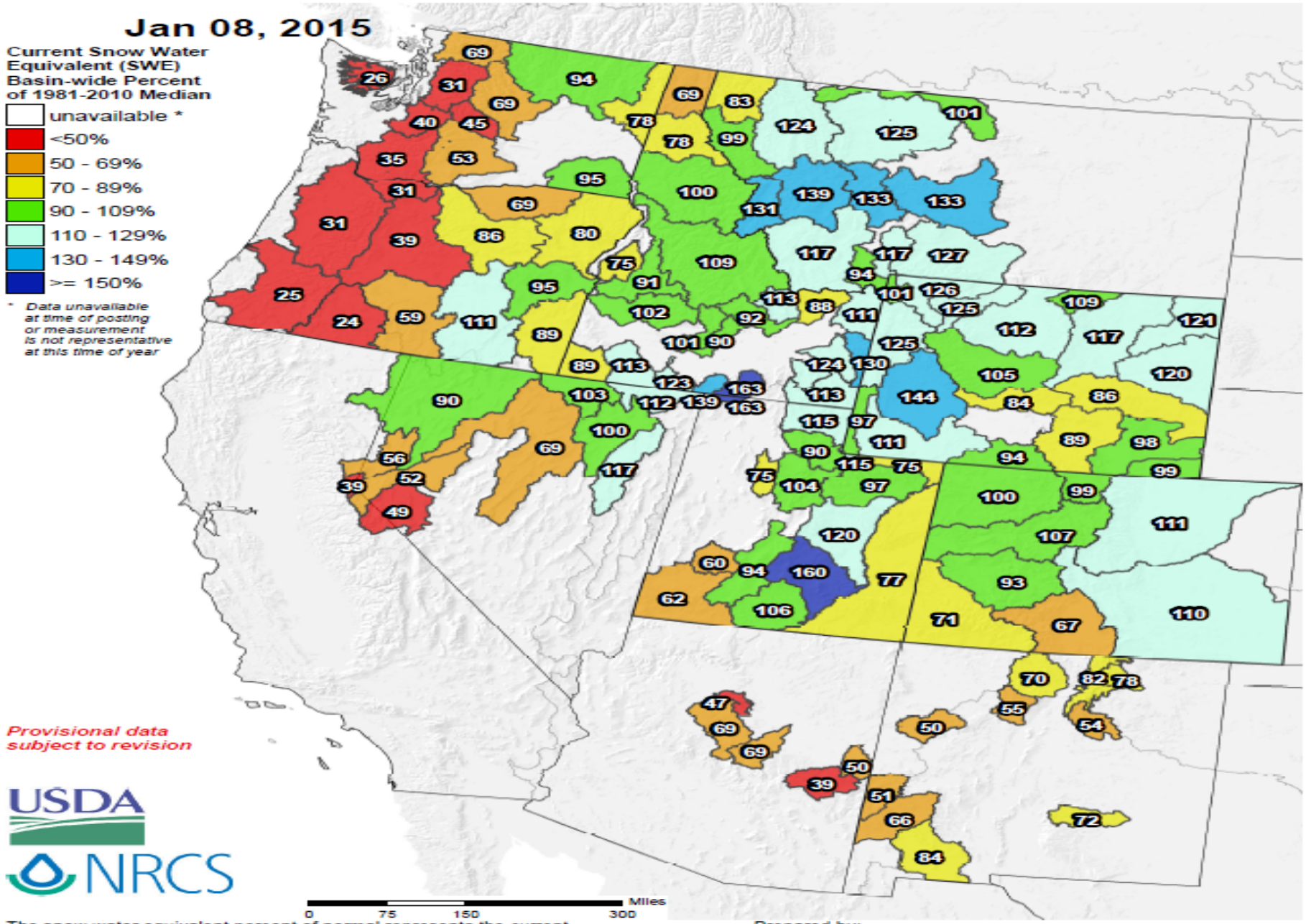
Natural Resources Conservation Service

Idaho Water Supply Outlook Report
January 1, 2015

An avalanche on Sunday December 21st shows the unstable conditions created by the mid-December storm events. This December 19 – 22series of storms deposited 4.3 inches of snow water equivalent at Mores Creek SNOTEL site, elevation 6,100 feet, near Idaho City. The automated snow depth sensor increased from 21 inches to 47 inches during this period. For the six day period December 19 – 25, the site increase by 5.7 inches of snow water with over 30 inches of snowfall. Heavy snow loading during this period increased avalanche danger across much of southern Idaho because of the large amount of snowfall received in such a short time period. Photo courtesy of Eric Rothwell and Brian Anderson.

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



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
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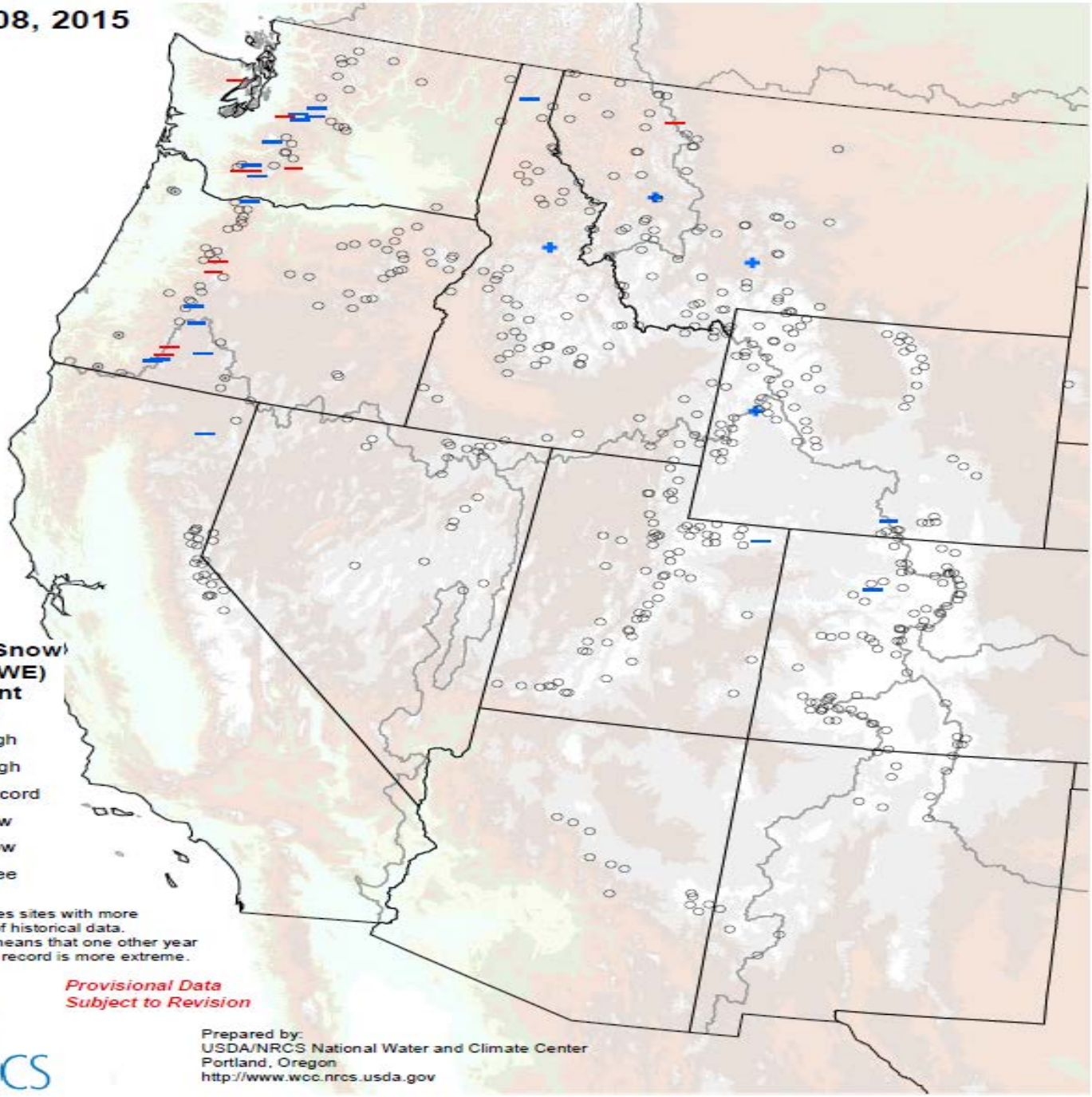
SNOTEL Current Snow Water Equivalent (SWE) Records

Jan 08, 2015



Analysis includes sites with more than 20 years of historical data.
"Near" record means that one other year of the period of record is more extreme.

Provisional Data Subject to Revision

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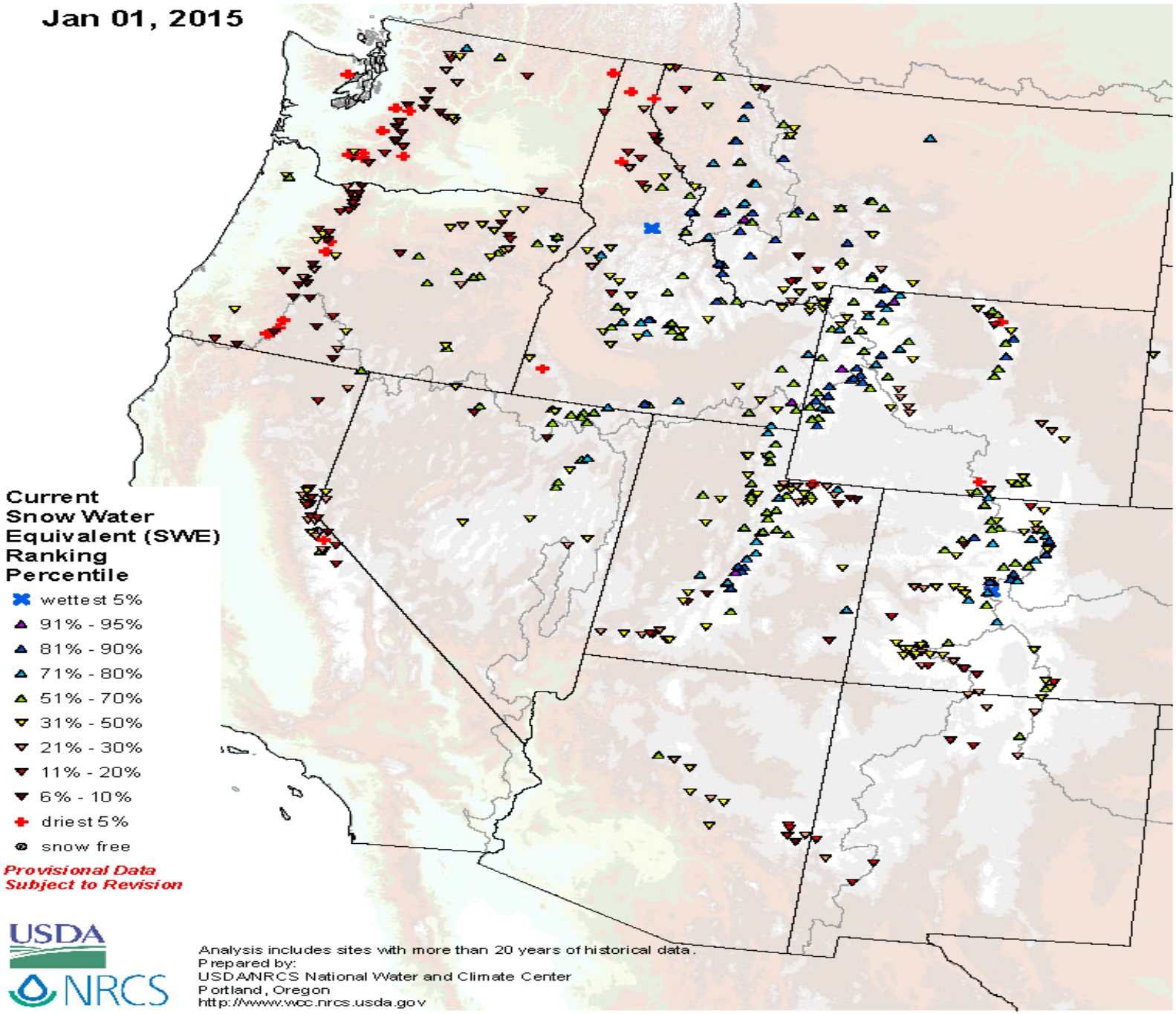
SNOTEL Current Snow Water Equivalent (SWE) Ranking Percentile

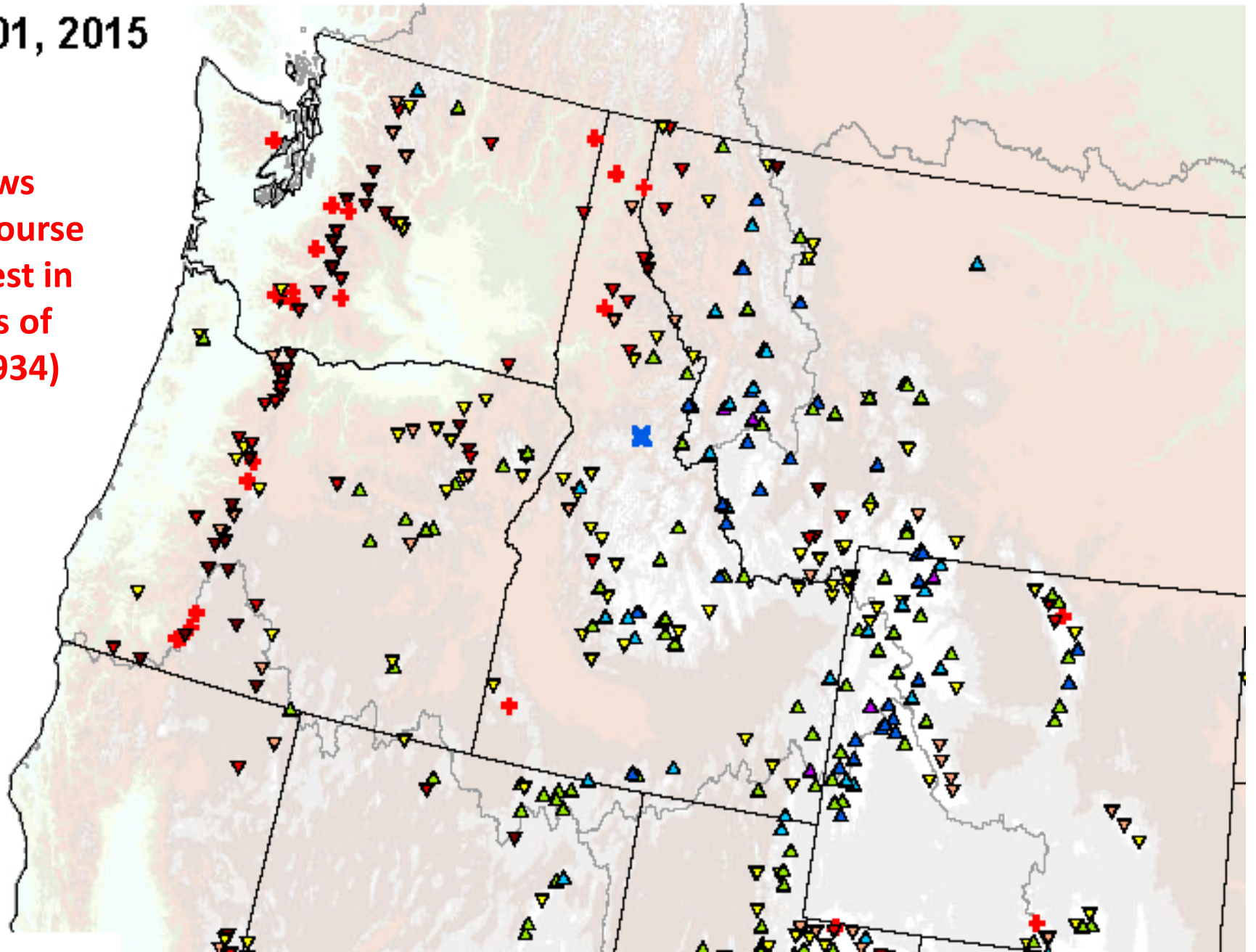
Jan 01, 2015



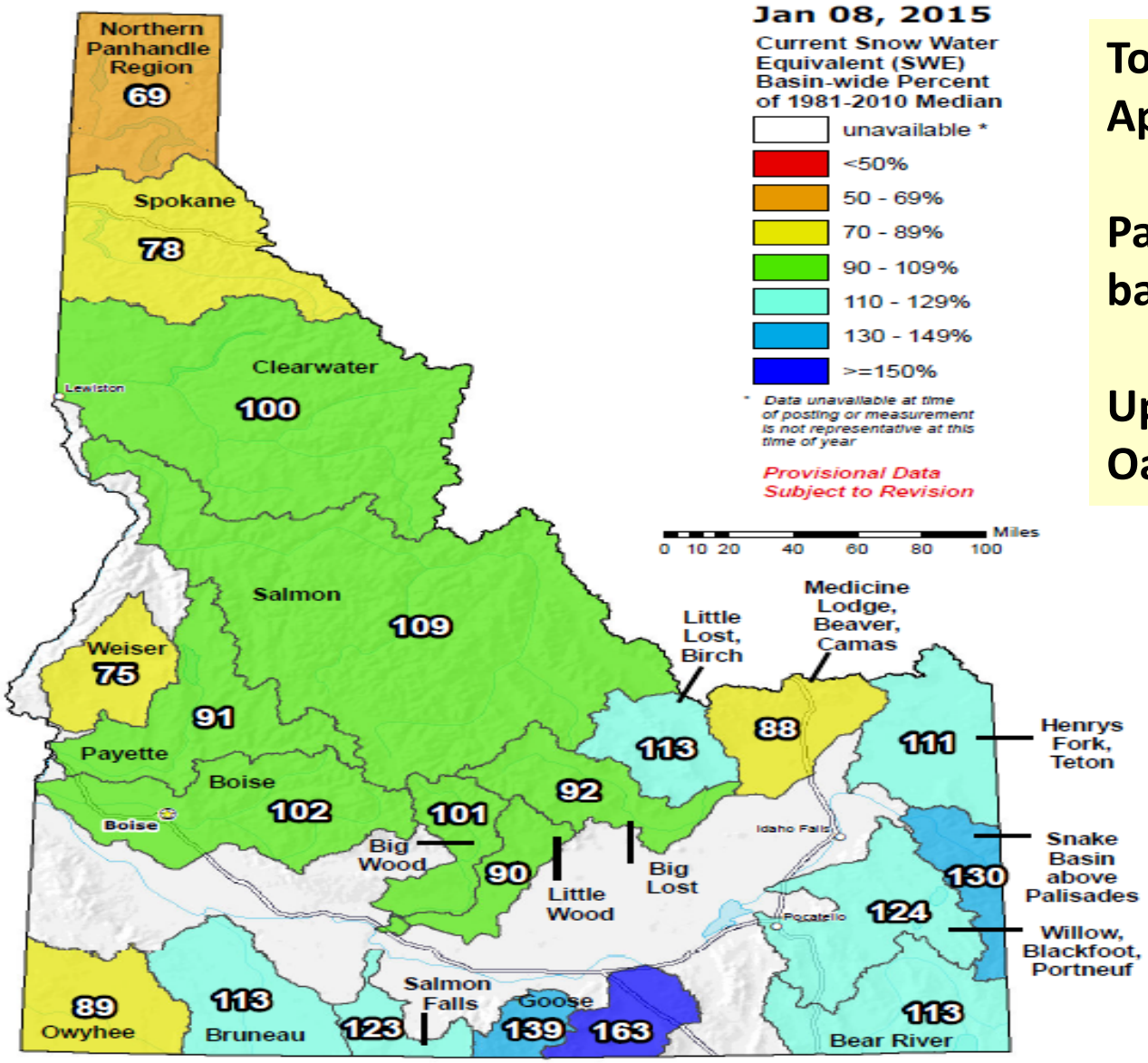
SNOTEL Current Snow Water Equivalent (SWE) Ranking Percentile

Jan 01, 2015

Benton Meadows Snow Course 3rd lowest in 79 years of data (1934)



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



Today's SWE as % of April 1 Seasonal Peak:

Panhandle & Owyhee basins are only 35%

Upper Snake & Oakley are 60%

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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).

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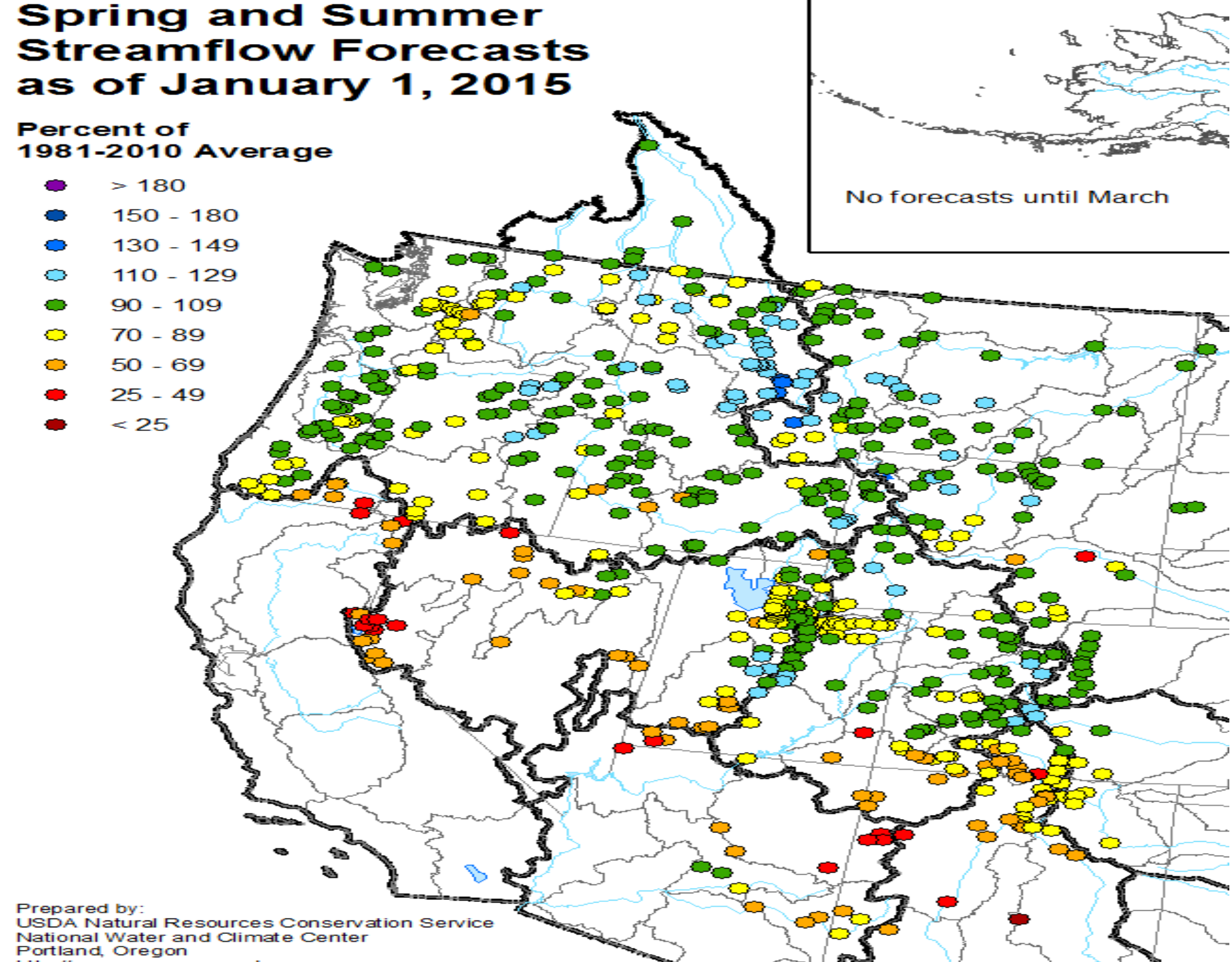
Spring and Summer Streamflow Forecasts as of January 1, 2015



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USDA Natural Resources Conservation Service
National Water and Climate Center
Portland, Oregon

IDAHO SURFACE WATER SUPPLY INDEX (SWSI) January 1, 2015

The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.0 (abundant supply) to -4.0 (extremely dry), with a value of zero indicating a median water supply as compared to historical occurrences. The SWSI analysis period is from 1981 to present.

SWSI values provide a more comprehensive outlook of water availability by combining streamflow forecasts and reservoir storage where appropriate. The SWSI index allows comparison of water availability between basins for drought or flood severity analysis. Threshold SWSI values have been determined for some basins to indicate the potential for agricultural irrigation water shortages.

BASIN or REGION	*SWSI Value*	*Most Recent Year With Similar SWSI Value*	*Agricultural Water Supply Shortage May Occur When SWSI is Less Than*
Northern Panhandle	Not Available	---	---
Spokane	-1.0	2013	NA
Clearwater	1.4	2009	NA
Salmon	0.2	2010	NA
Weiser	-0.5	2000	NA
Payette	0.7	2008	NA
Boise	1.2	2009	-1.5
Big Wood	0.7	2012	0.6
Little Wood	0.7	2012	-1.3
Big Lost	0.0	2012	0.6
Little Lost	0.2	2012	1.3
Teton	0.5	2014	-3.9
Henrys Fork	-0.3	2012	-3.4
Snake (Heise)	1.7	2009	-1.5
Oakley	0.5	2012	0.6
Salmon Falls	-0.7	2000	-0.6
Bruneau	0.5	2009	NA
Owyhee	0.1	2012	-3.2
Bear River	-0.2	2014	-3.7

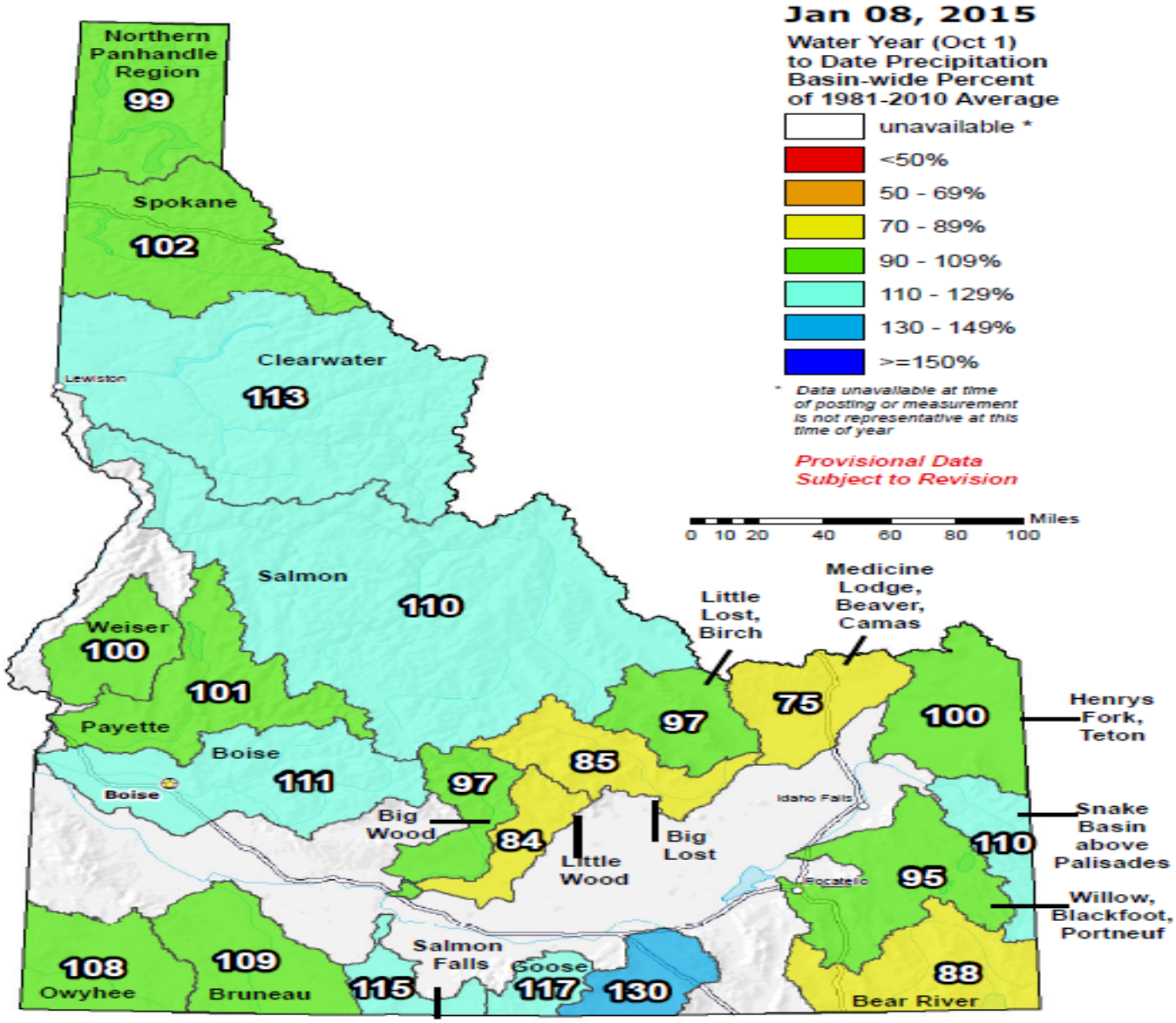
Summary Table: Amount of streamflow needed in 2015 for adequate surface irrigation supplies.

Update Jan 5, 2015

Fall reservoir carryover storage is used to project spring storage levels. By knowing the adequate irrigation water supply level in your basin, spring reservoir volumes are subtracted from the adequate irrigation supply to determine the volume of streamflow needed to meet marginally adequate surface irrigation supplies for 2015.

1 Basin	2 Adequate irrigation water supply KAF	3 Projected End of Mar, Feb, or Jan reservoir storage KAF	4 2015 Streamflow volume needed for adequate water supply KAF	5 % of average streamflow needed to meet an adequate irrigation supply in 2015	6 1981-2010 Streamflow average KAF	7 Stream-flow period	8 Jan 1, 2015 Streamflow Forecast % of average	9 2014 Stream-flow % of average
Boise	1500	624	876	64%	1360	apr-sep	107%	86%
Big Wood	275	68	207	78%	265	apr-sep	96%	31%
Little Wood	60	17	43	52%	82	mar-sep	96%	32%
Big Lost	180	32	148	99%	150	apr-sep	94%	45%
Little Lost	40	---	40	118%	34	apr-sep	97%	67%
Teton	85	---	85	44%	193	apr-sep	102%	107%
Snake (Heise)	4,400	1792	2608	69%	3,780	apr-sep	109%	121%
Oakley Reservoir	50	19	31	100%	31	mar-sep	110%	62%
Salmon Falls	110	20	90	106%	85	mar-sep	106%	49%
Owyhee	450	100	350	53%	665	feb-sep	104%	~ 14%
Bear River	400	---	0	0%	205	apr-sep	59%	57%

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



USDA NRCS

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:
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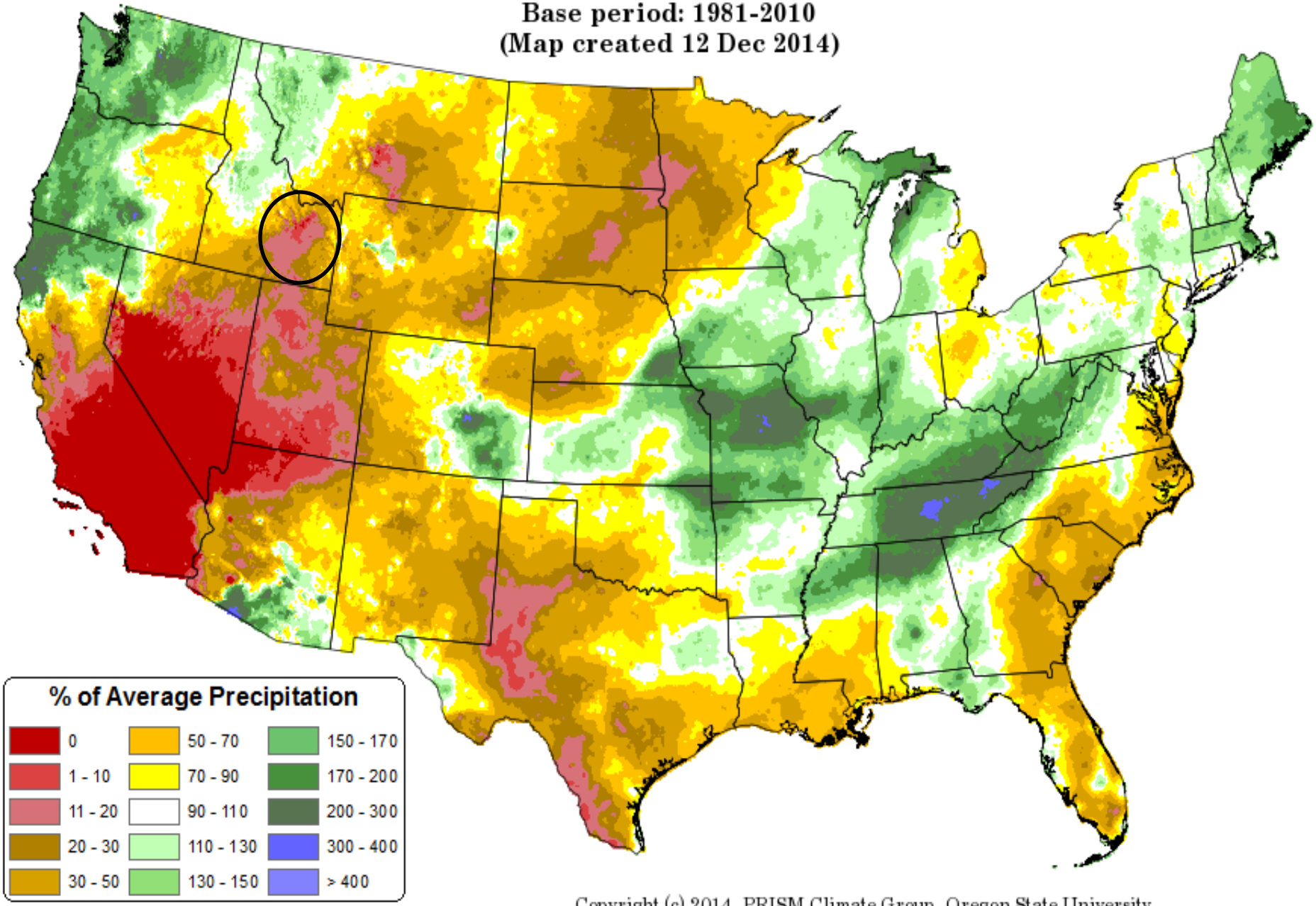
Total Precipitation Anomaly: October 2014

Period ending 31 Oct 2014
Base period: 1981-2010
(Map created 12 Dec 2014)



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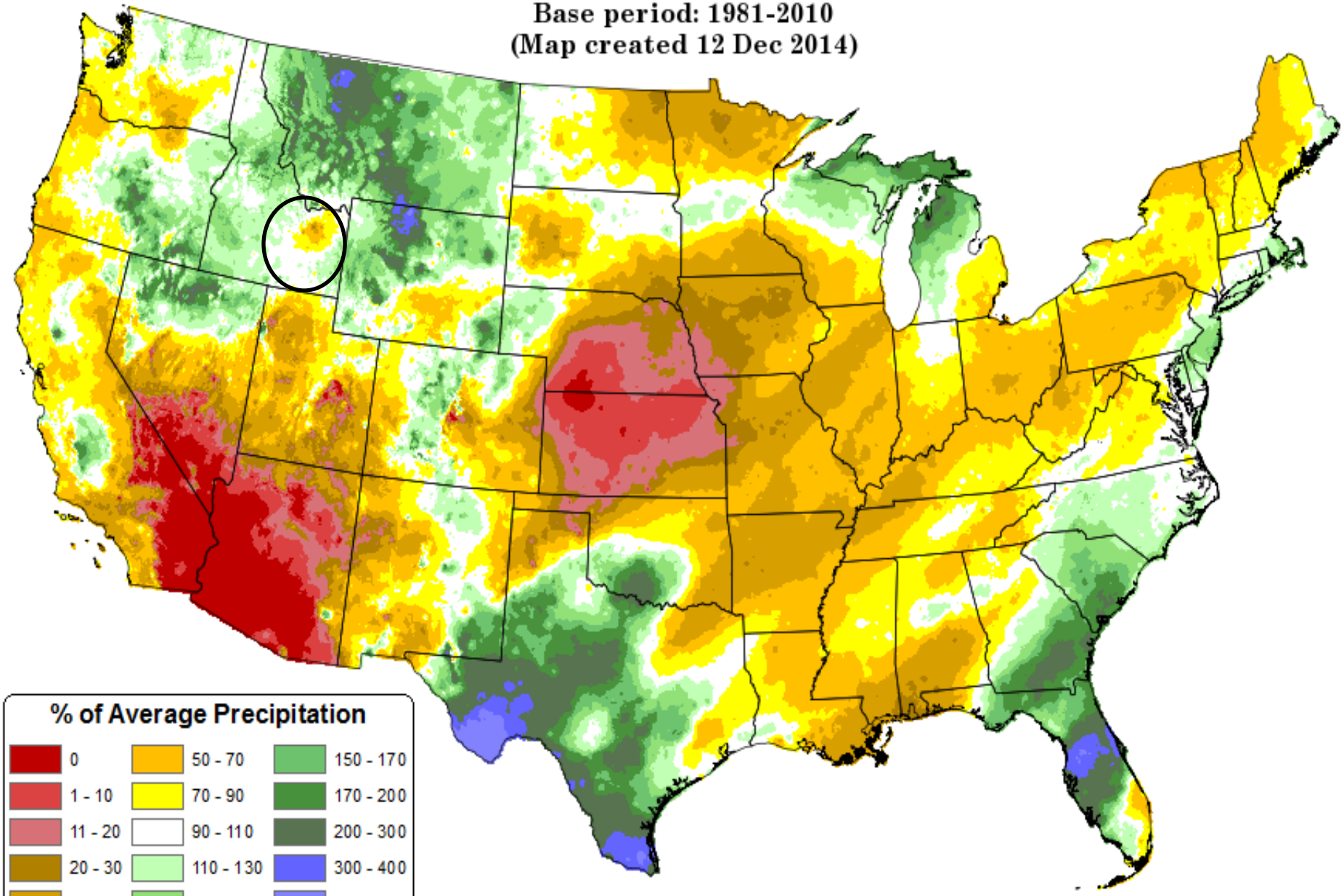
Total Precipitation Anomaly: November 2014

Period ending 30 Nov 2014
Base period: 1981-2010
(Map created 12 Dec 2014)



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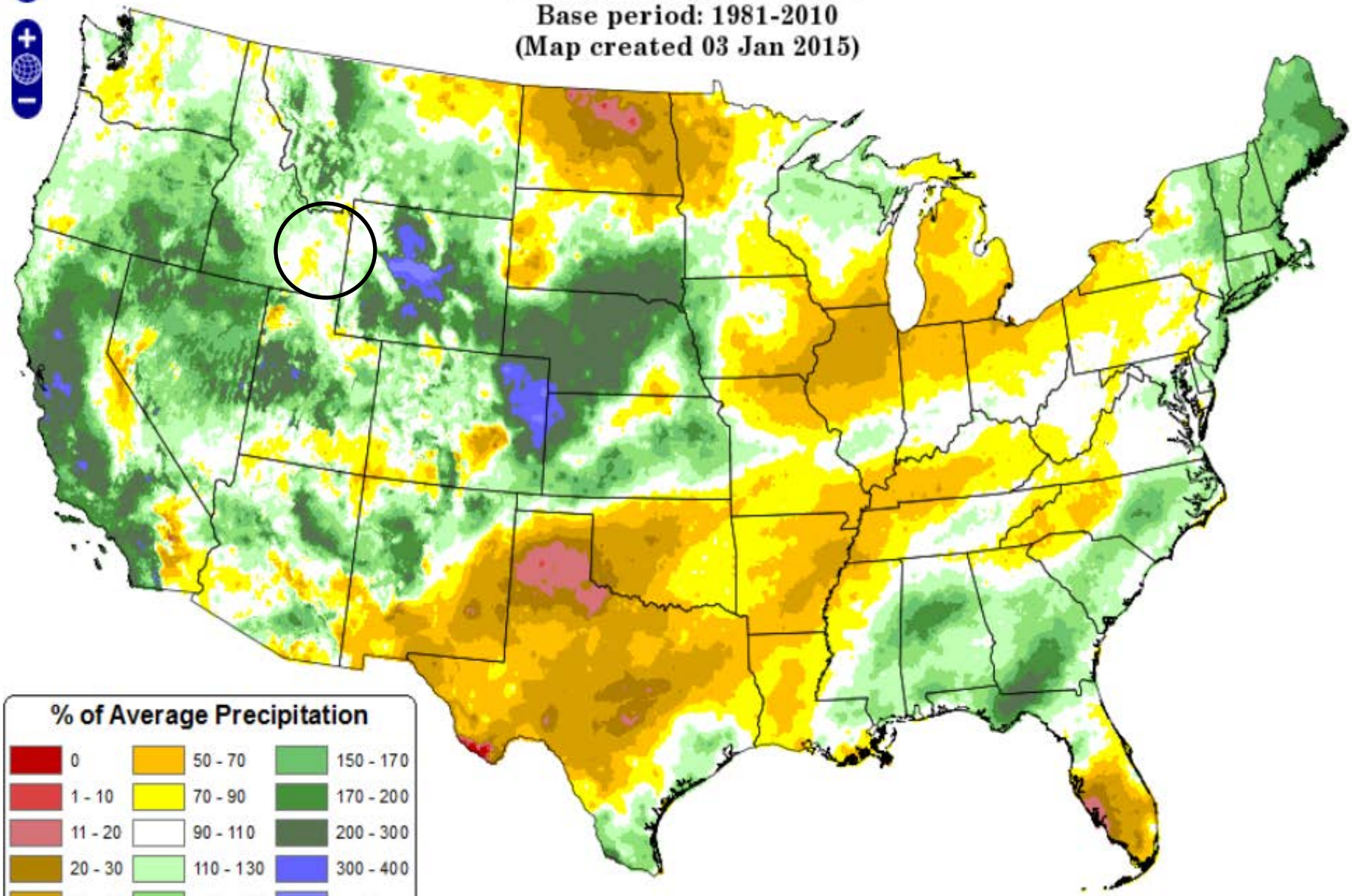
Total Precipitation Anomaly: December 2014

Period ending 31 Dec 2014
Base period: 1981-2010
(Map created 03 Jan 2015)



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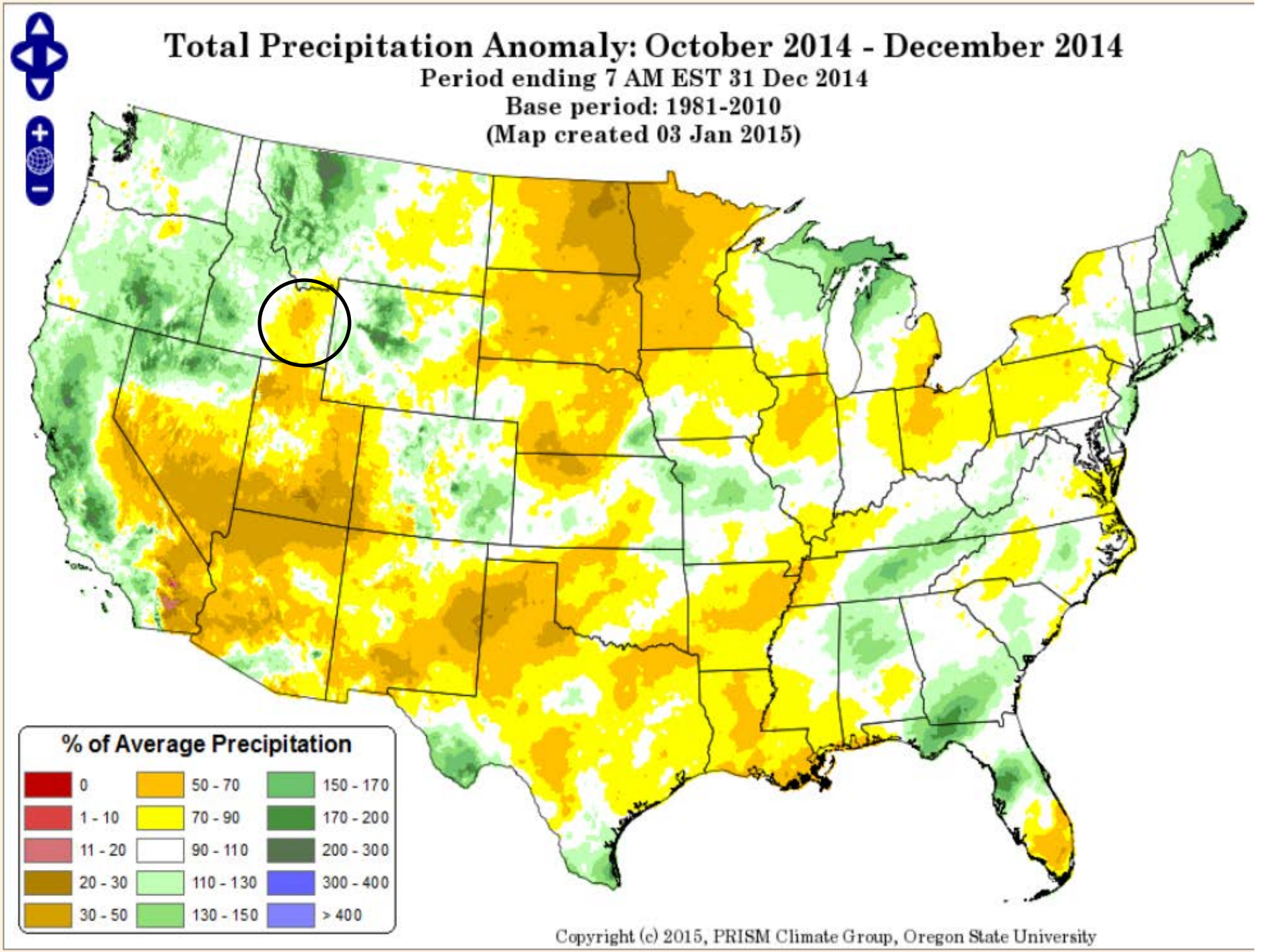
Total Precipitation Anomaly: October 2014 - December 2014
Period ending 7 AM EST 31 Dec 2014
Base period: 1981-2010
(Map created 03 Jan 2015)
% of Average Precipitation
0
1 - 10
11 - 20
20 - 30
30 - 50
50 - 70
70 - 90
90 - 110
110 - 130
130 - 150
150 - 170
170 - 200
200 - 300
300 - 400
> 400
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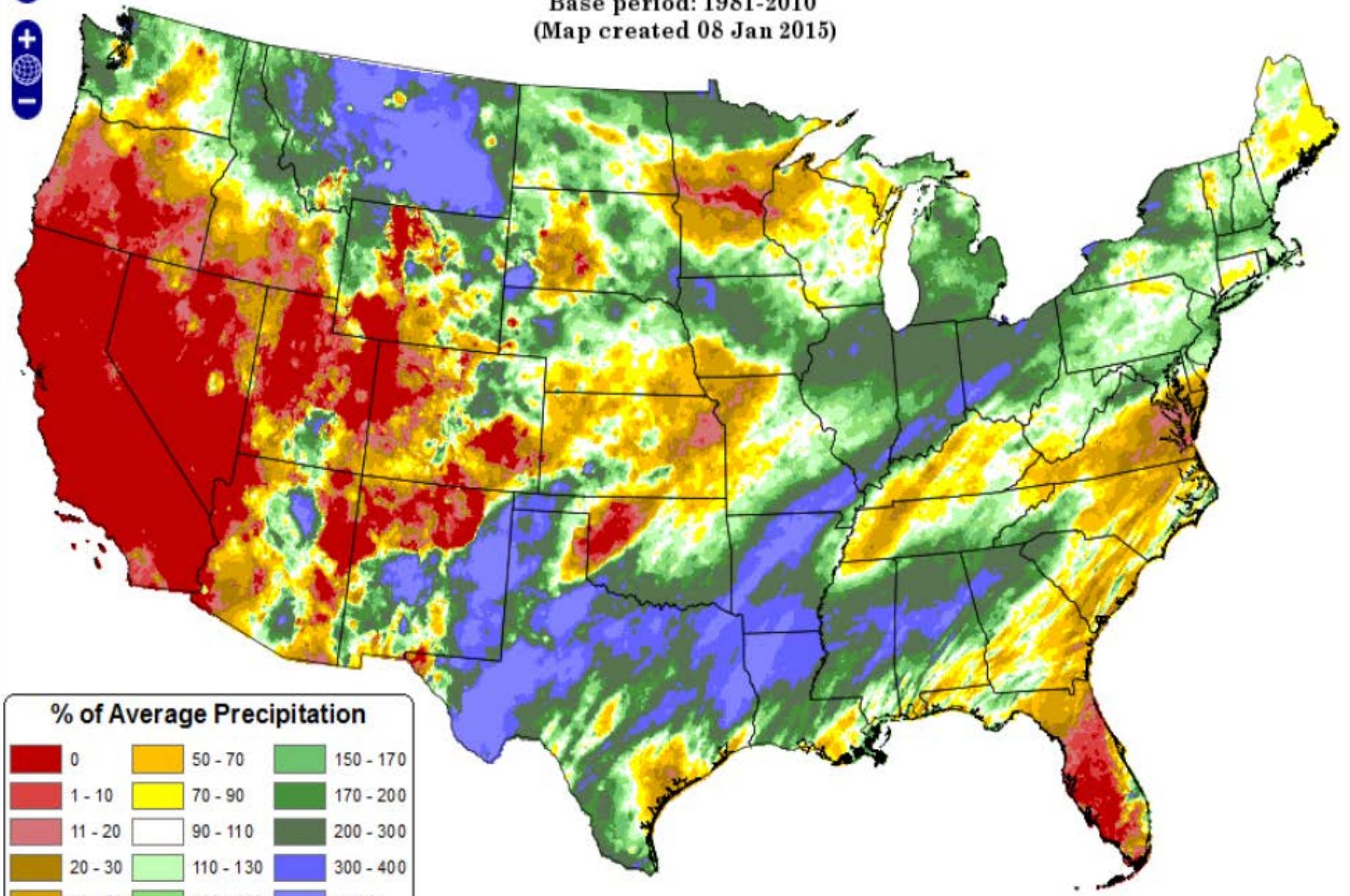
Total Precipitation Anomaly: 01 January 2015 - 07 January 2015

Period ending 7 AM EST 07 Jan 2015
Base period: 1981-2010
(Map created 08 Jan 2015)



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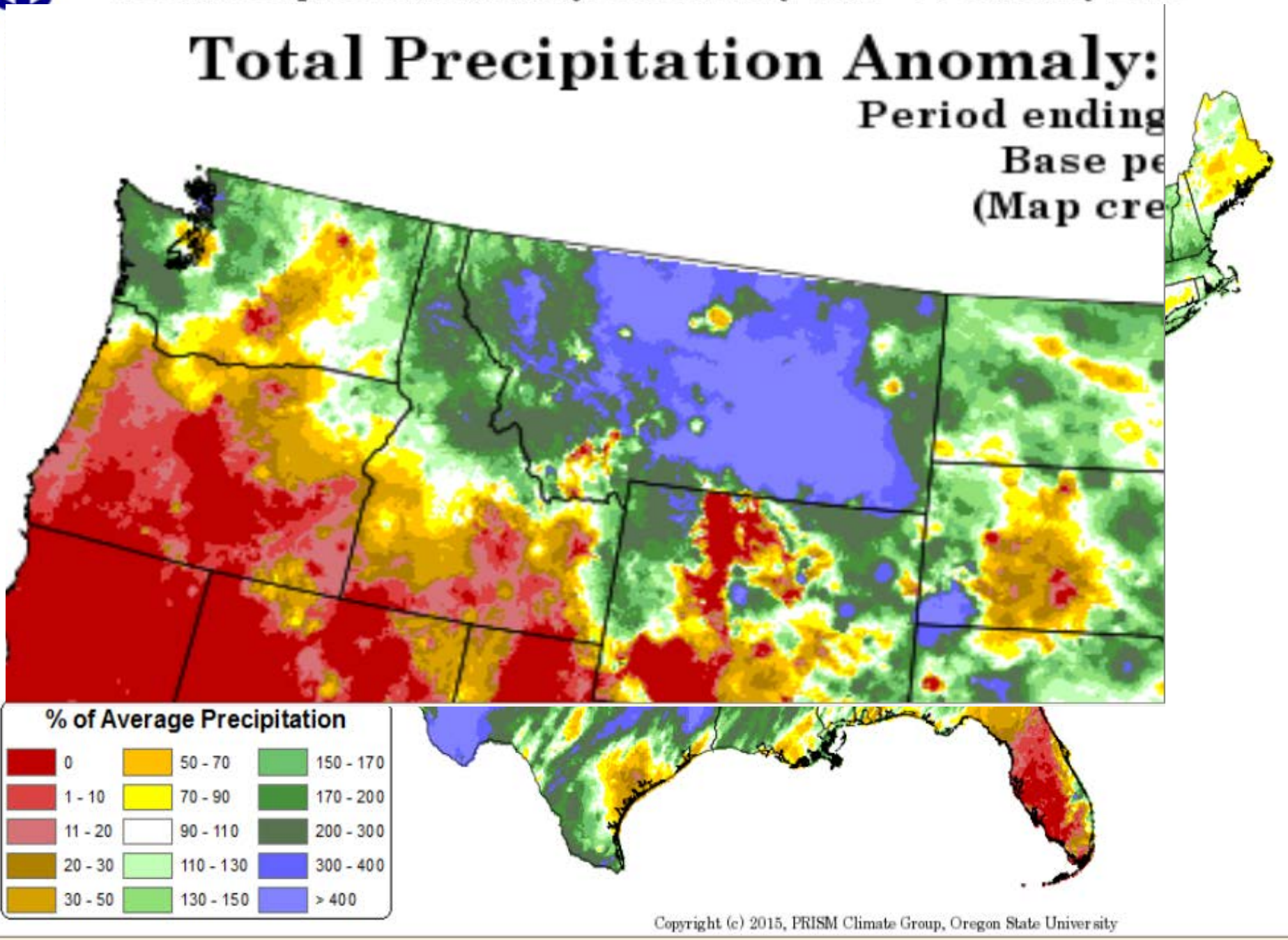
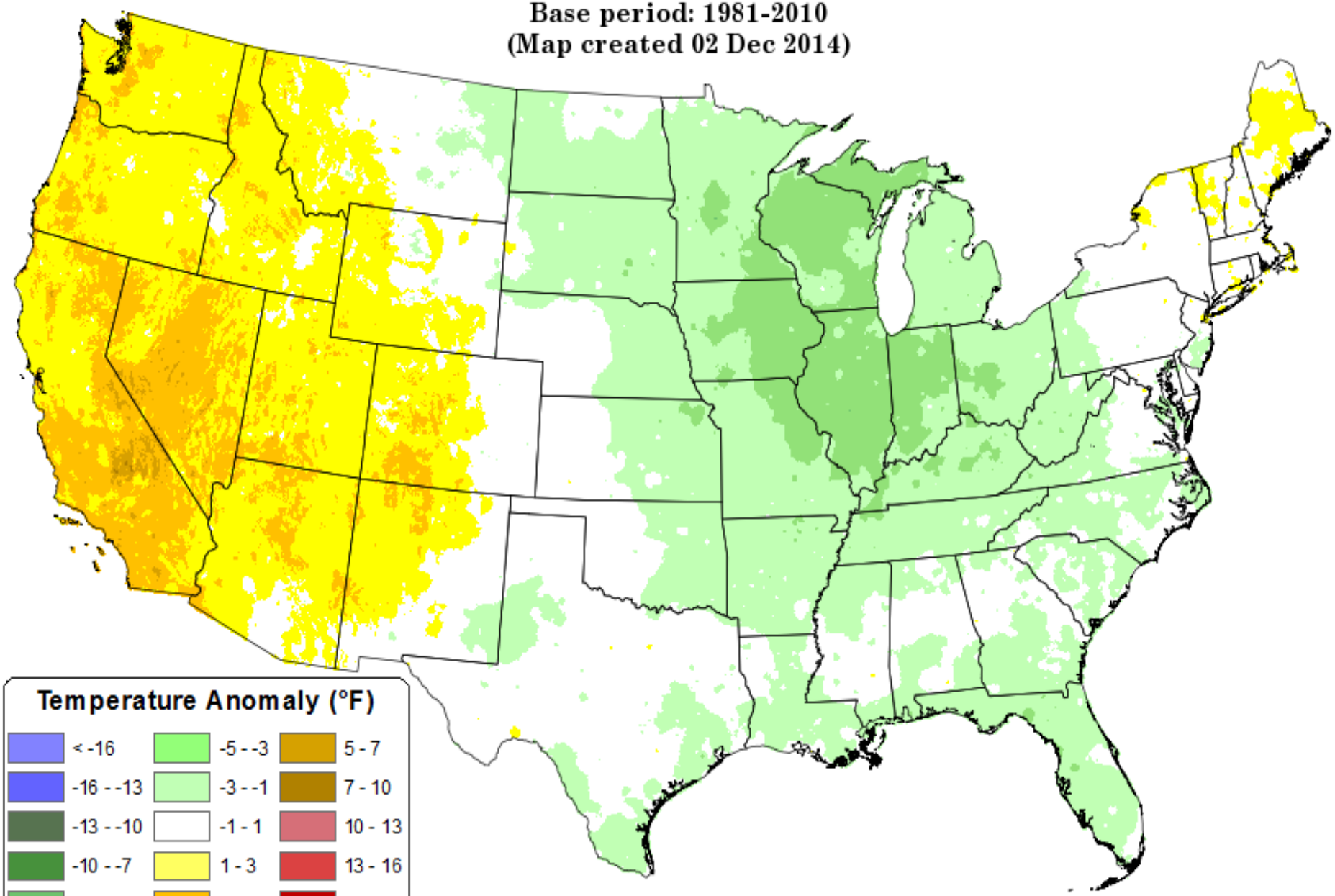
Total Precipitation Anomaly: 01 January 2015 - 07 January 2015



Daily Mean Temperature Anomaly: September 2014 - November 2014

Period ending 7 AM EST 30 Nov 2014
Base period: 1981-2010
(Map created 02 Dec 2014)



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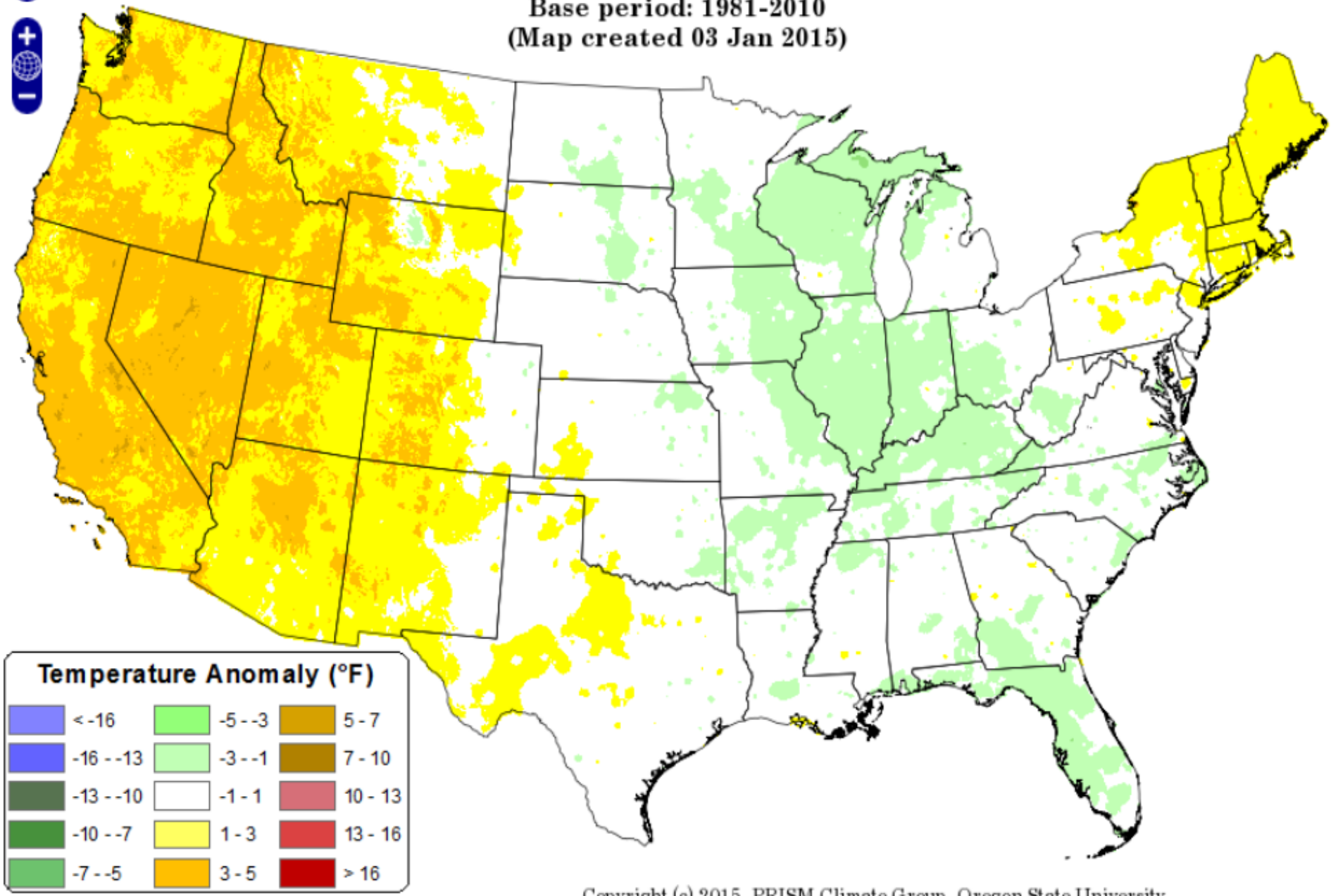
Daily Mean Temperature Anomaly: October 2014 - December 2014

Period ending 7 AM EST 31 Dec 2014
Base period: 1981-2010
(Map created 03 Jan 2015)



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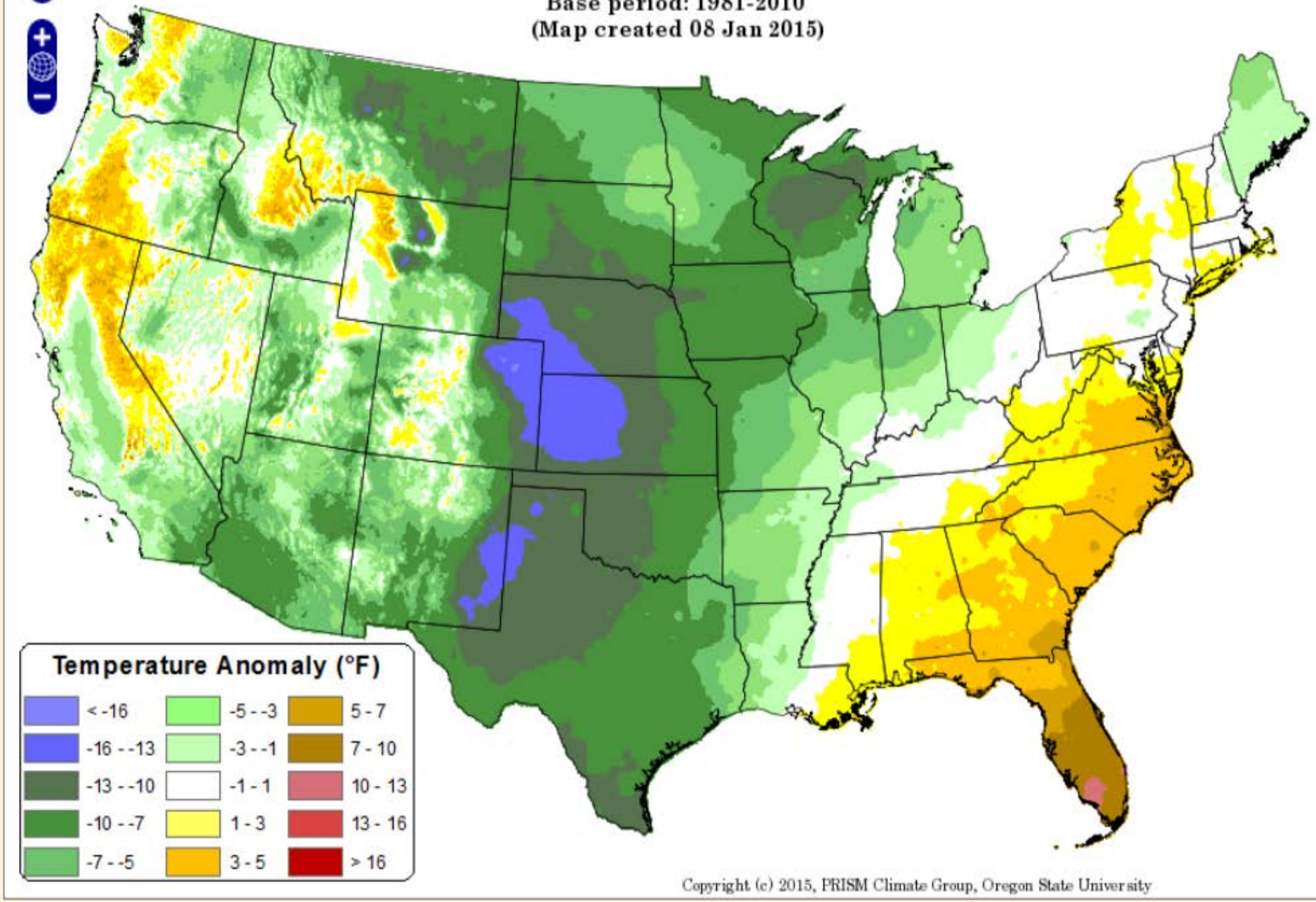
Daily Mean Temperature Anomaly: 01 January 2015 - 07 January 2015

Period ending 7 AM EST 07 Jan 2015
Base period: 1981-2010
(Map created 08 Jan 2015)



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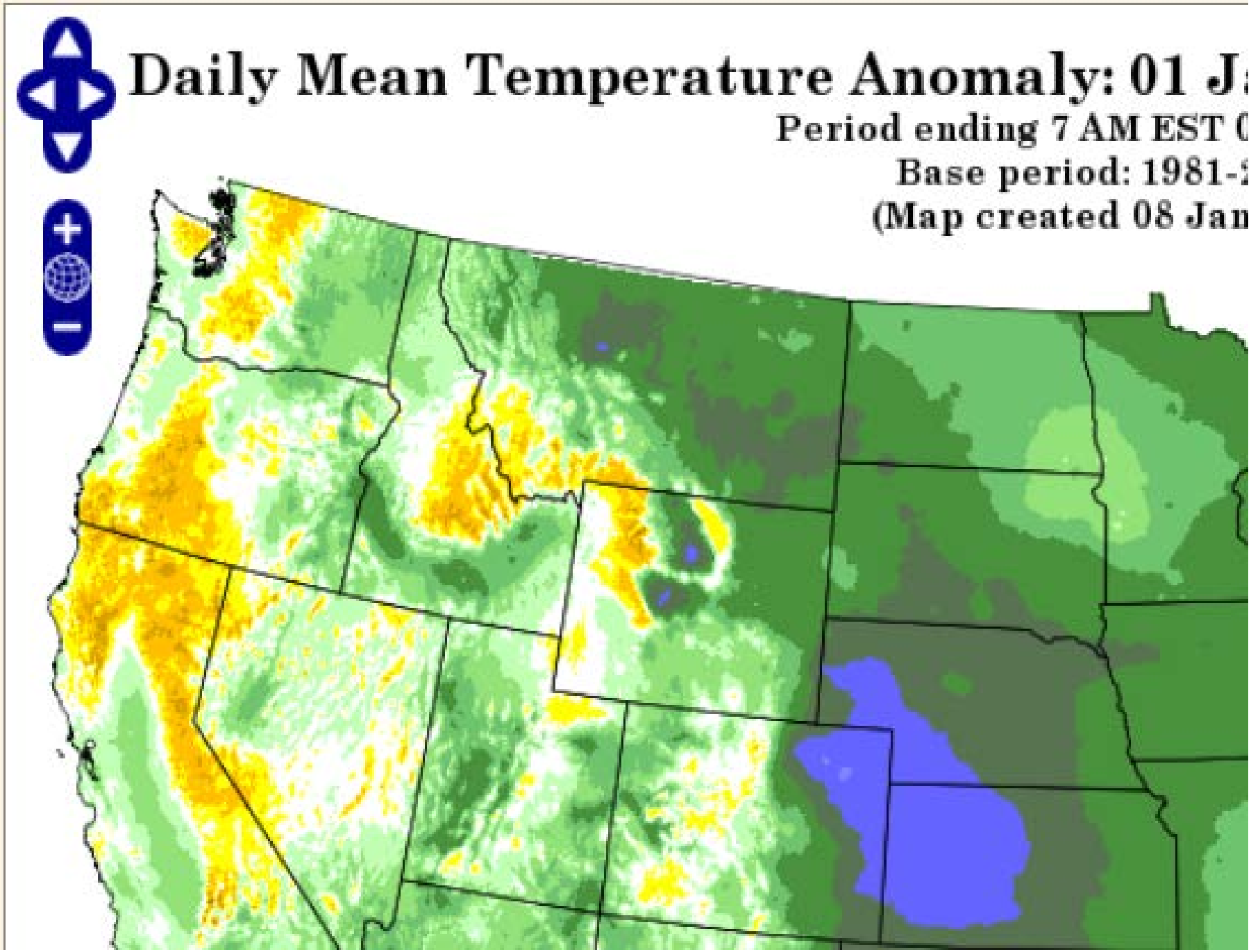
Daily Mean Temperature Anomaly: 01 J
Period ending 7 AM EST
Base period: 1981-
(Map created 08 Jan

Replacing & Returning 4” of SWE on Emigration Summit’s Flat Snow Pillow

Dec 11, 2014

Questions?