

Seasonal Climate Forecast Verification

October – December 2016

Issued: January 10, 2017

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Oregon Dept. of Agriculture (ODA) - Oregon Dept. of Forestry (ODF)
ODA Production support from Diana Walker and Andy Zimmerman

Format and Purpose:

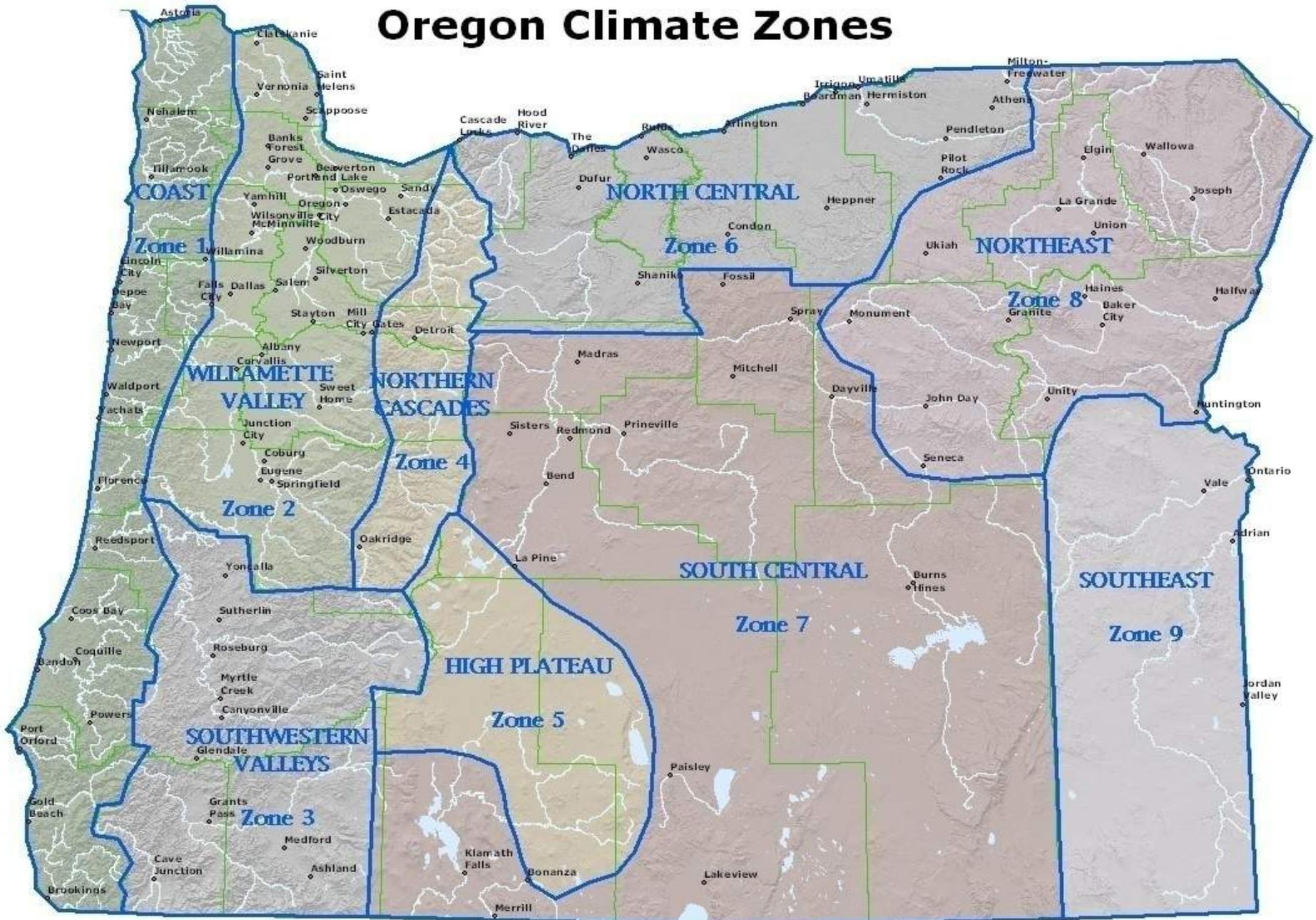
- A side-by-side comparison of the “Seasonal Climate Forecast” vs. what (Actually Occurred) is done for both the 1-month & 3-month forecasts.*
- To assess the utility of this forecast and form a basis for “adjustments” to the forecast method.**

**Utilizes 1981-2010 long-term averages*

**See “Forecasting Methods...” at:

<http://www.oregon.gov/ODA/programs/NaturalResources/Pages/Weather.aspx>

Oregon Climate Zones

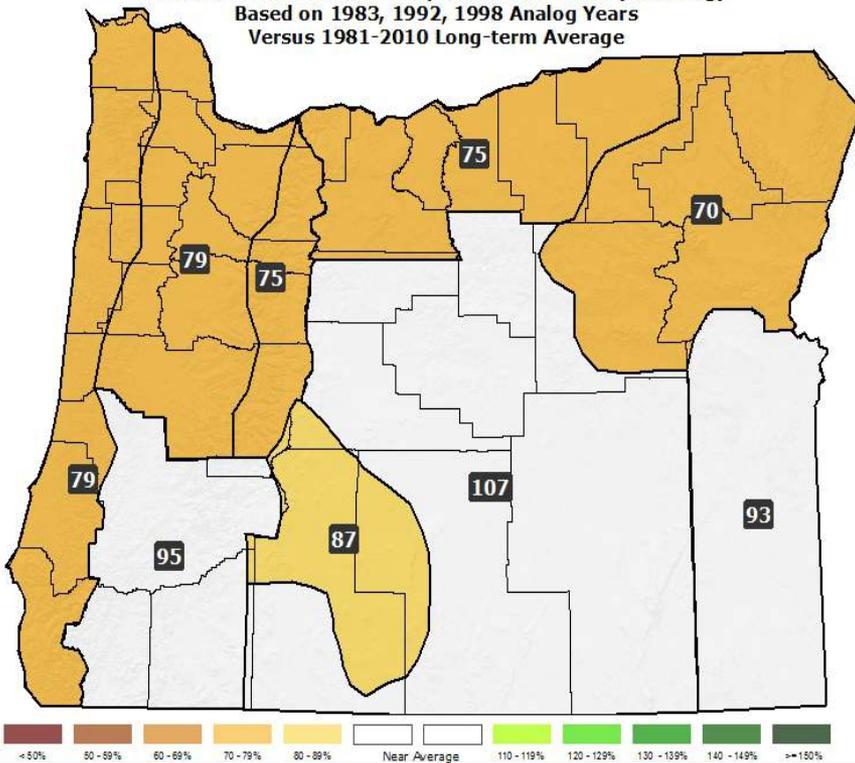


October 2016

(Forecast Issued September 22, 2016)

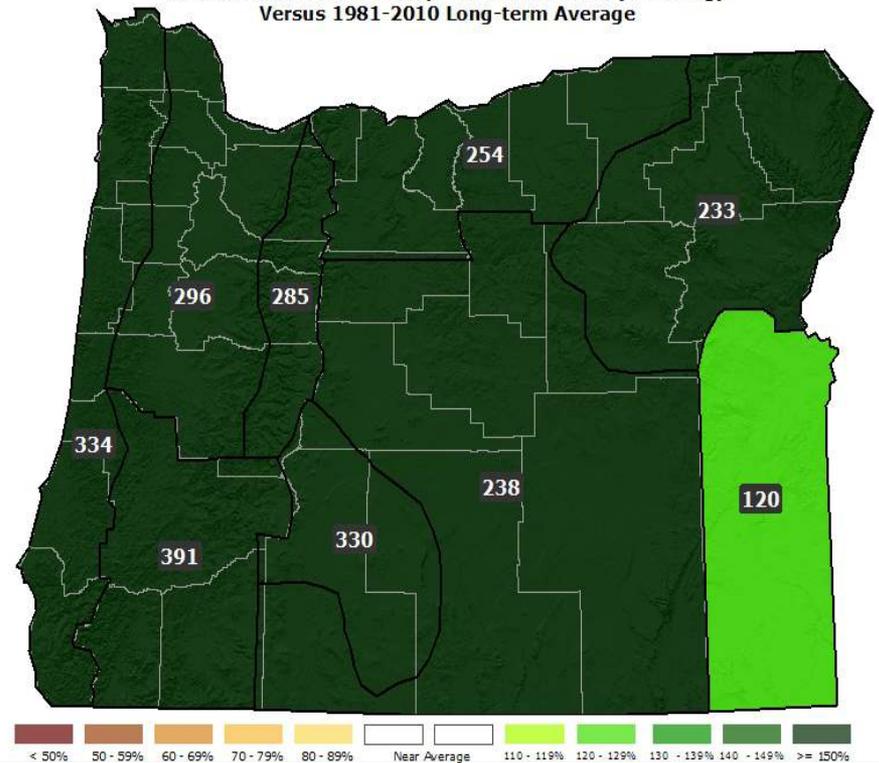
Forecast Precipitation

October 2016 Forecast Precipitation Anomalies (% of Avg)
Based on 1983, 1992, 1998 Analog Years
Versus 1981-2010 Long-term Average



Actual Precipitation

October 2016 Actual Precipitation Anomalies (% of Avg)
Versus 1981-2010 Long-term Average



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

October 2016

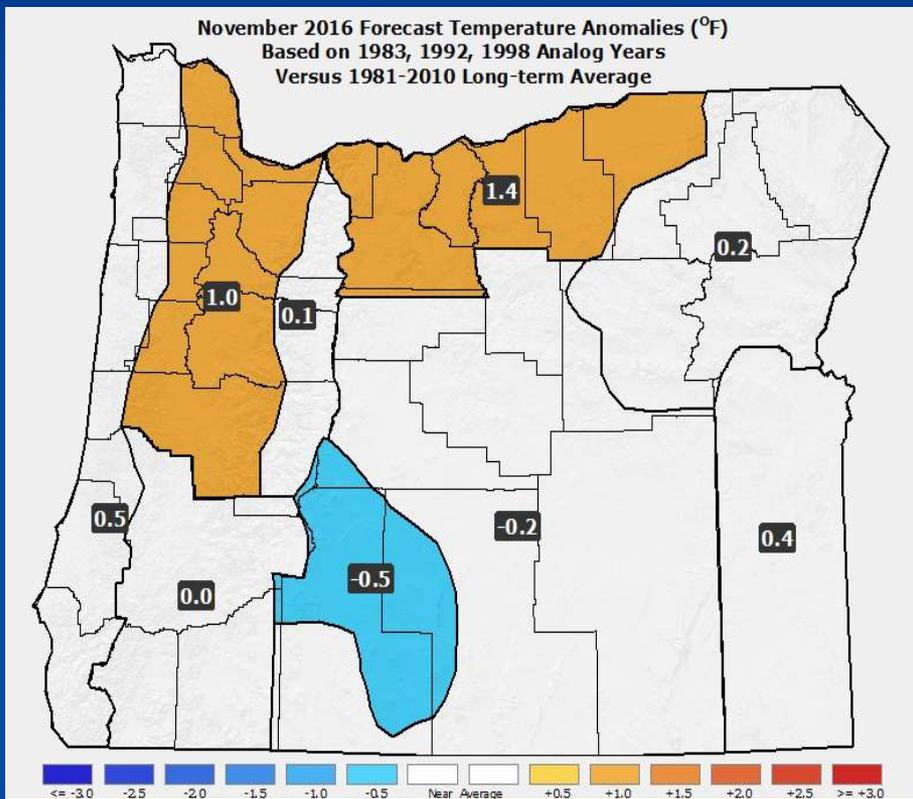
(Forecast Issued September 22, 2016)/(Actual)

- Slightly-above-average or above-average temperatures. (Temperatures were near average north and ranged from below average in SW Oregon to above average in SE Oregon.)
- Near-to-below-average precipitation. (Potent storms lashed the region, some with embedded tropical moisture. Many sites set new monthly precipitation records. The greatest positive departures, nearly 400% of average, were in SW Oregon.)

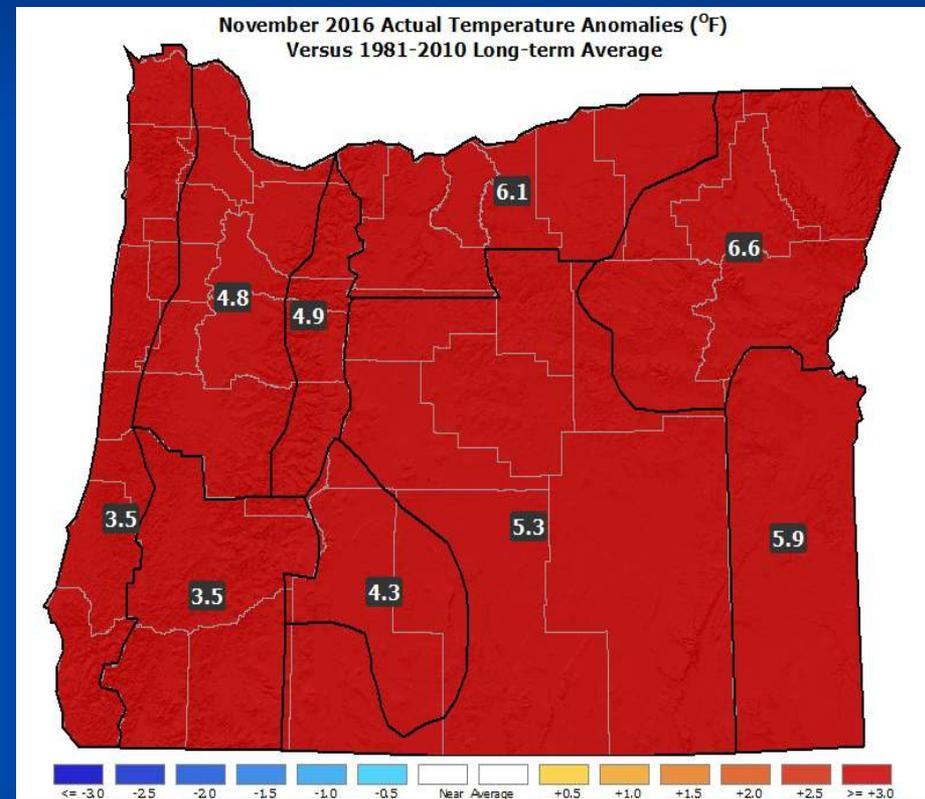
November 2016

(Forecast Issued October 20, 2016)

Forecast Temperatures



Actual Temperatures

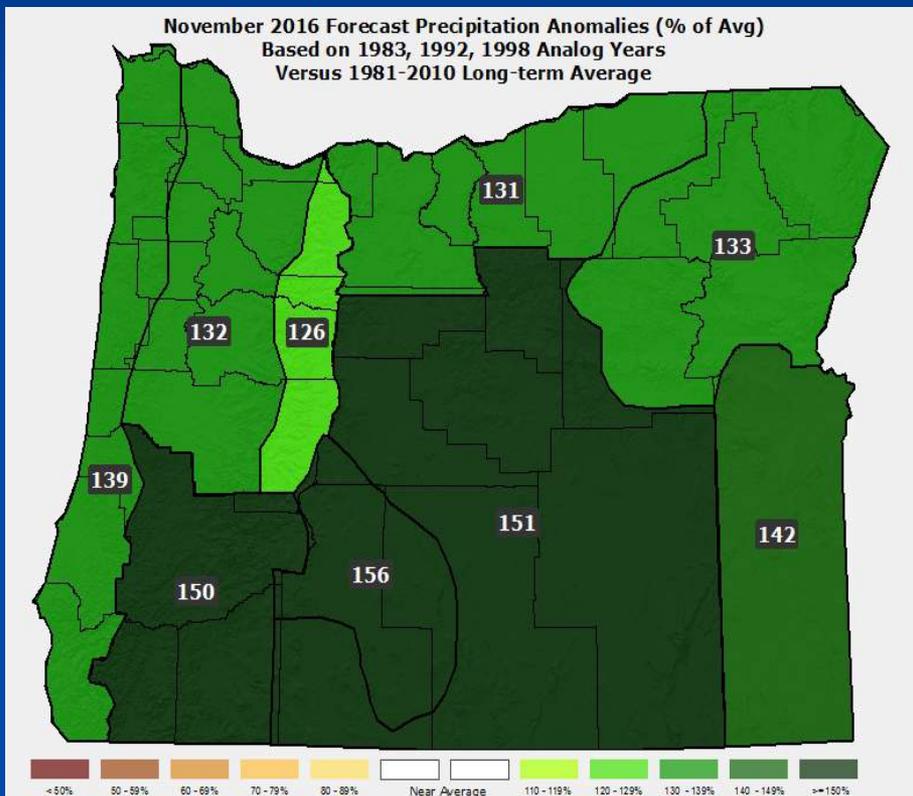


Data courtesy of the National Centers for Environmental Information (NCEI)

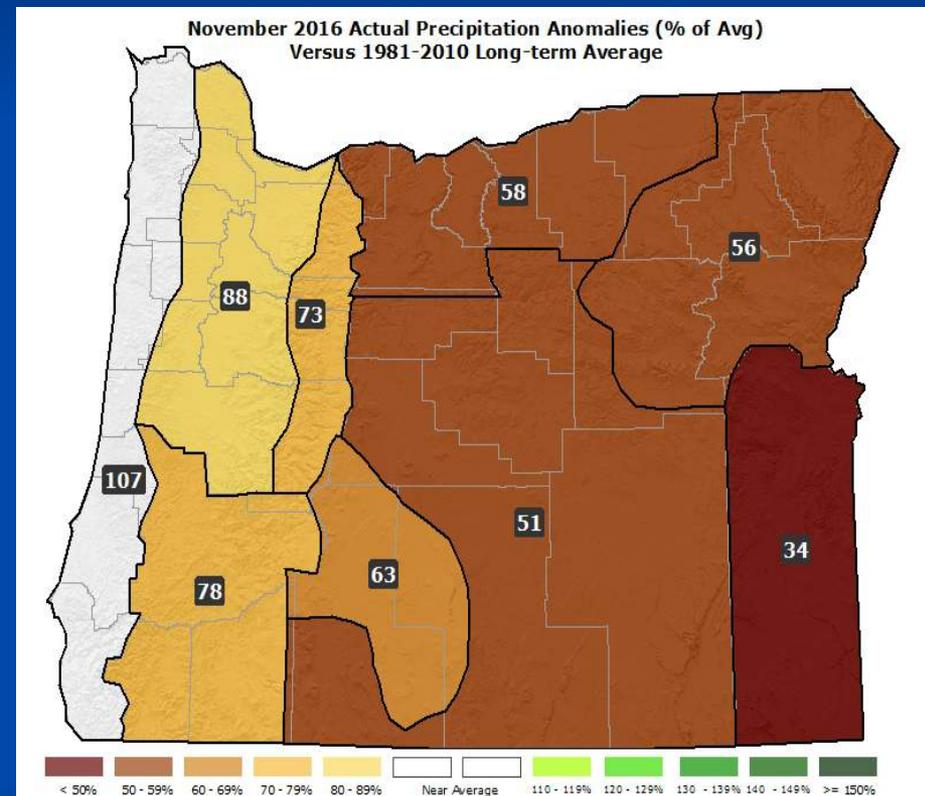
November 2016

(Forecast Issued October 20, 2016)

Forecast Precipitation



Actual Precipitation



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

November 2016

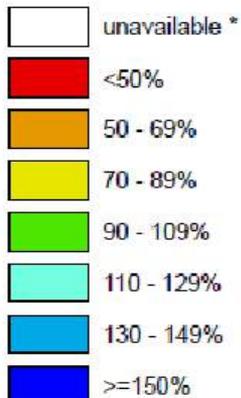
(Forecast Issued October 20, 2016) / (Actual)

- Enhanced storminess should keep temperatures near or above average. (Temperatures were well above average statewide, ranging from +3.5°F on the coast and in the SW interior to +6.6°F in NE Oregon .)
- Above-average precipitation and mountain snow. (Precipitation was above average along the coast and in the Willamette Valley but below average elsewhere. Significant mountain snow late in the month built snowpacks close to average by December 1st...see next slide for details.)

Oregon SNOTEL Current Snow Water Equivalent (SWE) % of Normal

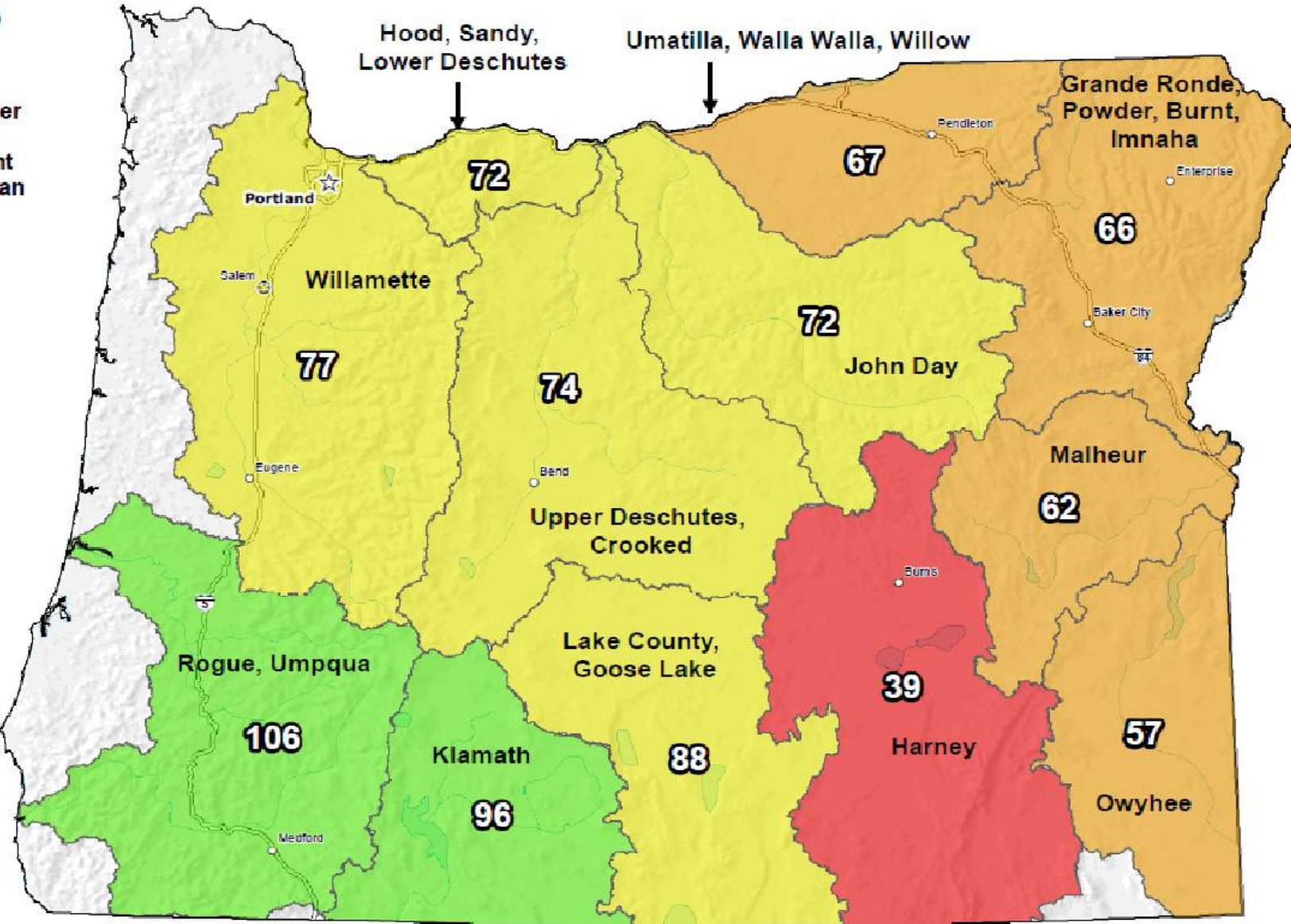
Dec 01, 2016

Current Snow Water Equivalent (SWE) Basin-wide Percent of 1981-2010 Median

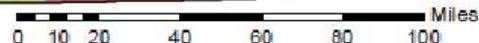


* Data unavailable at time of posting or measurement is not representative at this time of year

Provisional Data
Subject to Revision



The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).



Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

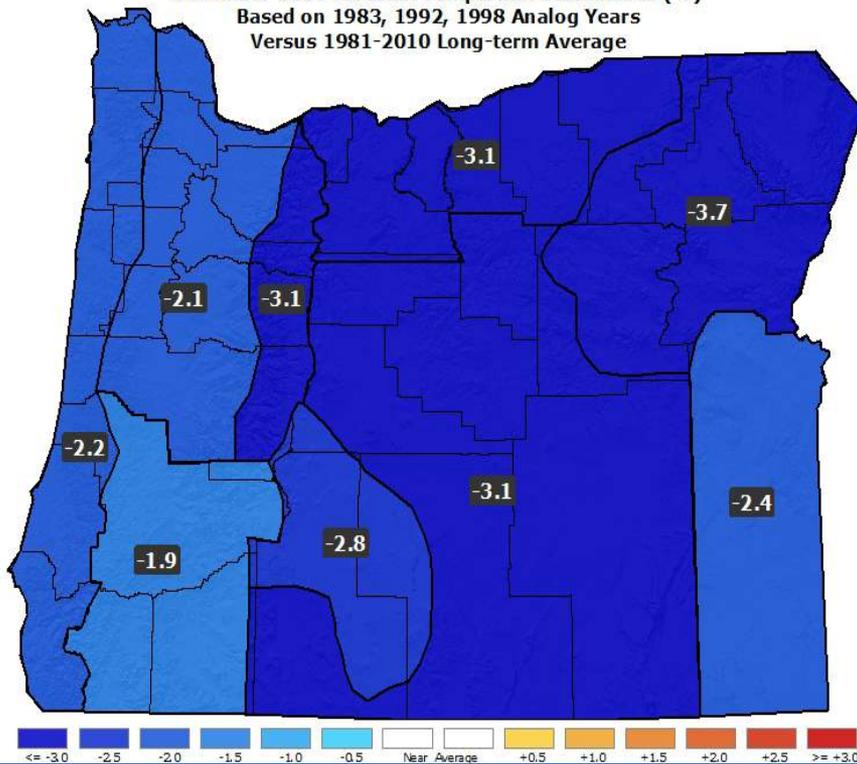
December 2016

(Forecast Issued November 17, 2016)

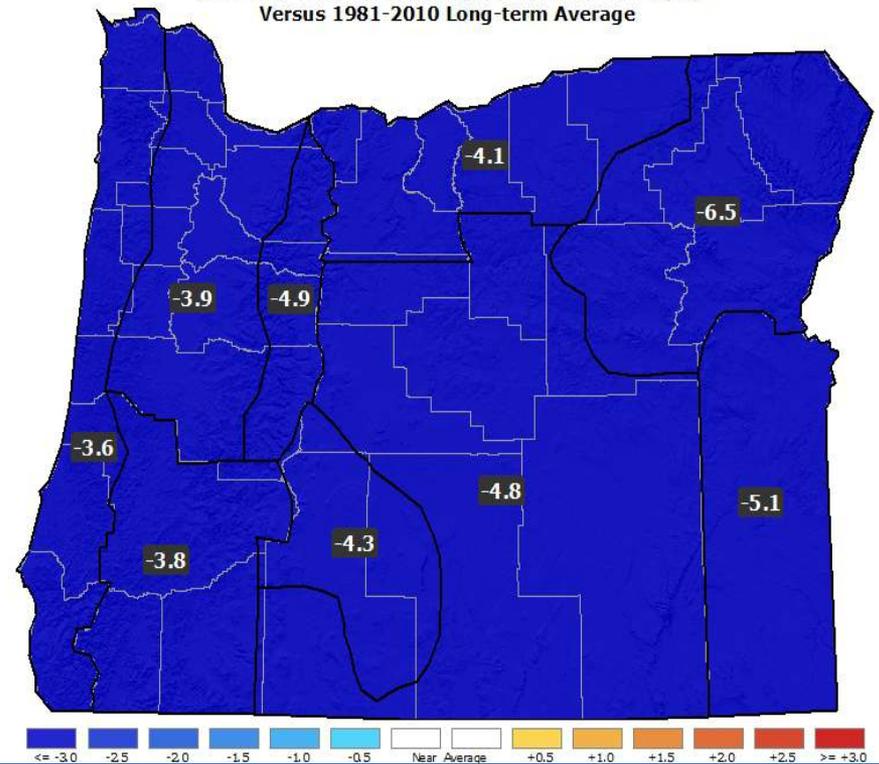
Forecast Temperatures

Actual Temperatures

December 2016 Forecast Temperature Anomalies (°F)
Based on 1983, 1992, 1998 Analog Years
Versus 1981-2010 Long-term Average



December 2016 Actual Temperature Anomalies (°F)
Versus 1981-2010 Long-term Average

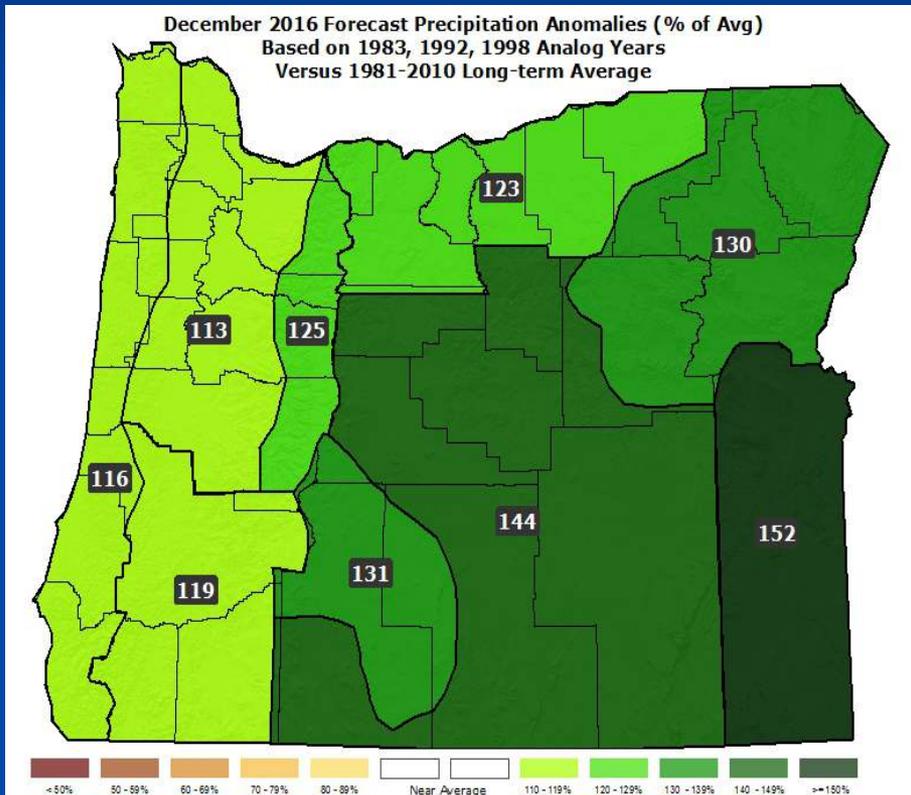


Data courtesy of the National Centers for Environmental Information (NCEI)

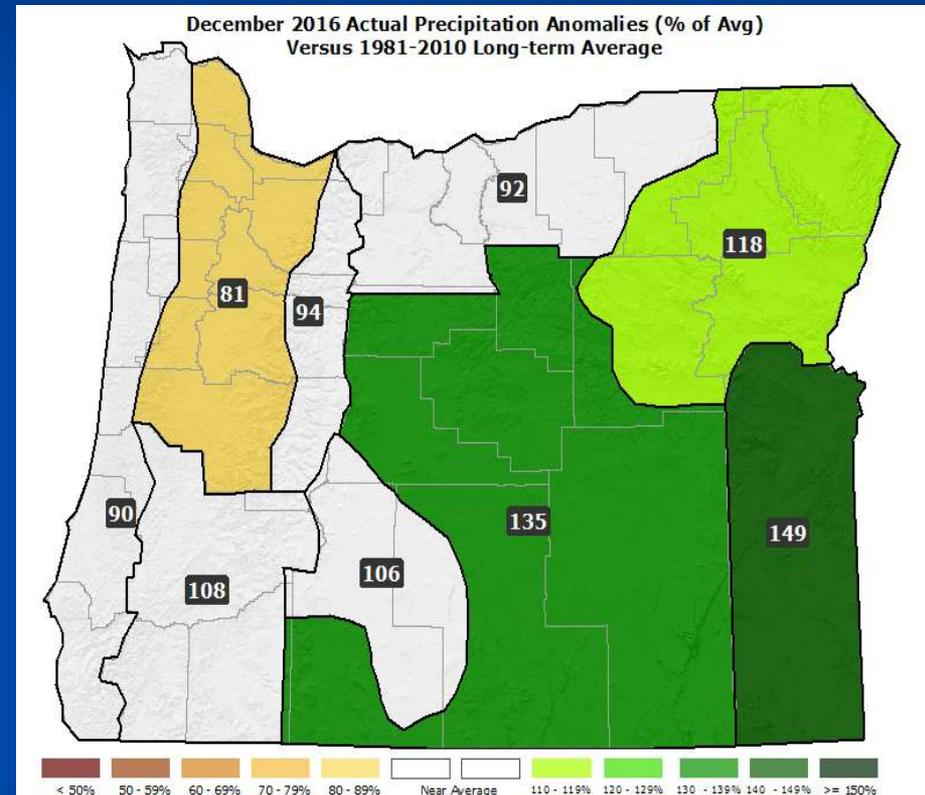
December 2016

(Forecast Issued November 17, 2016)

Forecast Precipitation



Actual Precipitation



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

December 2016

(Forecast Issued November 17, 2016)/(Actual)

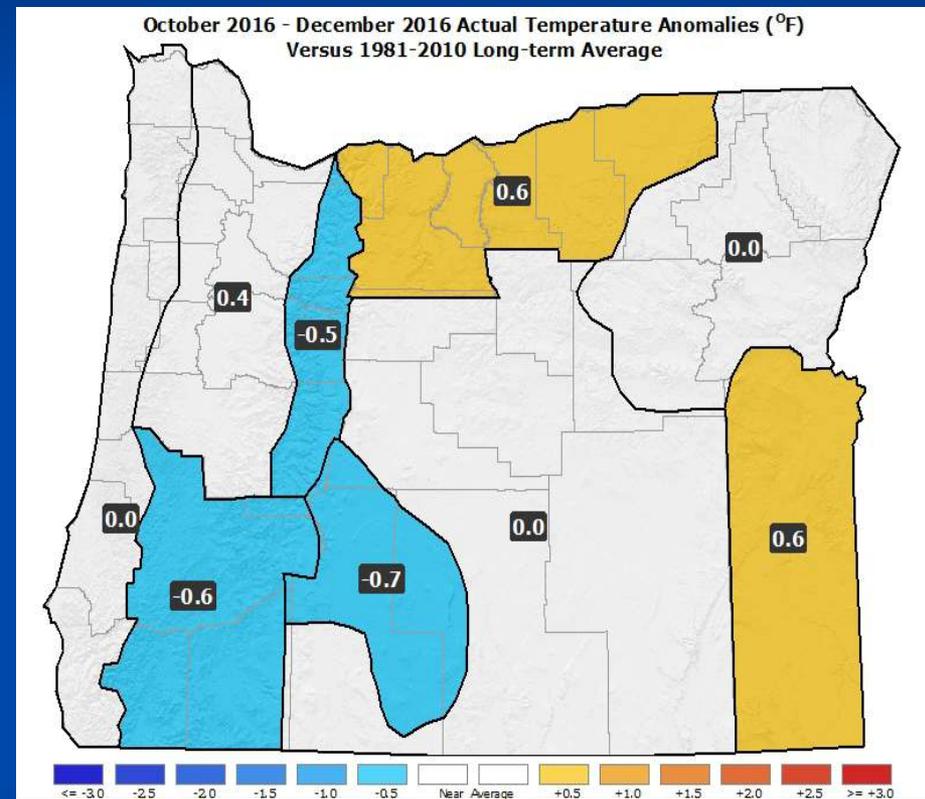
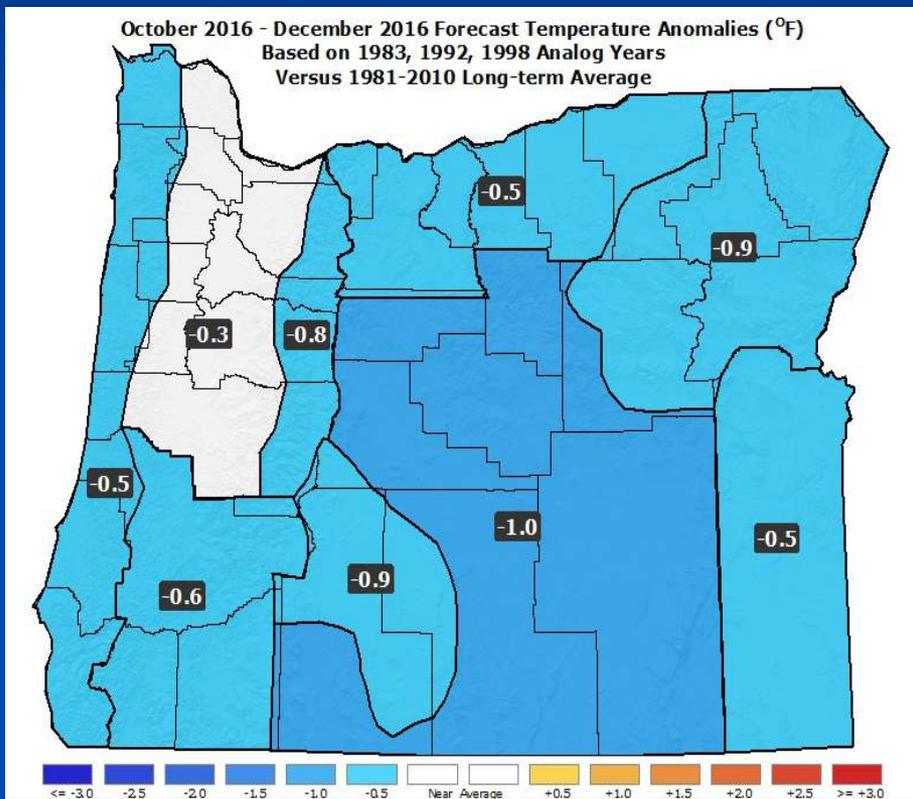
- Cooler and wetter than average with below normal snow levels. (December was an exceptionally cold month statewide. Temperature departures ranged from 3.6°F below average along the coast to 6.5°F below average in NE Oregon. Precipitation ranged from near average across the western zones to well above average, mostly as snow, across the eastern zones. Mountain snowfall was generally above average with heavy snow late in the month, especially north.)
- Arctic event likely with well-above average chances for western valley & coastal snow/ice. (A mid-month Arctic air intrusion led to widespread snow and ice, including across the Willamette Valley and some northern coastal locations.)

October – December 2016

(Forecast Issued September 22, 2016)

Forecast Temperatures

Actual Temperatures



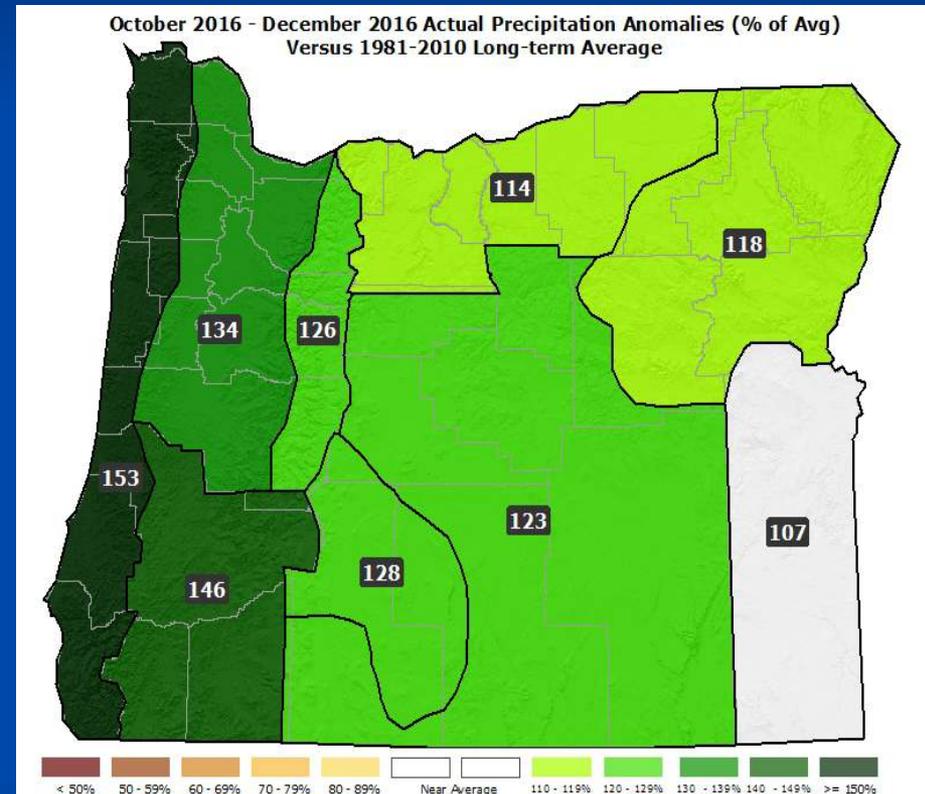
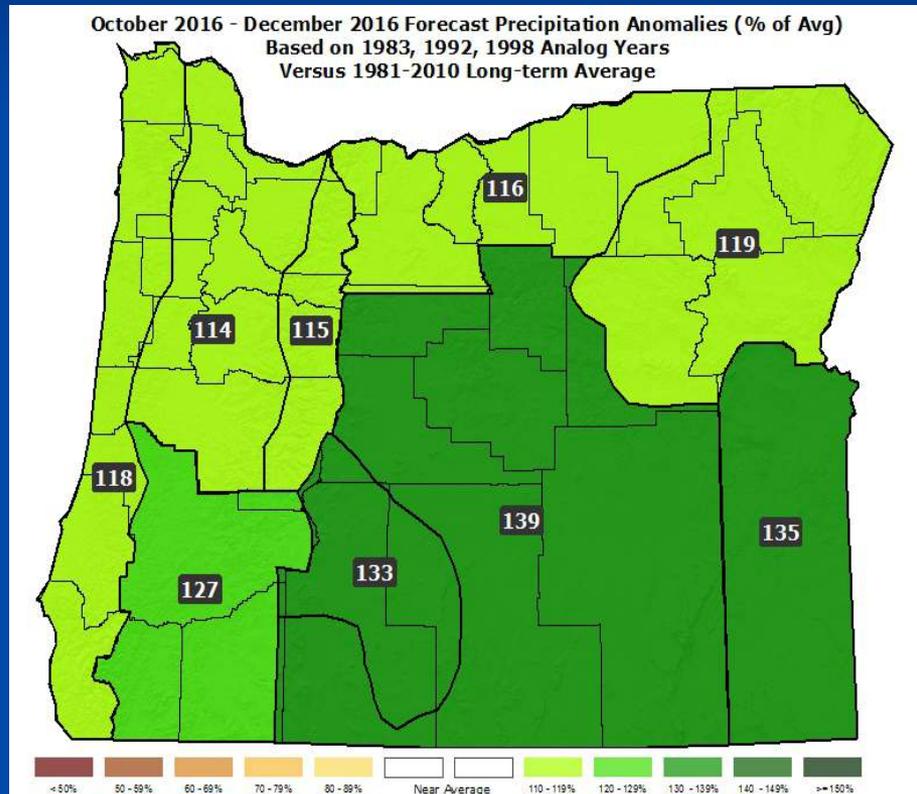
Data courtesy of the National Centers for Environmental Information (NCEI)

October – December 2016

(Forecast Issued September 22, 2016)

Forecast Precipitation

Actual Precipitation



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

October – December 2016

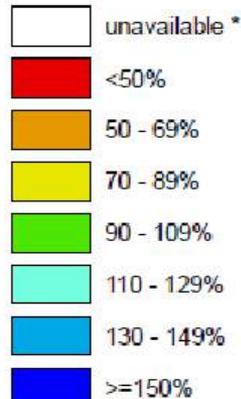
(Forecast Issued September 22, 2016)/(Actual)

- Near or above-average temperatures in October and November should be offset by a cold December. (A cool October was followed by a very warm November, but an extremely cold December, with Arctic air at mid-month, dropped the 3-month departures to near average.)
- Above-average rain with abundant mountain snowfall likely. (A slightly dry November was more than offset by an extremely wet October and above-average precipitation in December. Mountain snowpacks finished the year near average from SW to south-central Oregon and above average elsewhere...see next slide for details.)

Oregon SNOTEL Current Snow Water Equivalent (SWE) % of Normal

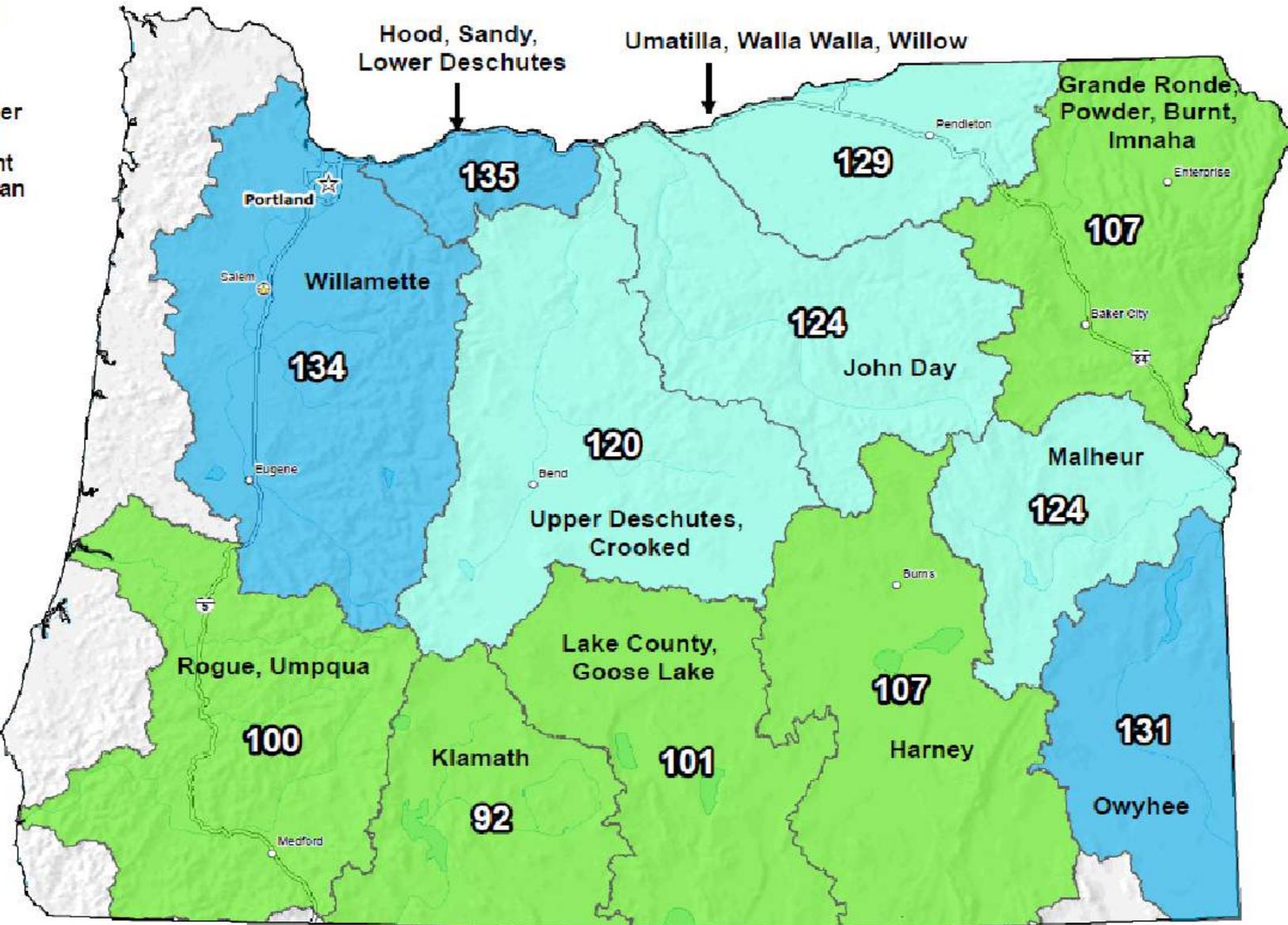
Jan 01, 2017

Current Snow Water Equivalent (SWE) Basin-wide Percent of 1981-2010 Median

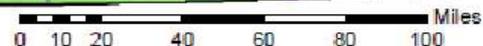


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Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

Updated Mid-Month

Your Feedback is Welcome!

Sign-up for Email notification of updates at:

<http://listsmart.osl.state.or.us/mailman/listinfo/seasonalclimateforecast>

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