



Oregon Water Supply Availability Committee
December 5, 2017

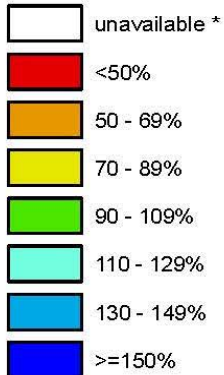
H. Scott Oviatt
Snow Survey Supervisory Hydrologist
USDA NRCS Snow Survey and Water
Supply Forecasting Program
Scott.Oviatt@or.usda.gov
503-414-3271
<http://www.nrcs.usda.gov/wps/portal/nrcs/main/or/snow/>

Statewide SNOTEL Snow Water Equivalent is 238% of normal

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

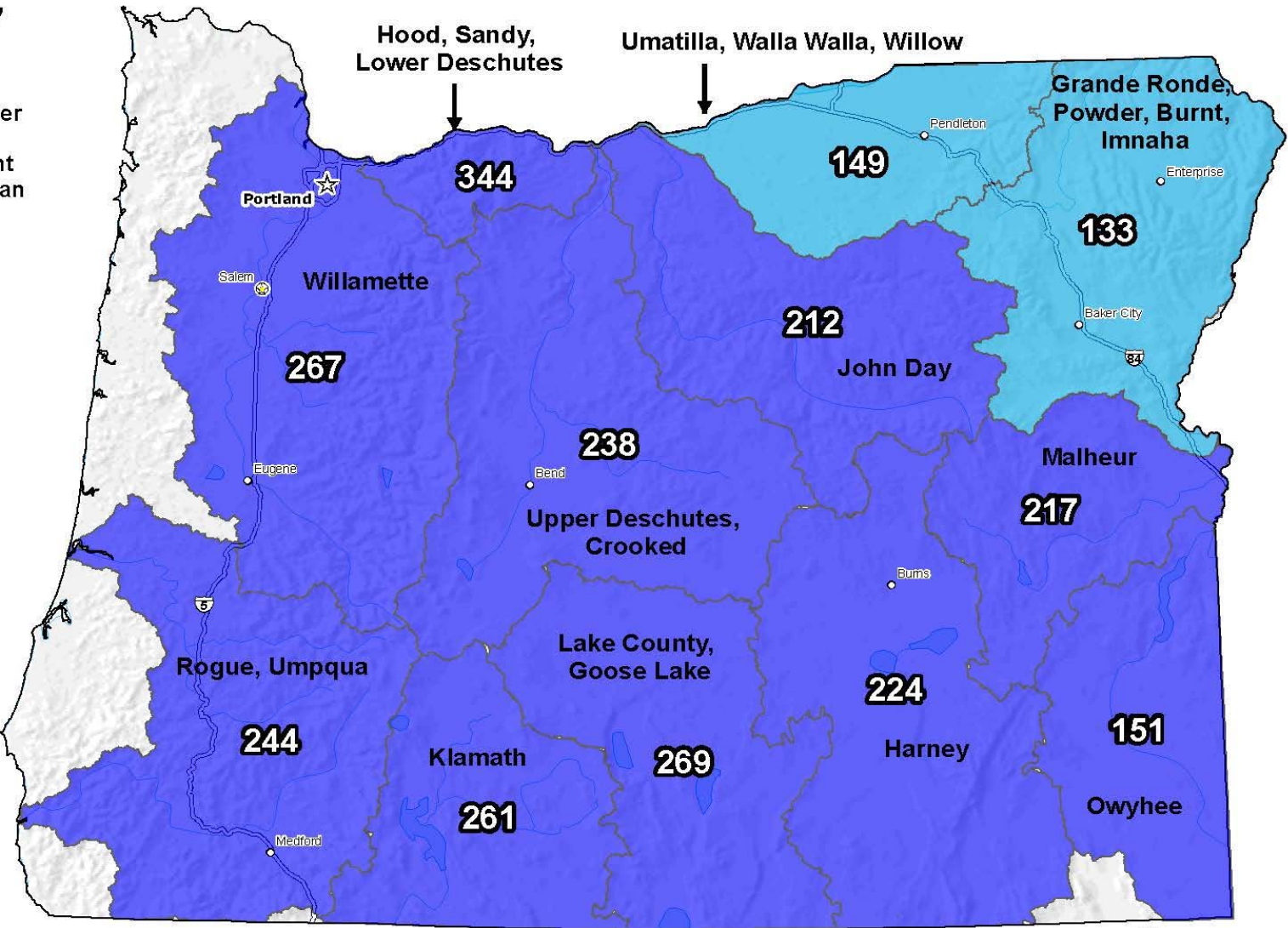
Nov 20, 2017

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

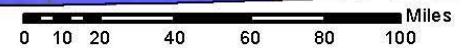


* Data unavailable at time of posting or measurement is not representative at this time of year

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).



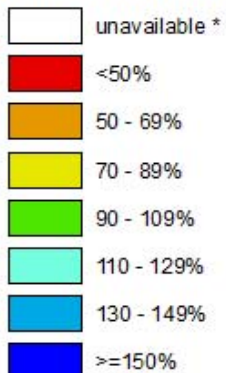
Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

Statewide SNOTEL Snow Water Equivalent is 59% of normal

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

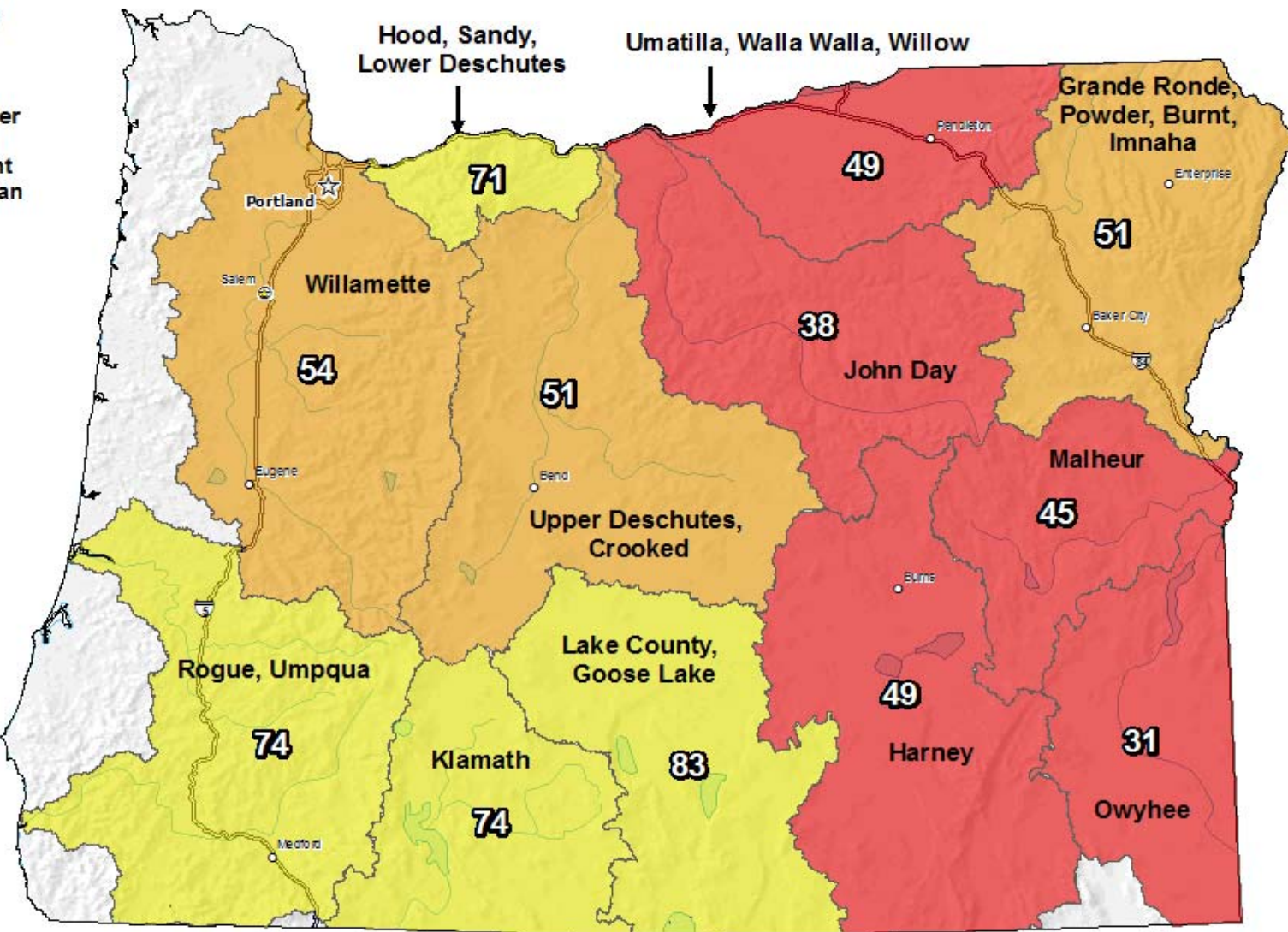
Dec 05, 2017

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

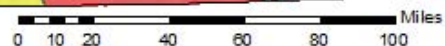


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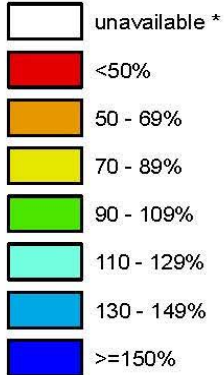
Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

Statewide SNOTEL Precipitation is 131% of normal

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

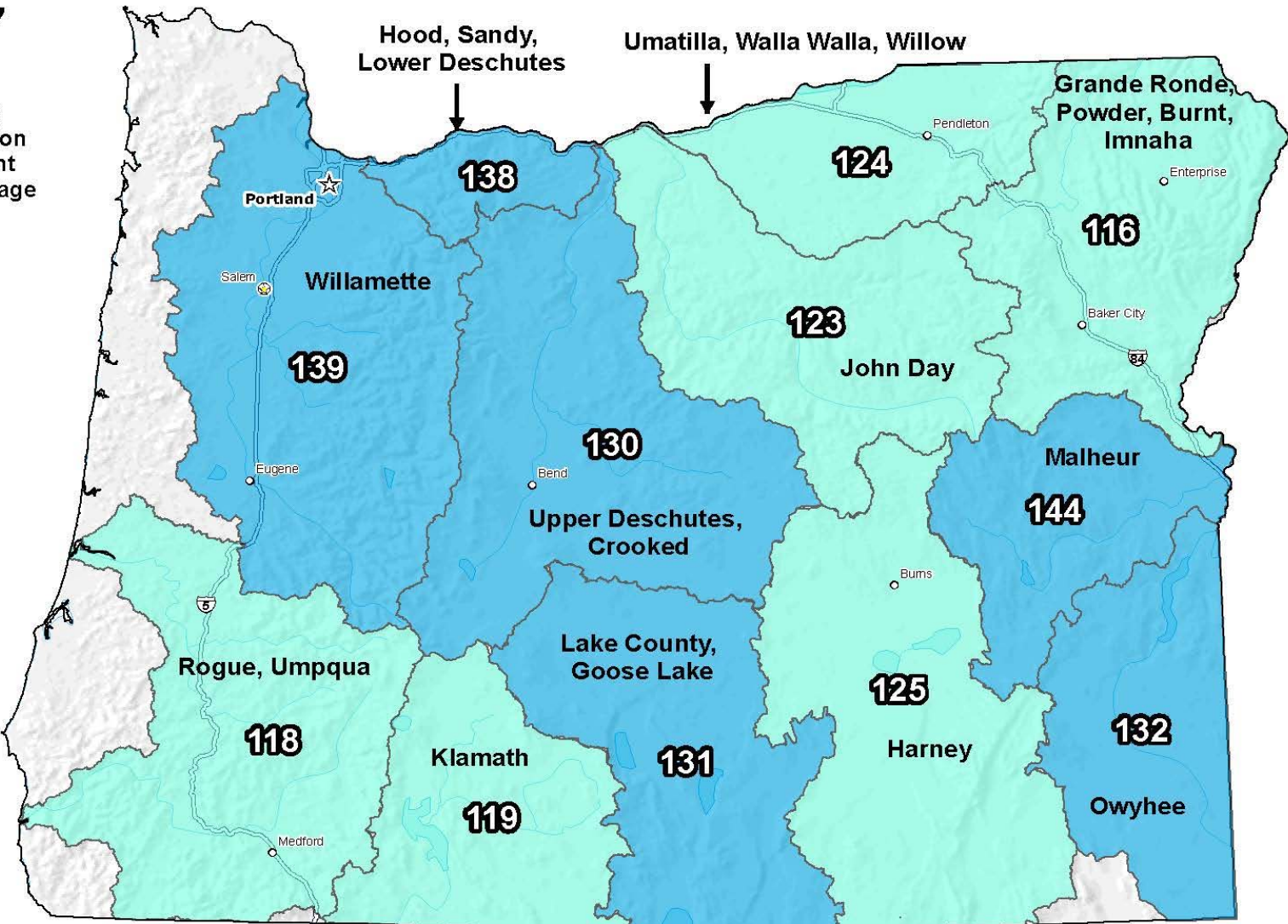
Nov 20, 2017

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



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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).



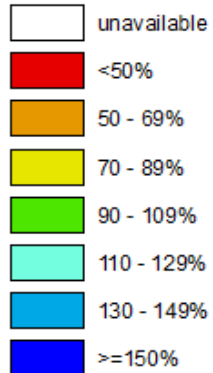
Prepared by:
USDA/NRCS National Water and Climate Center
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<http://www.wcc.nrcs.usda.gov>

Statewide SNOTEL Precipitation is 119% of normal

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

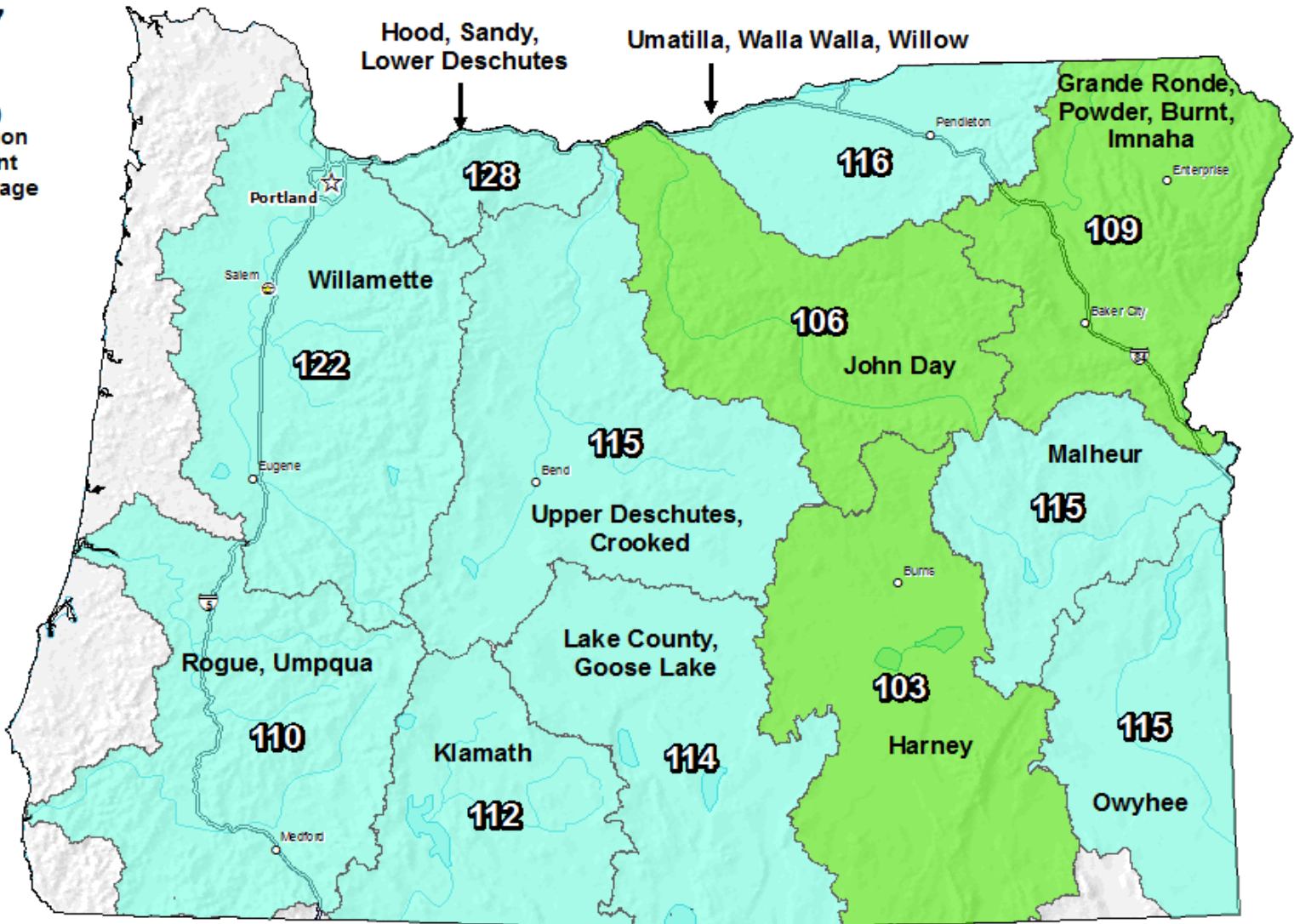
Dec 05, 2017

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



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

General Observations in Early December 2017

- **Snow Water equivalent Values Generally = 8.0” water or less**
- **Snow Concentrated at higher elevations, little low to mid elevation snowpack**
- **Low and mid elevation snowpack that was measured in mid-November has melted due to warmer temperatures and rain-on-snow**
- **Little if any accumulating snow since mid-November (most mountain precipitation rain)**



Oregon Water Supply Availability Committee
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Thank you!

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Oregon Water Supply Availability

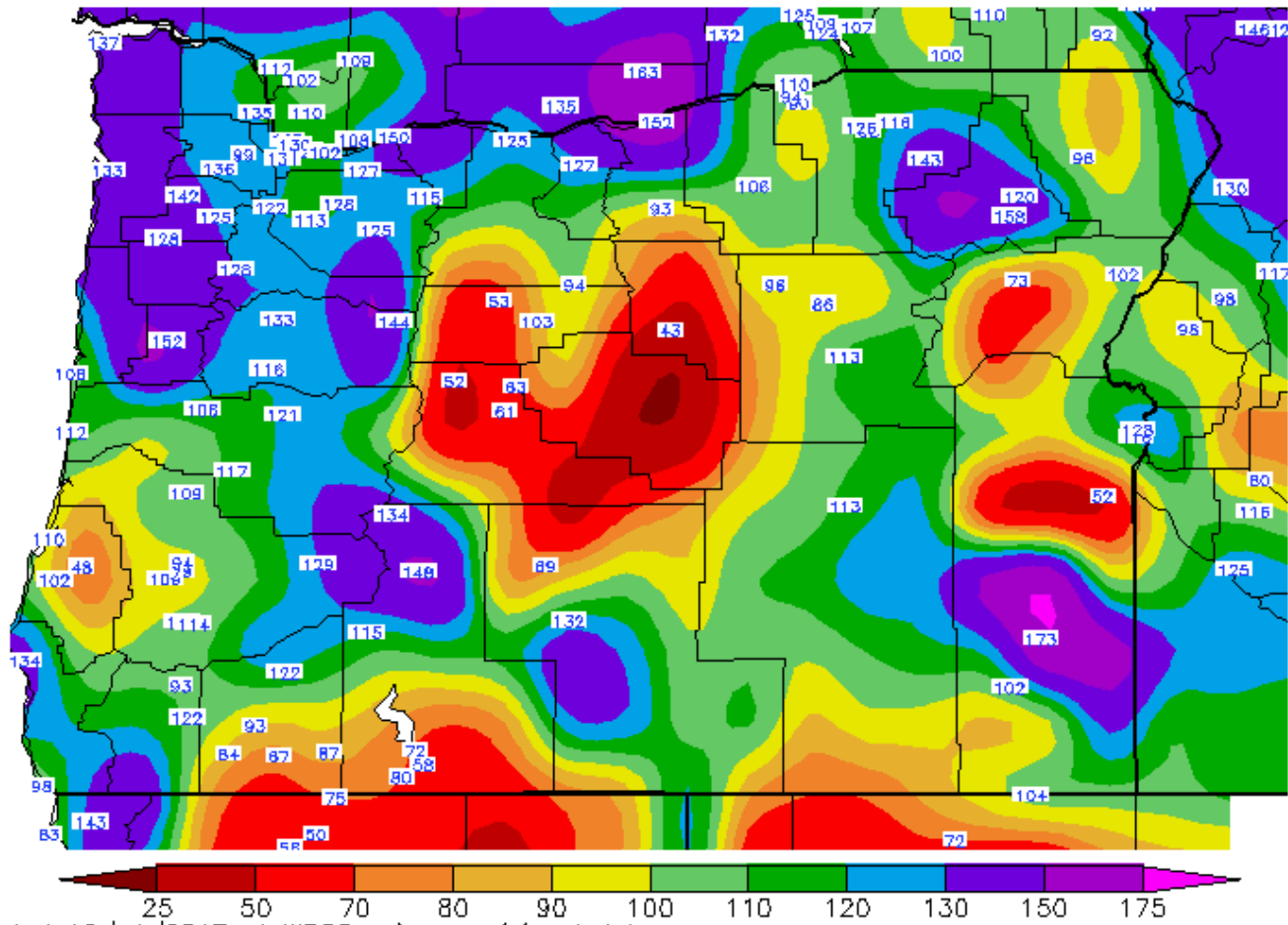
December 4, 2017 NWS Update

Andy Bryant, NWS Portland



WY2018 Precipitation thus far

Percent of Average Precipitation (%)
10/1/2017 - 11/30/2017



Generated 12/ 1/2017 at WRCC using provisional data.
NOAA Regional Climate Centers



November Precipitation

Observed Amounts (inches)

% of Average

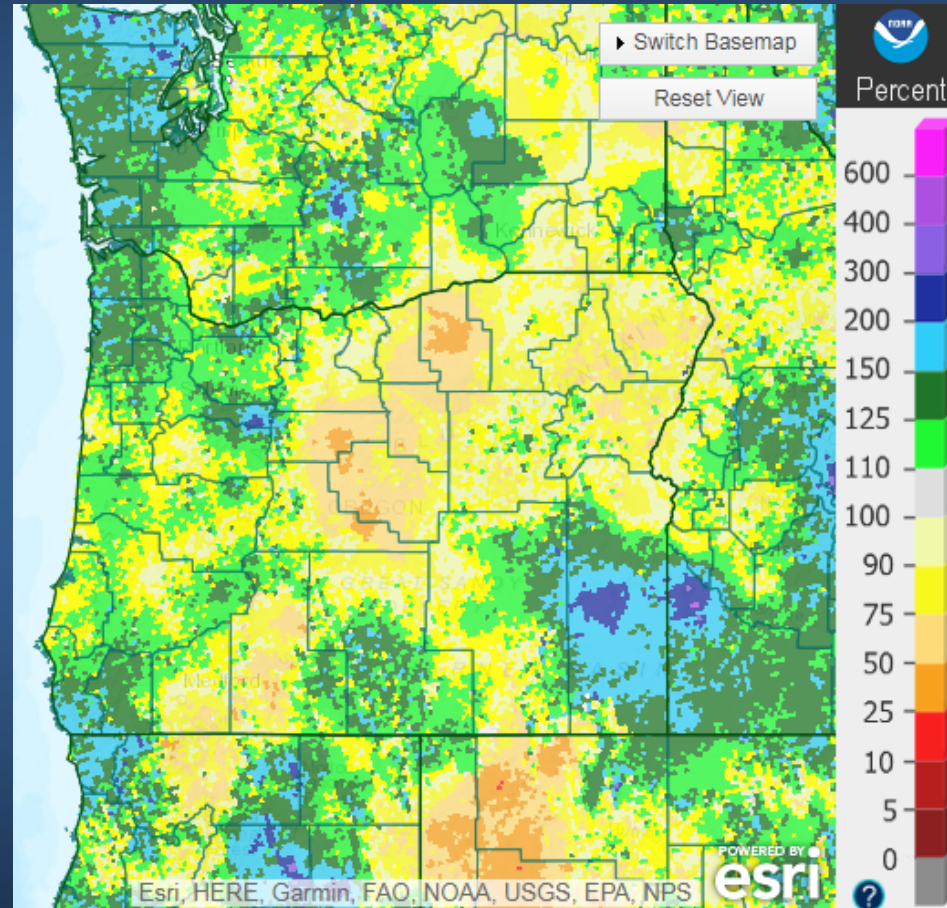
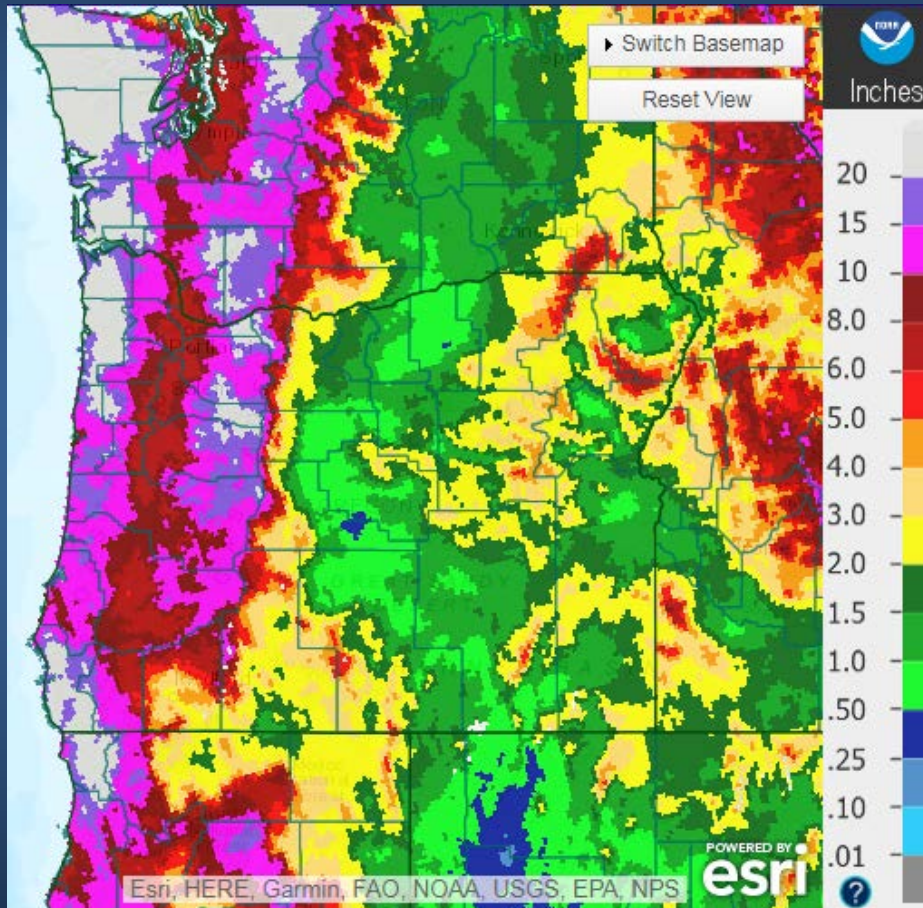


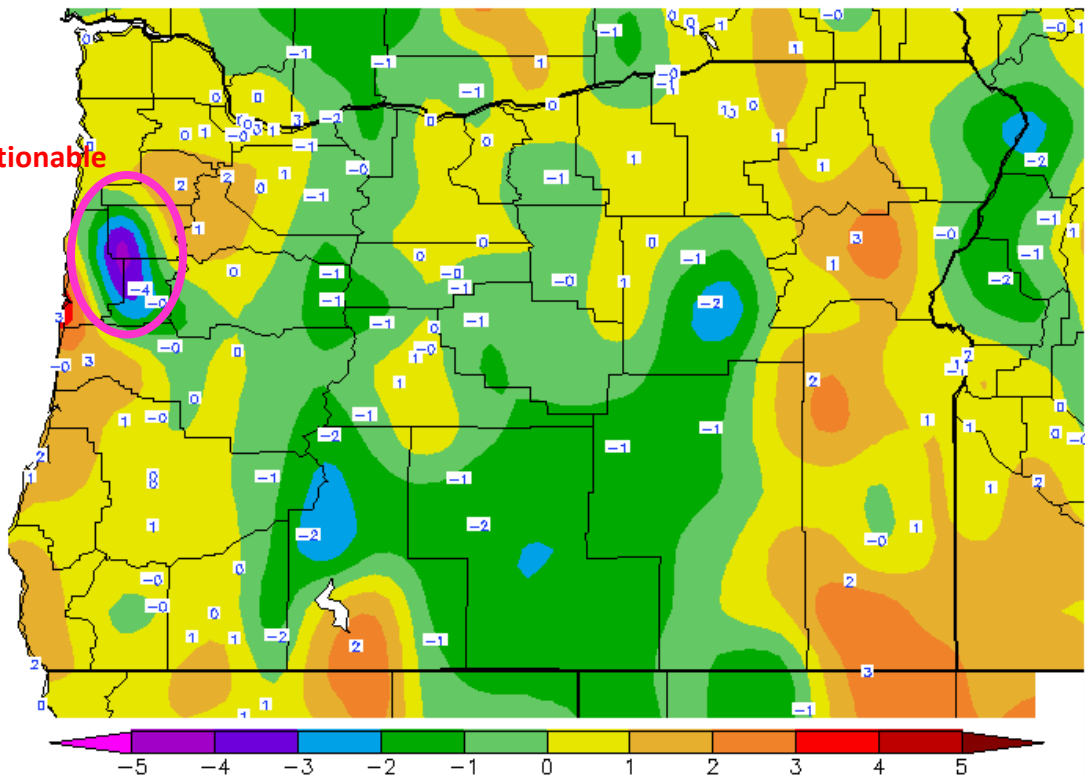
Image sources: water.weather.gov/precip/index.php



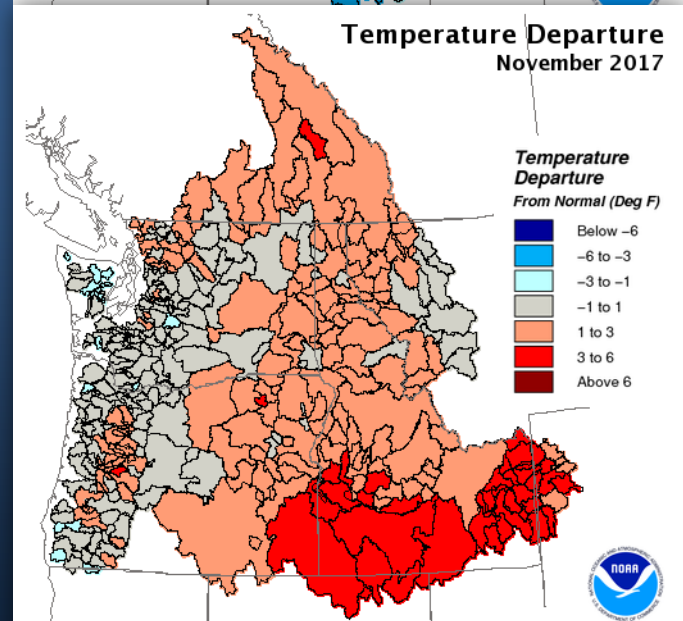
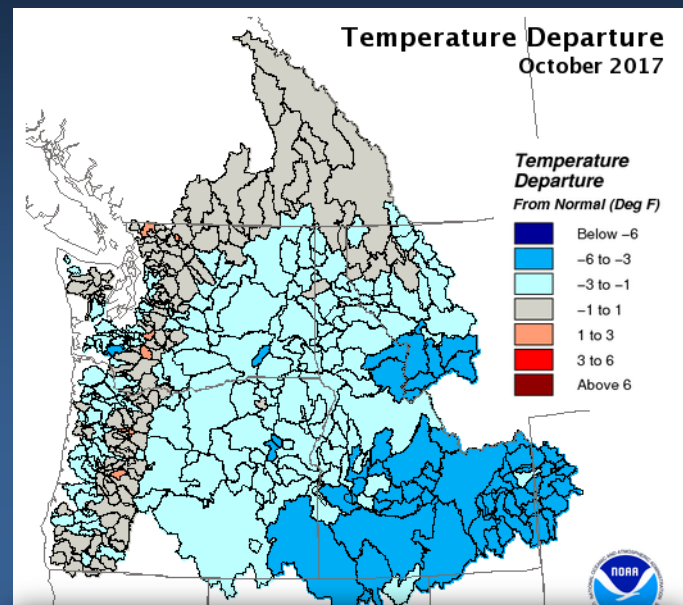
Temperatures Oct & Nov

Ave. Temperature dep from Ave (deg F)
10/1/2017 - 11/30/2017

Questionable Data



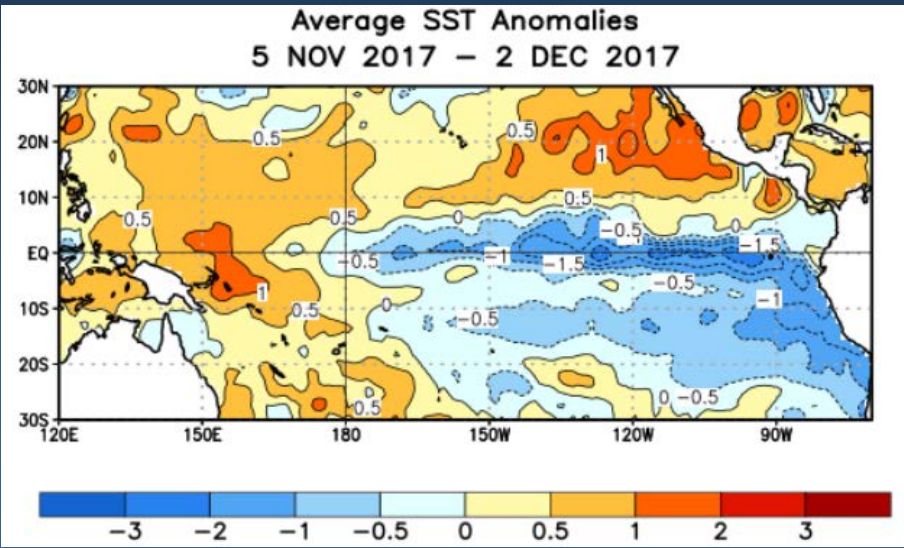
Generated 12/ 1/2017 at WRCC using provisional data.
NOAA Regional Climate Centers



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



La Niña Conditions



La Niña is likely now peaking and predicted to slowly trend to ENSO neutral during the spring of 2018.

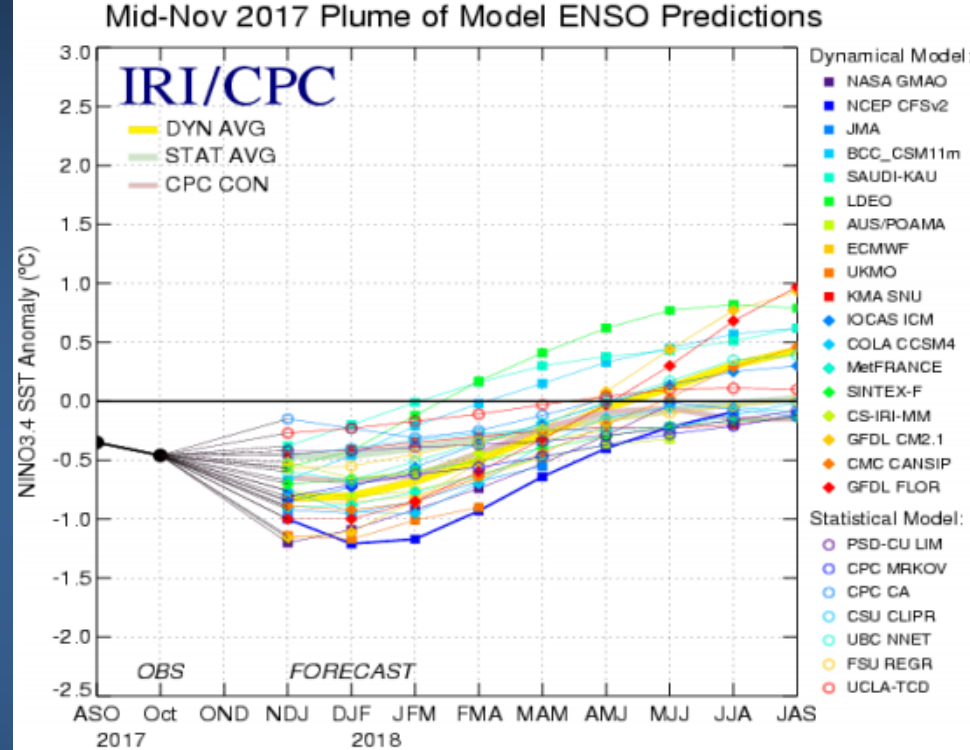
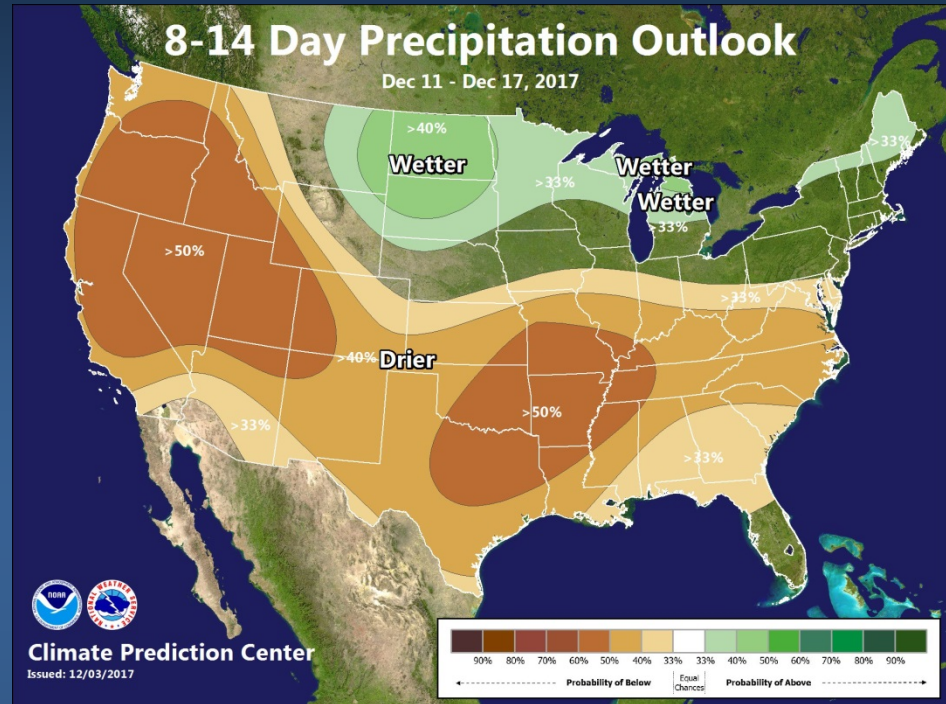
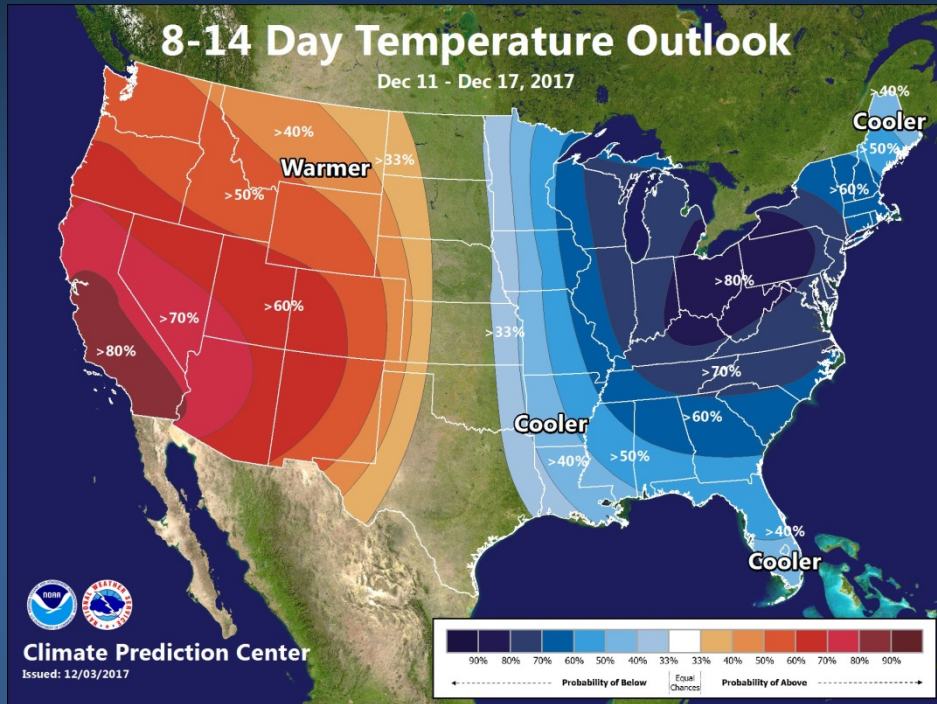


Figure provided by the International Research Institute (IRI) for Climate and Society (updated 17 November 2017).



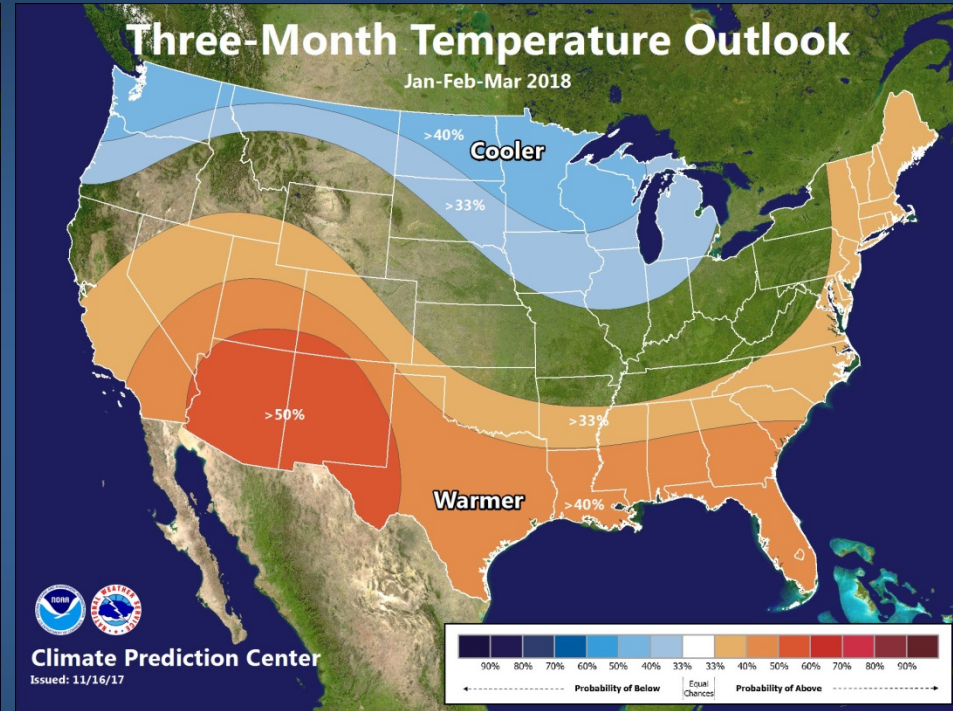
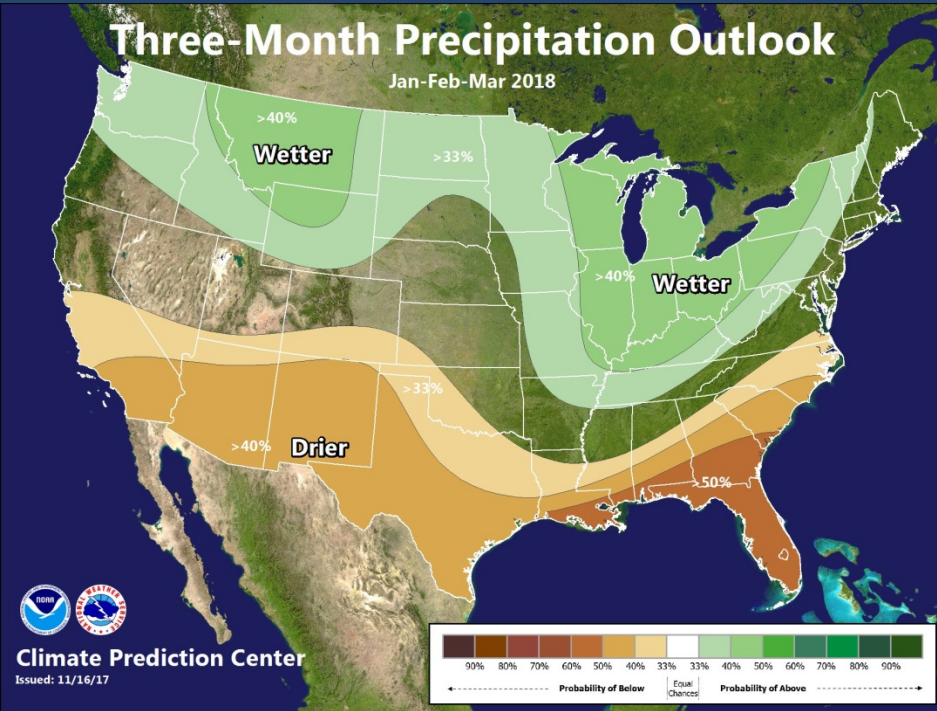
December Outlook



Dry and warm (except for valley inversion) conditions are expected through mid December, likely resulting in below-average precipitation and above-average temperatures for the month, barring a drastic change to wetter and/or cooler conditions in late December.



Outlook for January-February-March





Surface Water Conditions Report

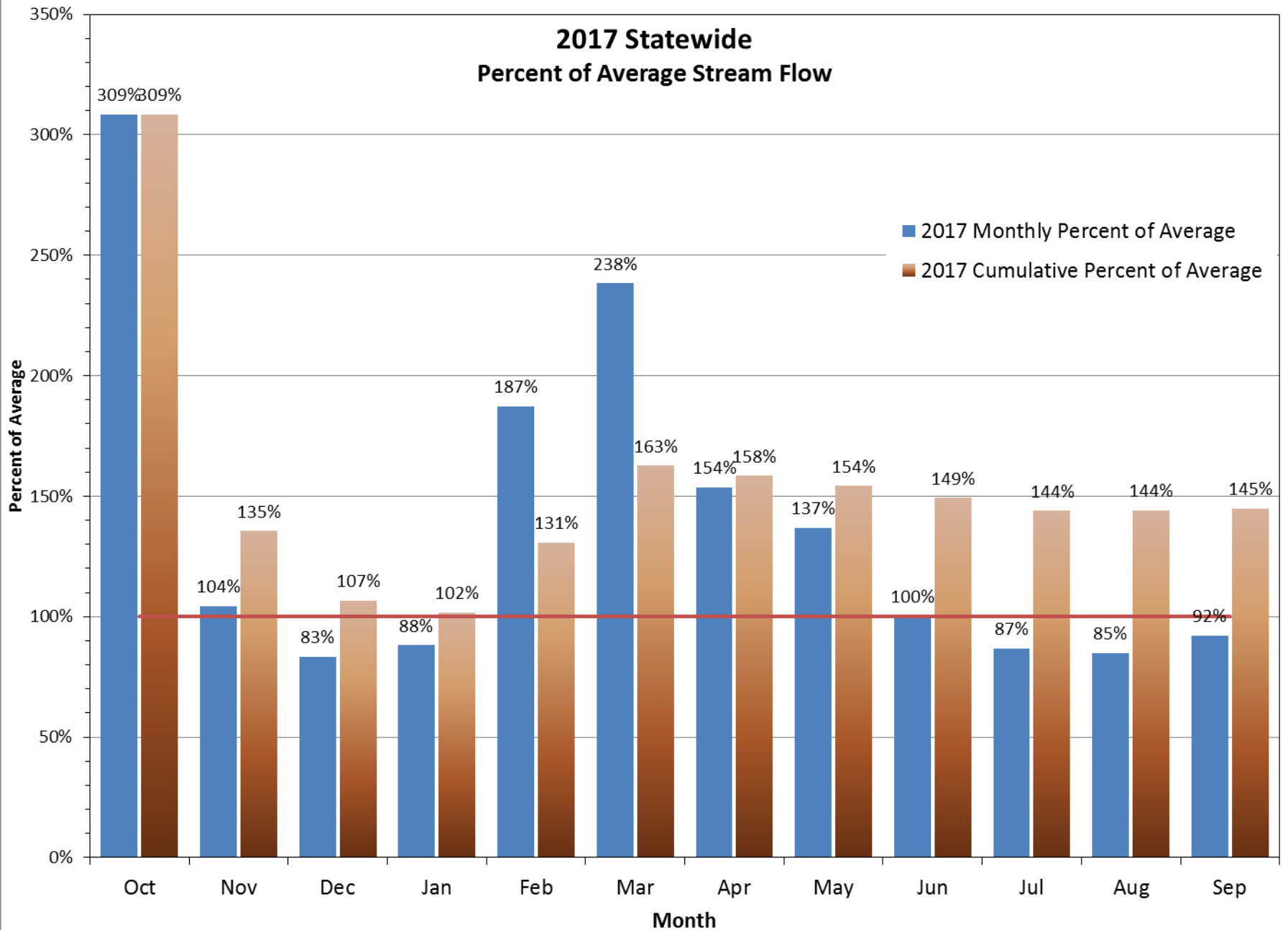
Water Supply Availability Committee



Ken Stahr
Oregon Water Resources
Department
December 5, 2017

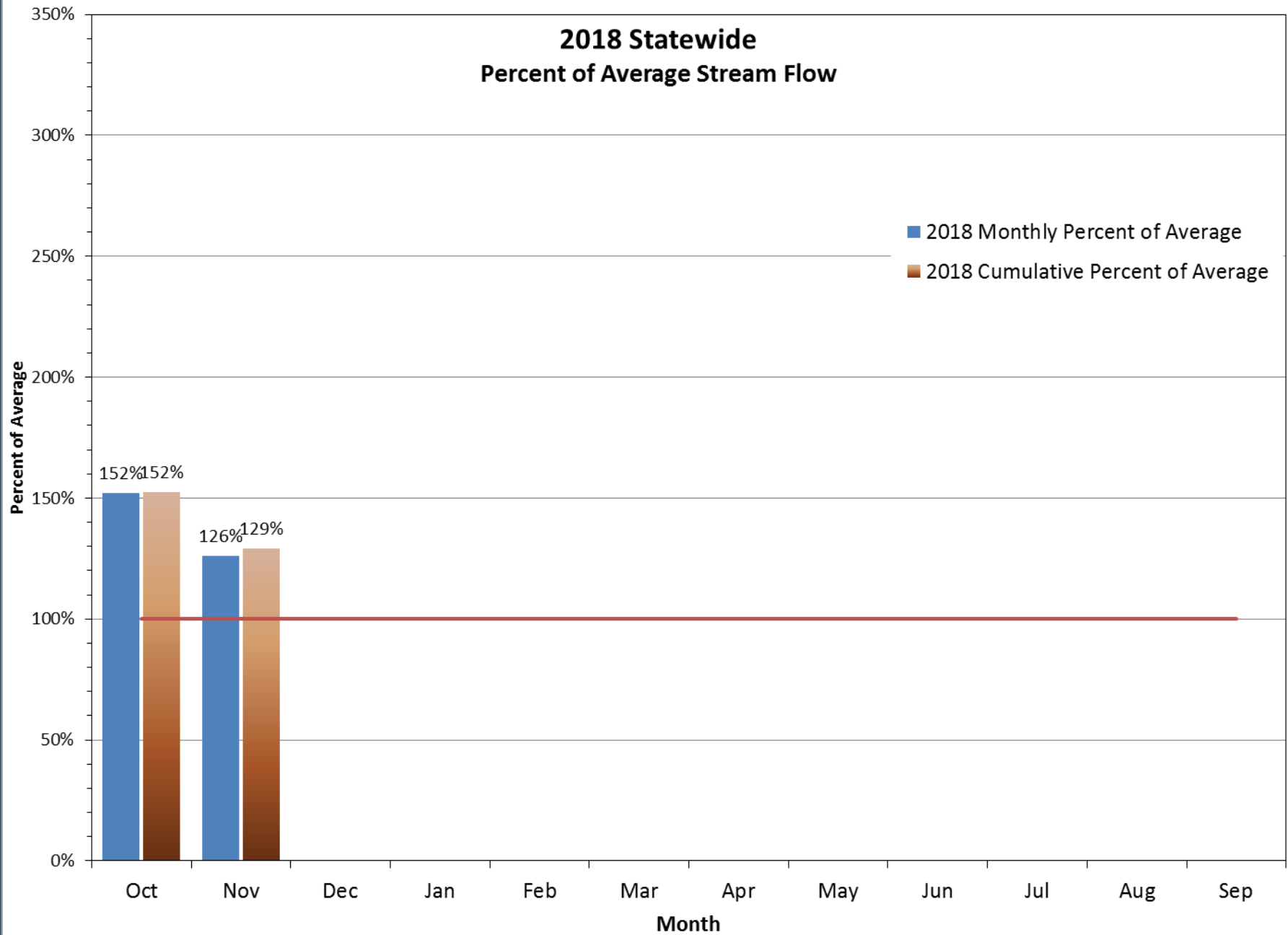


2017 Statewide Percent of Average Stream Flow





2018 Statewide Percent of Average Stream Flow



Percent of Average Streamflow Month of September, 2017

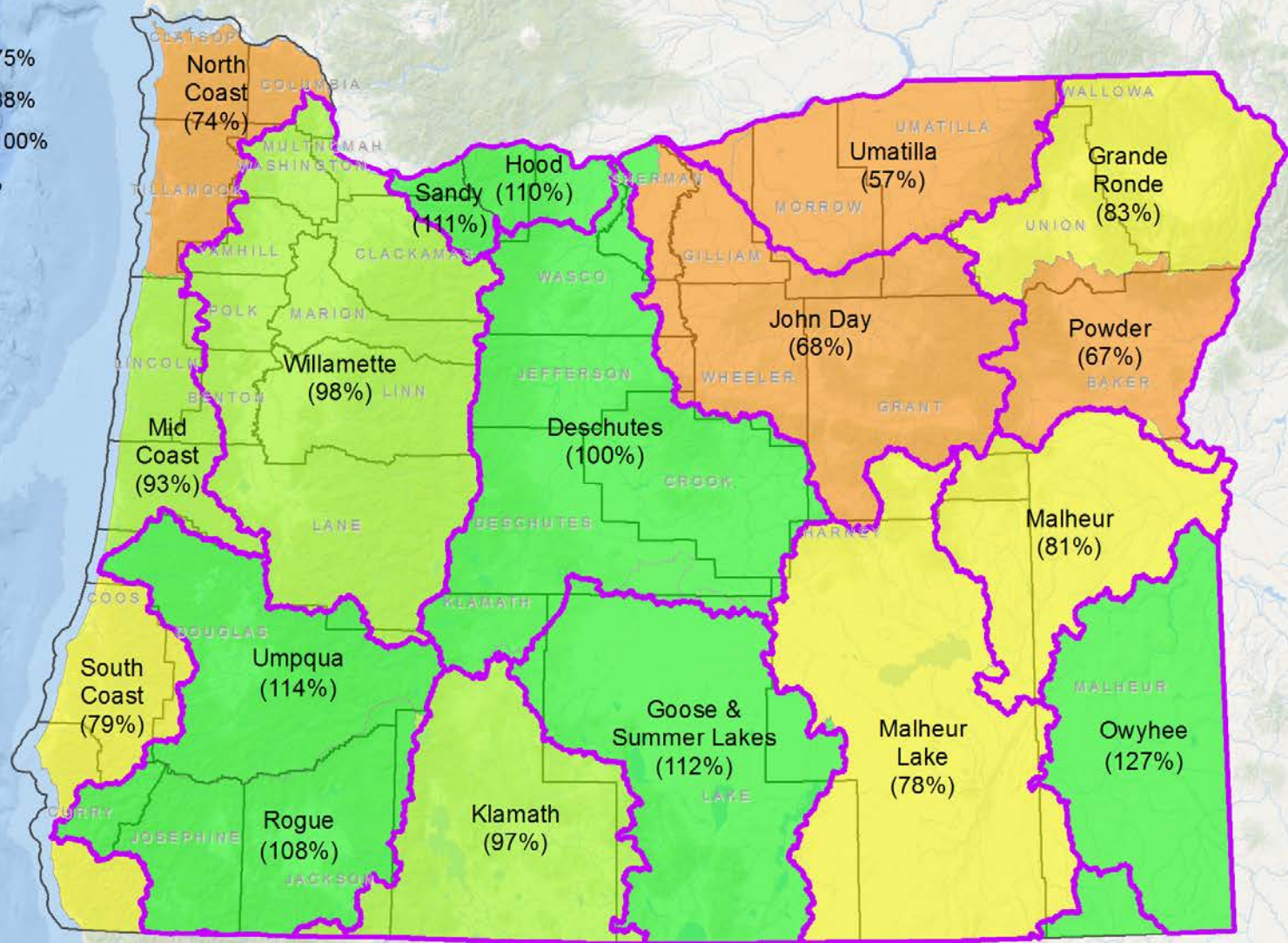
Percent of Average Streamflow

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.

Percent of Average Streamflow Month of October, 2017

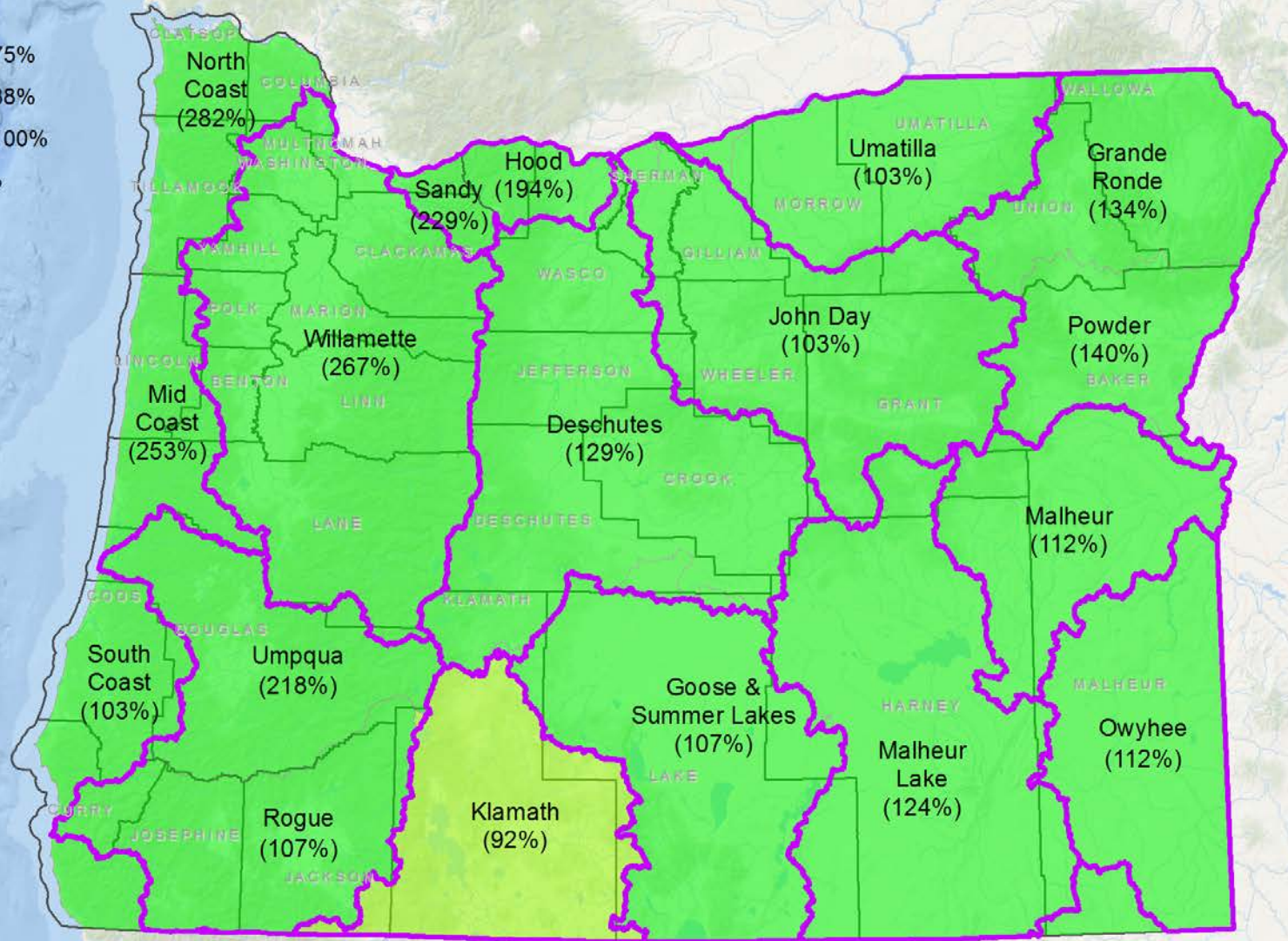
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Percent of Average Streamflow Month of November, 2017

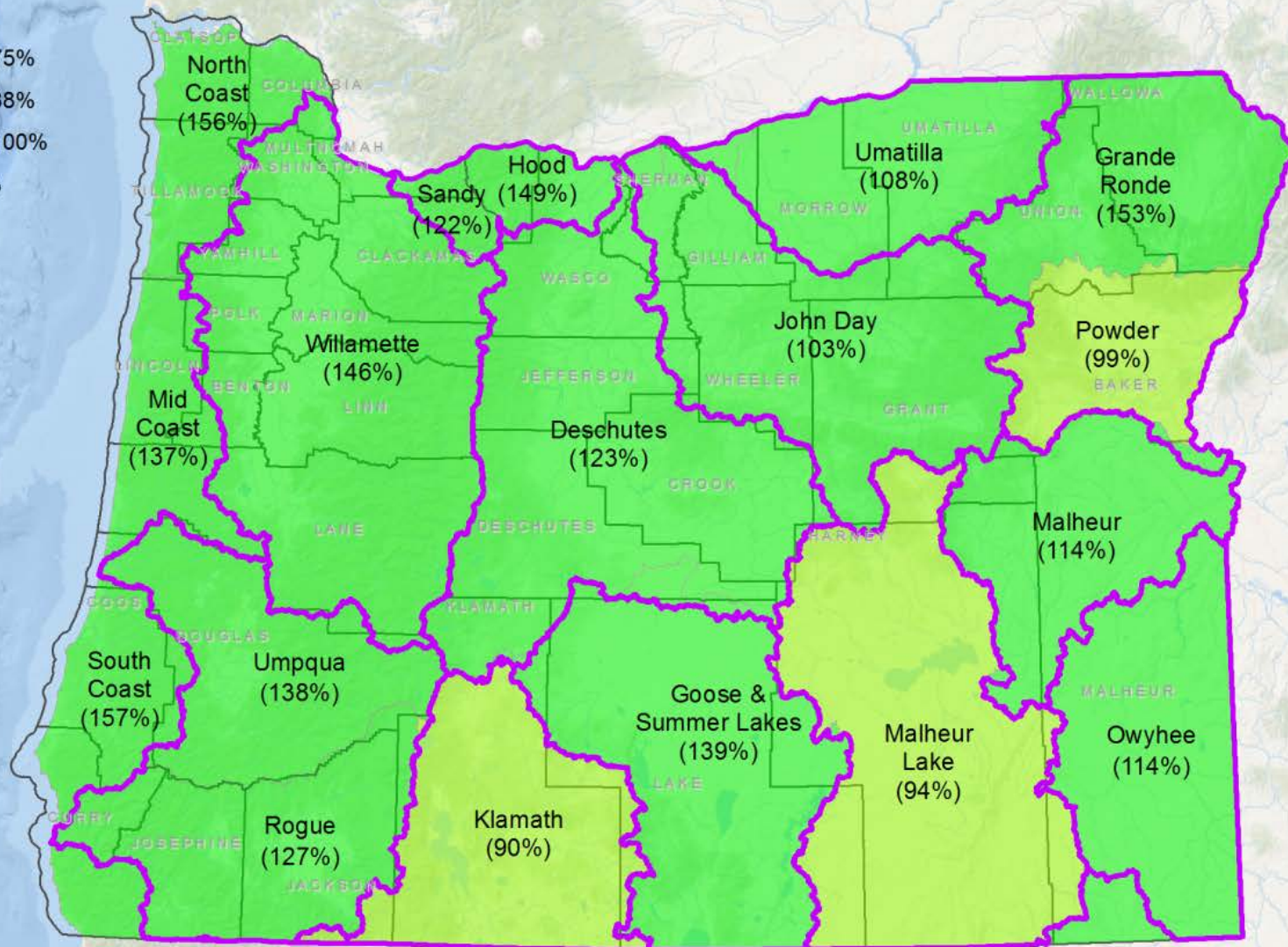
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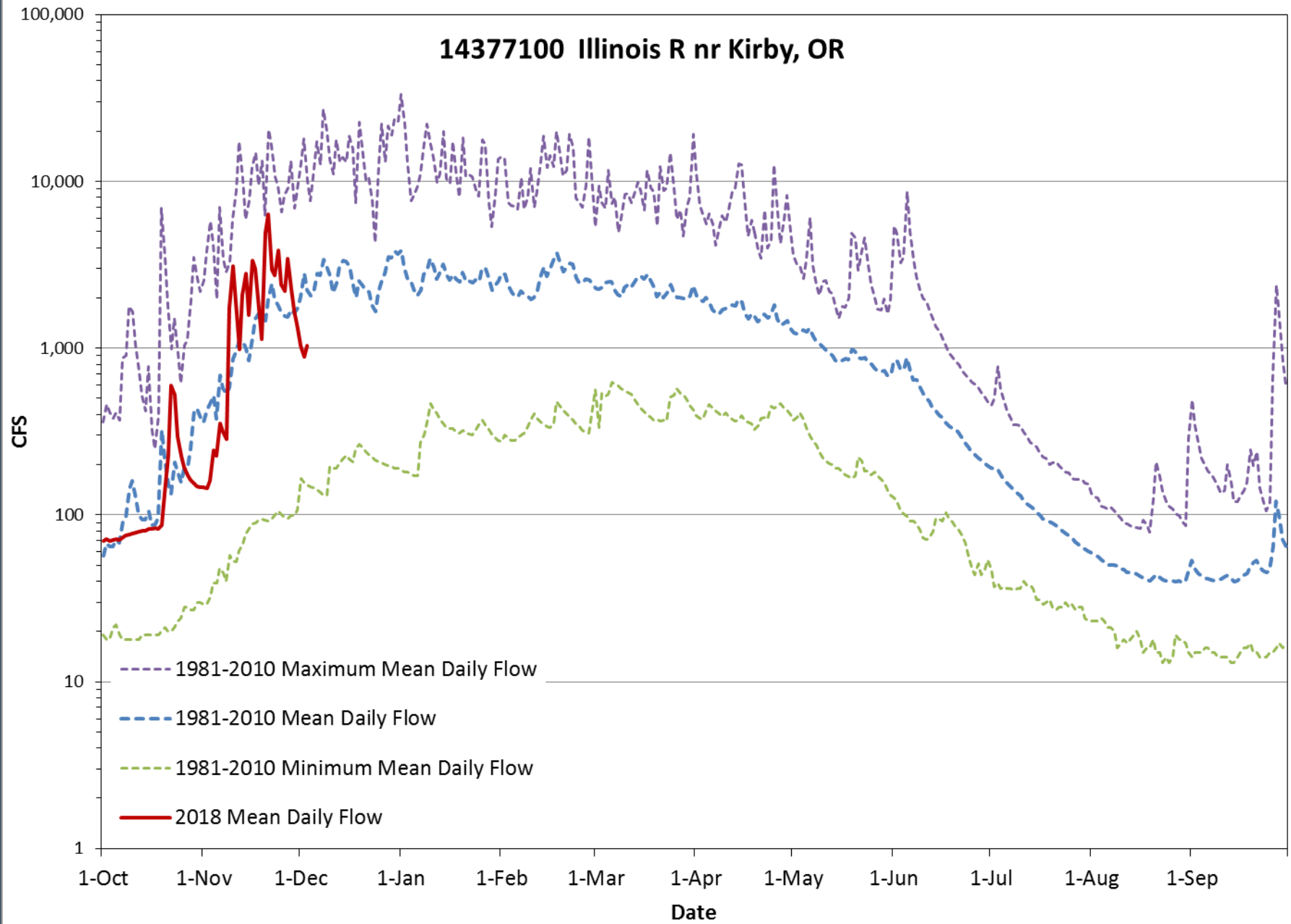
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Basin	Water Year % of average through November, 2017	% of average for November	% of average for 12/01/2017
North Coast	178%	156%	81%
Willamette	165%	146%	77%
Sandy	150%	122%	67%
Hood	162%	149%	87%
Deschutes	122%	123%	131%
John Day	103%	103%	102%
Umatilla	107%	108%	83%
Grande Ronde	141%	153%	149%
Powder	92%	99%	74%
Malheur	113%	114%	109%
Owyhee	114%	114%	137%
Malheur Lake	93%	94%	97%
Goose & Summer Lakes	127%	139%	111%
Klamath	92%	90%	88%
Rogue	126%	127%	61%
Umpqua	147%	138%	42%
South Coast	149%	157%	53%
Mid Coast	146%	137%	64%
West Side	152%	140%	64%
East Side	115%	117%	106%
State	129%	126%	90%

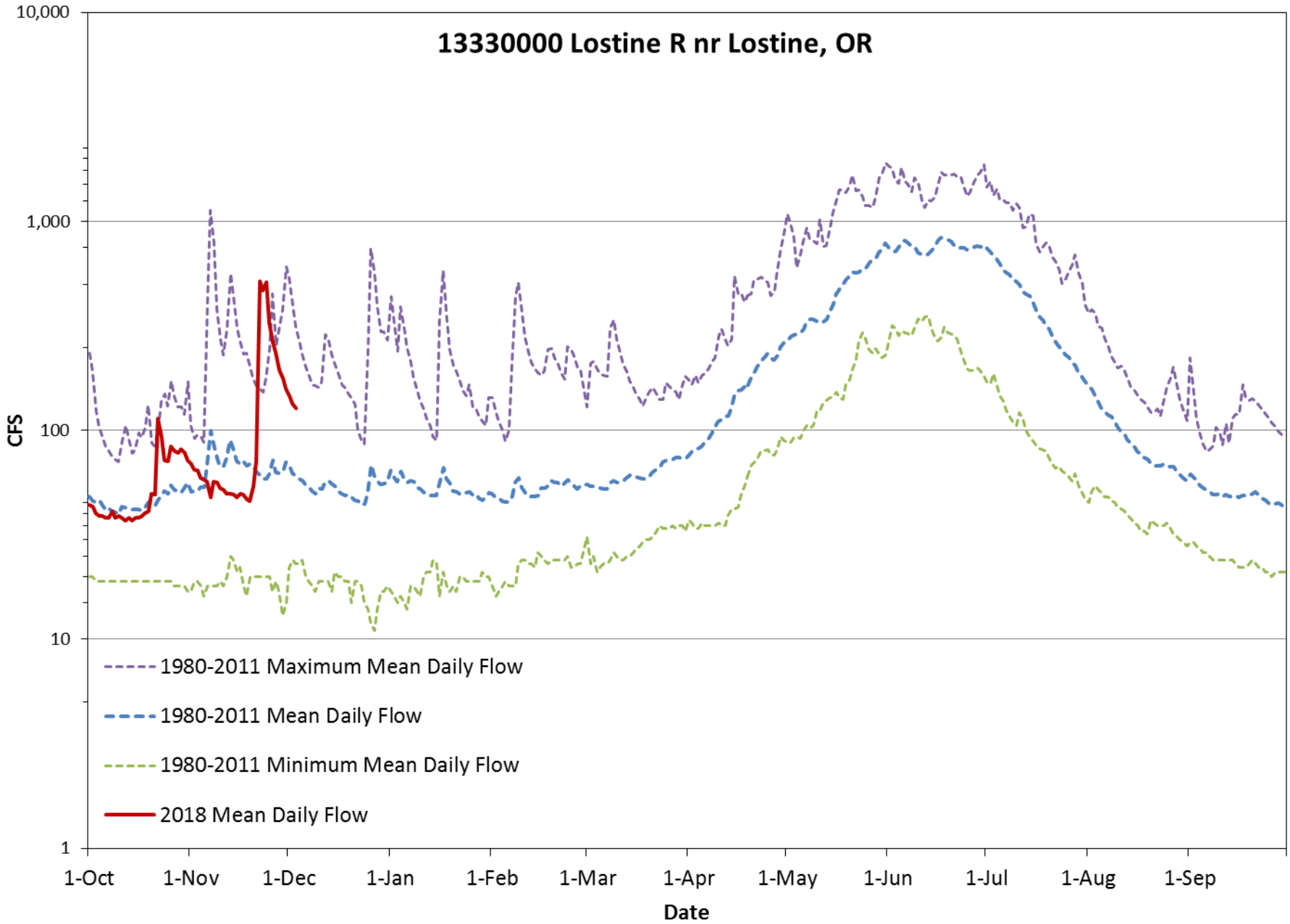


14377100 Illinois R nr Kirby, OR



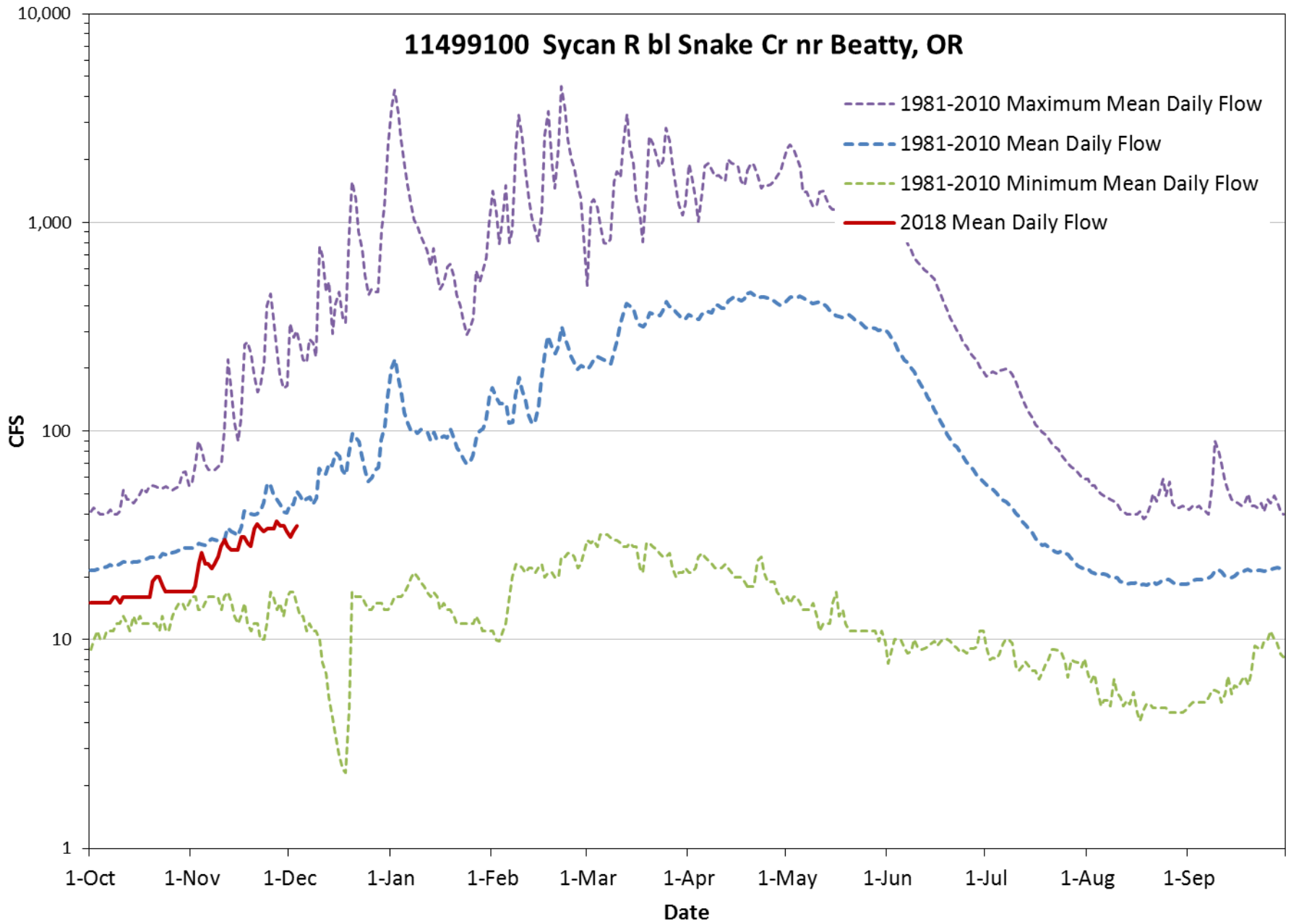


13330000 Lostine R nr Lostine, OR



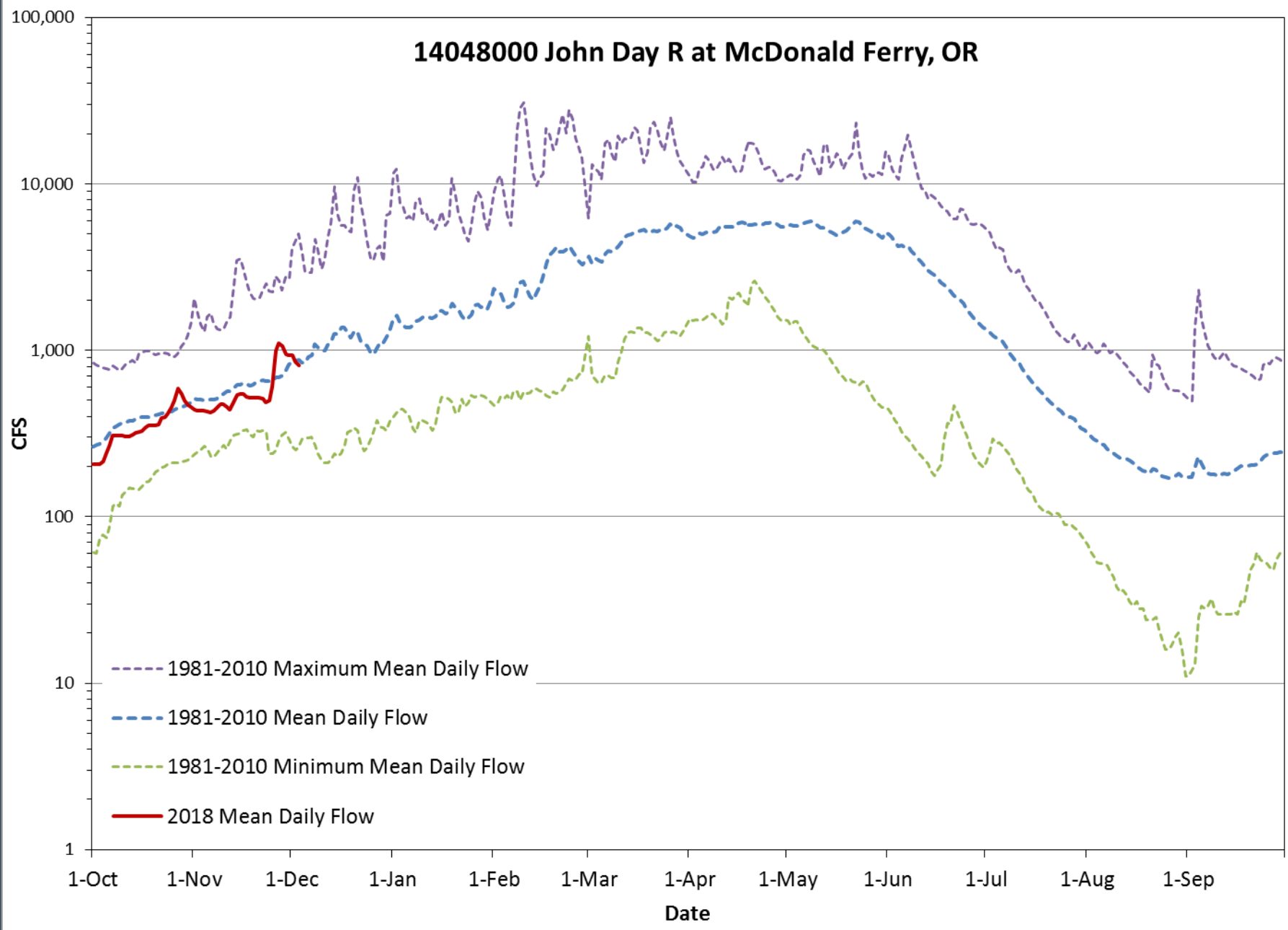


11499100 Sycan R bl Snake Cr nr Beatty, OR



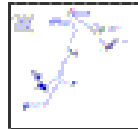
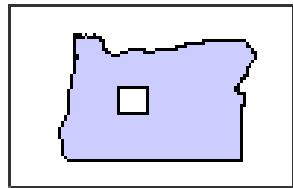


14048000 John Day R at McDonald Ferry, OR

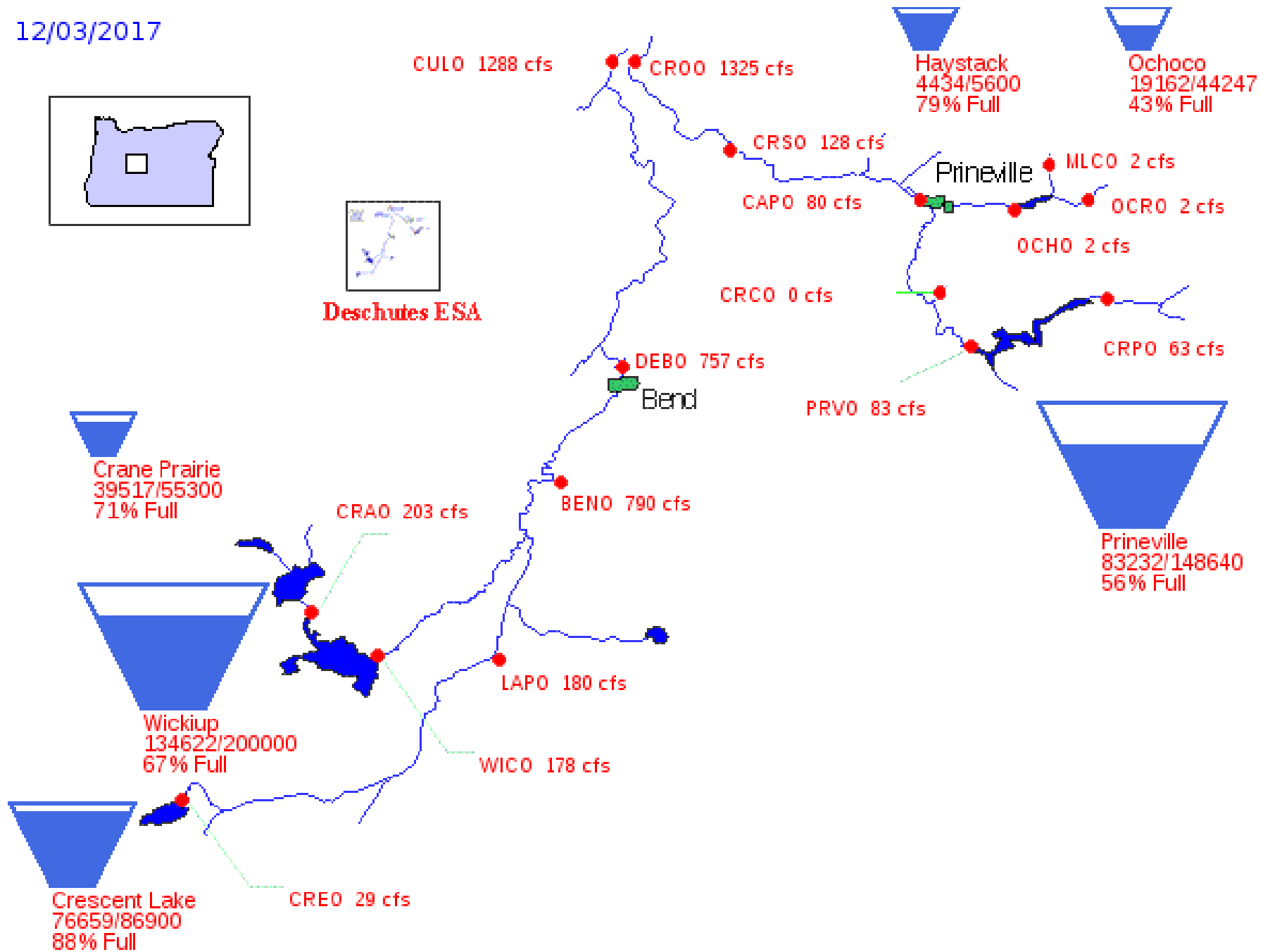


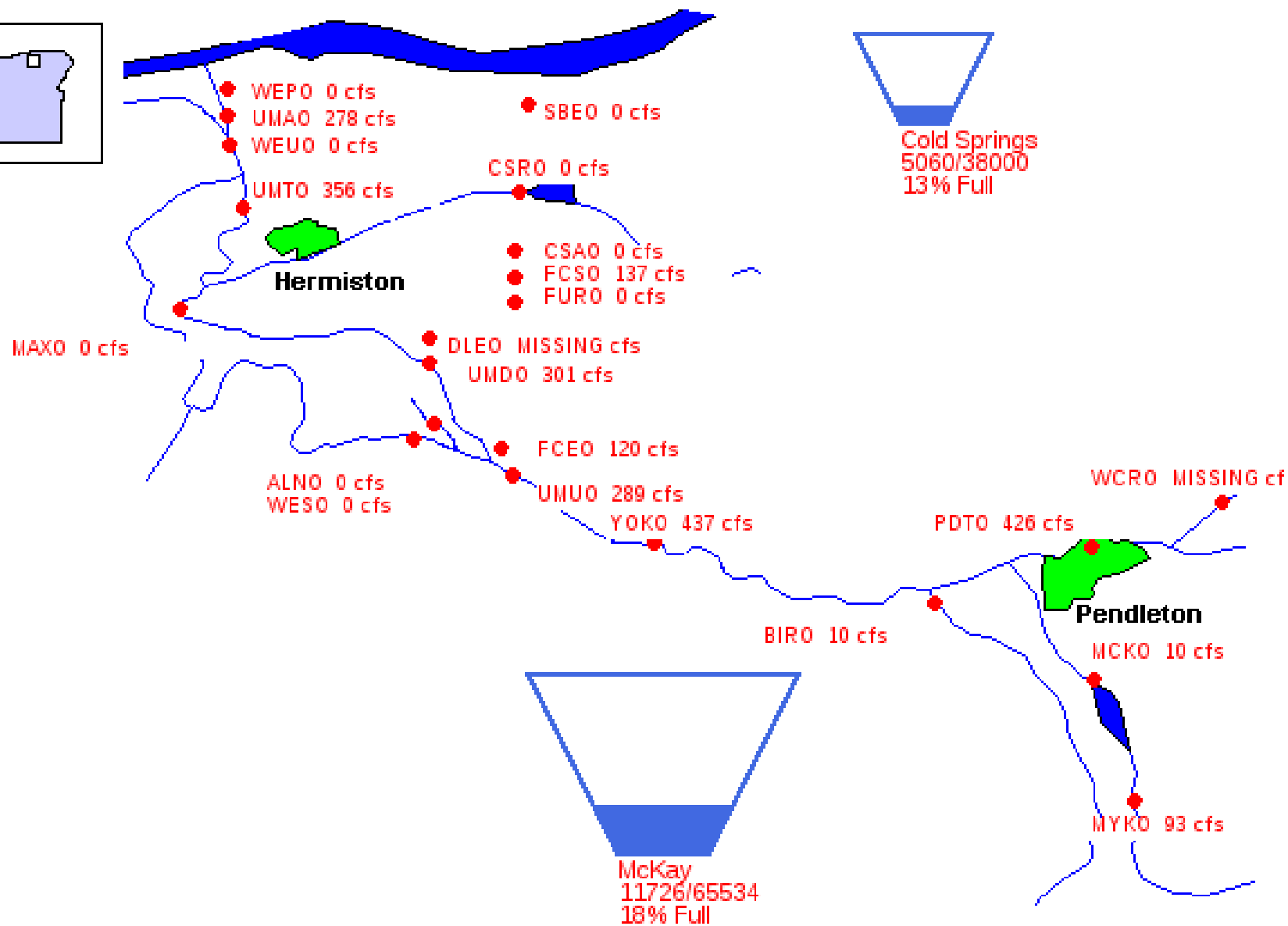
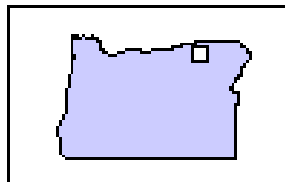
Storage

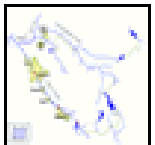
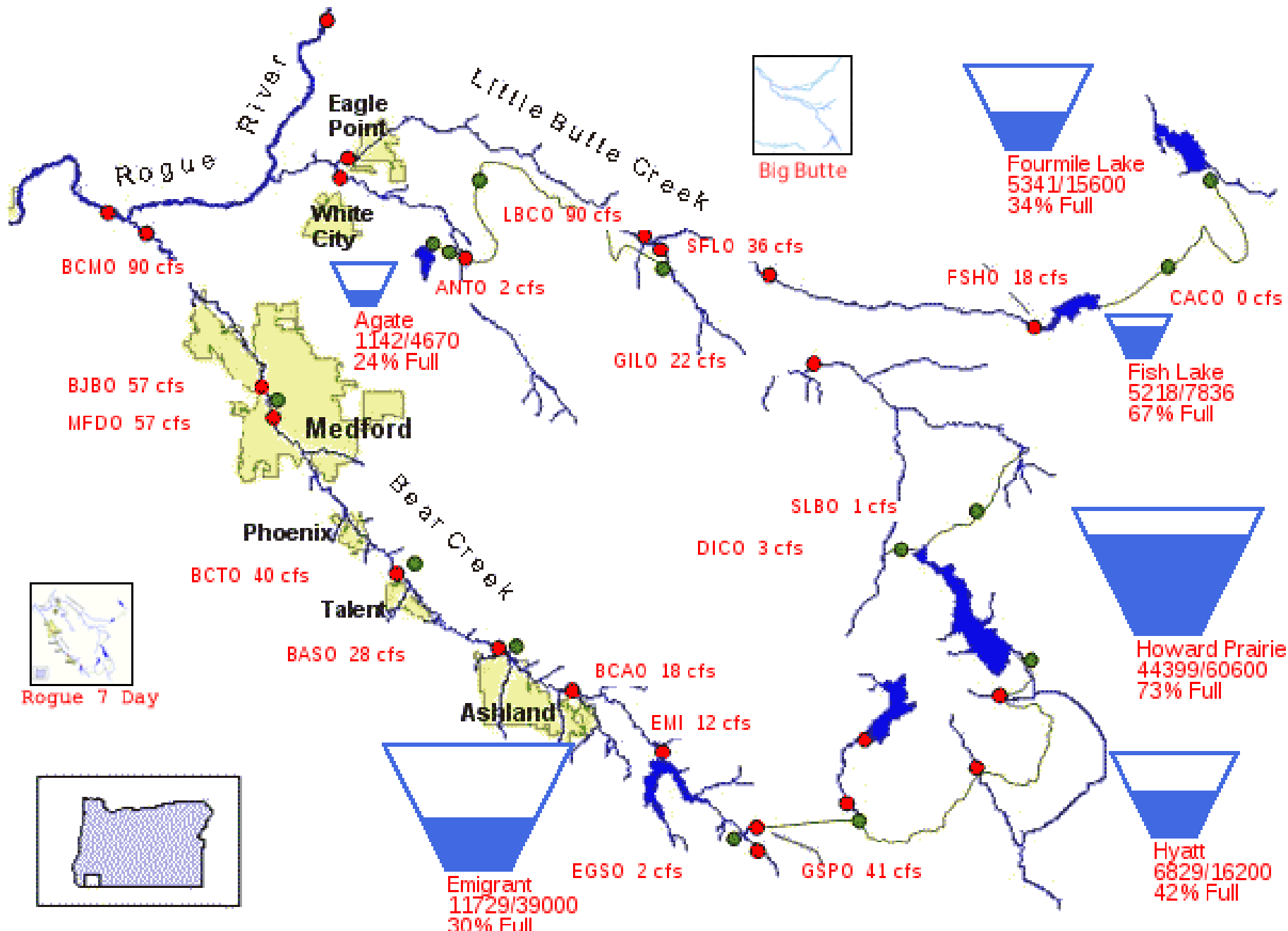
12/03/2017



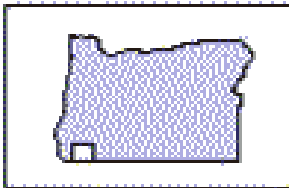
Deschutes ESA



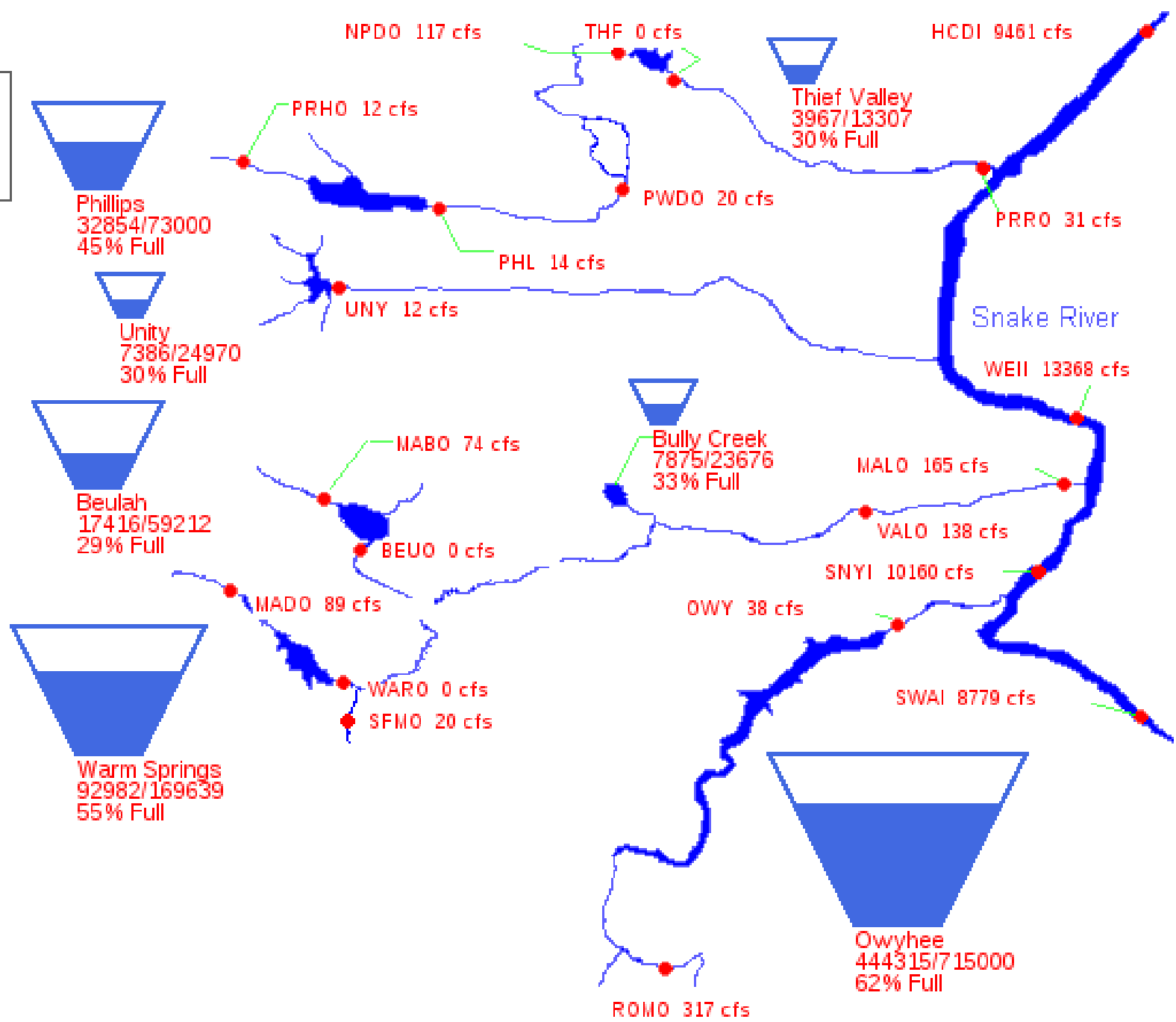
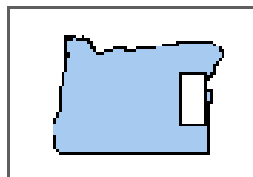


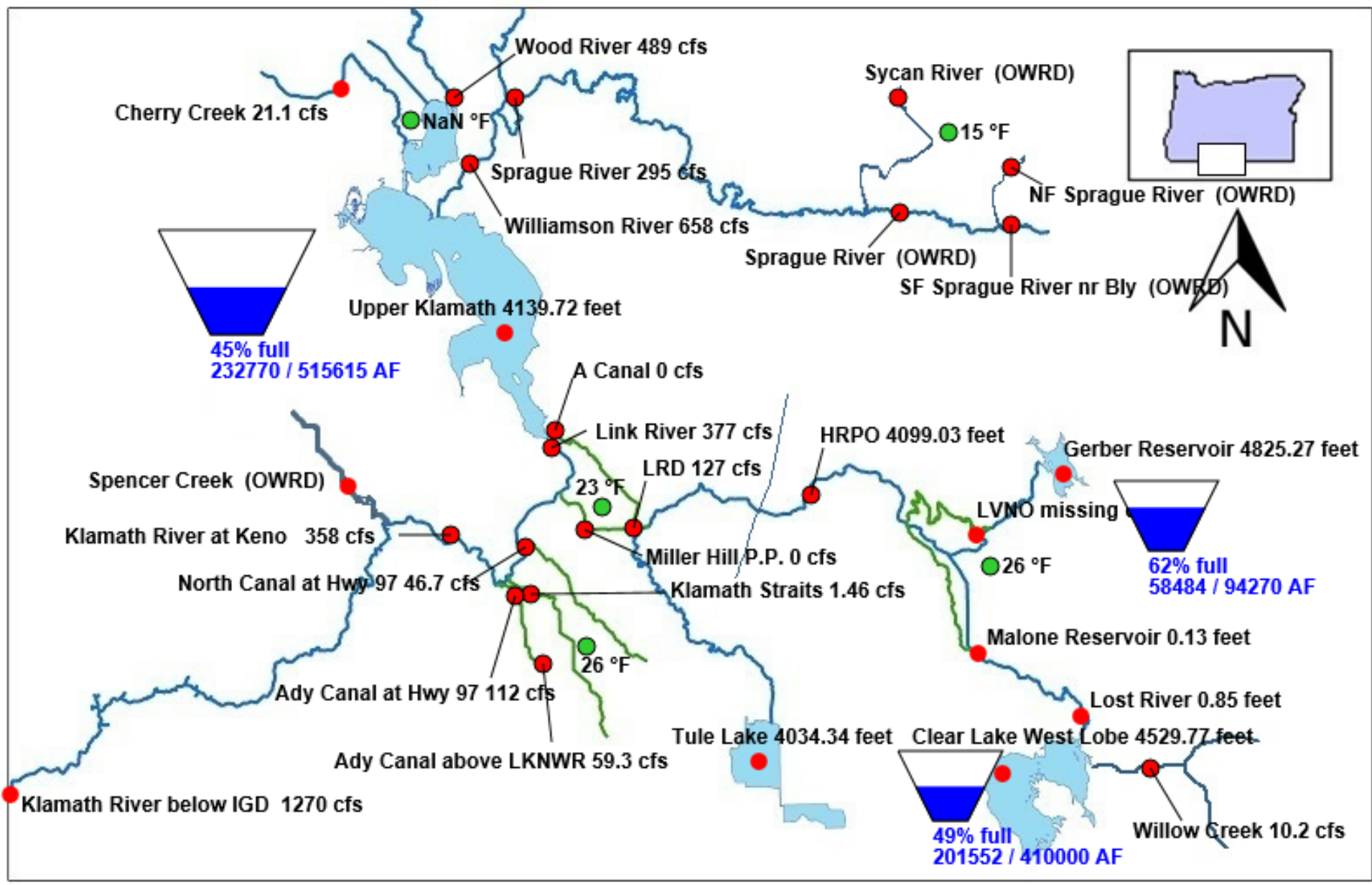


Rogue 7 Day



12/03/2017





Thank You

RECLAMATION

Managing Water in the West

**Oregon Water Supply Availability
Committee Meeting
December 5, 2017**

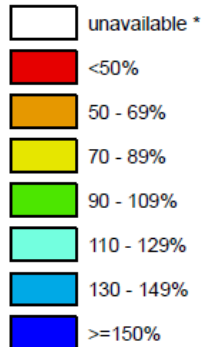


U.S. Department of the Interior
Bureau of Reclamation

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

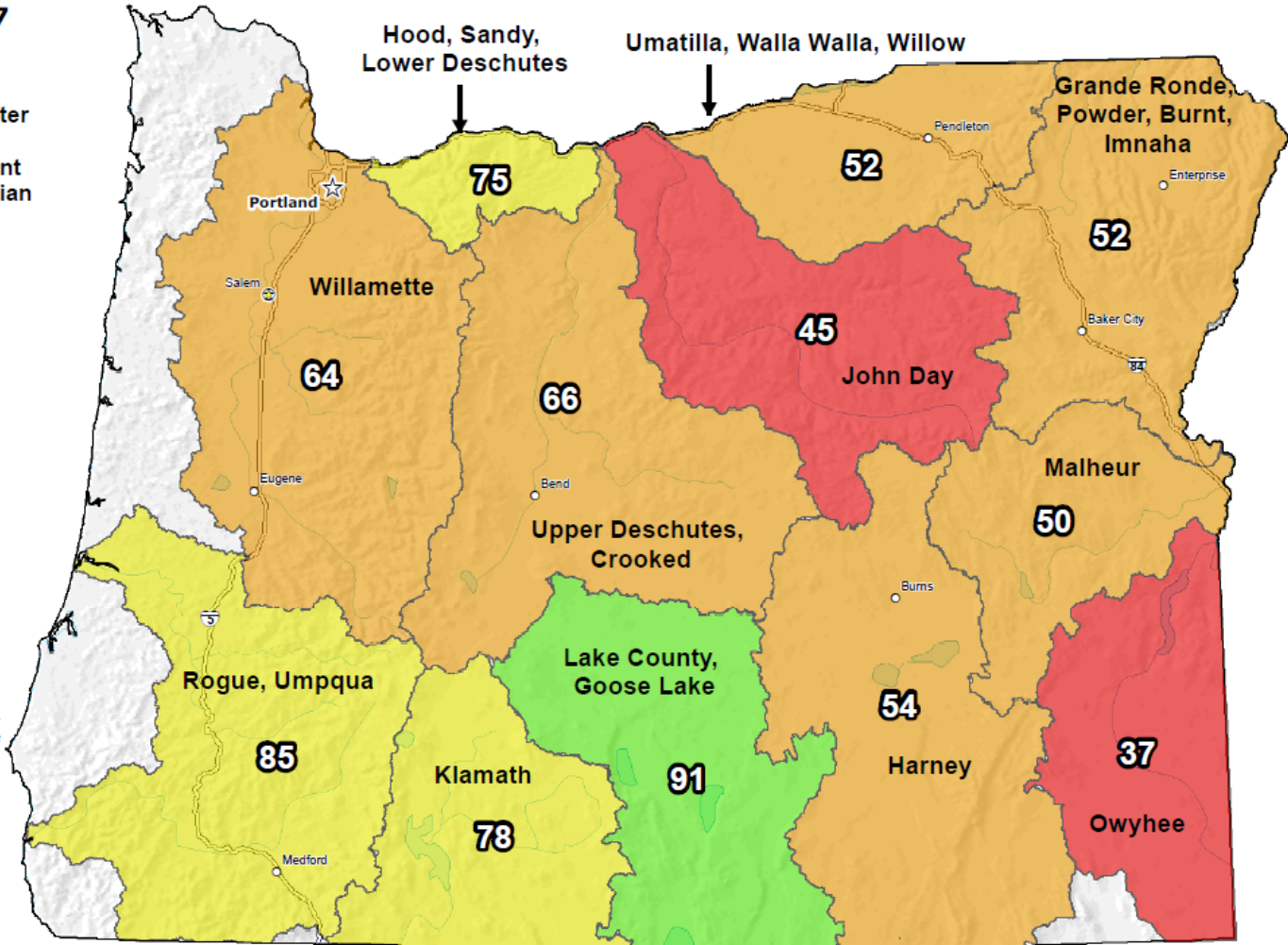
Dec 04, 2017

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



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Subject to Revision



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0 10 20 40 60 80 100 Miles

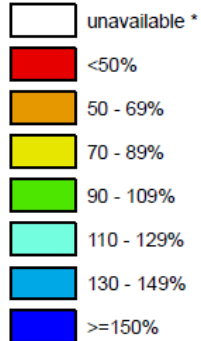
Prepared by:
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RECLAMATION

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

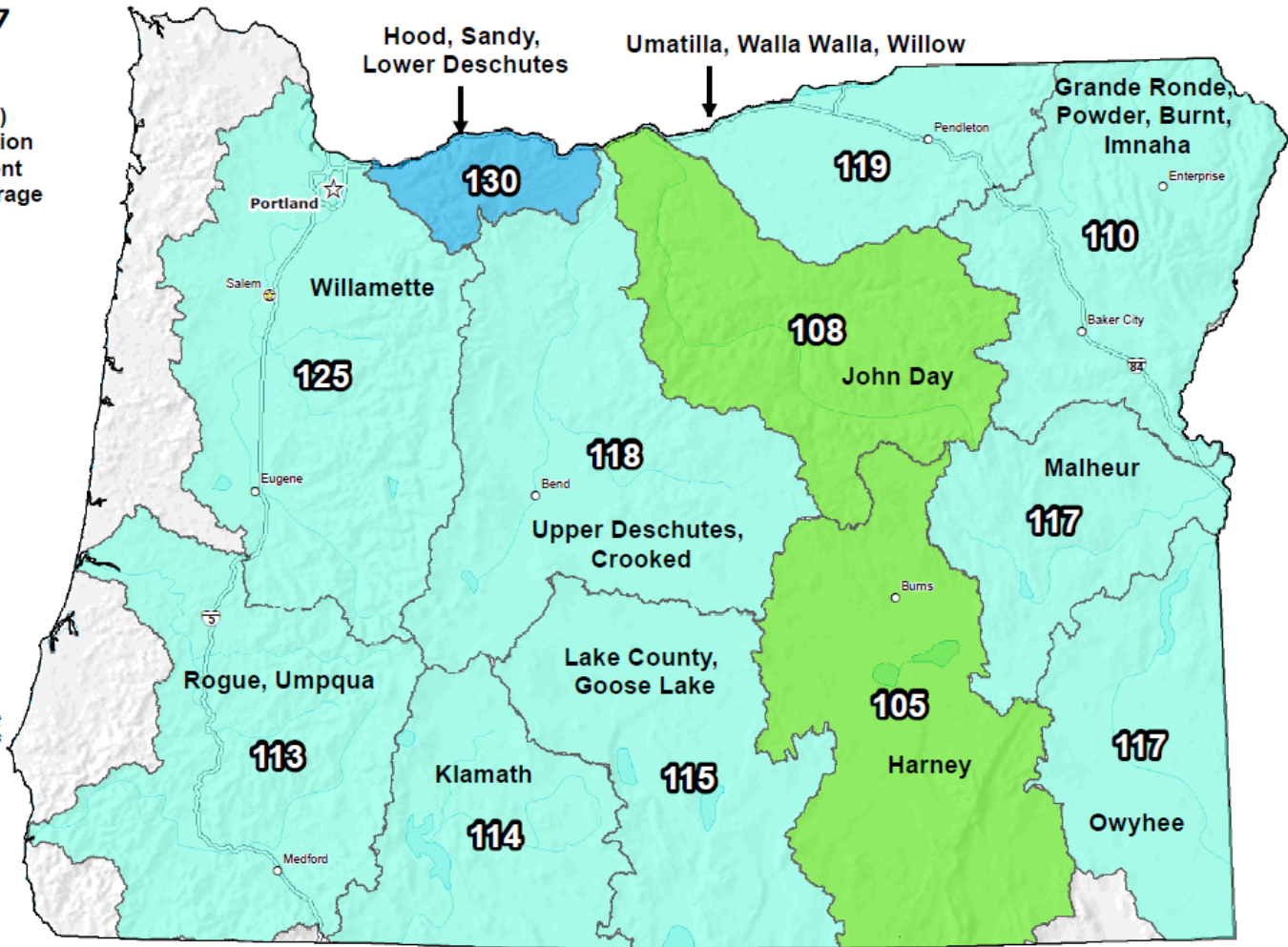
Dec 04, 2017

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

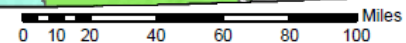


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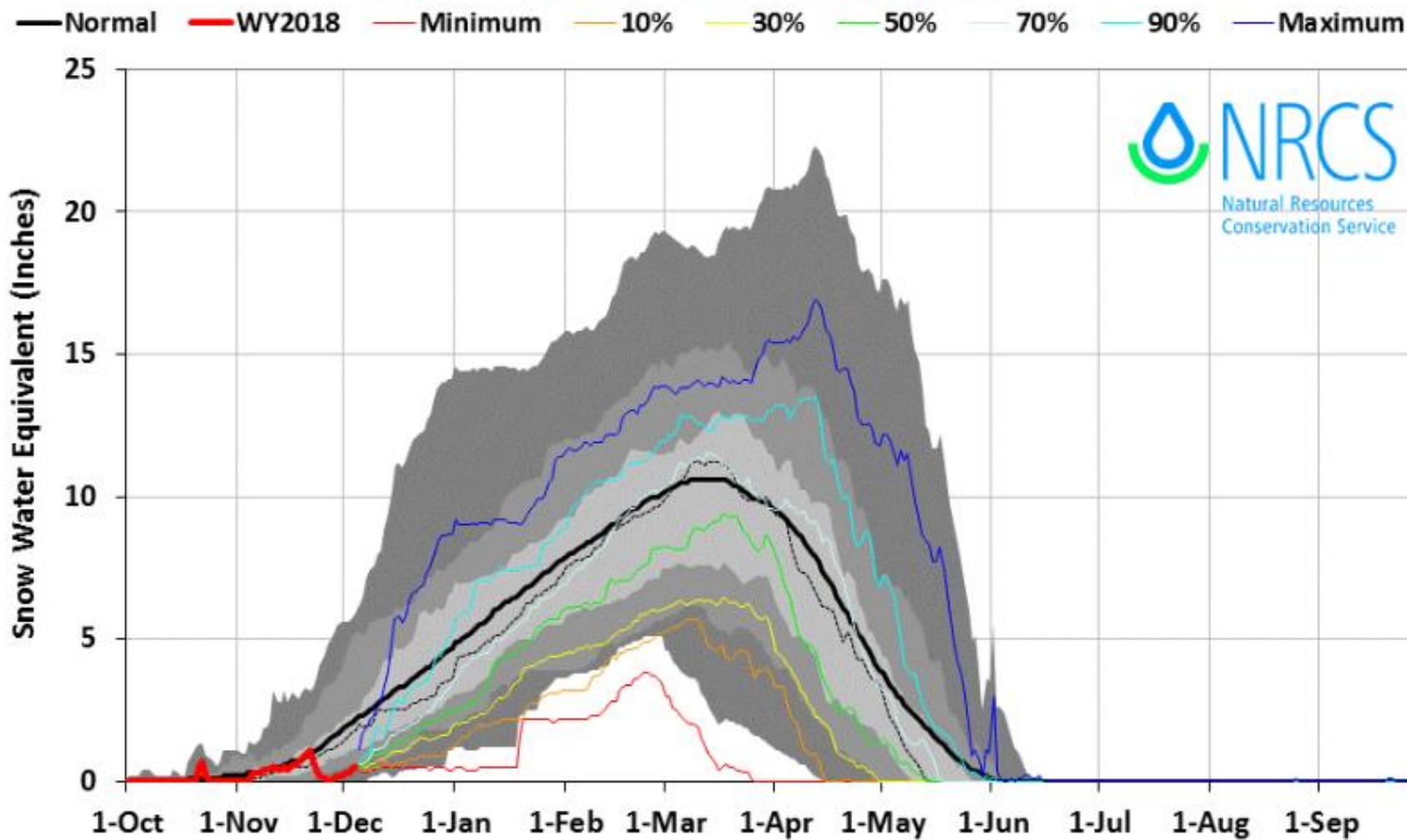


Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

RECLAMATION

Owyhee Basin 2018 Snow Water with Non-Exceedence Projections (7 sites)

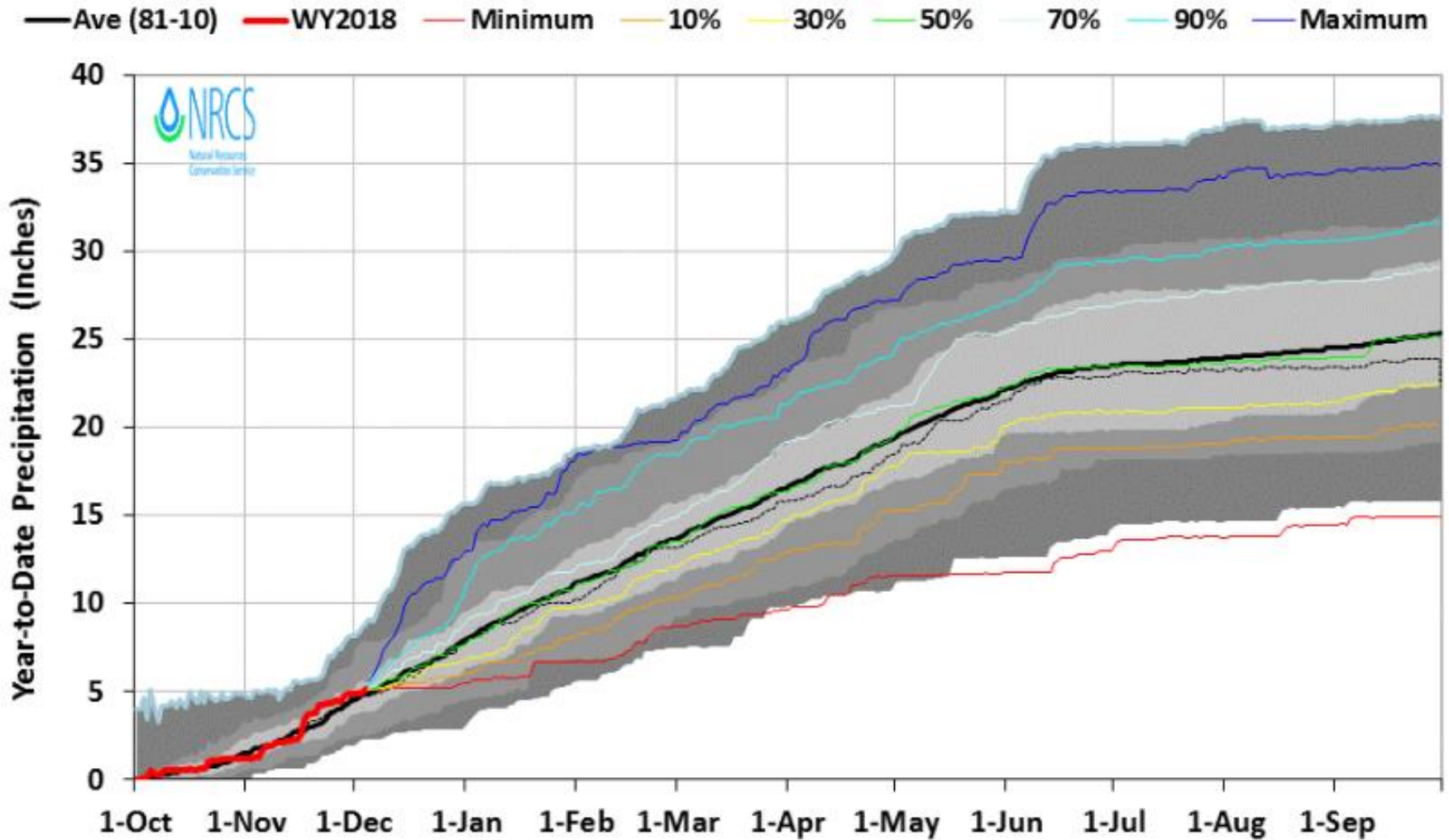
Based on Provisional SNOTEL data as of Dec 04, 2017



RECLAMATION

Owyhee Basin 2018 Precipitation with Non-Exceedence Projections (7 sites)

Based on Provisional SNOTEL data as of Dec 04, 2017

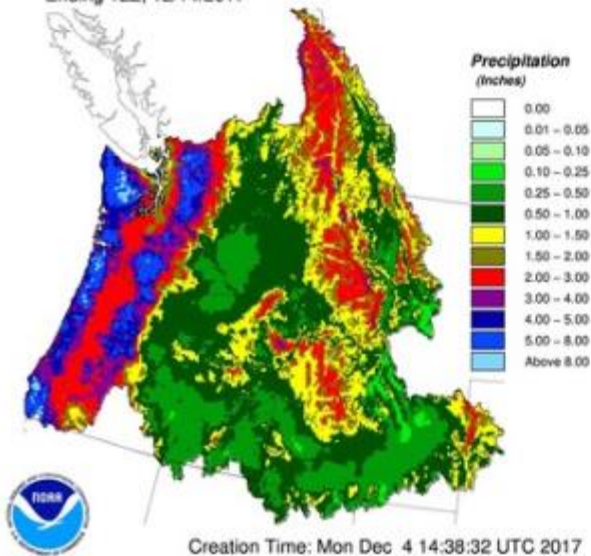


RECLAMATION

10 Day Forecast Precipitation: Volume Analysis

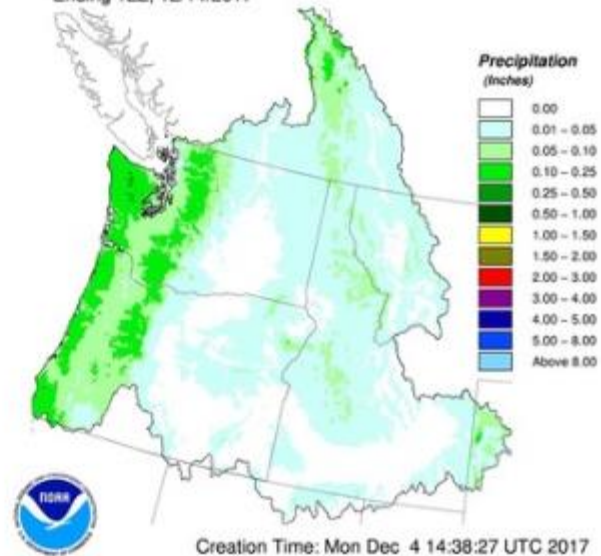
10 Day Precipitation Climatology

Ending 12Z, 12/14/2017



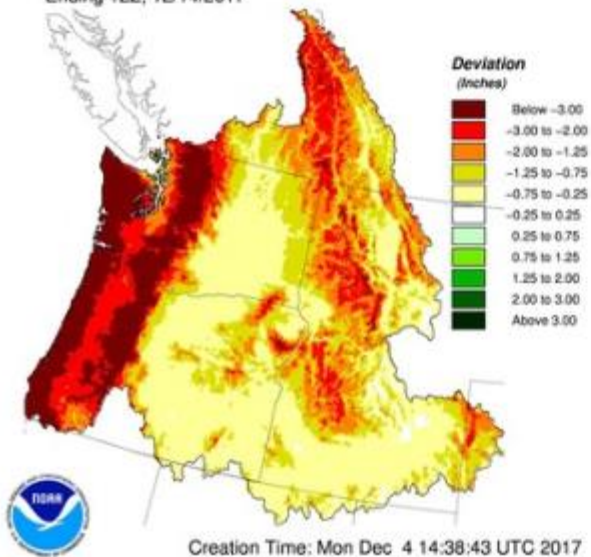
10 Day QPF

Ending 12Z, 12/14/2017



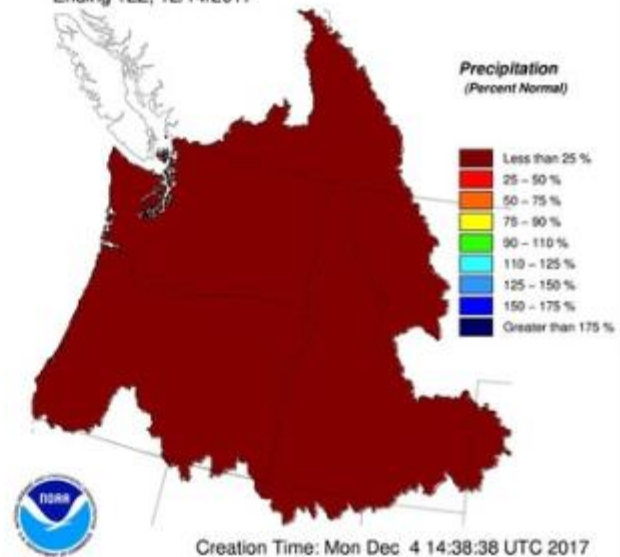
10 Day QPF (Deviation from Climatology)

Ending 12Z, 12/14/2017



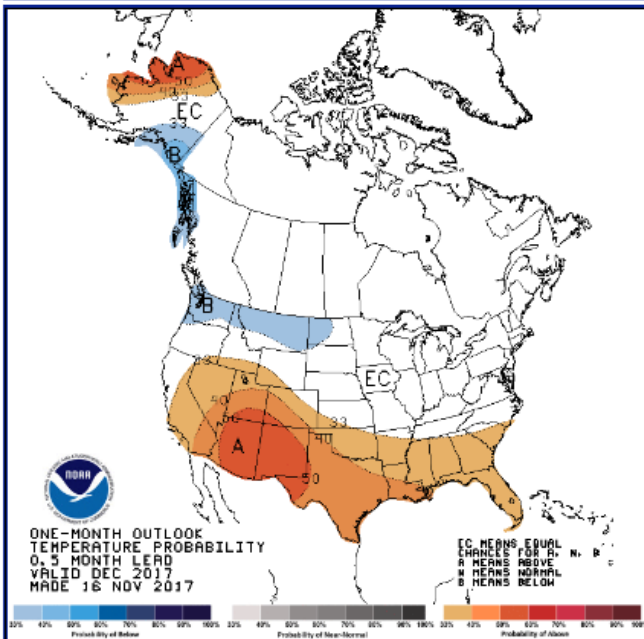
10 Day QPF (Percent of Climatology)

Ending 12Z, 12/14/2017

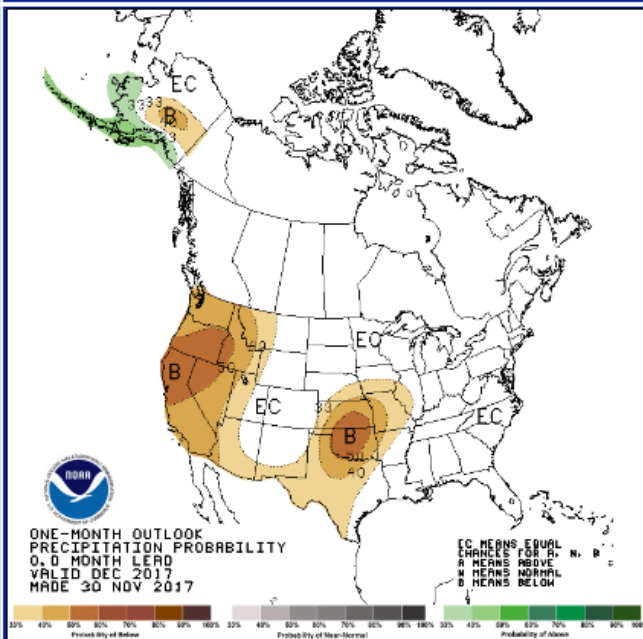
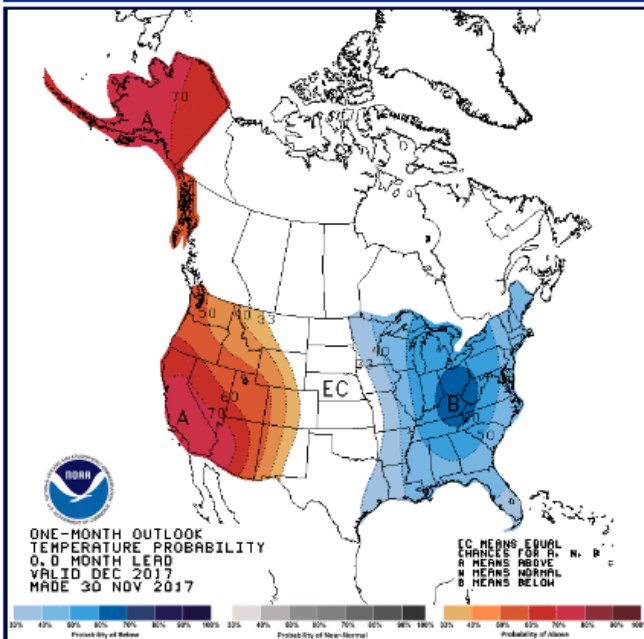
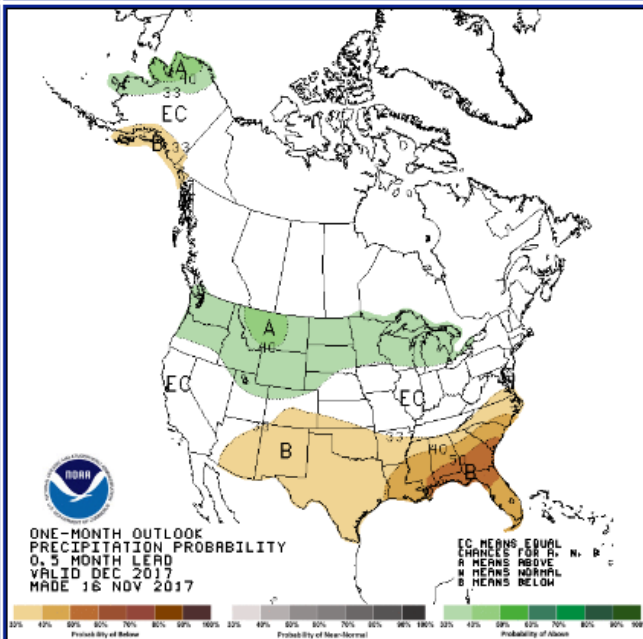


RECLAMATION

30 Day (Monthly) Temperature Outlook

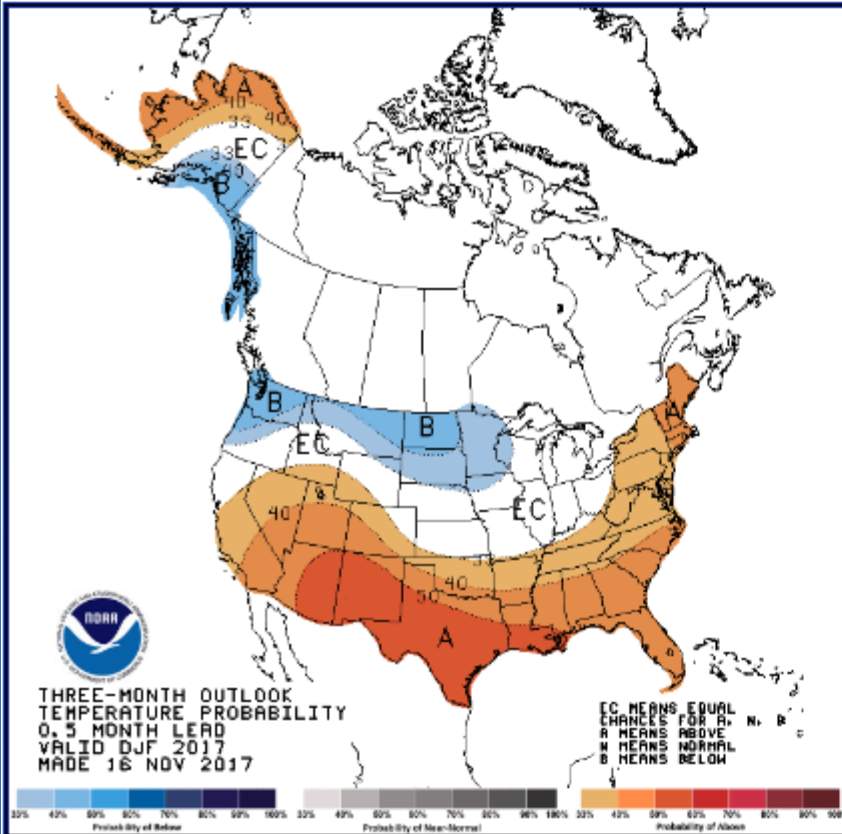


30 Day (Monthly) Precipitation Outlook

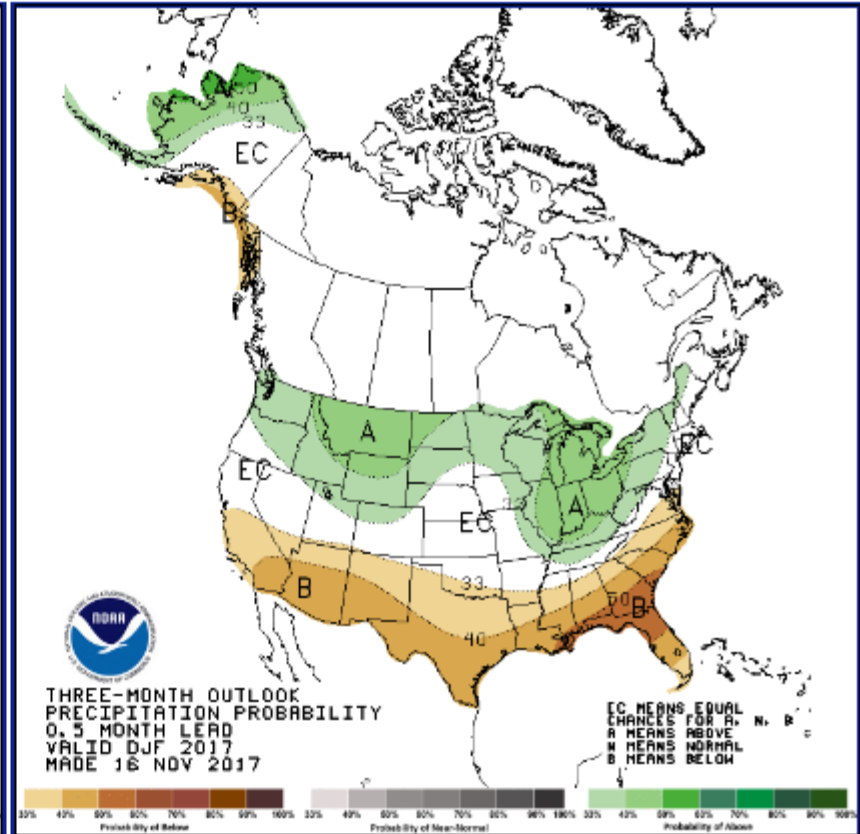


RECLAMATION

90 Day (Monthly) Temperature Outlook

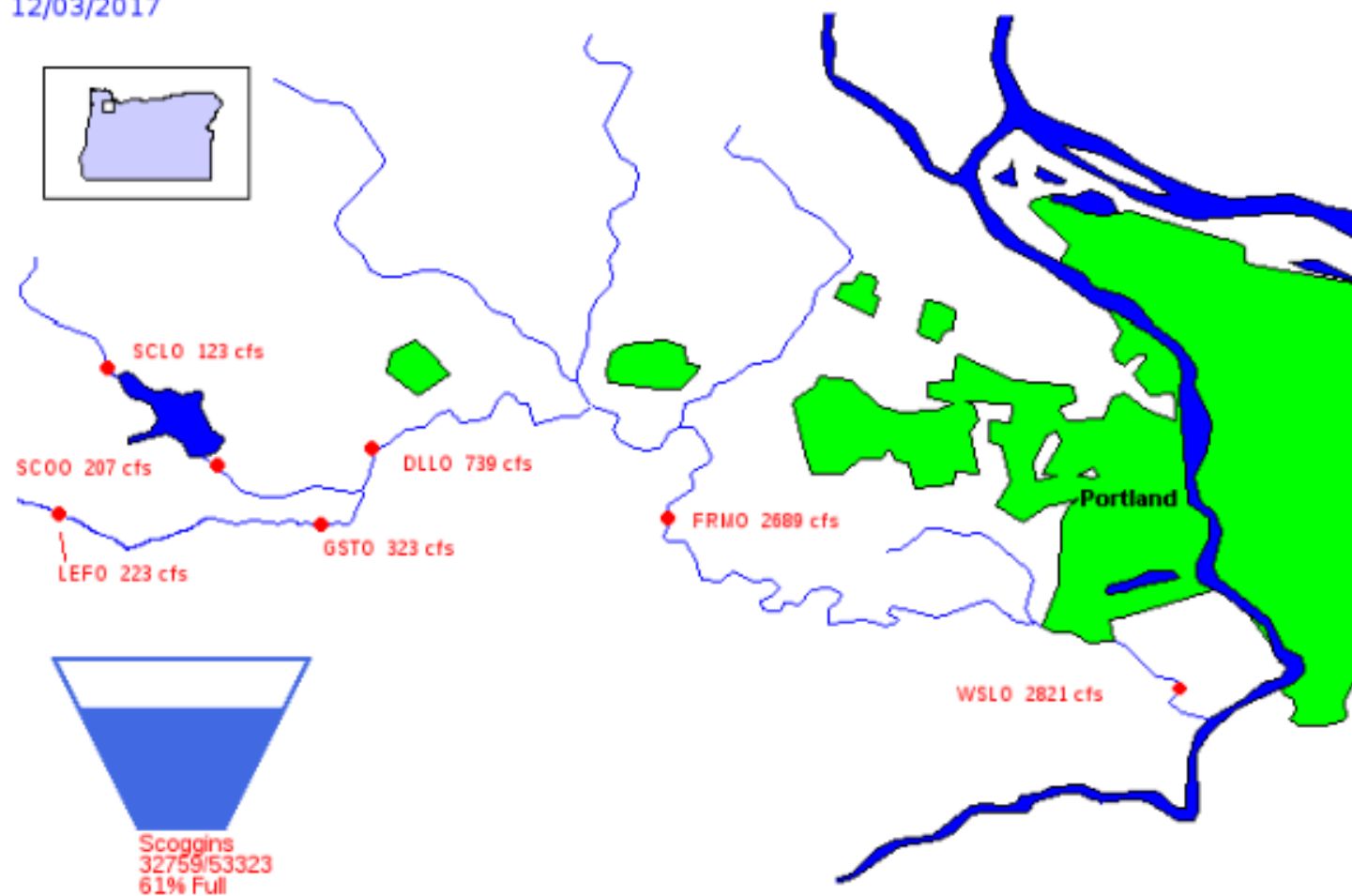


90 Day (Monthly) Precipitation Outlook



Bureau of Reclamation, Pacific Northwest Region Tualatin River Basin Storage and Flow Diagram

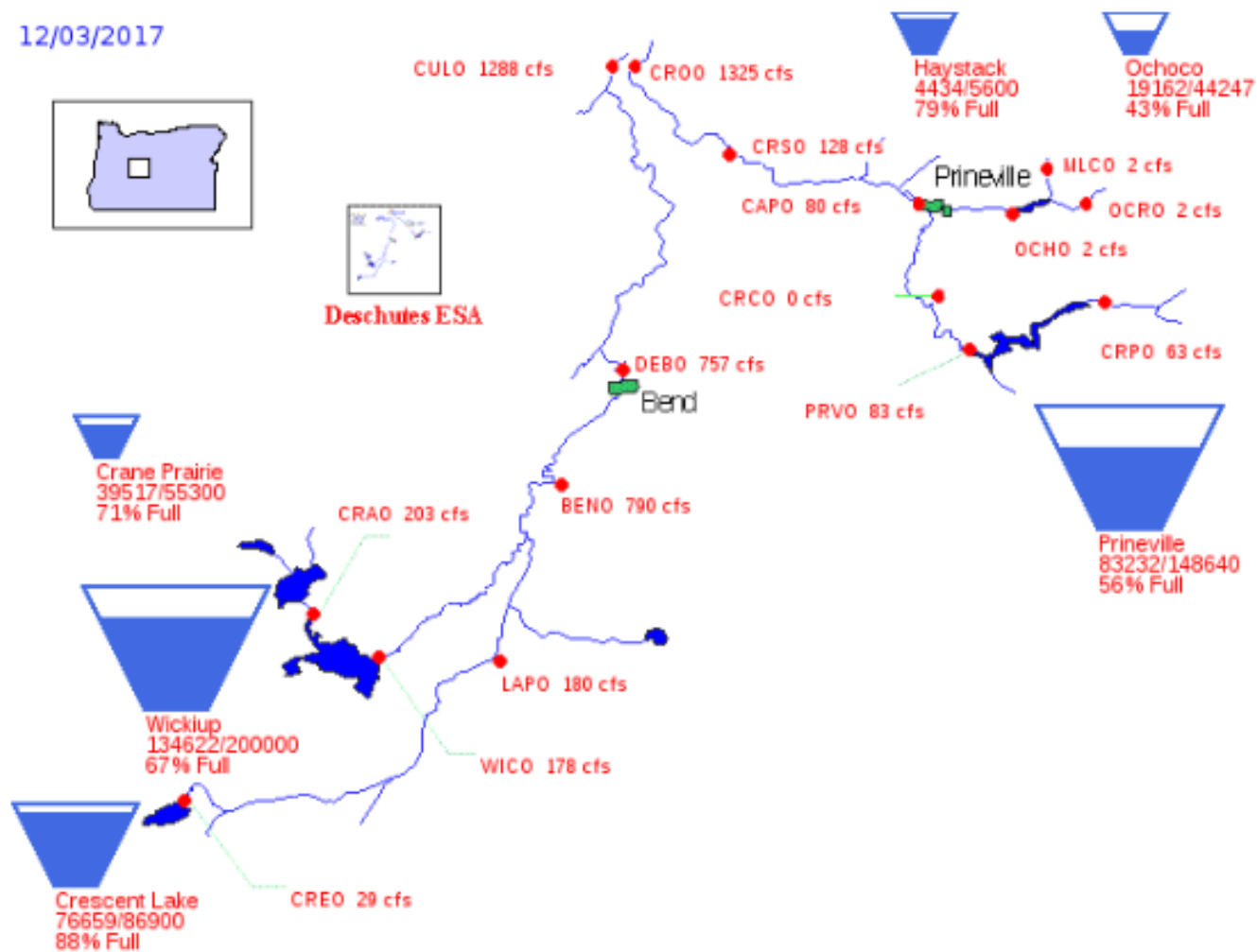
12/03/2017



RECLAMATION

US Bureau of Reclamation, Pacific Northwest Region Major Storage Reservoirs in the Deschutes River Basin

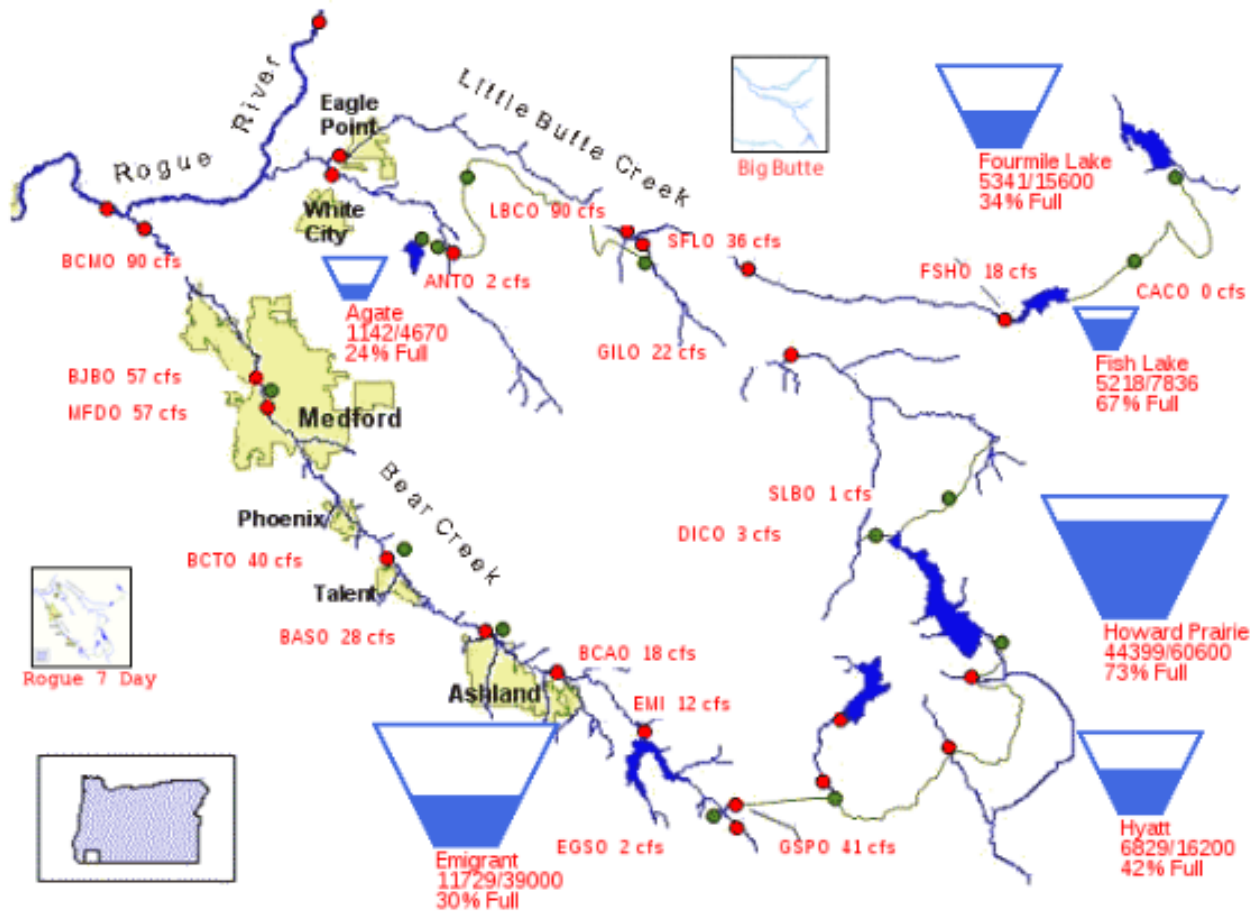
12/03/2017



RECLAMATION

US Bureau of Reclamation, Pacific Northwest Region Bear Creek and Little Butte Creek Basins

12/03/2017

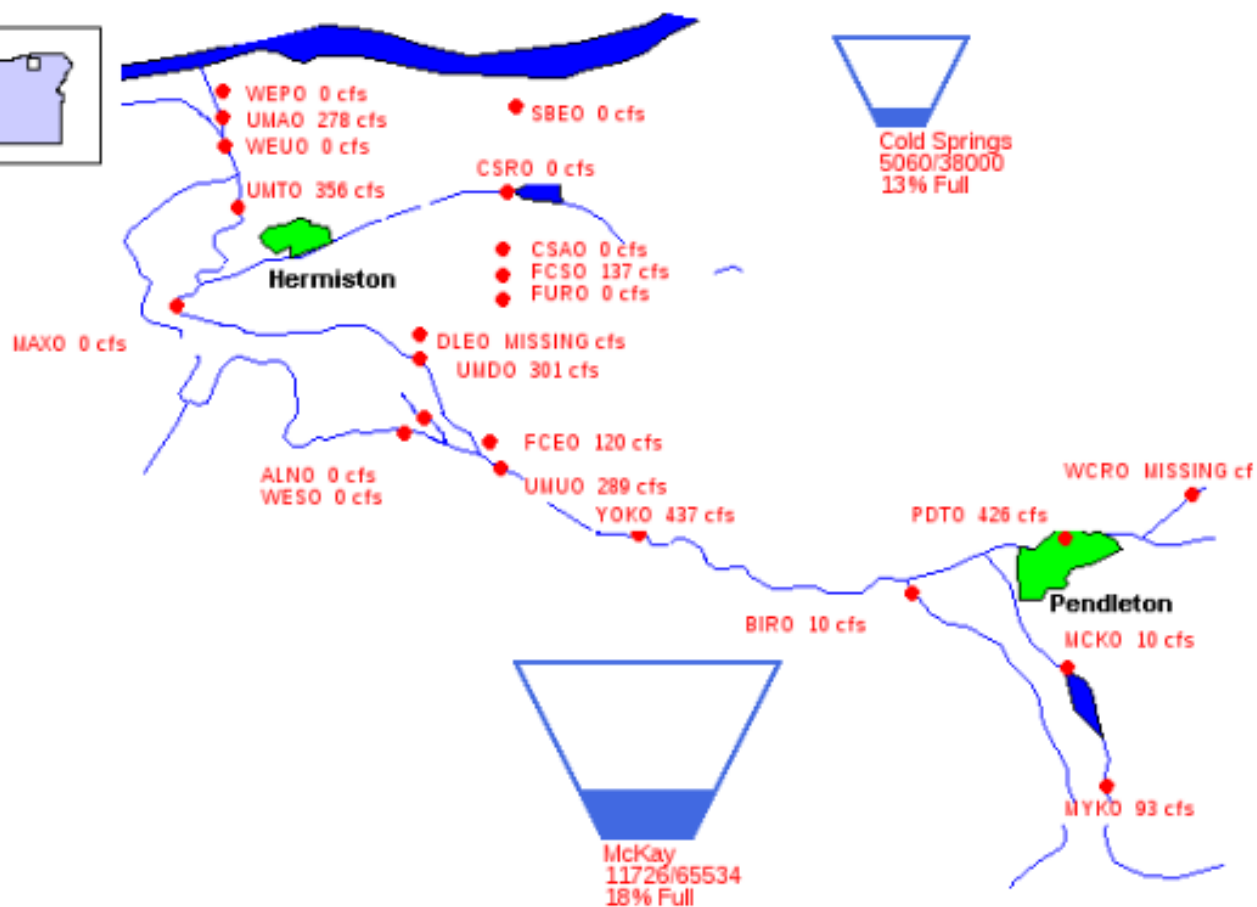
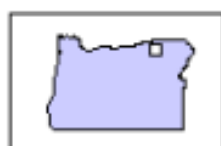


PROVISIONAL DATA - SUBJECT TO CHANGE!

RECLAMATION

Bureau of Reclamation, Pacific Northwest Region Umatilla River Basin Storage and Flow Diagram

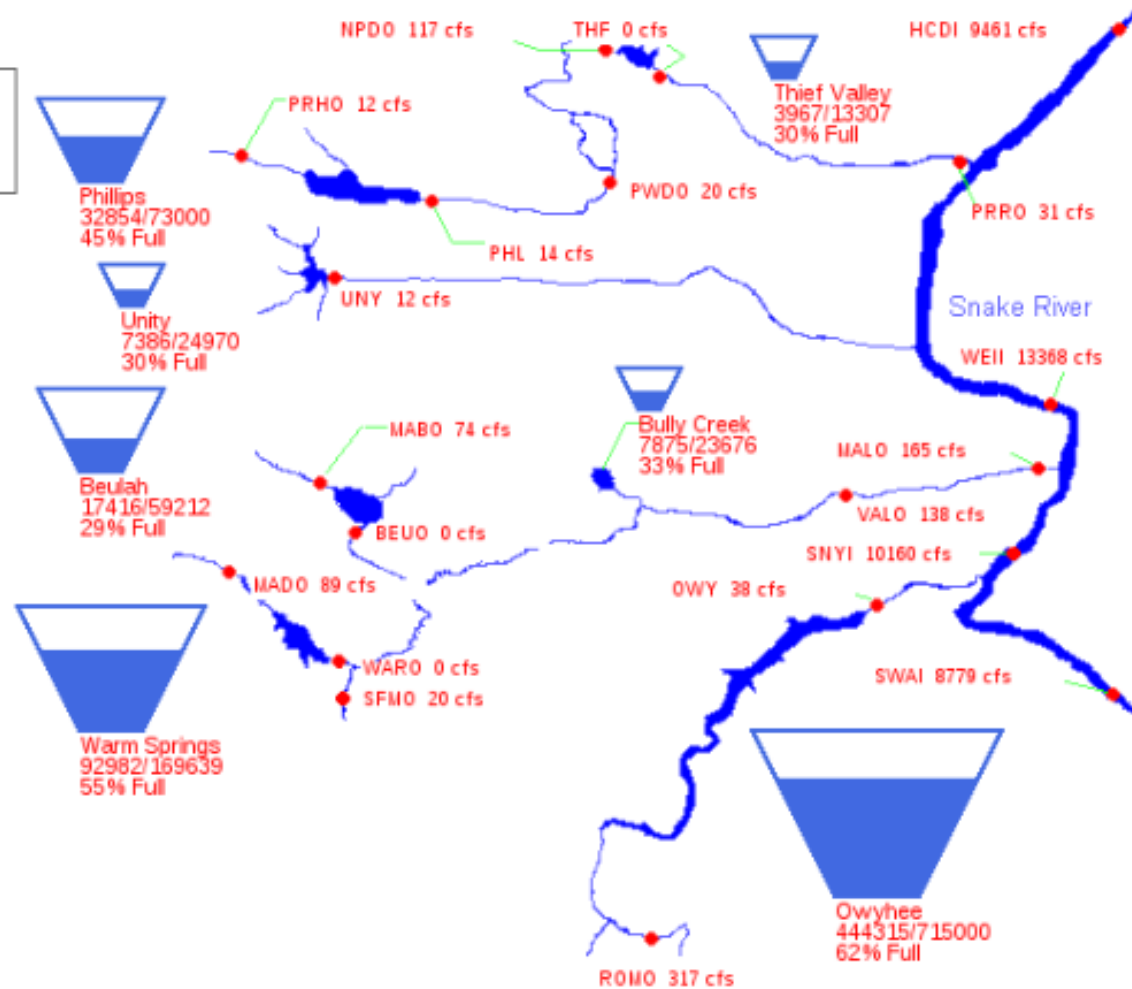
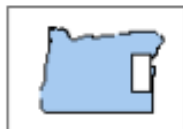
12/03/2017



RECLAMATION

US Bureau of Reclamation, Pacific Northwest Region Major Storage Reservoirs in Southeastern Oregon

12/03/2017



RECLAMATION

Questions?

RECLAMATION