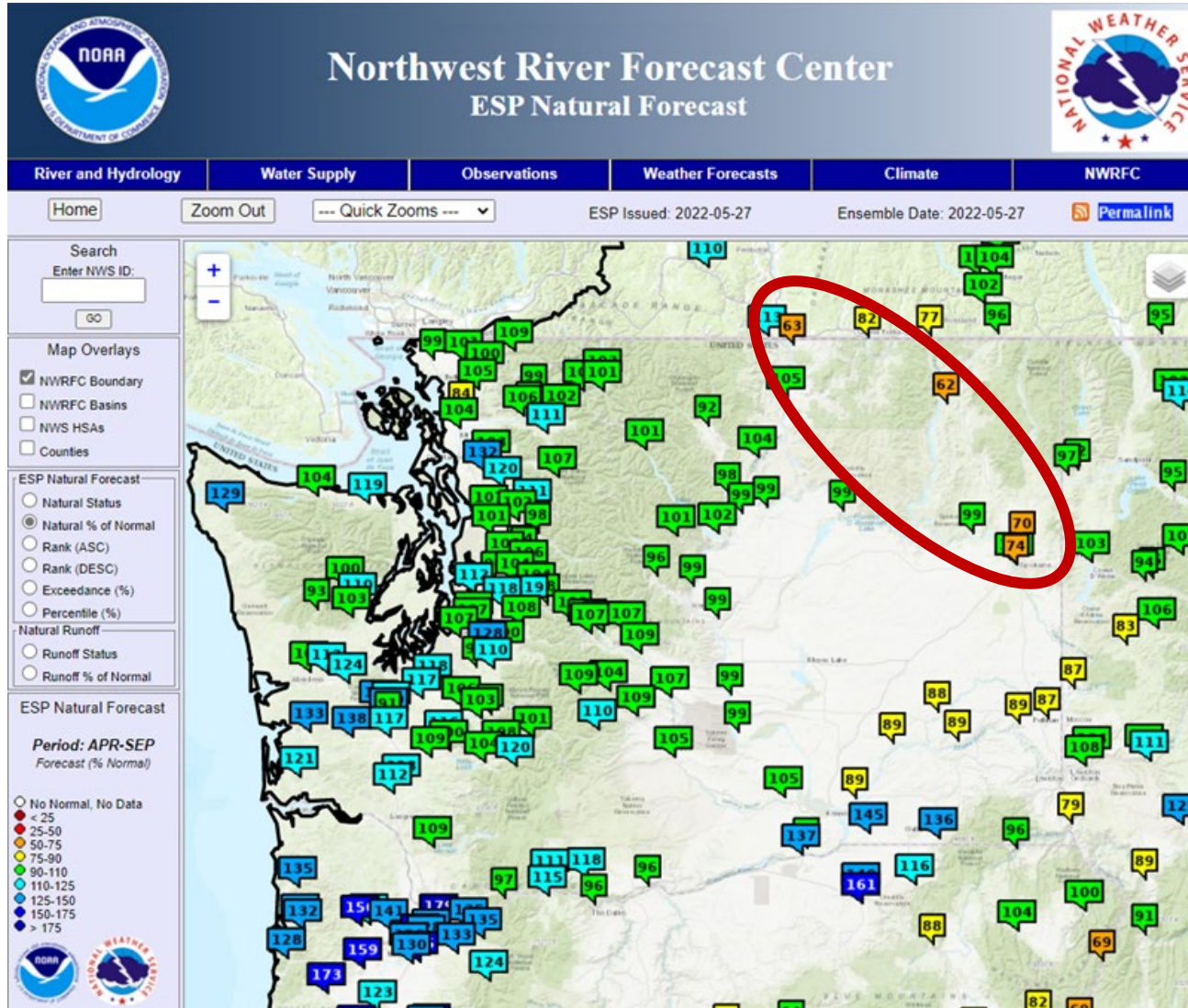


Generated 5/27/2022 at HPRCC using provisional data. NOAA Regional Climate Centers

Since beginning of water year



# Forecasted streamflow



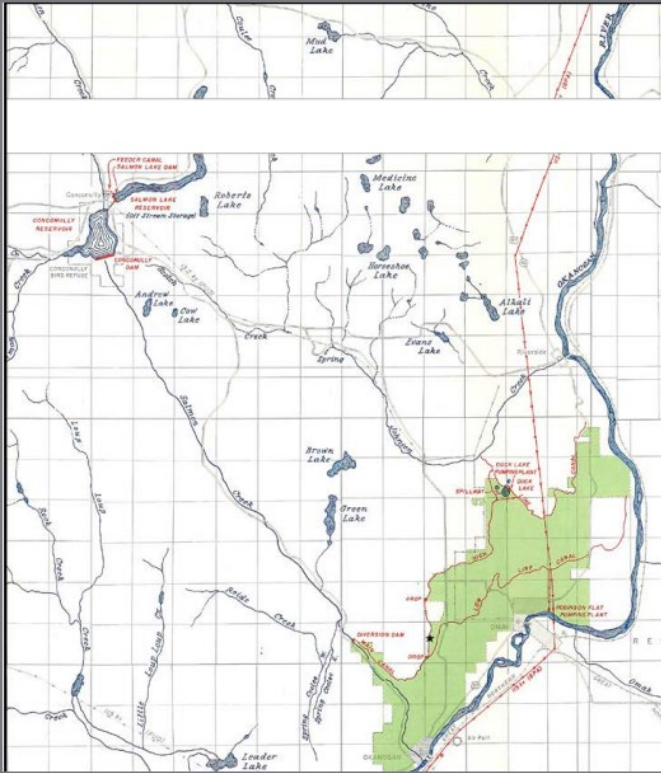
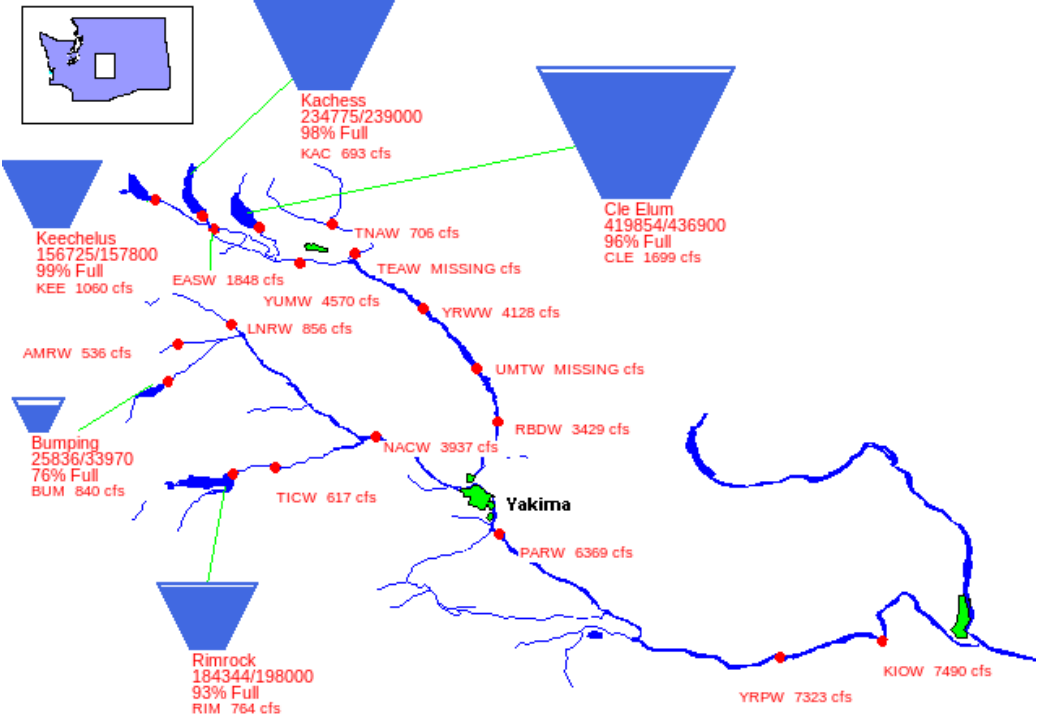


# Contrast in Storage Conditions

Yakima Project: 100 percent water supply projected

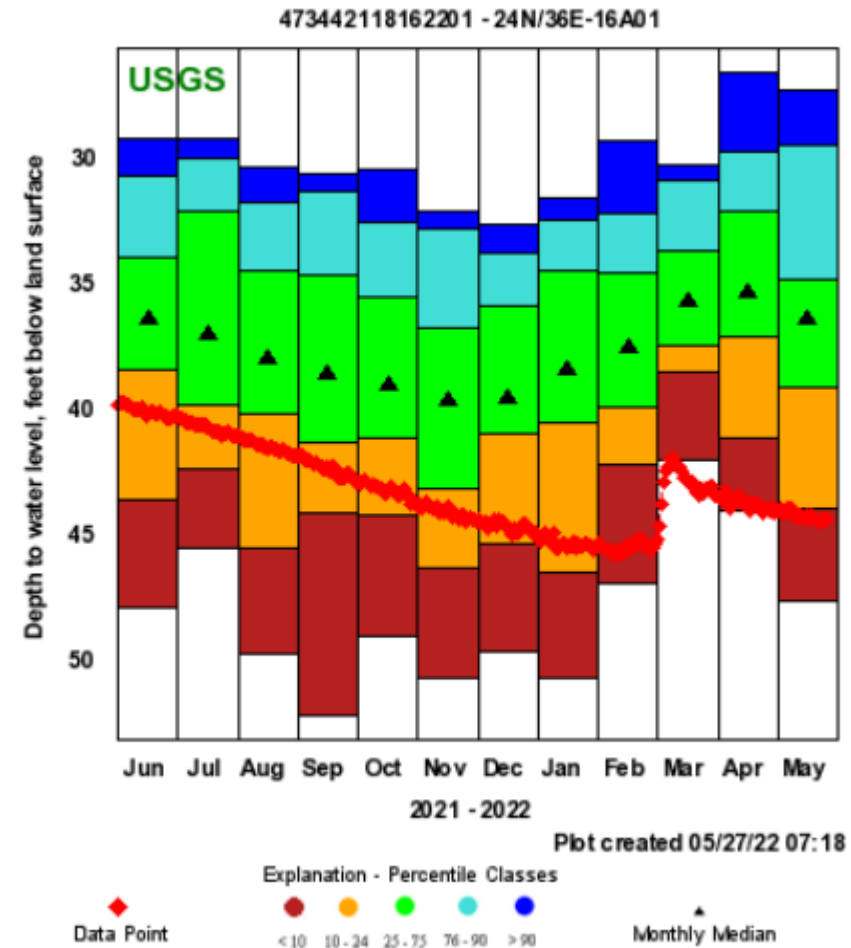
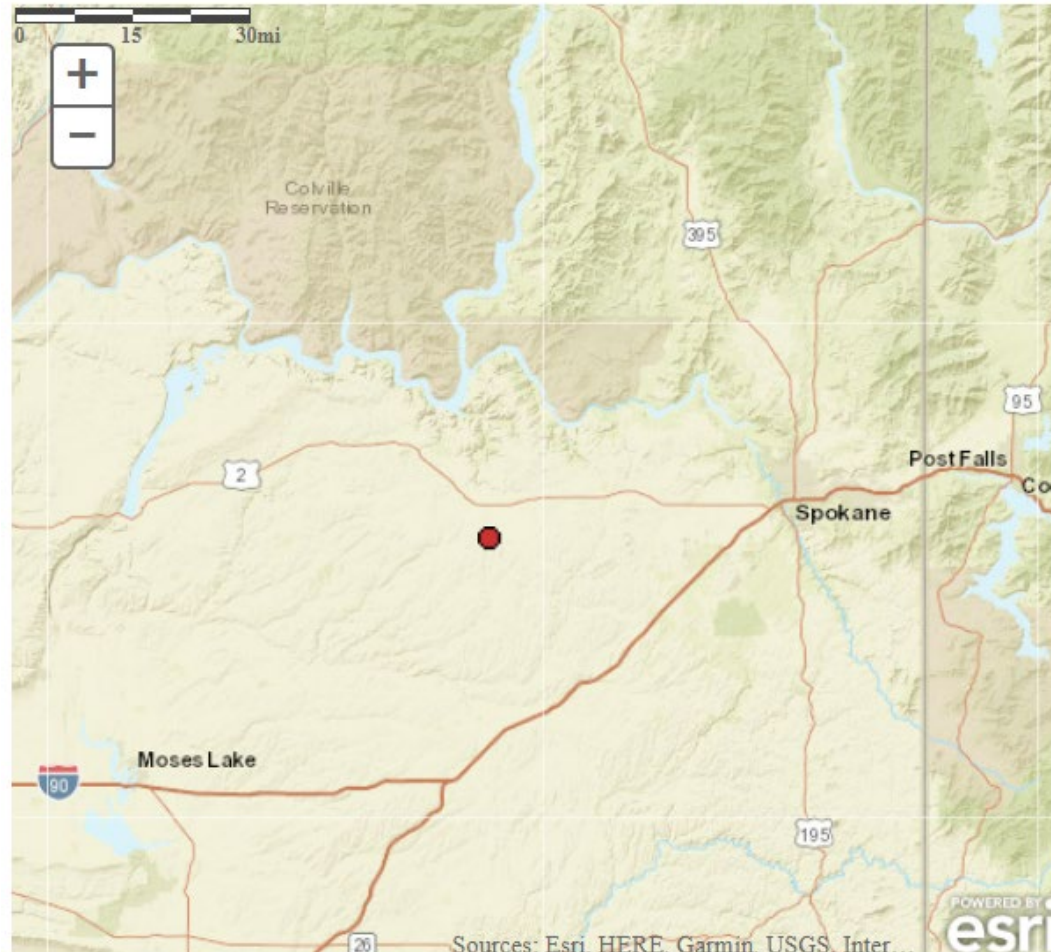
Okanogan Irrigation District: currently at 44 percent of normal

05/31/2022

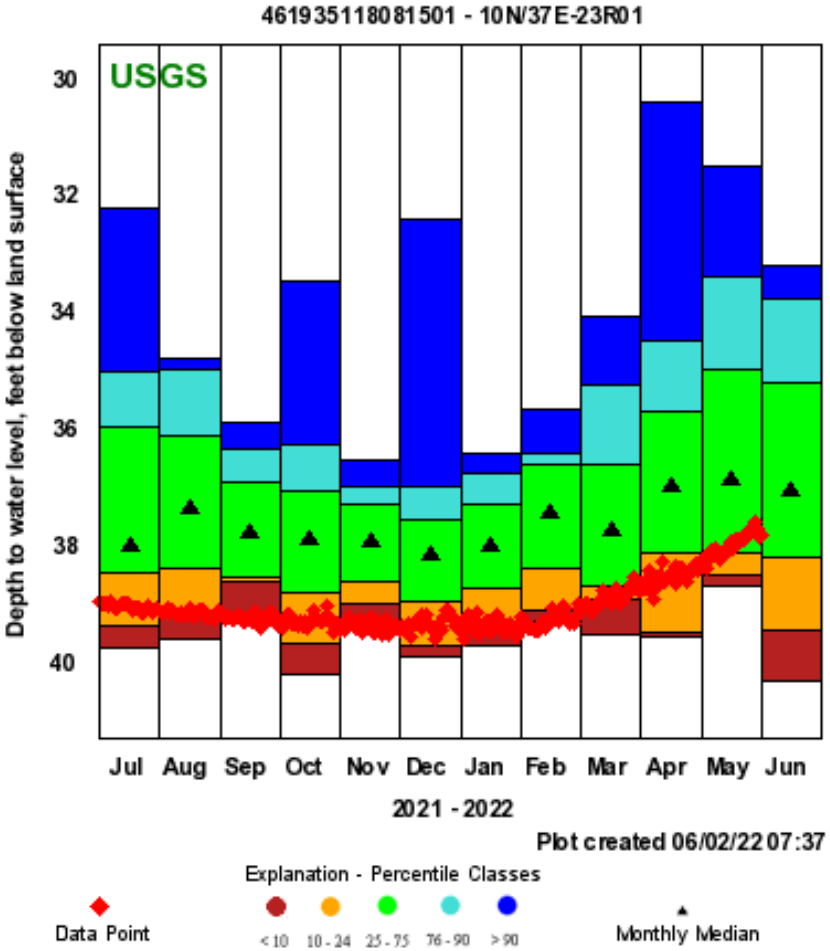
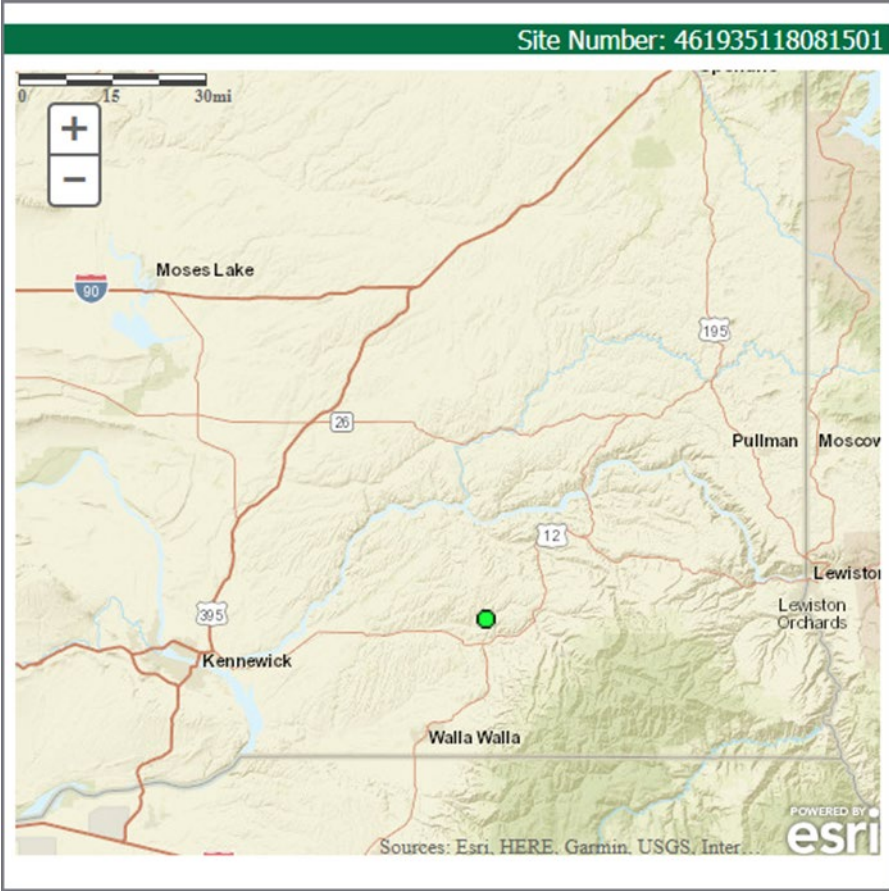


# Shallow Groundwater Recovery: Lincoln County

Site Number: 473442118162201

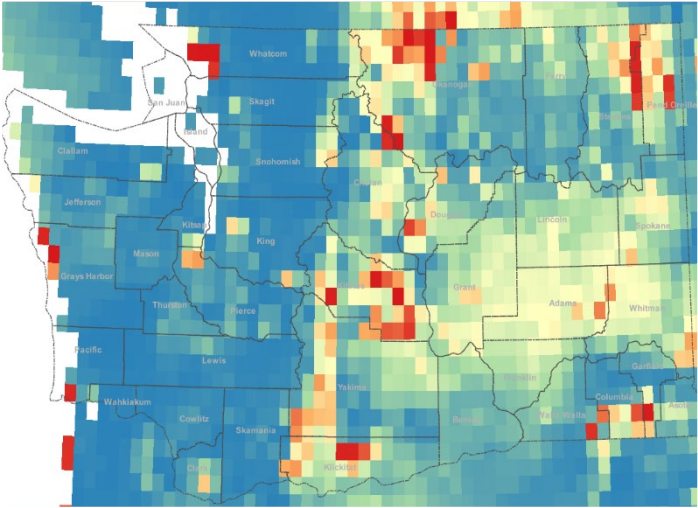


# Groundwater Recovery: Columbia County

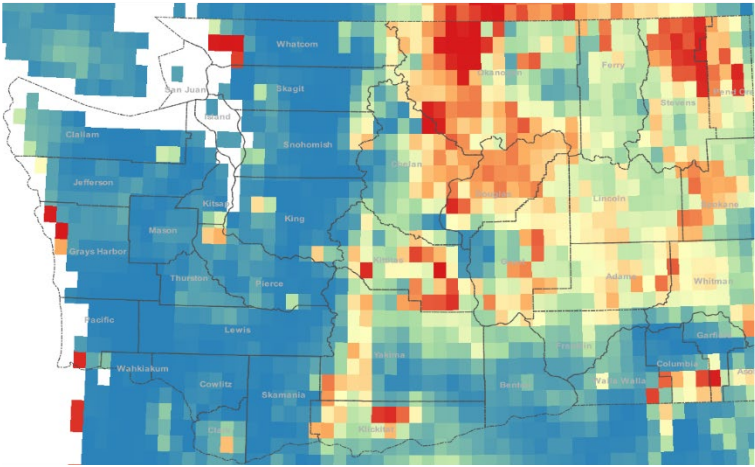


# Soil Moisture and Shallow Groundwater

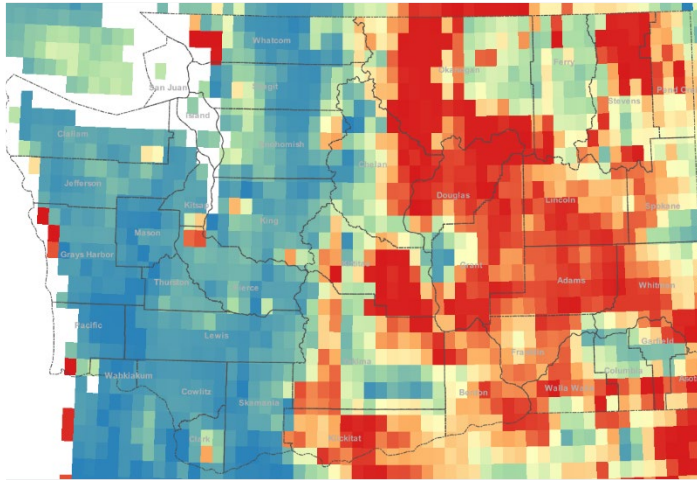
NASA GRACE



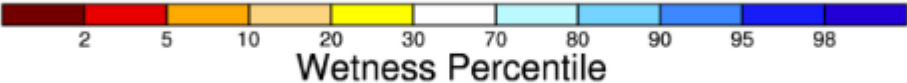
Surface Zone  
(top 2 cm)



Root Zone  
(top 1 meter)



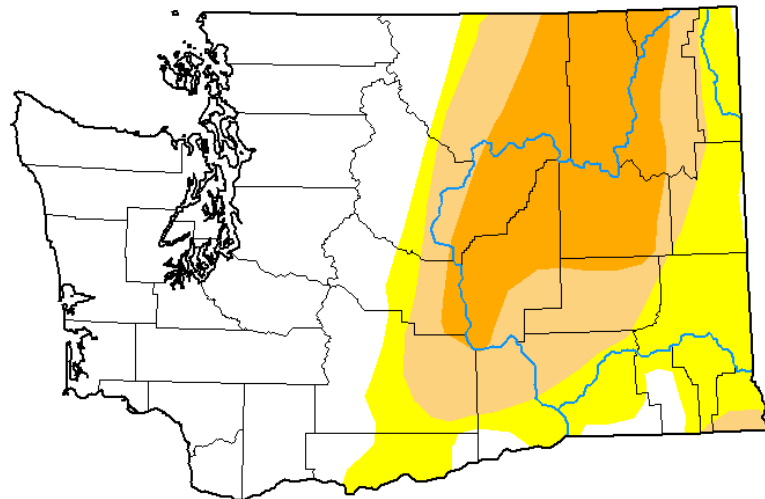
Shallow Groundwater



# Comparison of Drought Advisory Area and US Drought Monitor

## U.S. Drought Monitor Washington

**May 24, 2022**  
(Released Thursday, May. 26, 2022)  
Valid 8 a.m. EDT



### Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

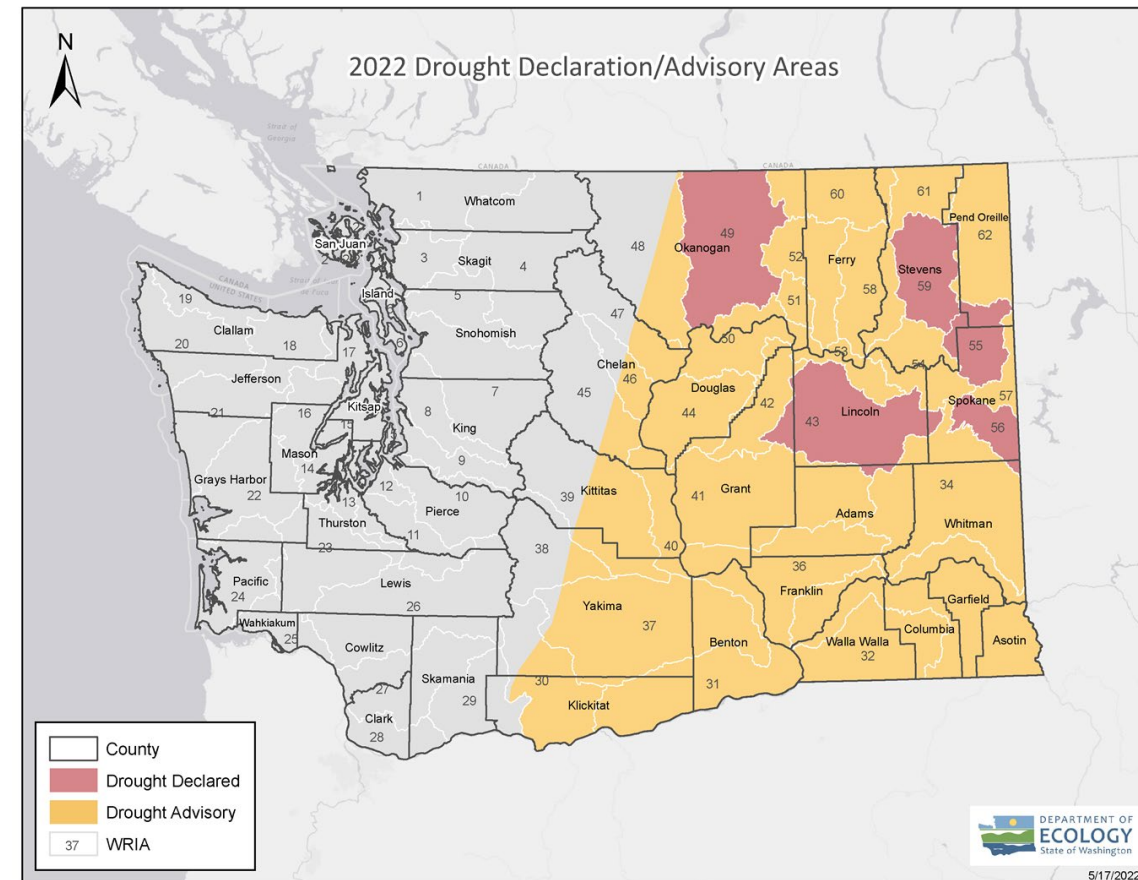
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

### Author:

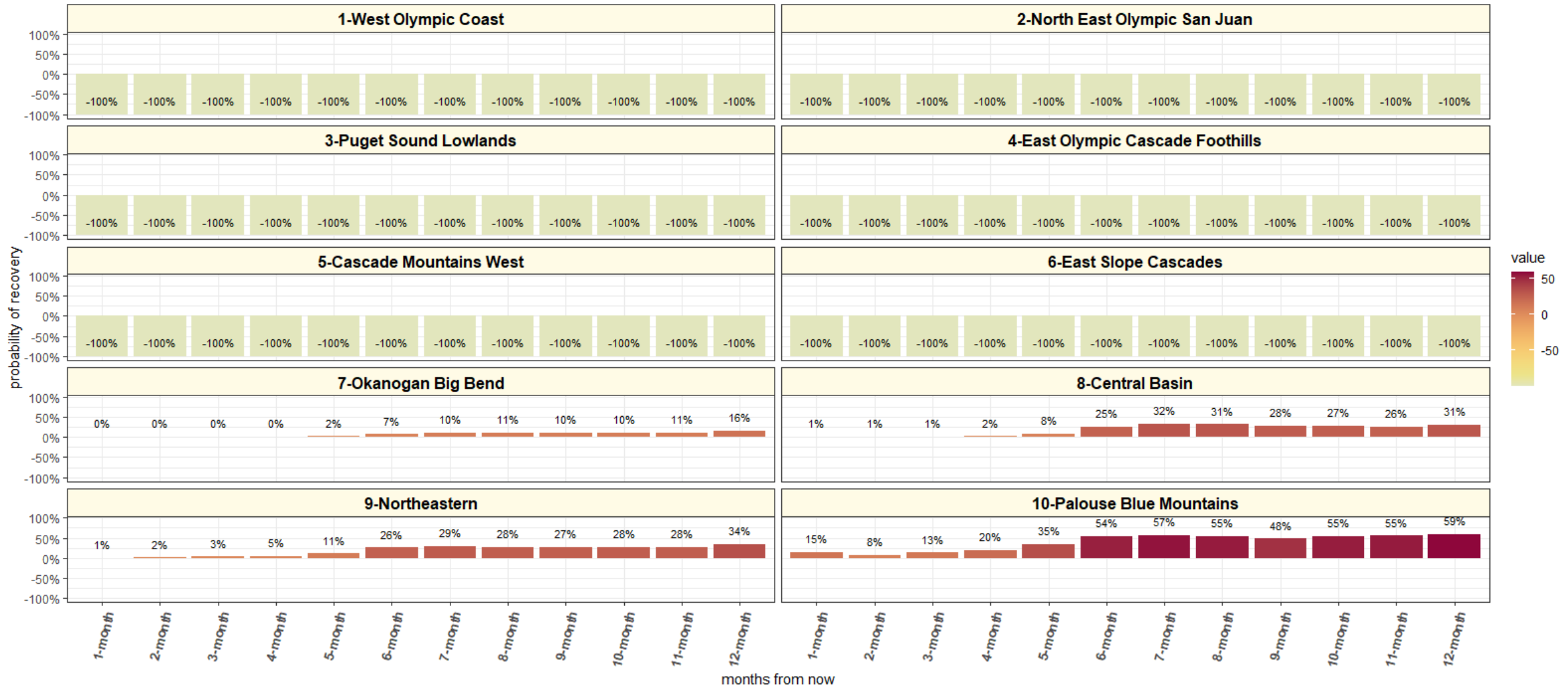
Richard Heim  
NCEI/NOAA



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)



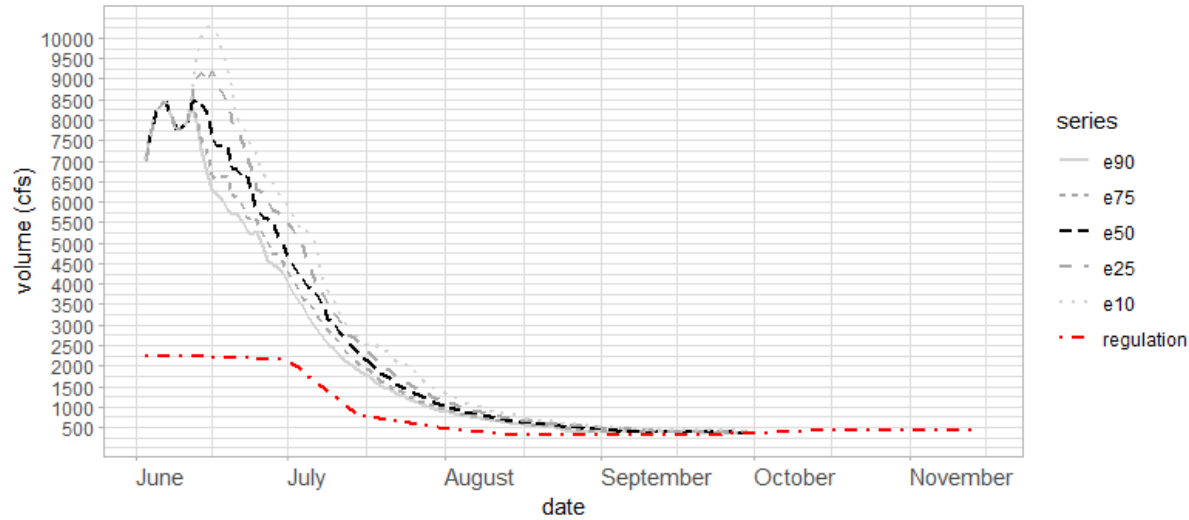
Probability of recovery from drought | 2022-06-01



Data: NOAA Drought Termination Tool

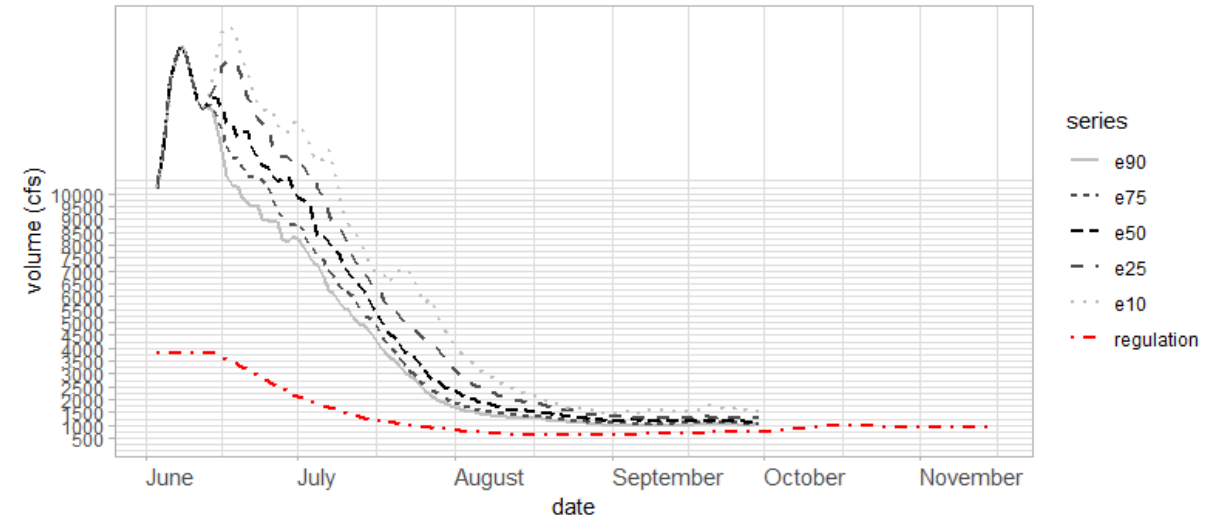
Assumes climatological conditions for the remainder of the month.  
Monthly timesteps are not interdependent.  
A drought is considered to be ameliorated when the PHDI is raised to -2.0, and ended when above -0.5.

2022-06-01 | ensemble forecast vs Methow River nr Pateros regulation flows



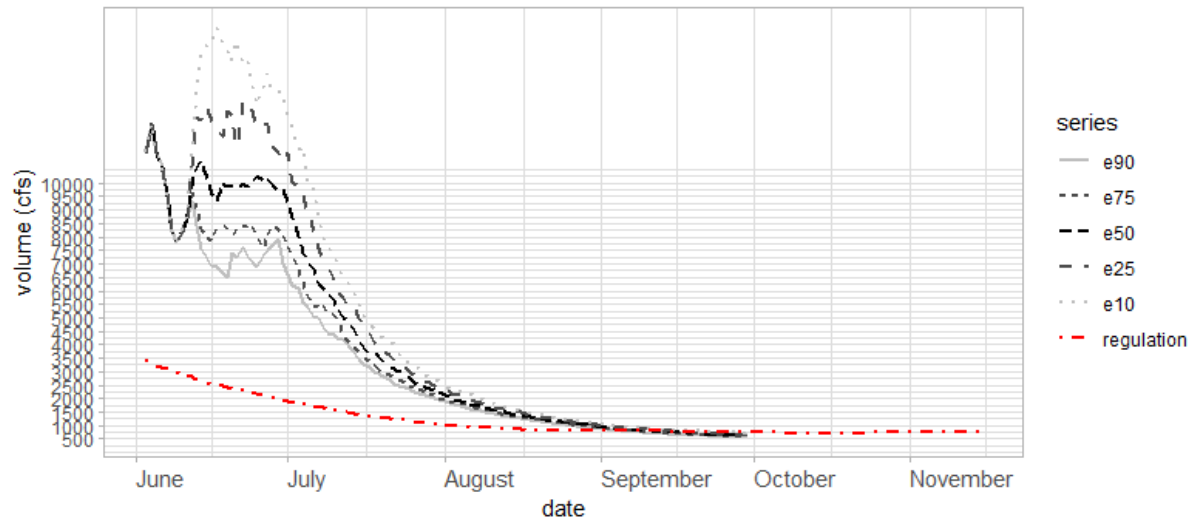
data: NWRFC (QINE file),WDOE

2022-06-01 | ensemble forecast vs Okanogan at Malott regulation flows



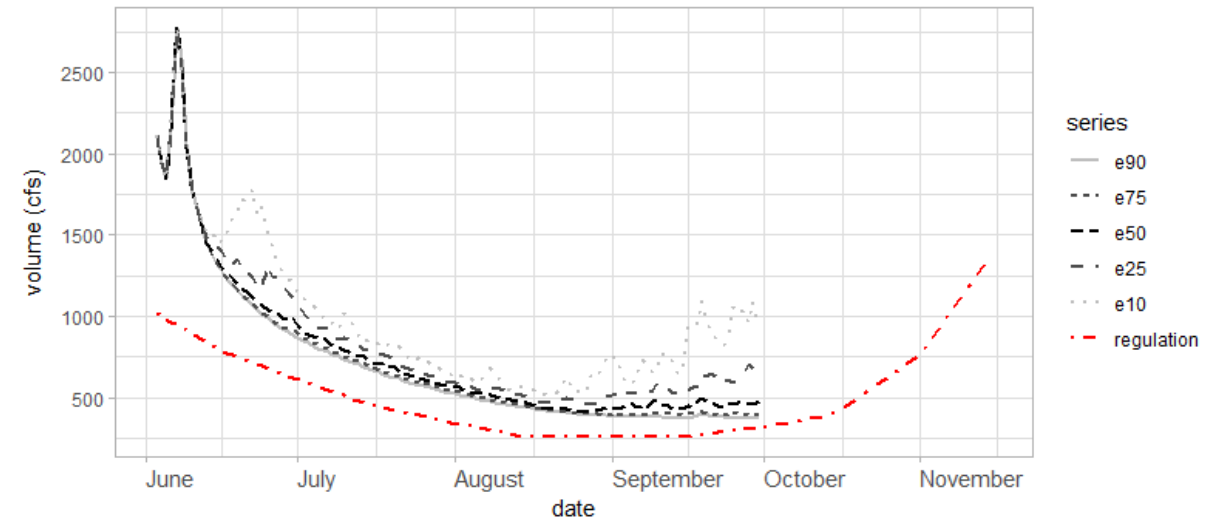
data: NWRFC (QINE file),WDOE

2022-06-01 | ensemble forecast vs Wenatchee at Peshastin regulation flows



data: NWRFC (QINE file),WDOE

2022-06-01 | ensemble forecast vs Chehalis at Porter regulation flows



data: NWRFC (QINE file),WDOE

