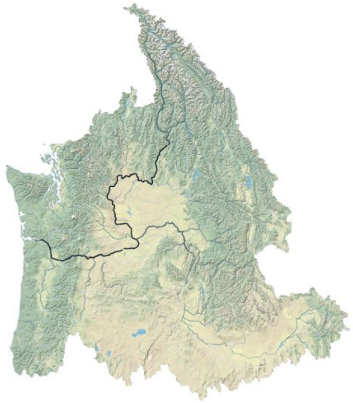
# OR and WA Water Year 2024 Recap



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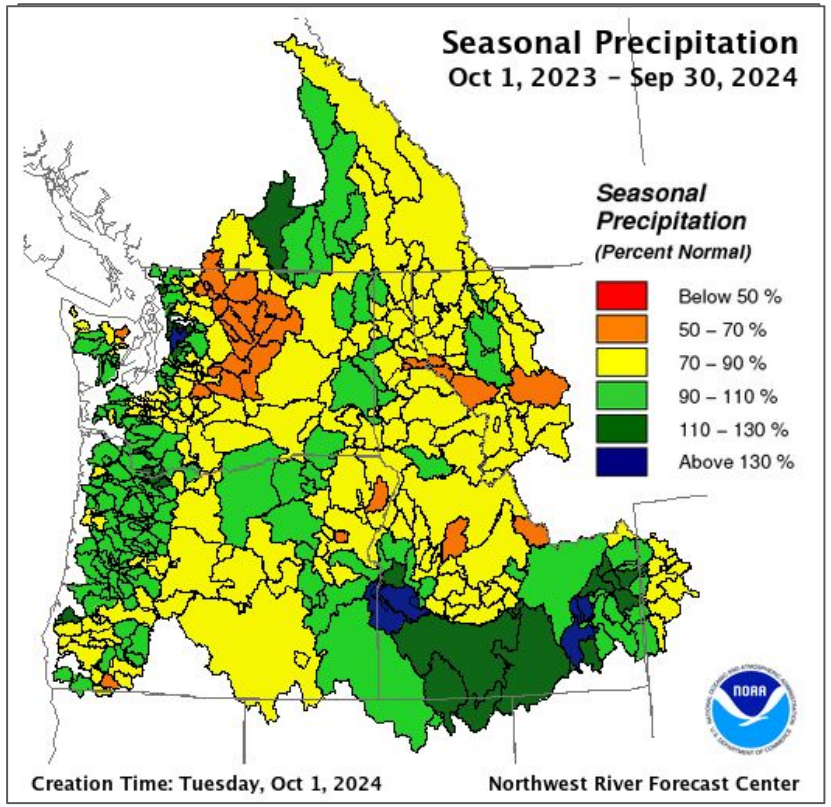
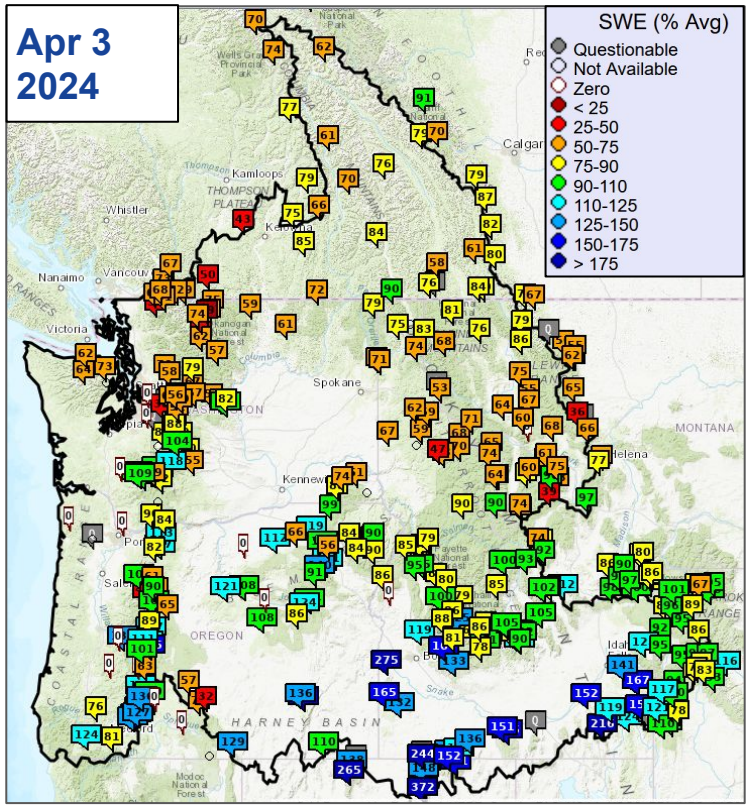
# Water Year 2024

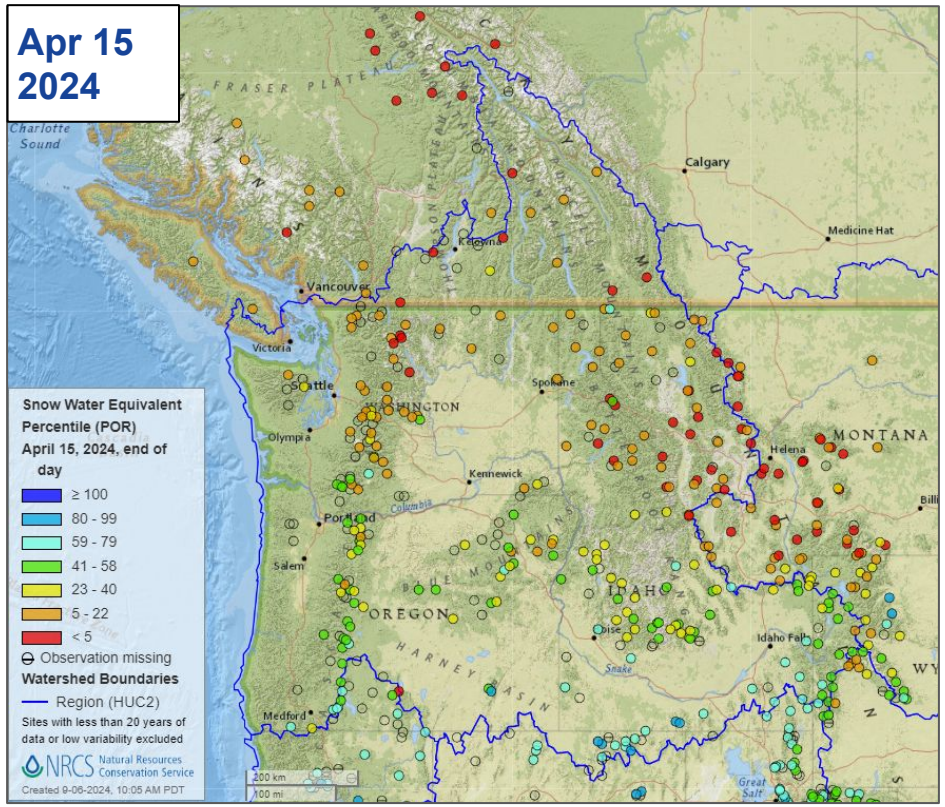
- Fall was dry and warm compared to normal, late start to snowpack
- Lower north/higher south pattern developed early, continued through April and affected runoff and water supply forecasts for the whole season
- December was warmer than normal and brought flooding to Western Washington
- January was the big runoff month for western Oregon
- Record low snowpacks across the northern portion of the basin started in February and persisted through the peak snowpack season
- May brought late season snowpack building - driving water supply forecasts up, flooding in the Coquille

# Precipitation and Snowpack

Precipitation and snowpack were higher than normal in the south while the north saw record low snowpack at some stations.

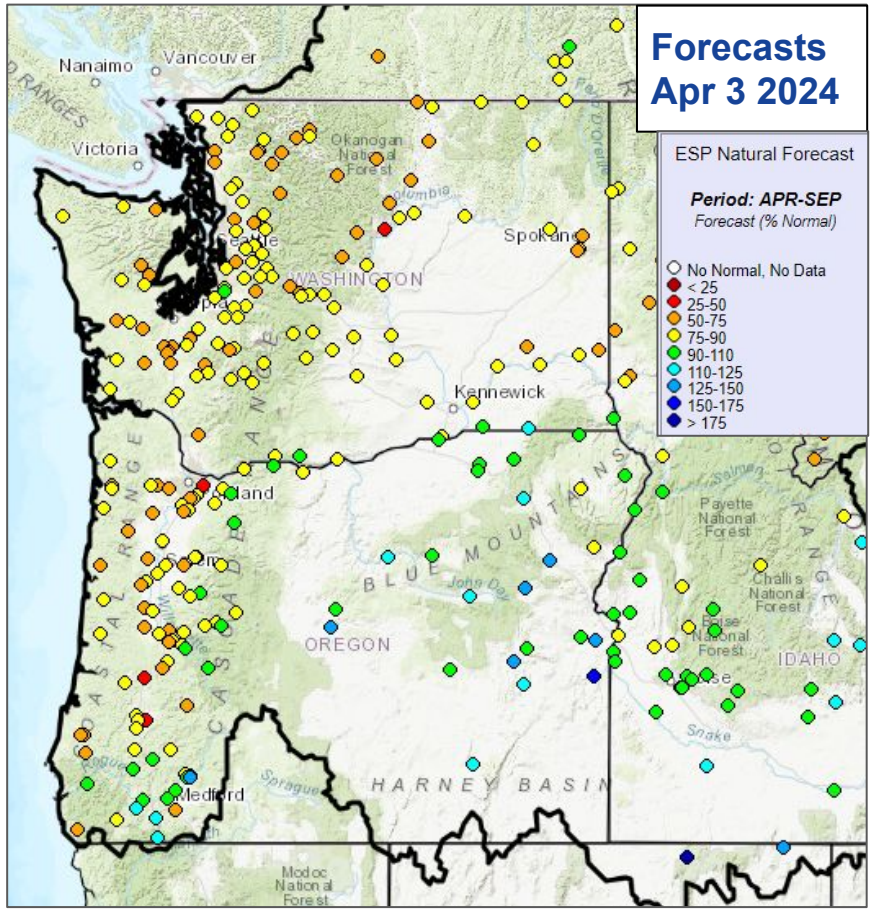


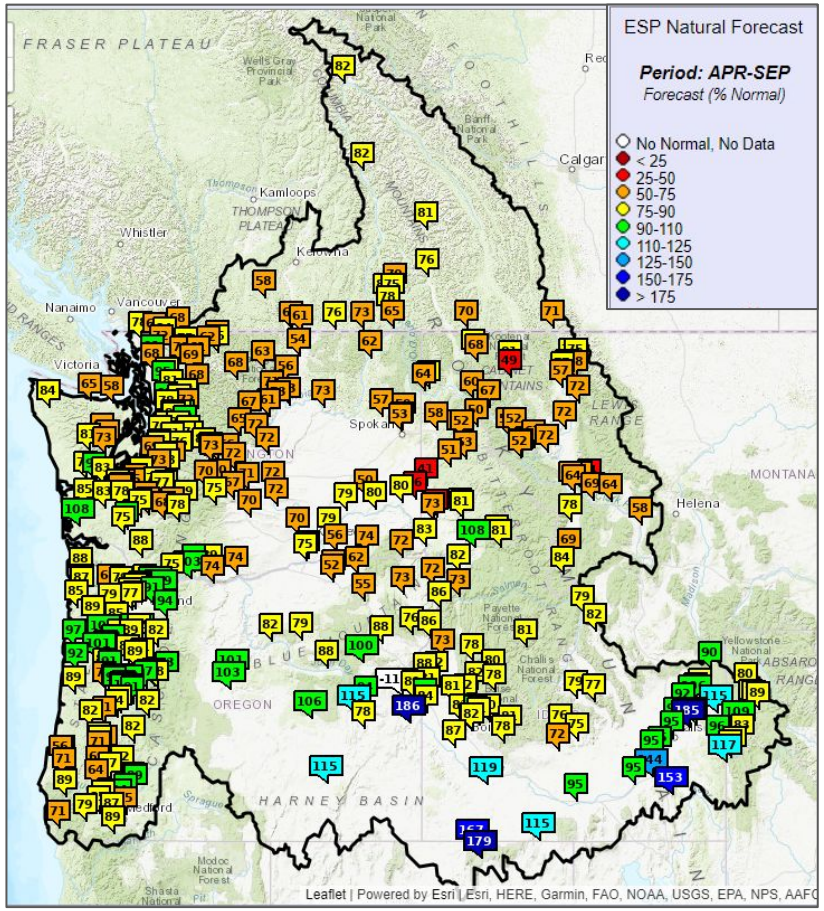



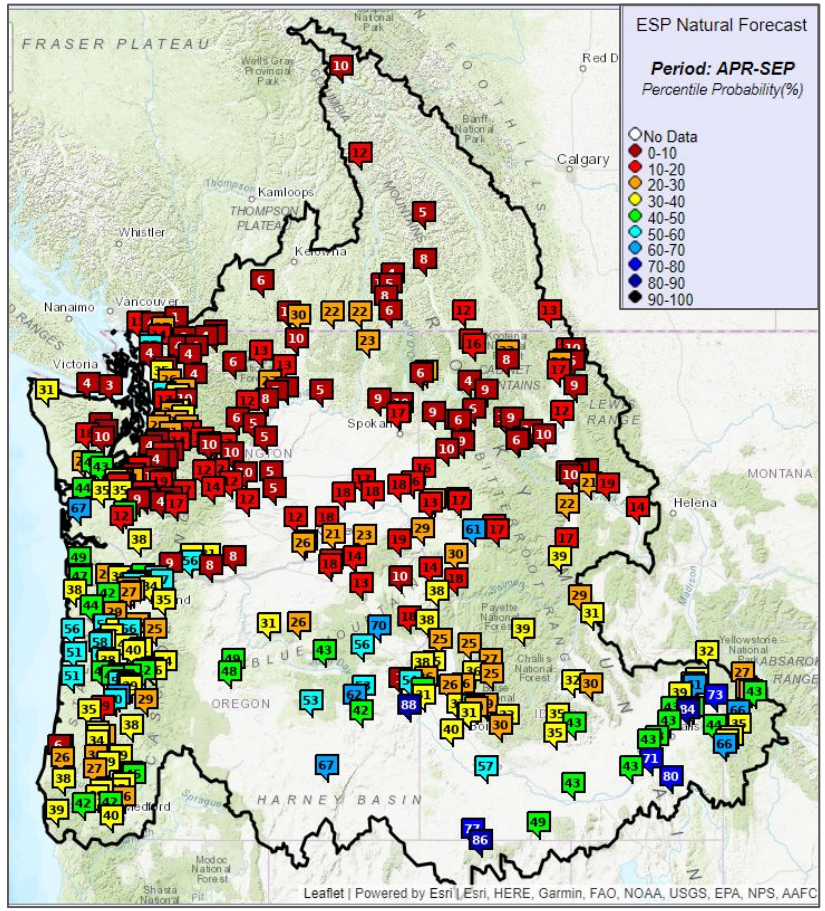




Snow data from Natural Resources Conservation Service, BC Hydro, Ministry of Environment and Climate Change Strategy, and Alberta Environment and Parks.

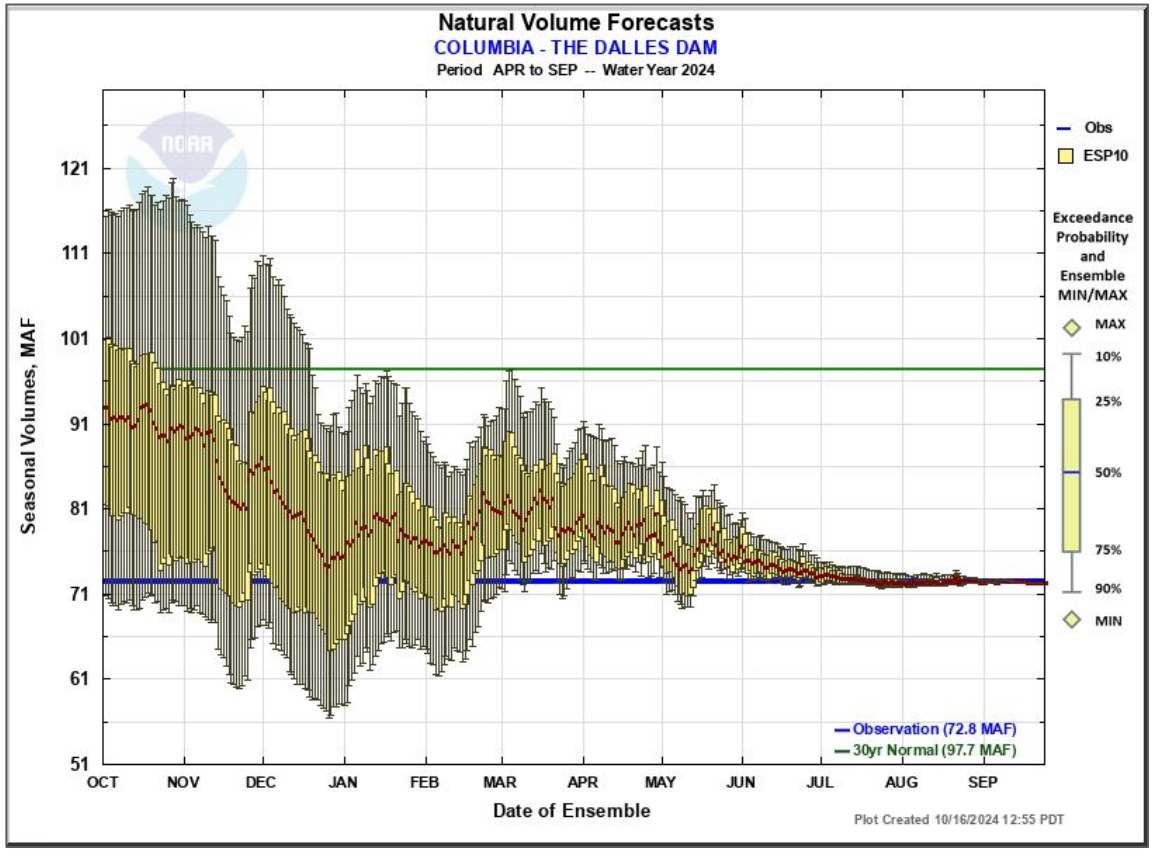
# Forecast and Observed April -September Runoff

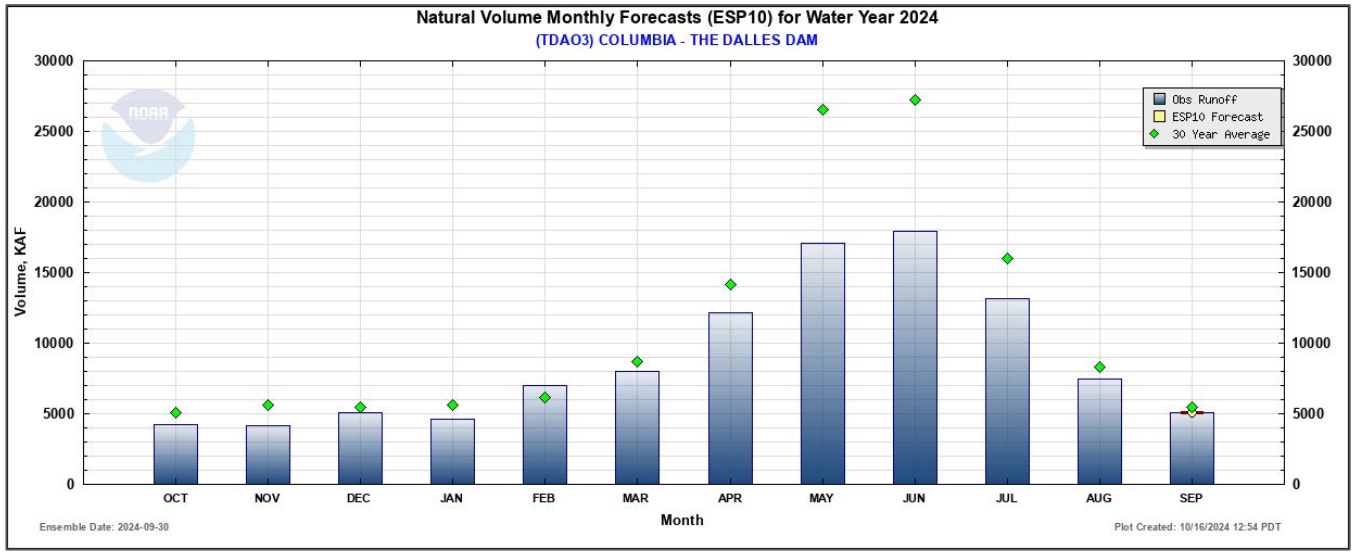


# Ensemble Streamflow Prediction

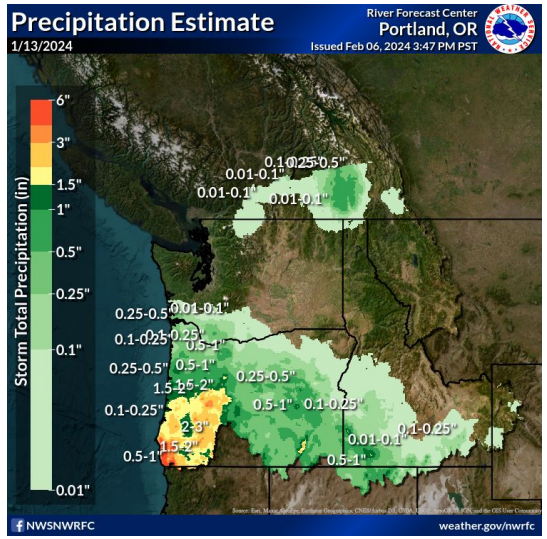


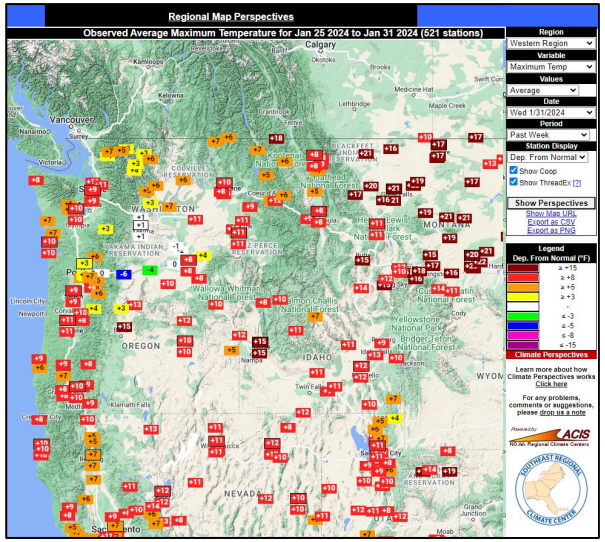



# Oregon

January produced above normal runoff at many locations

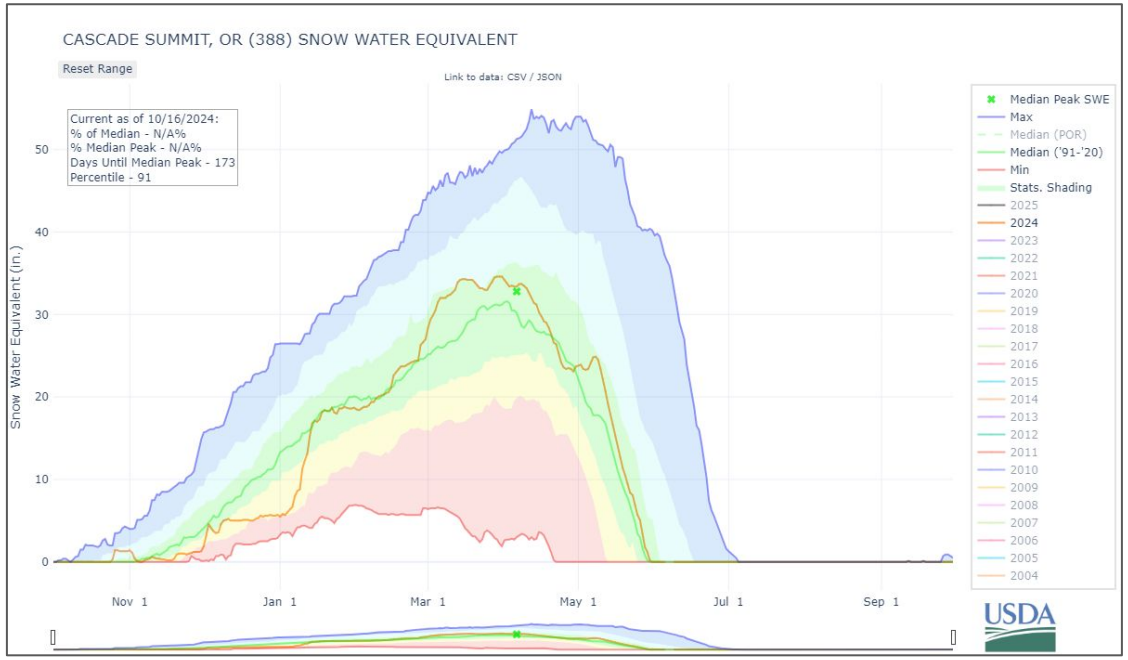
- Winter weather brought blizzard conditions to the Cascades and widespread low elevation snow
- A warm period and snowmelt followed the cold weather



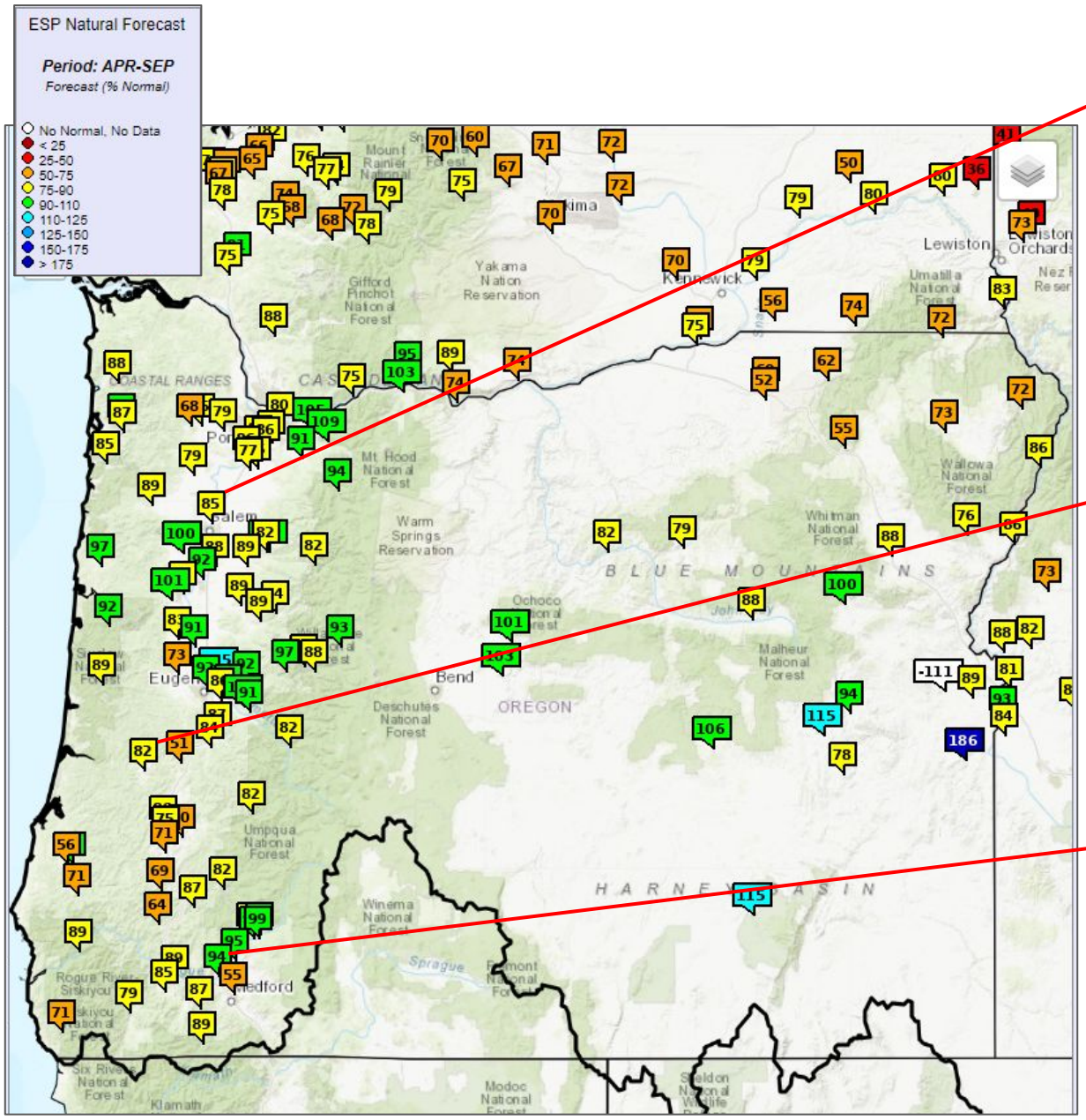



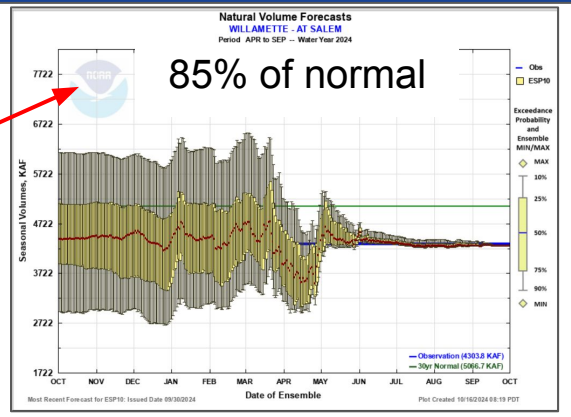

Early May brought late season snowpack building driving water supply forecasts up

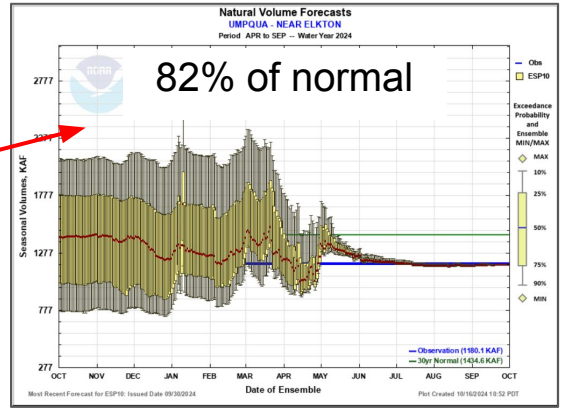
- A relatively brief but potent atmospheric river event moved through, impacting much of OR and SW ID the first week of May

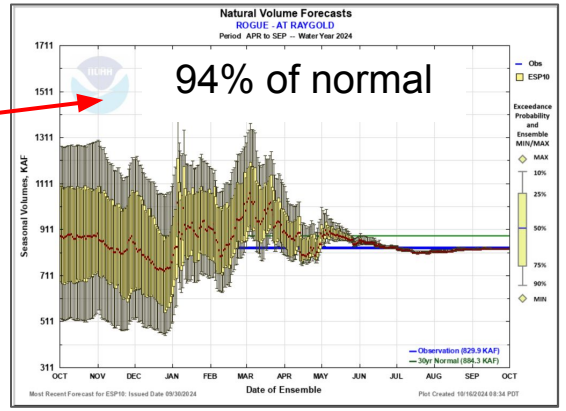


# Western Oregon

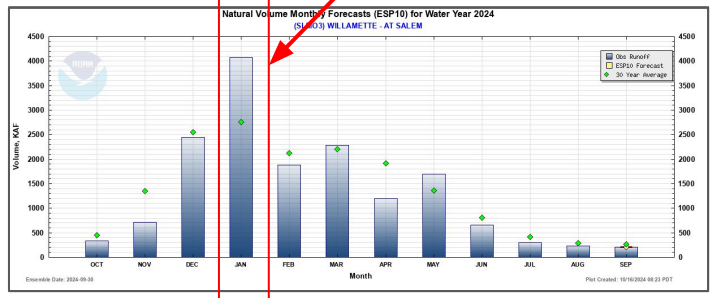


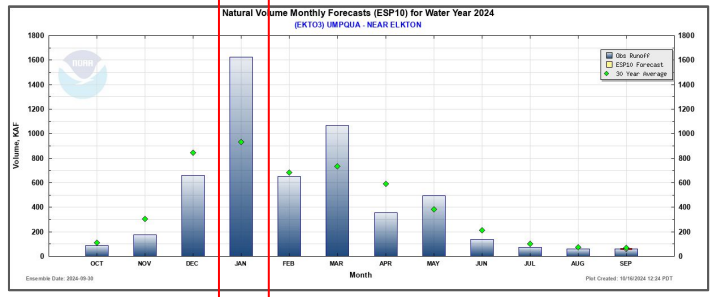



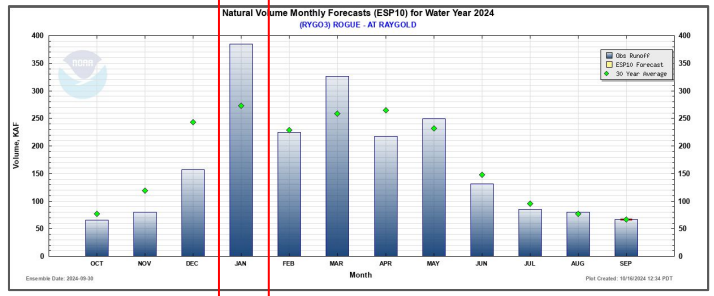



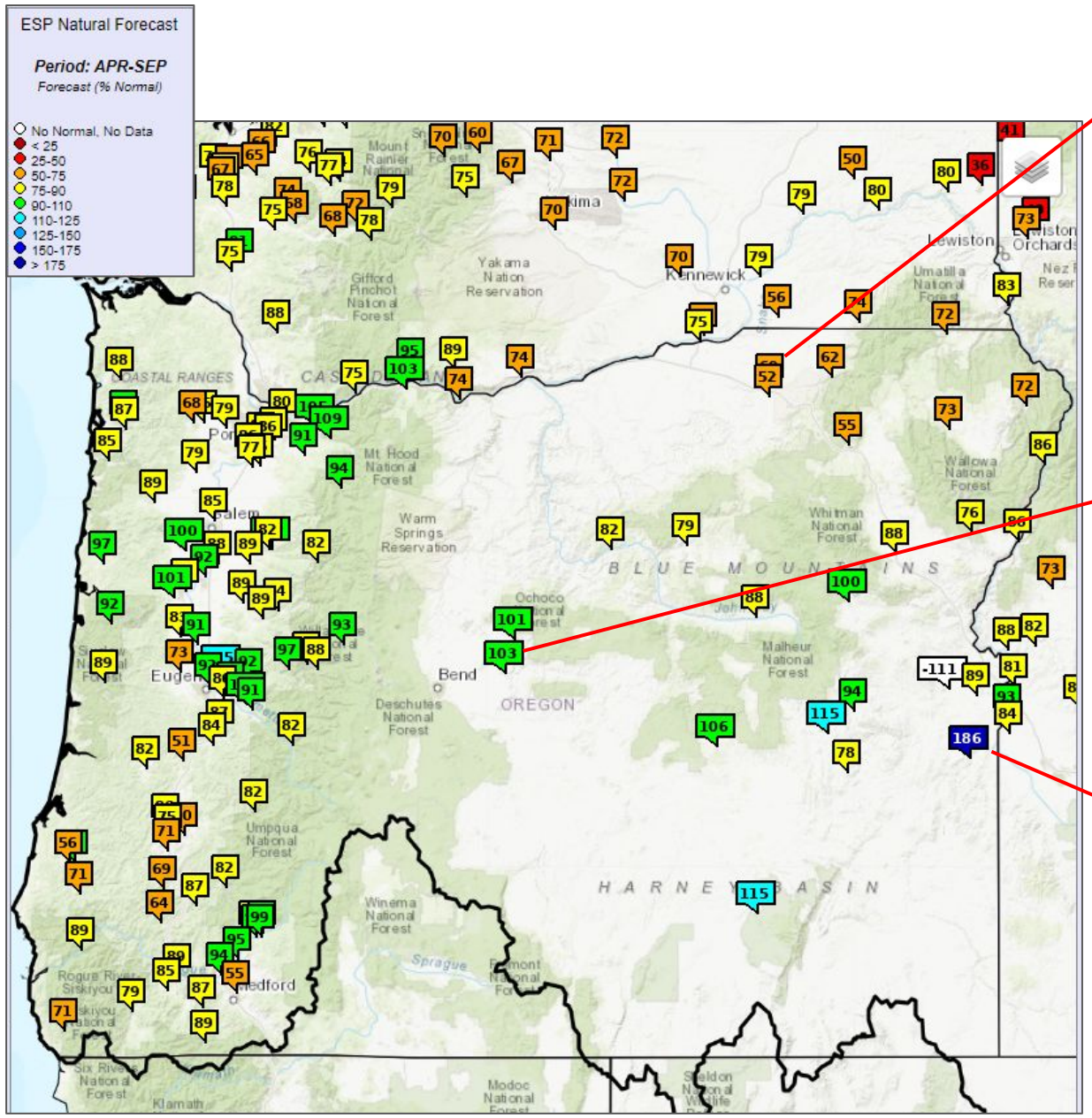

January was the big runoff month

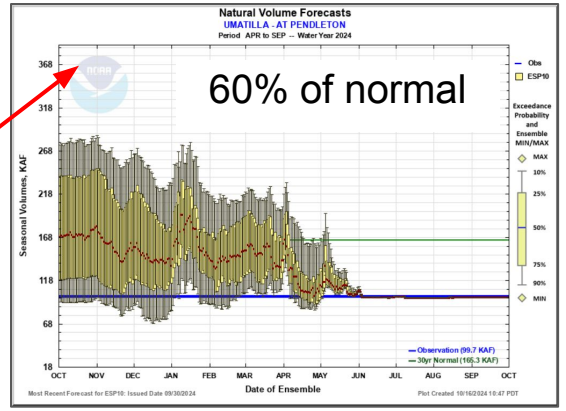


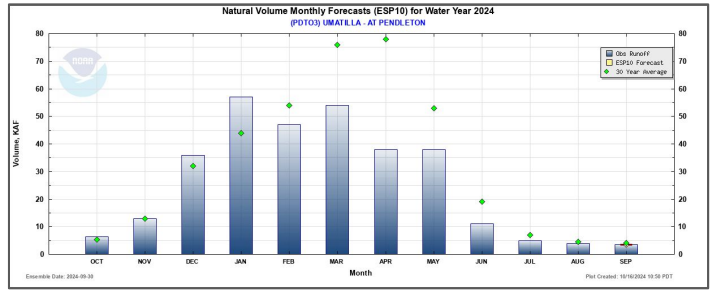



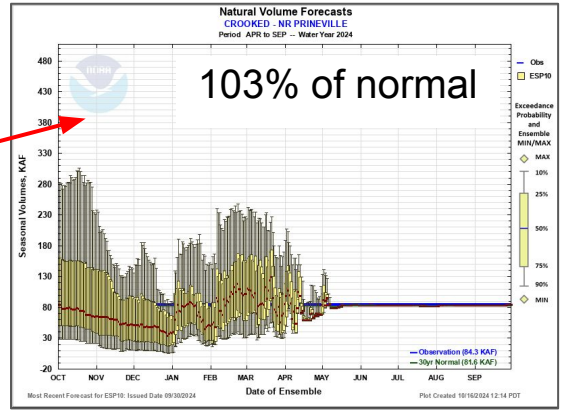



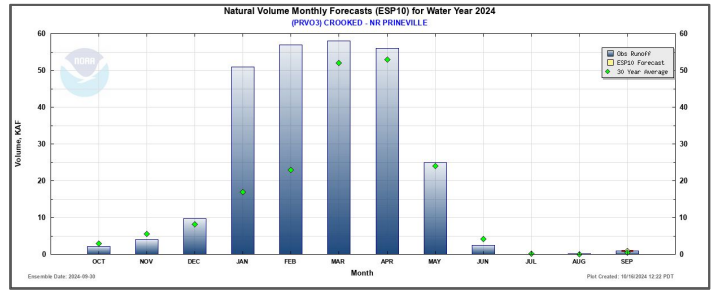
# Eastern Oregon

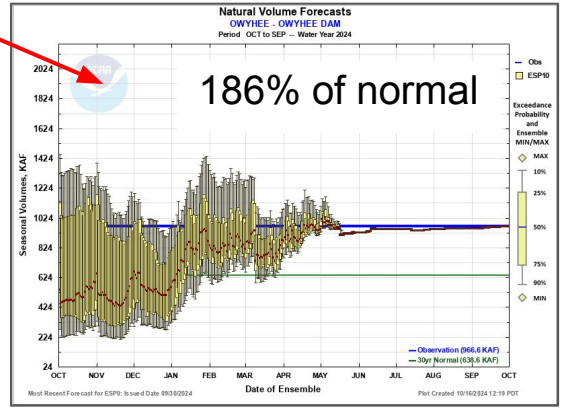


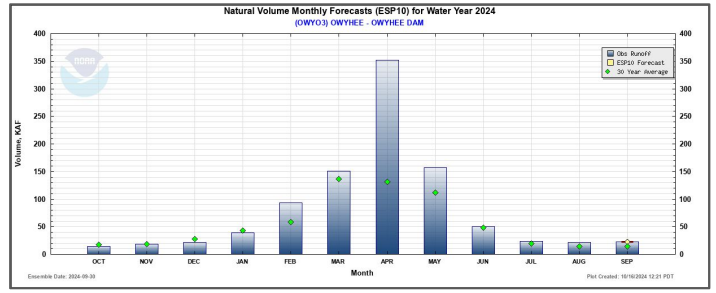



# Washington

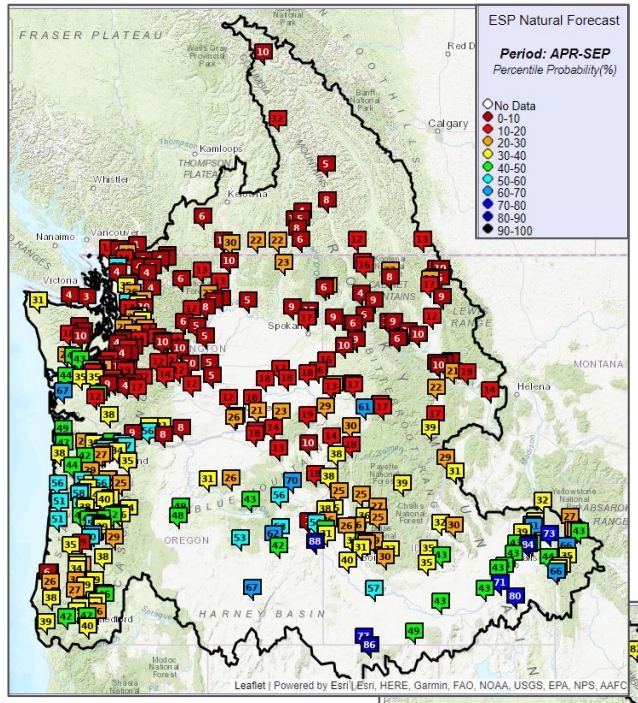
What drove Apr-Sep volumes so low in Washington?

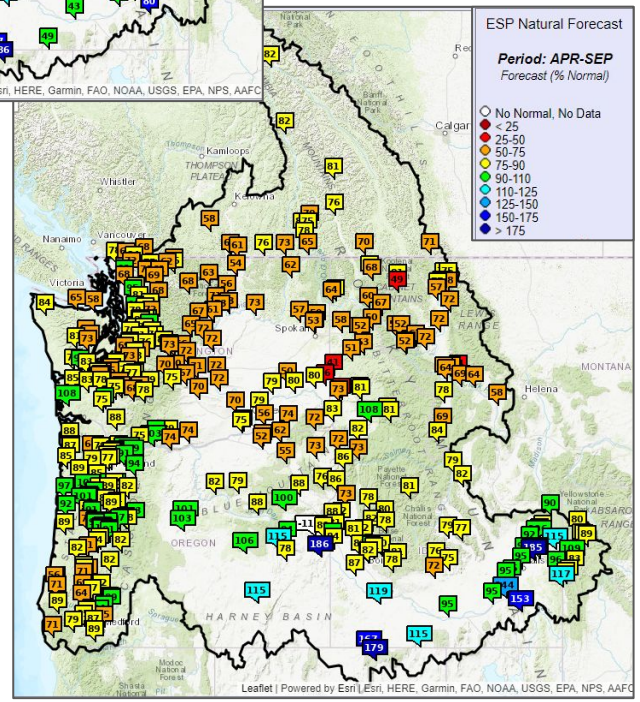
- Snow deficits accruing the whole water year
- Precip deficits accruing in March, April and May
- Runoff deficits accruing in April - June

NWRFC consistently forecast below normal runoff but some forecasts were still too high:

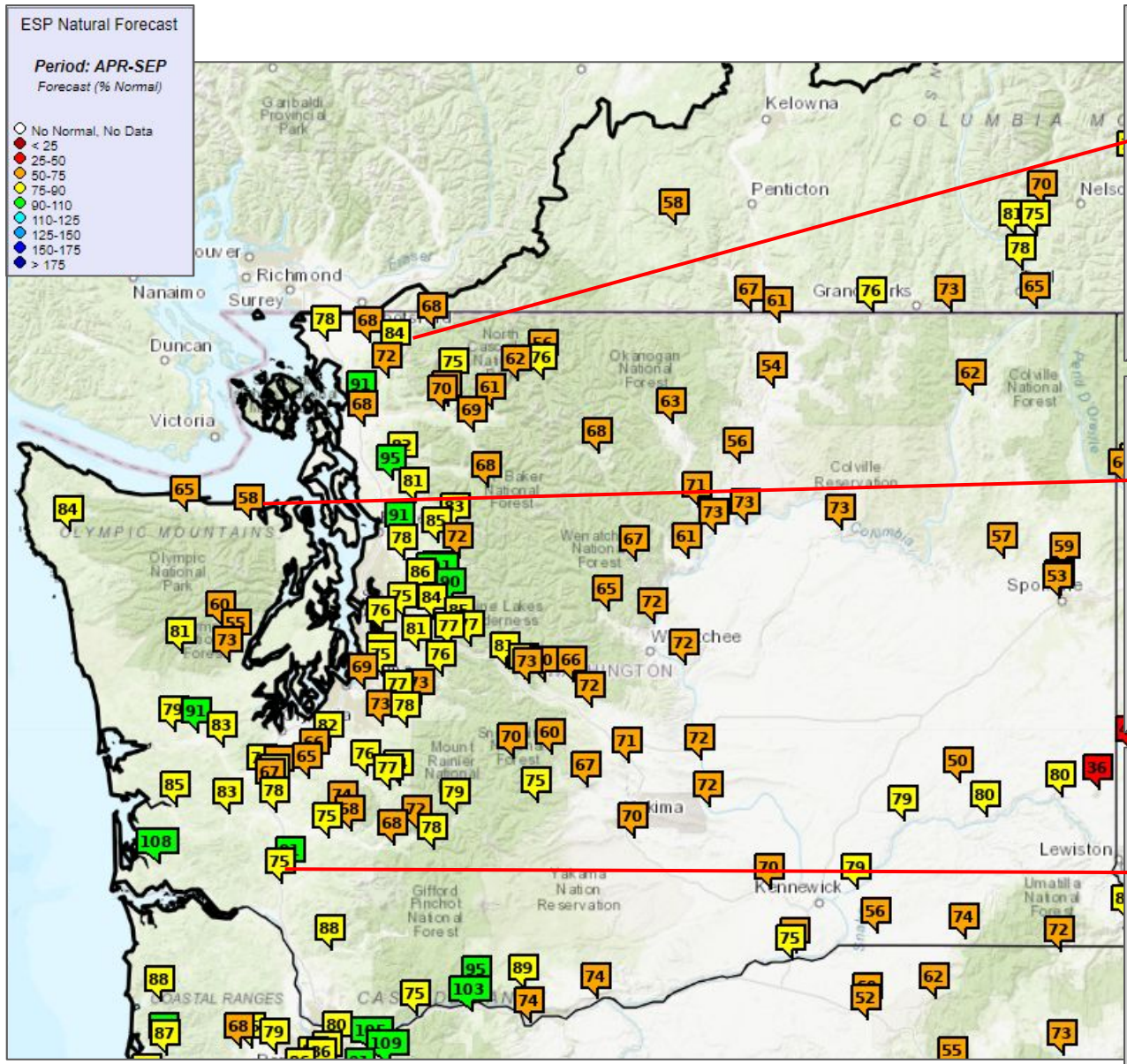
- South Sound
- Cowlitz
- Olympics
- Yakima

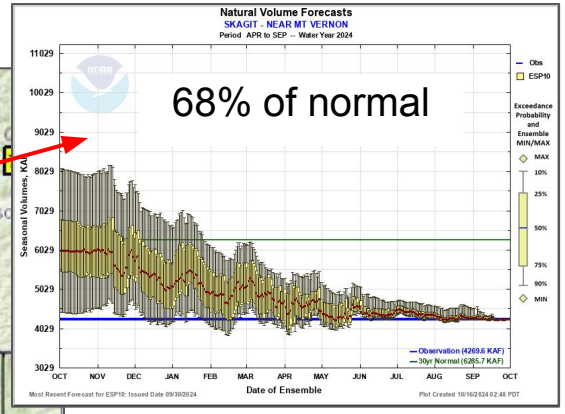
Some lower elevation forecast points stand out as having near normal Apr - Sep runoff: Stillaguamish, Pilchuck, Tolt, Snoqualmie

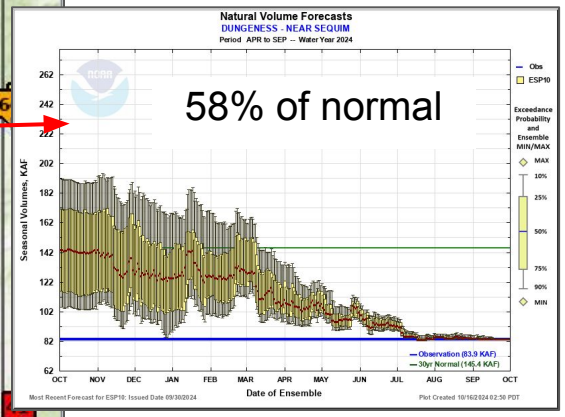


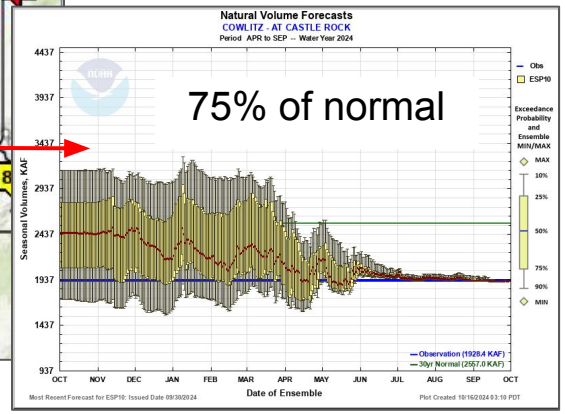



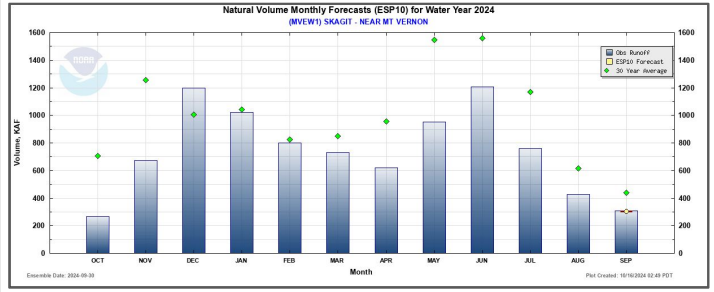
# Western Washington

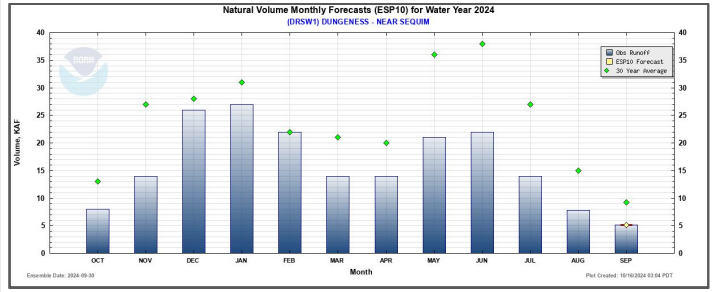


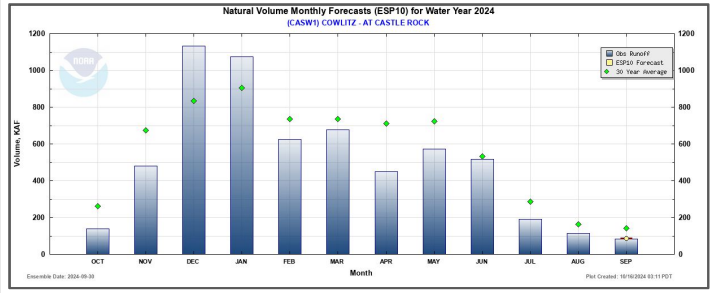



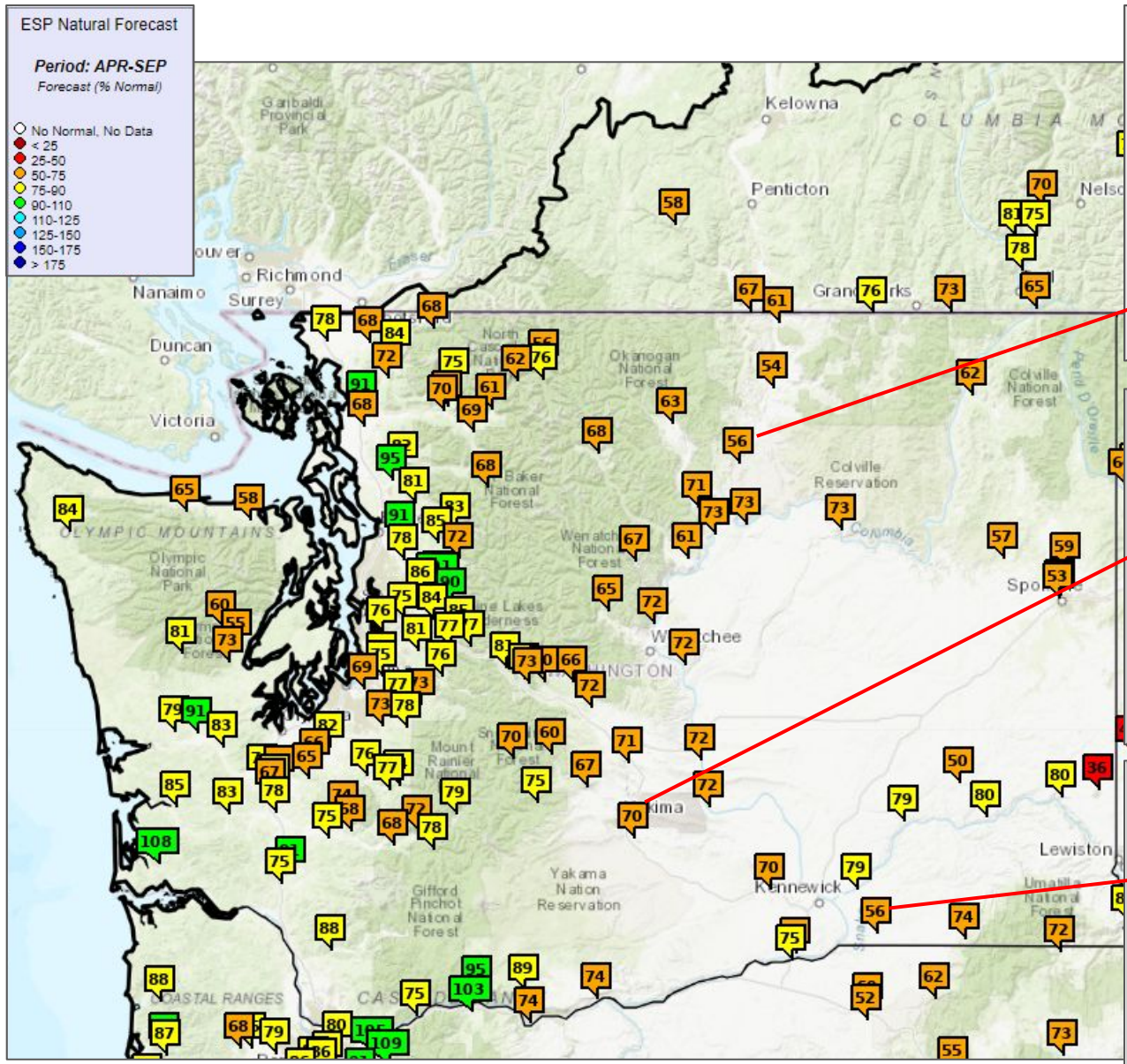



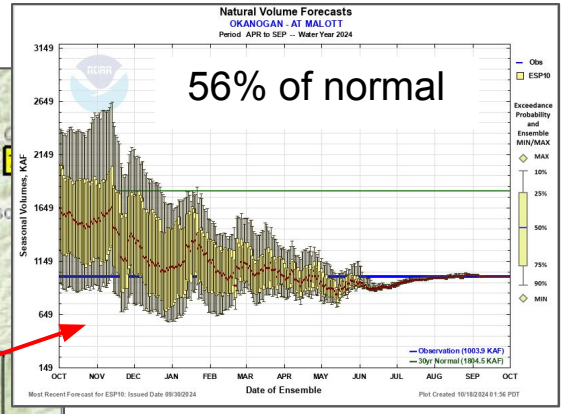



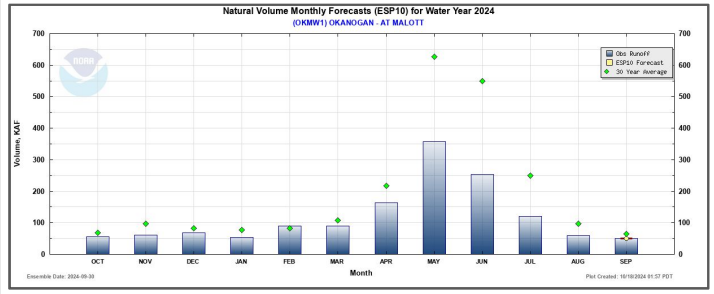



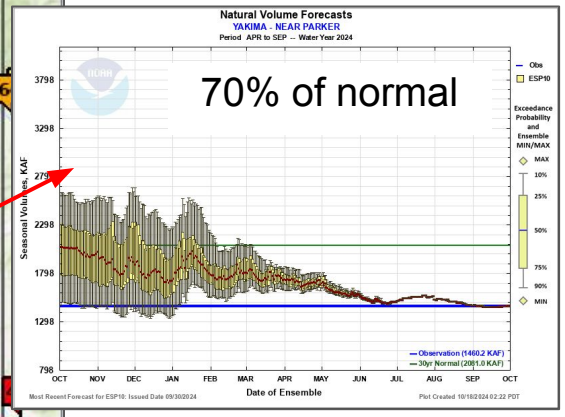



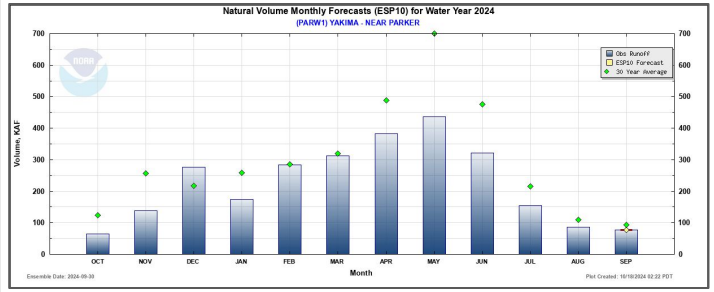
# Eastern Washington

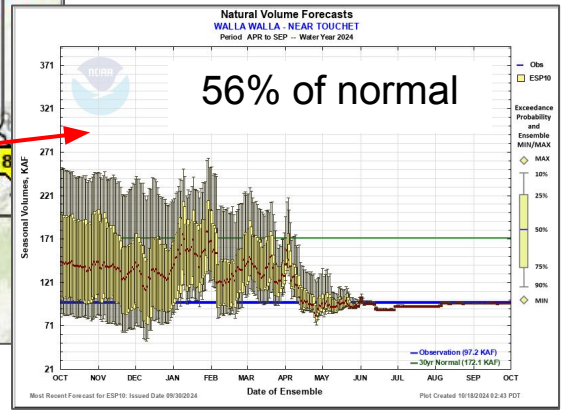


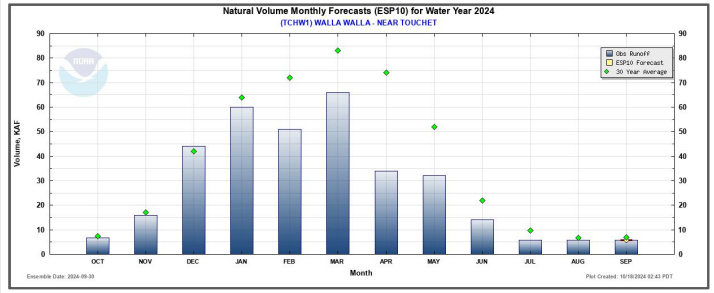



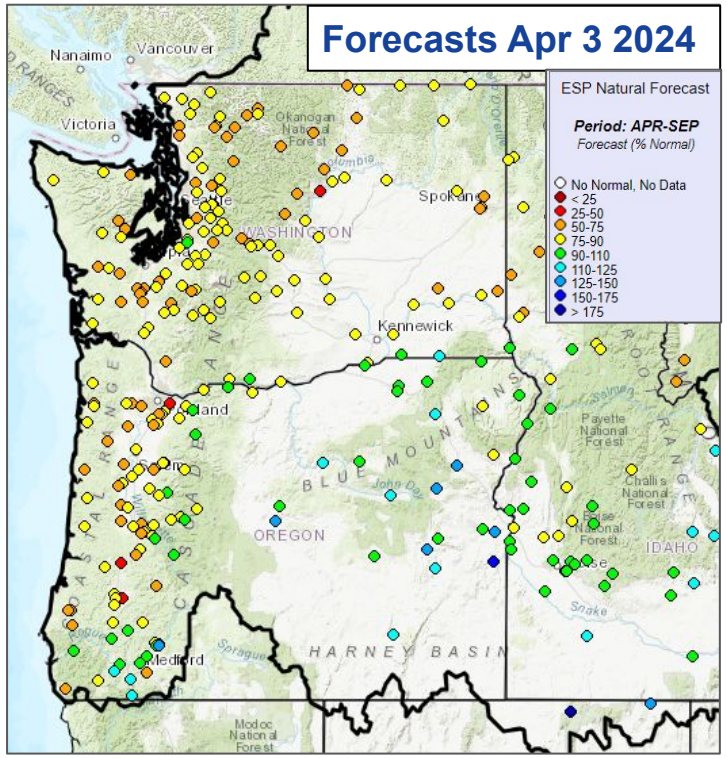



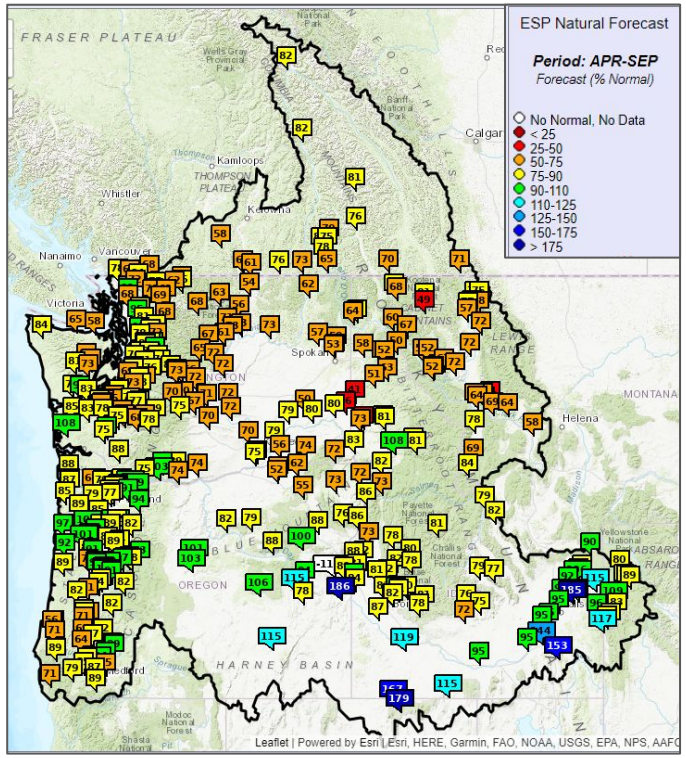



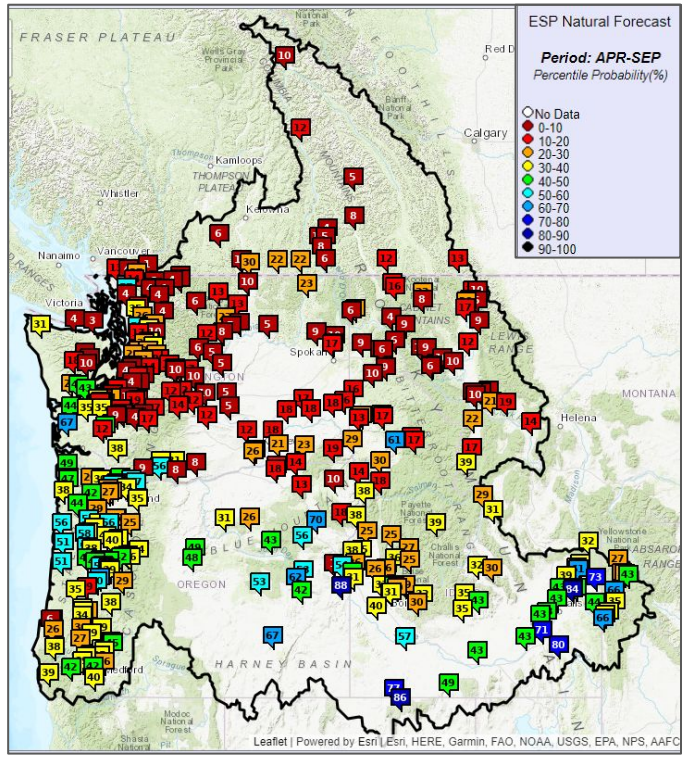



# Key Takeaways

- Apr - Sep volumes follow the same pattern as other water supply parameters: higher in the south, lower in the north.
- NWRFC water supply forecasts anticipated dry conditions across our northern tier and remained consistent through the forecast season.
- Some forecasts were higher than observations, specifically  forecasts in the southern Puget Sound, Cowlitz, Olympics and Yakima.

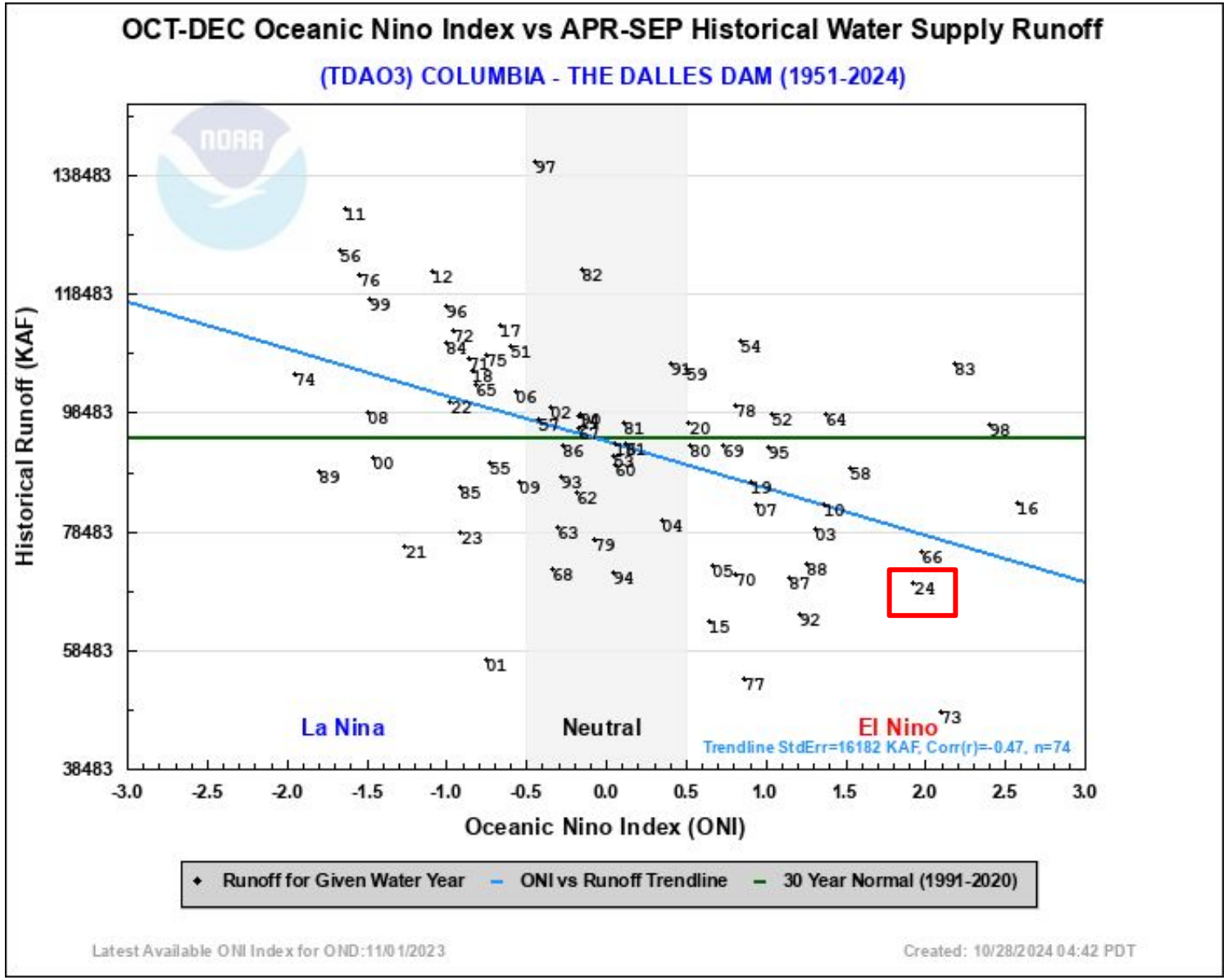


# ENSO signal versus Runoff Volume

Apr - Sep volume at the Columbia River at The Dalles was less than normal - 74% of normal.



# Questions?

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**Northwest River Forecast Center**

Monthly Water Supply Briefings First Thursday of Each Month
*nwrfc.noaa.gov/water_supply/ws_schd.cgi*

| Jan | Feb | Mar | Apr | May | Jun |
|---|---|---|---|---|---|
| 9 | 6 | 6 | 3 | 1 | TBD |

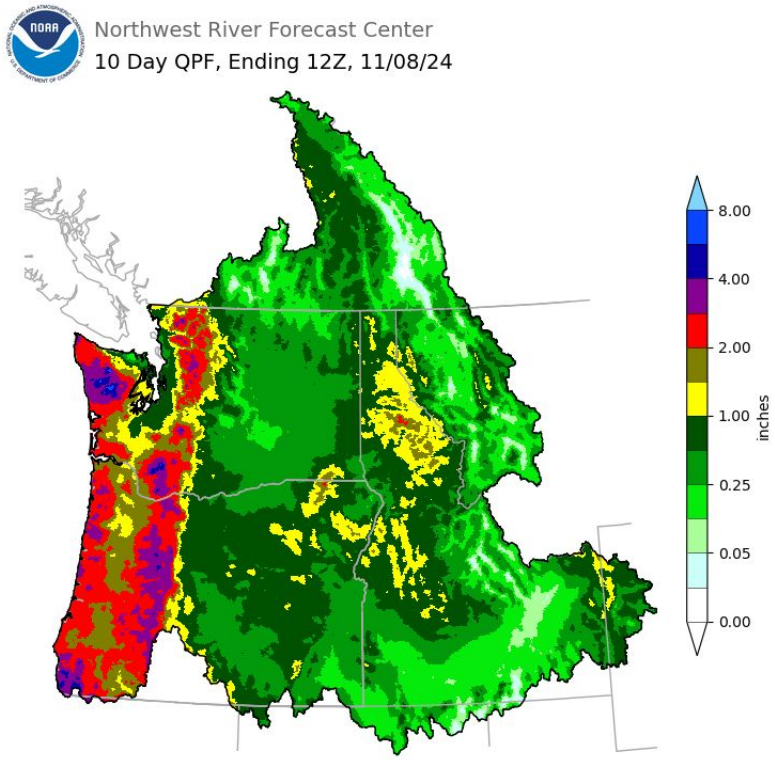
All presentations held at 10:00 am Pacific Time unless noted otherwise

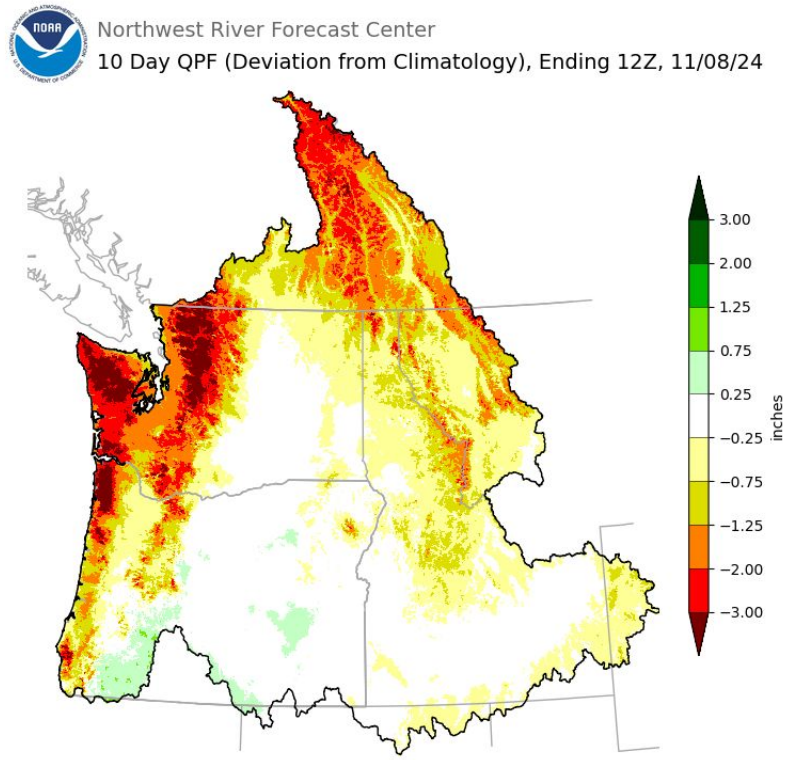
nwrfc.watersupply@noaa.gov (503) 326-7291 nwrfc.noaa.gov

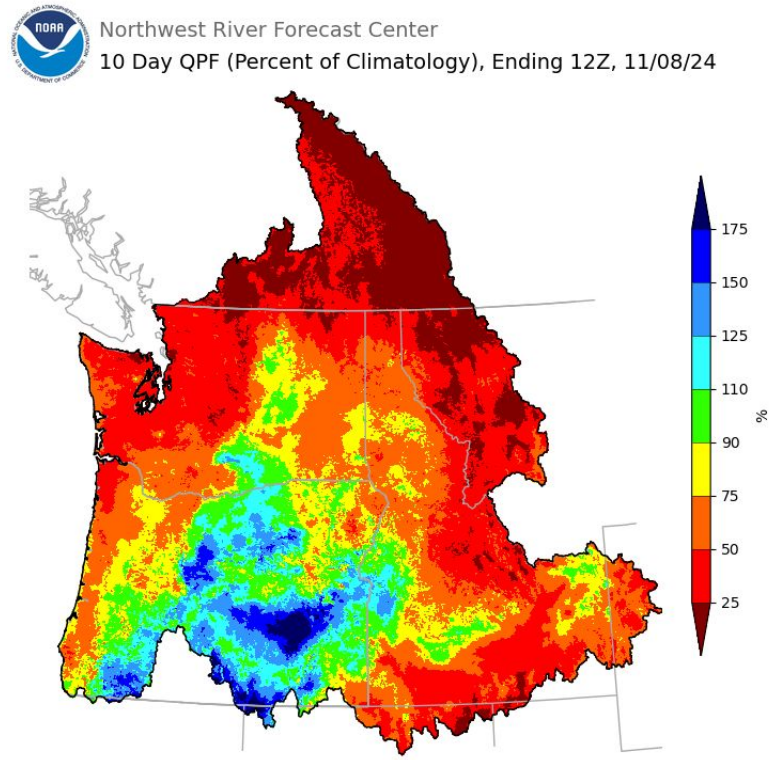
# Extra slides

# 10 day Precipitation Forecast

Precipitation amounts forecast to fall in the next 10 days is a mix of above and below normal.

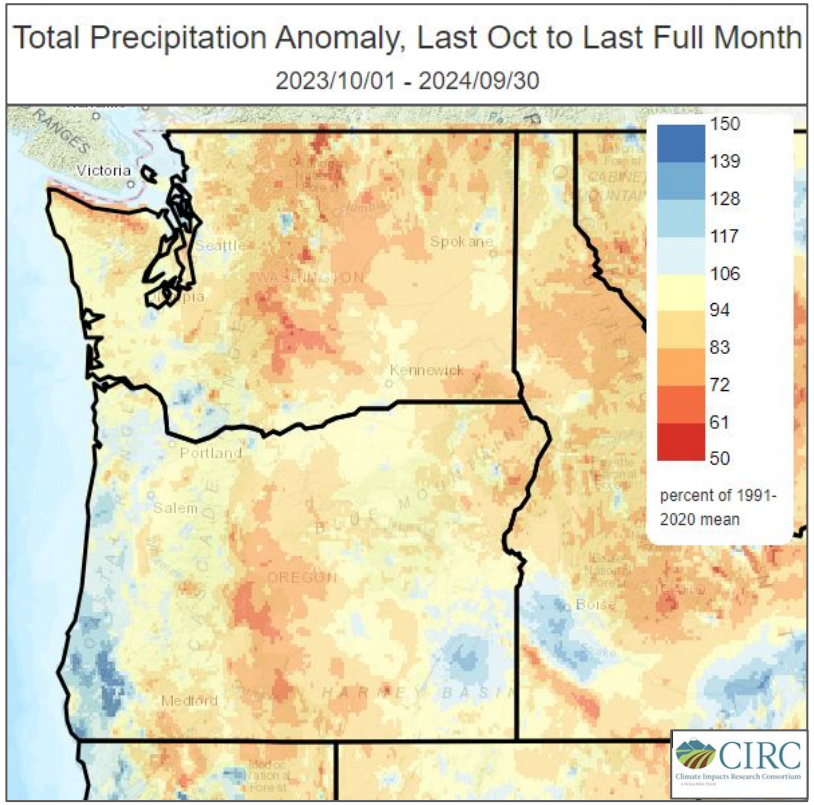


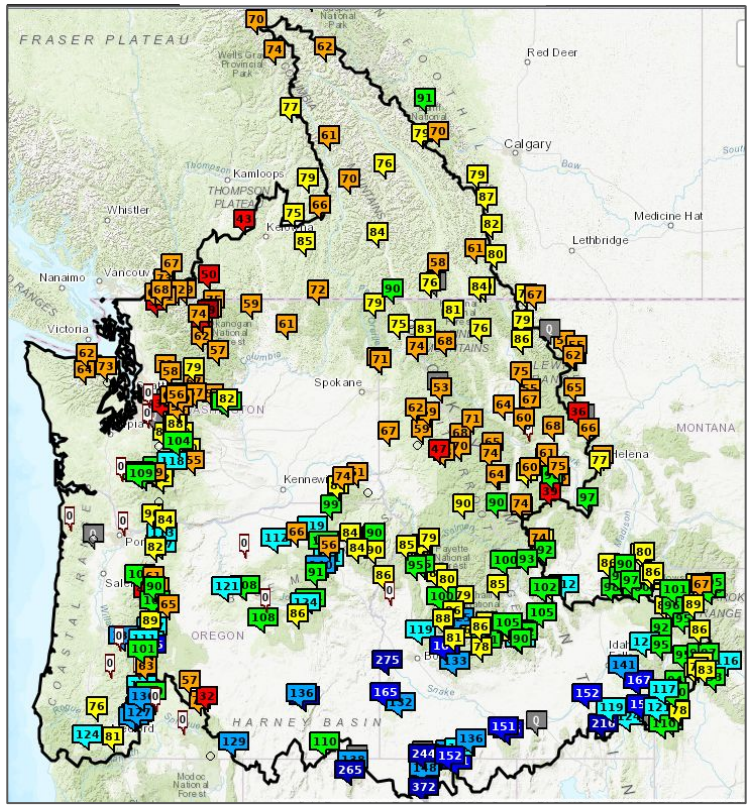



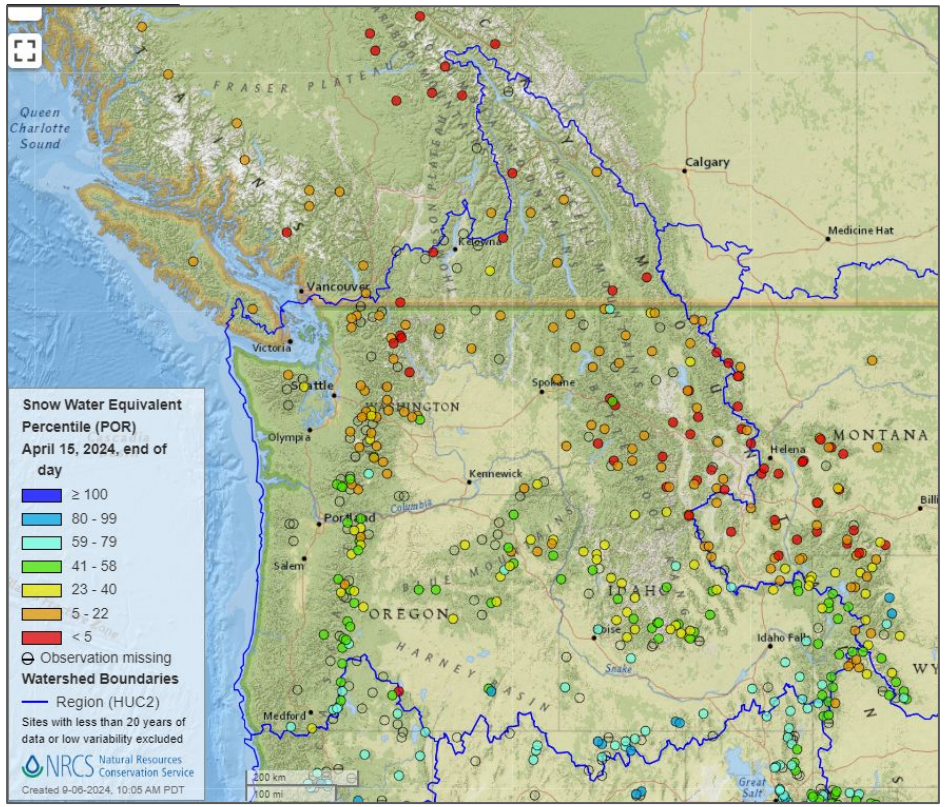



# Precipitation and Snowpack

Precipitation and snowpack were higher than normal in the south while the north saw record low snowpack at some stations.

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