

USDA Oregon Technical Advisory Committee
November 09, 2017
Red Hill SNOTEL Site (N. side of Mt. Hood – photo taken October 11, 2017)



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<http://www.nrcs.usda.gov/wps/portal/nrcs/main/or/snow/>

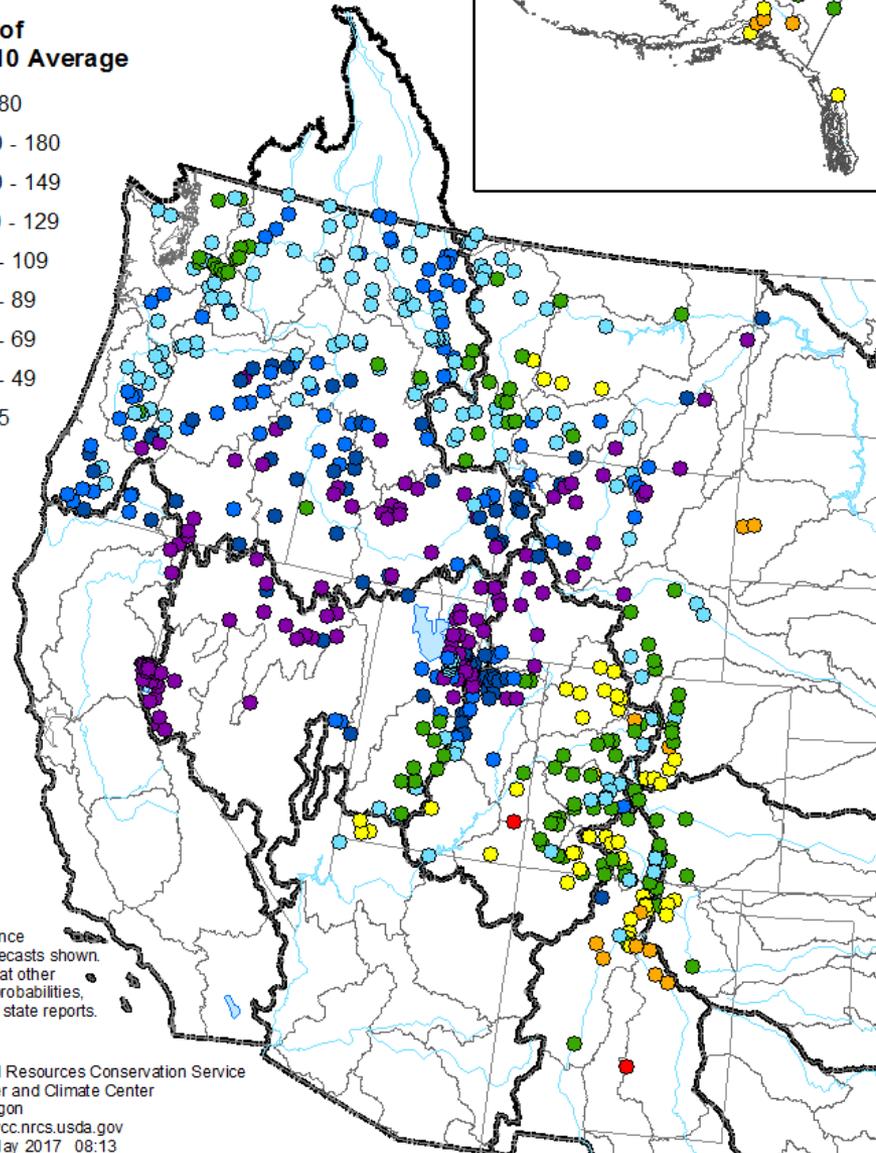
WATER YEAR 2017 SUMMARY

- 1. Record setting October 2016 precipitation set the tone for wet weather that continued through early June**
- 2. Snow & cold during December - January resulted in widespread low elevation snow and above normal amounts in the mountains**
- 3. Mid-winter (February and March) heavy rain and warm temperature events resulted in flooding with significant snowmelt. Due to surplus, the snowpack was sustained at normal levels even after these losses**
- 4. December through April represented 5 consecutive months of above average precipitation (at SNOTEL sites)**
- 5. Normal to above normal snowpack maintained through the peak of the season (mid March to early April)**
- 6. Most major irrigation reservoirs began the water supply season with average to above average amounts of water**
- 7. As forecast, most rivers experienced above average streamflow volumes from April – July (largely due to the above normal streamflow contribution during April and May)**
- 8. July and August were hot and dry, placing high demands for water usage with decreased streamflows statewide, and introducing drought conditions and wildfire**

Spring and Summer Streamflow Forecasts as of May 1, 2017

Percent of
1981-2010 Average

- > 180
- 150 - 180
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- 25 - 49
- < 25



50% exceedance
probability forecasts shown.
For forecasts at other
exceedance probabilities,
see individual state reports.

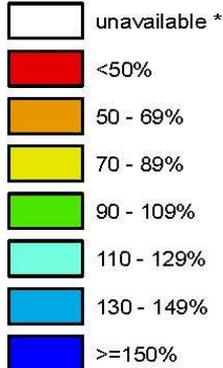
Prepared by:
USDA Natural Resources Conservation Service
National Water and Climate Center
Portland, Oregon
<https://www.wcc.nrcs.usda.gov>
Created: 5 May 2017 08:13

March 15, 2017 - Statewide SNOTEL Snow Water Equivalent - 130% of normal

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

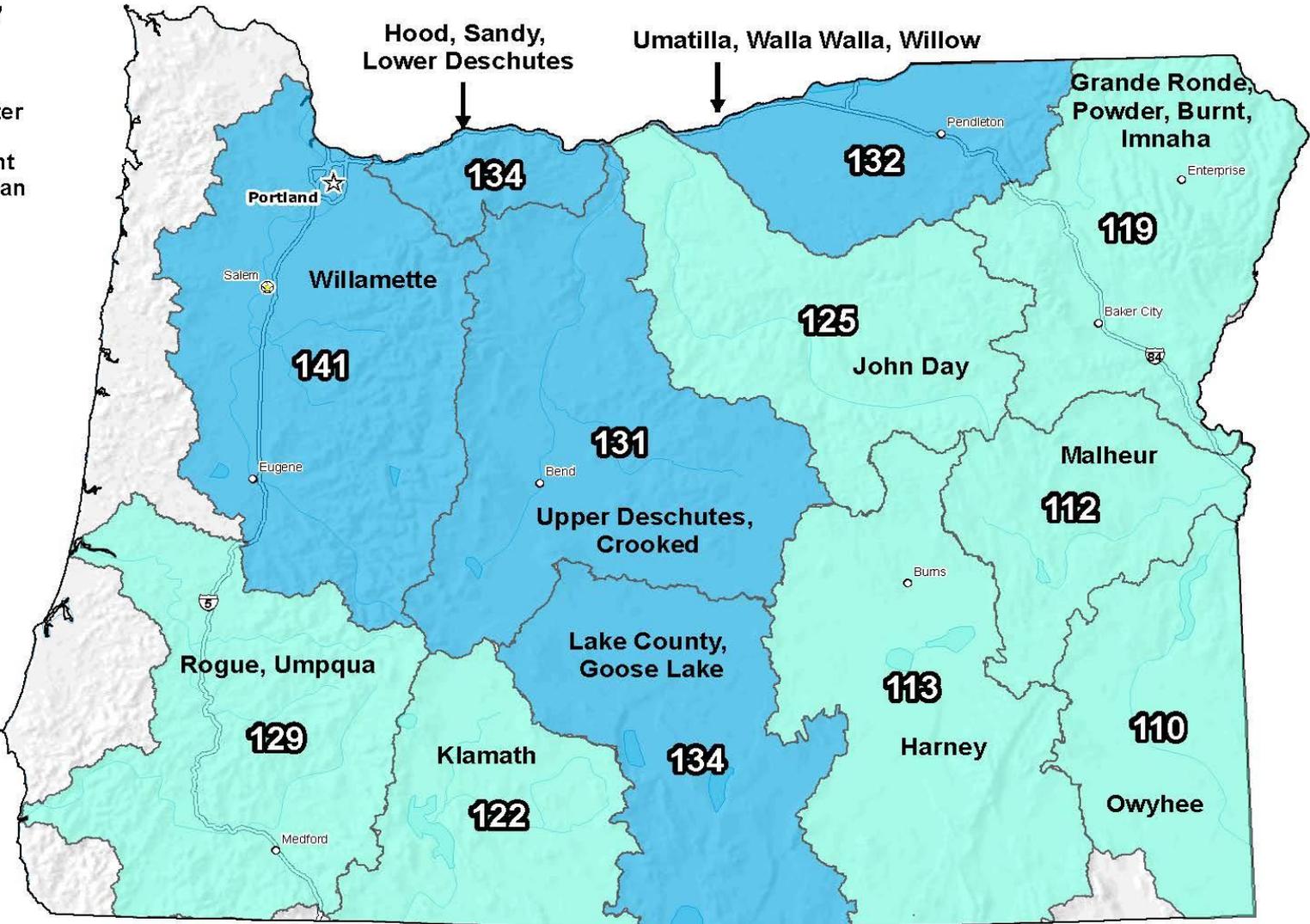
Mar 15, 2017

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

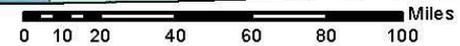


* Data unavailable at time of posting or measurement is not representative at this time of year

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).



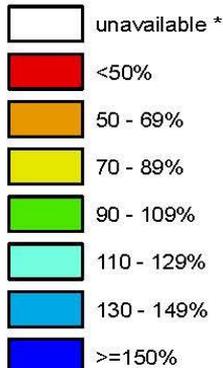
Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

2017 Water Year Statewide SNOTEL Precipitation - 125% of normal

Oregon SNOTEL Water Year (Oct 1) to Date Precipitation % of Normal

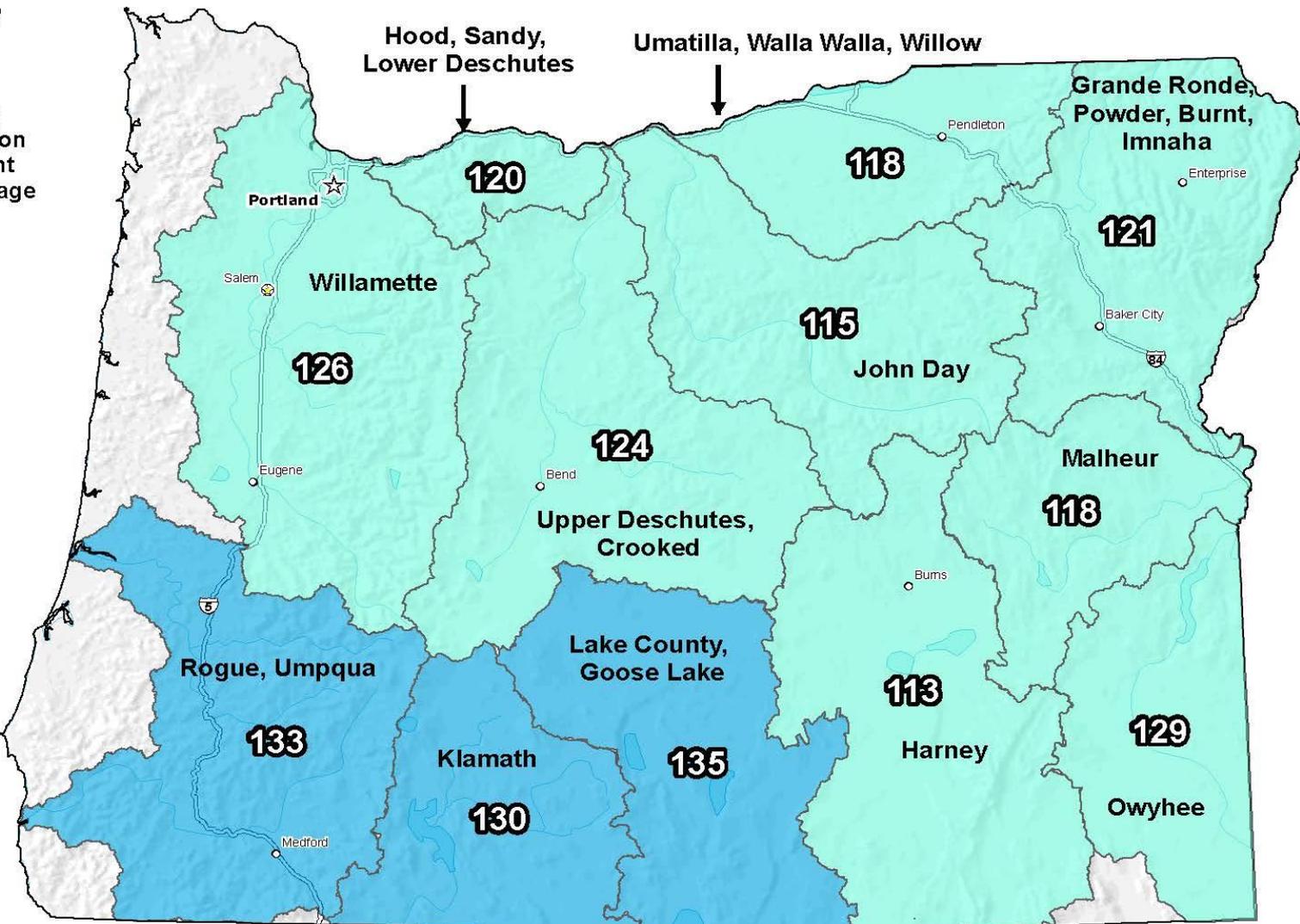
Sep 30, 2017

Water Year (Oct 1) to Date Precipitation Basin-wide Percent of 1981-2010 Average



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

Provisional Data
Subject to Revision



The water year to date precipitation percent of normal represents the accumulated precipitation 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).

0 10 20 40 60 80 100 Miles

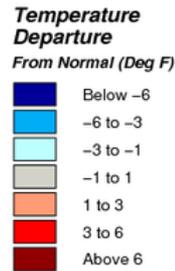
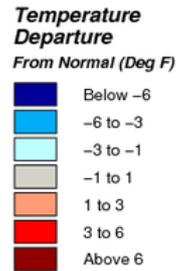
Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

Temperature Departure July 2017

July 2017
Temperature Departure

Temperature Departure August 2017

August 2017
Temperature Departure



Creation Time: Tuesday, Aug 1, 2017 Northwest River Forecast Center

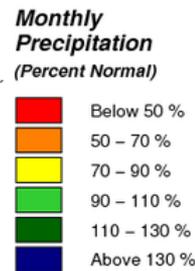
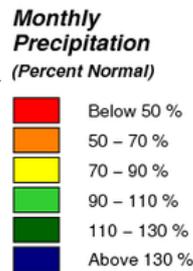
Creation Time: Friday, Sep 1, 2017 Northwest River Forecast Center

Monthly Precipitation July 2017

July 2017
Precipitation % Normal

Monthly Precipitation August 2017

August 2017
Precipitation % Normal



Creation Time: Tuesday, Aug 1, 2017 Northwest River Forecast Center

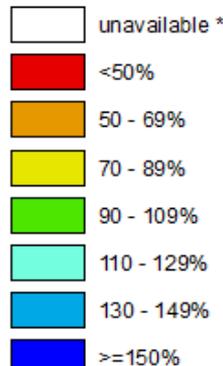
Creation Time: Friday, Sep 1, 2017 Northwest River Forecast Center

Statewide SNOTEL Precipitation is 139% of normal

Oregon SNOTEL Water Year (Oct 1) to Date Precipitation % of Normal

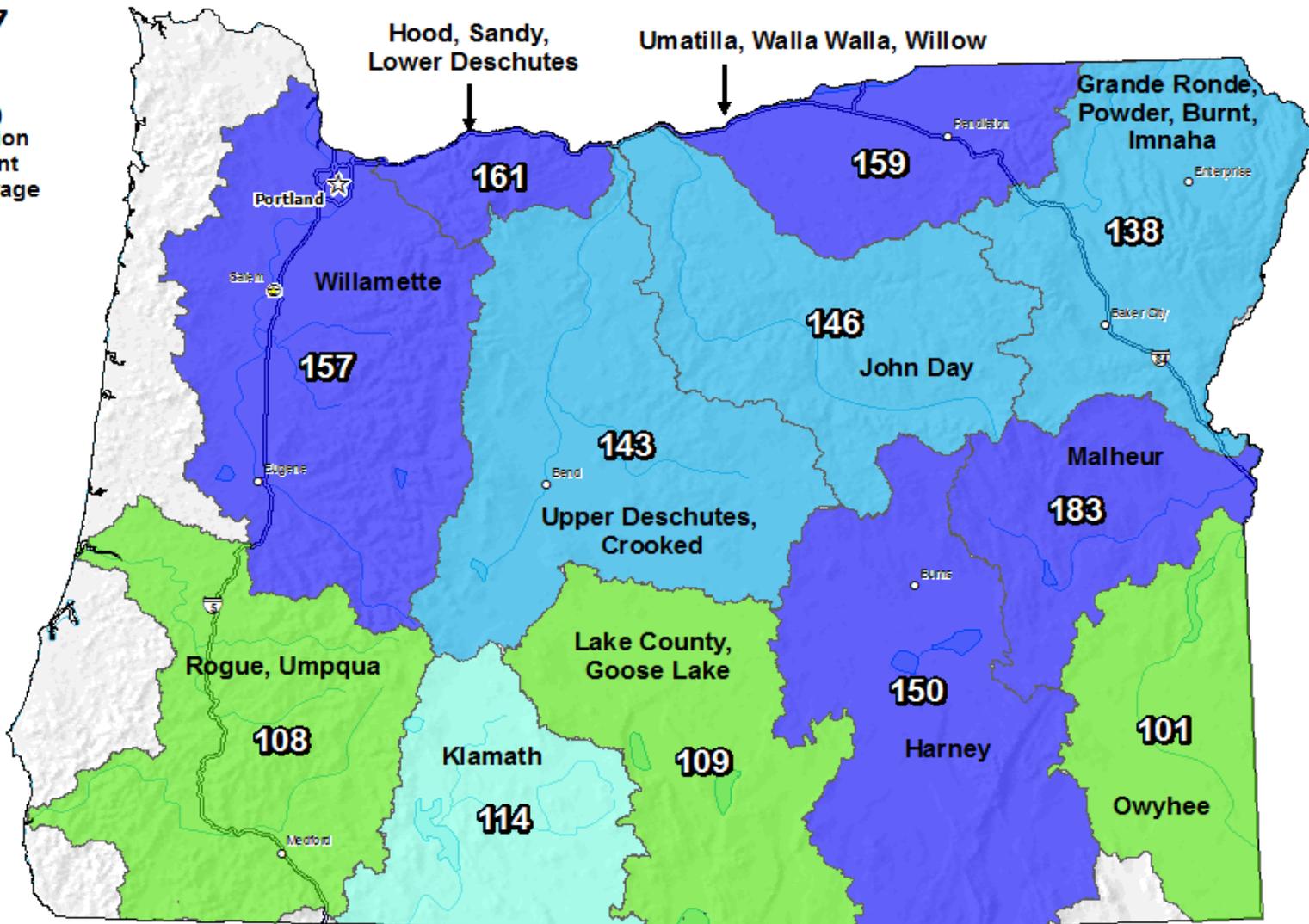
Nov 07, 2017

Water Year (Oct 1) to Date Precipitation Basin-wide Percent of 1981-2010 Average



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

Provisional Data
Subject to Revision



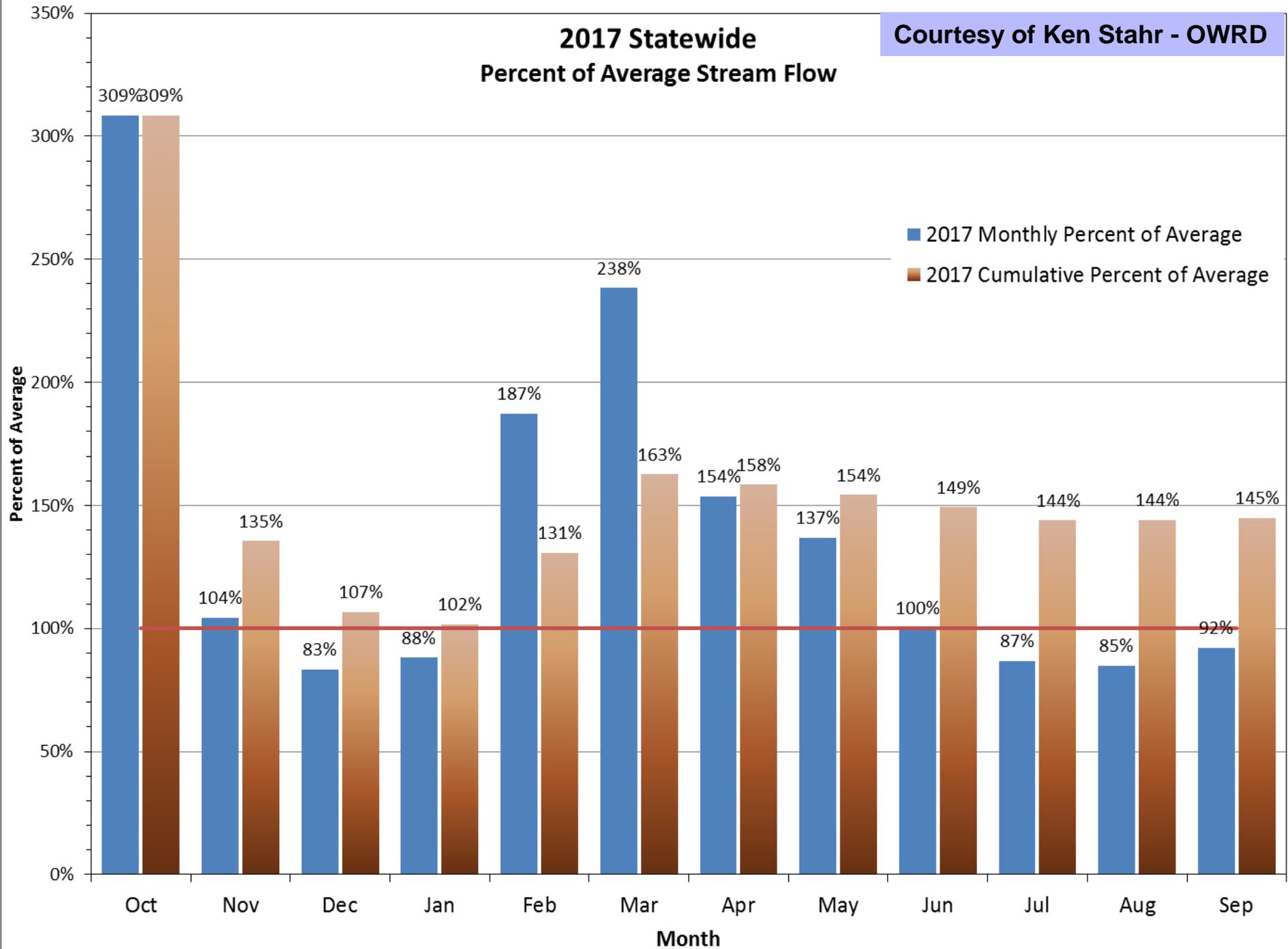
The water year to date precipitation percent of normal represents the accumulated precipitation found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

0 10 20 40 60 80 100 Miles

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

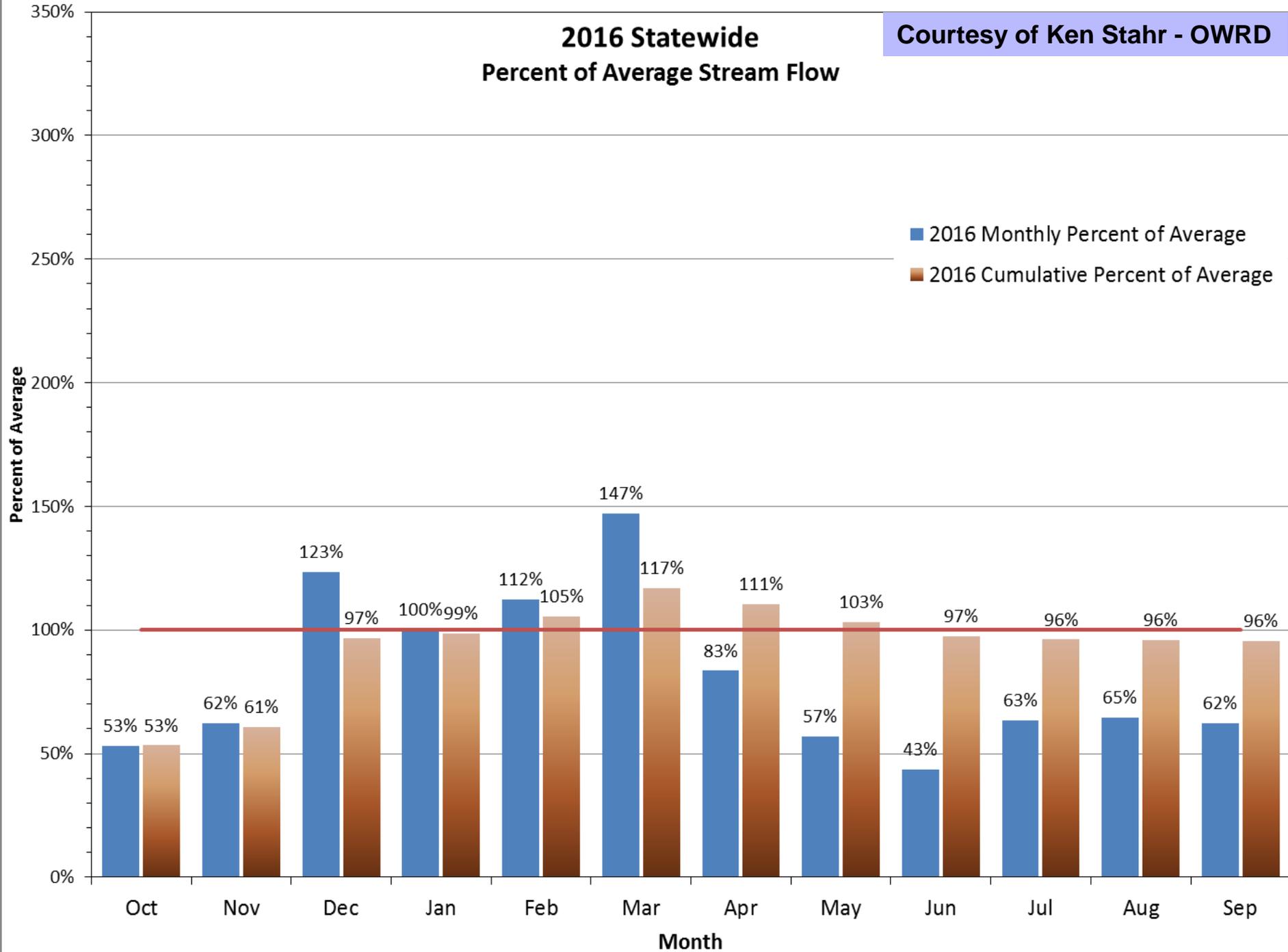
2017 Statewide Percent of Average Stream Flow

Courtesy of Ken Stahr - OWRD



2016 Statewide Percent of Average Stream Flow

Courtesy of Ken Stahr - OWRD



Percent of Average Streamflow Month of October, 2017

Percent of Average Streamflow

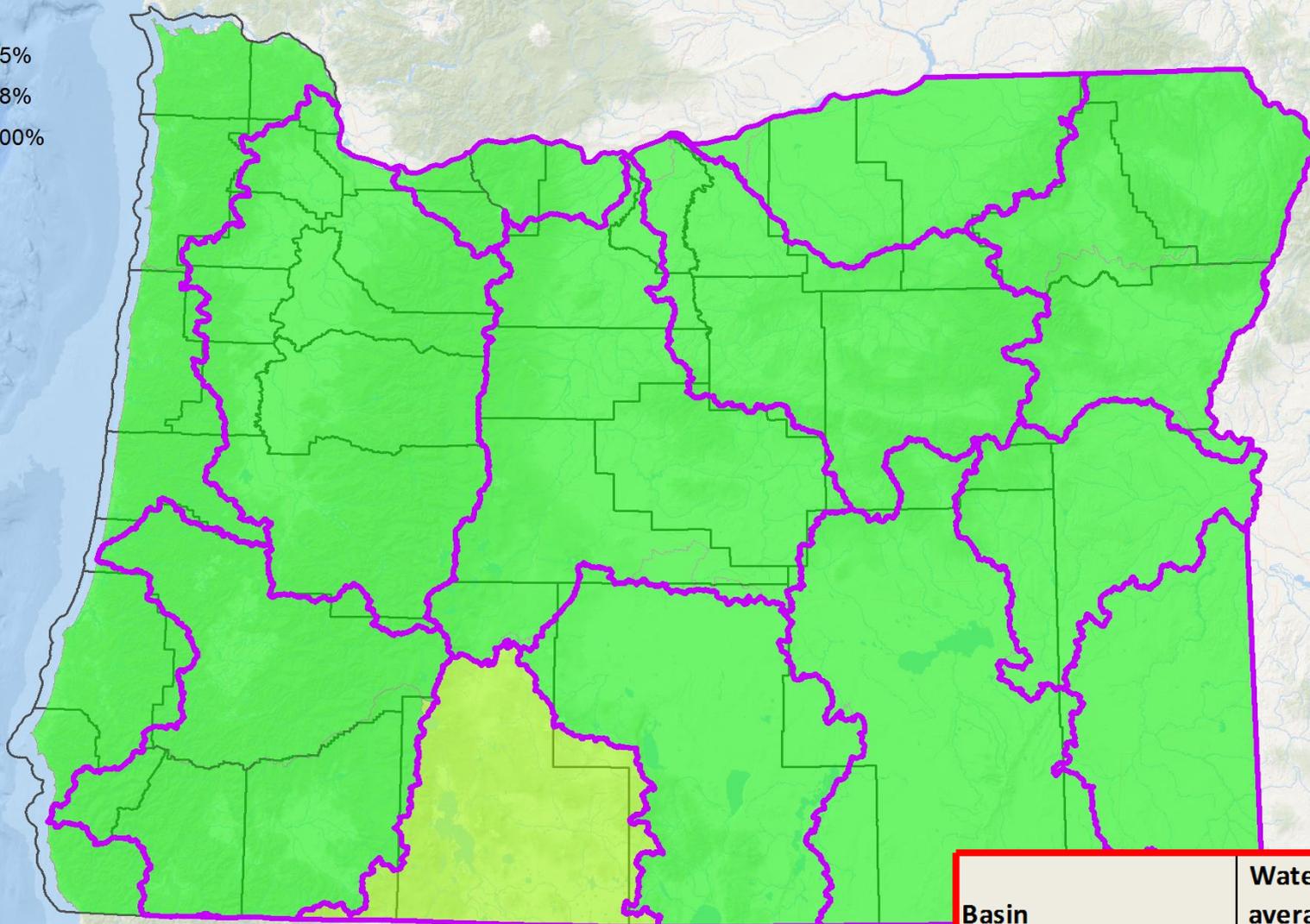
WRD Basin

-  < 50%
-  50% - 75%
-  76% - 88%
-  89% - 100%
-  > 100%

NRCS Basin



County

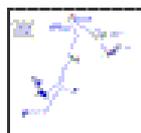
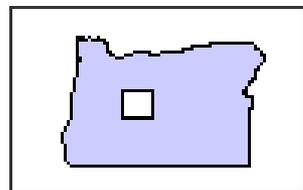


Average streamflow data are based on 30 years of record (1981-2010). All data represent free-flowing streams unaffected by significant man-made control structures such as dams or diversion works.

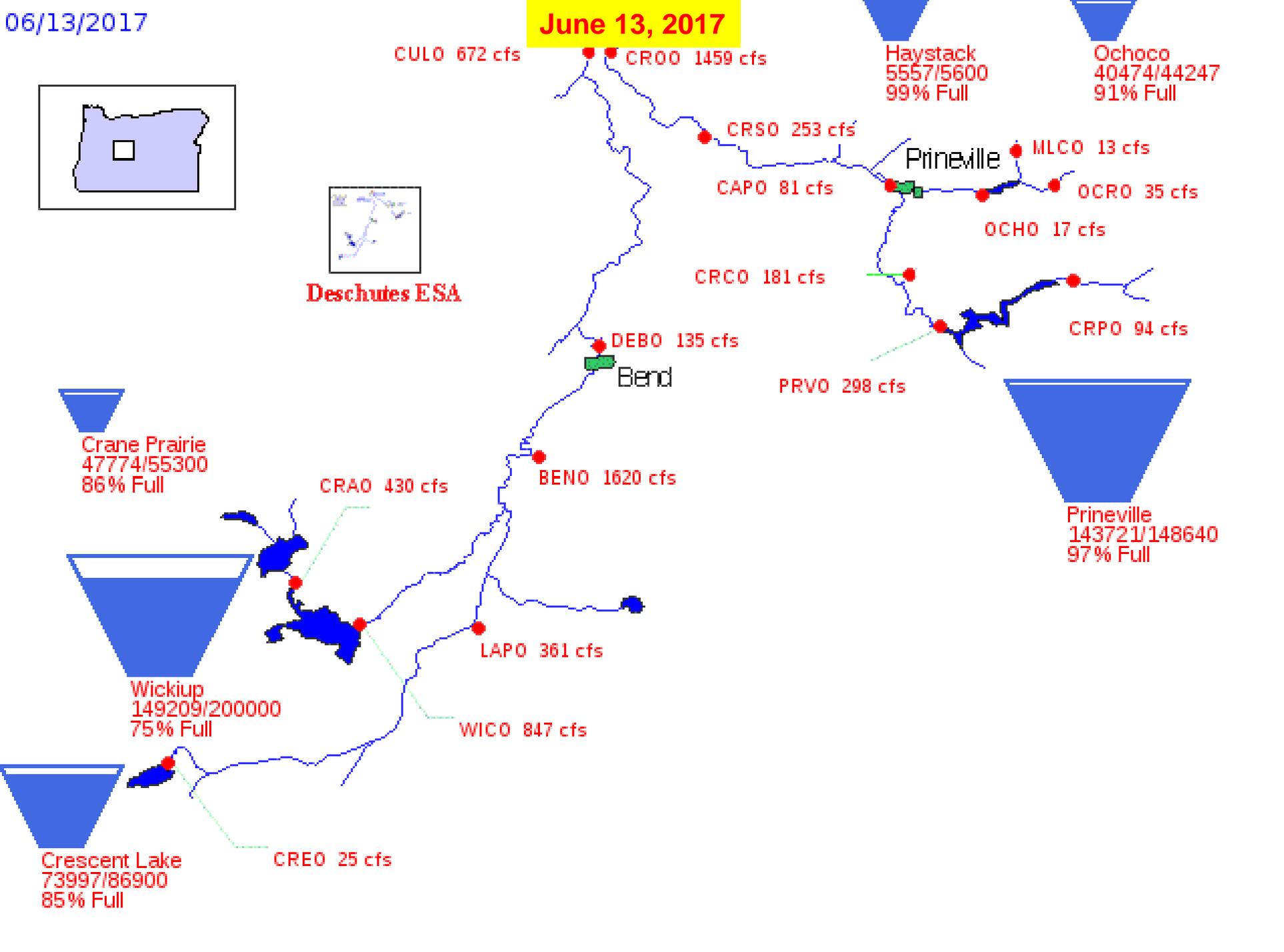
Basin	Water Year % of average through October, 2017
West Side	209%
East Side	123%
State	156%

06/13/2017

June 13, 2017

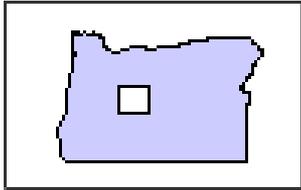


Deschutes ESA

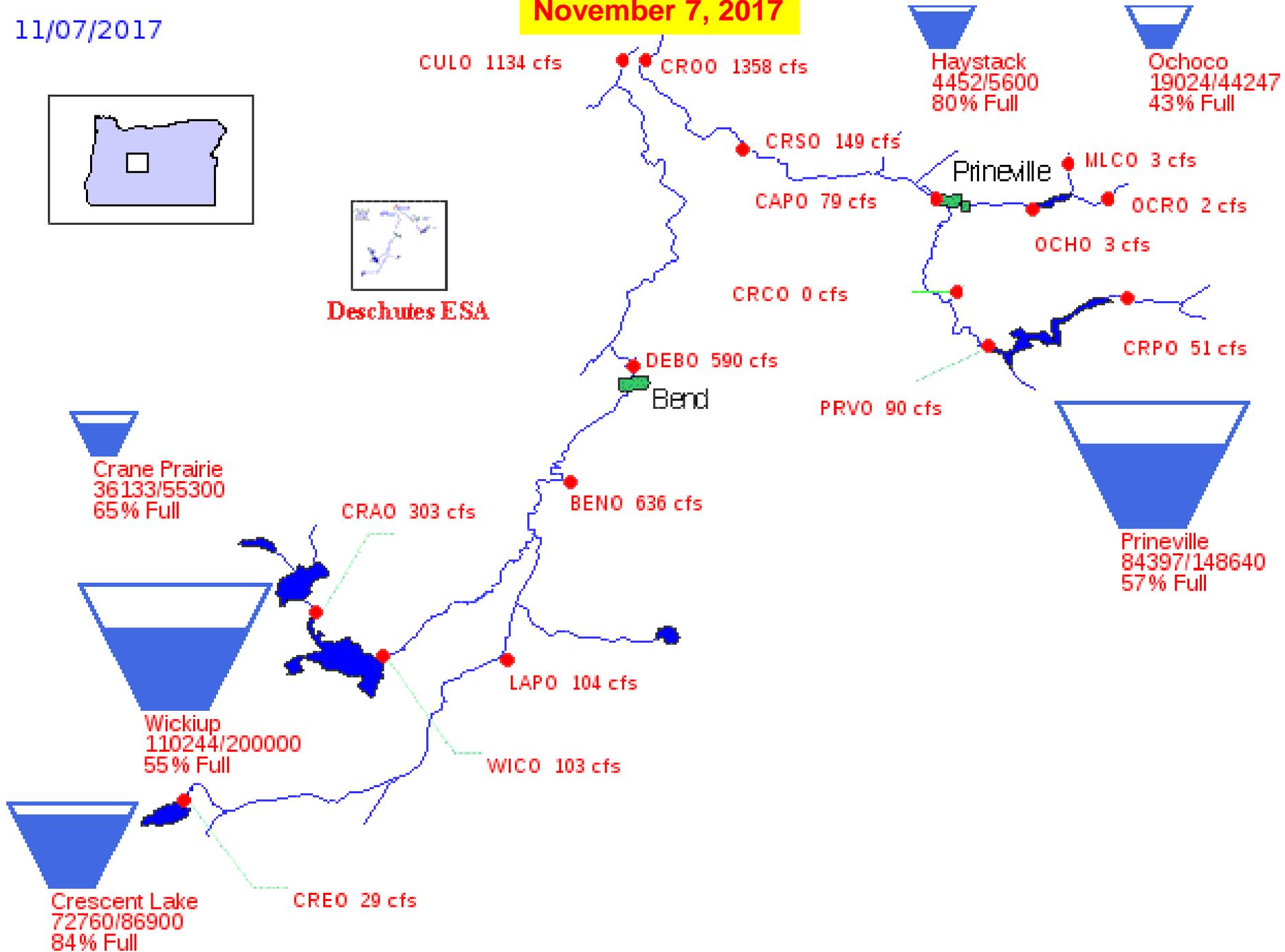


11/07/2017

November 7, 2017

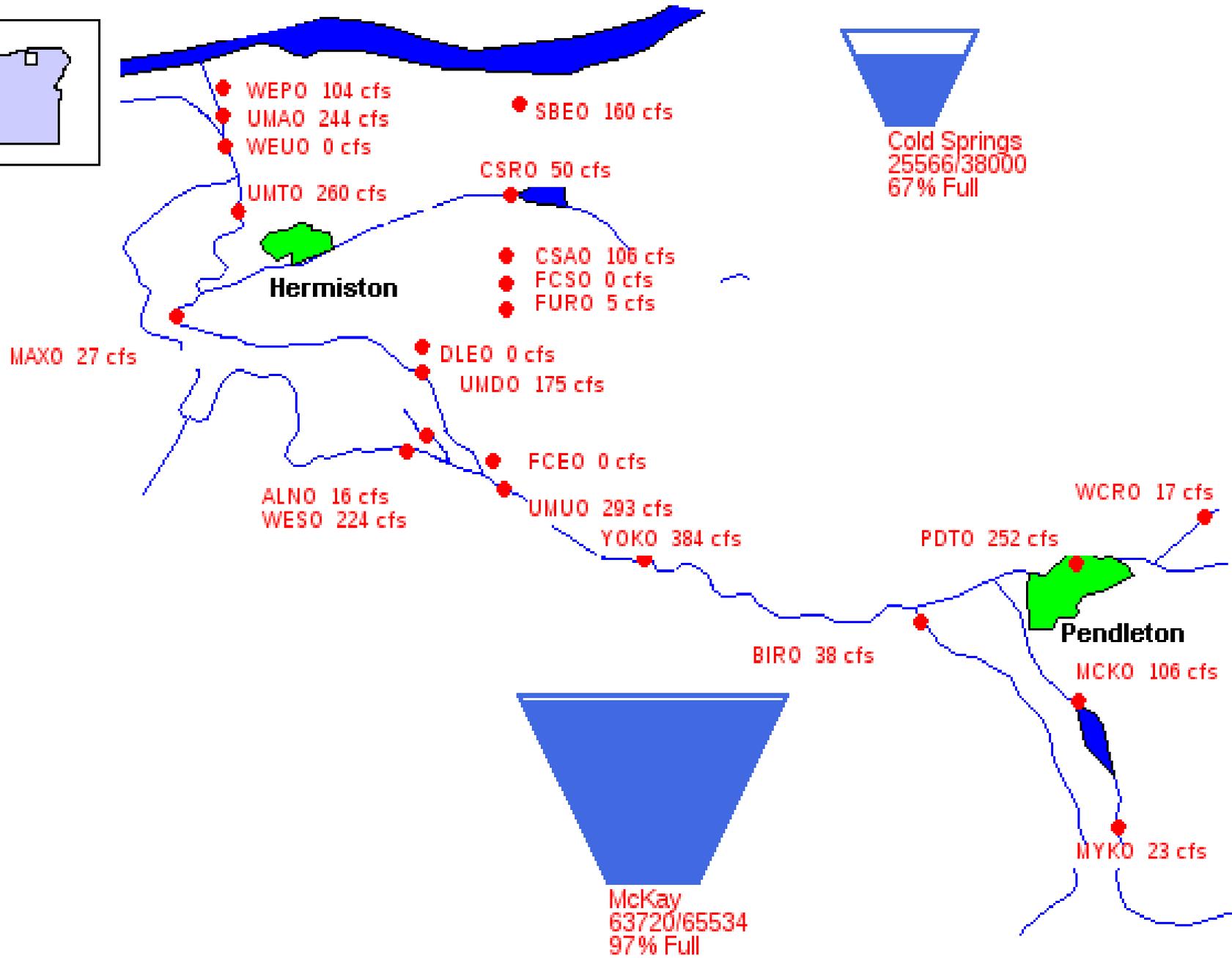
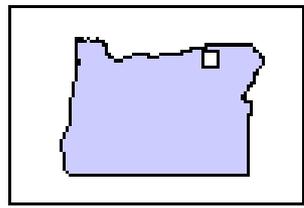


Deschutes ESA



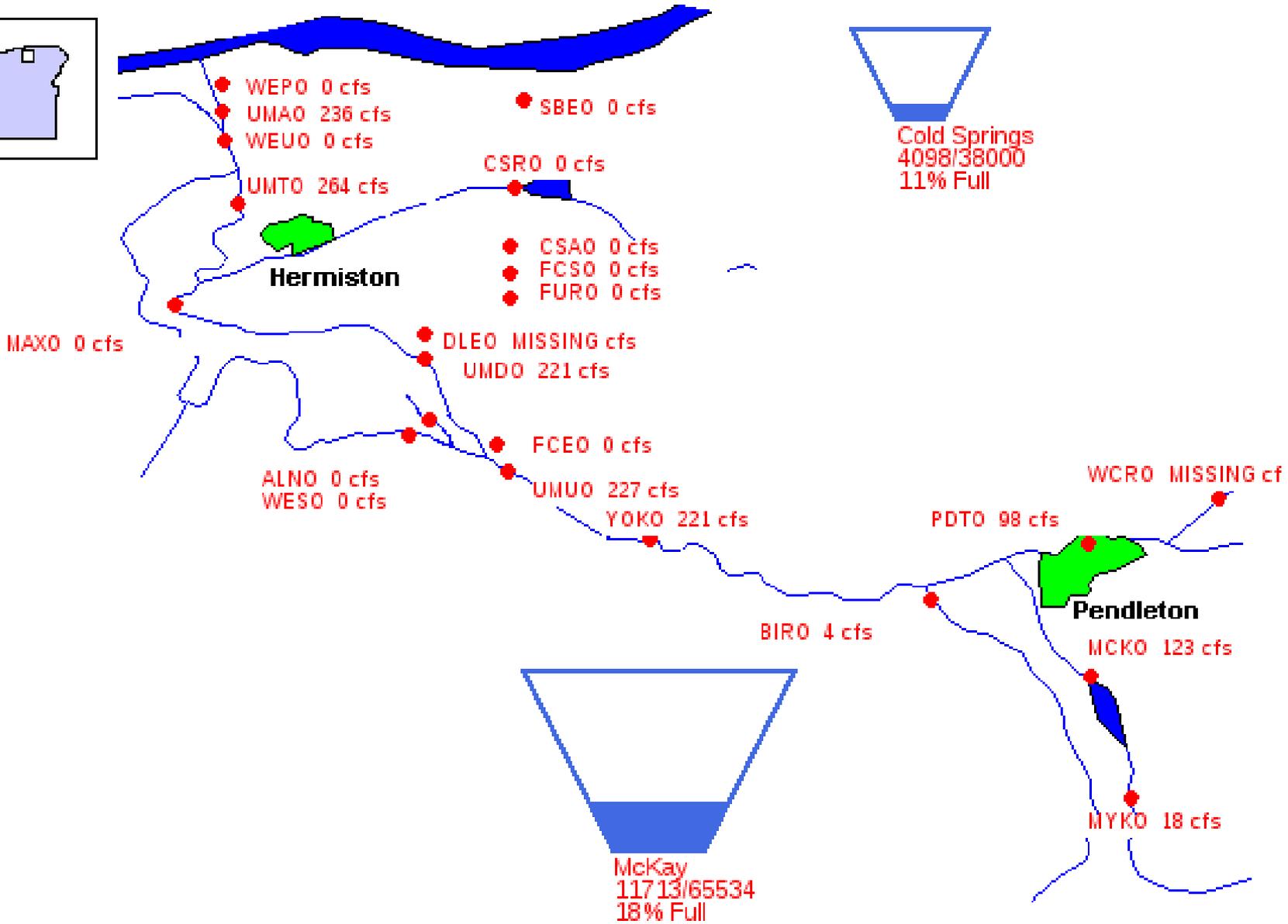
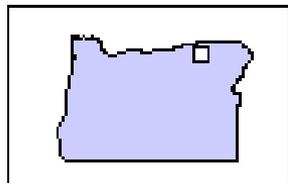
06/11/2017

June 11, 2017



November 7, 2017

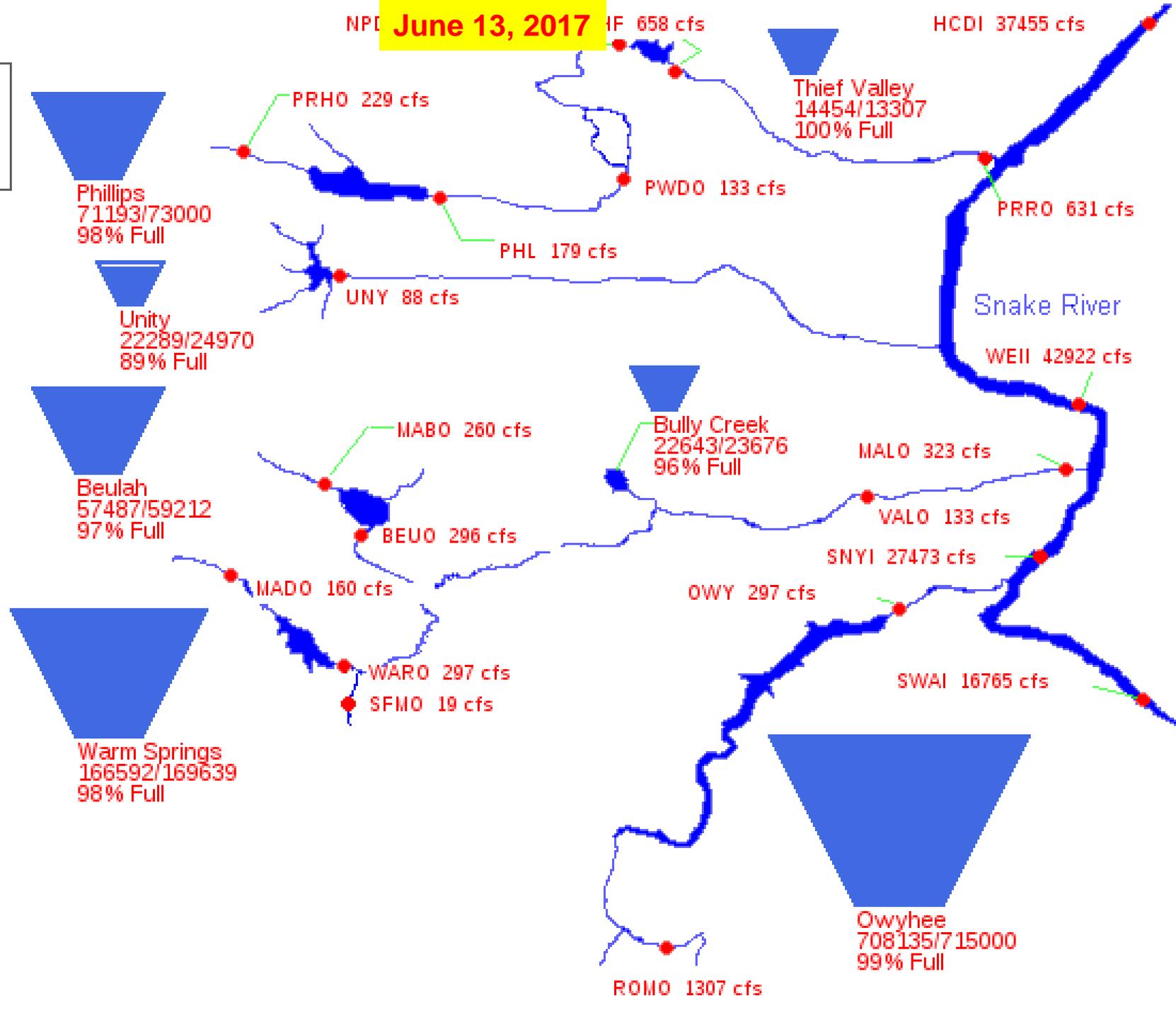
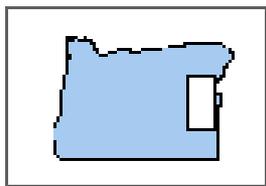
11/07/2017



06/13/2017

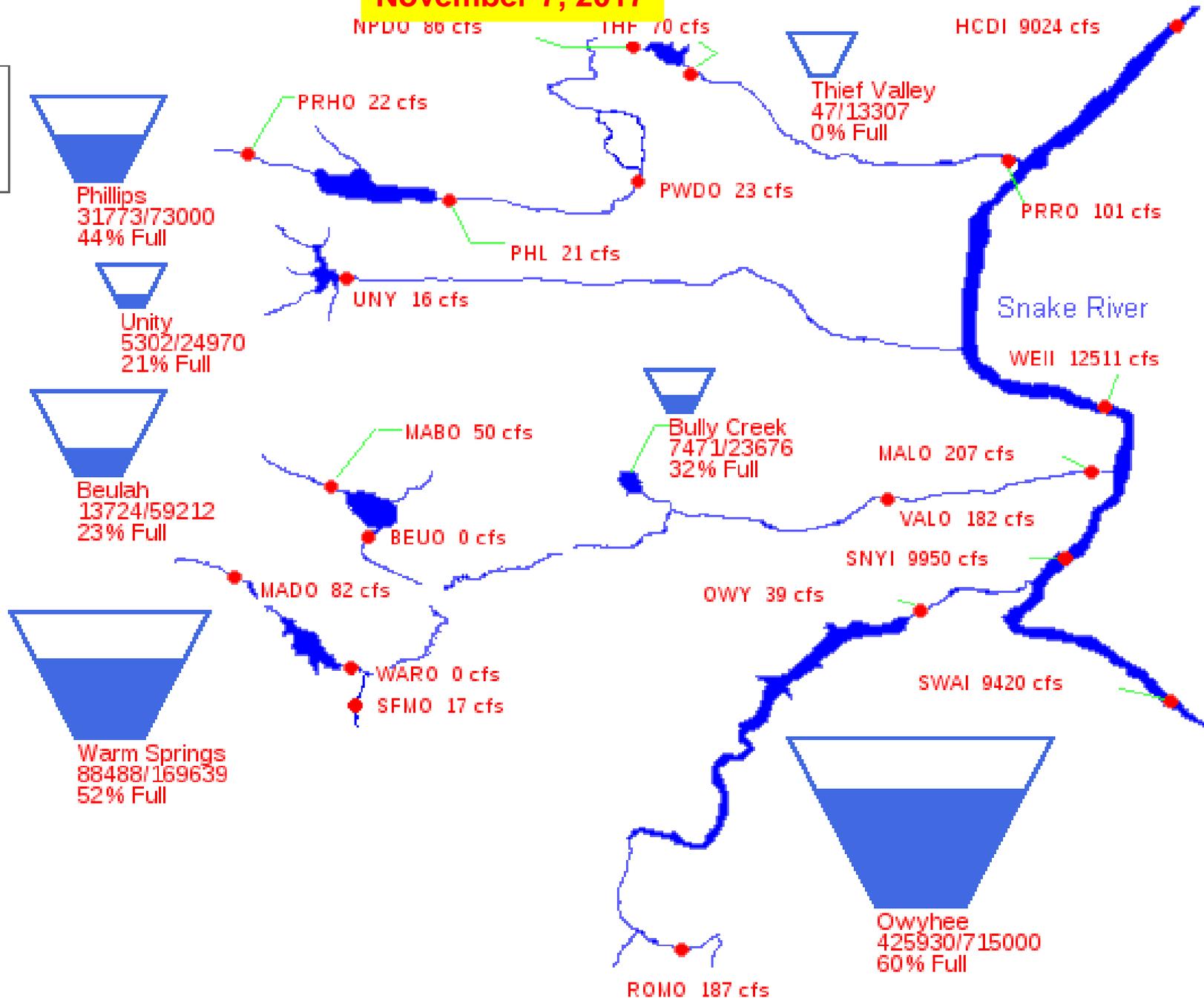
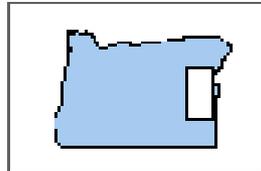
NPI June 13, 2017 IF 658 cfs

HCDI 37455 cfs

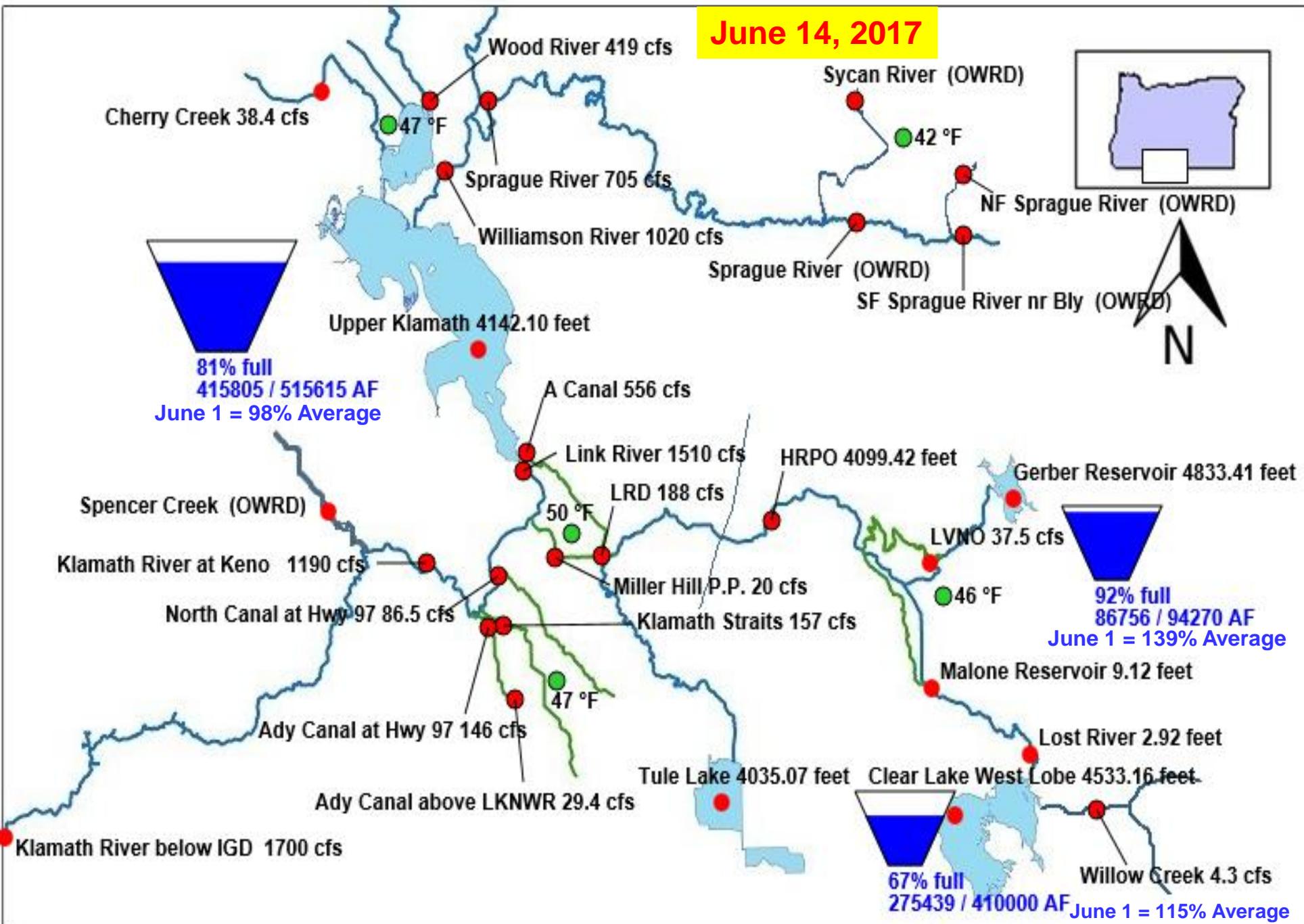


November 7, 2017

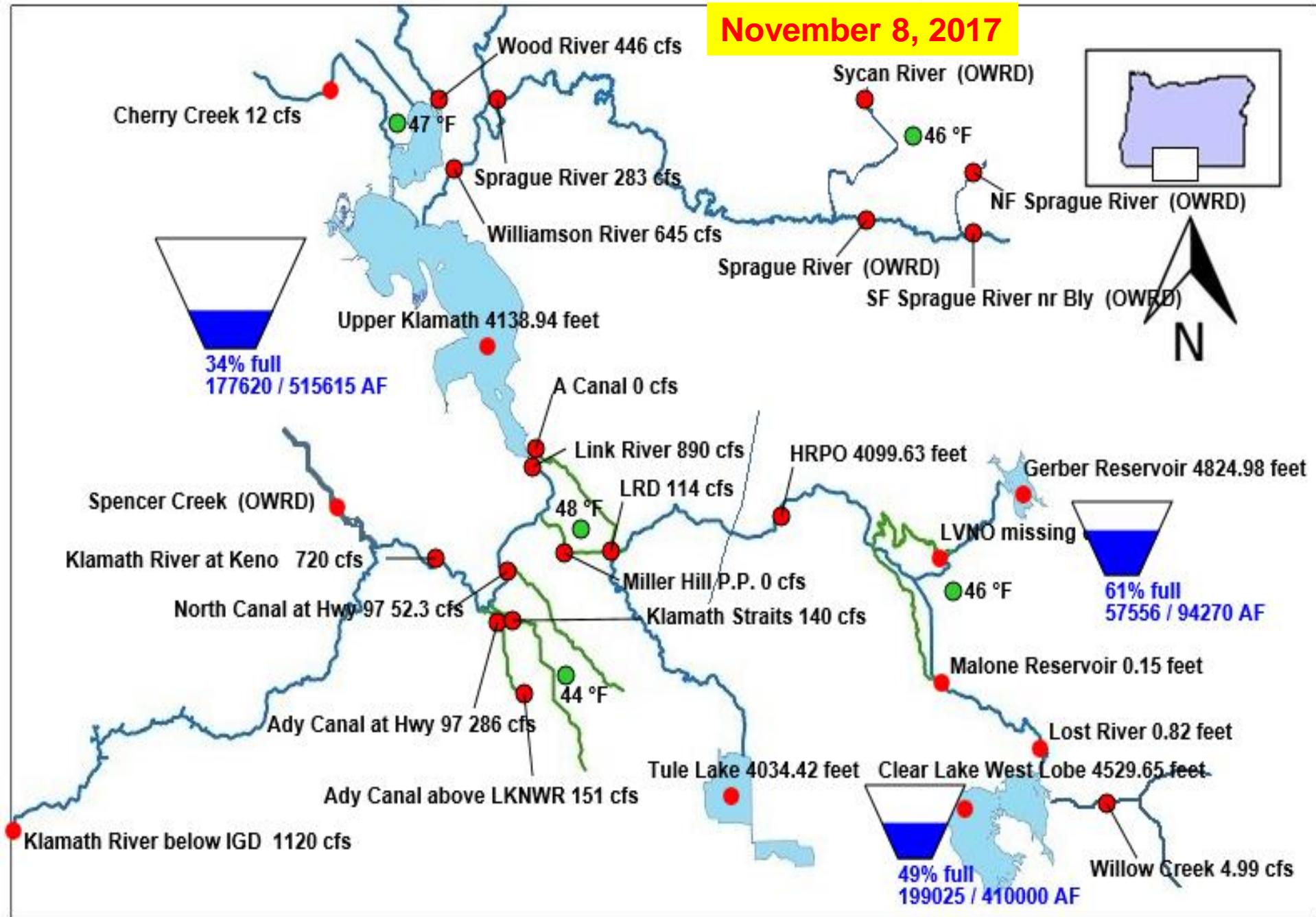
11/07/2017



June 14, 2017

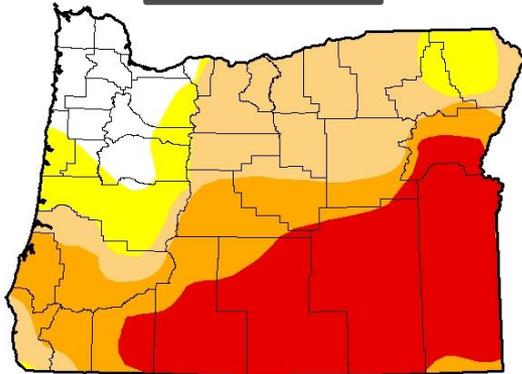


November 8, 2017



U.S. Drought Monitor
Oregon
2014

90% D0-D4



November 4, 2014
(Released Thursday, Nov. 6, 2014)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	9.64	90.36	79.39	54.68	34.88	0.00
Last Week 10/29/2014	9.54	90.46	80.24	55.07	35.30	0.00
3 Months Ago 09/02/2014	1.75	98.25	75.89	56.02	35.23	0.00
Start of Calendar Year 12/01/2013	0.19	99.81	62.59	24.96	1.30	0.00
Start of Water Year 03/01/2014	1.56	98.44	76.61	56.26	35.30	0.00
One Year Ago 11/05/2013	37.74	62.26	38.38	24.86	1.30	0.00

Intensity:

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

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

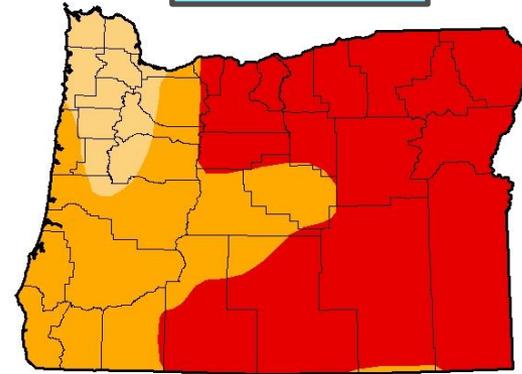
Author:
Matthew Rosencrans
CPC/NCEP/NWS/NOAA



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

U.S. Drought Monitor
Oregon
2015

100% D1-D4



November 10, 2015
(Released Thursday, Nov. 12, 2015)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	91.53	60.69	0.00
Last Week 11/02/2015	0.00	100.00	100.00	91.57	60.68	0.00
3 Months Ago 09/10/2015	0.00	100.00	100.00	100.00	49.87	0.00
Start of Calendar Year 12/01/2014	13.61	86.39	80.70	49.29	34.11	0.00
Start of Water Year 02/29/2015	0.00	100.00	100.00	100.00	67.29	0.00
One Year Ago 11/10/2014	9.66	90.34	79.41	54.68	34.88	0.00

Intensity:

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

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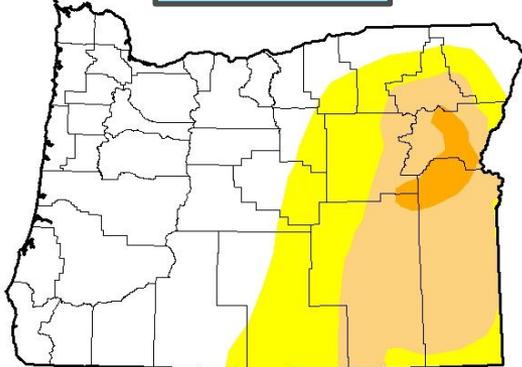
Author:
Richard Tinker
CPC/NOAA/NWS/NCEP



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

U.S. Drought Monitor
Oregon
2016

44% D0-D2



November 8, 2016
(Released Thursday, Nov. 10, 2016)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	56.44	43.56	23.22	2.63	0.00	0.00
Last Week 11/1/2016	56.44	43.56	27.07	2.63	0.00	0.00
3 Months Ago 09/02/2016	0.00	100.00	50.20	12.03	0.00	0.00
Start of Calendar Year 12/01/2015	14.52	85.48	80.45	65.33	39.55	0.00
Start of Water Year 02/01/2016	0.00	100.00	50.59	12.30	0.00	0.00
One Year Ago 11/08/2015	0.00	100.00	100.00	91.53	60.69	0.00

Intensity:

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

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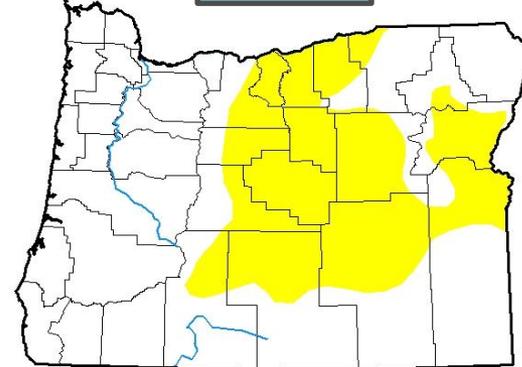
Author:
Deborah Bathke
National Drought Mitigation Center



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

U.S. Drought Monitor
Oregon
2017

33% D0



November 7, 2017
(Released Thursday, Nov. 9, 2017)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	67.05	32.95	0.00	0.00	0.00	0.00
Last Week 10-31-2017	59.56	40.44	0.00	0.00	0.00	0.00
3 Months Ago 09-09-2017	44.70	55.30	0.00	0.00	0.00	0.00
Start of Calendar Year 01-03-2017	65.31	34.69	5.29	0.00	0.00	0.00
Start of Water Year 09-26-2017	39.23	60.77	28.57	0.00	0.00	0.00
One Year Ago 11-08-2016	56.44	43.56	23.22	2.63	0.00	0.00

Intensity:

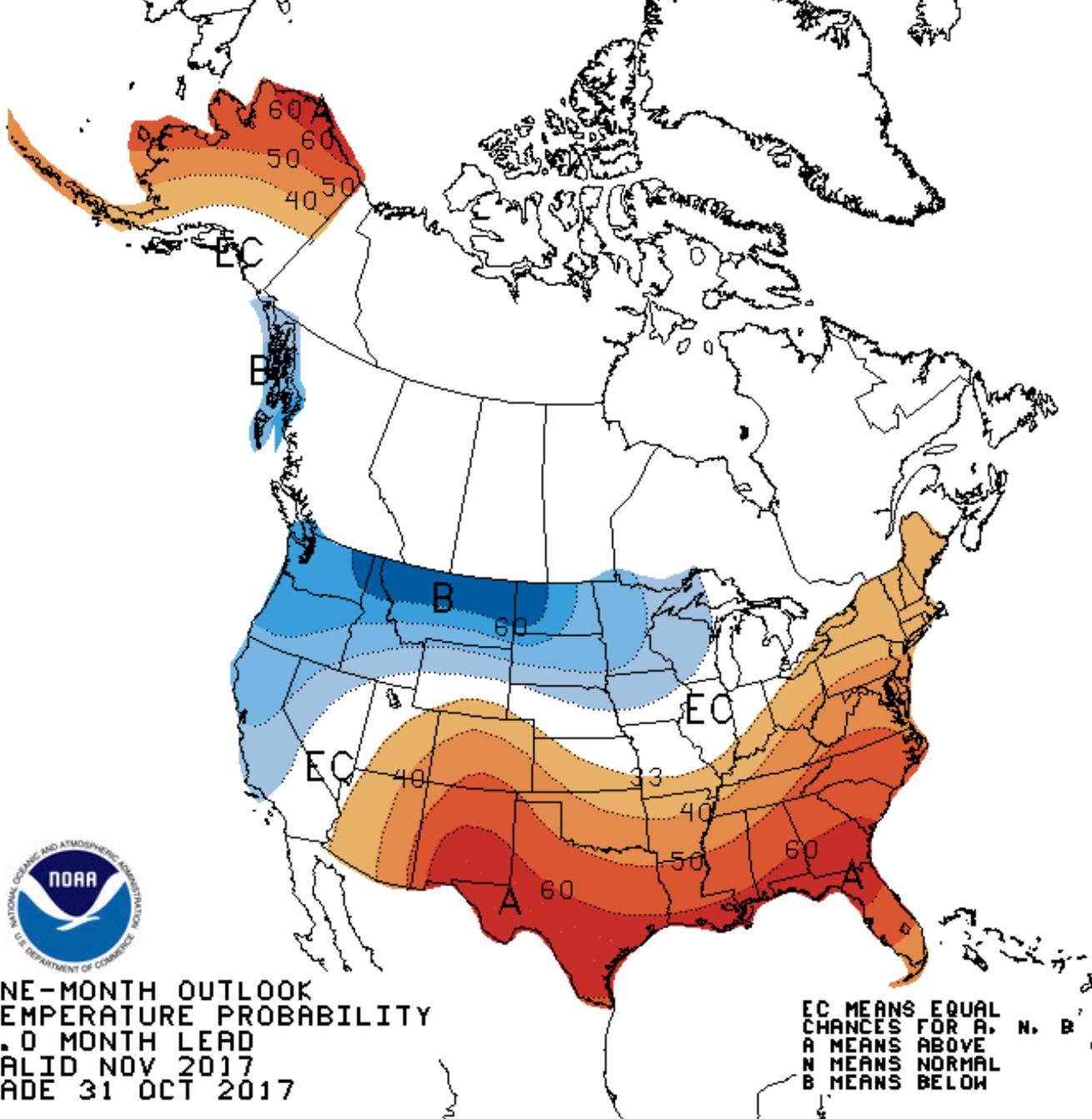
 D0 Abnormally Dry D3 Extreme Drought
 D1 Moderate Drought D4 Exceptional Drought
 D2 Severe Drought

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Author:
David Miskus
NOAA/NWS/NCEP/CPC

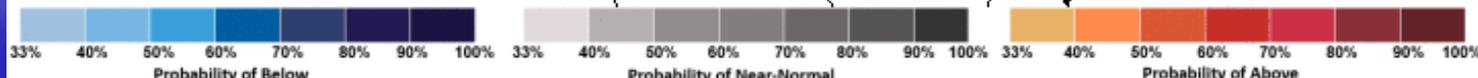


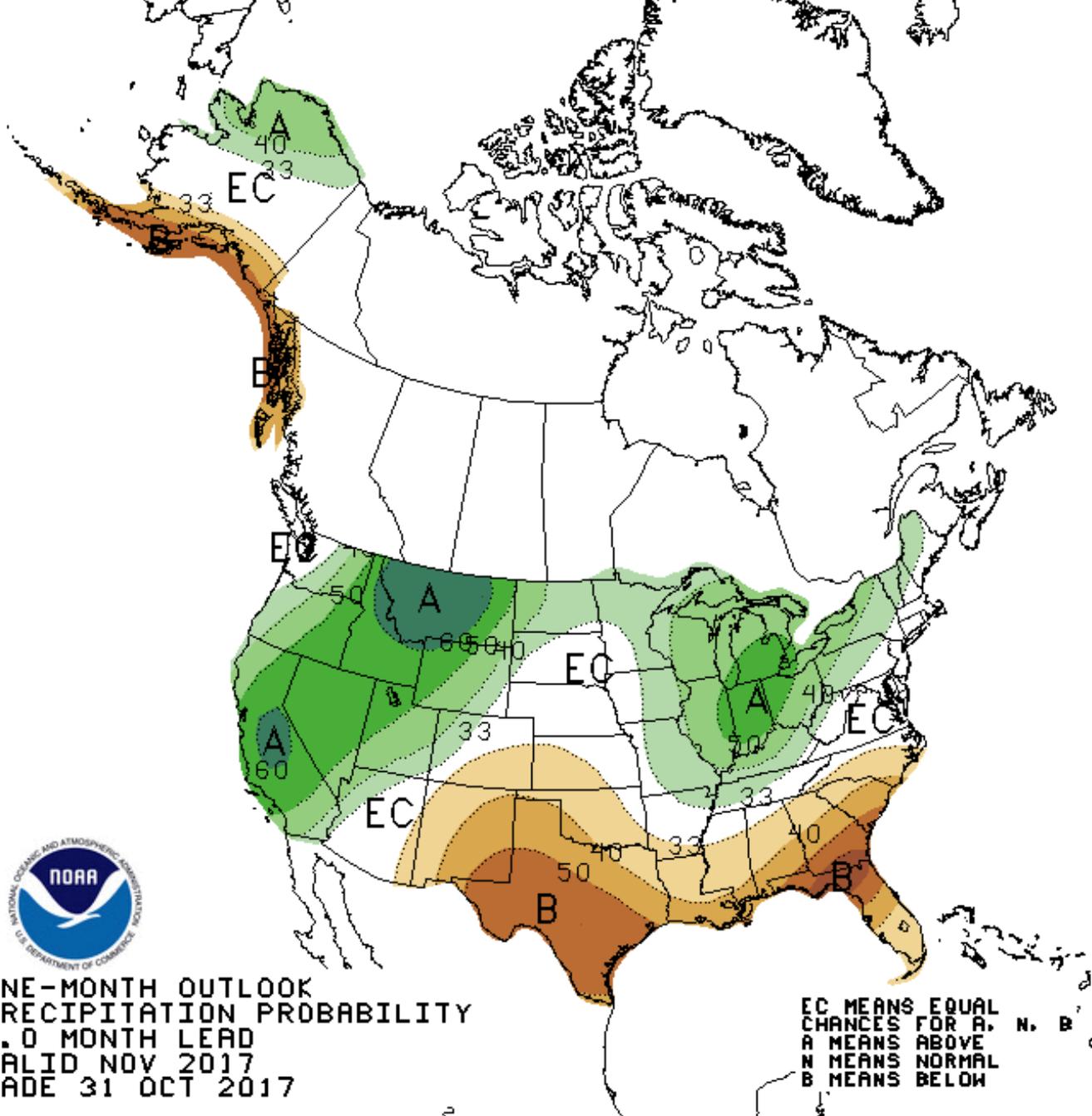
<http://droughtmonitor.unl.edu/>



ONE-MONTH OUTLOOK
 TEMPERATURE PROBABILITY
 0.0 MONTH LEAD
 VALID NOV 2017
 MADE 31 OCT 2017

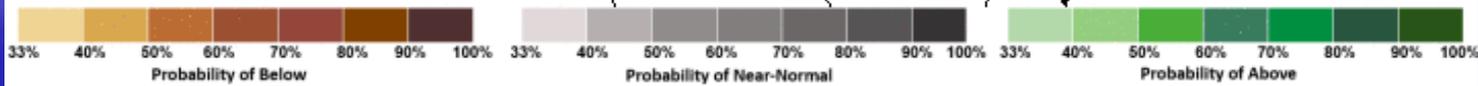
EC MEANS EQUAL
 CHANCES FOR A, N, B
 A MEANS ABOVE
 N MEANS NORMAL
 B MEANS BELOW

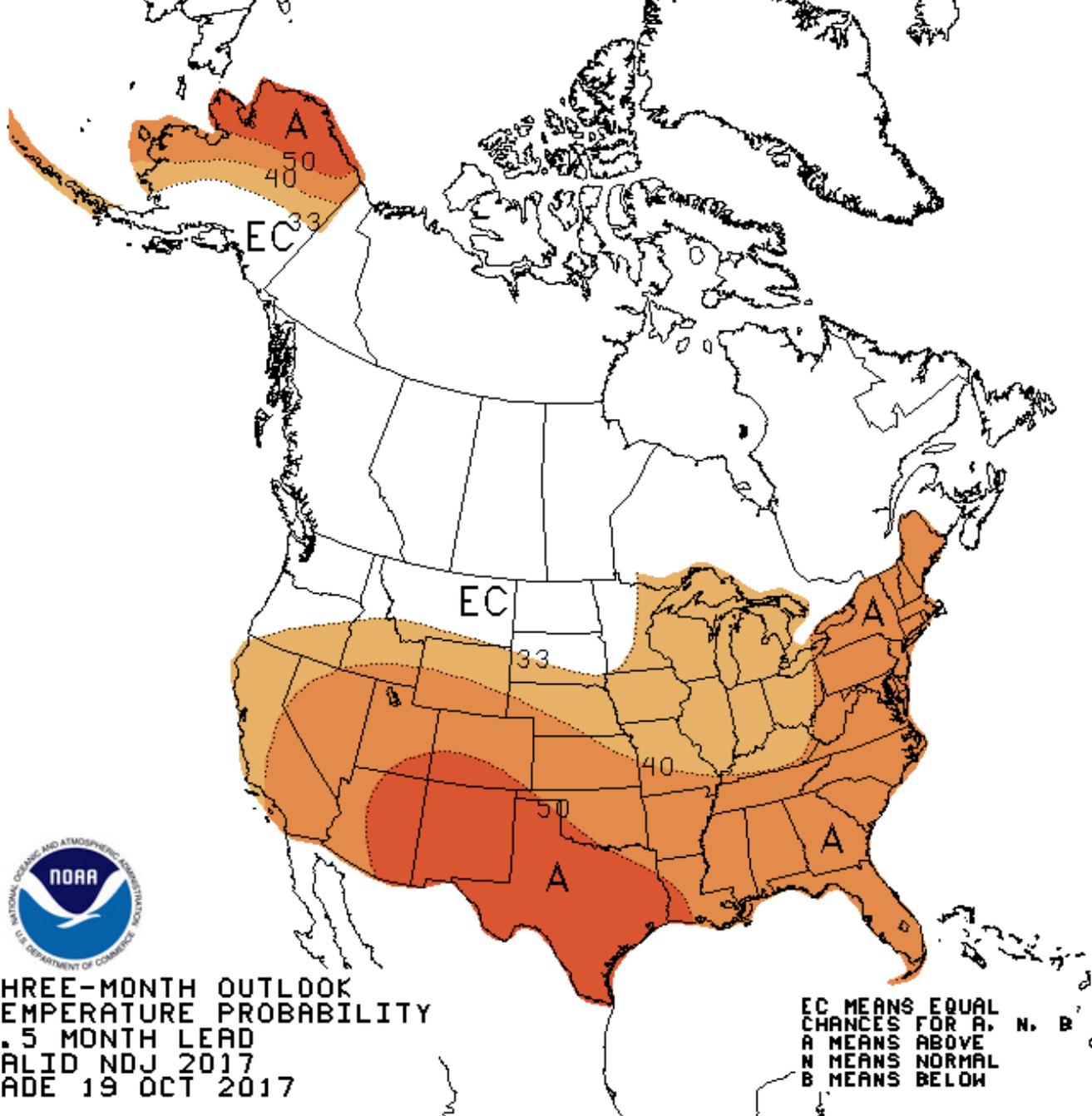




ONE-MONTH OUTLOOK
 PRECIPITATION PROBABILITY
 0.0 MONTH LEAD
 VALID NOV 2017
 MADE 31 OCT 2017

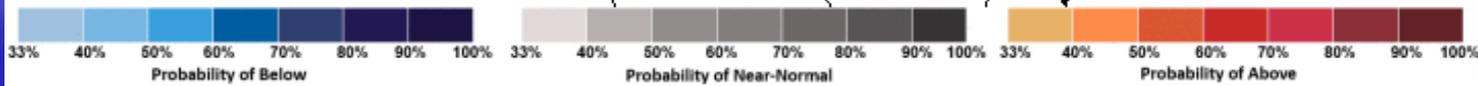
EC MEANS EQUAL
 CHANCES FOR A, N, B
 A MEANS ABOVE
 N MEANS NORMAL
 B MEANS BELOW

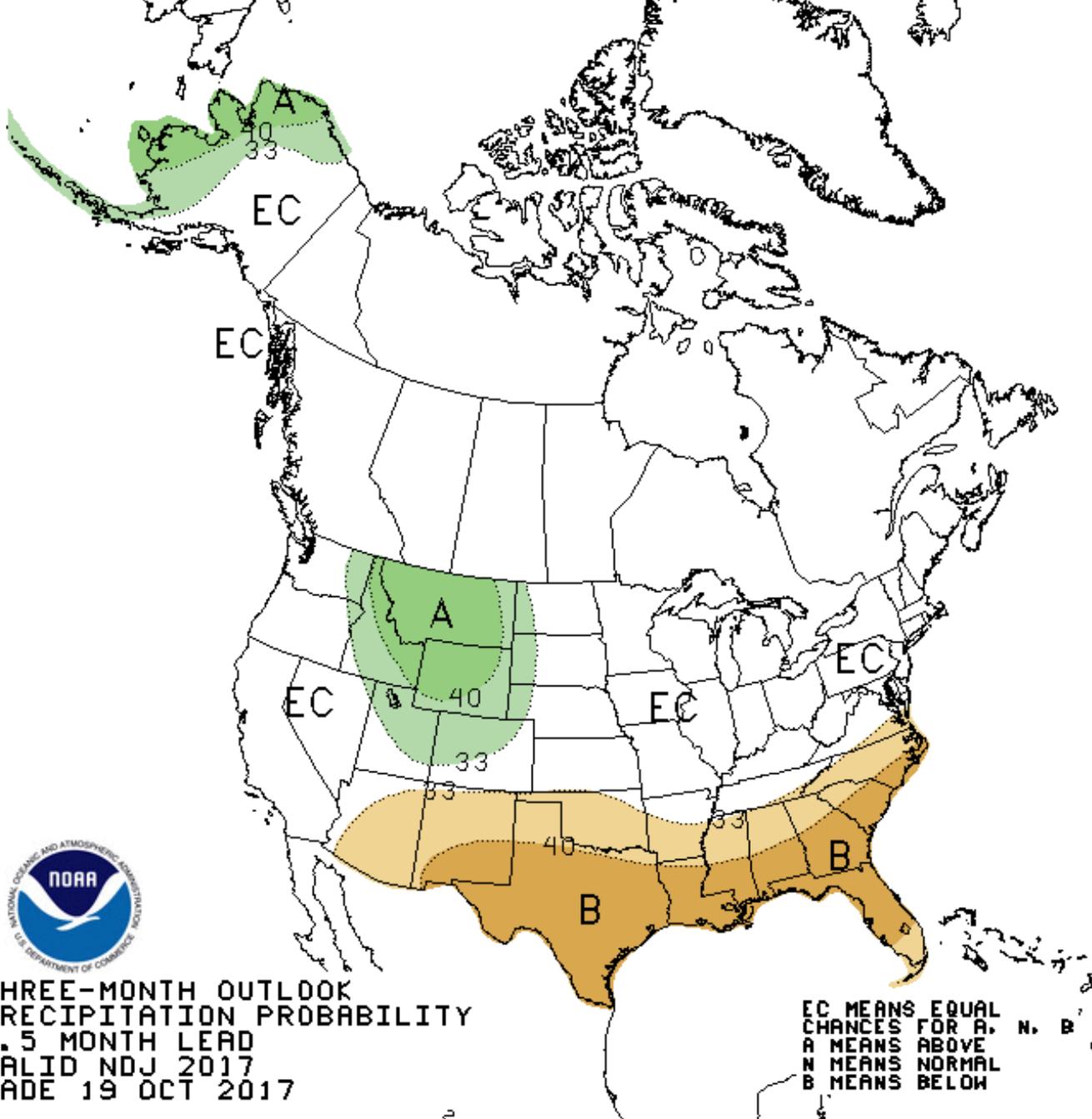




THREE-MONTH OUTLOOK
 TEMPERATURE PROBABILITY
 0.5 MONTH LEAD
 VALID NDJ 2017
 MADE 19 OCT 2017

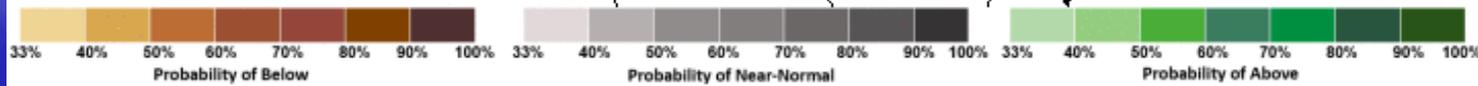
EC MEANS EQUAL
 CHANCES FOR A, N, B
 A MEANS ABOVE
 N MEANS NORMAL
 B MEANS BELOW





THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID NDJ 2017
MADE 19 OCT 2017

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW



Questions?

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USDA Oregon Technical Advisory Committee
November 09, 2017
Red Hill SNOTEL Site (N. side of Mt. Hood – photo taken October 11, 2017)



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