



WRAC Water Supply Update

WR Statewide Drought Lead, Caroline Mellor January 13, 2025

Overview



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Goals for WRAC

Recap: Drought declaration and process



Water supply update



Next steps for ongoing drought management

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



• January is too early to make big predictions, but we continued to be concerned for the Yakima region and are closely watching the Central Cascades.

Takeaways

- Emergency drought response tools continue to be available.
- Ecology is closely monitoring conditions and coordinating with partners.







Drought conditions - two requirements:

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

See: <u>RCW 43.83B.405</u> and <u>WAC 173-166-050</u>.

Drought Conditions

Water Supply Factors

Water year to date

 Snowpack • Precipitation • Temperature • Soil moisture

• Streamflow

• Soil moisture

Hydrologic threshold for drought was met

Forecasts

• Precipitation • Temperature

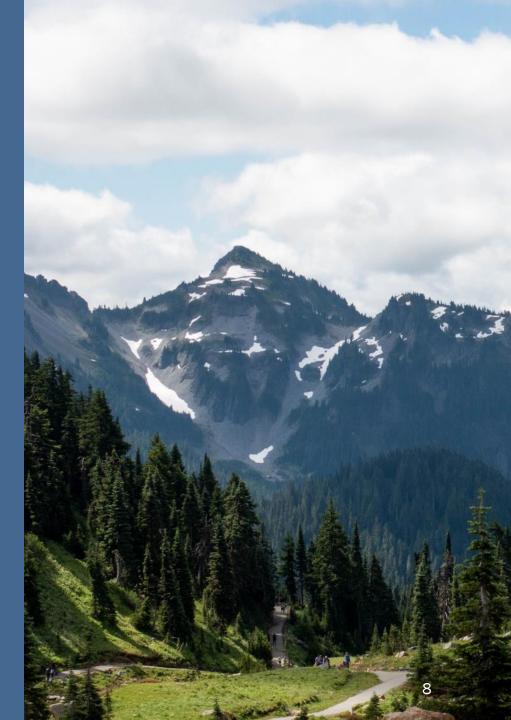
Feb 2, 2024

Hurricane Ridge Webcam, National Park Service **Olympic National Park**





Implications of a Drought Declaration





Provides Ecology with the authority to:

- What Does a Declaration Do?
- 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

> Public water supply

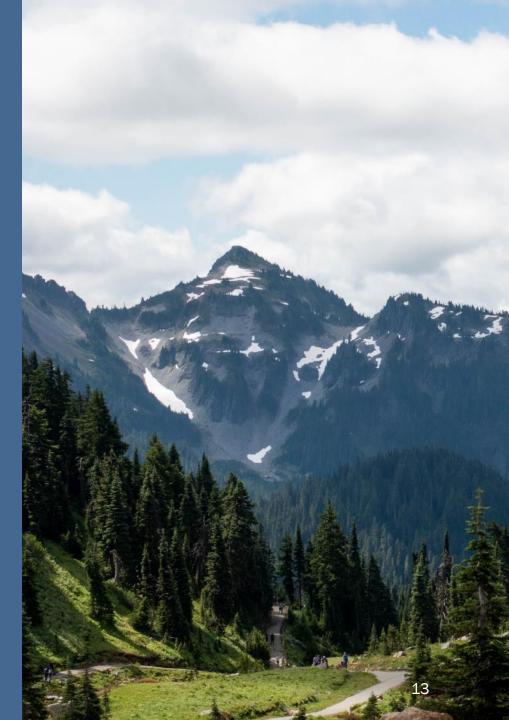
- Purchasing or leasing water or water rights
- Replacing intakes, pumps, and related accessories
- Transporting emergency water supplies
- Implementing water conservation strategies

Fisheries and wildlife

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



Water Supply Outlook



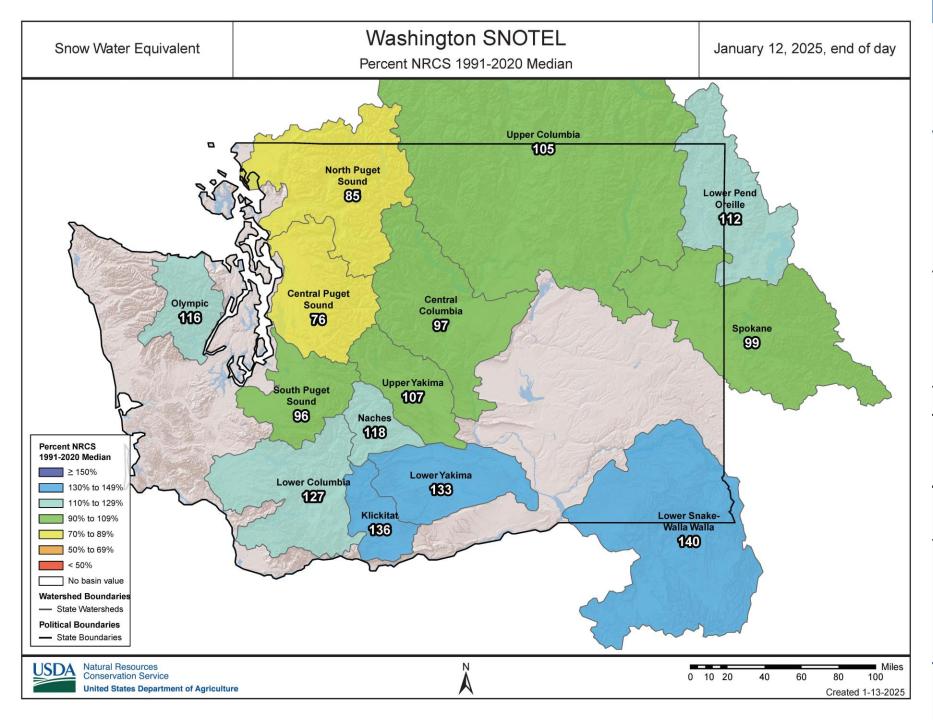


La Niña is here

La Niña

- Wetter, colder winters in general.
- This La Niña is weak = less of an impact on our weather.







Snowpack Conditions

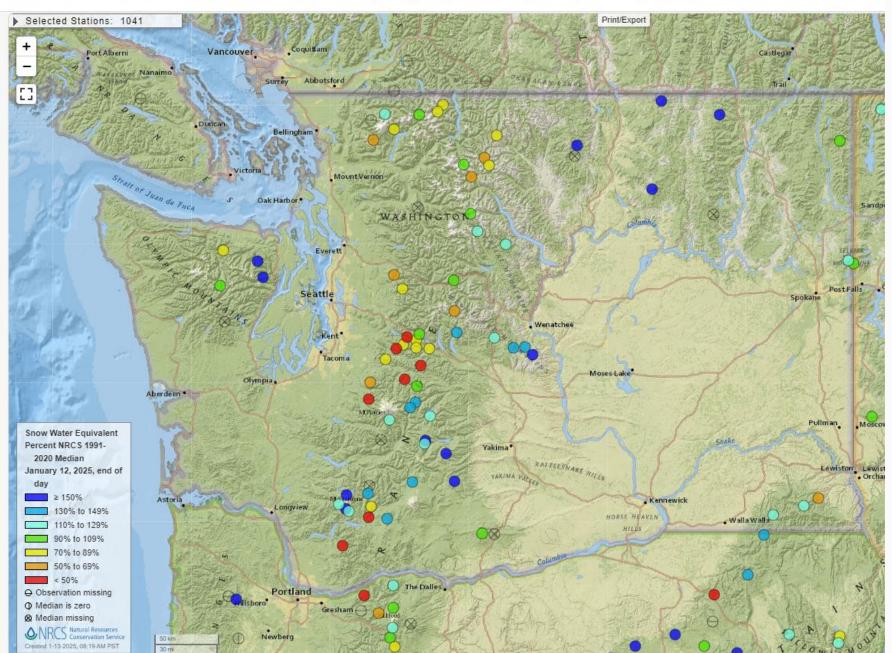
Statewide SWE is at 104%.

Statewide precipitation today is at 94%.

This date in 2016, Statewide SWE was 114% & precip was at 123%

(Source: NRCS).

NWCC Home Site Plots v Basin Plots v Interactive Map Report Generator Update Reports Forecast Plots v Webservices v Conta



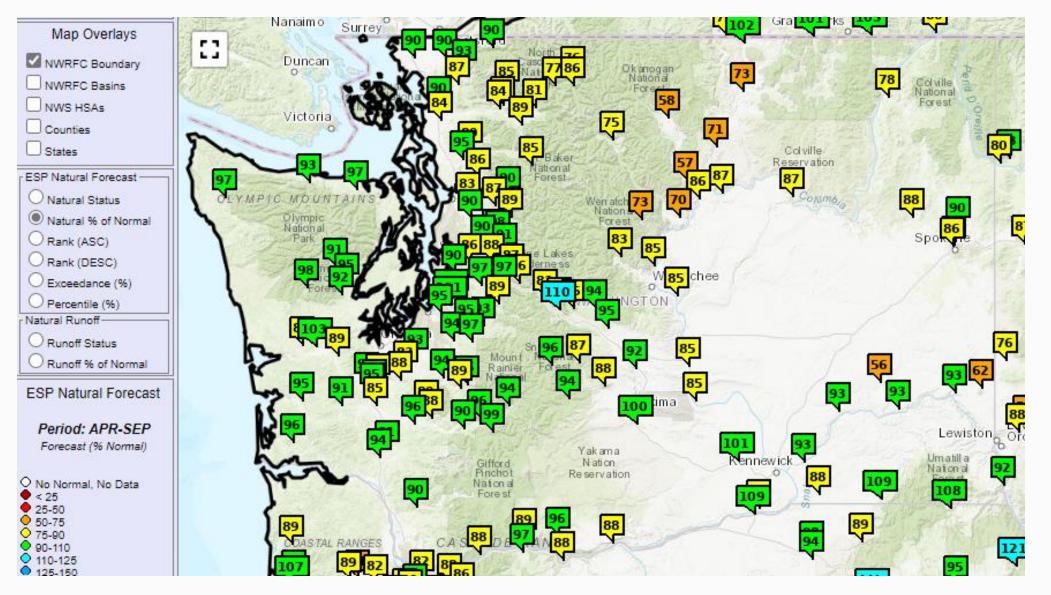


Snowpack Conditions

SNOTEL sites tell a more nuanced story.

(Source: NRCS).

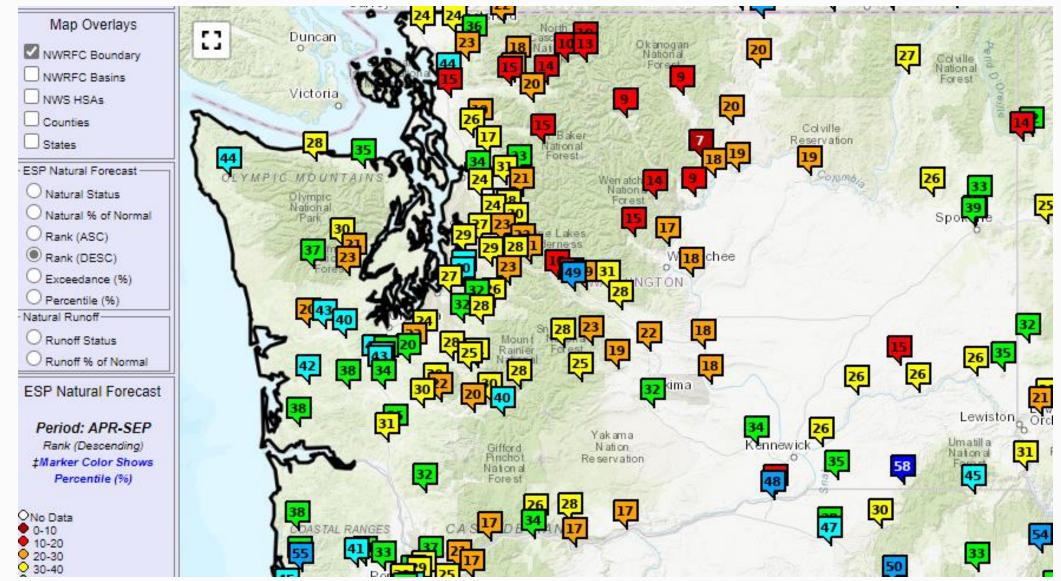
Streamflow natural forecast as % of normal State of Washington



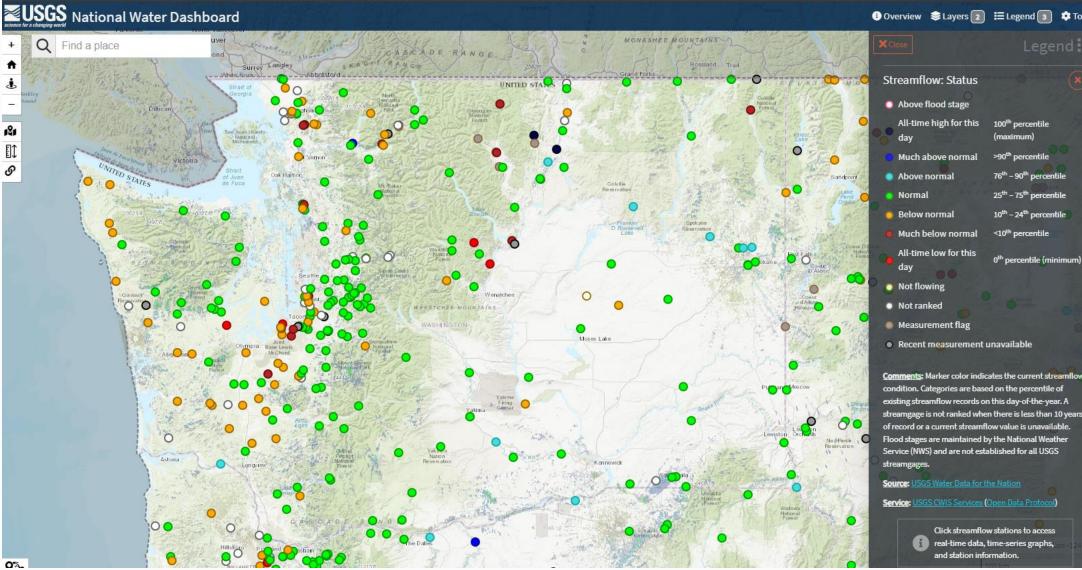
Source: NW River Forecast Center

Rank compared to historical record





Source: USGS Water Dashboard



USGS Stream Gauges

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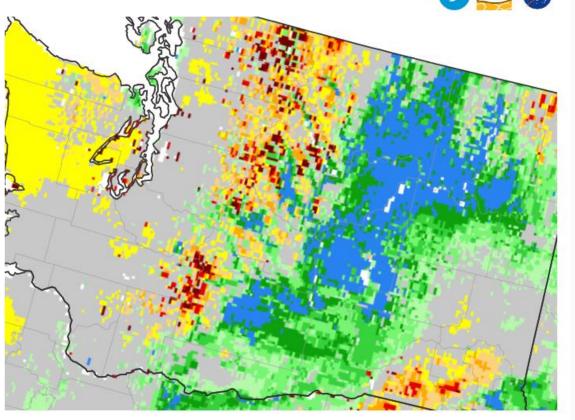


Overview Stayers 2 ≣ Legend 3 \$ Tool

0-100 cm Soil Moisture Percentile



Soil Moisture



0-100 cm Soil Moisture Percentile

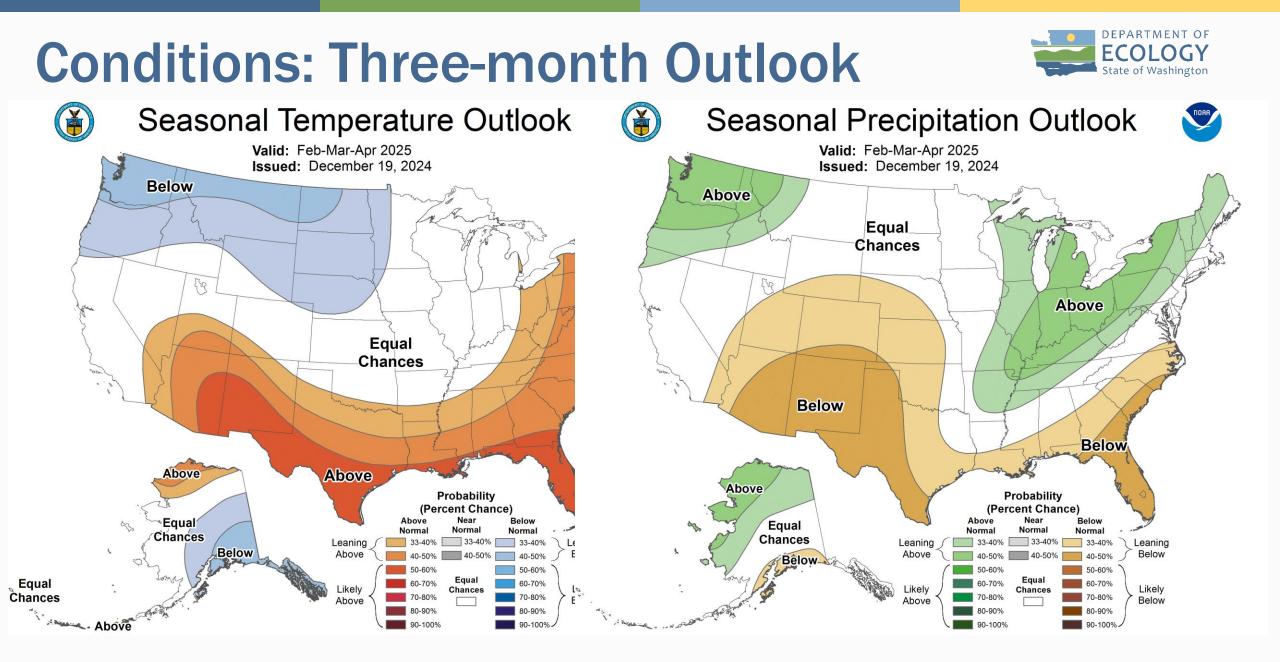


This NASA SPORT-LIS soil moisture map shows the moisture content of the top 100 cm of soil compared to historical conditions (1981–2013), based on the Noah unified land surface model. Red and orange hues indicate drier soils, while greens and blues indicate greater soil moisture. Source(s): NASA

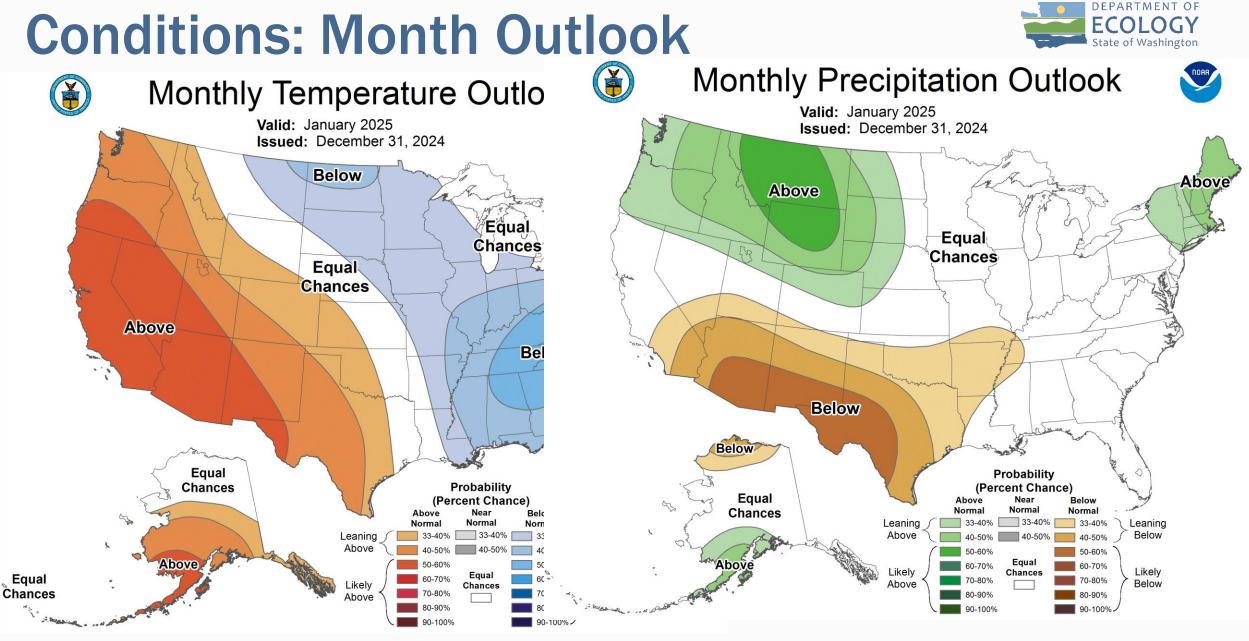
Source(s): NASA Data Valid: 01/13/25

Drought.gov





Released: December 19, 2024 (Climate Prediction Center, NOAA)

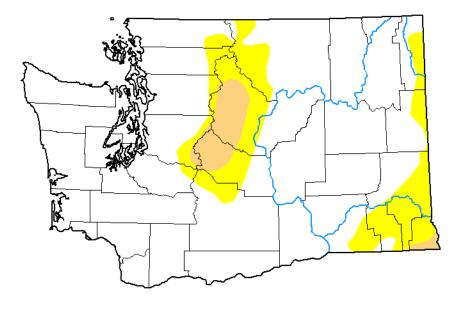


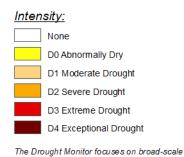
Released: December 31, 2024 (<u>Climate Prediction Center, NOAA</u>)

Current US Drought Monitor

DEPARTMENT OF ECOLOGY State of Washington

U.S. Drought Monitor Washington January 7, 2025 (Released Thursday, Jan. 9, 2025) Valid 7 a.m. EST





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

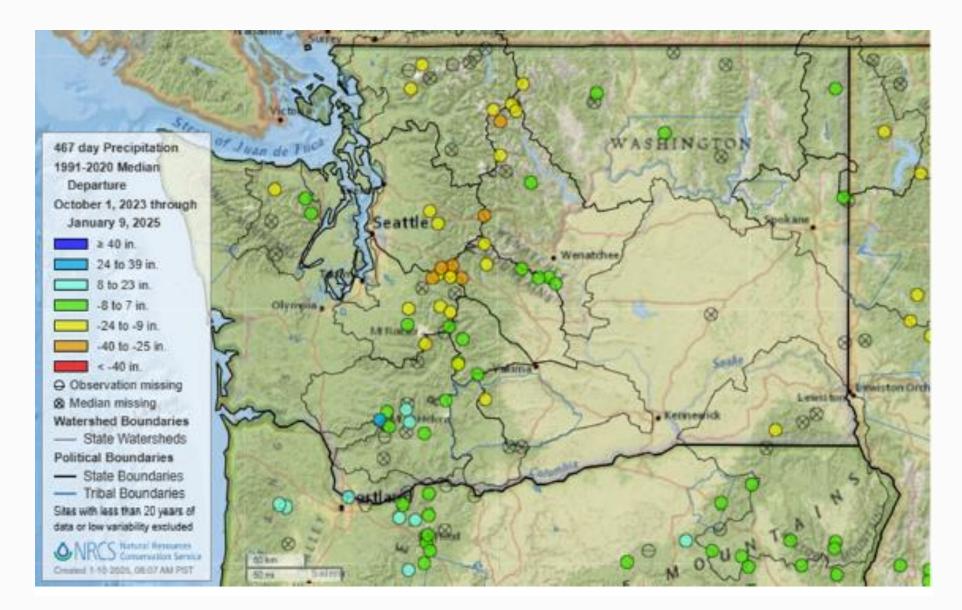
<u>Author:</u> Brad Pugh CPC/NOAA



*The US Drought Monitor does not reflect snowpack or water supply waters but is a statement on immediate conditions.

Compounding Deficits



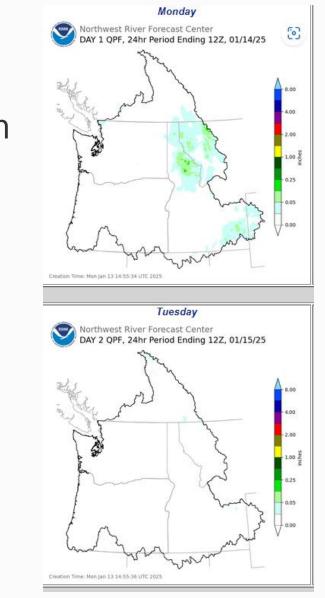


Water Supply Conditions

 Water year 2025 temperatures above normal with December temperatures especially warm (10th warmest on record).

 Precipitation has been wetter than normal across eastern WA and near-normal to slightly below normal in western WA so far.

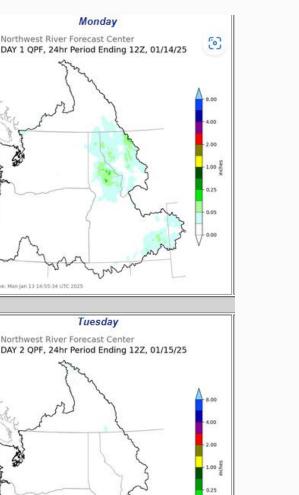




Water Supply Conditions

 La Niña has arrived but is currently weak and expected to stay weak.

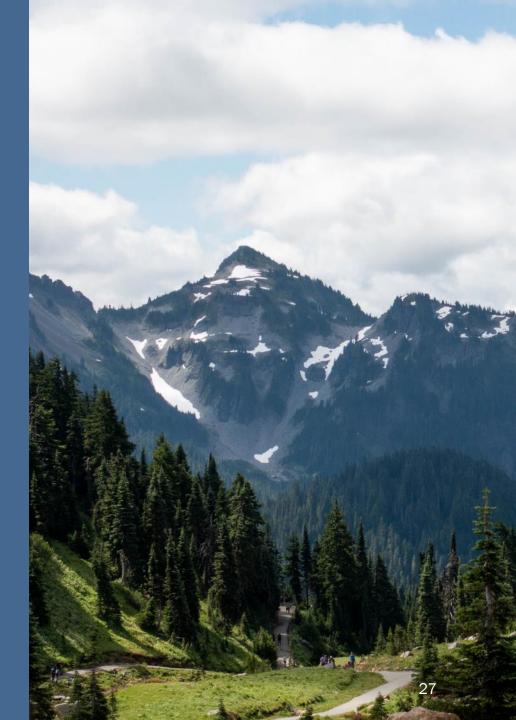
• BOR Yakima storage is at 34.9%, as compared to average.



ation Time: Mon tan 13 14:55:36 UTC 2021







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.





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Takeaways

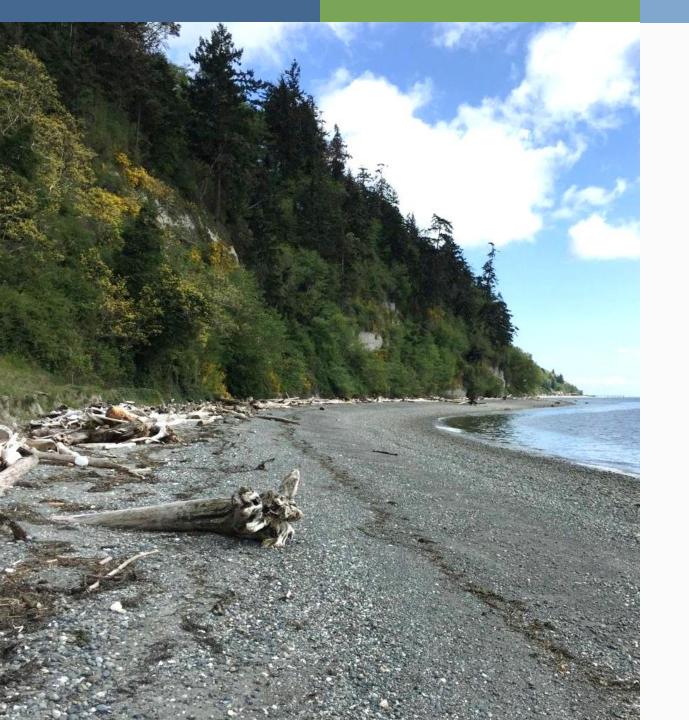
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Drought info

Communications

- <u>WSAC website</u> updated with meeting materials and presentation recordings.
- Latest blog post: <u>Washington water supply update -</u> <u>Washington State Department of Ecology</u>
- Drought Response website: <u>Drought Response -</u> <u>Washington State Department of Ecology</u>



Questions?





Thank you

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