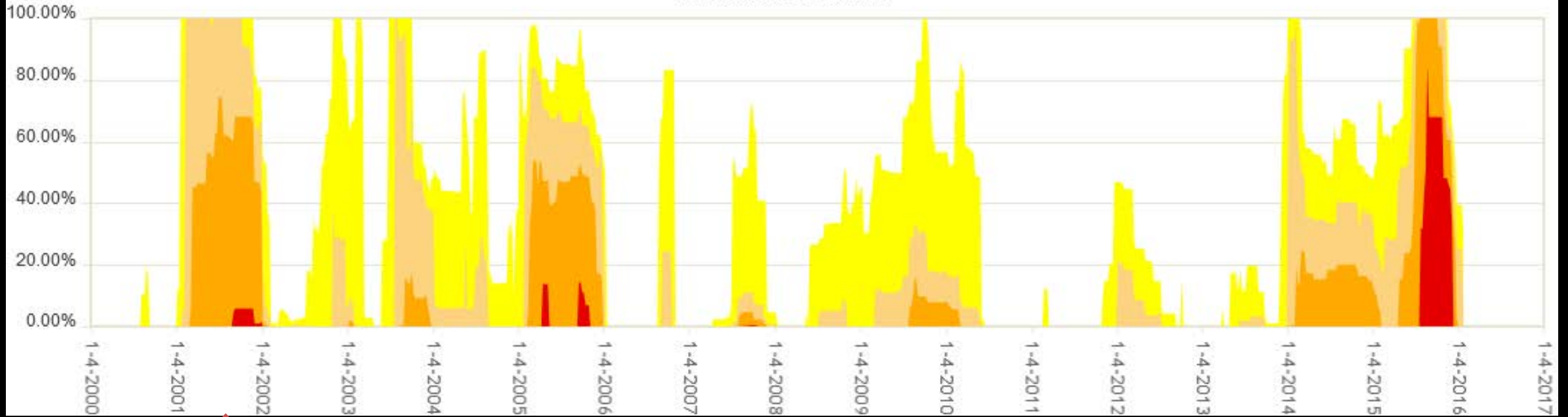


Washington Percent Area



2  
0  
0  
1

2  
0  
0  
5

2  
0  
1  
5

U.S. Drought Monitor Legend

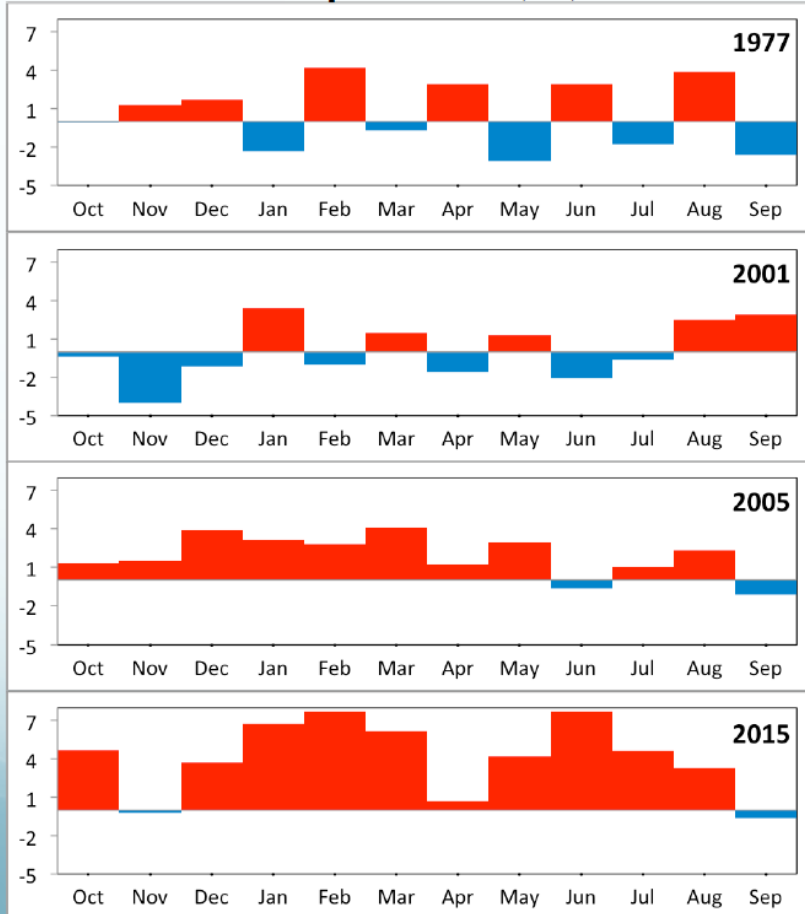
Drought Severity

-  D0 (Abnormally Dry)
-  D1 (Moderate Drought)
-  D2 (Severe Drought)
-  D3 (Extreme Drought)
-  D4 (Exceptional Drought)

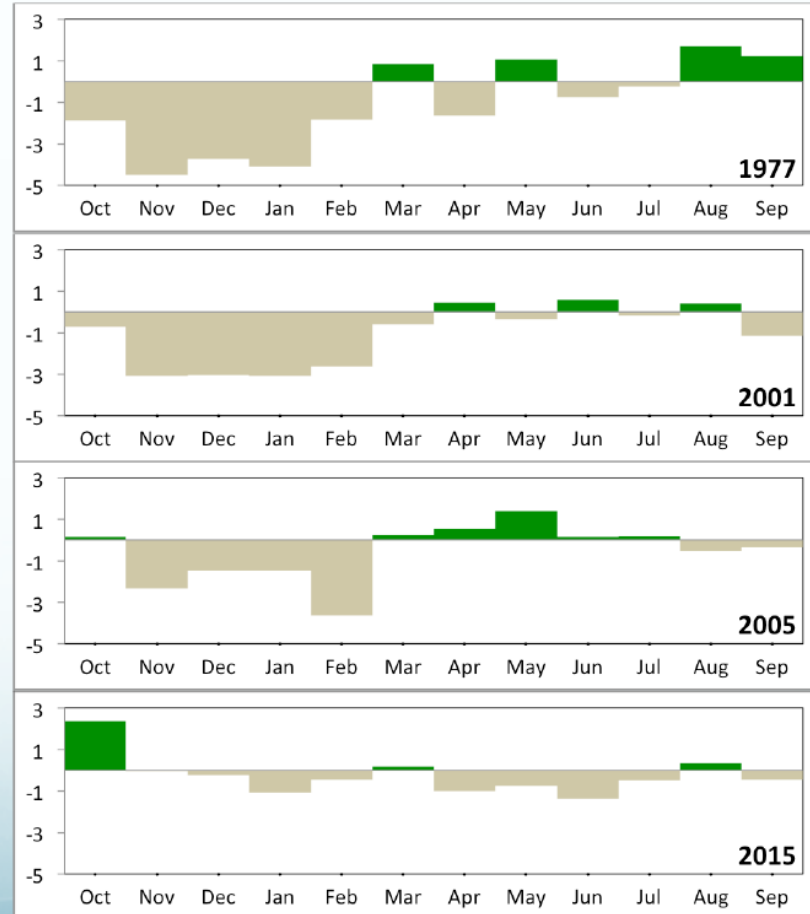
# Recent WA Droughts

WA State anomalies for the 1977, 2001, 2005, and 2015 WYs

## Temperature (°F)

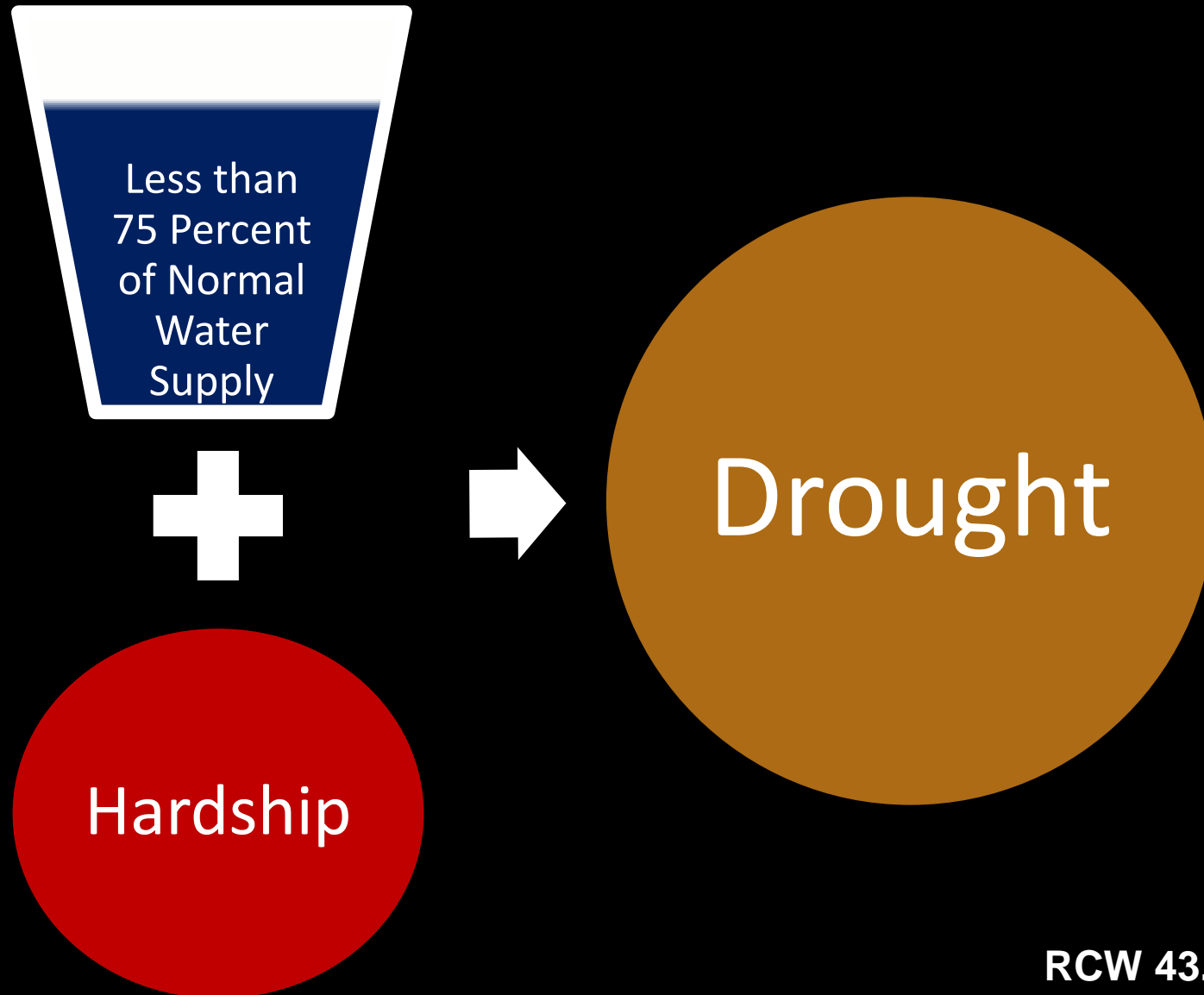


## Precipitation (in)

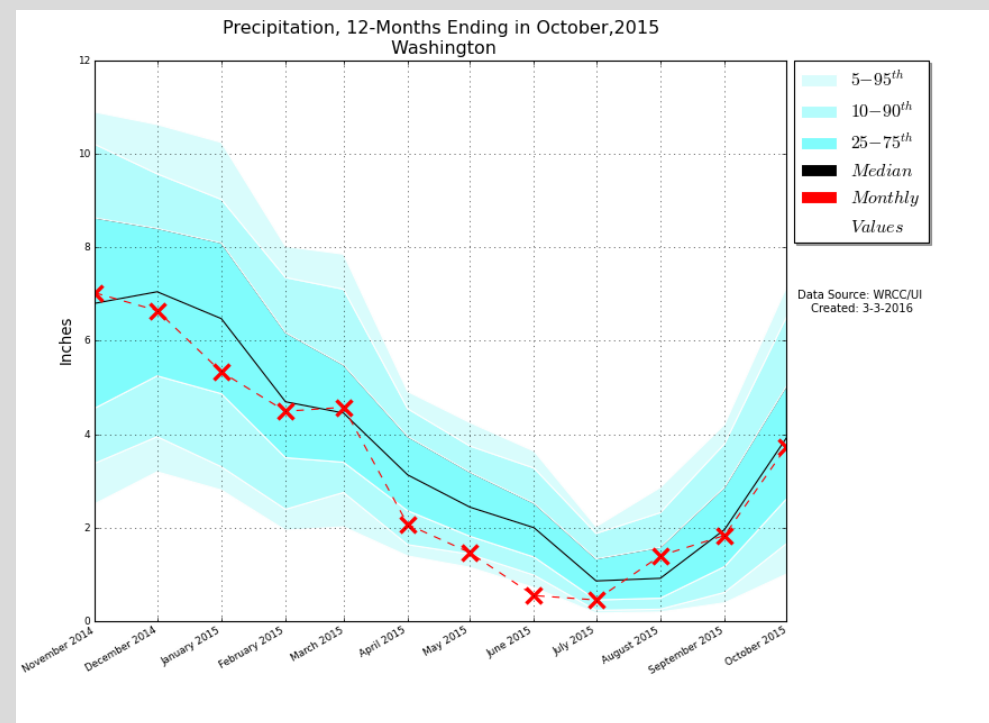
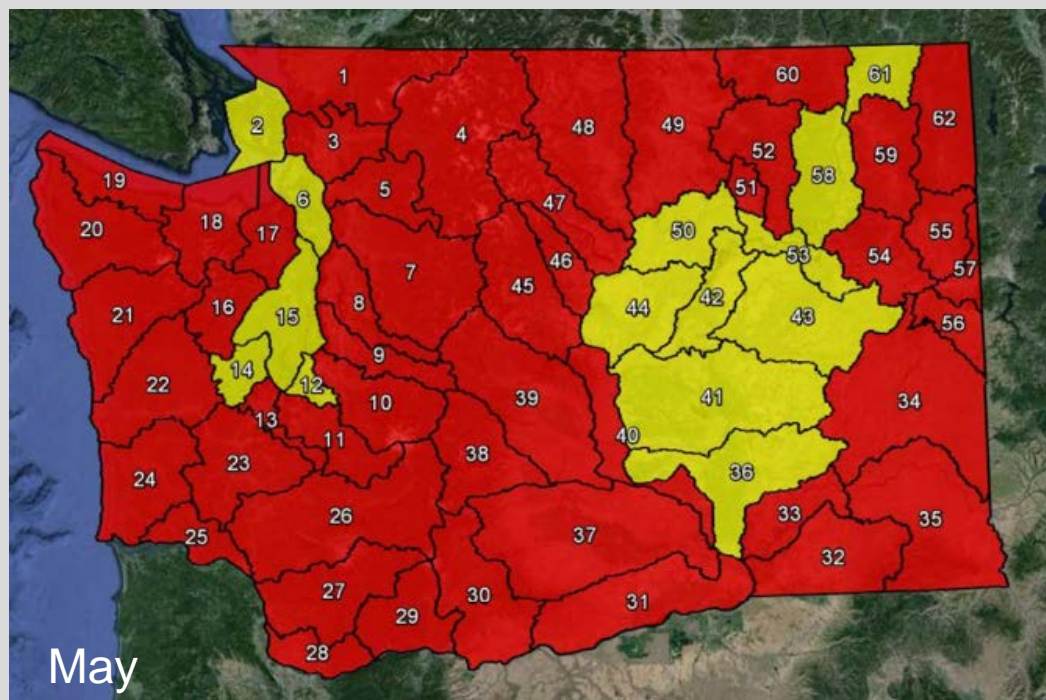
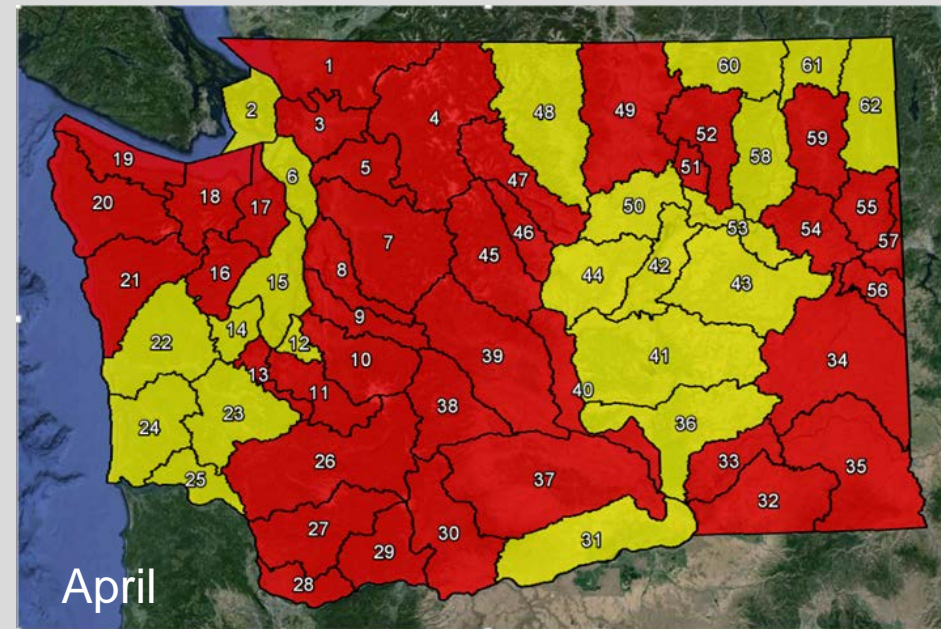
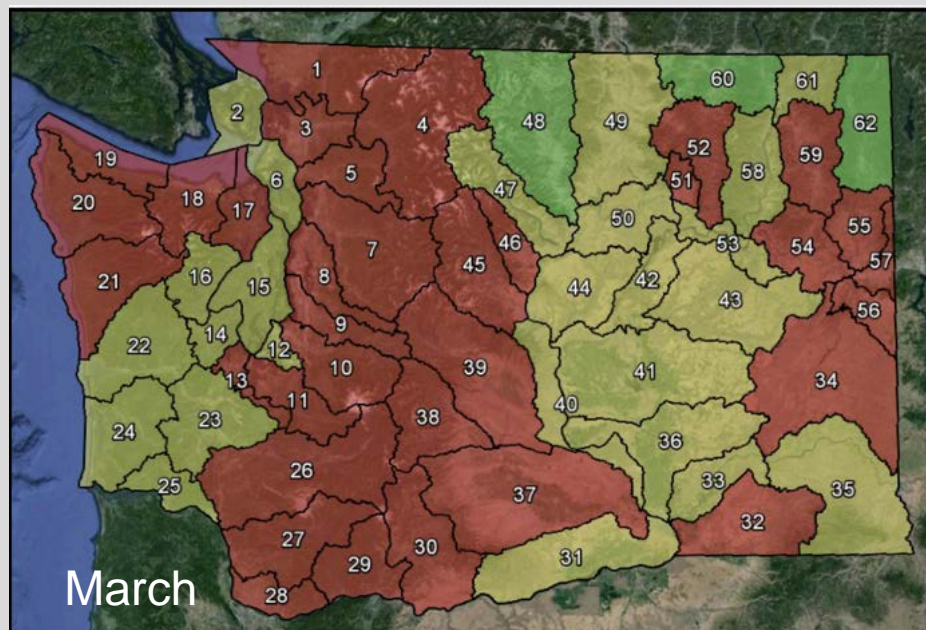


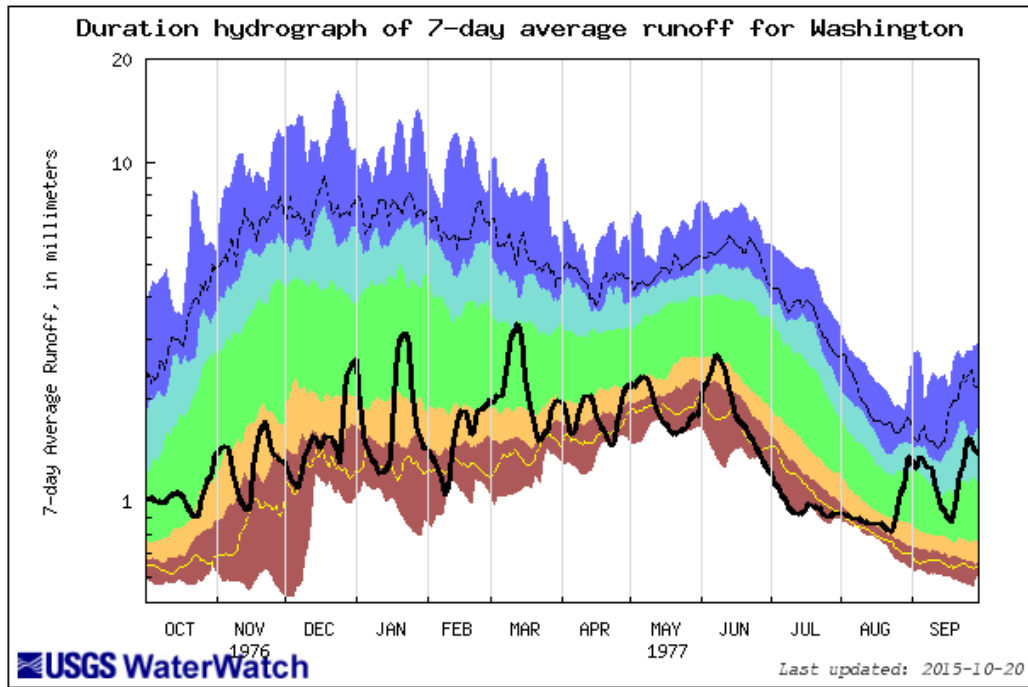
Source: Karin Bumbaco, Office of Washington State Climatologist

# Washington State's Drought Trigger



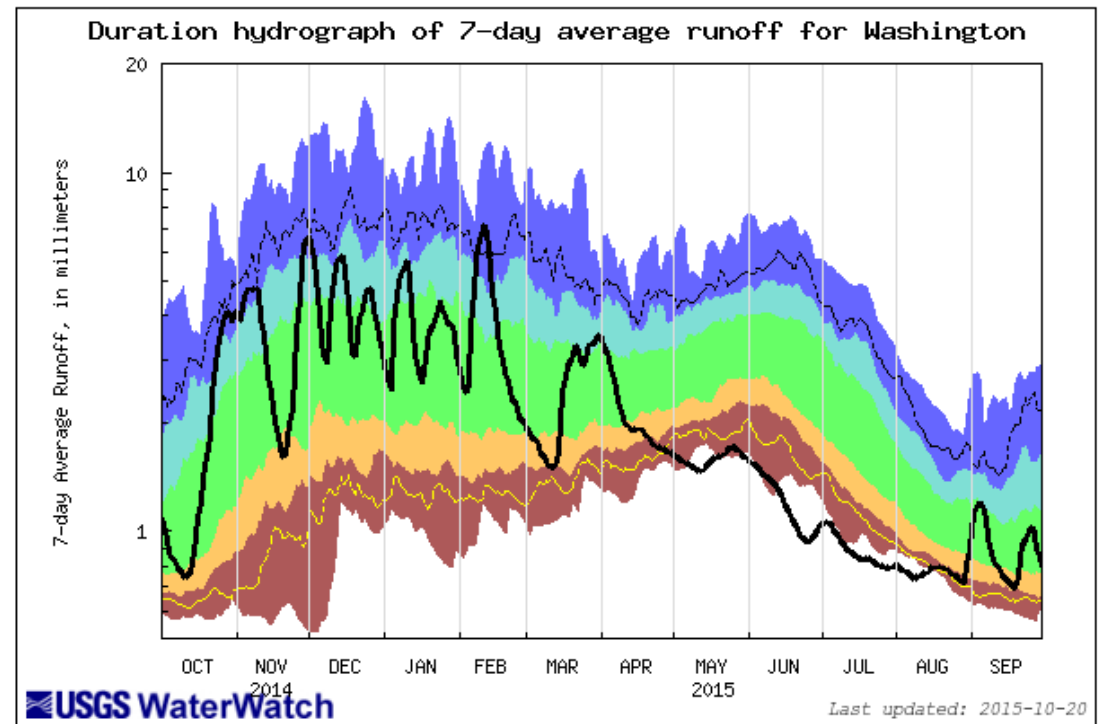
RCW 43.83B.400





Explanation - Percentile classes						Runoff
lowest-10th percentile	5	10-24	25-75	76-90	95	
Much below Normal	Below normal	Normal	Above normal	Much above normal		

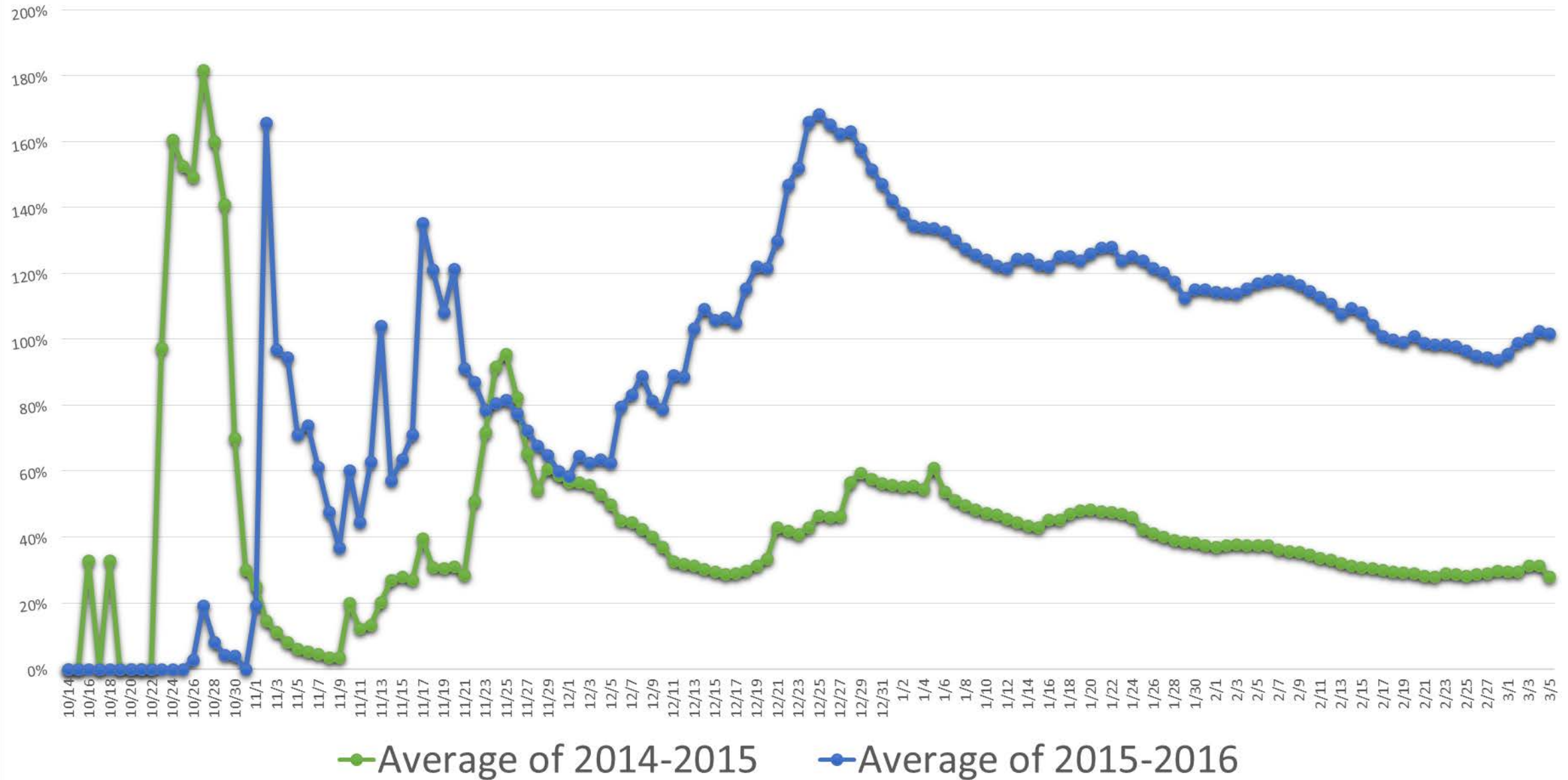
← 1977: Driest on Record,  
Normal Temperature October thru March



Explanation - Percentile classes						Runoff
lowest-10th percentile	5	10-24	25-75	76-90	95	
Much below Normal	Below normal	Normal	Above normal	Much above normal		

2015: Warmest on Record, Normal  
Precipitation October thru March →

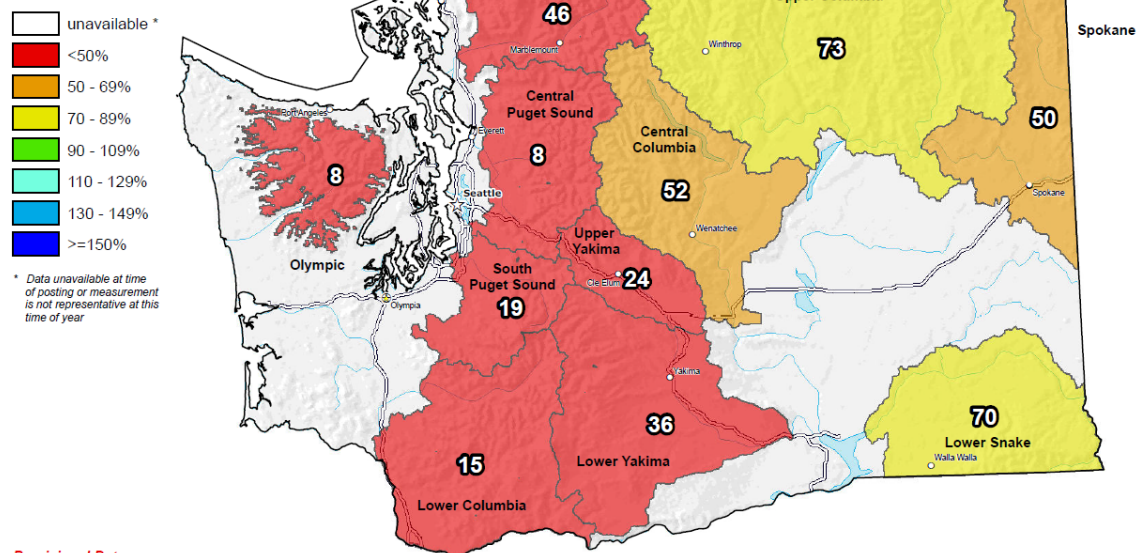
# Statewide Averaged SWE, Percent of Normal WY 2015 vs WY 2016



# Washington SNOTEL Current Snow Water Equivalent (SWE) % of Normal

Mar 07, 2015

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



Provisional Data  
Subject to Revision



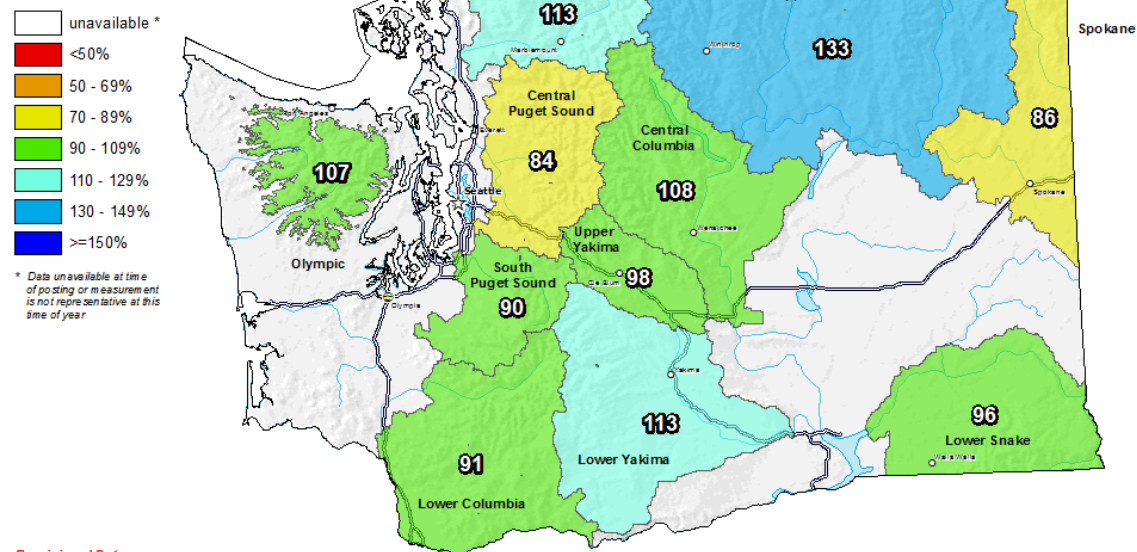
The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

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

# Washington SNOTEL Current Snow Water Equivalent (SWE) % of Normal

Mar 07, 2016

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



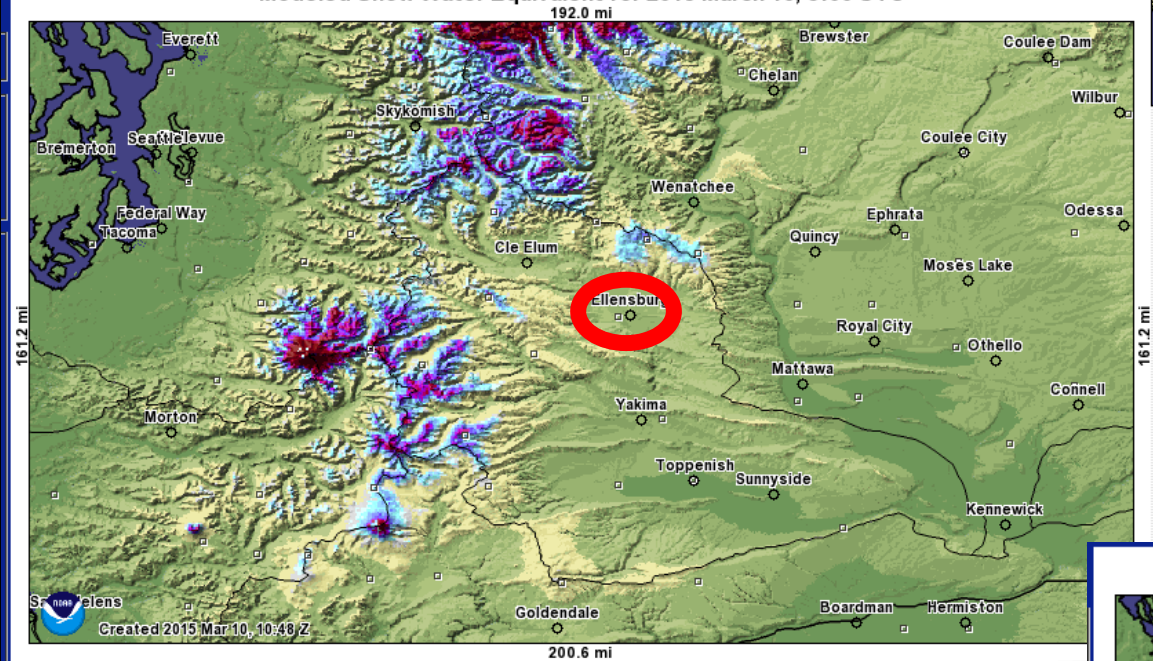
Provisional Data  
Subject to Revision



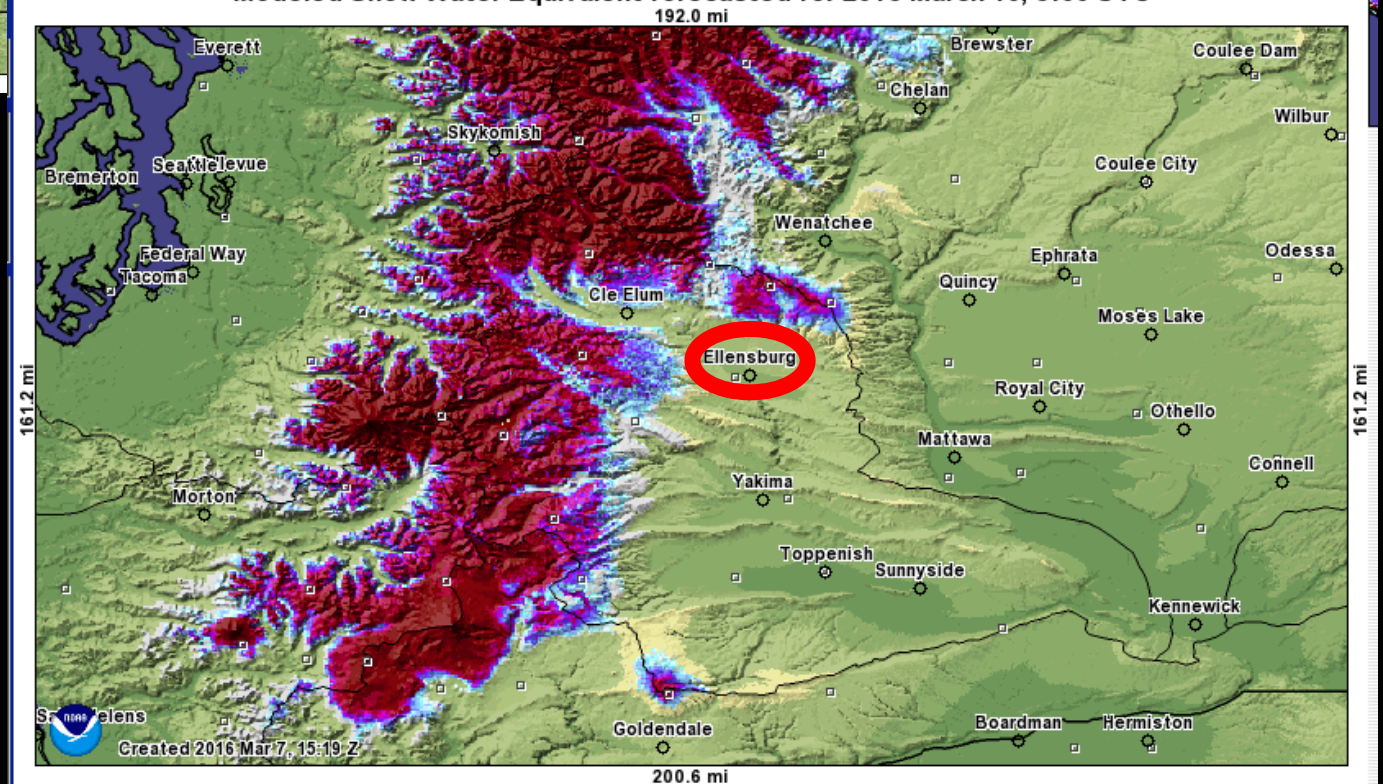
The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

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

Modeled Snow Water Equivalent for 2015 March 10, 6:00 UTC



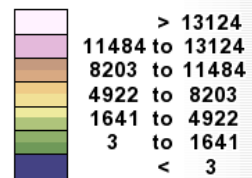
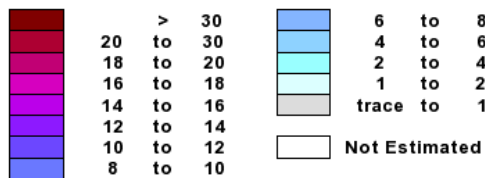
Modeled Snow Water Equivalent forecasted for 2016 March 10, 6:00 UTC



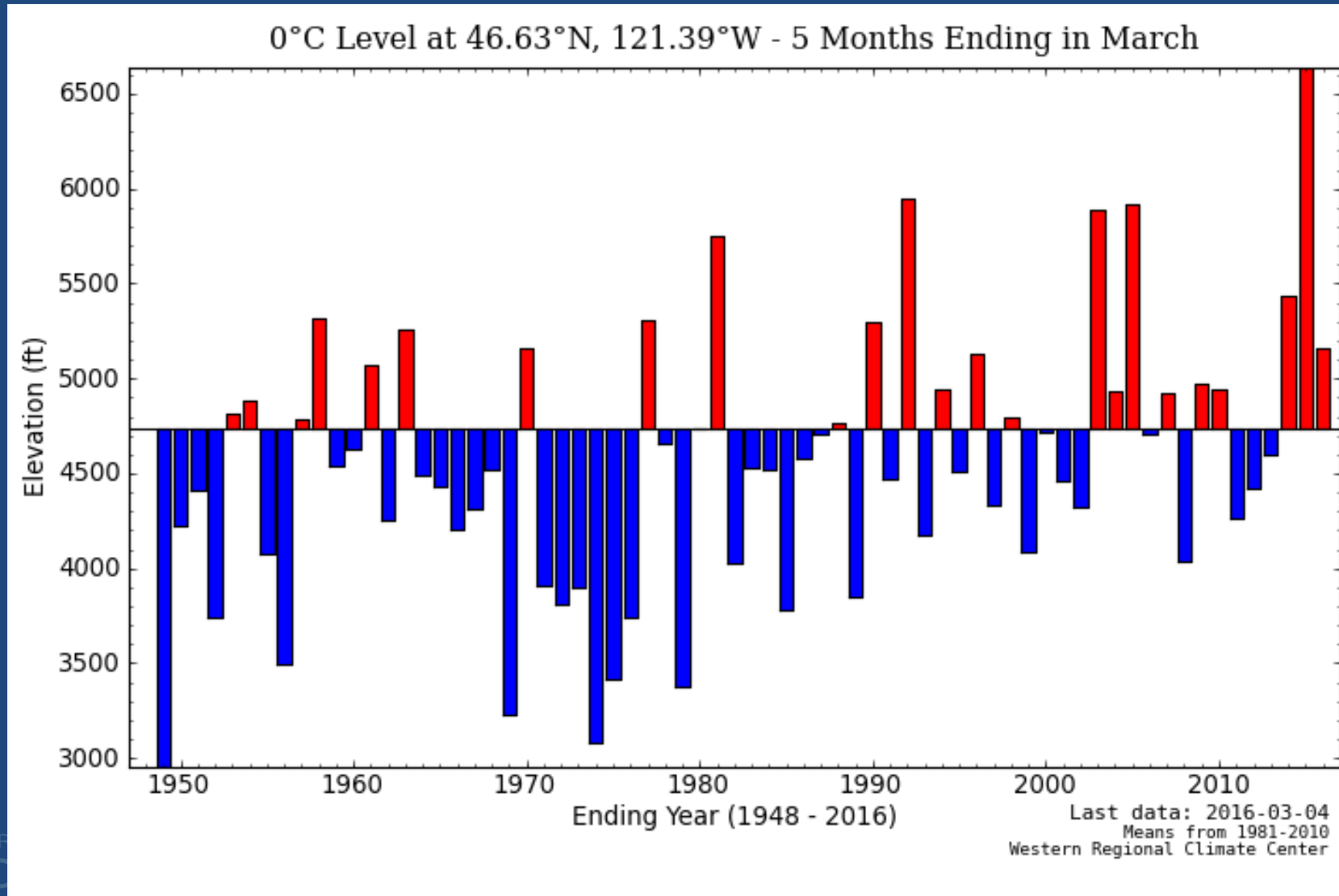
200.6 mi

Inches of water equivalent

Elevation in feet

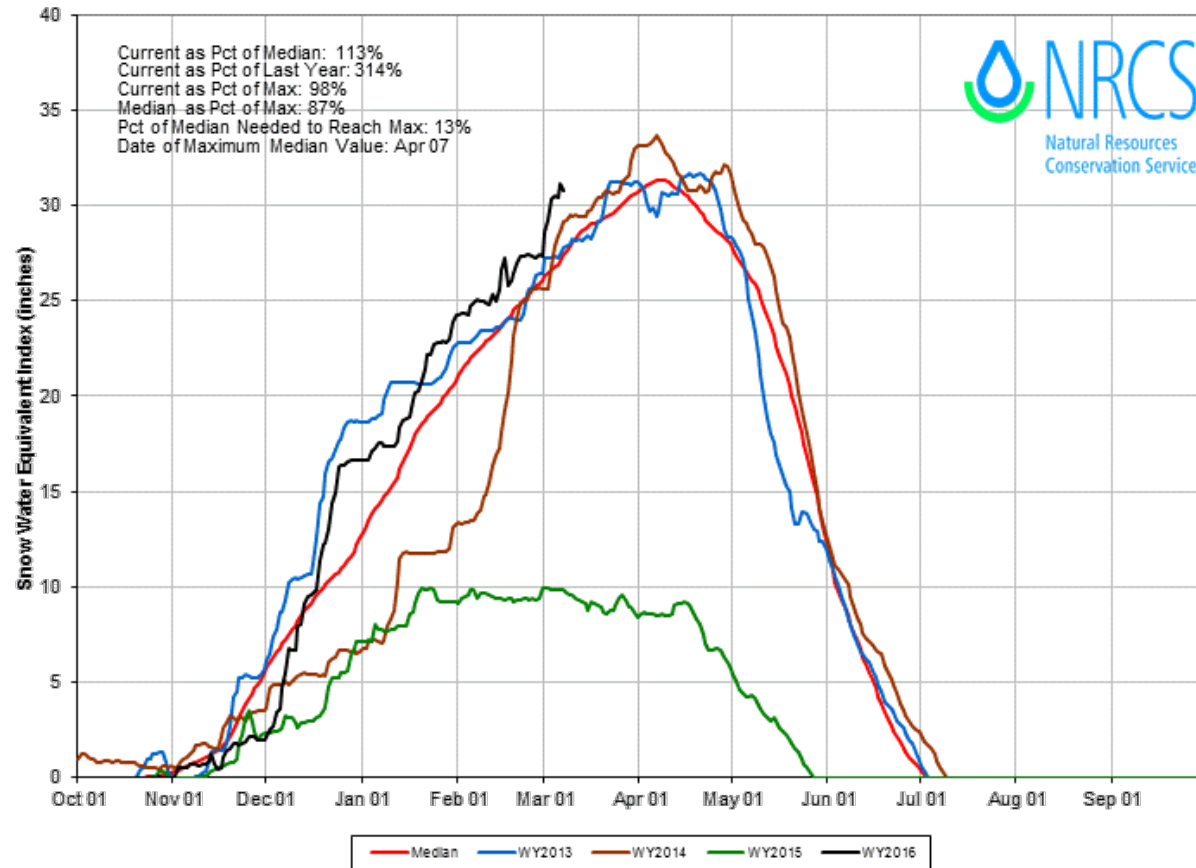


# Freezing Level at White Pass (November – March, 1948-2016)

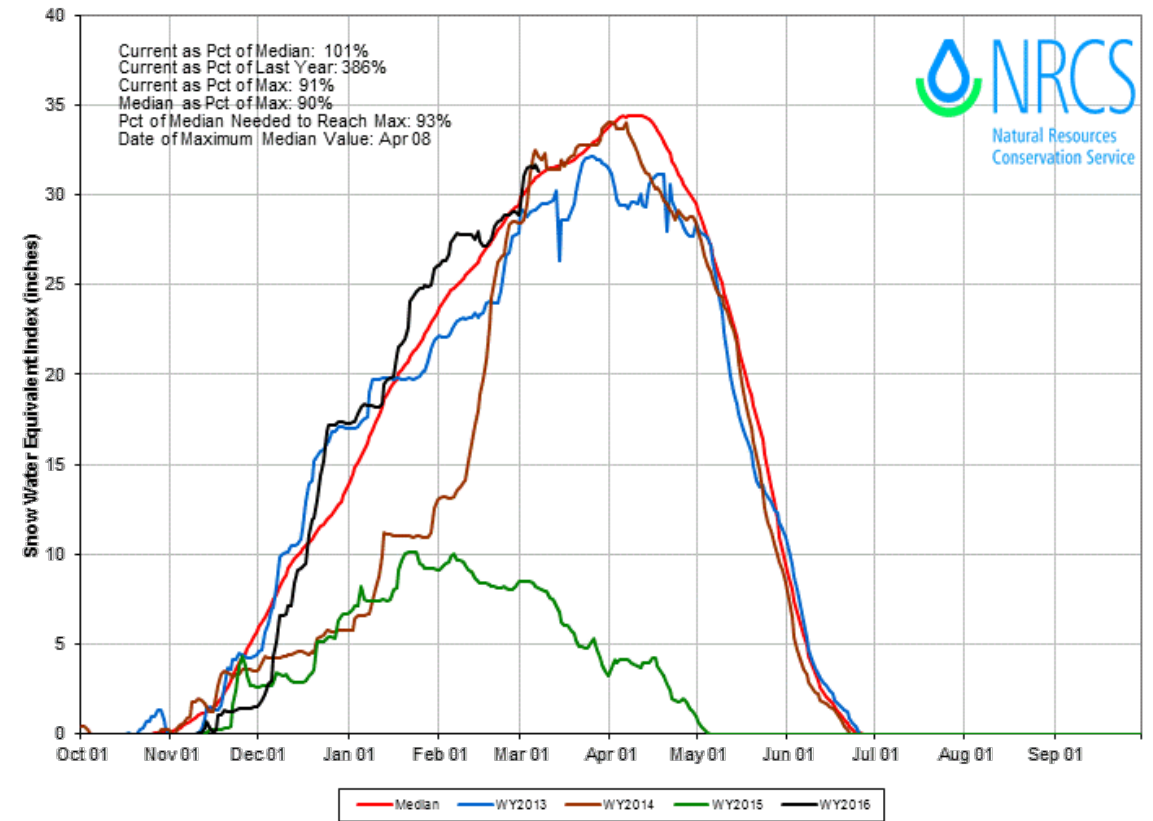


# “Climbing Mt. Median”

LOWER YAKIMA Time Series Snowpack Summary  
Based on Provisional SNOTEL data as of Mar 07, 2016

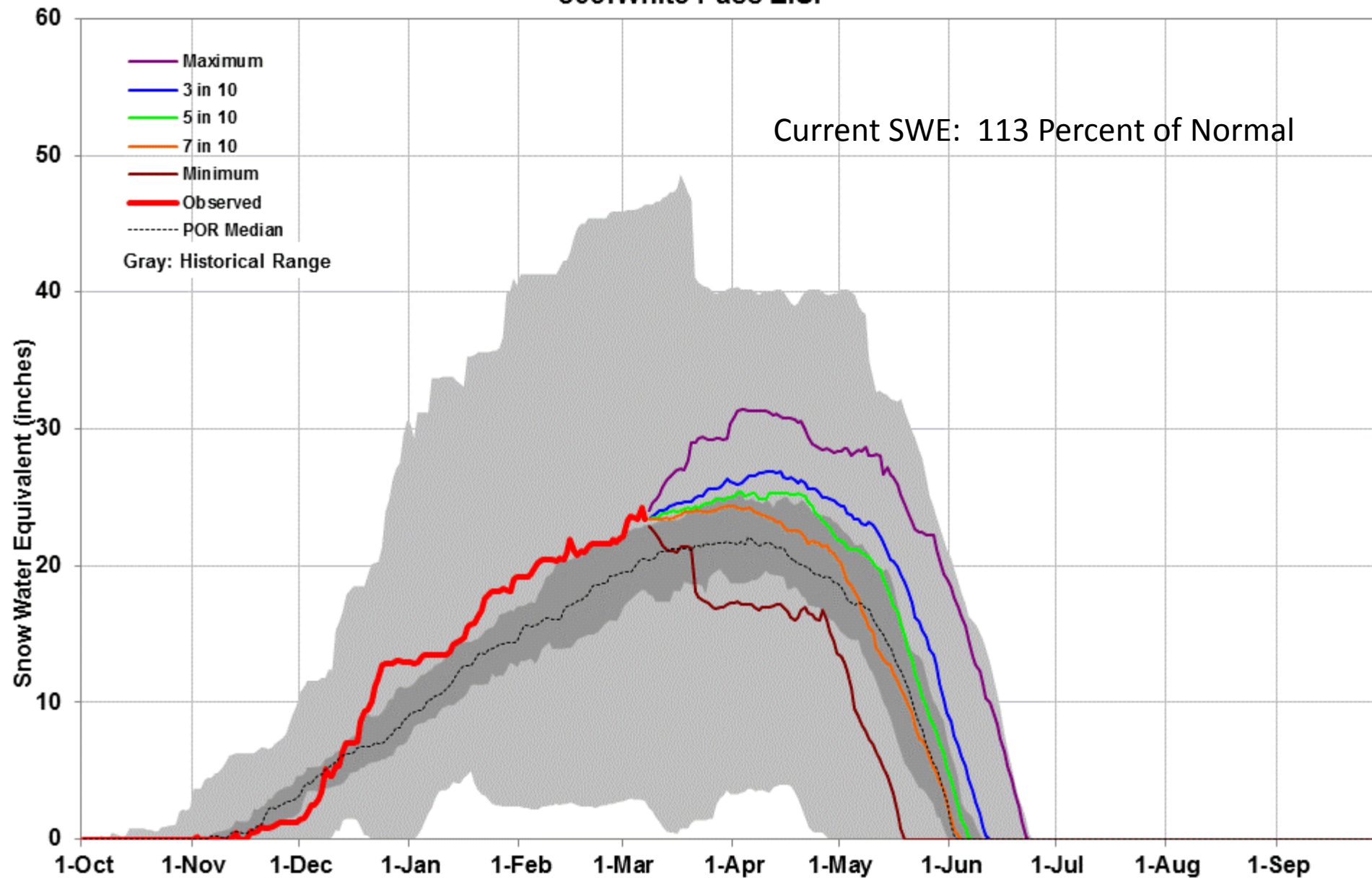


UPPER YAKIMA Time Series Snowpack Summary  
Based on Provisional SNOTEL data as of Mar 07, 2016



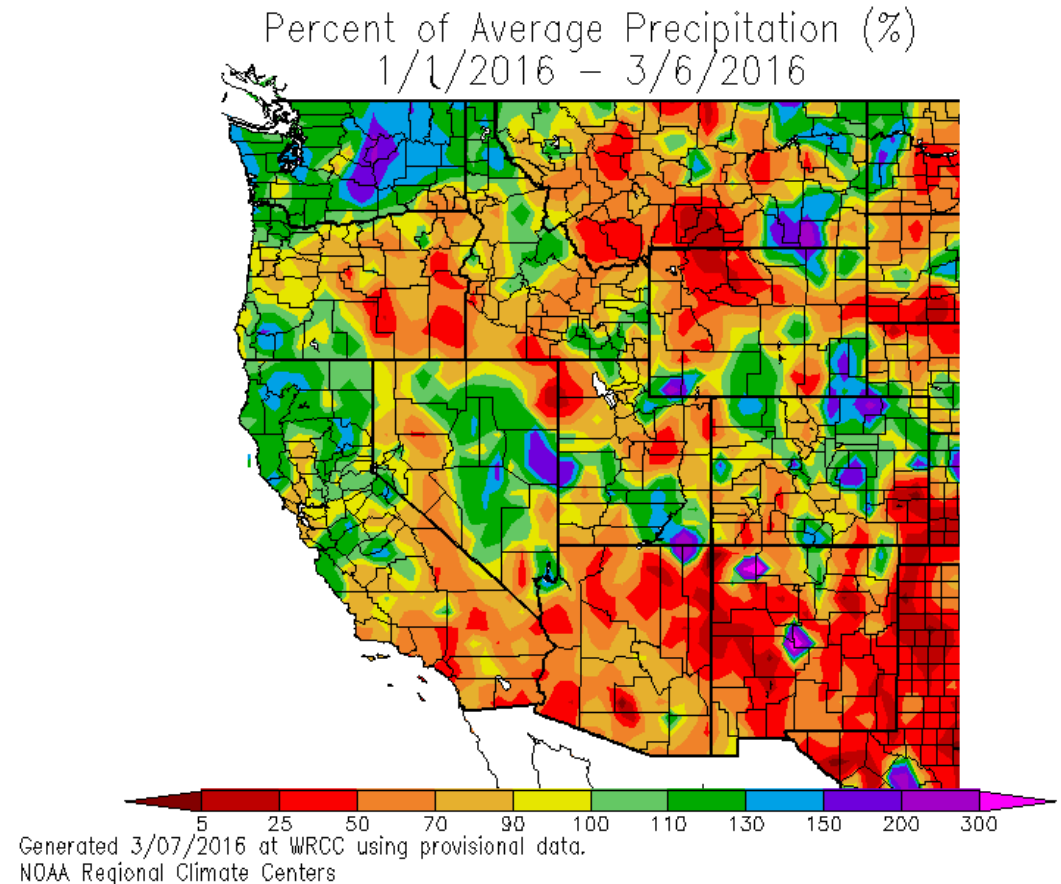
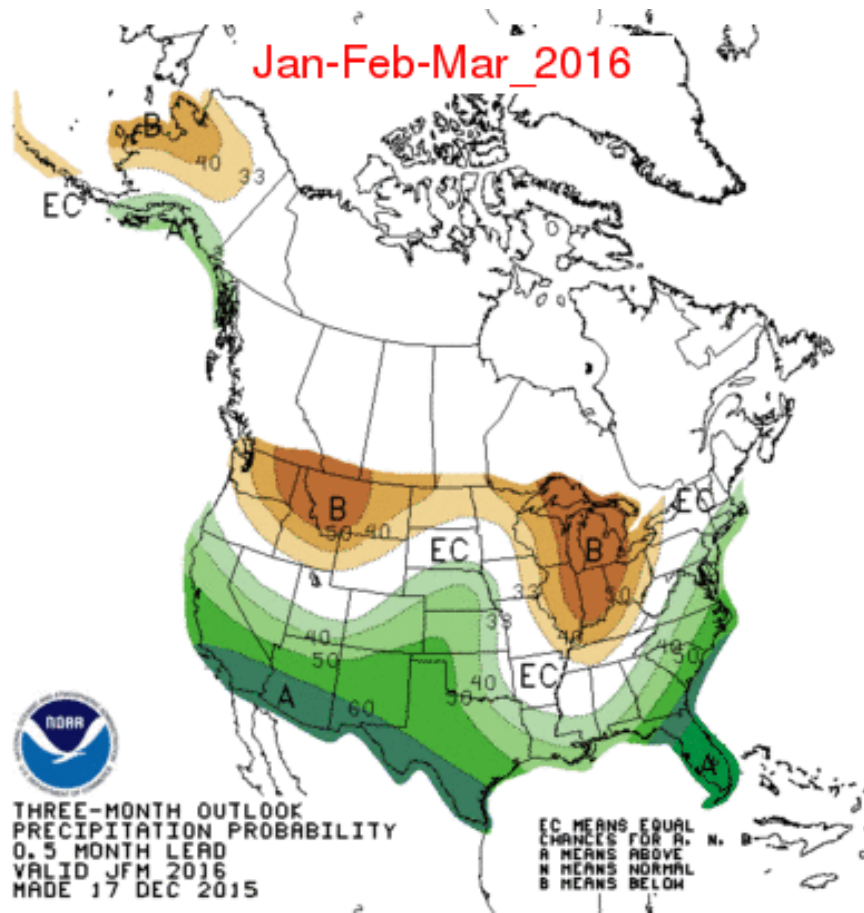
Percent Median SWE Accumulation needed to reach median peak seasonal SWE:

- Lower Yakima: 13 Percent (excellent news)
- Upper Yakima: 93 Percent (good news)

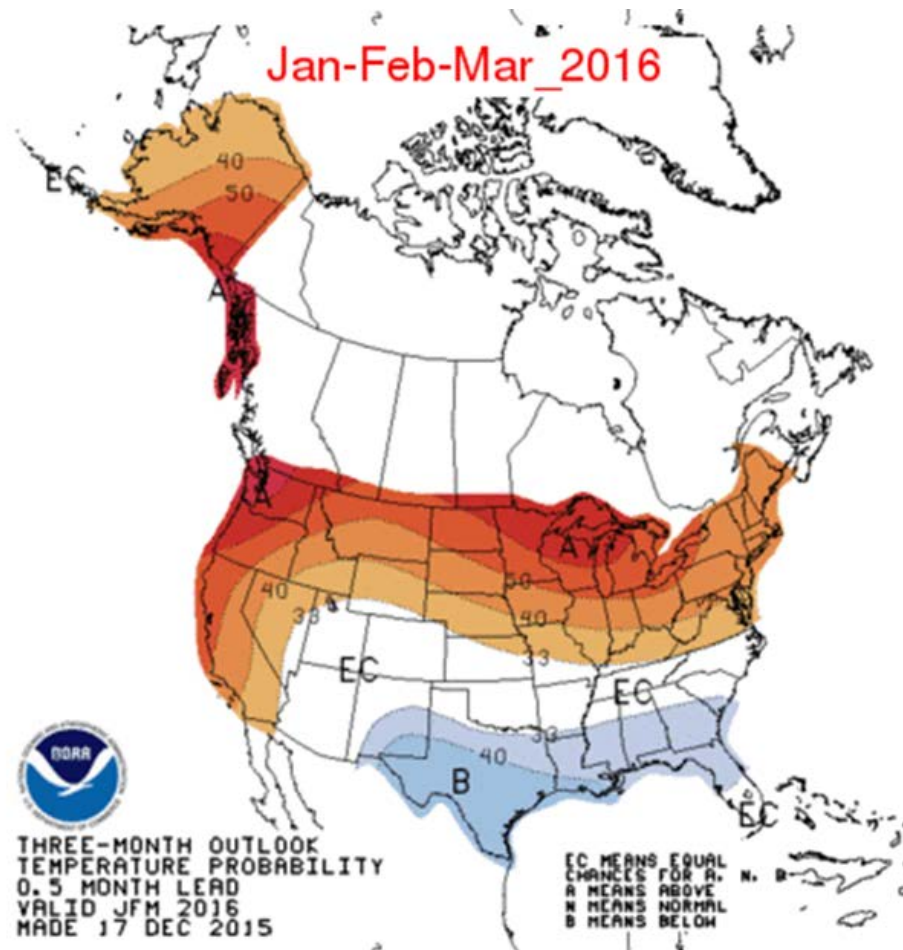


This is an automated product based on SNOTEL data, provisional data are subject to change. This product combines the historical period of record data (gray background) with the recent daily data (heavy red, left) to project into the future (colored lines, right). This product does not consider climate information such as El Nino or short range weather forecasts and therefore should only be used as a seasonal planning tool. Contact Jim.Marron@por.usda.gov 503 414 3047

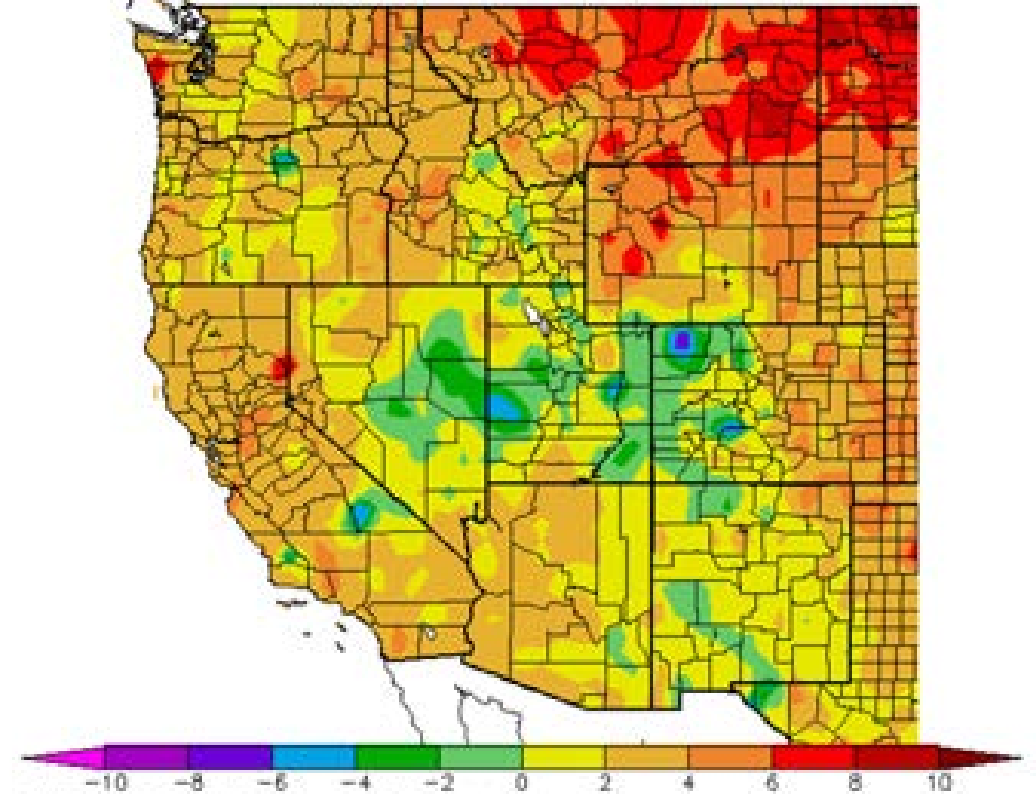
# Precipitation: Expected vs Observed



# Temperature: Expected vs Observed

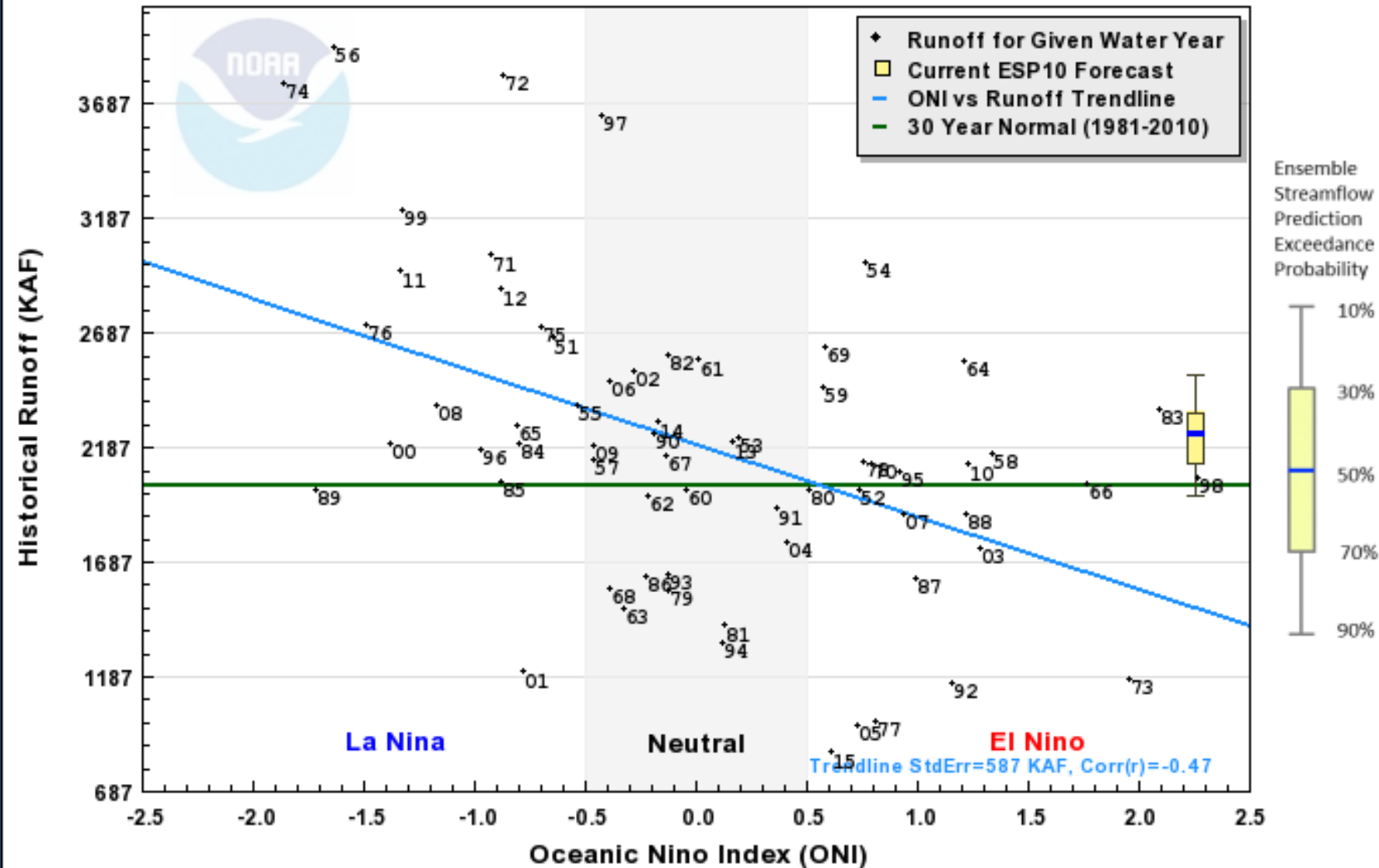


Ave. Temperature dep from Ave (deg F)  
1/1/2016 - 3/6/2016



Generated 3/07/2016 at WRCC using provisional data.  
©NOAA Regional Climate Centers

# OCT-DEC Oceanic Nino Index vs APR-SEP Historical Natural Runoff (PARW1) YAKIMA - NEAR PARKER



ESP Forecast Date: 03/06/2016

Created: 03/07/2016 02:28 PST





# Northwest River Forecast Center ESP Natural Forecast



River and Hydrology

Water Supply

Observations

Weather Forecasts

Climate

NWRFC

Home

Zoom Out

--- Quick Zooms ---

ESP Issued: 2016-03-07

Ensemble Date: 2016-03-07

[Permalink](#)

Search

Enter NWS ID:

GO

Map Overlays

- ☒ NWRFC Boundary
- ☐ NWRFC Basins
- ☐ NWS HSAs
- ☐ Counties

ESP Natural Forecast

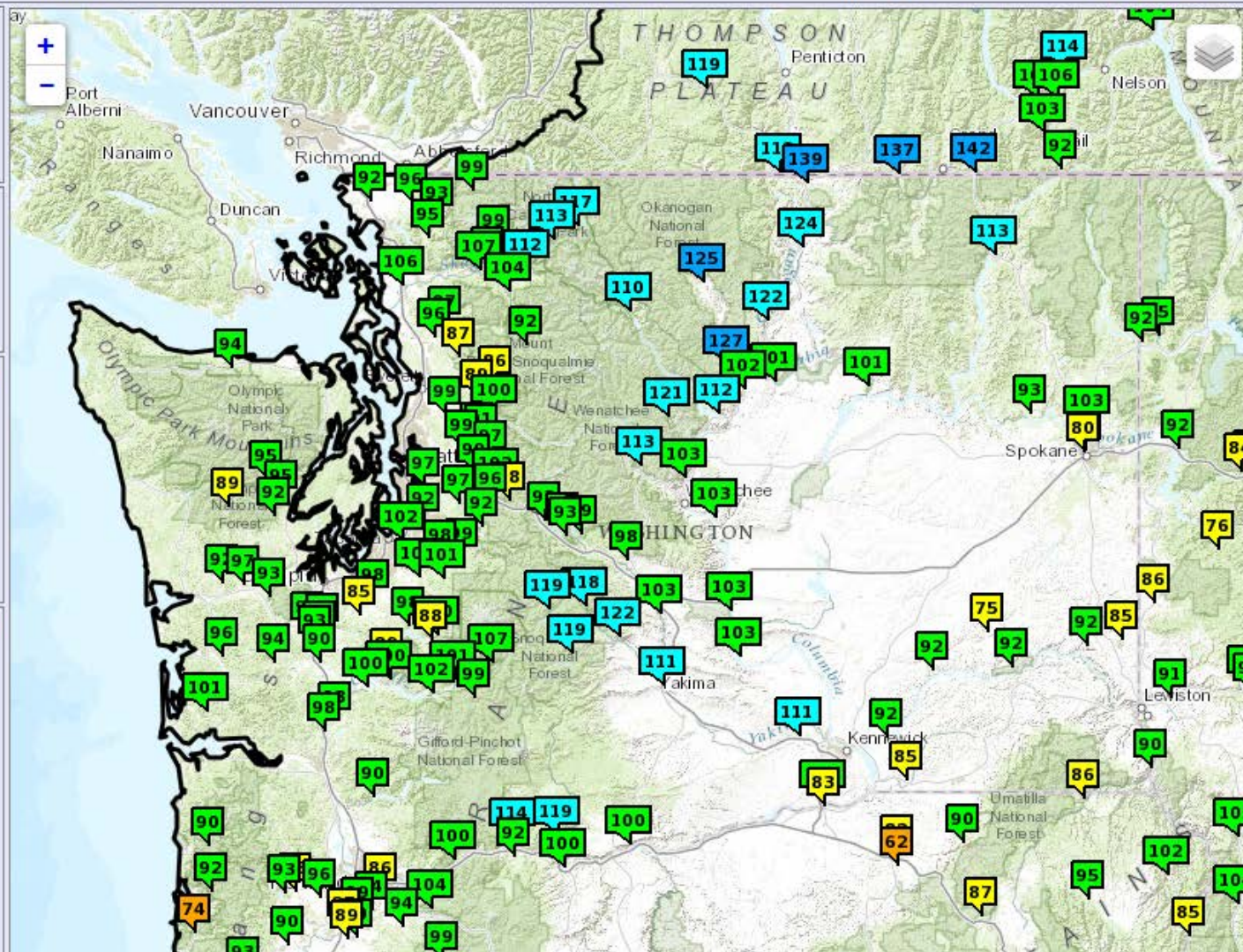
- ☐ Status
- ☒ Percent of Normal
- ☐ Rank (ASC)
- ☐ Rank (DESC)
- ☐ Exceedance (%)
- ☐ Percentile (%)

ESP Natural Forecast

Period: APR-SEP

Forecast (% Normal)

- ☐ No Normal, No Data
- ☐ < 25
- ☐ 25-50
- ☐ 50-75
- ☐ 75-90
- ☐ 90-110
- ☐ 110-125
- ☐ 125-150
- ☐ 150-175
- ☐ > 175



DEPARTMENT OF  
ECOL  
State of Washington



# Drought: The so-called “Slow Moving Disaster”

## Water Managers: River Forecasts, Snowpack Come into Clarity

## Bureau Forecasts

October							November							December							January							February							March							April							May																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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## Agriculture: Plan and Invest for Next Growing Season

## State Response: Water Leases, Transfers, Emergency Wells

Jeff Marti  
Washington Department of Ecology  
Water Resources Program  
jeff.marti@ecy.wa.gov  
360 407 6627



07/08/2015 13:10