

Seasonal Climate Forecast Verification

August – October 2025

Issued: December 1, 2025*

*(Delayed by Federal Government Shutdown)

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Production - ODF: Julie Vondrachek; Kristin Cody; Gary Votaw; Sherri Pugh

Photo: Sherri Pugh

Format and Purpose:

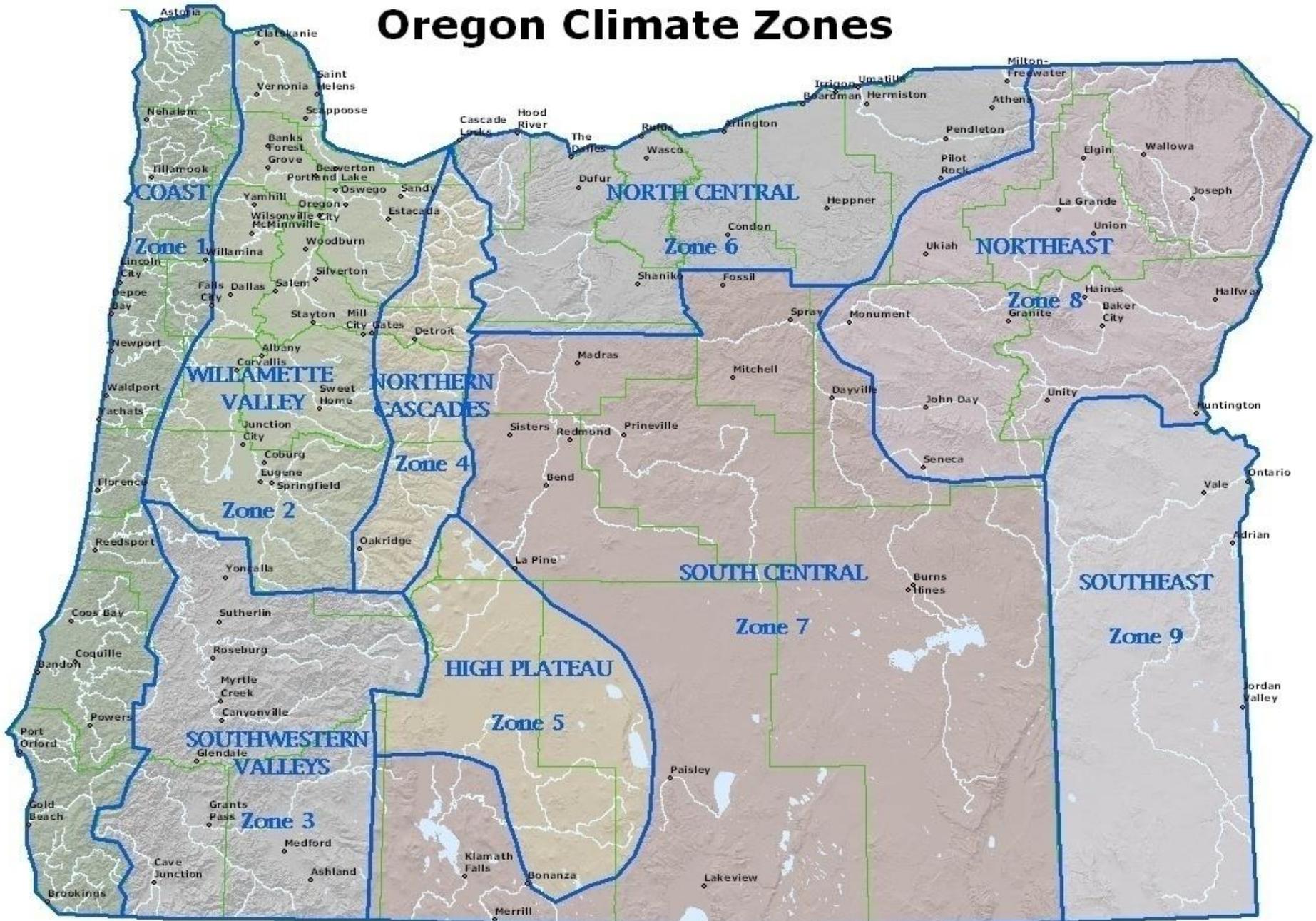
- A side-by-side comparison of the “**Seasonal Climate Forecast**” vs. what (**Actually Occurred**) is done for both the 1-month & 3-month forecasts.*
- The accuracy of each forecast is reviewed, and the need for analog-year updates is examined.
- This is part of an ongoing assessment of the utility of this forecast method.**

**Utilizes 1991-2020 long-term averages*

**See “Forecasting Methods...” at:

<https://www.oregon.gov/oda/natural-resources/pages/weather.aspx>

Oregon Climate Zones



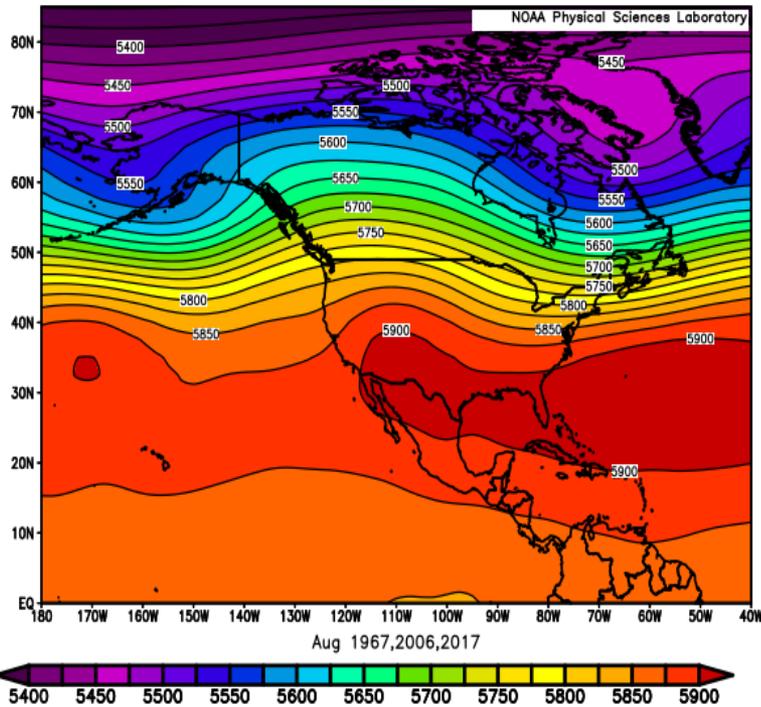
August 2025

(Forecast Issued July 17, 2025) / (Actual)

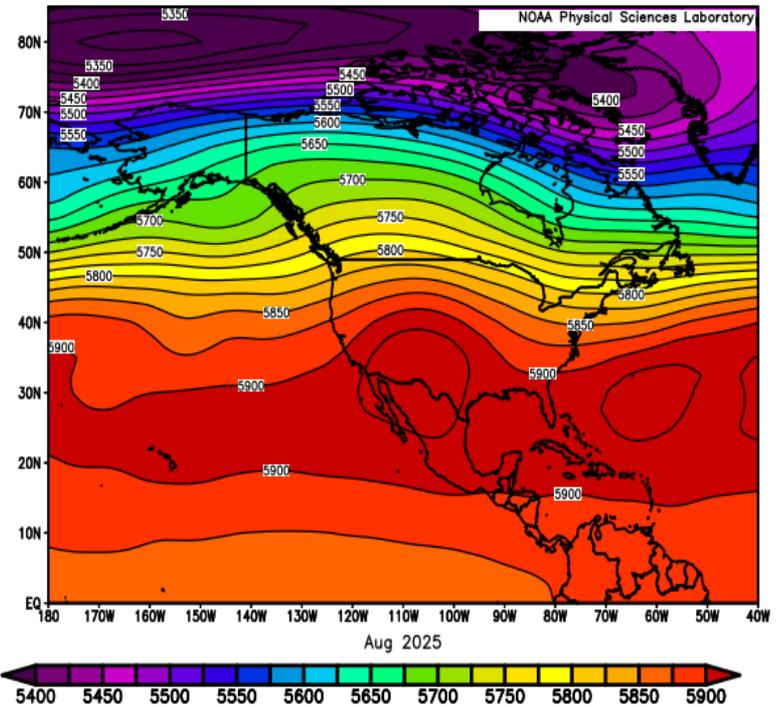
Forecast Upper-Air Pattern

Actual Upper-Air Pattern

NCEP/NCAR Reanalysis
500mb Geopotential Height (m) Composite Mean



NCEP/NCAR Reanalysis
500mb Geopotential Height (m) Composite Mean



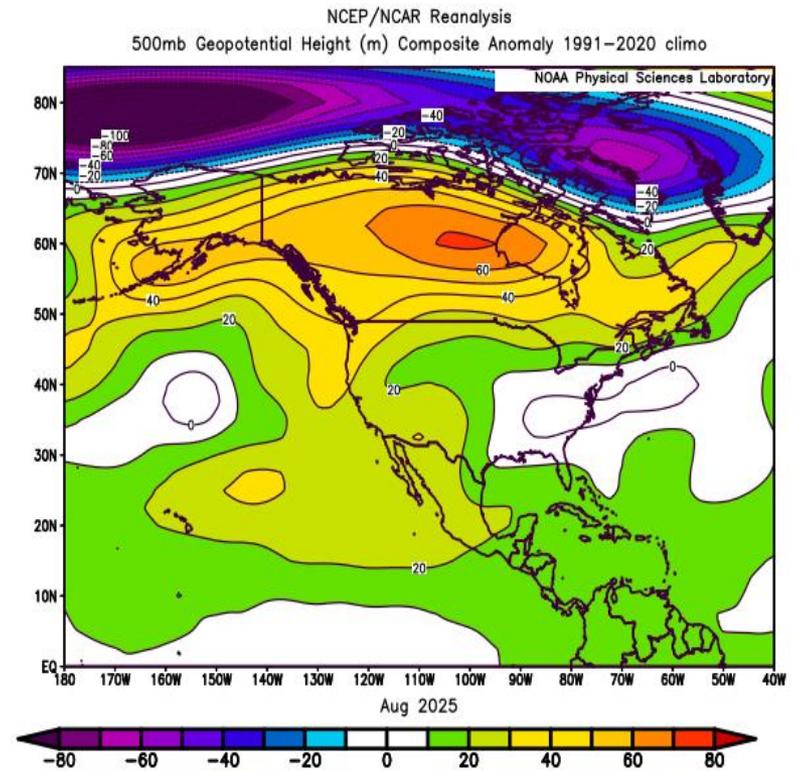
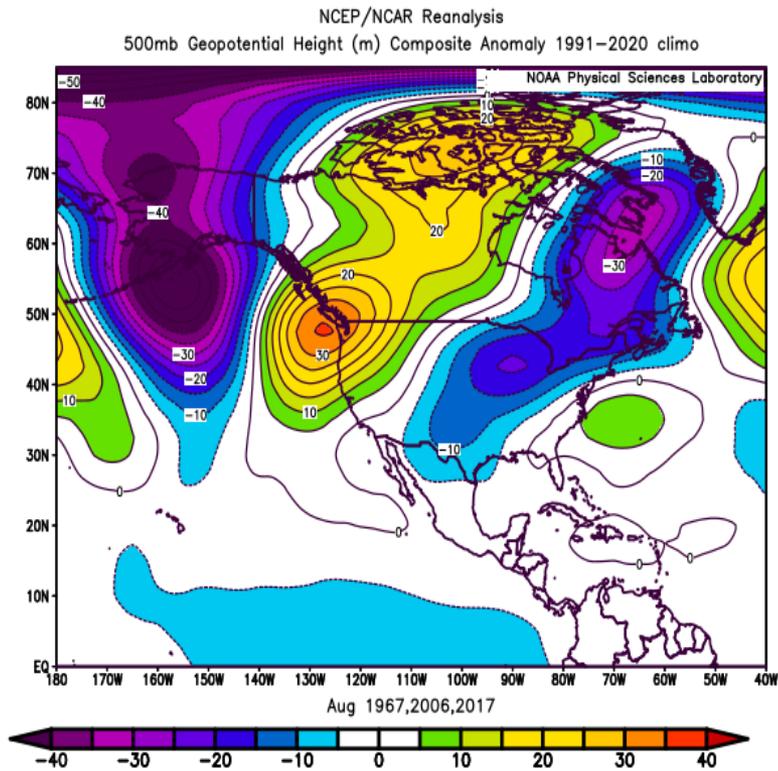
- The forecast (left) and the observed pattern (right) both showed stronger ridging than average from the Pacific NW to the Rockies. The 1967 & 2017 analog years both exhibited this general pattern. *A “forecast hit.”*

August 2025

(Forecast Issued July 17, 2025) / (Actual)

Forecast Upper-Air Anomalies

Actual Upper-Air Anomalies



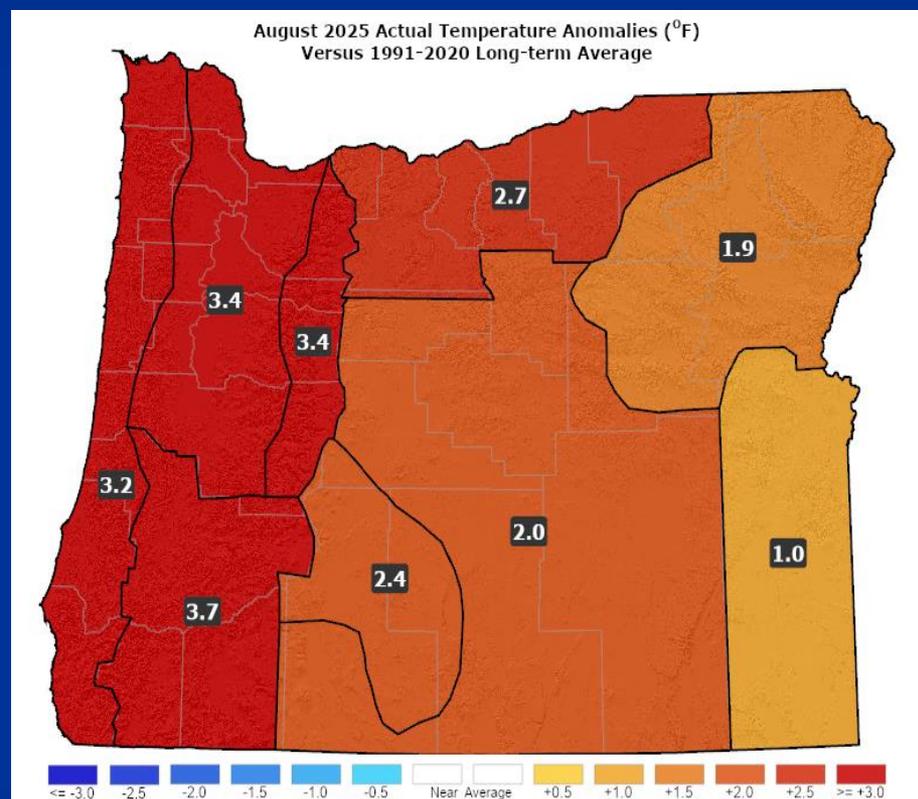
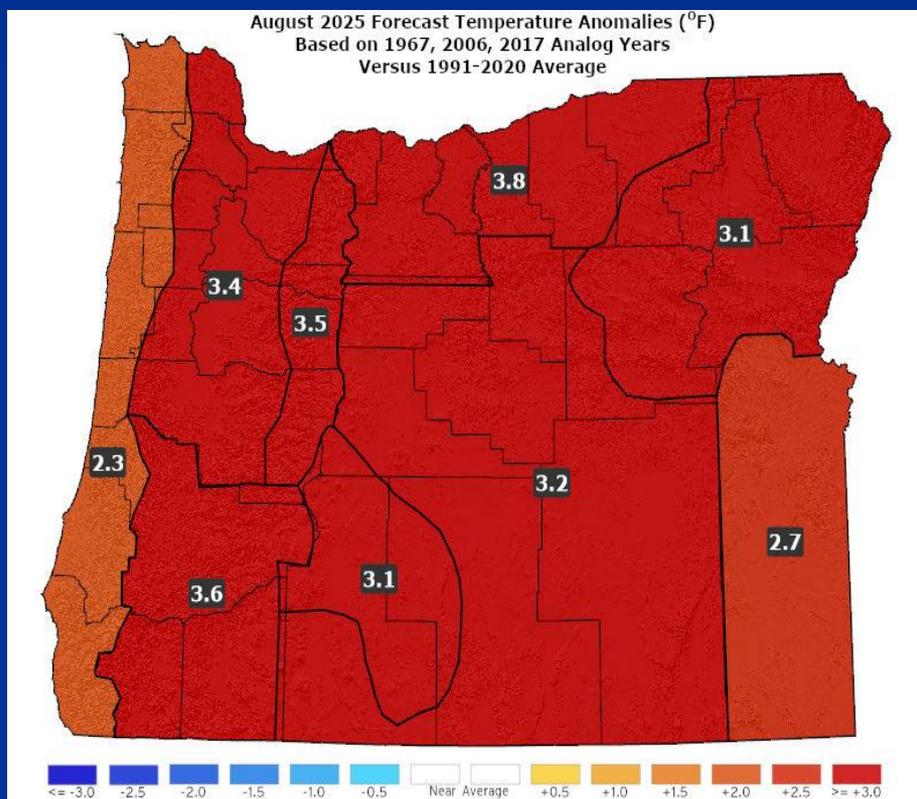
■ Positive (warm) anomalies covered the Pacific NW in both the composite analog forecast (left) and the observed pattern (right). *A “forecast hit.”*

August 2025

(Forecast Issued July 17, 2025)/(Actual)

Forecast Temperatures

Actual Temperatures



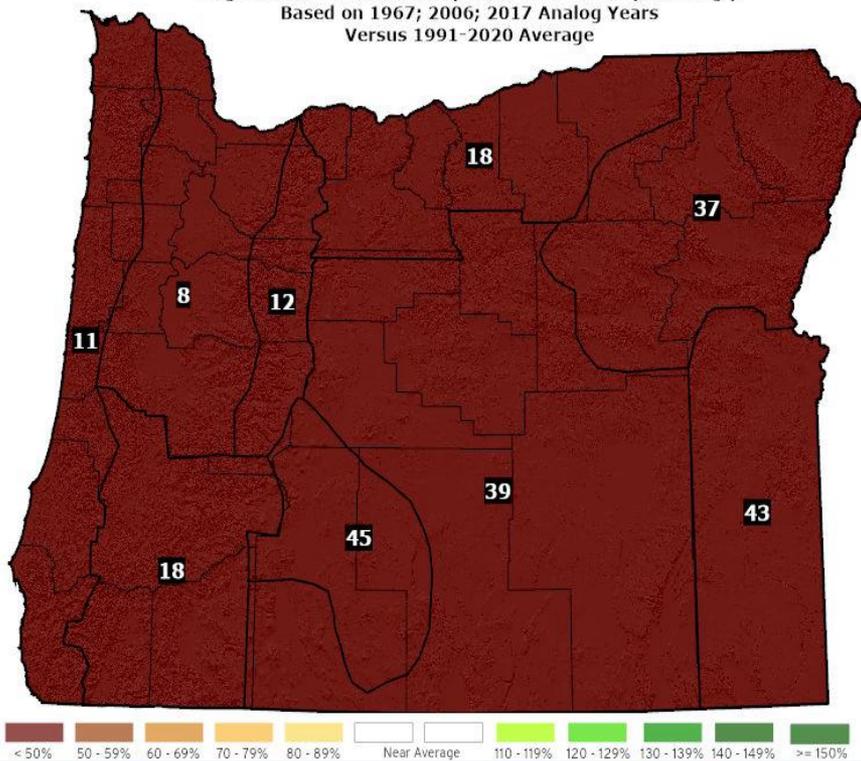
Data courtesy of the National Centers for Environmental Information (NCEI)

August 2025

(Forecast Issued July 17, 2025)/(Actual)

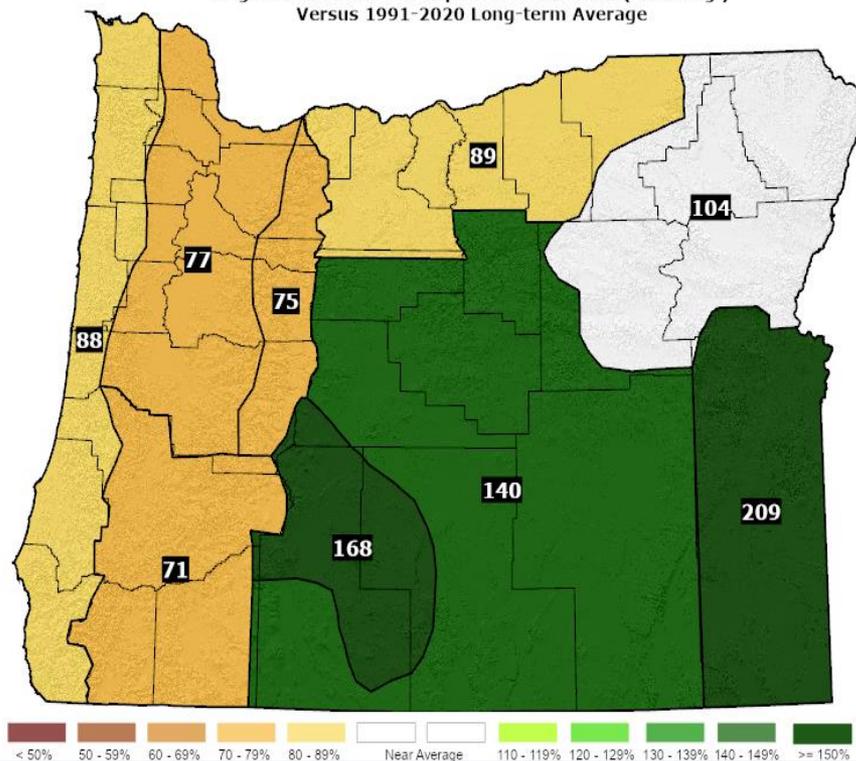
Forecast Precipitation

August 2025 Forecast Precipitation Anomalies (% of Avg.)
Based on 1967; 2006; 2017 Analog Years
Versus 1991-2020 Average



Actual Precipitation

August 2025 Actual Precipitation Anomalies (% of Avg.)
Versus 1991-2020 Long-term Average



Data courtesy of the National Centers for Environmental Information (NCEI)

August 2025

(Forecast Issued July 17, 2025)/(Actual)

- Both the 1967 & 2017 analog years had unusually hot weather with multiple days of 100+°F heat in the valleys. In contrast, 2006 was moderate. (A moderate first week was followed by a couple of hot spells with western valley temperatures exceeding 100°F. Parts of central and NE Oregon also touched the century mark at times.) A “forecast hit.”
- The analogs years varied from slightly drier than average to much-drier than average. (Western zones were drier than average but eastern areas had near-to-above-average rainfall.) A “partial forecast hit.”

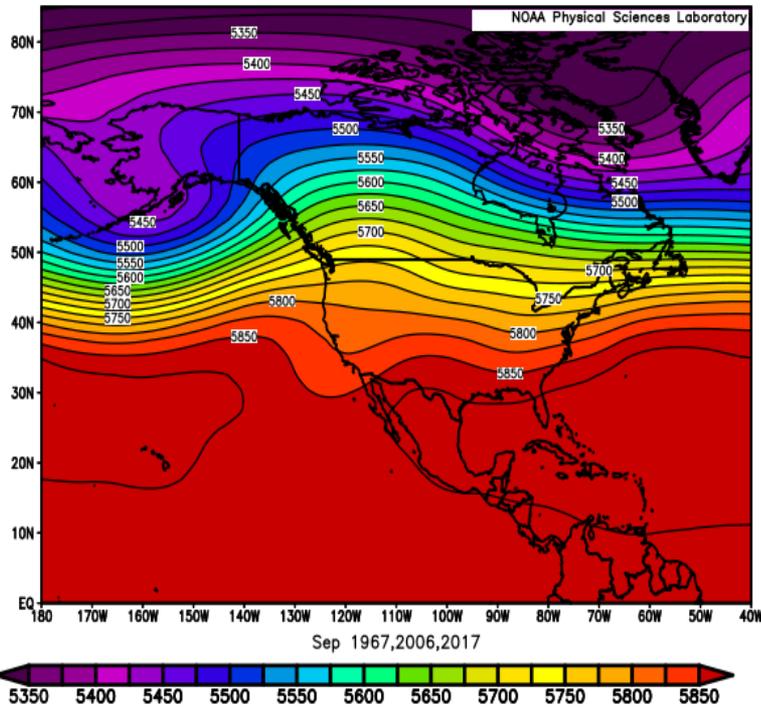
September 2025

(Forecast Issued August 21, 2025) / (Actual)

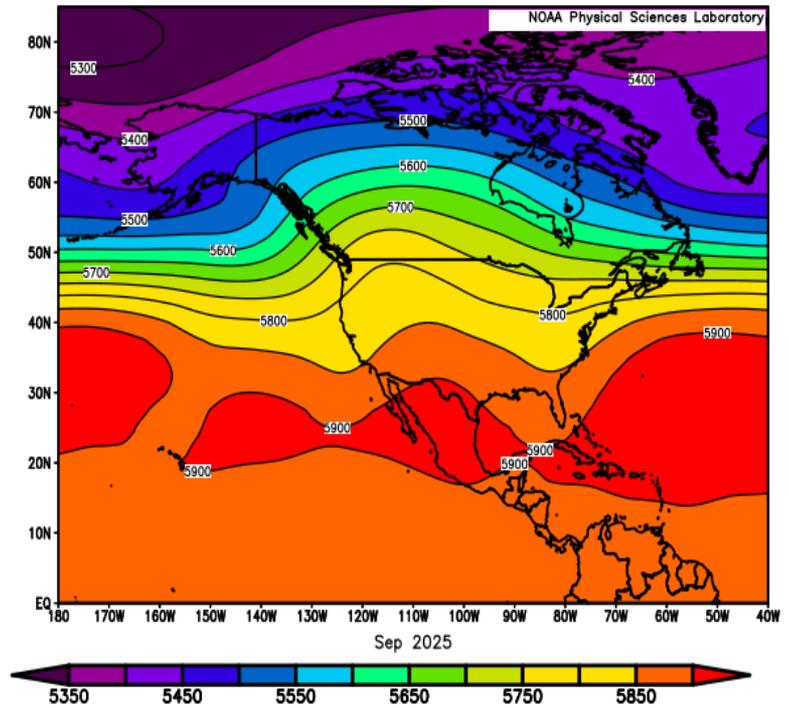
Forecast Upper-Air Pattern

Actual Upper-Air Pattern

NCEP/NCAR Reanalysis
500mb Geopotential Height (m) Composite Mean



NCEP/NCAR Reanalysis
500mb Geopotential Height (m) Composite Mean



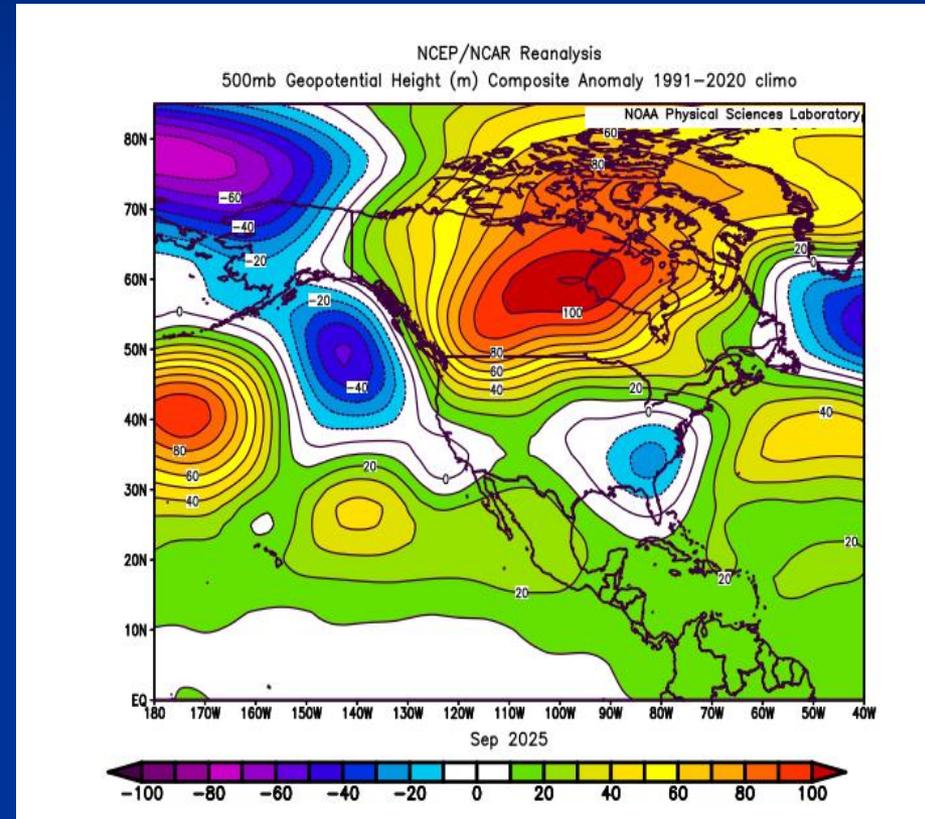
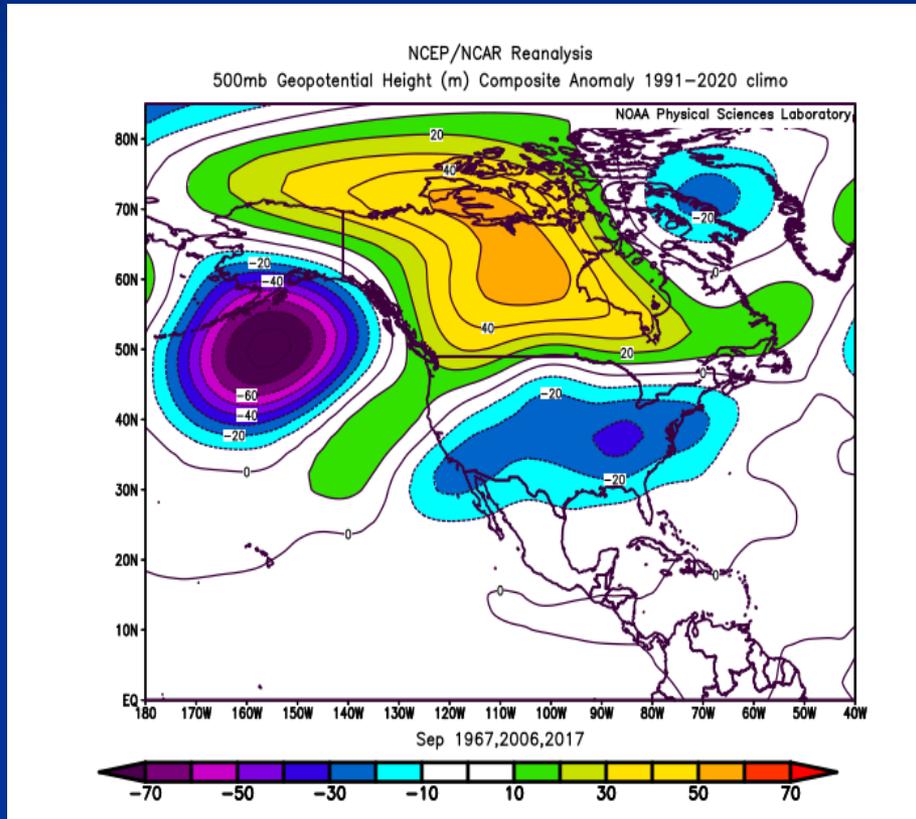
- The analog composite (left) and 2025 pattern (right) showed upper-level ridging centered just east of the Pacific NW with predominant W-SW flow aloft over Oregon. *A “forecast hit.”*

September 2025

(Forecast Issued August 21, 2025) / (Actual)

Forecast Upper-Air Anomalies

Actual Upper-Air Anomalies



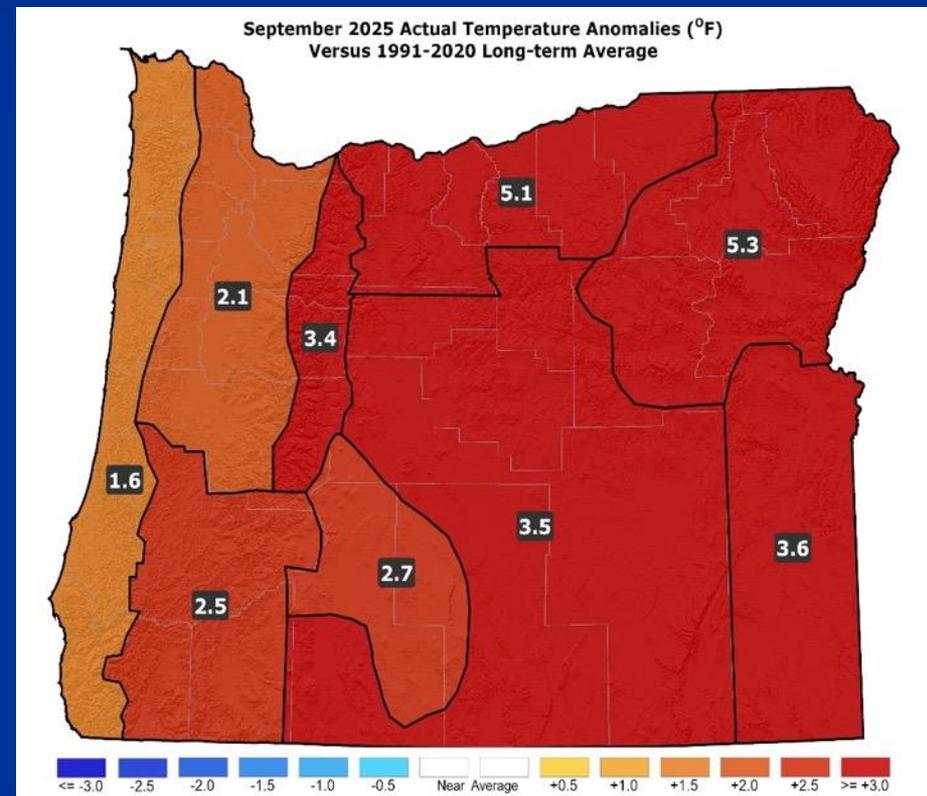
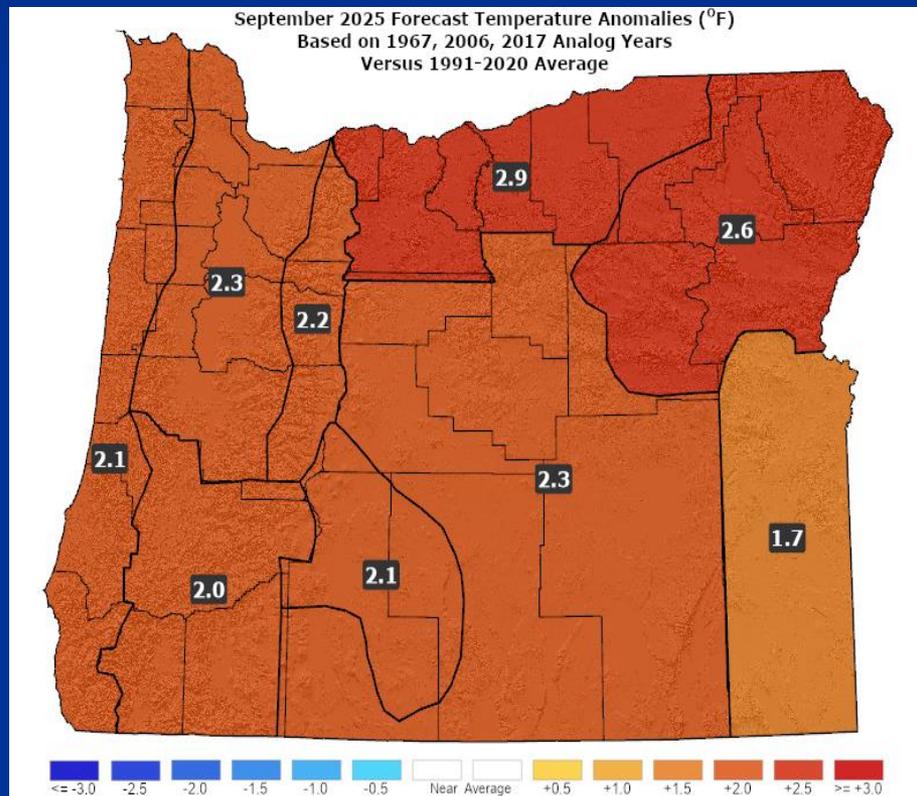
- Both the analog forecast (left) and the September 2025 pattern (right) had a broad area of positive (warm) anomalies centered over central Canada extending southwestward, to over the Pacific NW. *A “forecast hit.”*

September 2025

(Forecast Issued August 21, 2025) / (Actual)

Forecast Temperatures

Actual Temperatures



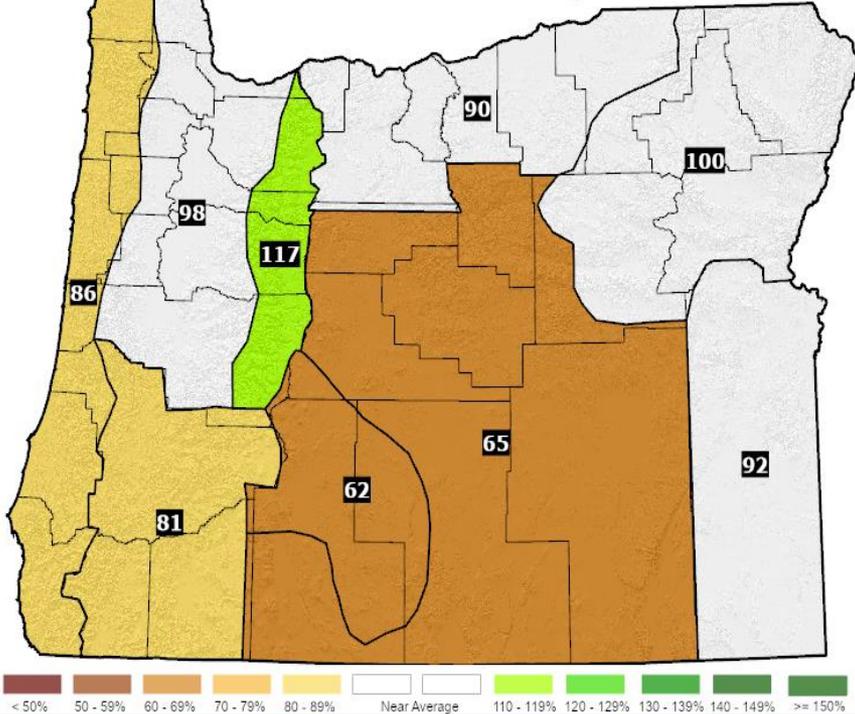
Data courtesy of the National Centers for Environmental Information (NCEI)

September 2025

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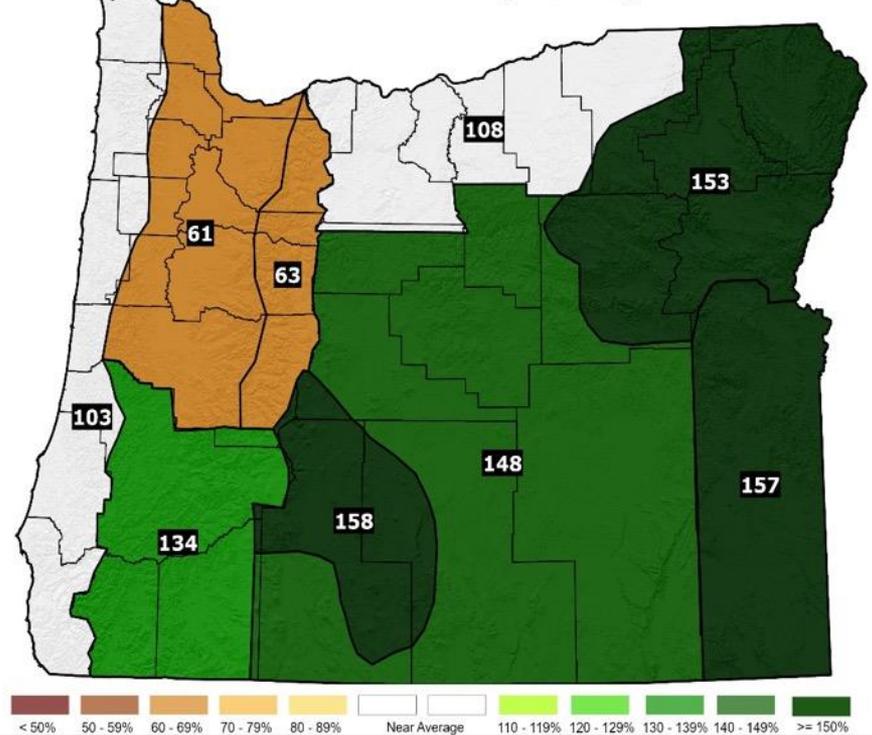
Forecast Precipitation

September 2025 Forecast Precipitation Anomalies (% of Avg.)
Based on 1967; 2006; 2017 Analog Years
Versus 1991-2020 Average



Actual Precipitation

September 2025 Actual Precipitation Anomalies (% of Avg.)
Versus 1991-2020 Long-term Average



Data courtesy of the National Centers for Environmental Information (NCEI)

September 2025

(Forecast Issued August 21, 2025) / (Actual)

- Above-average temperatures with enhanced chances for 100+°F heat in some western valley and eastern basin sites through mid-month. (Temperatures were above normal statewide...with highs climbing into the 90s at times in both the western valleys and the eastern basins.) A “forecast hit.”
- Precipitation near or below average. Drier analogs of 1967 & 2006 were countered by a wetter 2017. All analog years had at least some shower activity. (Upper-level troughs brought showers to much of the state at mid-month and again at month’s end. Rainfall was below average in the NW zones but near or above average elsewhere, in what is typically one of the drier months of the year statewide. A “partial forecast hit.”)

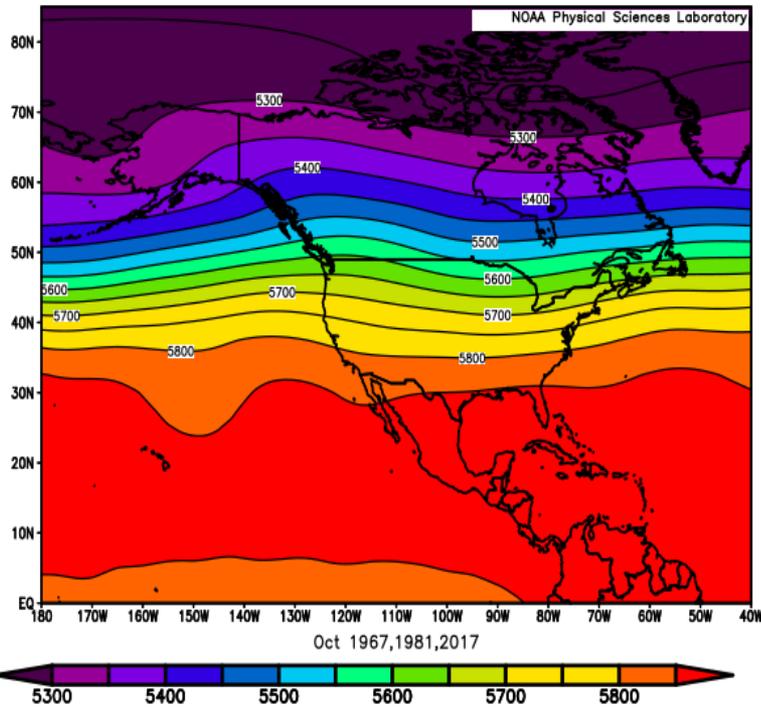
October 2025

(Forecast Issued September 18, 2025)/(Actual)

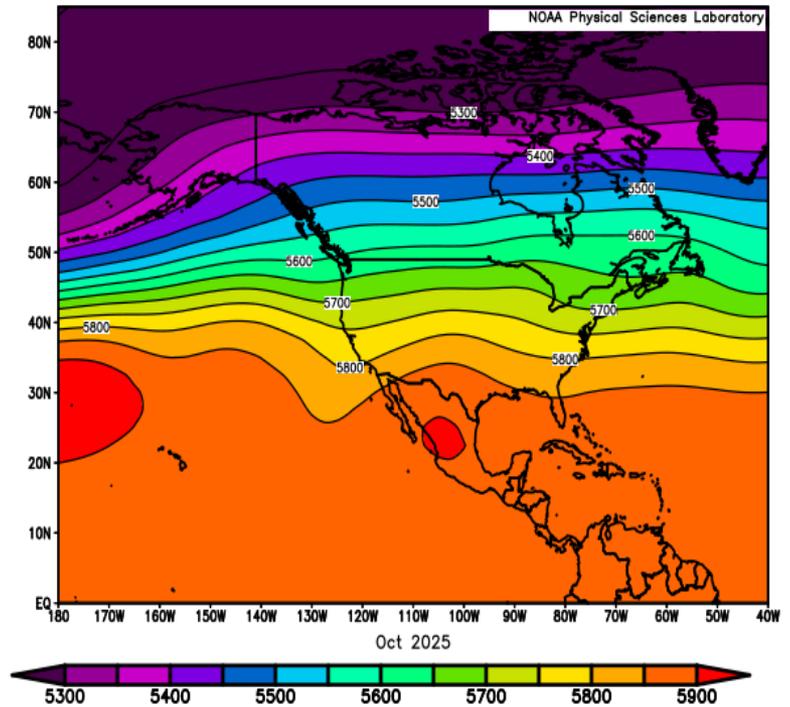
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Actual Upper-Air Pattern

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500mb Geopotential Height (m) Composite Mean



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500mb Geopotential Height (m) Composite Mean



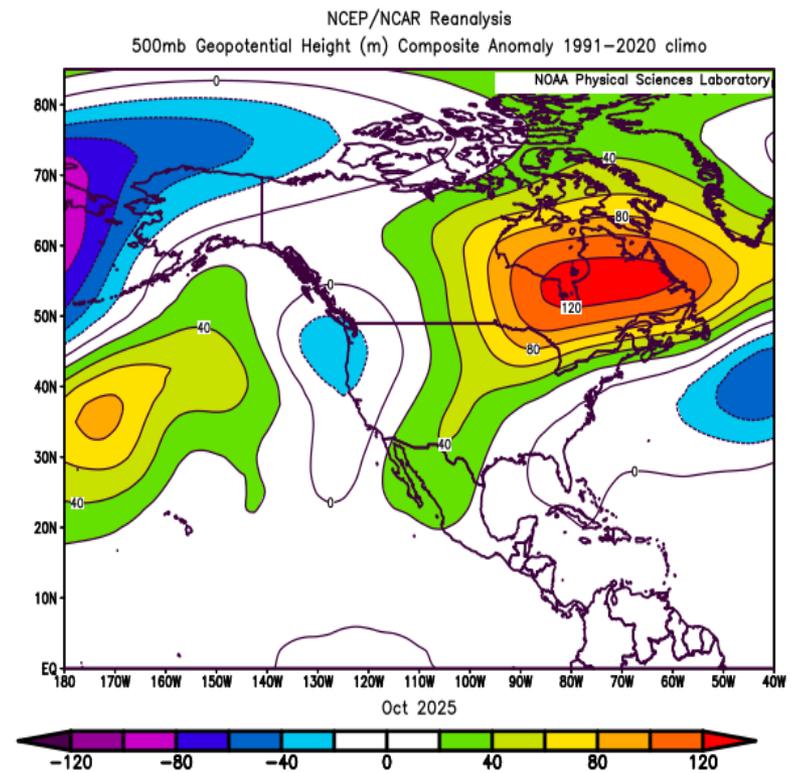
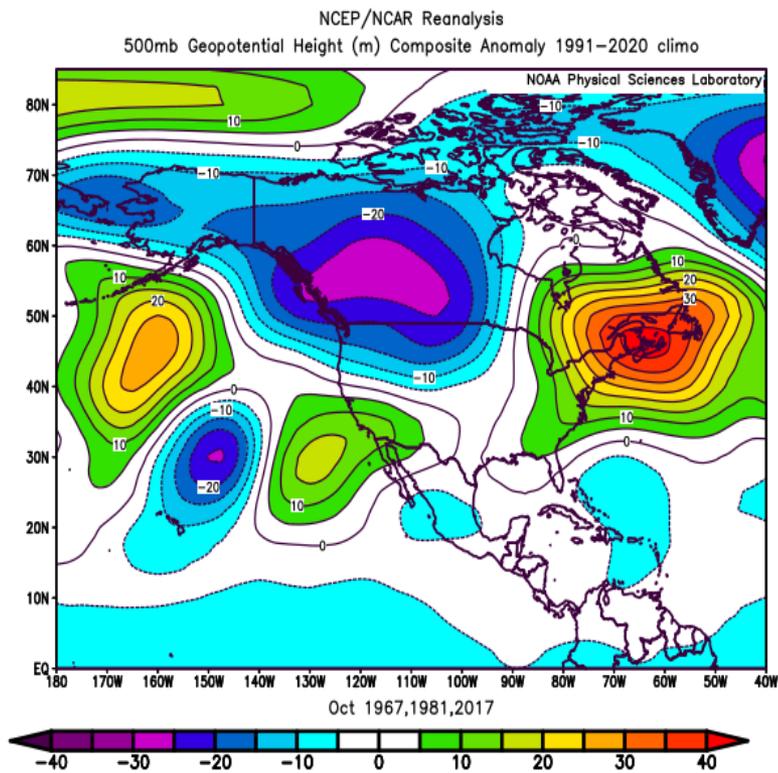
- Both the analog blend (left) and the October 2025 observed pattern (right) had prevailing westerly flow aloft over Oregon...ranging from more SW flow, in 1967, to more W-NW flow, in 2017. A “forecast hit.”

October 2025

(Forecast Issued September 18, 2025)/(Actual)

Forecast Upper-Air Anomalies

Actual Upper-Air Anomalies



- Analogs (left) ranged from anomalous troughing in 1981 to ridging in 2017, with the blend favoring troughing. 2025 (right) had anomalous troughing. *A “forecast hit.”*

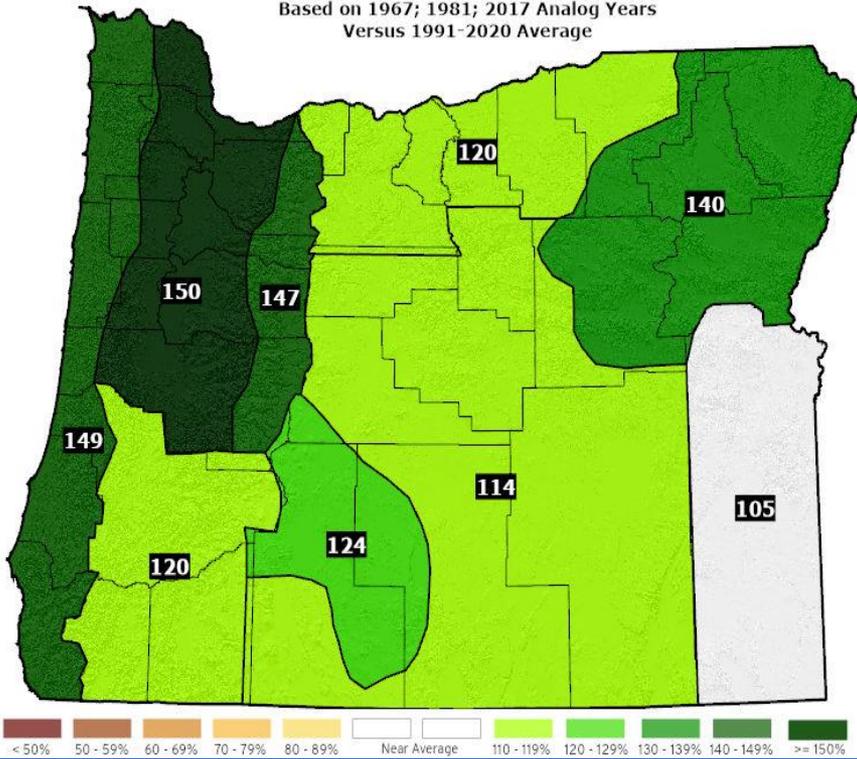
October 2025

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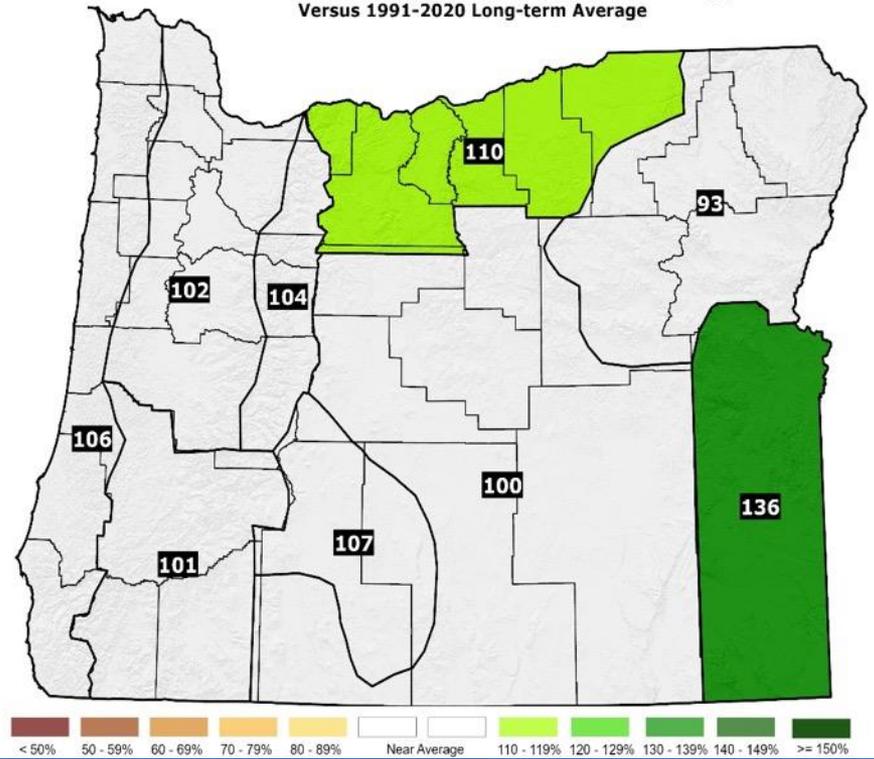
Forecast Precipitation

Actual Precipitation

October 2025 Forecast Precipitation Anomalies (% of Avg.)
Based on 1967; 1981; 2017 Analog Years
Versus 1991-2020 Average



October 2025 Actual Precipitation Anomalies (% of Avg.)
Versus 1991-2020 Long-term Average



Data courtesy of the National Centers for Environmental Information (NCEI)

October 2025

(Forecast Issued September 18, 2025)/(Actual)

- Despite differing upper-air patterns, the analogs had average or slightly below average temperatures. (October 2025 brought a marked shift from well-above-average temperatures to below-average temperatures.) A “forecast hit.”
- Above-average precipitation with some snow on the mountain passes by month’s end. (October 2025 had near-average or above-average precipitation. The mountain passes saw brief snow.) Mostly a “forecast hit.”

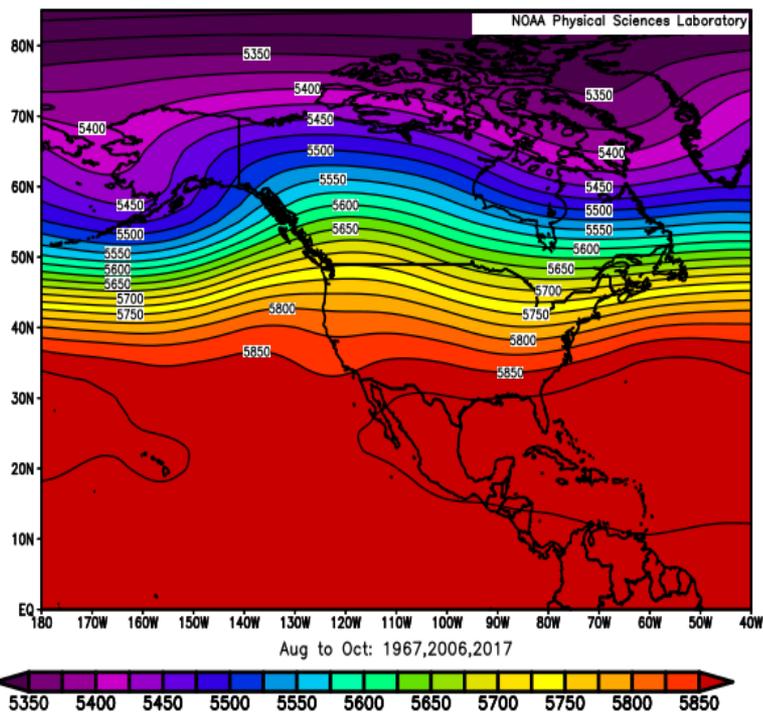
August – October 2025

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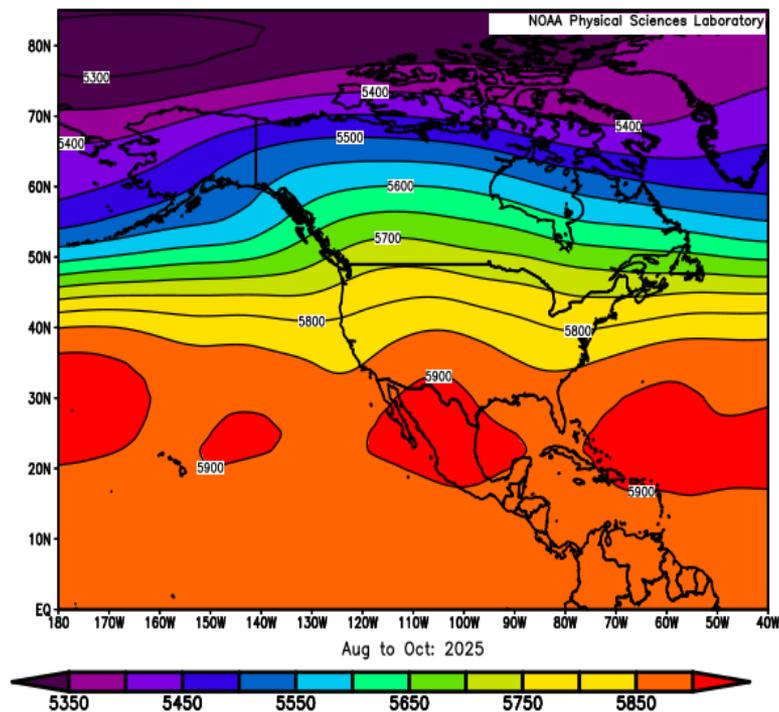
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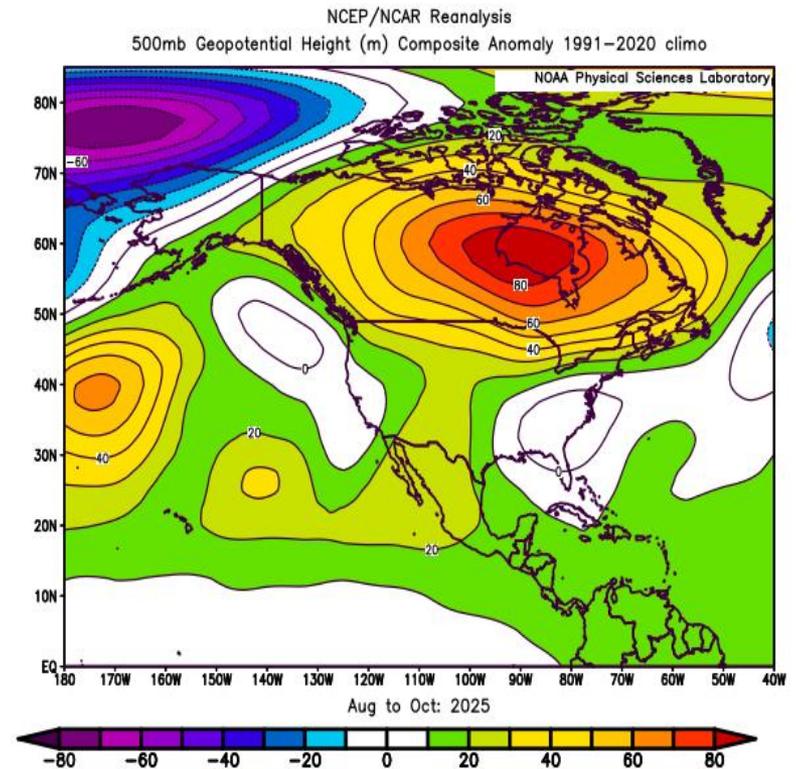
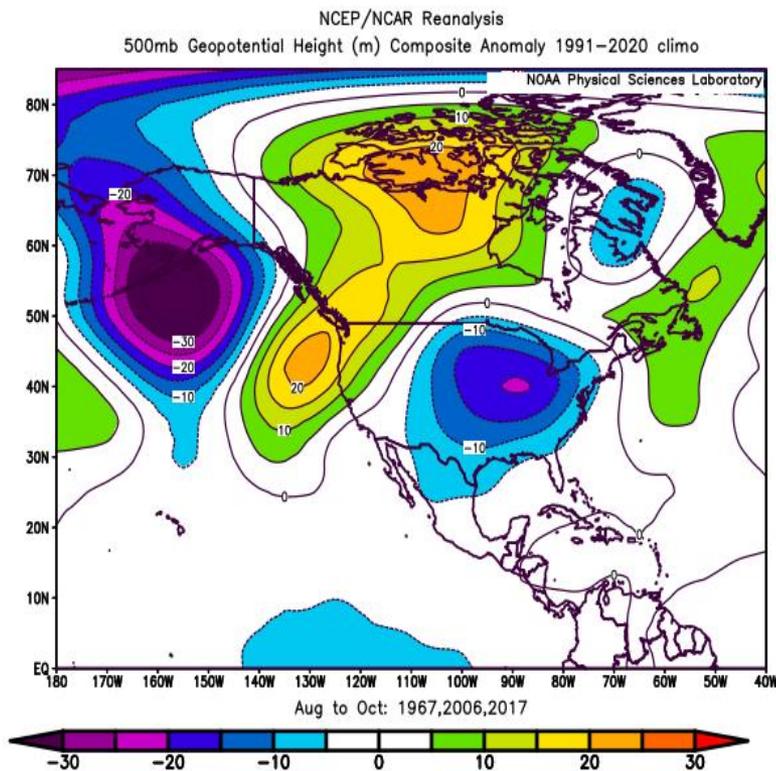
- A composite of the analogs (left) and the actual 2025 upper-air pattern (right) were a very close match over the Pacific NW. A “forecast hit.”

August – October 2025

(Forecast Issued July 17, 2025) / (Actual)

Forecast Upper-Air Anomalies

Actual Upper-Air Anomalies



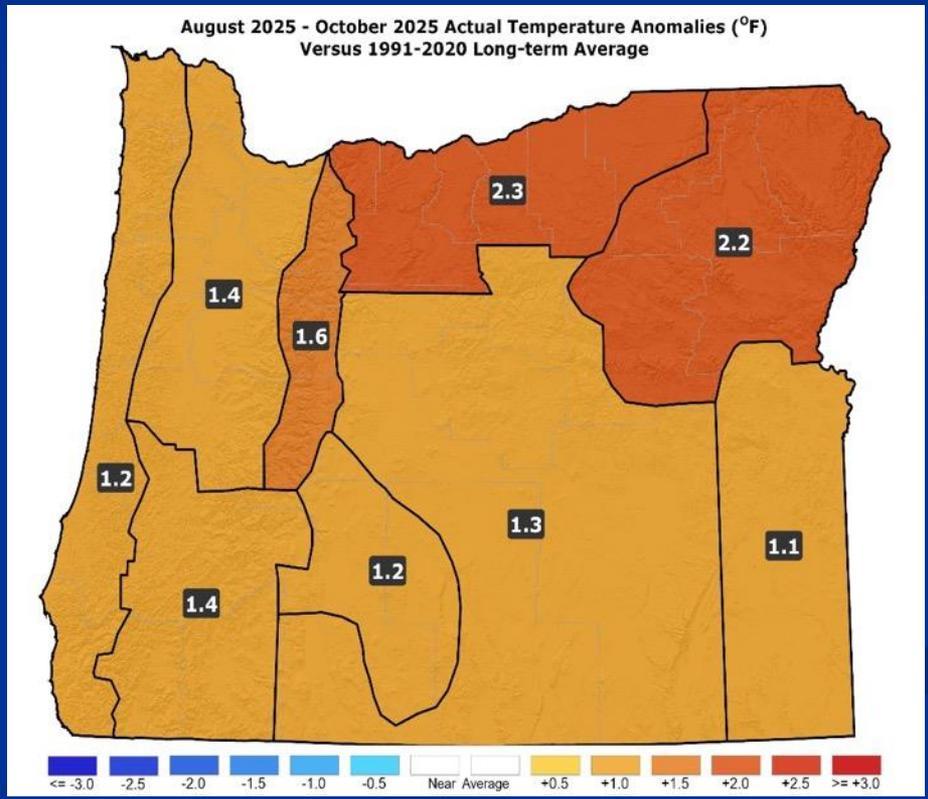
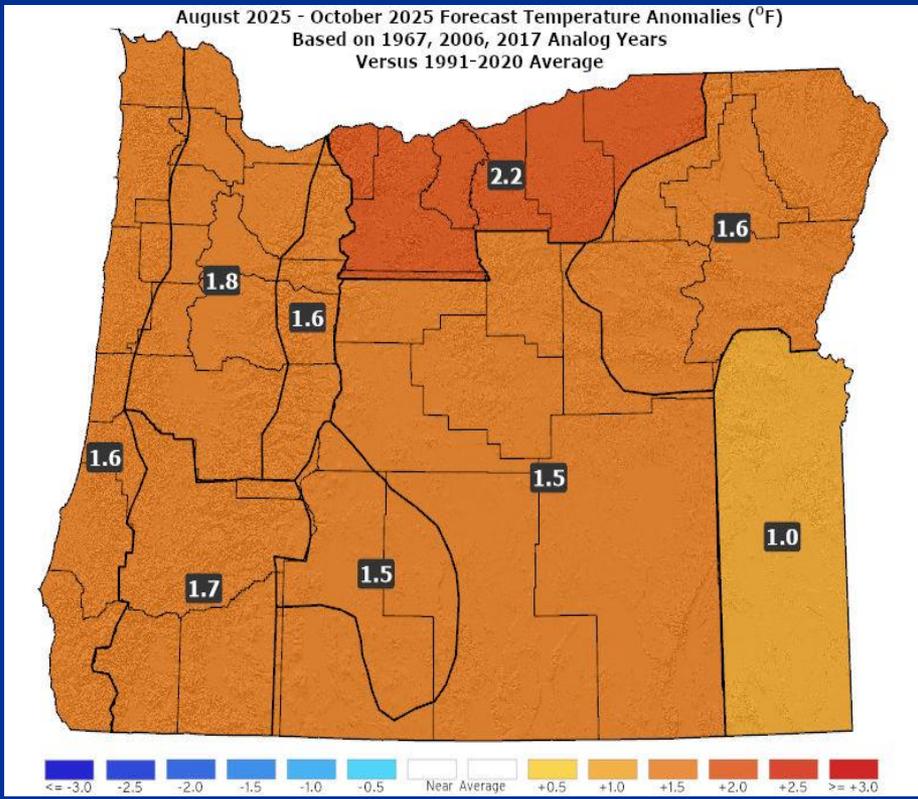
- Both the forecast analogs (left) and the actual 2025 pattern (right) maintained anomalous ridging over the Pacific Northwest, despite anomalous troughing in October. *A “forecast hit.”*

August – October 2025

(Forecast Issued July 17, 2025)/(Actual)

Forecast Temperatures

Actual Temperatures



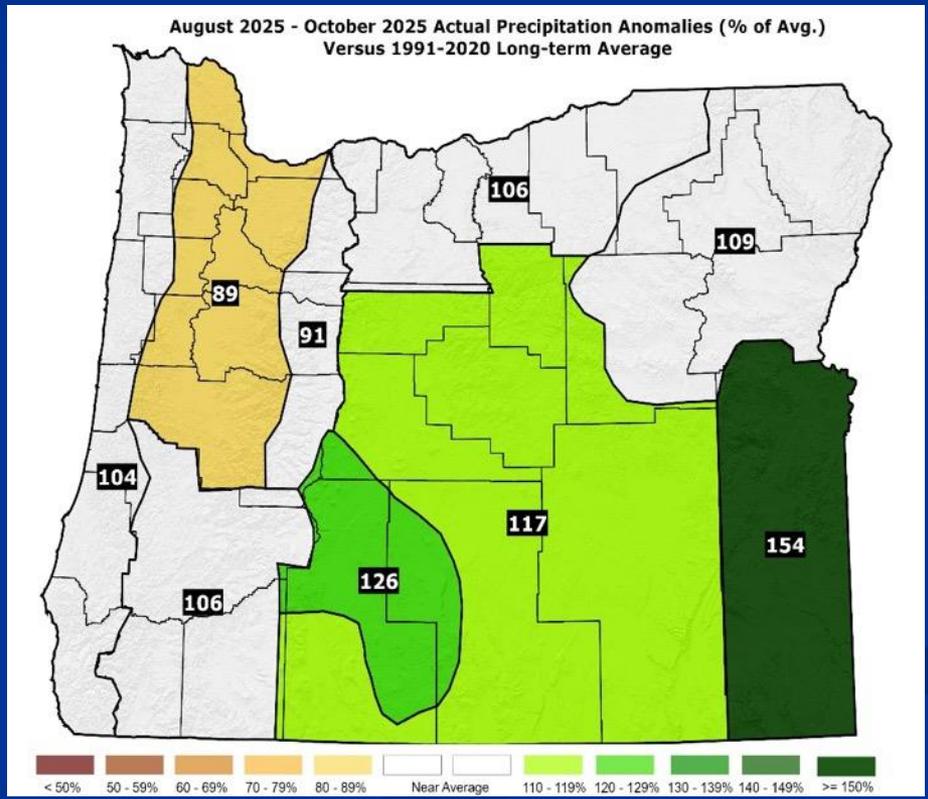
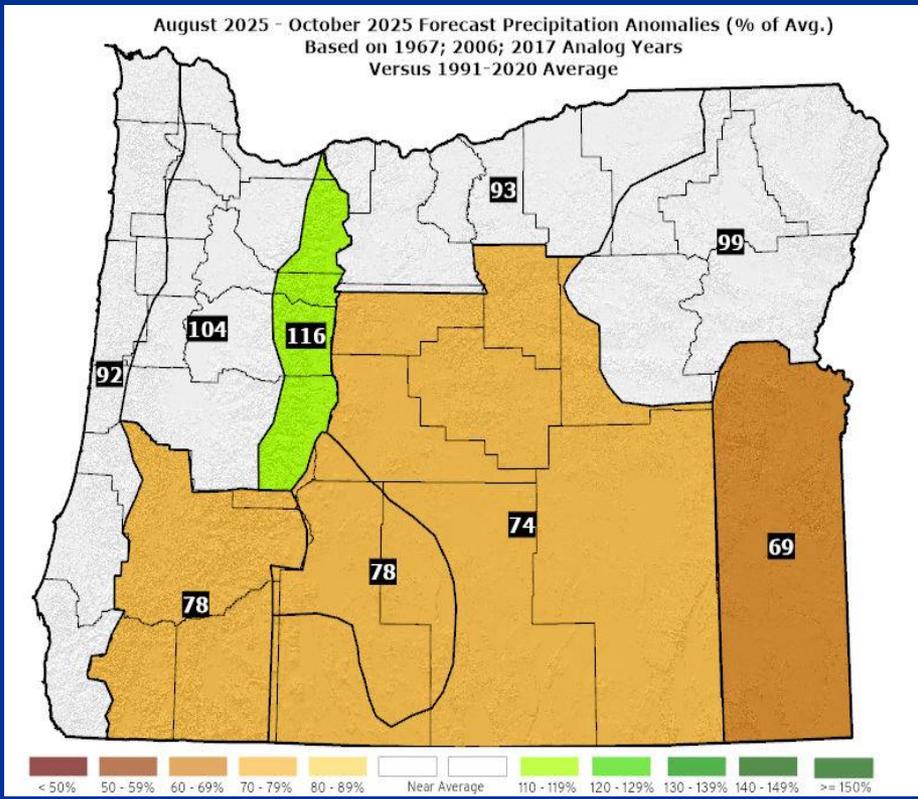
Data courtesy of the National Centers for Environmental Information (NCEI)

August – October 2025

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Forecast Precipitation

Actual Precipitation



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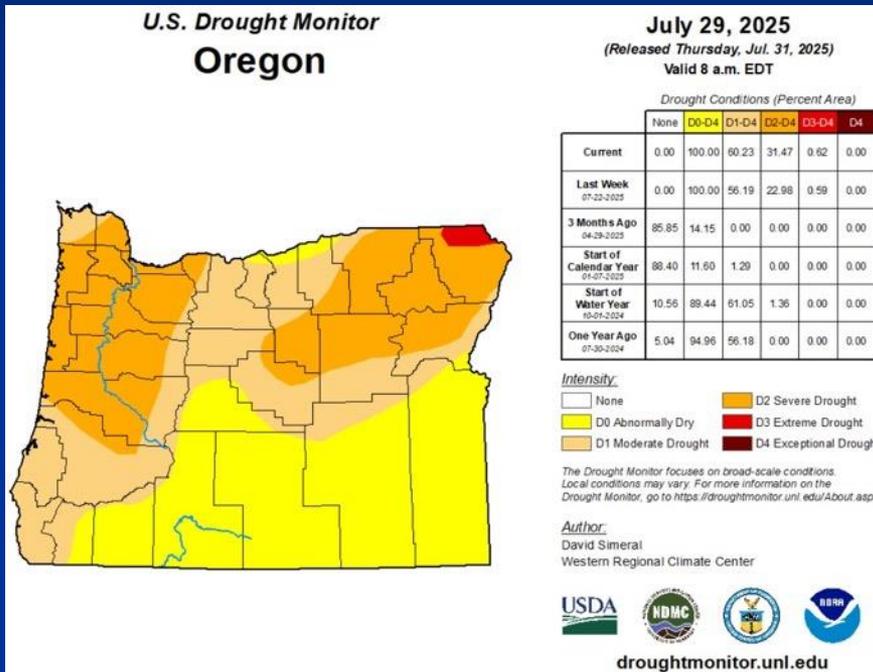
August – October 2025

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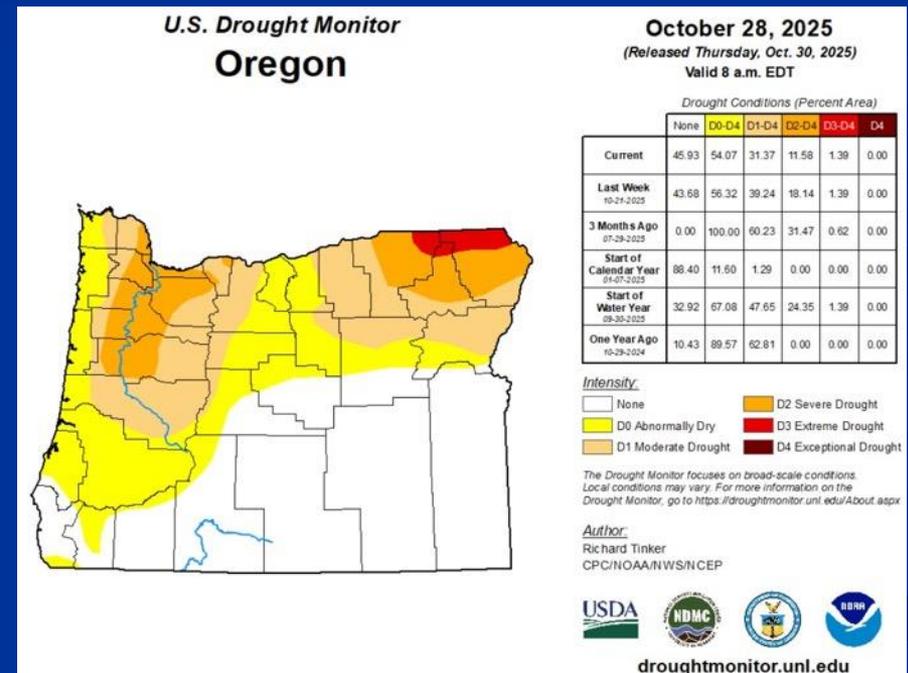
- Warmer than average weather through September, then a marked shift to average or slightly cooler-than-average conditions in October. (Above-average temperatures were experienced through September, with a switch to cooler-than-average conditions in October.) A “forecast hit.”
- Drier than average conditions, especially south. Heightened chances for lightning episodes. (August was dry in the west but produced considerable thundershower activity from the Cascades eastward. September was drier than average for the NW zones, but the remainder of the state had near or above-average rainfall. October saw mostly near-average rainfall.) A “partial forecast hit.”

Oregon Drought Status (Minor Improvement Most Areas)

July 29, 2025



October 28, 2025



Courtesy: National Drought Mitigation Center (NDMC)

<https://droughtmonitor.unl.edu/>

Forecast Resources

- ODA Seasonal Climate Forecast Home:

<https://www.oregon.gov/oda/natural-resources/pages/weather.aspx>

- CPC Official US Three-Month Forecasts (Graphics):

https://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=01

- CPC US 30-Day & 90-Day Forecasts (Discussions):

https://www.cpc.ncep.noaa.gov/products/predictions/long_range/fxus07.html

- CPC Weekly & Monthly ENSO Discussions:

https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory

- Australian Government Climate Model Summary:

<http://www.bom.gov.au/climate/model-summary/#region=NINO34&tabs=Overview>

- Australian Government ENSO Wrap-Up:

<http://www.bom.gov.au/climate/enso>

- IRI ENSO Quick Look:

<https://iri.columbia.edu/our-expertise/climate/forecasts/enso/current/>

Water Supply / Fire-Potential Outlook

- CPC U.S. Seasonal Drought Outlook:

https://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.png

- NRCS Snow Water Equivalent Oregon Map:

https://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/or_swepctnormal_update.pdf

- NRCS/USDA Snow Water Equivalent Products:

<https://www.nrcs.usda.gov/wps/portal/wcc/home/snowClimateMonitoring/snowpack/>

- NDMC U.S. Drought Monitor:

<https://droughtmonitor.unl.edu/>

- NIDIS North American Drought Portal:

<https://www.drought.gov/nadm/content/percent-average-precipitation>

- WRCC WestWideDroughtTracker:

<https://www.wrcc.dri.edu/wwdt/>

- NWCC Northwest Interagency Coordination Center (video)

<https://gacc.nifc.gov/nwcc/predict/outlook.aspx>

Updated Mid-Month

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Sign-up for Email notification of updates at:

https://public.govdelivery.com/accounts/ORODA/subscriber/new?topic_id=ORODA_14

Contact: Pete Parsons, ODF Lead Meteorologist
at 503-945-7448 or peter.gj.parsons@odf.oregon.gov

Photo: Chris Parsons