Water Year 2022 is off to a wet start.

La Niña Conditions have developed as of fall 2021 and are likely to persist through winter and early spring 2022.

Climate Prediction Center (CPC) forecasts with probabilities leaning toward:

1) a Wetter than Normal Fall 2021, and
2) a Cooler and Wetter than normal Winter

ENSO Conditions trend to Neutral by spring 2022, and CPC outlooks for late spring and summer are more influenced by long-term climate trends.
La Niña Through This Winter

Model Predictions of ENSO from Oct 2021

IRI/CPC

Nino3.4 SST Anomaly (°C)

OBSERVED FORECAST
How does ENSO Phase Affect Weather Patterns?

**La Niña**
- Cooler than normal sea-surface temps across central & eastern tropical Pacific
- Favors higher chances for cooler and wetter than normal conditions for the Pacific Northwest during winter months

**El Niño**
- Warmer than normal water across the central and eastern tropical Pacific
- Favors higher chances for warmer than normal temperatures with near-normal to below normal precipitation for the Pacific Northwest during winter months
Outlook for rest of November

8-14 day Outlook for Temperatures and Precipitation from NOAA Climate Prediction Center
CPC February - April 2022 Outlook

Seasonal Temperature Outlook
Valid: Feb-Mar-Apr 2022
Issued: October 21, 2021

Seasonal Precipitation Outlook
Valid: Feb-Mar-Apr 2022
Issued: October 21, 2021

www.cpc.ncep.noaa.gov
ENSO & Historic Climate in WA/OR

- Review of Dec-Jan-Feb data for four climate divisions in WA and OR
  - WA01 West Olympic Coast, WA
  - WA06 East Slopes Cascades, WA
  - OR05 High Plateau (south-central), OR
  - OR08 Blue Mountains (northeast), OR
  - Period of Record is 1950 - 2020

- Boxplots of precipitation & temperatures for ENSO-Neutral, La Niña, and El Niño

- All four climate divisions show a trend of wetter and cooler *on average* during La Niña conditions, but in varying degrees.

- Analysis done using NOAA Local Climate Analysis Tool (lcat.nws.noaa.gov/lcat)
Climate Divisions: West Slopes Olympics, WA

December-January-February Total Precipitation (inches) ONI Boxplot Analysis [1950-2020] for NCEI Climate Division ID #WA01

Precipitation
POR Mean = 46.3”

December-January-February Average Temperature (Degrees F) ONI Boxplot Analysis [1950-2020] for NCEI Climate Division ID #WA01

Temperature
POR Mean = 39.0°F

Temperature
POR Mean = 39.0°F
Climate Divisions: East Slopes Cascades, WA

December-January-February Total Precipitation (inches) ONI
Boxplot Analysis [1950-2020] for NCEI Climate Division ID #WA06

PRECIPITATION
POR Mean = 16.6”

December-January-February Average Temperature (Degrees F) ONI
Boxplot Analysis [1950-2020] for NCEI Climate Division ID #WA06

TEMPERATURE
POR Mean = 26.9°F
Climate Divisions: High Plateau (south-central), OR

December-January-February Total Precipitation (inches) ONI
Boxplot Analysis [1950-2020] for NCEI Climate Division ID #OR05

**PRECIPITATION**
POR Mean = 11.3”

December-January-February Average Temperature (Degrees F) ONI
Boxplot Analysis [1950-2020] for NCEI Climate Division ID #OR05

**TEMPERATURE**
POR Mean = 29.6°F

OR/WA Seasonal Outlook
NWS Portland, OR
Tuesday, November 16
Climate Divisions: Blue Mountains (northeast), OR

Precipitation

POR Mean = 8.8"

Temperature

POR Mean = 28.4°F
OR/WA Seasonal Outlook
NWS Portland, OR
Tuesday, November 16

Water Year Runoff vs. ENSO - Washington basins

https://www.nwrfc.noaa.gov/natural/index.html
Water Year Runoff vs. ENSO - Oregon basins

NOV-JAN Oceanic Nino Index vs OCT-SEP Historical Natural Runoff
(RYGO3) ROGUE - AT RAYGOLD (1951-2021)

- La Nina
- Neutral
- El Nino

Runoff for Given Water Year  ONI vs Runoff Trendline  30 Year Normal (1981-2010)

NOV-JAN Oceanic Nino Index vs OCT-SEP Historical Natural Runoff
(SERO3) JOHN DAY - AT SERVICE CK (1951-2021)

- La Nina
- Neutral
- El Nino

Runoff for Given Water Year  ONI vs Runoff Trendline  30 Year Normal (1981-2010)

https://www.nwrfc.noaa.gov/natural/index.html
• La Niña Conditions persist through winter.

• Climate Prediction Center (CPC) seasonal outlooks indicate an enhanced likelihood of above-average precipitation and below-average temperatures this winter in the PacNW, especially for Washington.

• Historical data supports the likelihood of below-average temperatures, above-average precipitation, and above-average water year runoff for Oregon and Washington.

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