



# **WRAC** Water Supply Update

WR Statewide Drought Lead, Caroline Mellor June 9, 2025

## Overview

- **1** Goals for WRAC
- 2 Recap: Drought declaration and process
- 3 Water supply update
- Next steps for ongoing drought management

# **Drought Emergency Declaration**



**Drought Advisory** 

On June 5, 2025, Ecology issued a drought emergency declaration in the North and Central Cascade Mountains and parts of the Puget Sound area, due to low snowpack, early and rapid snowmelt and a dry April and May.

This served as an expansion of the April 8, 2025, drought declaration for **the Yakima Basin watersheds.** 

\*The utilities of Everett, Seattle and Tacoma do not expect issues for their customers.

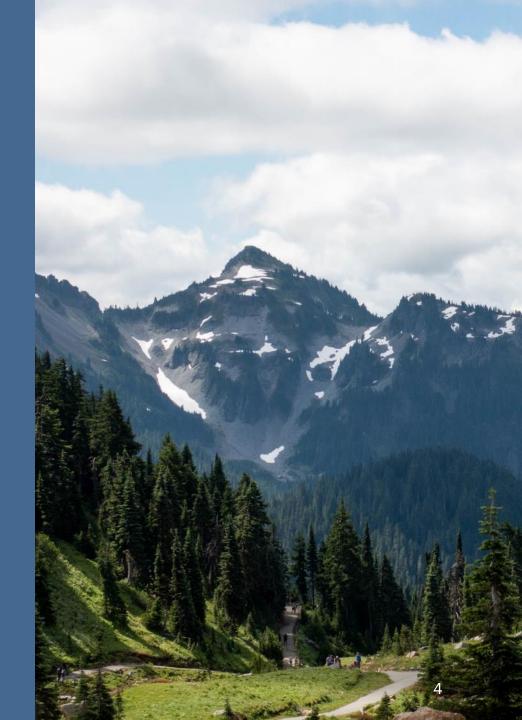


**Drought Emergency Declaration** 

See: https://ecology.wa.gov/water-shorelines/water-supply/water-availability/statewide-conditions/drought-response



# Drought Declaration **Process**





# 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.

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

# **Water Supply Factors**



Water year to date

- Snowpack
- Precipitation
- Temperature
- Soil moisture

Streamflow

- Precipitation
- Temperature
- Soil moisture

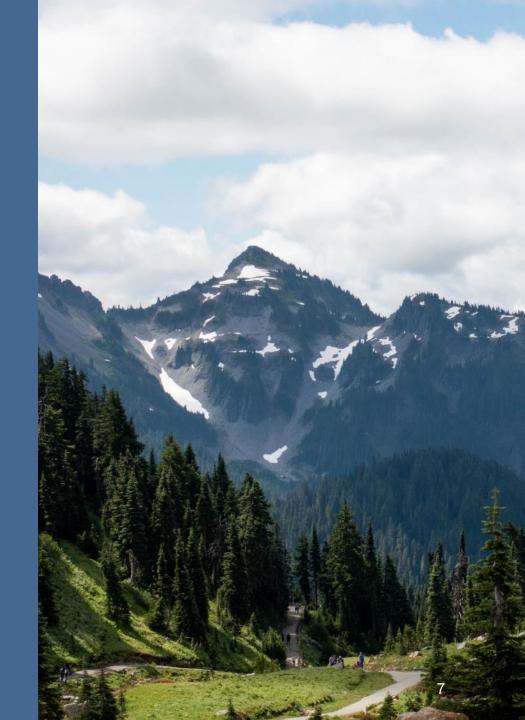
Hydrologic threshold for drought was met in 2025



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
- Irrigation districts
- Conservation districts
- Port 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

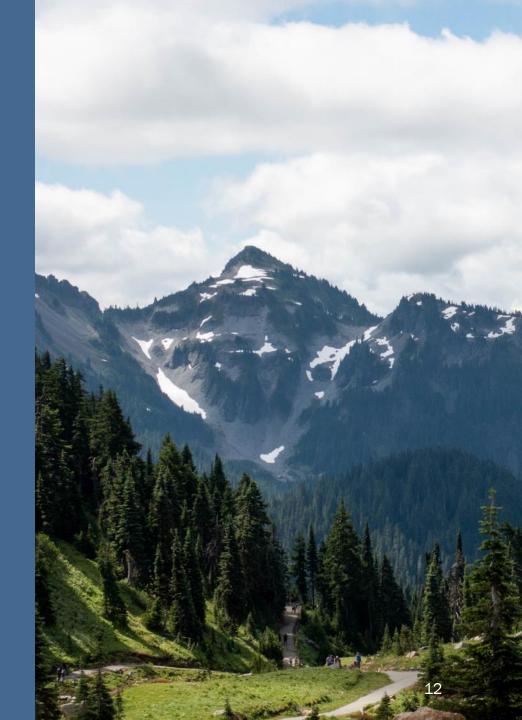
- Transporting emergency water supplies
- Implementing water conservation strategies

Fisheries and wildlife

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



# Water Supply Outlook



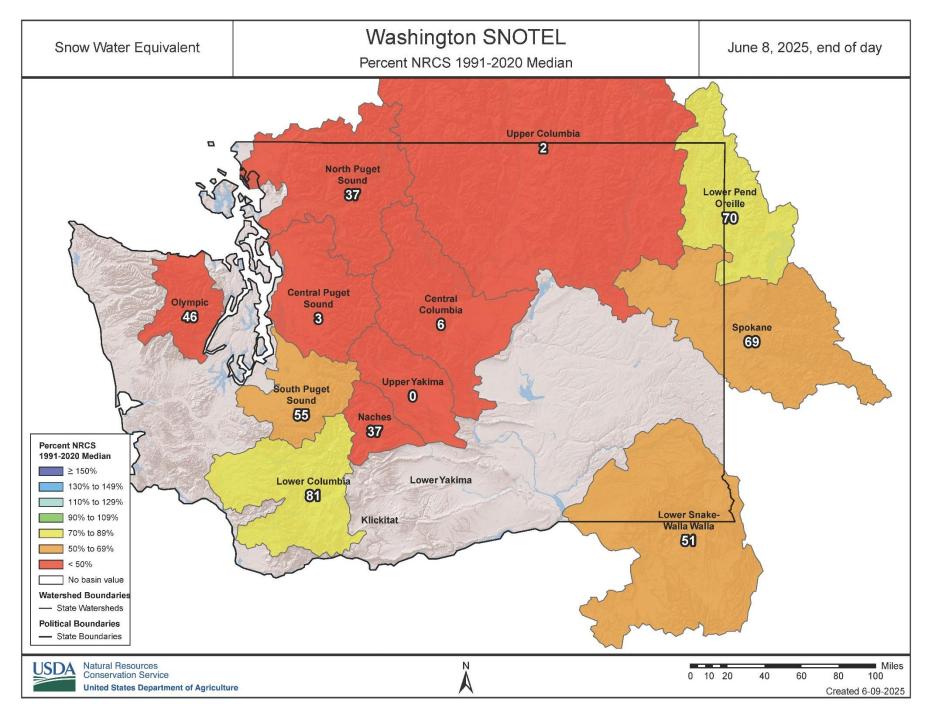


## La Niña - Gone

## La Niña left formally April 10.

- Currently we are in "ENSO" neutral" conditions.
- Current predictions are through this summer with confidence.
- Long-range predictions for fall and winter will be out later in summer.





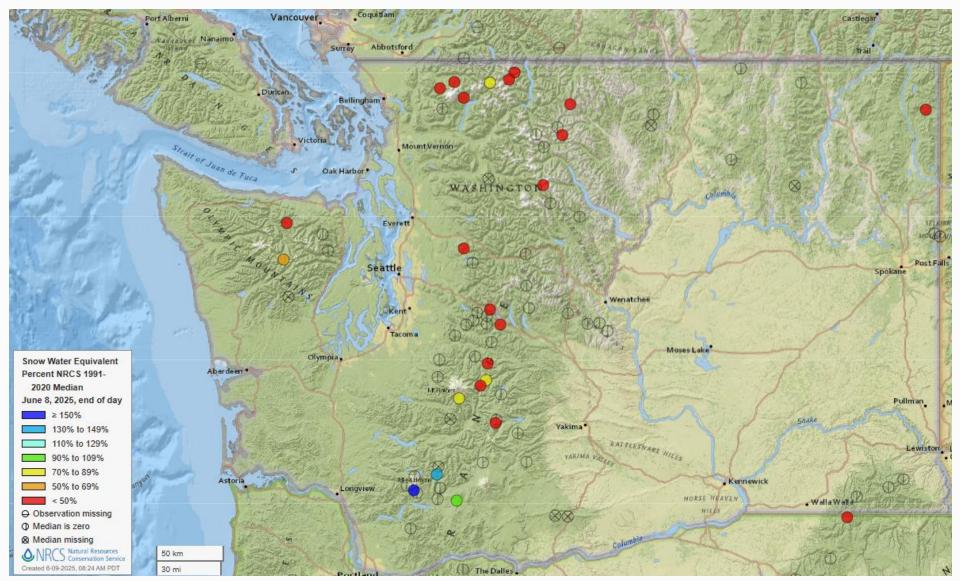


# **Snowpack Conditions**

Statewide SWE is at 49%.

Statewide precipitation today is at 84%.

(Source: NRCS).





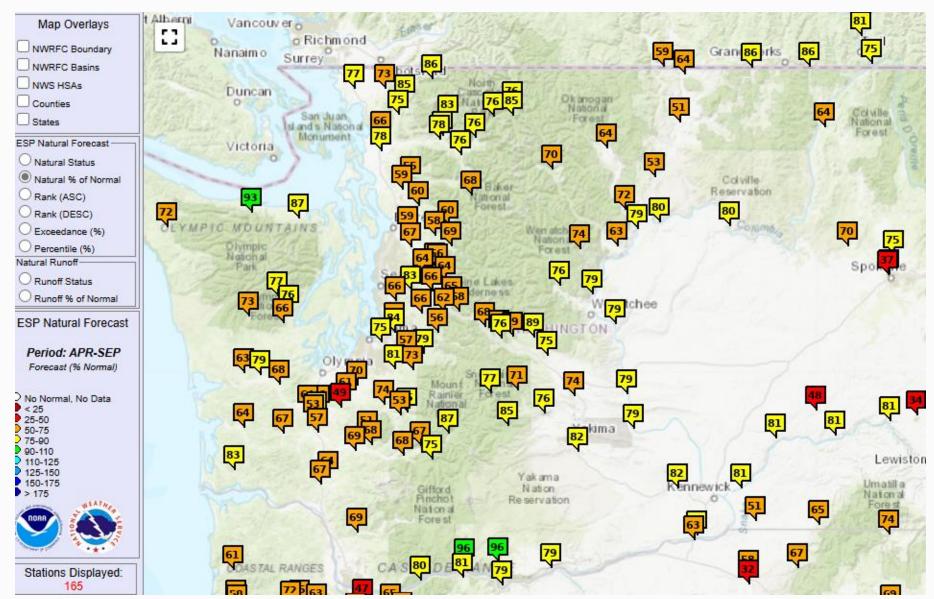
# **Snowpack Conditions**

SNOTEL sites tell a more nuanced story.

(Source: NRCS).

## Streamflow natural forecast as % of normal ECOLOGY State of Washington

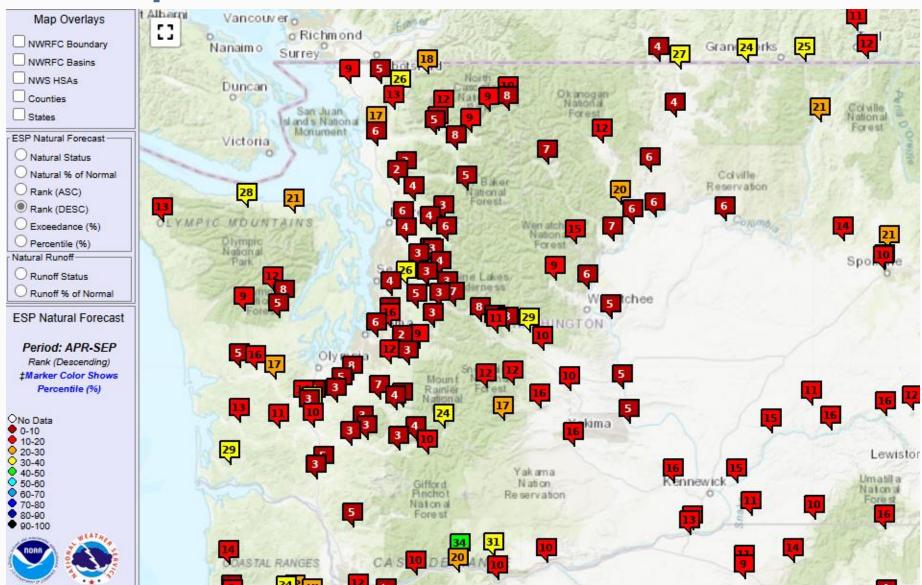




Source: NW River Forecast Center

# Rank compared to historical record

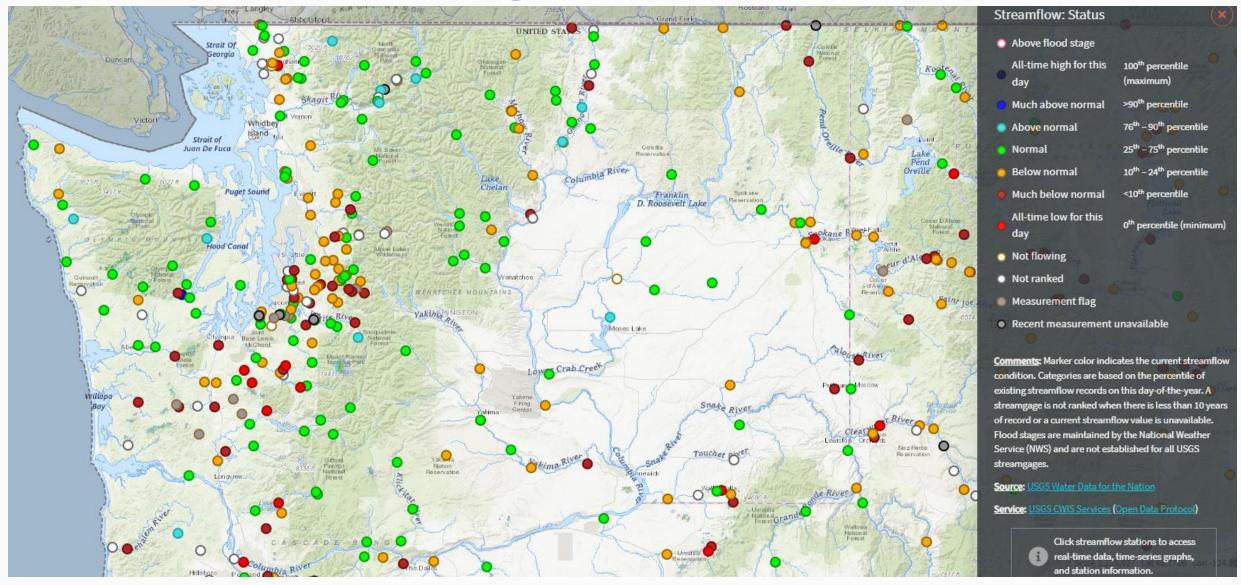




Source: NW River Forecast Center

# **USGS Stream Gauges**





Source: <u>USGS Water Dashboard</u>

#### NASA SPORT-LIS 0-100 cm Soil Moisture Percentile



#### Crop-CASMA Subsoil (1 Meter) Soil **Moisture Anomaly**



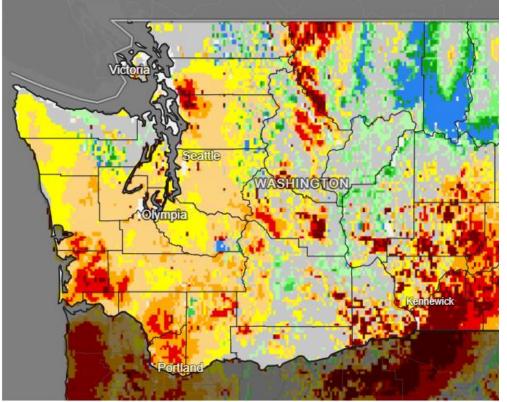




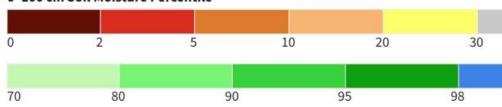




## Soil Moisture



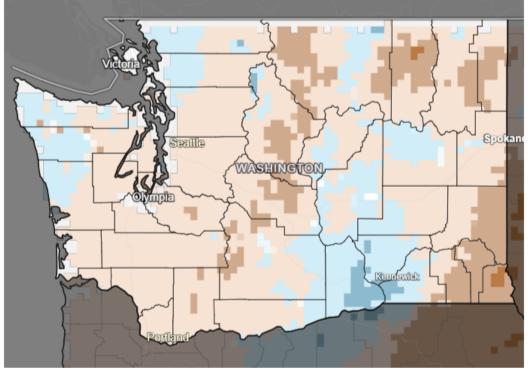




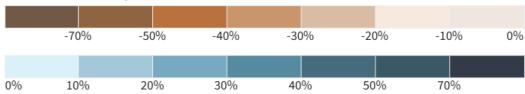
This NASA SPORT-LIS soil moisture map shows the moisture content of the top 100 cm compared to historical conditions (1981-2013), based on the Noah unified land surface Red and orange hues indicate drier soils, while greens and blues indicate greater soil m

Source(s): NASA Data Valid: 06/08/25





#### Soil Moisture Anomaly



This map shows the moisture content of the top 1 meter of soil, according to NASA's Crop-CASMA (Crop Condition and Soil Moisture Analytics). Soil moisture is shown as a deviation from average soil moisture conditions from 2015-present. This map relies on remotely sensed soil moisture data derived from NASA missions (SMAP) to assess soil moisture conditions across the lower 48 U.S. states.Brown hues indicate below-average soil moisture, and blue hues indicate above-average soil moisture.

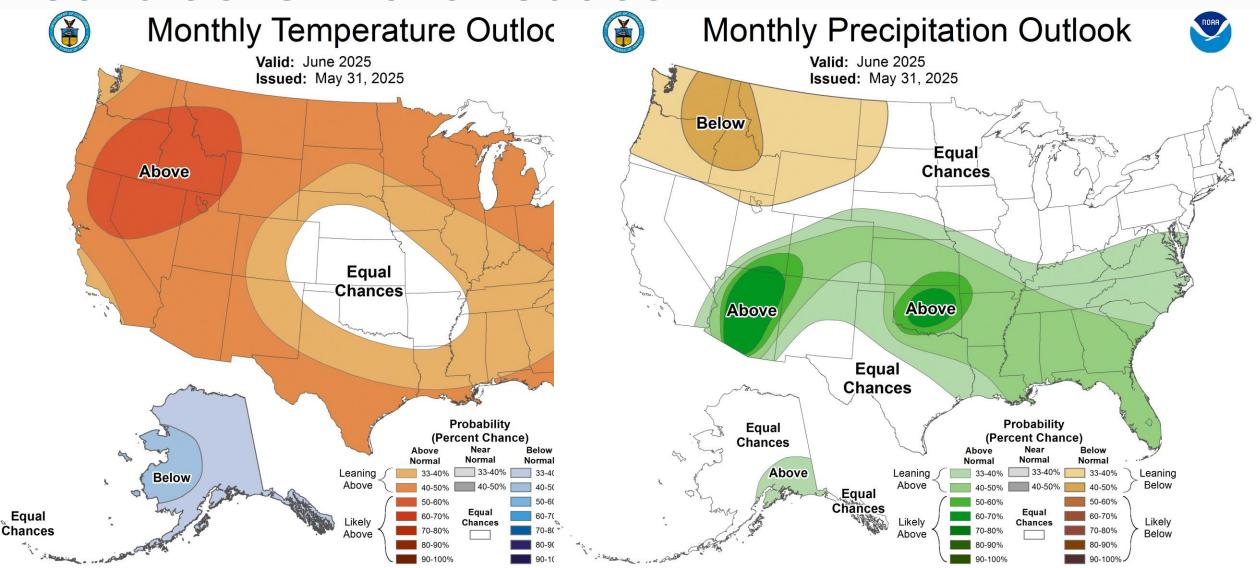
Source(s): NASA, USDA, George Mason University

Data Valid: 06/04/25

**Drought.gov** 

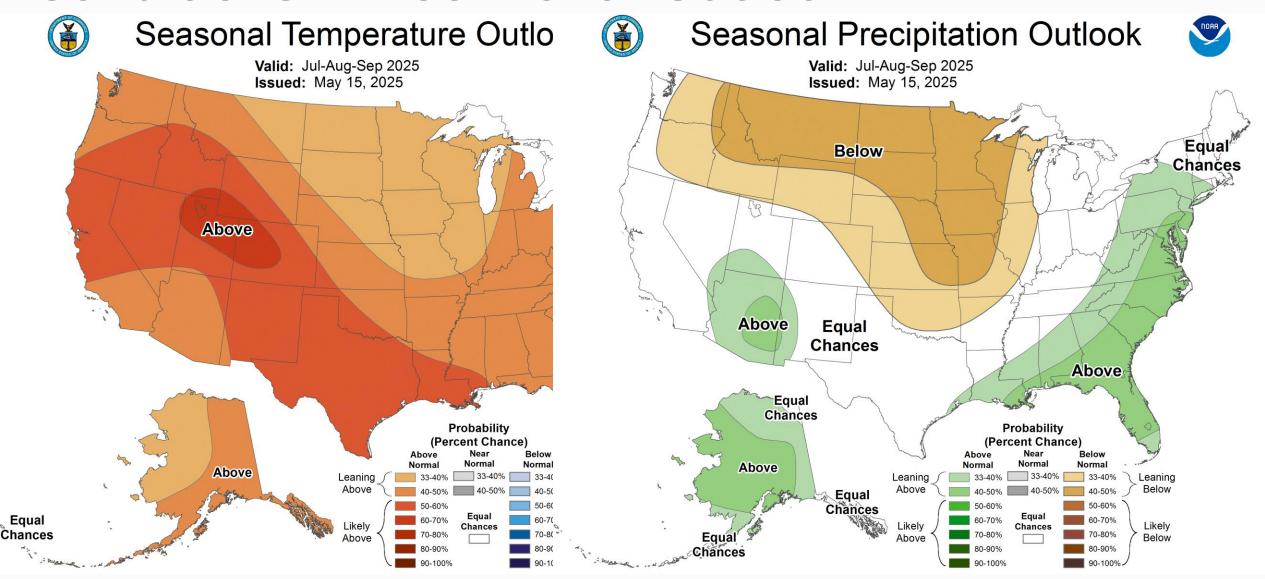
## **Conditions: Month Outlook**





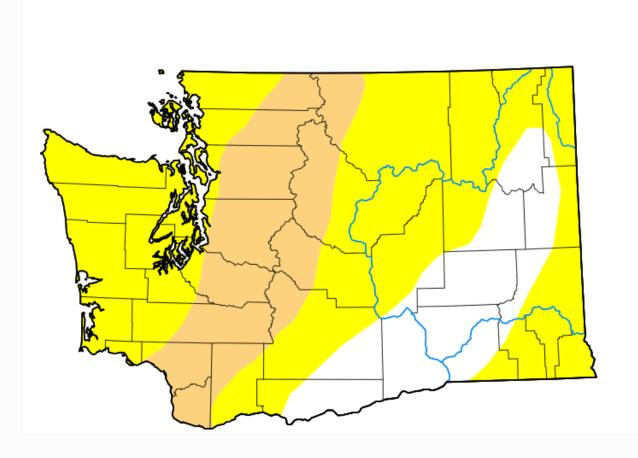
## **Conditions: Three-Month Outlook**





# **Current US Drought Monitor**





Map released: Thurs. June 5, 2025

Data valid: June 3, 2025 at 8 a.m. EDT

#### Intensity

None

D0 (Abnormally Dry)

D1 (Moderate Drought)

D2 (Severe Drought)

D3 (Extreme Drought)

**D4** (Exceptional Drought)

No Data

#### **Authors**

United States and Puerto Rico Author(s):

Brad Pugh, NOAA/CPC

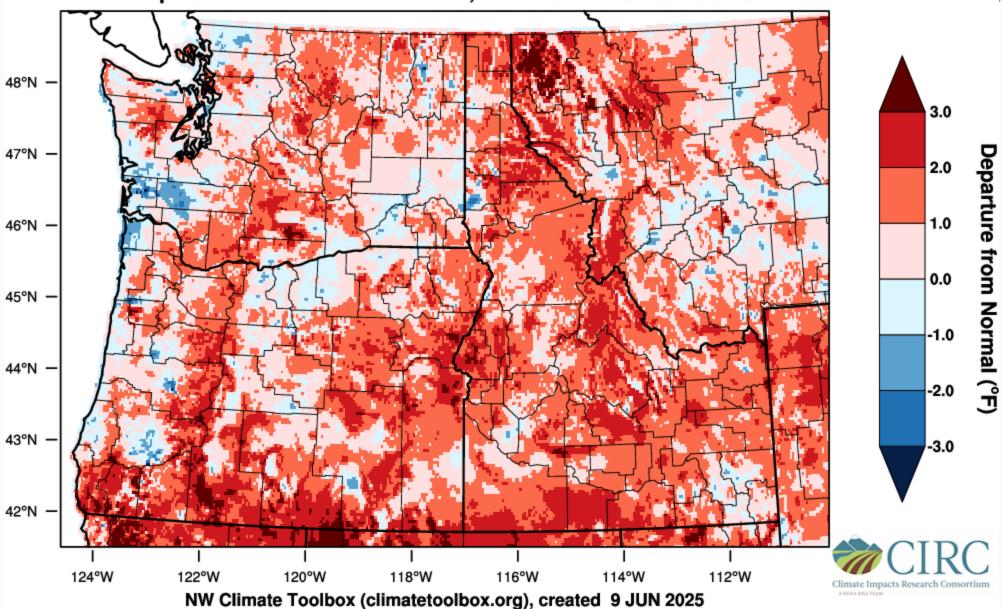
Pacific Islands and Virgin Islands Author(s):

**Curtis Riganti**, National Drought Mitigation Center

\*The Drought
Monitor does not
reflect snowpack
impacts on AprilSeptember water
supply as it's a
statement on
immediate
conditions.

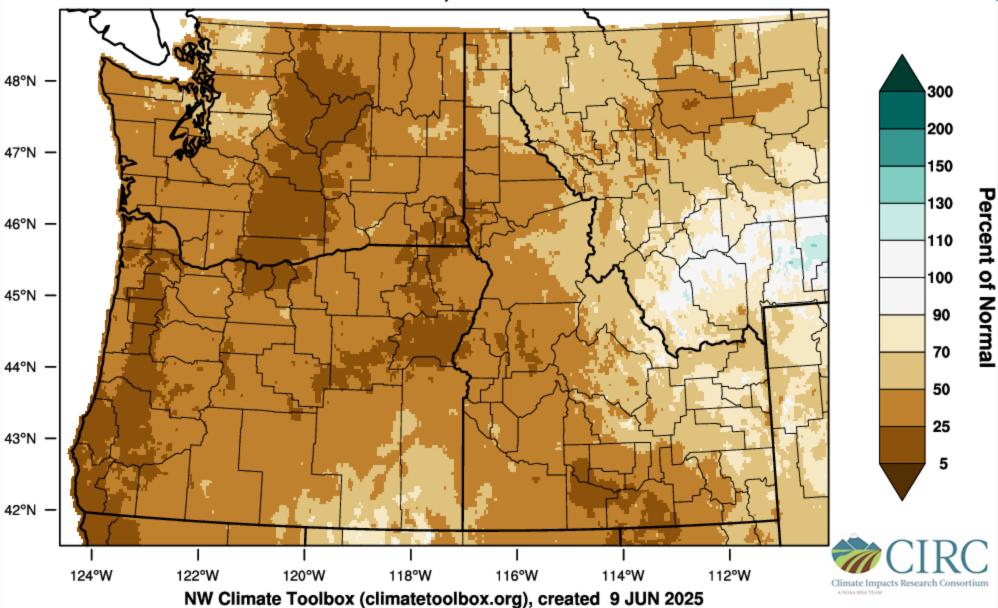
#### Average Temperature, Last 60 days, 04/10/25 to 06/08/25 Departure from 1991-2020 Normal, Northwestern United States



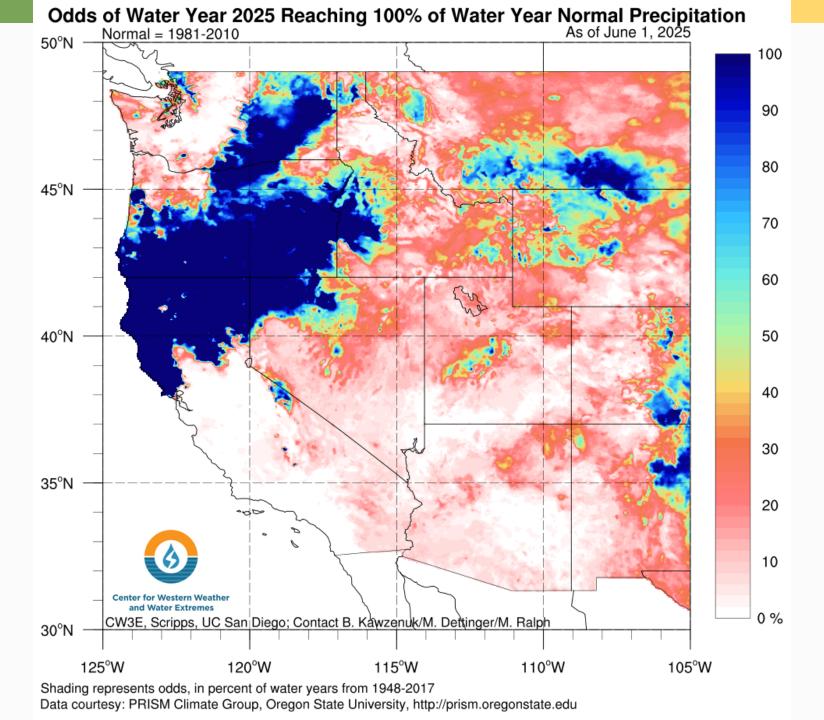


# Precipitation, Last 60 days, 04/10/25 to 06/08/25 Percent of 1991-2020 Normal, Northwestern United States





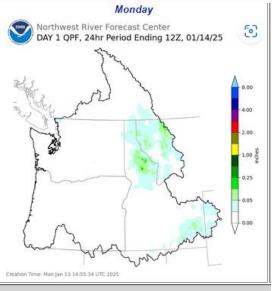
# Odds of reaching Normal Water Year precipitation

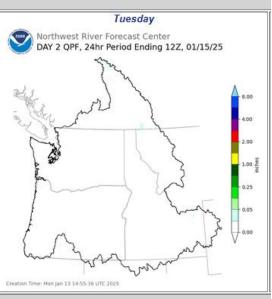


# **Water Supply Conditions**

DEPARTMENT OF ECOLOGY State of Washington

- The water year to date precipitation numbers continue to be different if we compare since January 1<sup>st</sup> vs Oct 1<sup>st</sup>.
- Don't put your sunscreen away. No "Junuary" in sight this year.
- Early and rapid snowmelt across the Central Cascades impacted water supply forecasts – with some sites melting off 30-33 days early.

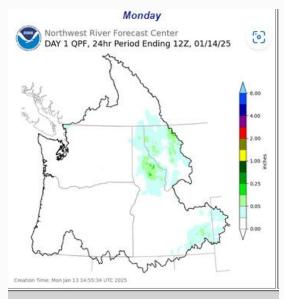


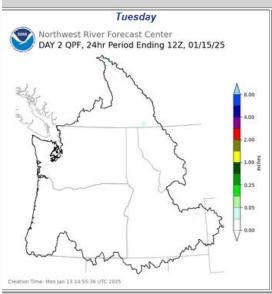


# Water Supply Conditions - Yakima



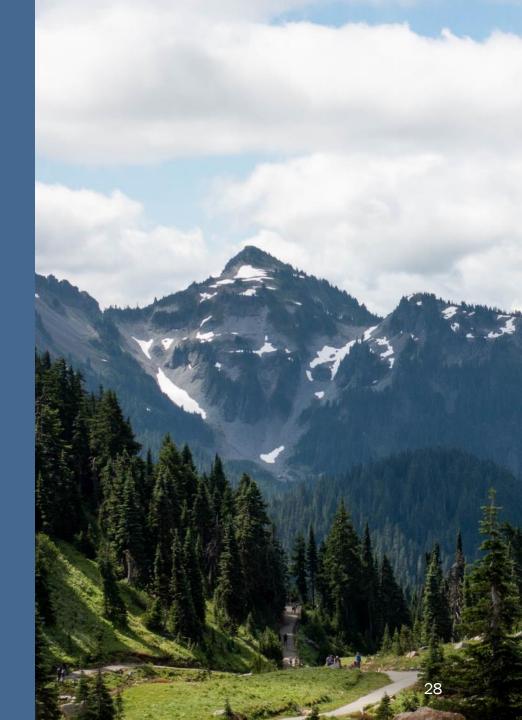
- BOR Yakima storage is at 73.4%, as compared to average for this time of year.
- BOR announced on June 5 that the June –
  September TWSA (Total Water Supply
  Available) for proratable water right holders is
  down to 43%.







# Ongoing drought management





# **Takeaways**

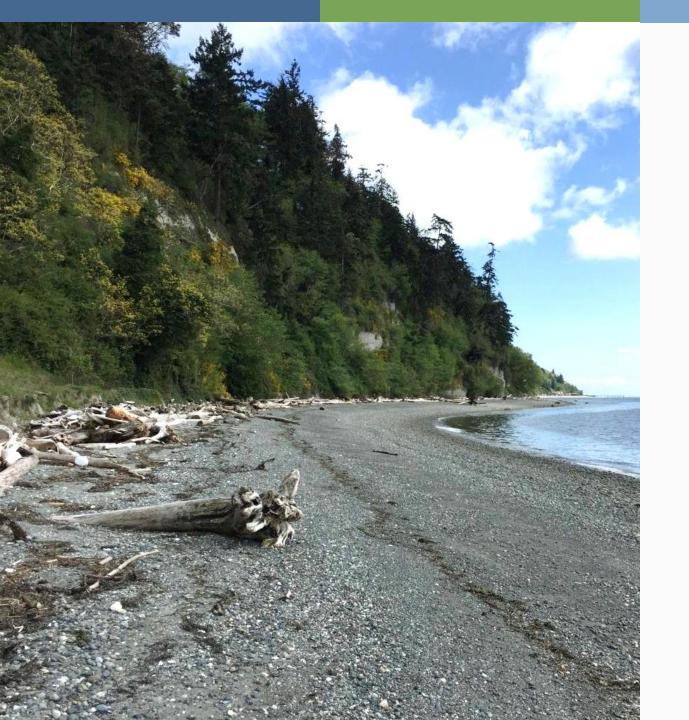
• Emergency drought response tools are now available for additional watersheds in the North and Central Cascades and portions of the Puget Sound, along with the Yakima basin watersheds.

 Ecology is closely monitoring conditions and may expand the drought emergency declaration geographic areas, as conditions evolve.



# Drought Info

- Updated drought website: <u>Drought Response</u>
  - Washington State Department of Ecology
    - New Declaration: <u>Order of Determination</u>
       <u>by the Director</u>
    - Press release: <u>June 5 Drought -</u>
       <u>Washington State Department of Ecology</u>
- Water Supply Availability Committee (WSAC) website



# Questions?





# Thank you

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