

#### STATE OF WASHINGTON

#### **DEPARTMENT OF ECOLOGY**

PO Box 47600, Olympia, WA 98504-7600 • 360-407-6000

#### Water Supply Availability Committee (WSAC)

Thursday, February 13, 2024, 10 a.m. - 11:30 a.m.

Zoom: Click to join. (Call-in: 253.205.0468; Meeting ID: 816 5686 6078; Passcode: 038972)

#### Meeting Objectives – February:

• Share pertinent info and assess water supply conditions in Washington for winter.

#### Agenda

Time	Agenda item	Responsible
10:00 a.m.	Welcome and agenda review	Caroline Mellor, Ecology
	Recap: Drought Declaration and implications	
10:10 a.m.	Regional Climate Setting/ ENSO	Karin Bumbaco, OWSC
10:25 a.m.	Mountain Conditions	Matt Warbritton, NRCS
10:40 a.m.	Streamflow and Groundwater	Nick Sutfin, USGS
10:55 a.m.	Yakima Project	TBD, BOR
11:05 a.m.	Water Supply Forecasts	Amy Burke, NWS
11:20 a.m.	Discussion: What concerns do folks have for	All participants
	drought recovery and Water Year 2025?	Ecology facilitates
11:25 a.m.	Wrap-up	Caroline Mellor, Ecology

#### Committee Purpose

WSAC provides an important consultative and advisory role to Ecology related to current and forecasted water supply conditions and whether the hydrologic drought threshold has been met or is forecasted to be met: seventy-five percent of normal water supply within a geographic area (RCW 43.83B.405 and WAC 173-166-050).

#### Resources

WSAC Website: <u>Water Supply Availability Committee - WA State Department of Ecology</u> Ecology Drought homepage: Drought response - WA State Department of Ecology

#### Contact

Committee Chair: Caroline Mellor, Statewide Drought Lead, WA Department of Ecology Caroline.Mellor@ecy.wa.gov | (c) 360.628.4666





# Water Supply Availability Committee

February 13, 2025

Water Resources Program



# Recording!



# Agenda



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10:00 a.m.	Welcome and agenda Recap: Drought declaration and implications	Caroline Mellor, Ecology
10:10 a.m.	Regional Climate Setting / ENSO	Karin Bumbaco, WSCO
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10:40 a.m.	Yakima Project	Mik Lewicki, BOR
10:55 a.m.	Water Supply Forecasts	Amy Burke, NWRFC
11:10 a.m.	Discussion: What concerns do folks have for drought recovery and Water Year 2025?	All participants
11:25 a.m.	Wrap-up and next steps	Caroline Mellor, Ecology



## Committee Role

WSAC provides an important consultative and advisory role to Ecology related to:

- Current and forecasted water supply conditions;
- Whether the hydrologic drought threshold has been met or is likely to be met.



## Meeting Objectives

 Share pertinent info and assess water supply conditions in Washington as we enter Water Year 2025

#### **Drought Emergency Declaration**



On April 16, 2024, Ecology declared a Statewide drought due to low snowpack and warm and dry forecast.

Limited exceptions for Puget Sound metro areas with healthy water storage.



See: <a href="https://ecology.wa.gov/water-shorelines/water-supply/water-availability/statewide-conditions/drought-response">https://ecology.wa.gov/water-shorelines/water-supply/water-availability/statewide-conditions/drought-response</a>



# Drought Conditions

Drought conditions - two requirements:

- 1. Hydrologic threshold An area is receiving, or is projected to receive, less than seventy-five percent of normal water supply.
- 2. Hardship threshold Water users and the environment are or are expected to experience undue hardship.

This Committee advises on the hydrologic threshold.

See: RCW 43.83B.405 and WAC 173-166-050.

#### **Water Supply Factors**



Water year to date

- Snowpack
- Precipitation
- Temperature
- Soil moisture

Precipitation

Temperature

Streamflow

Soil moisture

Hydrologic threshold for drought was met

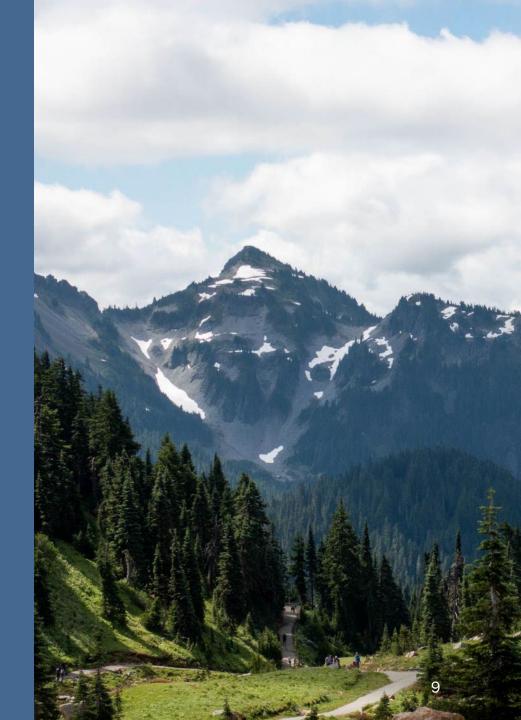


Hurricane Ridge Webcam, National Park Service Olympic National Park

Forecasts



# Implications of a Drought Declaration





# What Does a Declaration Do?

# Provides Ecology with the authority to:

- 1. Expedite emergency water transfer applications.
- 2. Establish a grant program to mitigate hardships to water users and the environment.





# Drought Response Funding

#### Grants to governmental entities:

- Federally recognized Tribes
- Counties, cities, and towns
- Water and sewer districts
- Public utility districts
- Port districts Conservation districts Irrigation districts
- Watershed management partnerships



# Additional Implications

State agencies – Ecology can enter into interagency agreements to fund drought response efforts

Examples: DOH, DFW, SCC, AGR

Eligibility for federal drought funding

Important communications tool



# Example Drought Response Grant Projects

# Agriculture or livestock

- Purchasing or leasing water or water rights
- Replacing intakes, pumps, and related accessories

# Public water supply

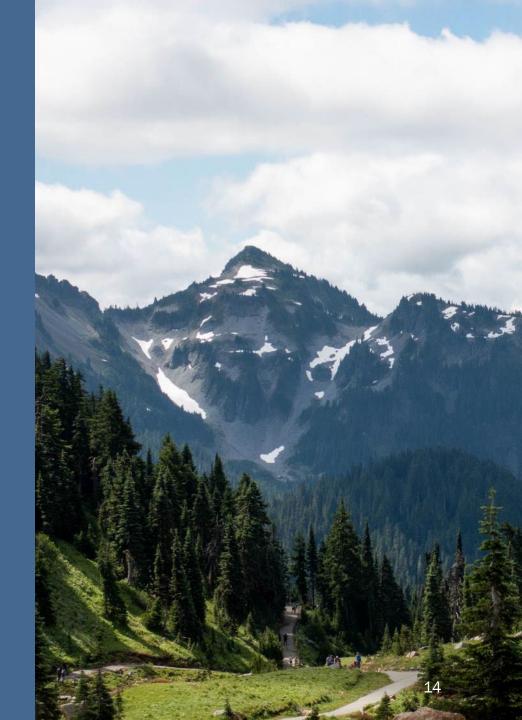
- Transporting emergency water supplies
- Implementing water conservation strategies

# Fisheries and wildlife

- Eliminating migration barriers
- Modifying stream channels adjacent to a hatchery



# Ongoing drought management





#### **Drought response continues**

The Drought declaration is currently in place till April 2025.

Ecology continues to evaluate conditions throughout this winter.





#### **Drought response continues**

Drought response funding remains open.

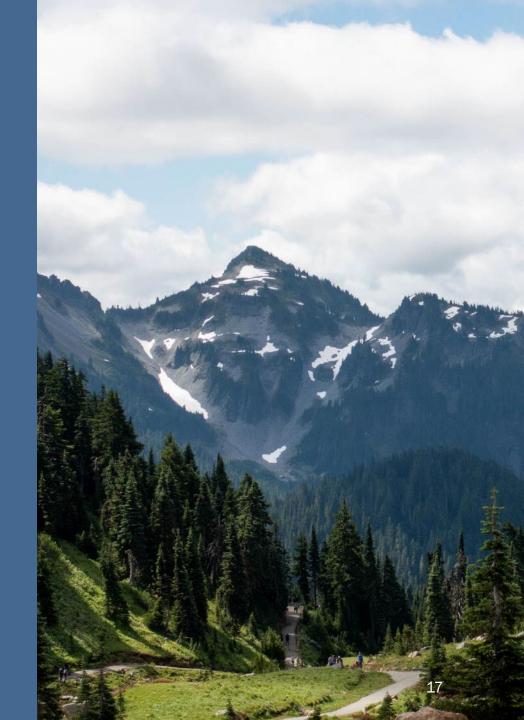
• Ecology re-issued the Emergency Drought Funding rule December 11.

 Any grant applications this winter must be to address continued drought impacts to water supply from 2024 drought conditions.





## Presenters





# Discussion Question

For all meeting attendees:

What concerns do folks have for drought recovery and Water Year 2025?



### Drought Info

- Updated drought website: <u>Drought Response</u>
  - Washington State Department of Ecology
    - Declaration <u>Order of Determination by</u>
       <u>the Director</u>
- Water Supply Availability Committee (WSAC) website



## Thank you

Contact: Committee Chair
Caroline Mellor
Statewide Drought Lead
Caroline.Mellor@ecy.wa.gov





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Research & Data

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Air & Climate

Water & Shorelines

Waste & Toxics

Spills & Cleanup

#### <u>Drought response grants - Washington State Department of Ecology</u> Water resources drought response grants

This funding opportunity opens April 17, 2024.

We issued a <u>Drought Emergency Declaration</u> on April 16, 2024. On April 10, 2024, the state Executive Water Emergency Committee determined that specific areas in Washington meet the statutory criteria for drought conditions described in Chapter 43.83B RCW , "water supply is less than 75 percent of normal, resulting in undue hardships to water users and the environment." Under SHB 1138, Emergency Drought Response &, funding became available to alleviate immediate conditions from this drought. The adopted emergency drought funding rule, Chapter 173-167 WAC, remains effective until Aug. 14, 2024.

Ecology may extend the emergency rule based on evolving drought conditions. If the emergency rule is extended, these guidelines will be updated to reflect the extended date to which applications may be submitted.

#### I want to...

- Apply for or manage a grant or loan
- Get guidance for managing a grant or loan
- Learn more about the 2024 drought







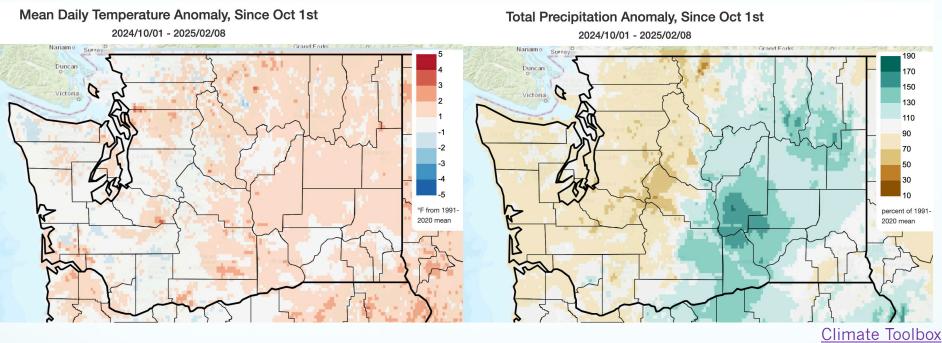
# Current Conditions and Seasonal Outlook

Karin Bumbaco
Washington State Climate Office
Climate Impacts Group
University of Washington
February 13, 2025

#### Water Year 2025

Temperature

Precipitation



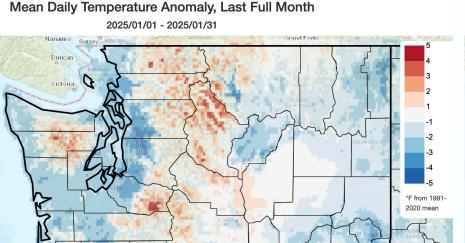
- Averaged statewide, Oct-Jan temperatures were above normal (+1.4°F), tying as the 18<sup>th</sup> warmest\*
- Averaged statewide, Oct-Jan precipitation was below normal (88% of normal)

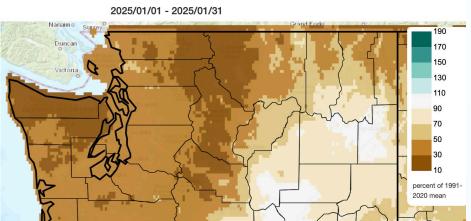
## January 2025

#### Temperature

Precipitation

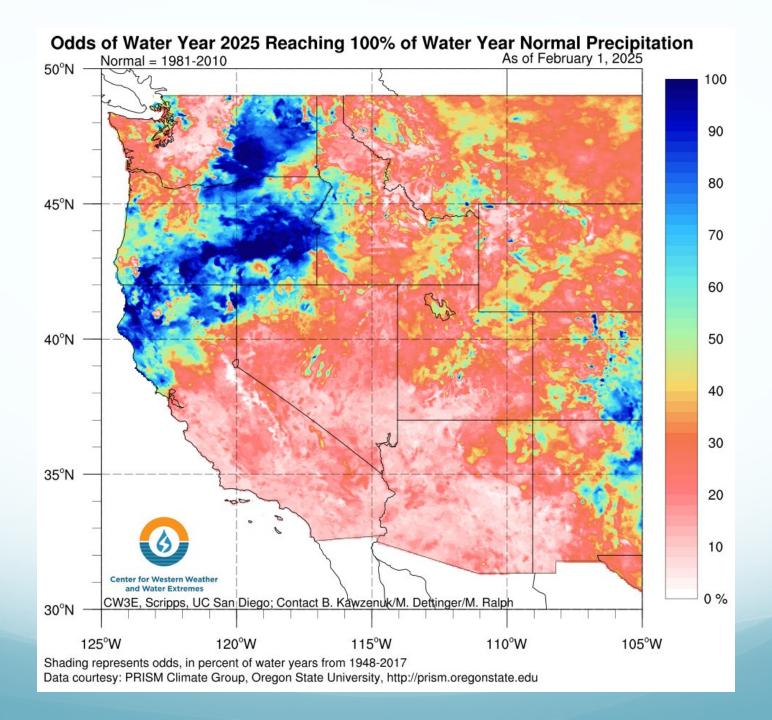
Total Precipitation Anomaly, Last Full Month





Climate Toolbox

- Averaged statewide, Jan temperatures were nearnormal (-0.6°F)\*
- Averaged statewide, Jan precipitation much below normal (35% of normal), ranking as the 5<sup>th</sup> driest

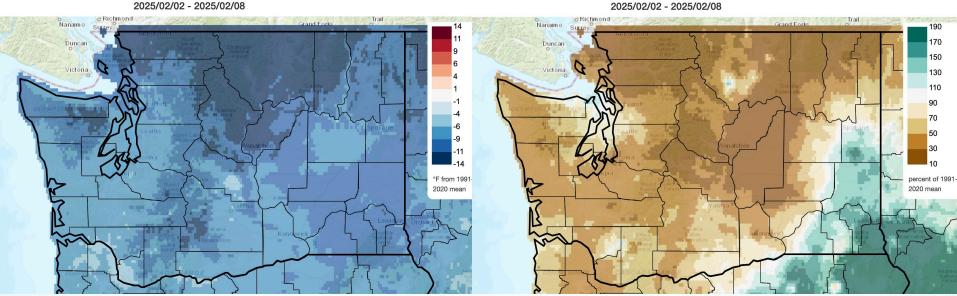


## February 2025 so far...

#### Temperature

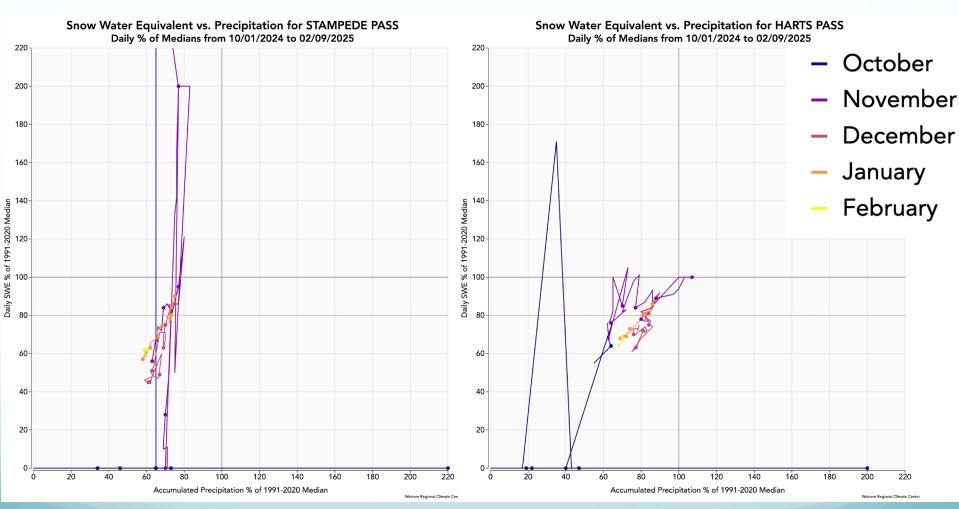
Precipitation

Mean Daily Temperature Anomaly, Last 7 Days Total Precipitation Anomaly, Last 7 Days

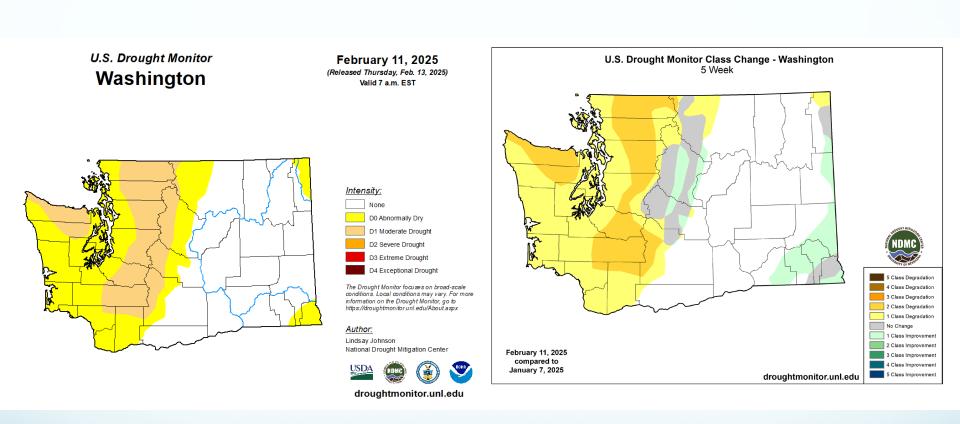


Climate Toolbox

# Snow Drought Tracker



# U.S. Drought Monitor



#### Current Status: La Niña

#### La Niña Advisory

#### Official NOAA CPC ENSO Probabilities (issued February 2025)

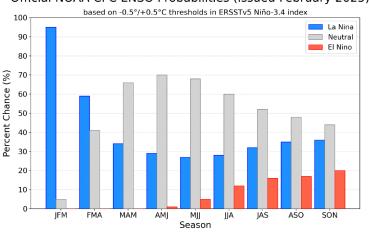
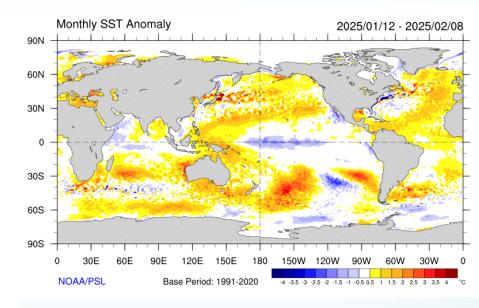
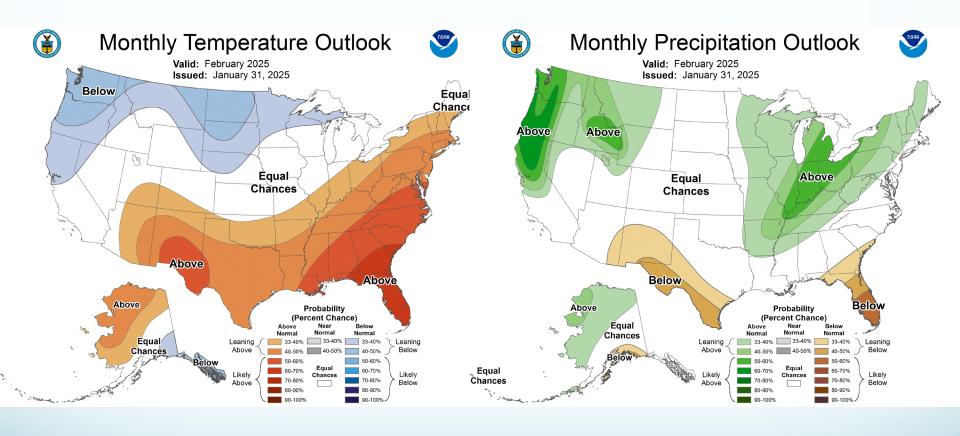


Figure 7. Official ENSO probabilities for the Niño 3.4 sea surface temperature index (5°N-5°S, 120°W-170°W). Figure updated 13 February 2025.

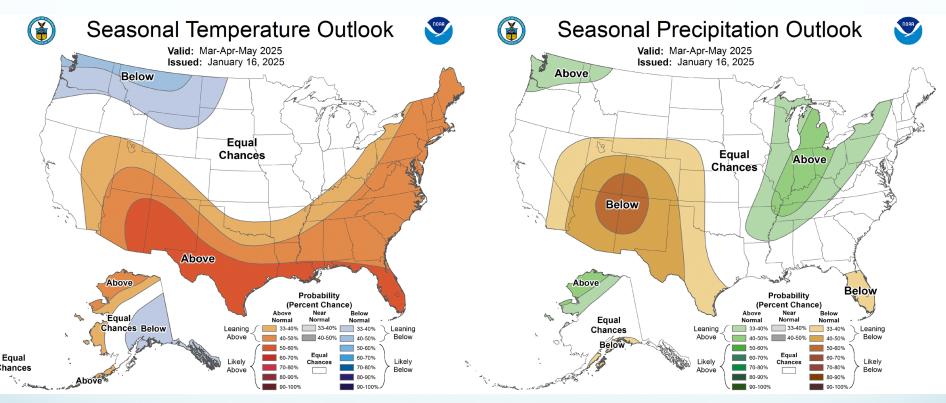


- Weak La Niña is expected to persist through the spring
- Neutral conditions more likely March-May (66%)

#### Climate Prediction Center Outlook: Feb

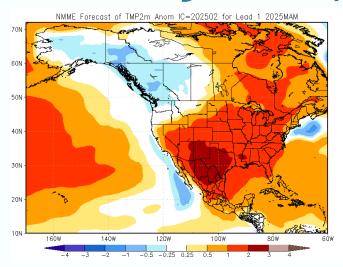


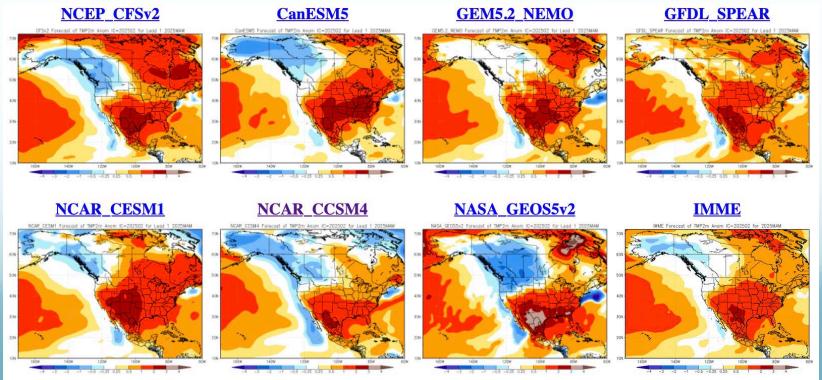
#### Climate Prediction Center Outlook: Mar-May



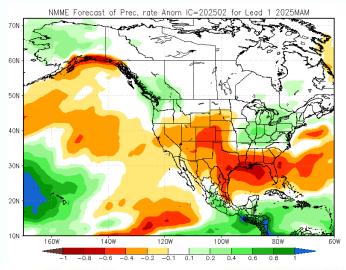
Feb-Apr: Higher odds of below normal temps and above normal precip

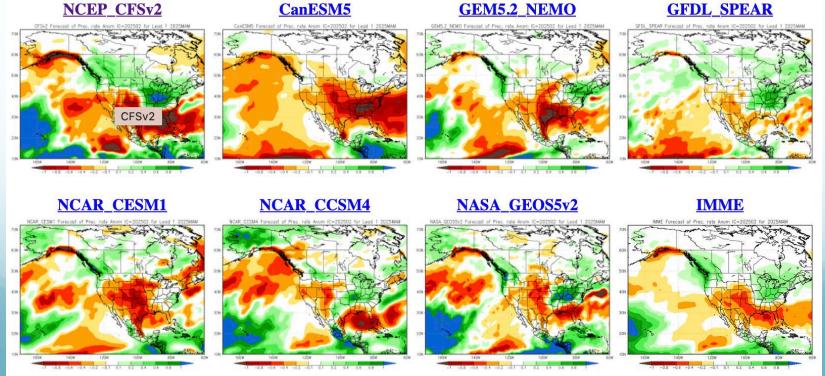
#### NMME: Mar-May Temperatures





### NMME: Mar-May Precipitation





# Summary

- Water year 2025 temperatures have been above normal (tying 18<sup>th</sup> warmest Oct-Jan on record)
- Water year precipitation has been drier than normal across western WA and above normal across eastern WA so far
  - January was extremely dry statewide (5<sup>th</sup> driest)
- Weak La Niña is finally here!
- Forecasts still indicate higher chances of below normal temperatures and above normal precipitation for February through this spring





# USDA Natural Resources Conservation Service Snow Survey and Water Supply Forecasting Program

# **Washington**Water Supply Availability Committee

Feb. 13, 2025

#### Matt Warbritton

Supervisory Hydrologist USDA NRCS SSWSF Portland Data Collection Office <u>matt.warbritton@usda.gov</u>

503-307-2829





# **Snowpack Conditions**

#### **Statewide Snowpack**

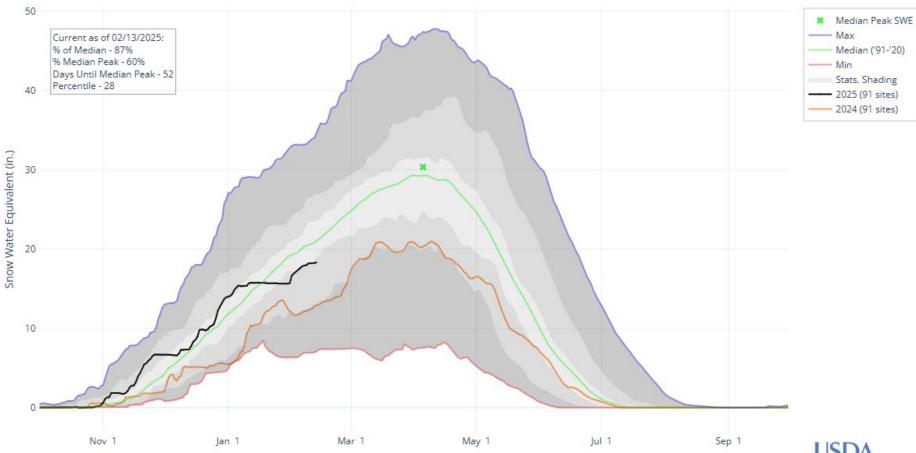
#### Profile for Snow Water Equivalent



Statewide Snowpack: 87% of Normal 60% of median peak

Snowpack Percentile: 28

#### SNOW WATER EQUIVALENT IN STATE OF WASHINGTON



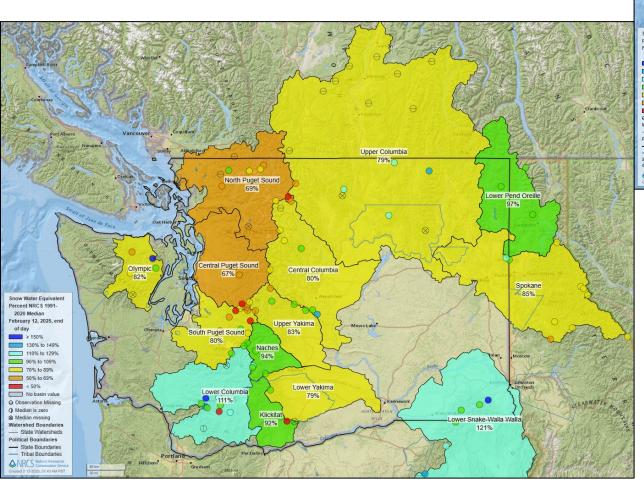


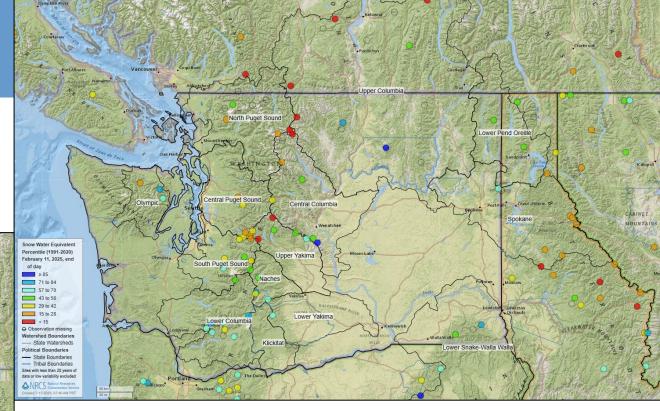
### **West-wide Snowpack**



## **Snowpack in Washington**

Basin & Site Map









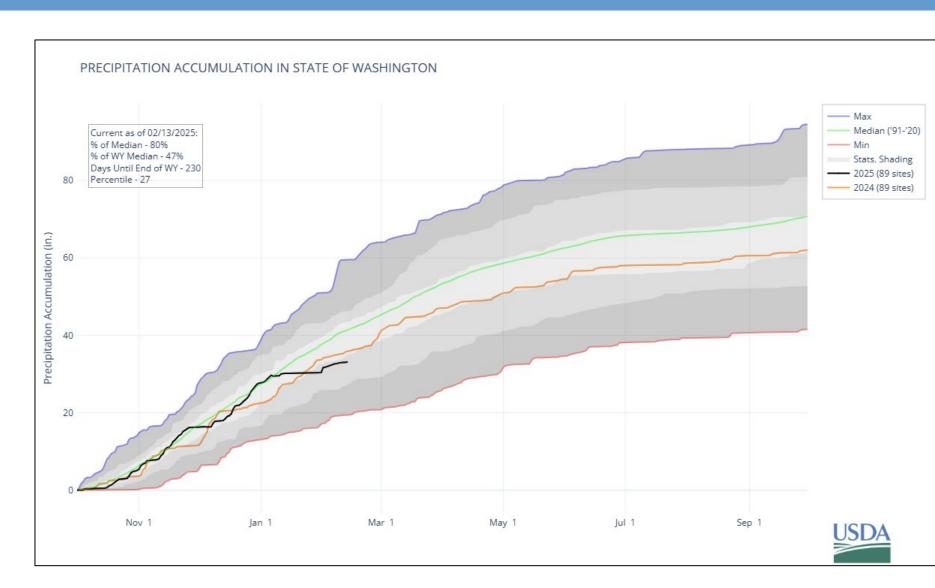
# **Precipitation Conditions**

## **Statewide WYTD Precipitation**



Statewide WYTD Precipitation: **80%** of normal

27 – percentile (normal period)

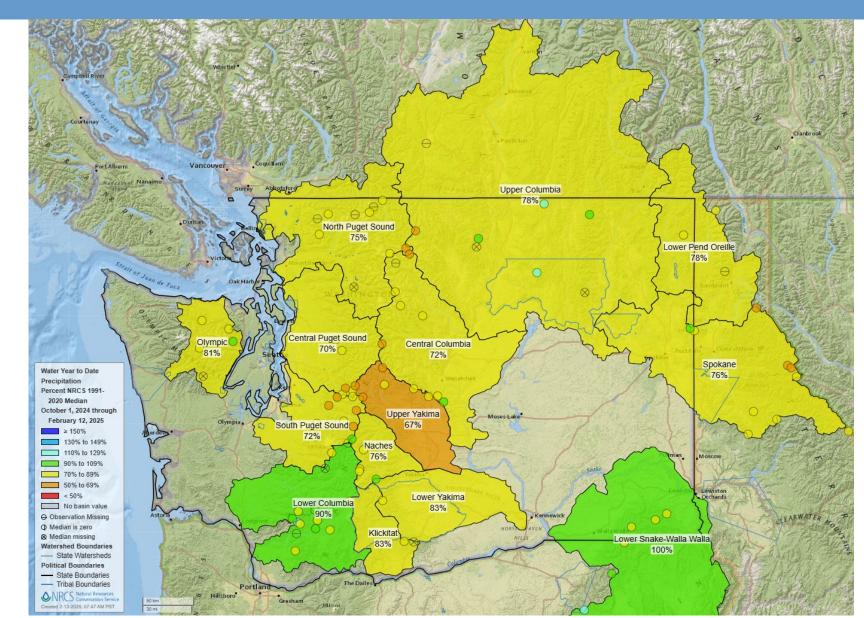


### **WYTD Precipitation – Site Map**

Percent of Normal

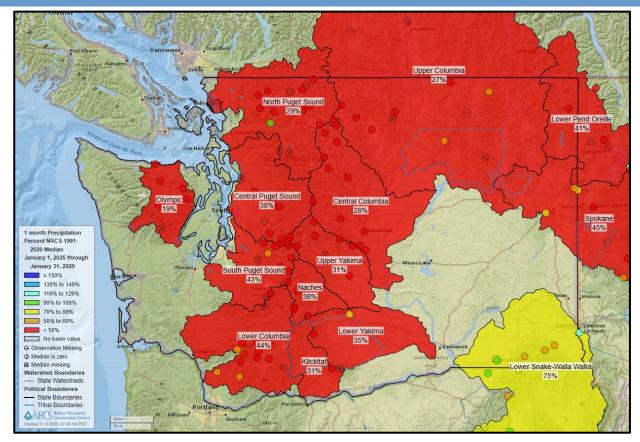


**Natural Resources Conservation Service** 



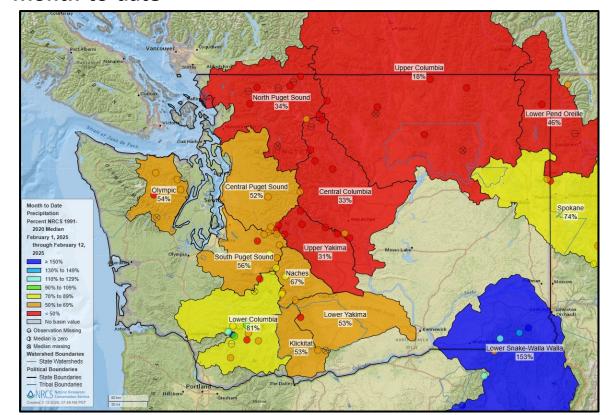
#### **Month-to-Date Precipitation**





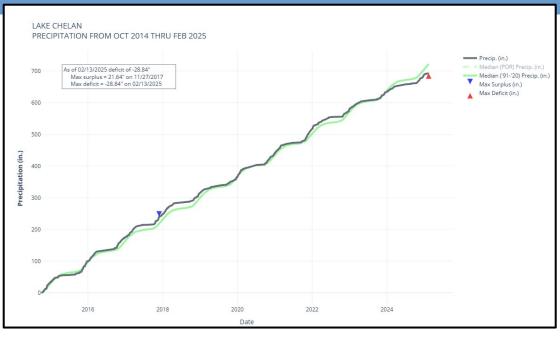
#### **January**

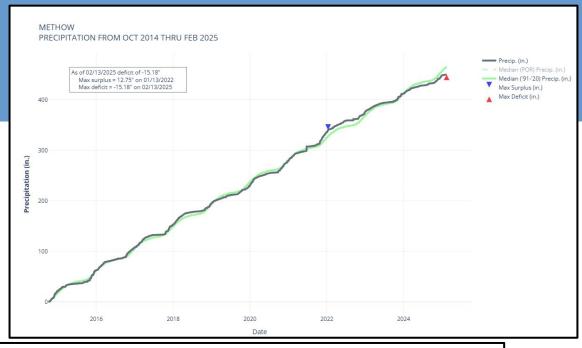
#### Month-to-date

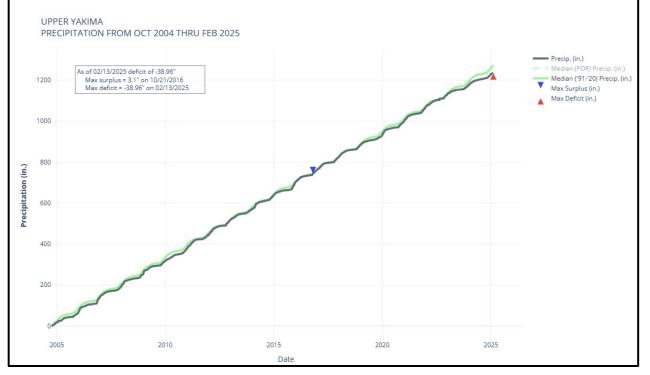


## **Precipitation: Compounding Deficits**

Last decade











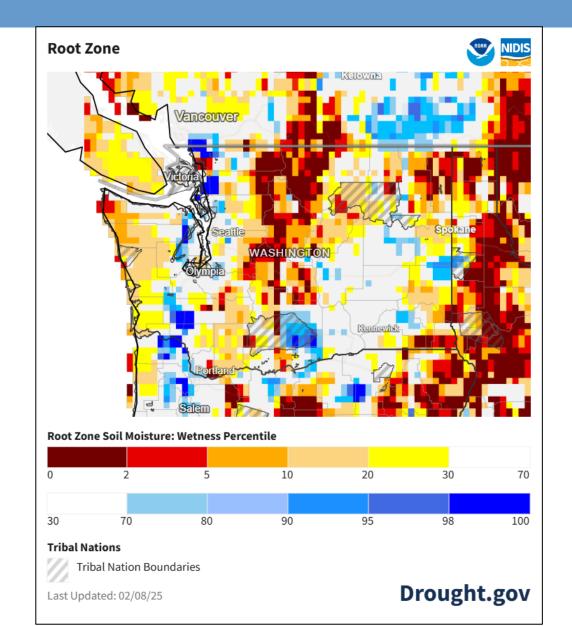
## **Soil Moisture**

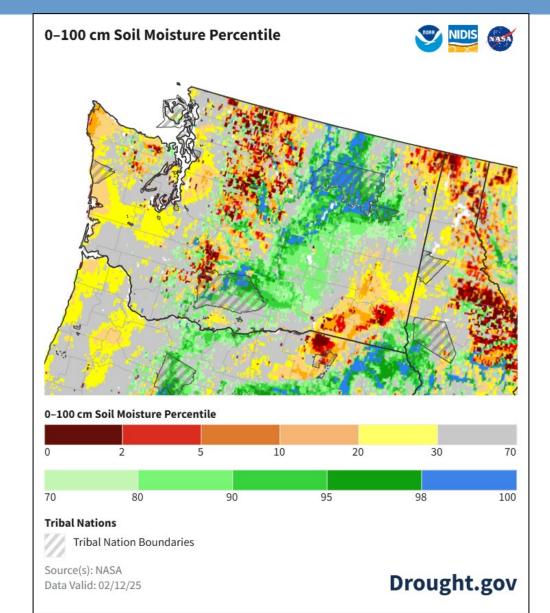
#### **Soil Moisture**

#### NASA GRACE and SPORT-LIS



**Natural Resources Conservation Service** 





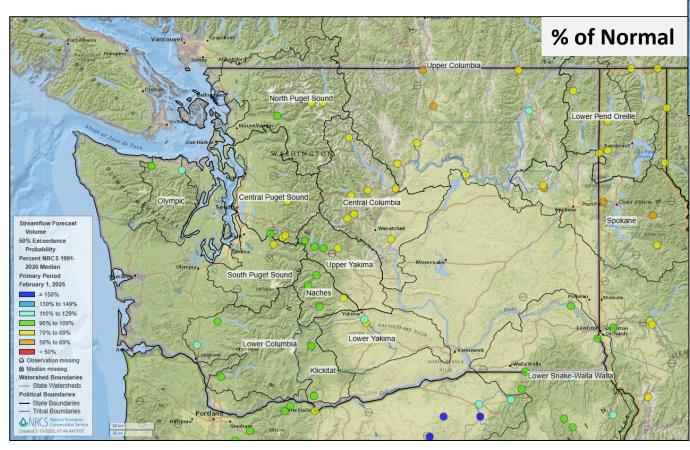


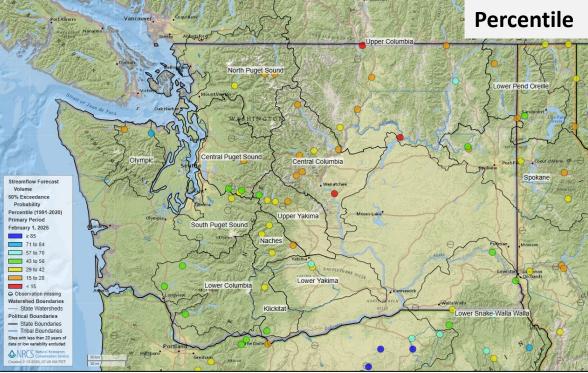


# Water Supply Outlook as of Feb. 1

## **Water Supply Forecasts**

Feb. 1

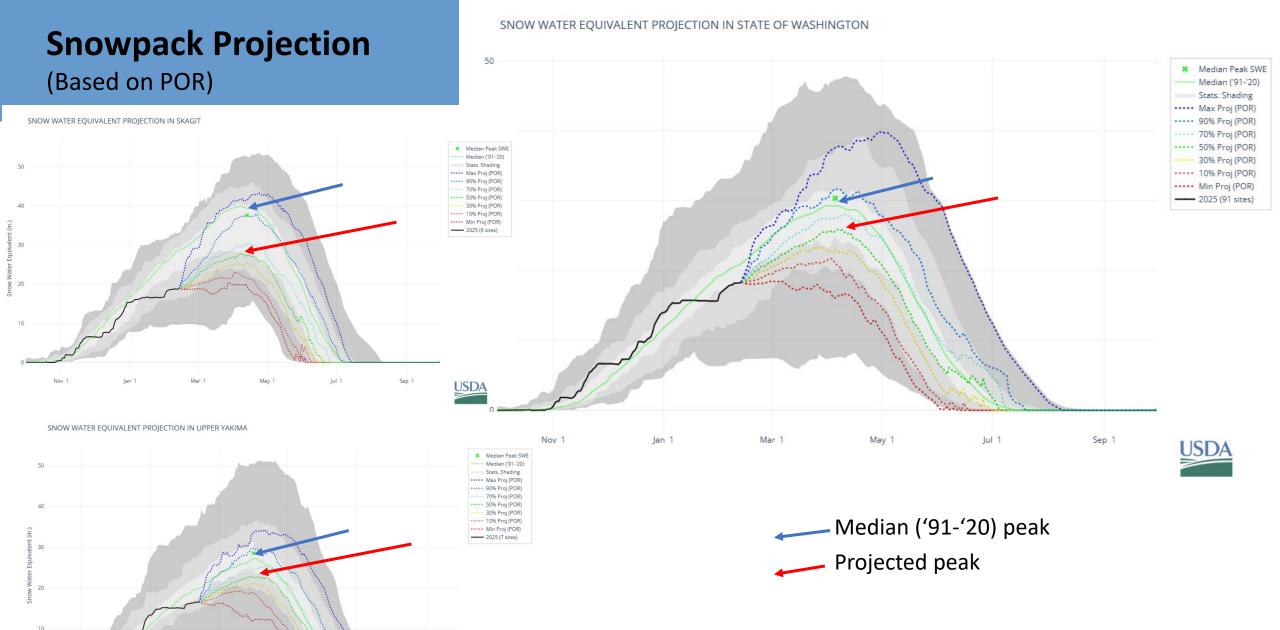








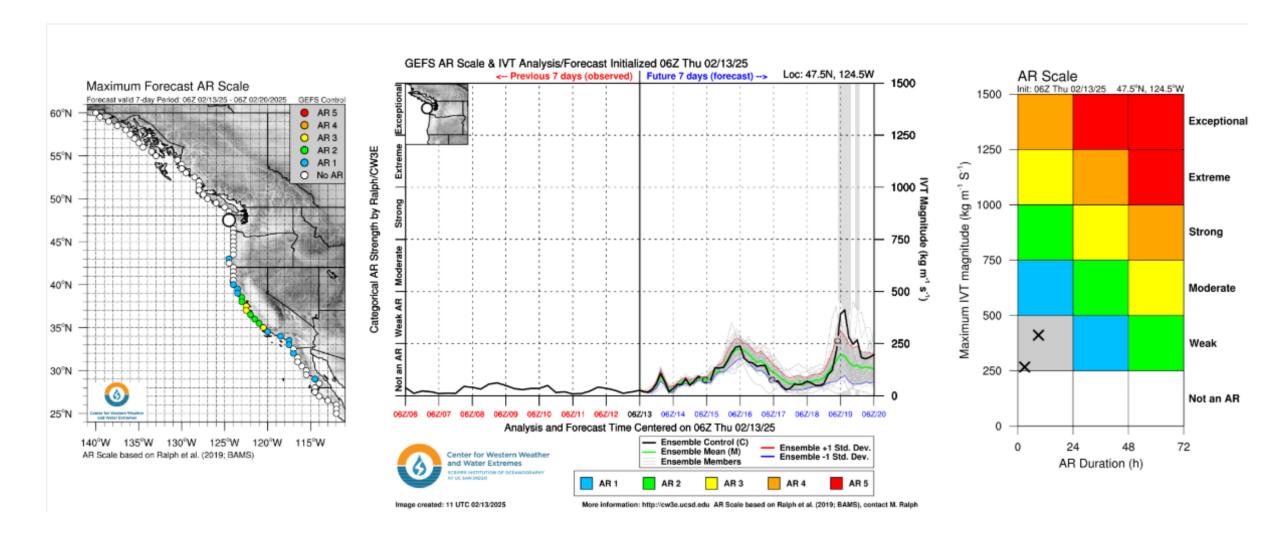
# **Looking ahead**



#### **Atmospheric River Forecast**

CW3E

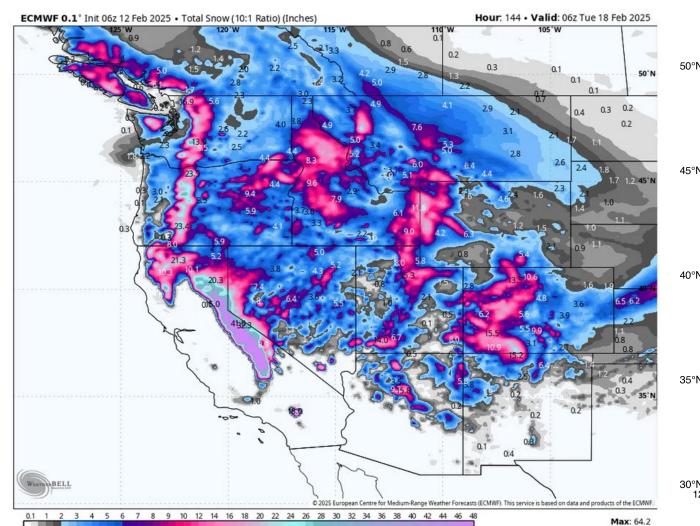


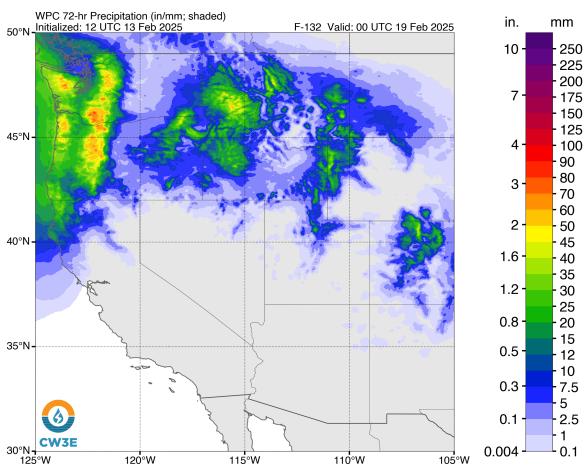


#### Feb. 12-18 Snow & Precipitation Forecast

CW3E









**Natural Resources Conservation Service** 



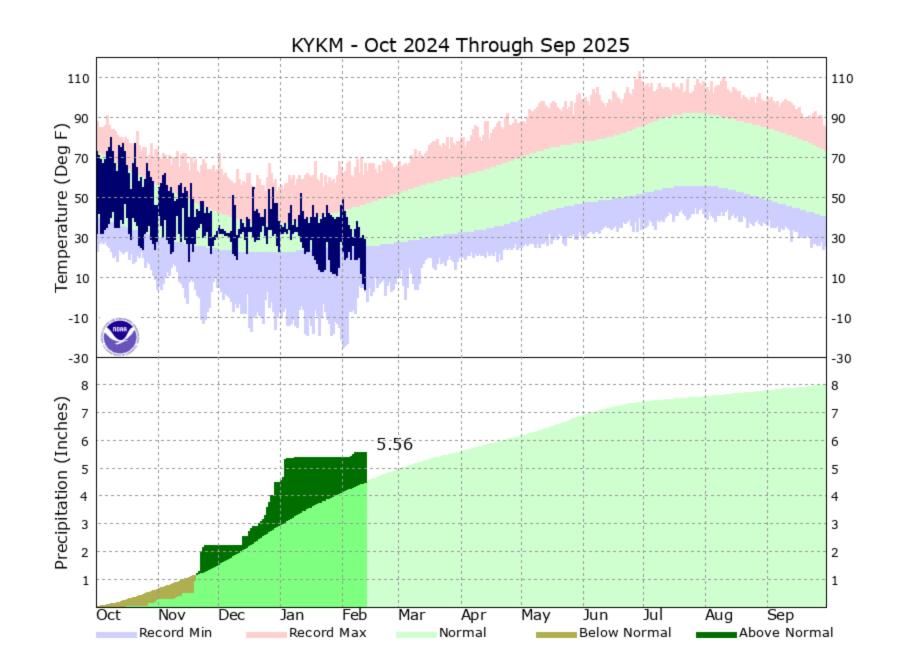
#### Thank you!

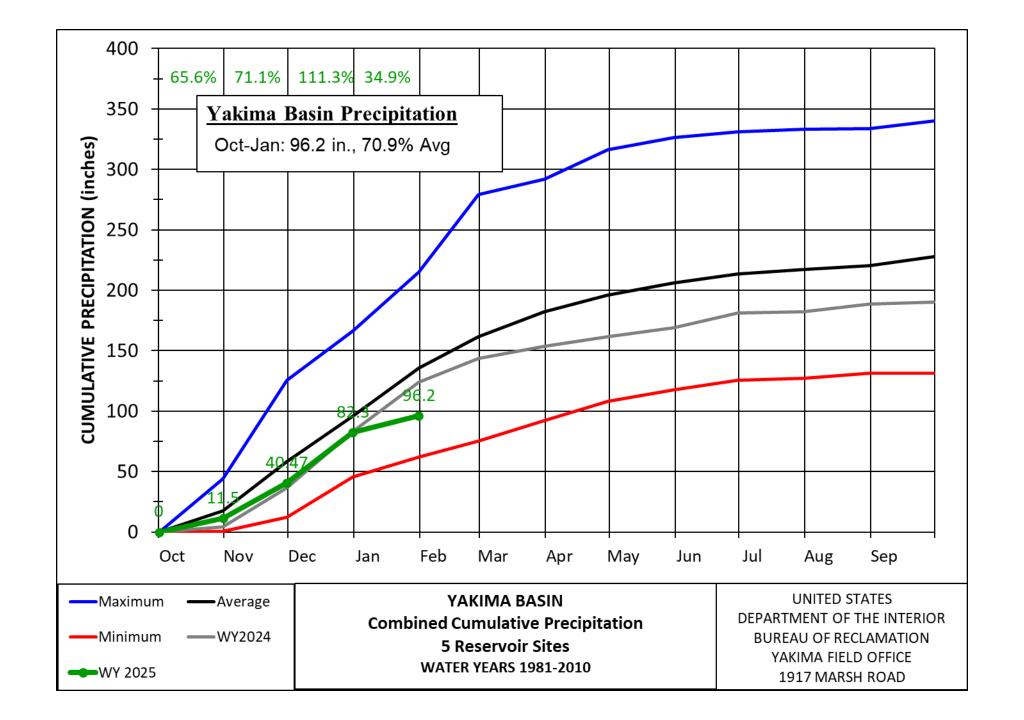
Matt Warbritton
Supervisory Hydrologist
USDA NRCS SSWSF
Portland Data Collection Office
matt.warbritton@usda.gov
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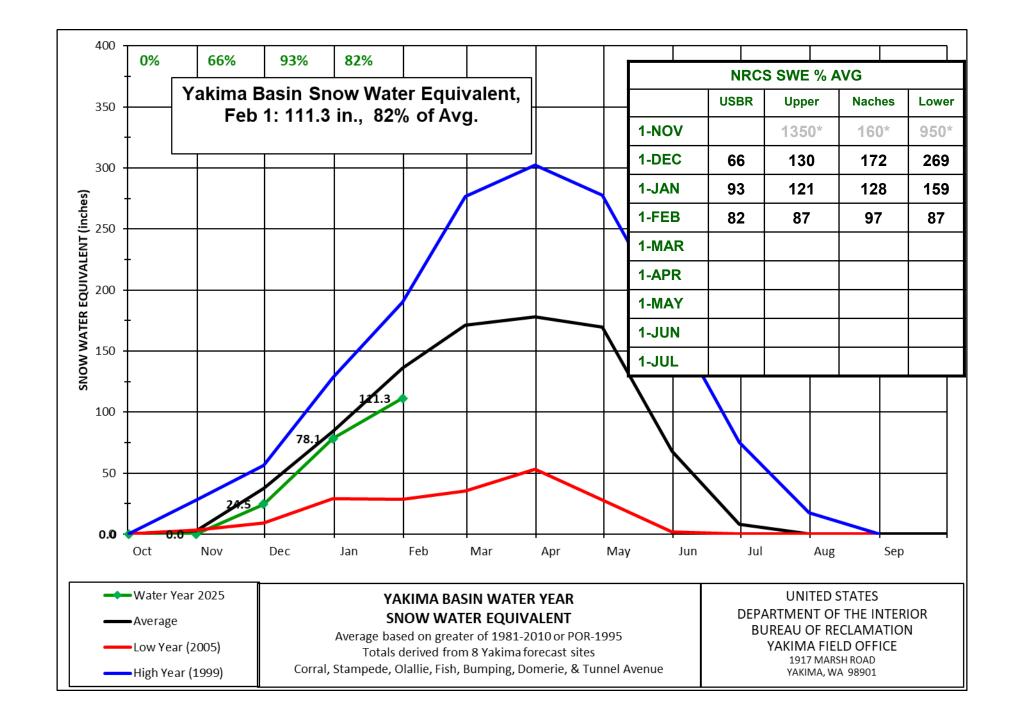
Washington Snow Survey and Water Supply Program Website In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

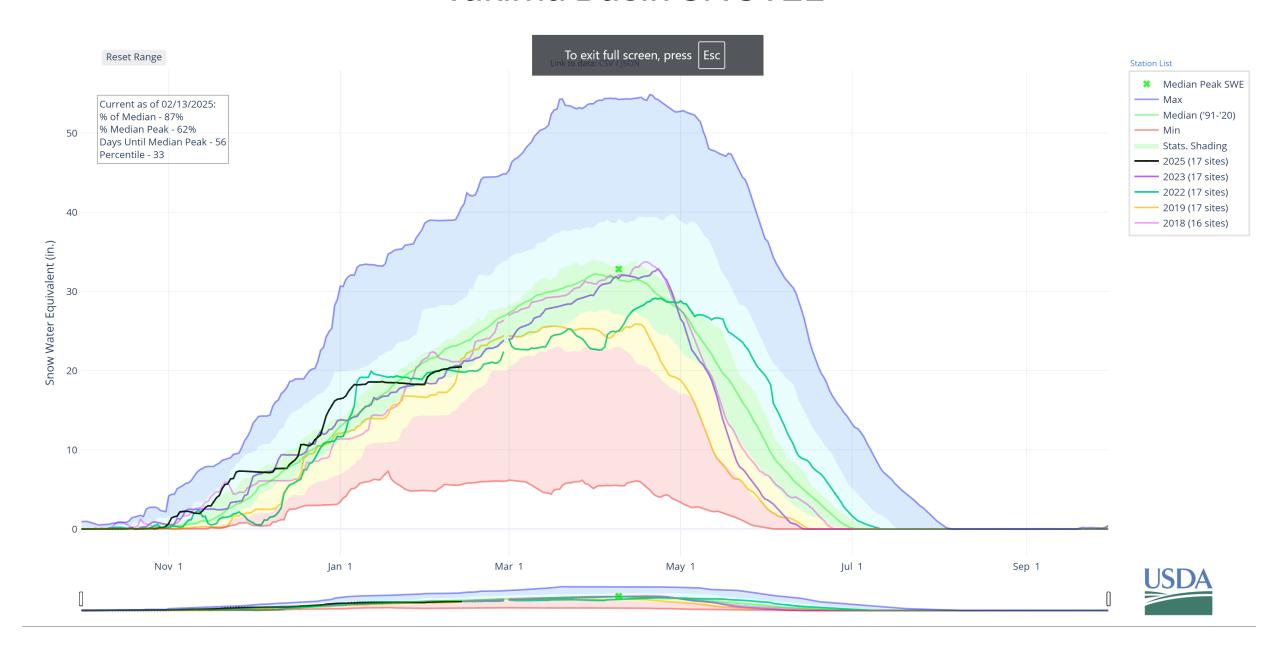
To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at How to File a Program Discrimination Complaint and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

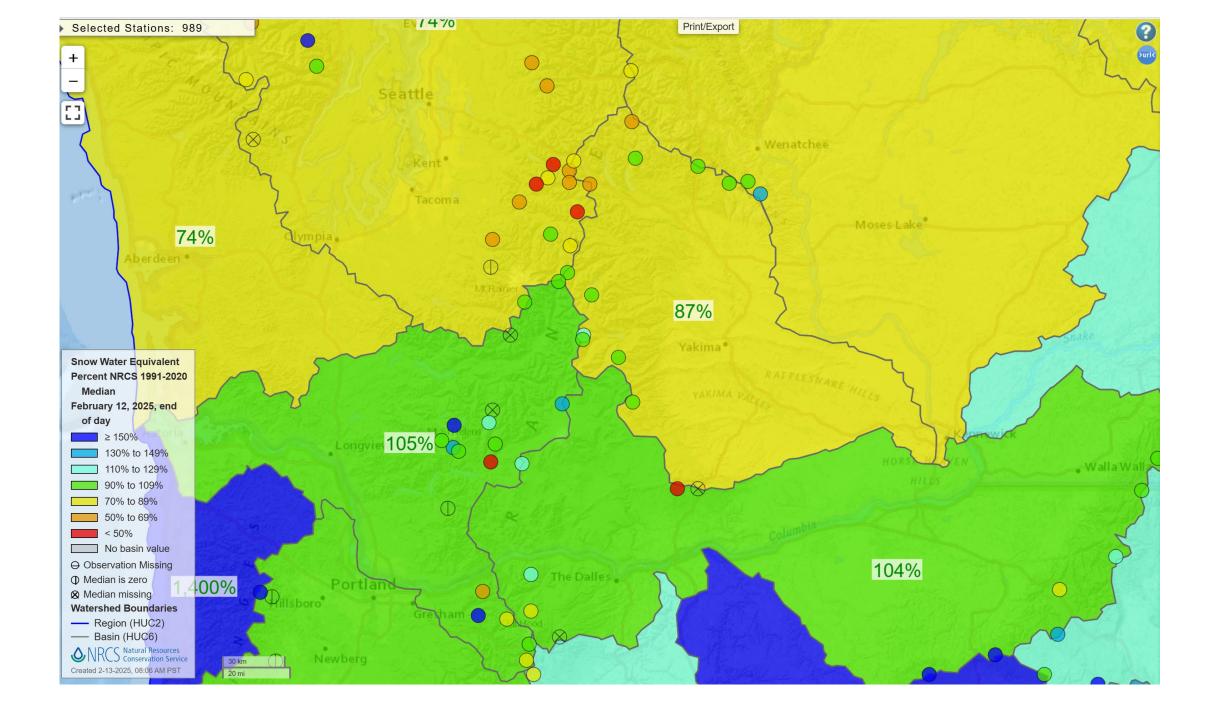


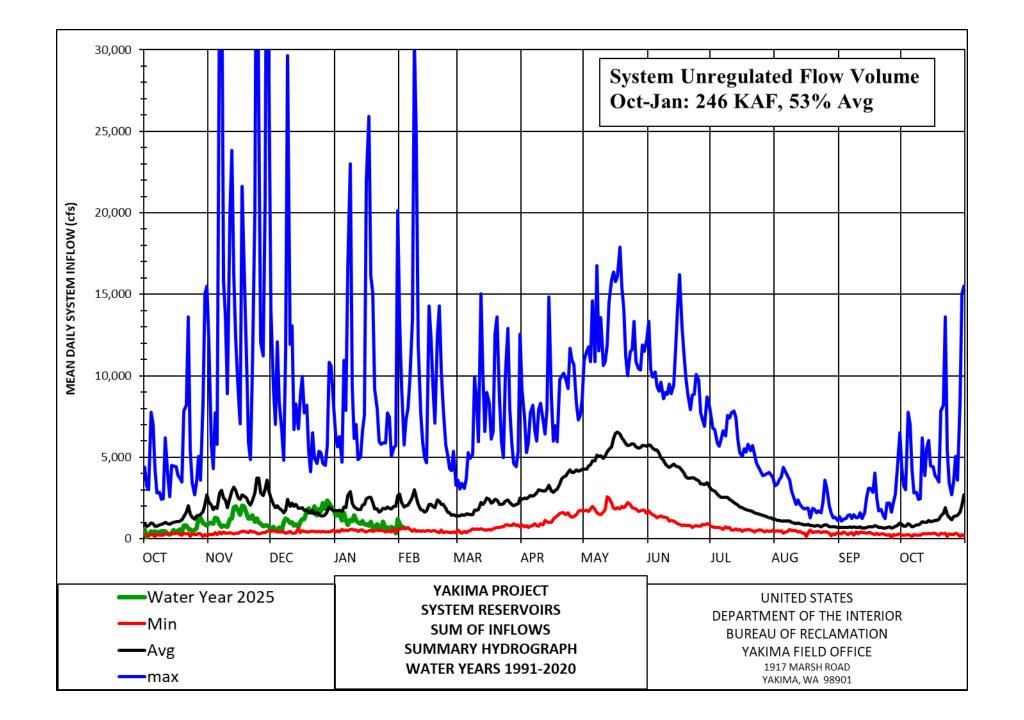


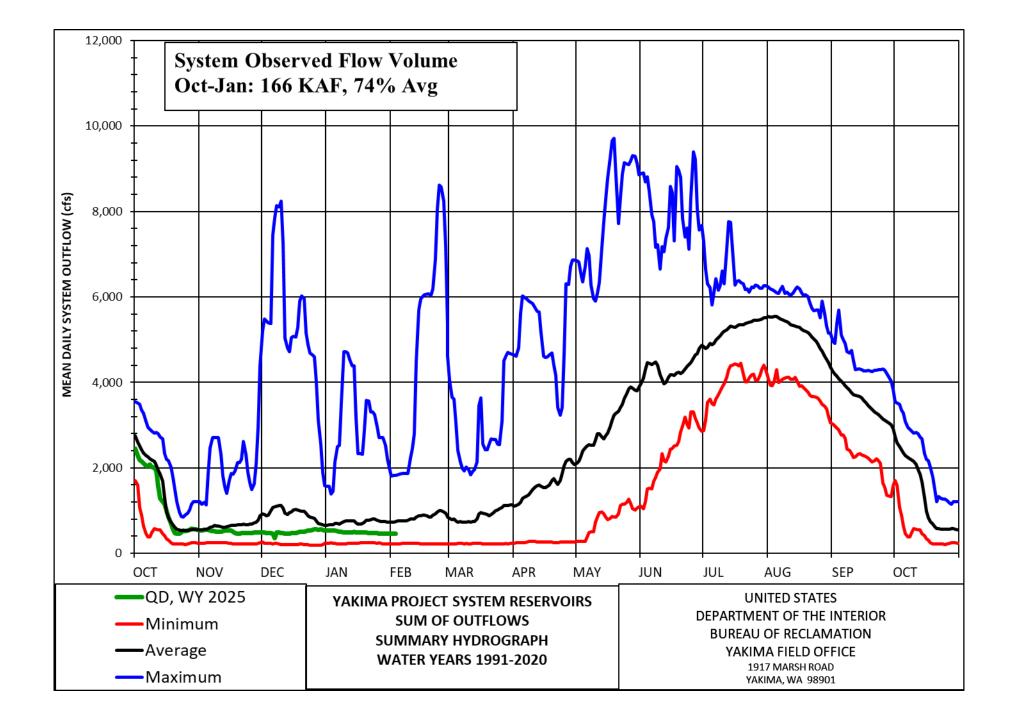


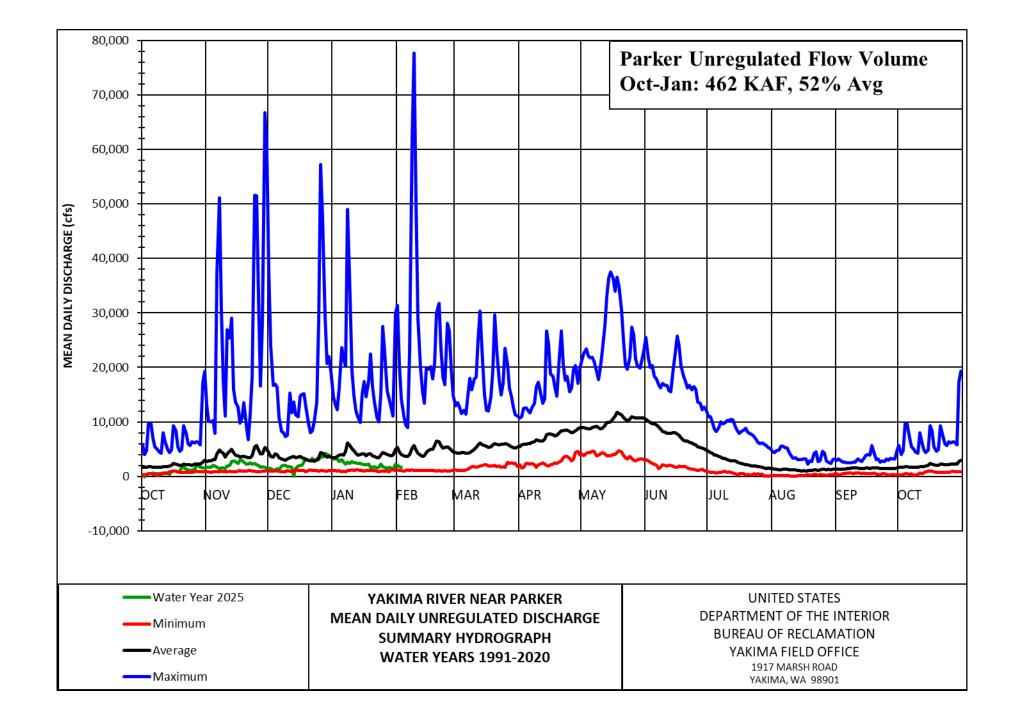
### Yakima Basin SNOTEL

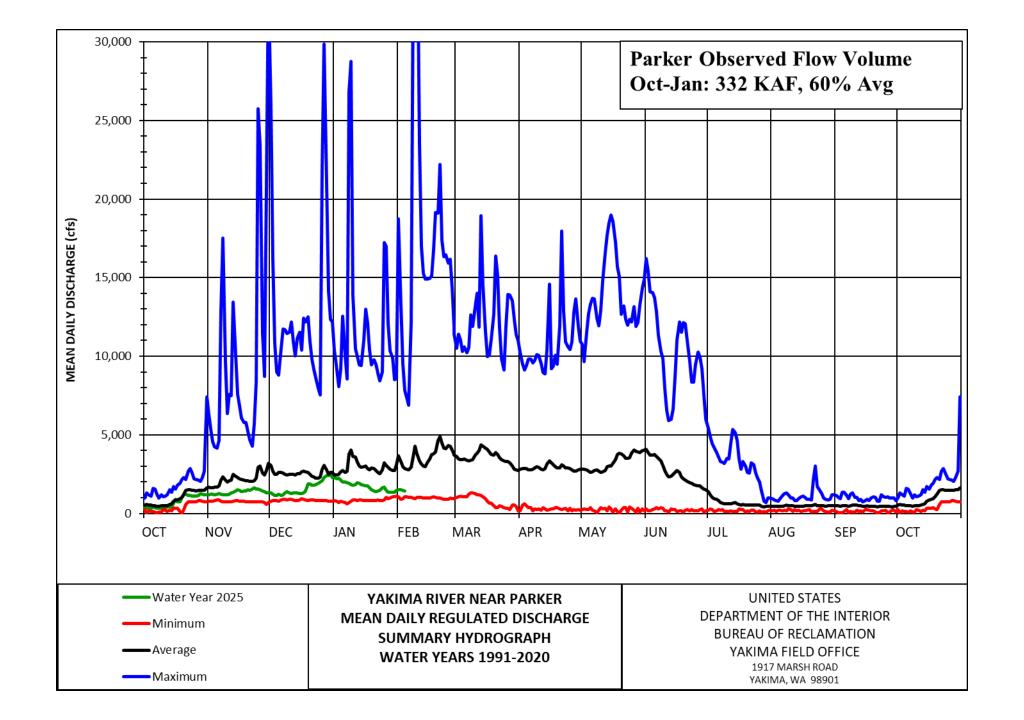


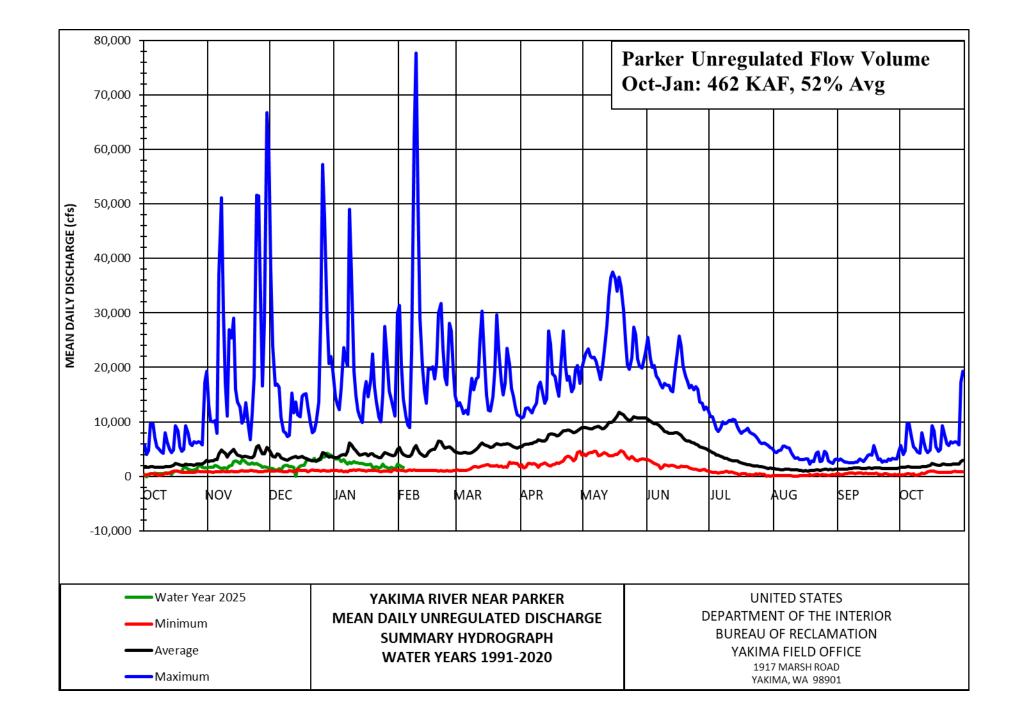


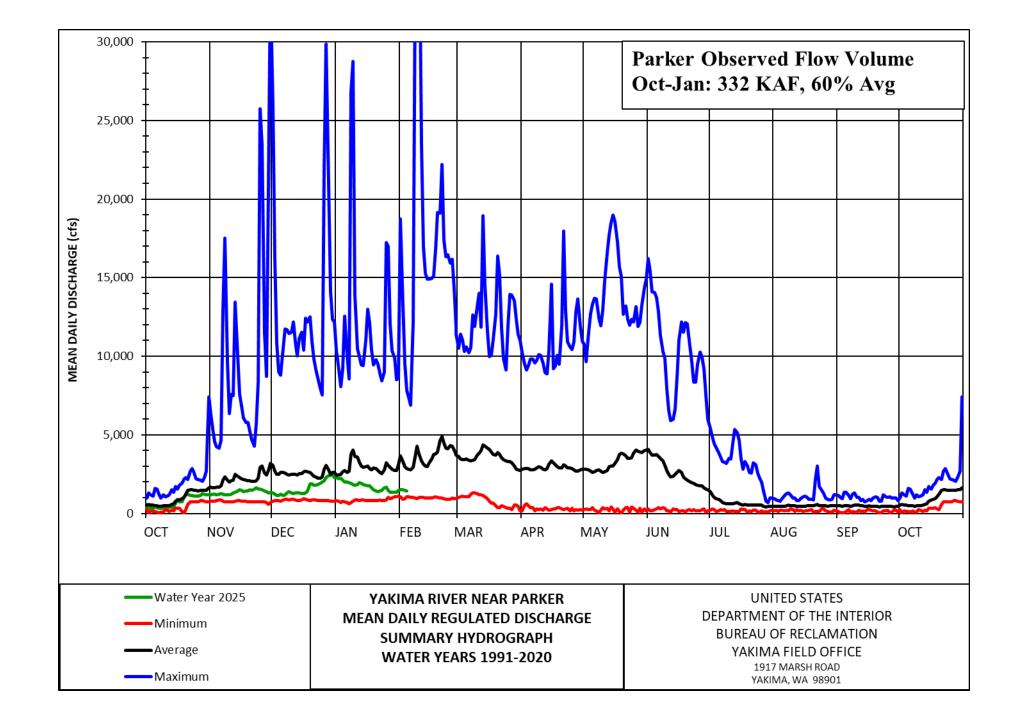


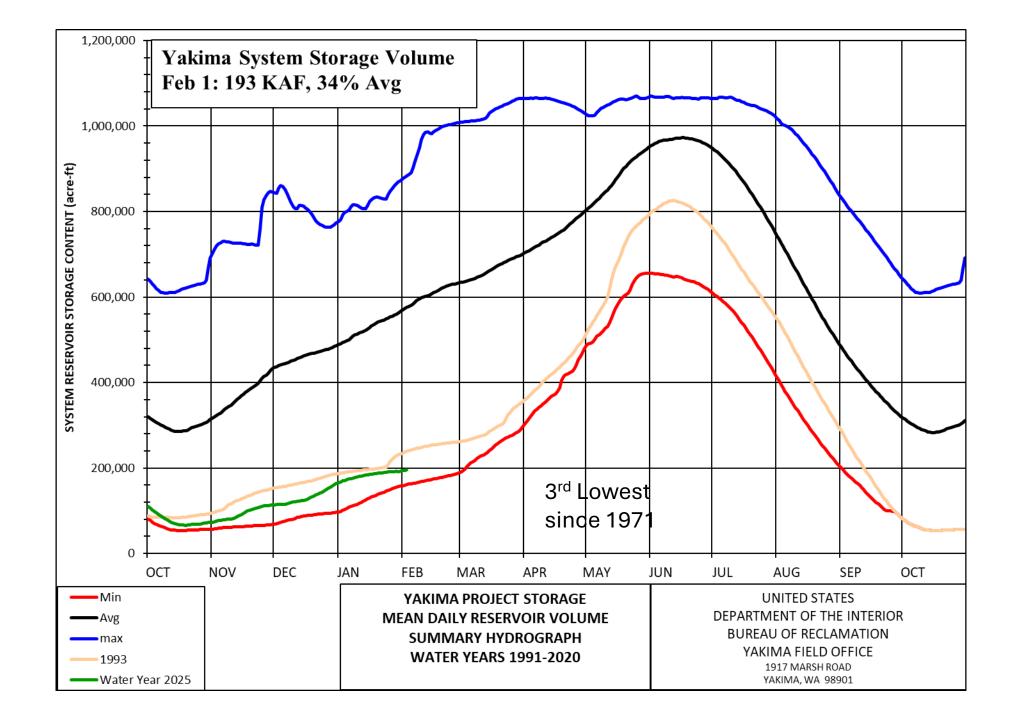


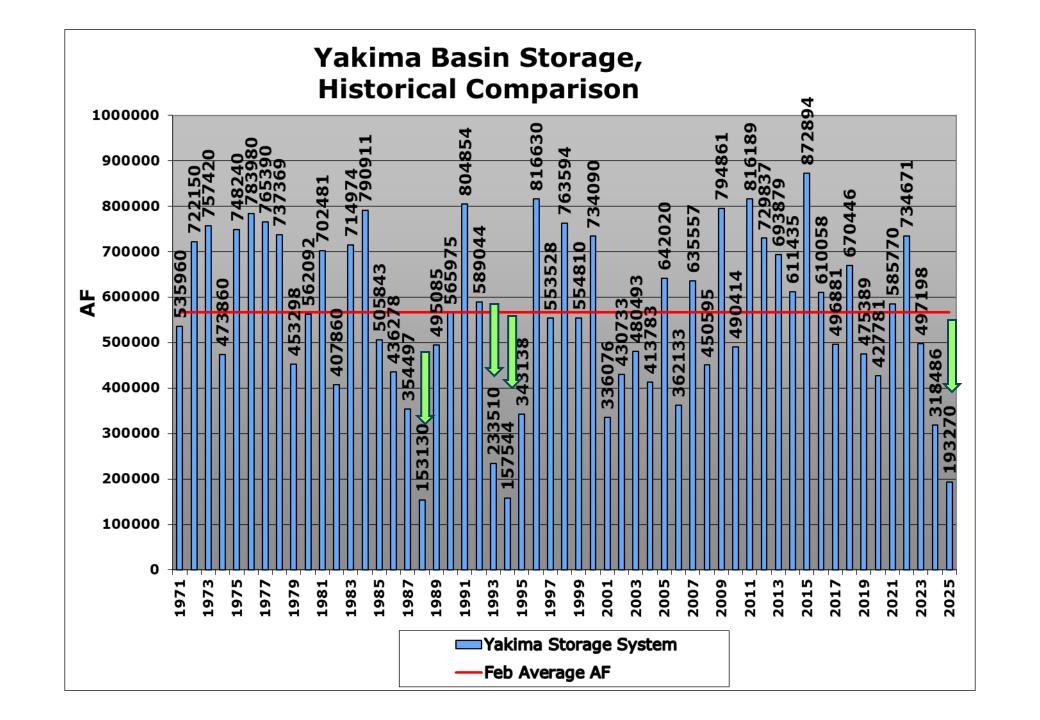














# NWS

# November 2024 Washington Water Supply

Amy Burke, Sr Hydrologist - Northwest River Forecast Center NWRFC.watersupply@noaa.gov

Brent Bower, Sr Service Hydrologist Seattle Andy Bryant, Sr Service Hydrologist Portland Robin Fox, Service Hydrologist Spokane George Perry, Service Hydrologist Pendleton





## Washington State - Areas of Responsibility

Northwest Washington - NWS Seattle - nws.seattle@noaa.gov

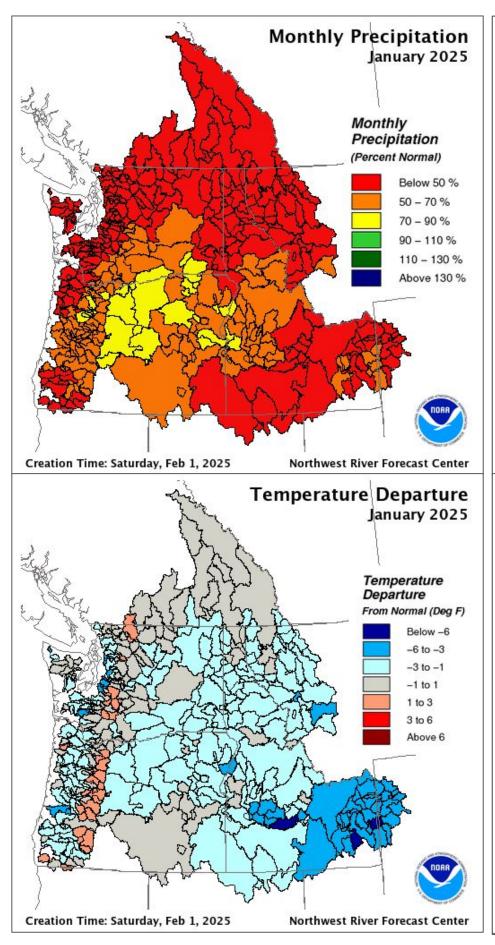
Southwest Washington - NWS Portland - nws.portland@noaa.gov

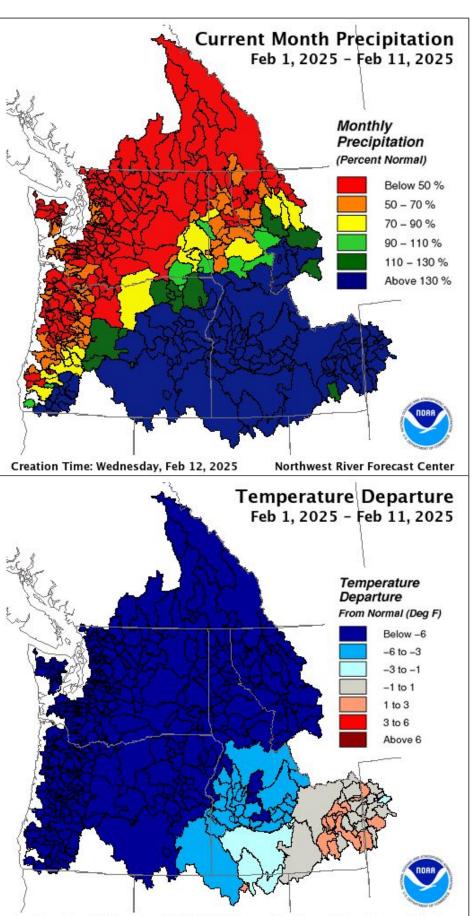
Northeast Washington - NWS Spokane - nws.spokane@noaa.gov

Southeast Washington - NWS Pendleton - pdt.operations@noaa.gov



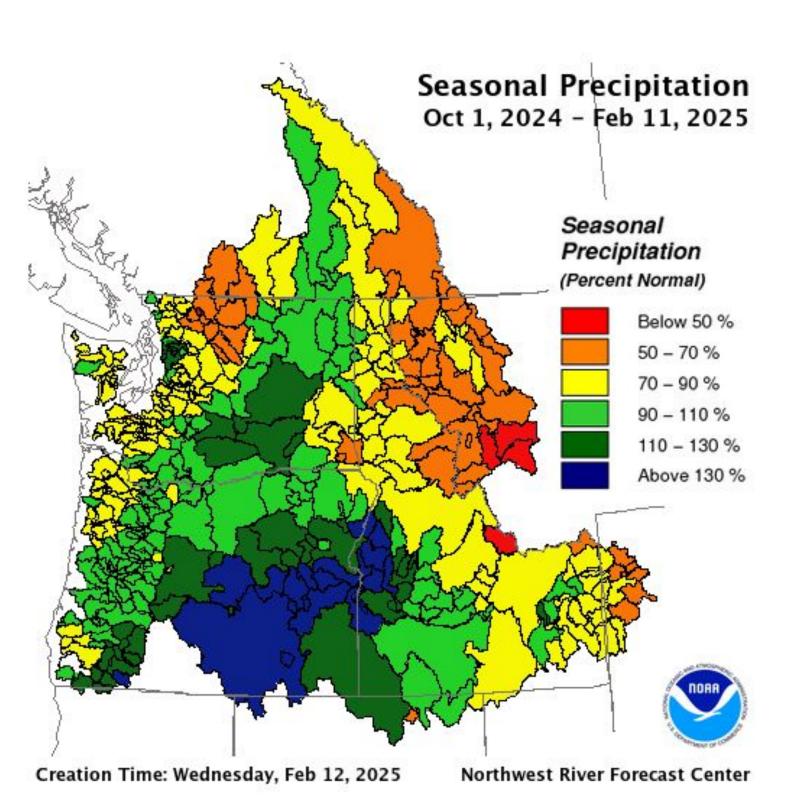
# Precipitation and Temperature



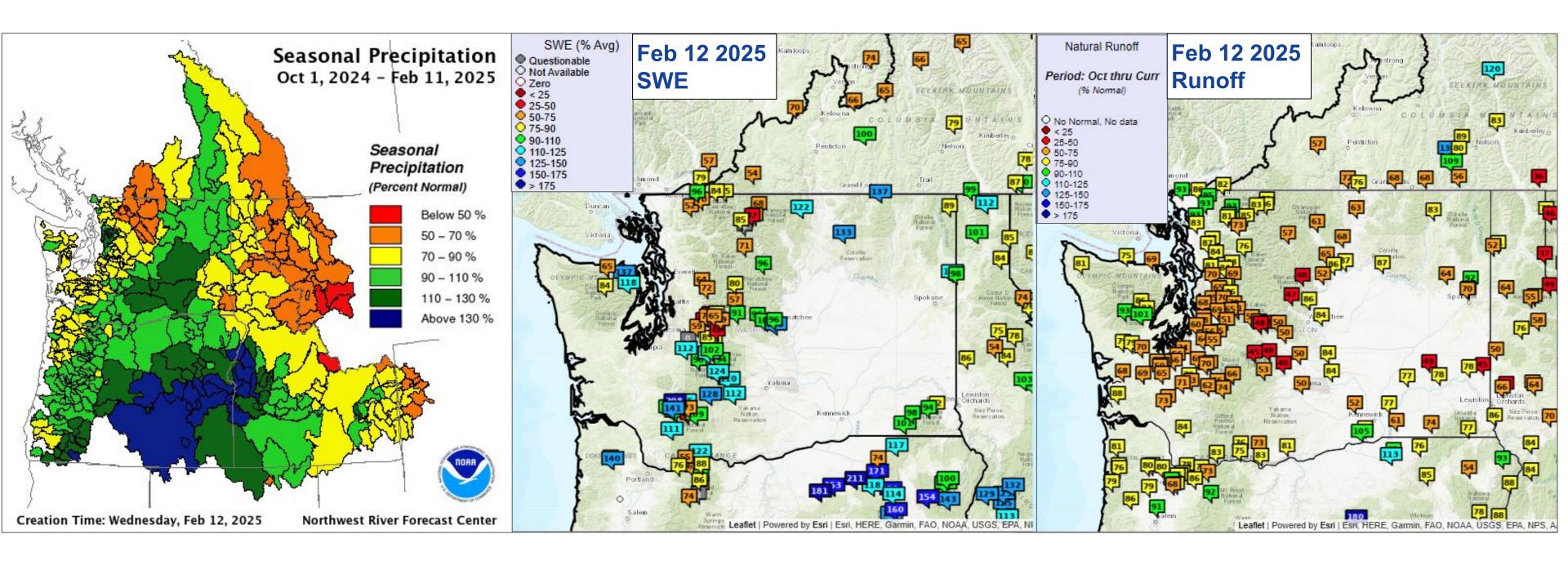


**Northwest River Forecast Center** 

Creation Time: Wednesday, Feb 12, 2025

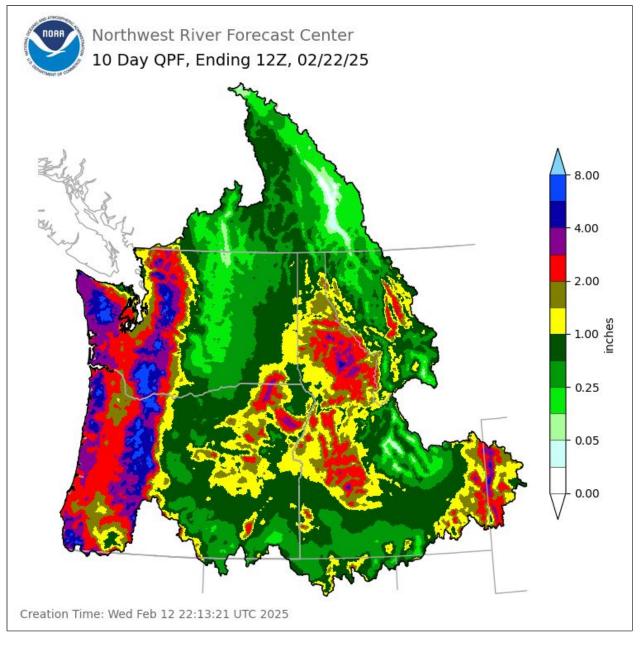


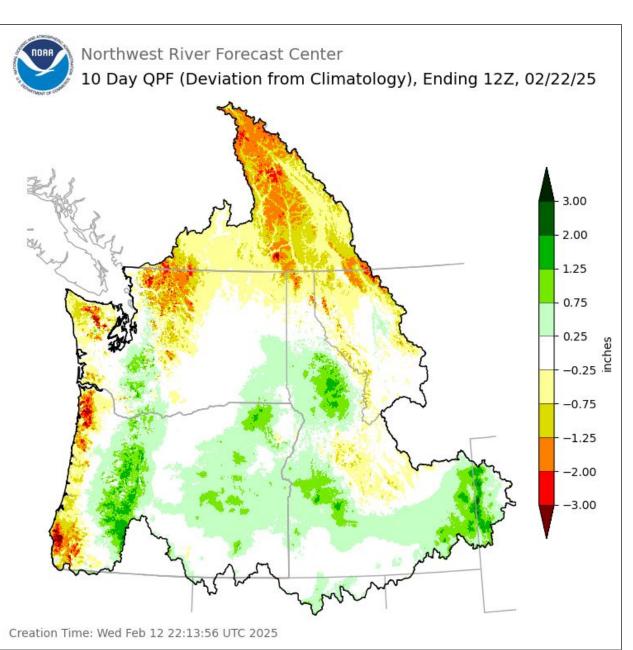
# Precipitation, Snowpack and Runoff

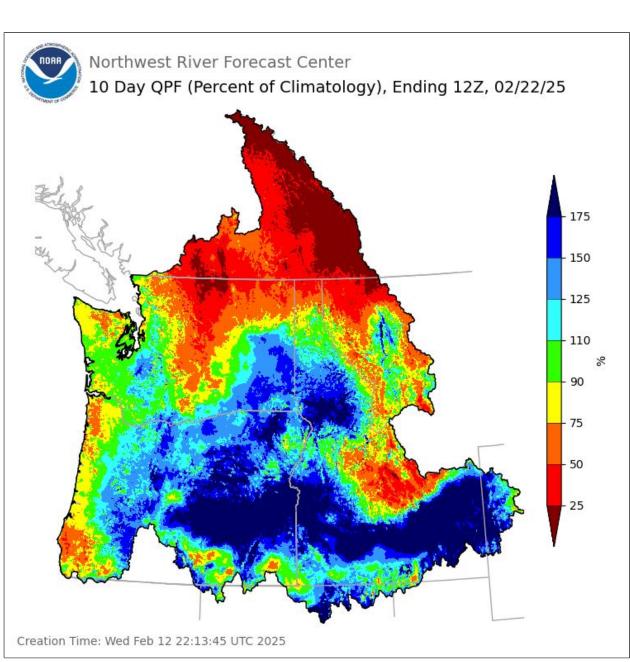




# 10 Day Precipitation Forecast used in ESP10 Forecasts







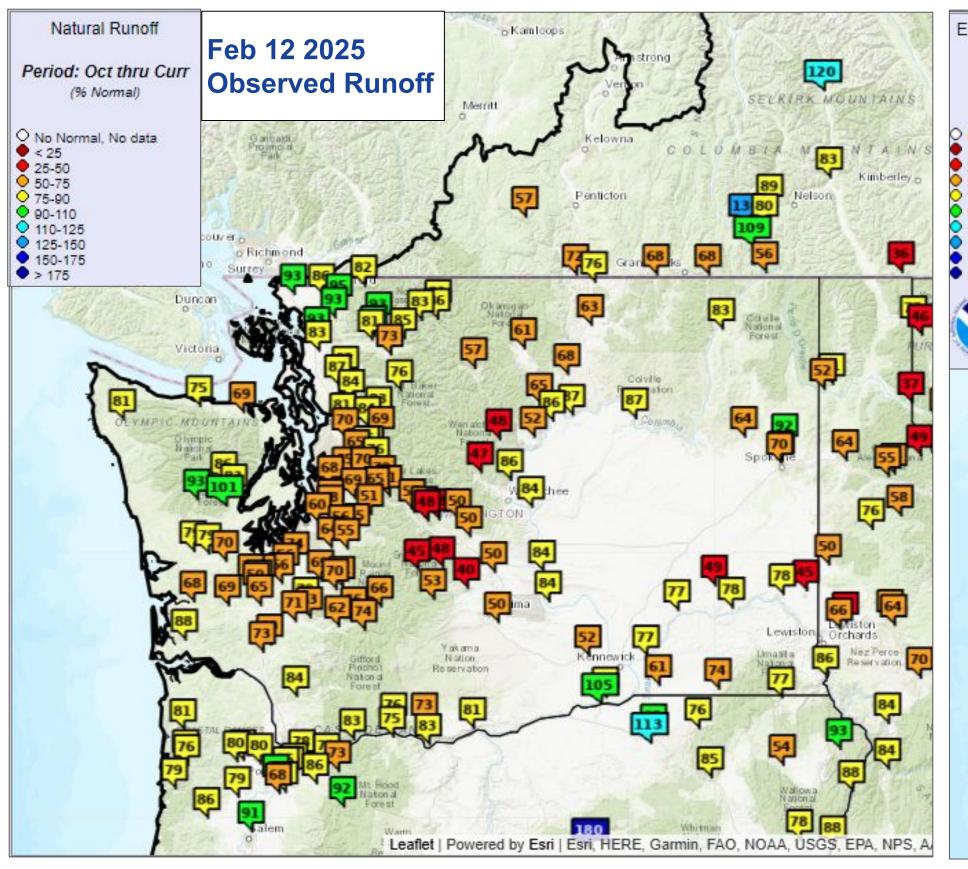
Quantitative Precipitation Forecast (QPF) Sources

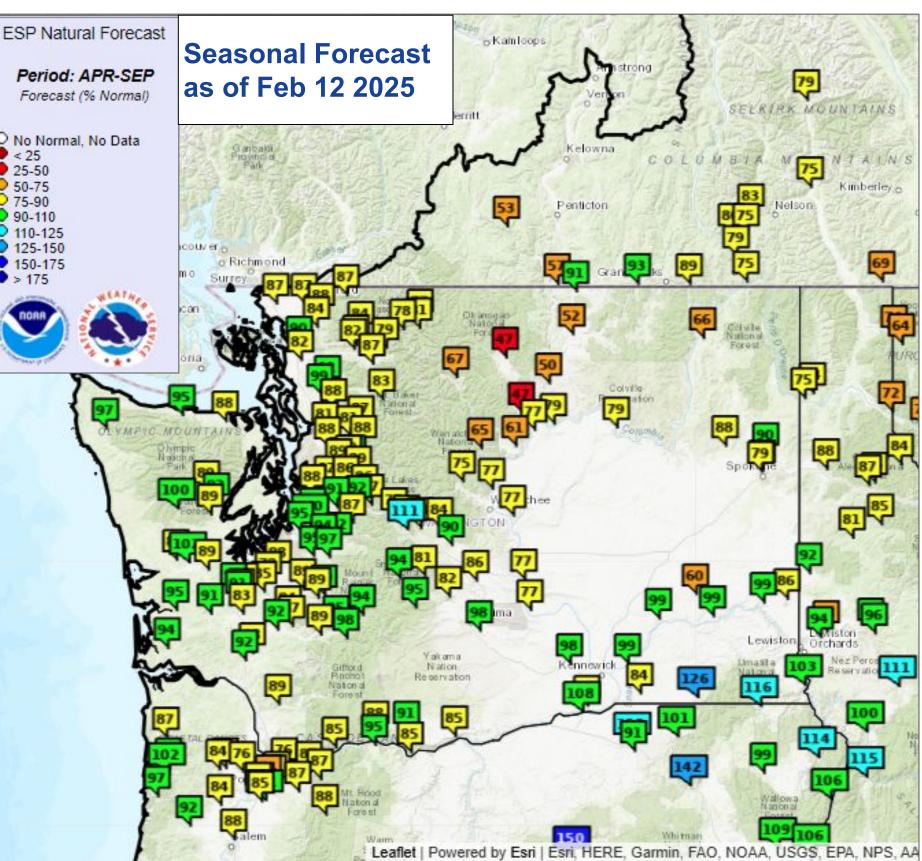
Days 1 - 2 NWS Weather Forecast Offices (WFO) in the US, WPC in BC Days 3 - 7 NWS Weather Prediction Center (WPC)

Days 8 - 10 NWS National Blend of Models (NBM)



# WY Runoff and Apr - Sep Forecasts





- January and February have been cold and dry
- Runoff since October 1 has largely been normal to below normal
- Precipitations forecasts for the next 10 days are a mix of above and below normal
- Apr-Sep river forecasts have dropped but are still a mix of normal to below