

NWS Form E-5 U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE MONTHLY REPORT OF HYDROLOGIC CONDITIONS	HYDROLOGIC SERVICE AREA: Pocatello, Idaho
	REPORT FOR: MONTH: May YEAR: 2015
TO: Hydrologic Operations Division, W/OH2 National Weather Service National Oceanic and Atmospheric Administration Silver Spring, Maryland 20910	SIGNATURE Corey Loveland Service Hydrologist
DATE: June 11, 2015	
When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts and hydrologic products issued (NWS Instruction 10-924).	



An X in this box indicates that no flooding has occurred for the month within this hydrologic service area.

Overview:

May brought an abrupt change to the ongoing dry precipitation pattern across the Hydrologic Service Area (HSA), where we welcomed much needed moisture to southeastern Idaho. Albeit being rain, it was still a relief to the dry pattern giving us much needed moisture to the parched soils. Indeed it has turned the landscape and mountainsides into a beautiful lush green. Overall, about four to six inches of precipitation fell across the mountainous and Caribou Highland area of the southeast corner of the state and about two to five inches fell across the Snake River plain according to AHPS data. Please see the note below regarding percent of normal precipitation for May. Temperature departures from normal for May show that across the HSA, temperatures have cooled down a bit and were mostly -1 to 3 degrees F above normal within the HSA. Mean average temperatures ranged from 40 to 58 degrees F as well. The Minidoka Dam station had 3 days of average temperatures over 65 degrees F during May.

Water supply volume forecasts for the April through September timeframe are well below normal across the HSA ranging from 26 to 86% of average for the NWRFC forecasts. Reservoirs are near full in the upper Snake and surface water irrigation use has subsided recently which should prolong the water supply for southern Idaho, but water may be scarce for next year depending on the outcome of the snowpack season over next winter. Again, irrigation shortages should occur in the Big/Little Wood, Big Lost and Southside basins.

As far as the short-term 8 to 14 day Climate Prediction Center Outlook is concerned, the forecast is near normal to a 40 percent chance of above normal temperatures in eastern Idaho (getting warmer in the south) and a near normal to 33 percent chance of below normal precipitation in south central Idaho. The one-month forecast graphics are found below. For the three-month outlook, the temperatures are forecast to warm up again in eastern Idaho; ranging from 33 to 40 percent chance of warmer than normal temperatures (getting warmer as you head west) and for precipitation, the outlook is for a wetter than normal summer with a 33 percent chance of above normal precipitation across all of southeastern Idaho.

Of the data available for the month, the station within the HSA reaching the highest 24-hour temperature was the Pocatello 2 NE COOP station reaching 90°F on the 31st. The station (non-SNOTEL) with the lowest recorded temperature was the Stanley COOP station at 15°F on May 10th. The highest recorded 24-hr precipitation (non-SNOTEL) occurred at the Ashton COOP station where 1.85 inches fell on the 17th. The highest recorded precipitation total (non-SNOTEL) occurred at the Bern COOP where 6.40 total inches was

recorded for the month. The Howell Canyon and Slug Creek Divide SNOTELs recorded 10.00 and 8.00 inches of total precipitation respectively for the month.

Reservoirs last month decreased capacity overall by around 8% in the upper Snake River basin system (a decrease of about 315 KAF occurred over the month and is currently sitting at 91% of capacity overall). Compared to last year at this time, it was about 78% of capacity. Heavy irrigation use from the reservoirs have been delayed this summer with the milder temperatures and above normal rainfall for May. According to NRCS and U.S. Bureau of Reclamation reservoir data, the most notable increase in storage were Jackson Lake and Grassy Lake reservoirs increasing percent capacity by 16 and 10% respectively. Both Little Wood and Lake Walcott decreased capacity by 4% over the month. With the delayed use of irrigation, the upper Snake reservoirs are nearly full.

Current streamflow conditions in eastern Idaho are mostly near normal for monthly streamflows for the majority of the unregulated streams (see graphic below). Most of the above normal rainfall has been absorbed by soils, vegetation and lost via evapotranspiration during the May.

Drought conditions across eastern Idaho have improved slightly since last month's assessment. Severe drought conditions have decreased over the southern portions of Twin Falls and Cassia counties. Currently, about 9 percent and 24 percent of the state is in Extreme and Severe drought respectively. The U.S. Seasonal Drought Outlook shows drought removal likely in the Bear River basin and near the Continental Divide with drought remaining but improving in the upper Snake River plain with the drought persisting or intensifying in the central mountains.

According to the Idaho NRCS Snow Survey June 1st Idaho Surface Water Supply Index (SWSI); combining streamflow volume forecasts and reservoir storage (where appropriate), rates the greatest valued basin for water supply within the HSA as being the Bear River basin. The basin was given a SWSI rating of -0.5 (near normal). This rating reflects overall water availability in the basins and are mostly used for irrigational planning purposes. The two lowest ranked basins within the HSA are the Little Wood and Little Lost basins both rated at -3.3, which is much below normal.

For more information on the Idaho Water Supply June 1st Outlook please visit:
<ftp://ftp.wcc.nrcs.usda.gov/states/id/webftp/wsor/2015/borid615.pdf>

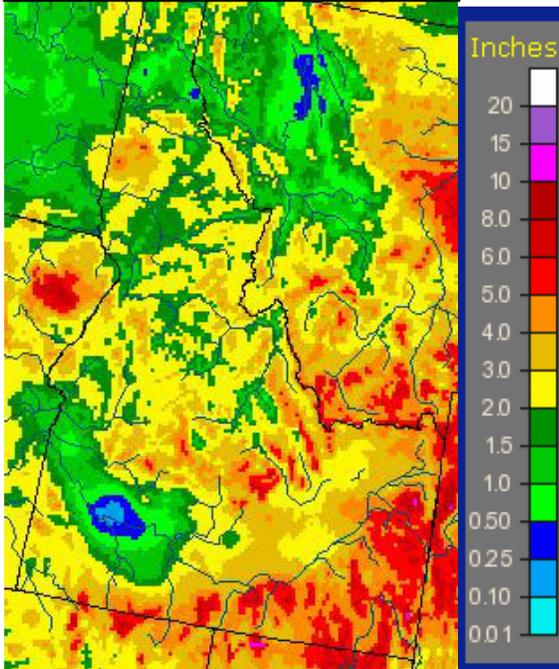
Please see NWRFC and CBRFC Official June 1st and current water supply season streamflow volume forecasts (Apr-Sept) and the NRCS Idaho Surface Water Supply Index (SWSI):

www.nwrfc.noaa.gov/ws
www.cbrfc.noaa.gov/lmap.php?interface=wsup
<ftp://ftp.wcc.nrcs.usda.gov/states/id/webftp/swsi/tables/Jun/SWSI06.pdf>

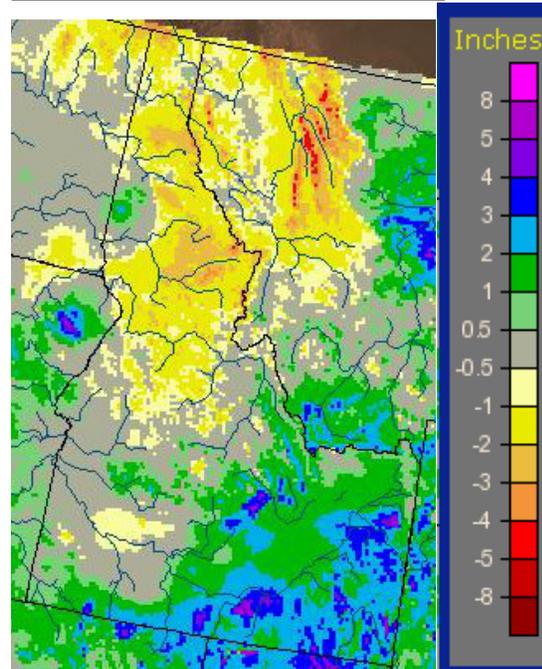
For a table format of the current volume forecasts and current runoff for WFO PIH:
www.nwrfc.noaa.gov/water_supply/ws_report.cgi

Precipitation:

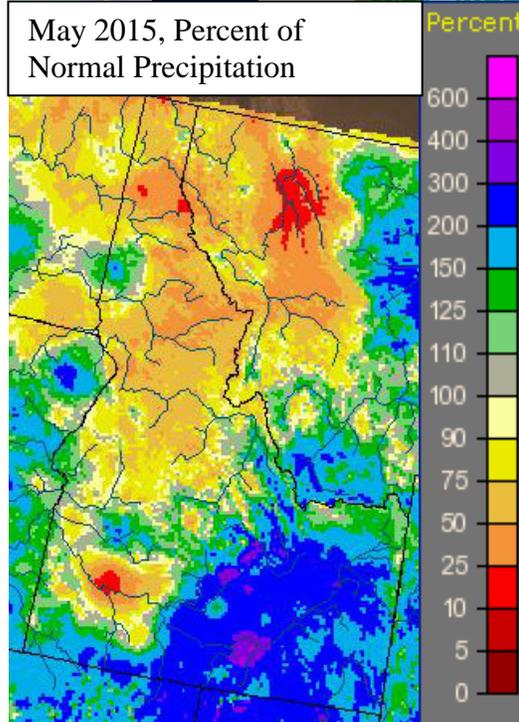
May 2015, Observed
Precipitation



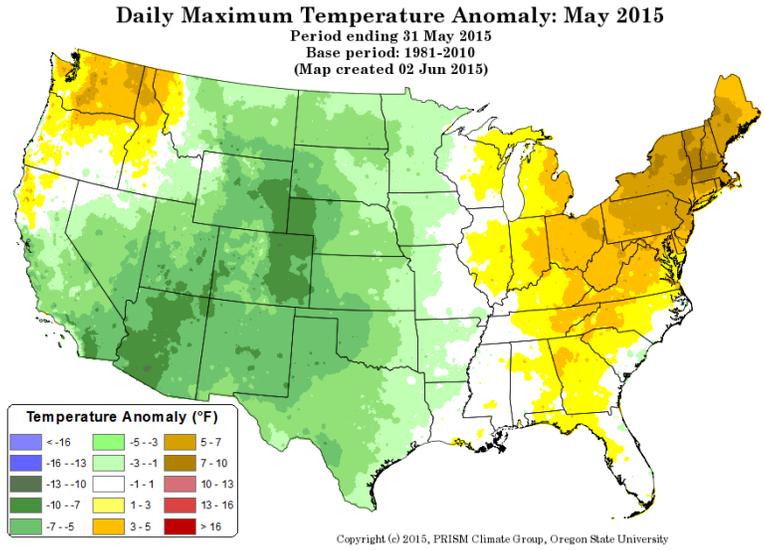
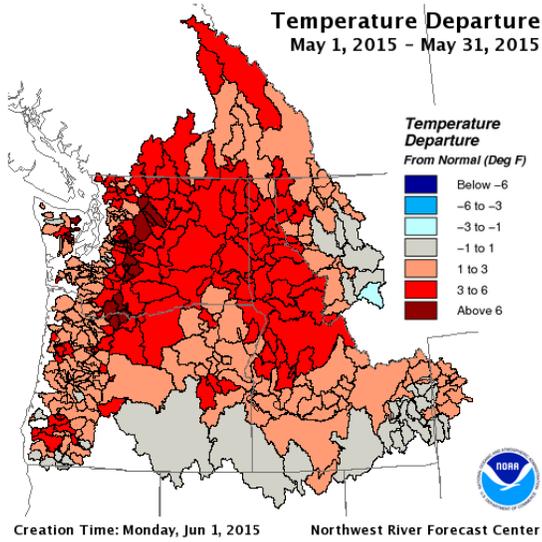
May 2015, Departure from
Normal Precipitation



May 2015, Percent of
Normal Precipitation

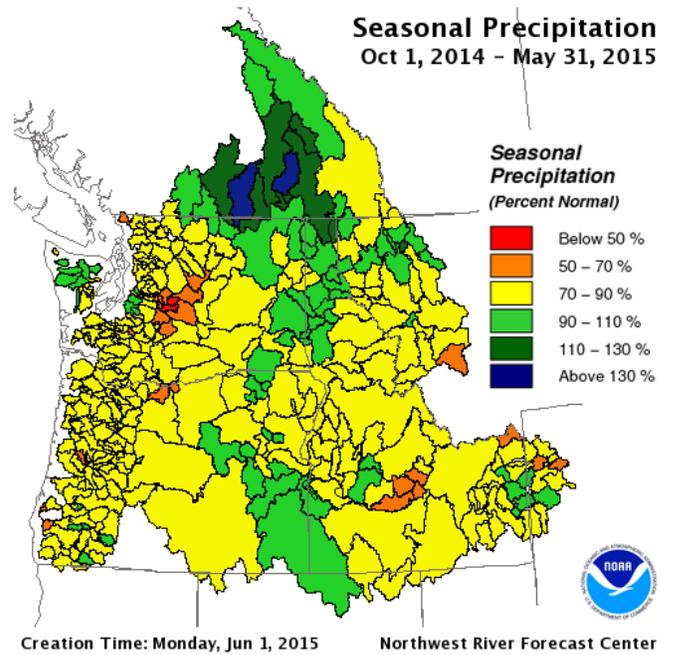
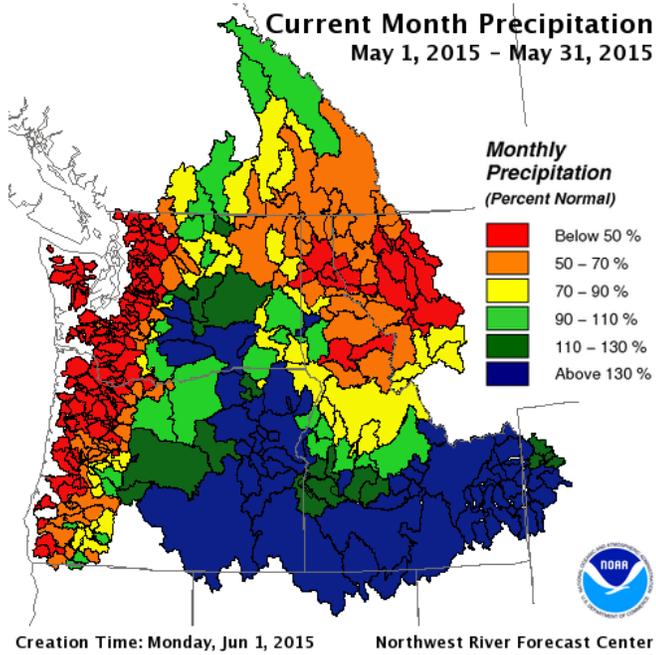


water.weather.gov/precip/index.php



nwrfc.noaa.gov/WAT_RES_wy_summary/20150601/CurMonMAT_2015May31_2015060116.png

prism.oregonstate.edu/

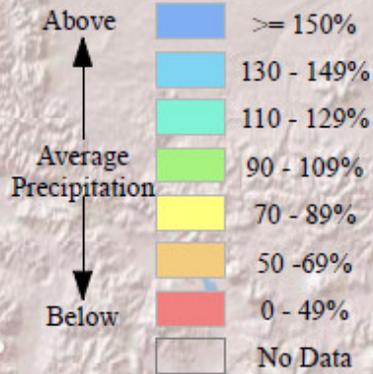


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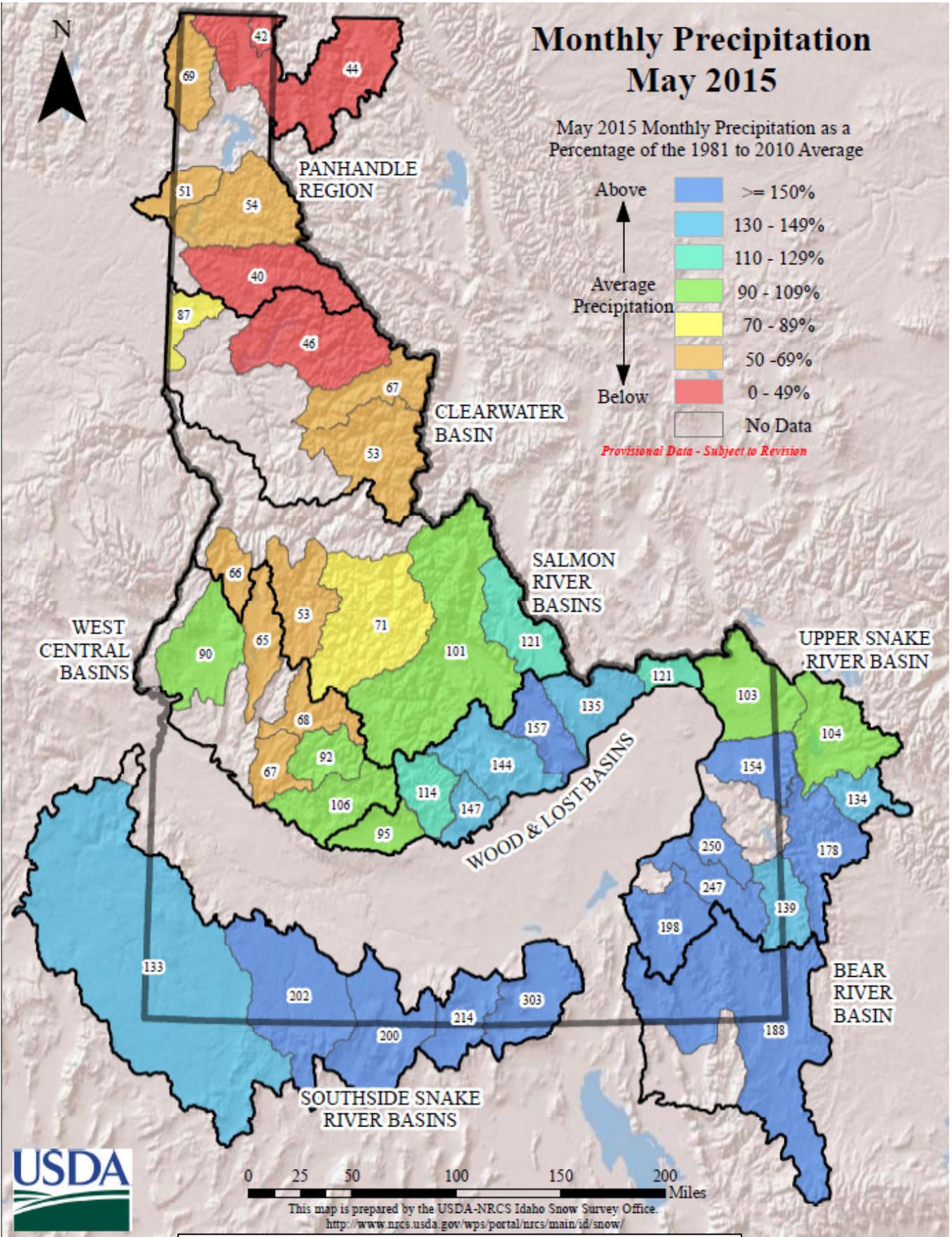
nwrfc.noaa.gov/WAT_RES_wy_summary/20150601/SeasonalMAP_2015May31_2015060116.png

Monthly Precipitation May 2015

May 2015 Monthly Precipitation as a Percentage of the 1981 to 2010 Average



Provisional Data - Subject to Revision



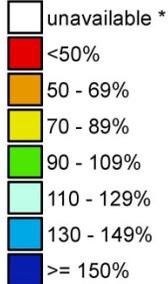
This map is prepared by the USDA-NRCS Idaho Snow Survey Office.
<http://www.nrcs.usda.gov/wps/portal/nrcs/main/id/snow/>

<ftp://ftp.wcc.nrcs.usda.gov/states/id/webftp/wsor/2015/borid615.pdf>

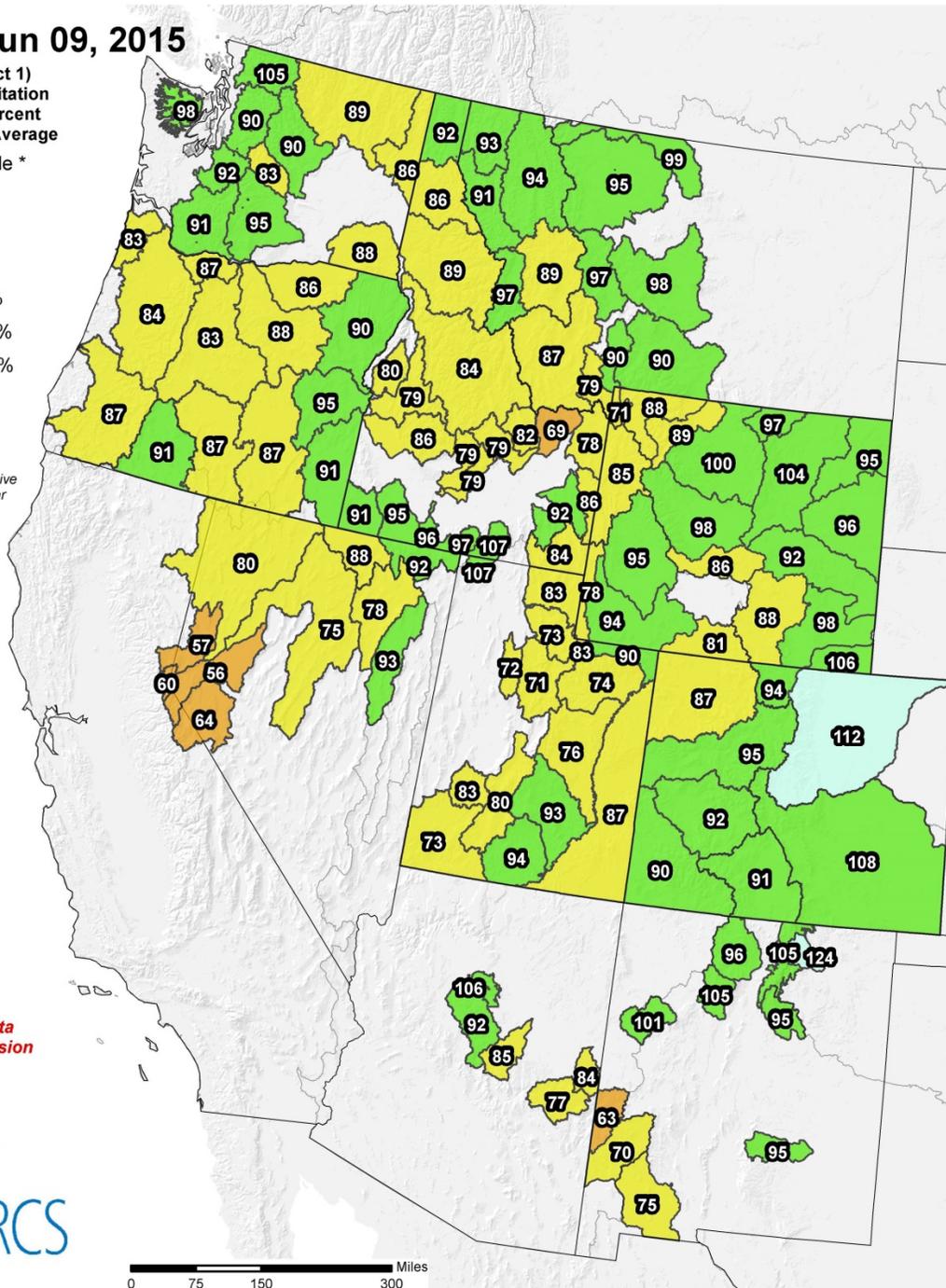
Westwide SNOTEL Water Year (Oct 1) to Date Precipitation % of Normal

Jun 09, 2015

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



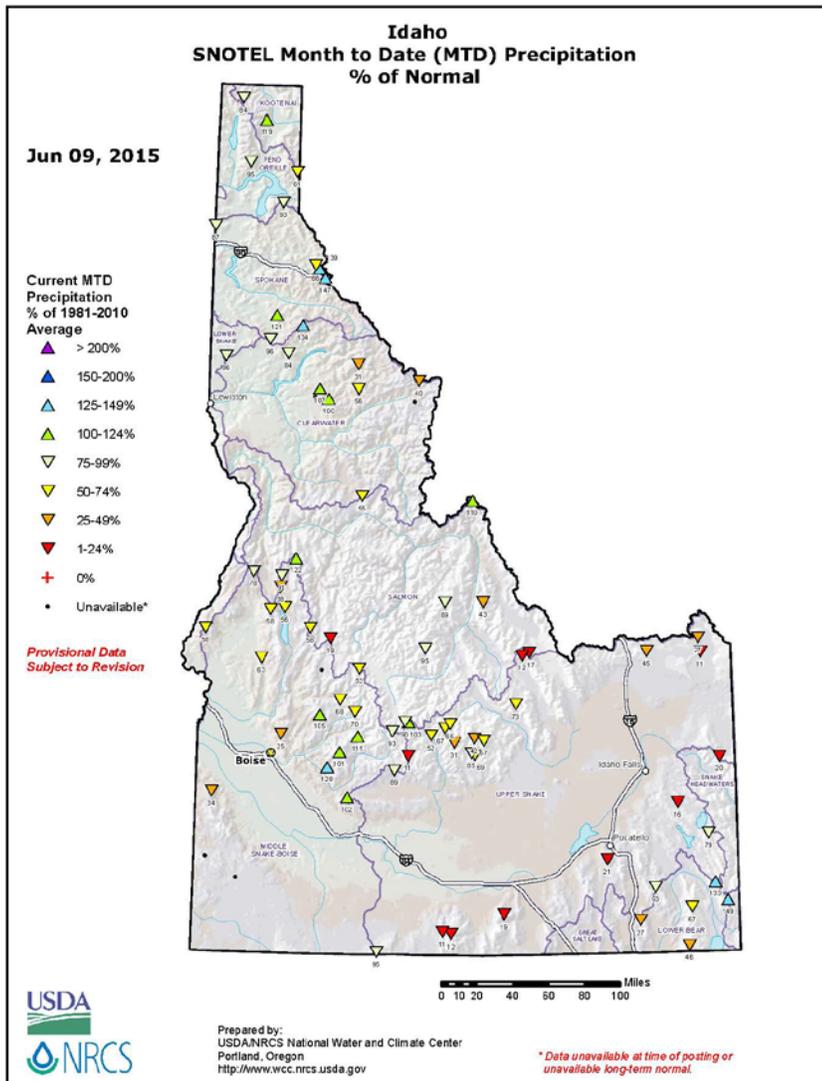
Provisional data
subject to revision



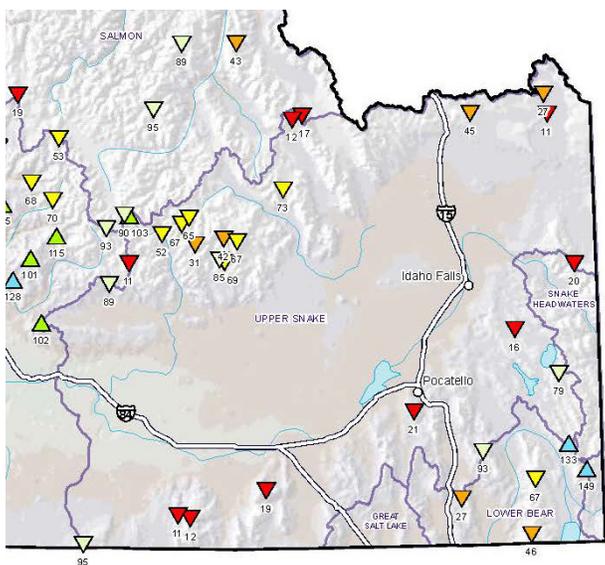
The water year to date precipitation percent of normal represents the accumulated precipitation found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

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

wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/west_wytdprecpcnormal_update.pdf



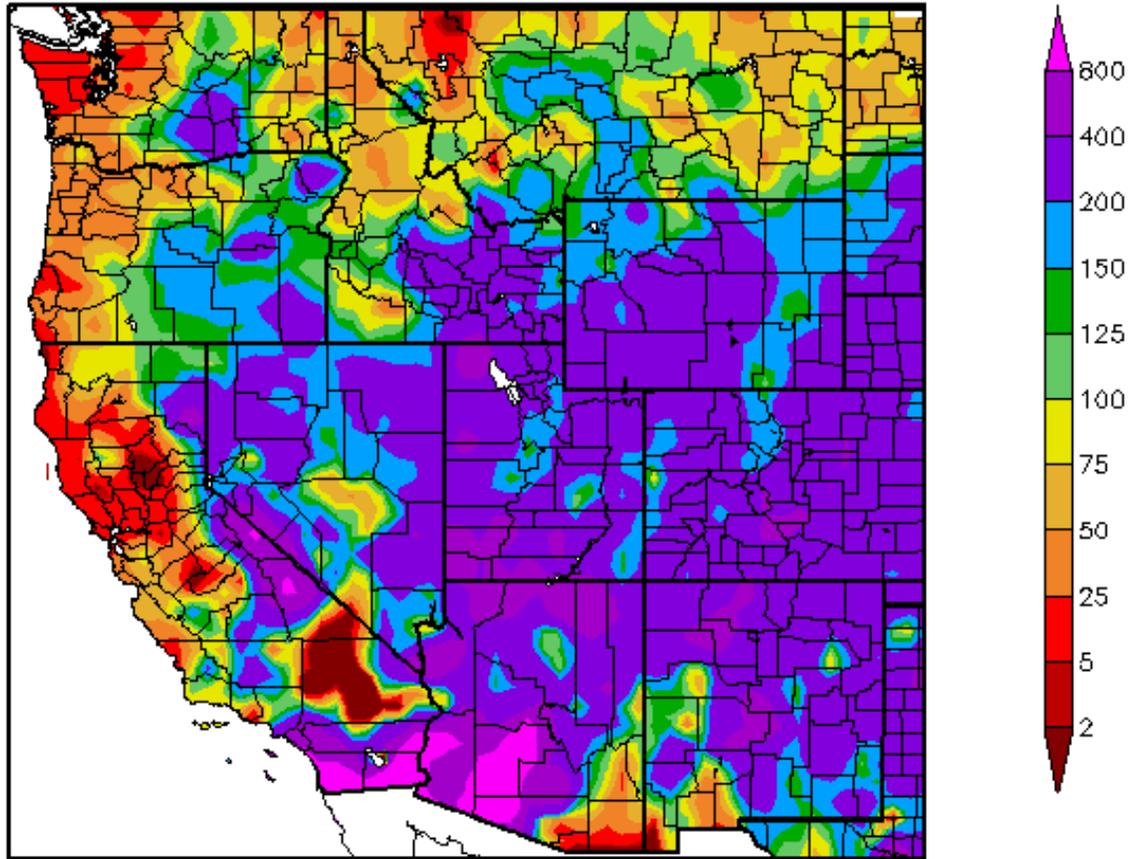
wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/id_mtdprecptnormal.pdf



**SNOTEL MTD % of Normal
Precipitation for end of May 2015**
(image is cropped from above image)

May's precipitation pattern did an about face to a wet pattern across the HSA; the entire eastern part of the state received well above normal precipitation; especially eastern Cassia county. The majority of the HSA received over 250% of normal for the month. Most of the West received this wet pattern including: NV, UT, WY, CO, AZ and NM, although it continued to be dry along the west coast and the northern tier.

Percent of Normal Precipitation (%) 5/1/2015 – 5/31/2015



Generated 6/5/2015 at HPRCC using provisional data.

Regional Climate Centers

hprcc.unl.edu/maps/current/index.php?action=update_type&map_type=

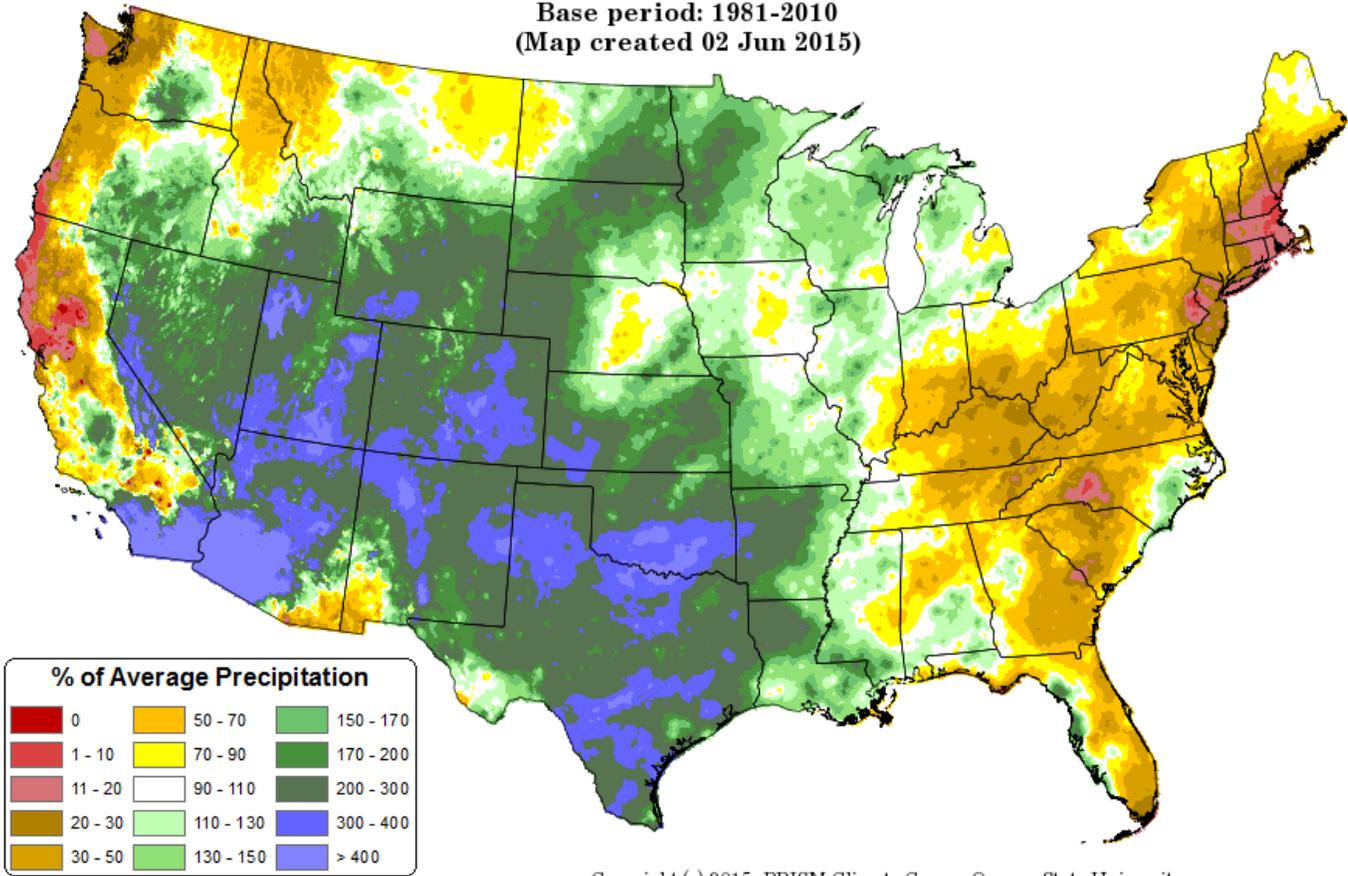
April CONUS Precipitation Anomaly:

Total Precipitation Anomaly: May 2015

Period ending 31 May 2015

Base period: 1981-2010

(Map created 02 Jun 2015)

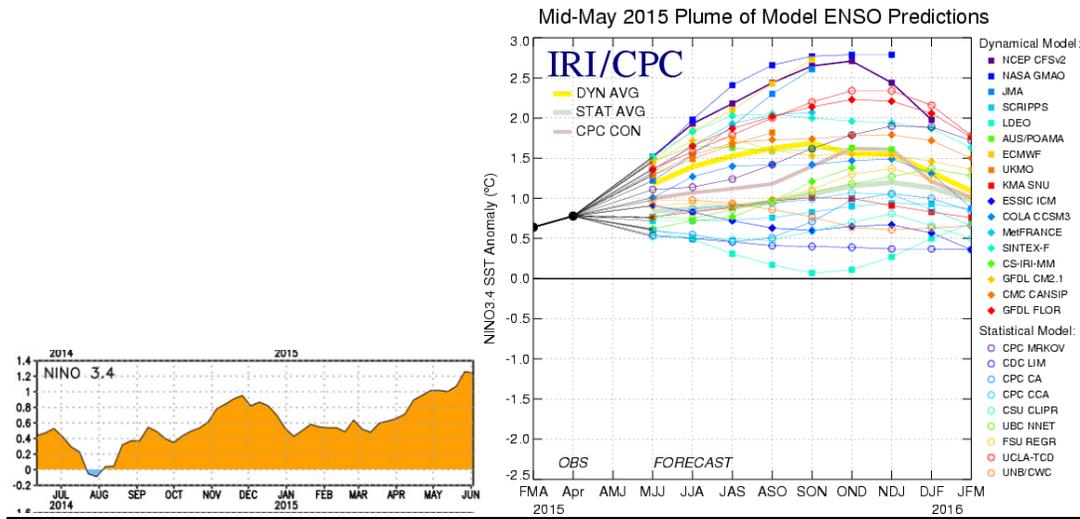


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prism.oregonstate.edu/comparisons/anomalies.php

ENSO Update:

Latest Observed SST Departure: Niño 3.4 ~ 1.2 Deg C



cpc.ncep.noaa.gov, iri.columbia.edu/climate/ENSO and cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.pdf

CPC Synopsis: El Niño conditions continue. There is an approximately 90% chance that El Niño conditions continue in the Northern Hemisphere during summer 2015.

Note: Positive equatorial sea surface temperature (SSTs) anomalies continue across the Pacific Ocean. MJO remains weak and the AO is mostly positive.

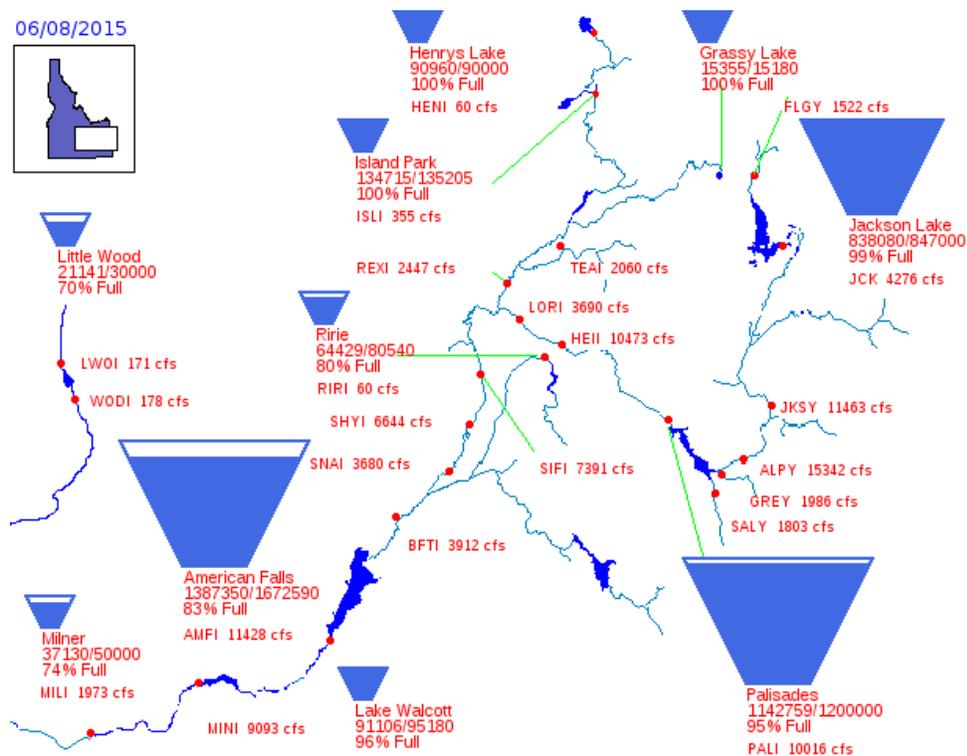
Reservoirs:

Reservoir	% Capacity April 30 ¹	% Capacity May 31 ²	Percent Change	% of Average ²	% of Average Last Year ²
Henrys Lake	98	99	1	105	102
Island Park	100	98	-2	100	95
Grassy Lake	91	101	10	108	100
Jackson Lake	84	100	16	140	105
Palisades	85	85	0	116	83
Ririe	71	78	7	90	102
Blackfoot	57	59	2	85	92
American Falls	82	85	3	97	95
Bear Lake	46	49	3	90	90
Magic	43	42	-1	61	55
Little Wood	70	66	-4	73	58
Mackay	83	80	-3	103	75
Oakley	30	32	2	65	68
Lake Walcott	100 ³	96 ⁴	-4	n/a	n/a
Milner	73 ³	74 ⁴	1	n/a	n/a

Source: (1) NRCS April 30, 2015; (2) NRCS May 31, 2015.
 (3) US Bureau of Reclamation (BOR) May 19, 2015 (4) BOR June 8, 2015

wcc.nrcs.usda.gov/ftpref/support/water/SummaryReports/ID/BRes_6_2015.pdf

06/08/2015

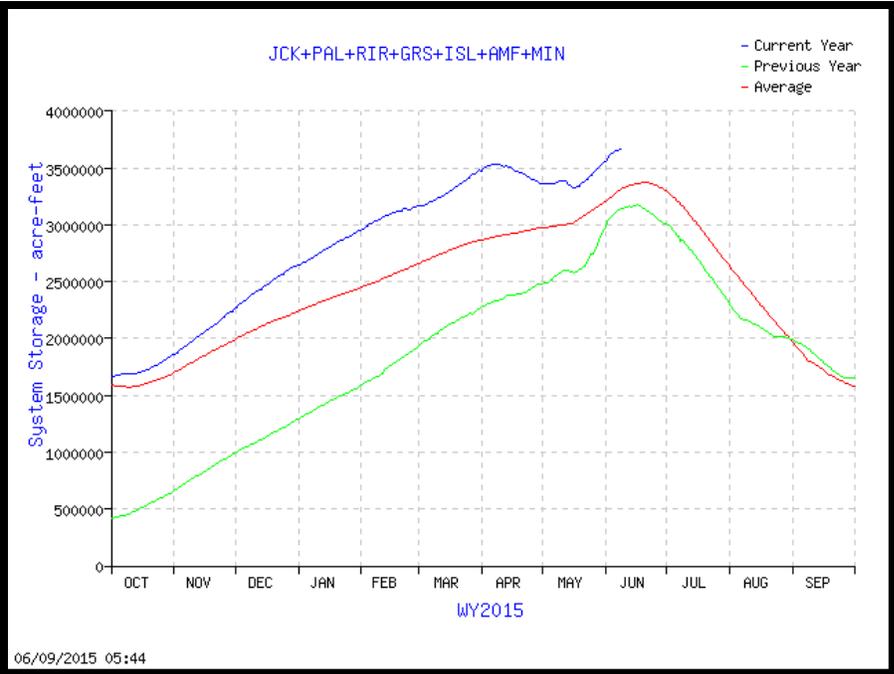


**91% of Capacity
in Upper Snake
River System**
(Jackson Lake, Palisades,
Grassy Lake, Island Park,
Ririe, American Falls &
Lake Walcott)

usbr.gov/pn/hydromet/burtea.html

Upper Snake River:
Total Space Available: 371,902 AF
Total Storage Capacity: 4,045,695 AF

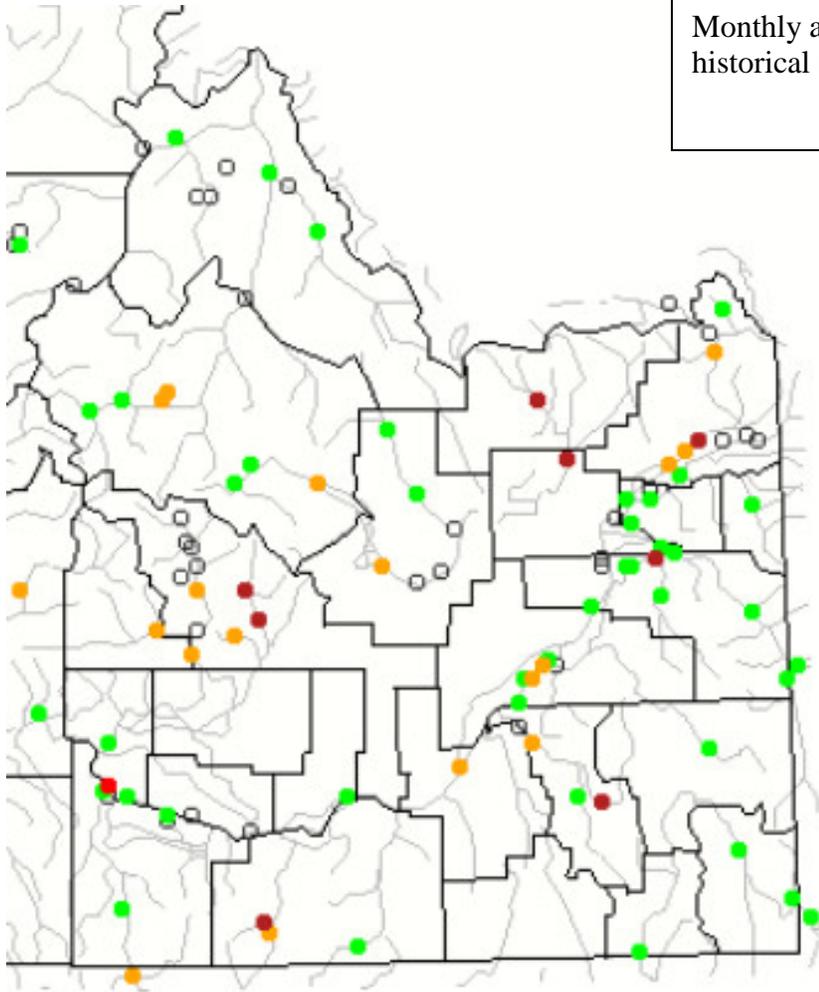
**Graph of Upper Snake River
Current Total System Reservoir
Storage**



usbr.gov/pn-bin/graphwy2.pl?snasys_af

Streamflow:

Monthly average streamflow compared to historical average streamflow for May 2015.



Explanation - Percentile classes							
	●	●	●	●	●	●	○
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

waterwatch.usgs.gov/?m=mv01d&r=id&w=map

Drought Information:

**U.S. Drought Monitor
Idaho**

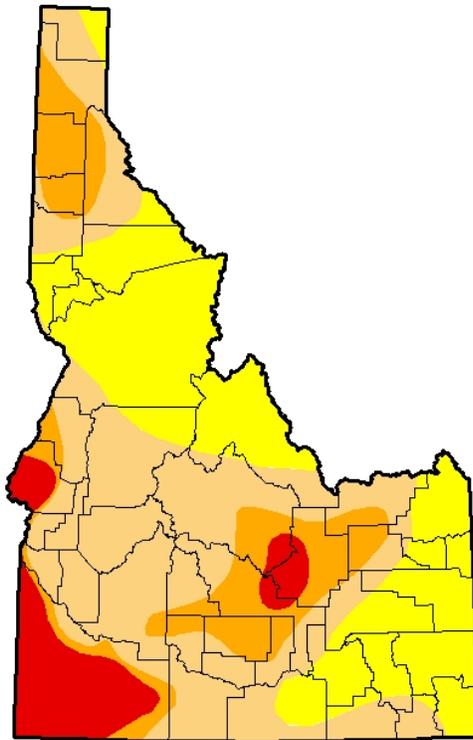
June 9, 2015

(Released Thursday, Jun. 11, 2015)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	65.15	24.01	9.19	0.00
Last Week <i>6/2/2015</i>	0.00	100.00	65.15	26.19	9.19	0.00
3 Months Ago <i>3/10/2015</i>	35.11	64.89	35.12	15.42	2.41	0.00
Start of Calendar Year <i>12/31/2014</i>	23.76	76.24	41.73	18.49	3.40	0.00
Start of Water Year <i>9/30/2014</i>	13.19	86.81	52.39	26.35	3.53	0.00
One Year Ago <i>6/10/2014</i>	36.50	63.50	41.29	28.59	1.74	0.00



Intensity:

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

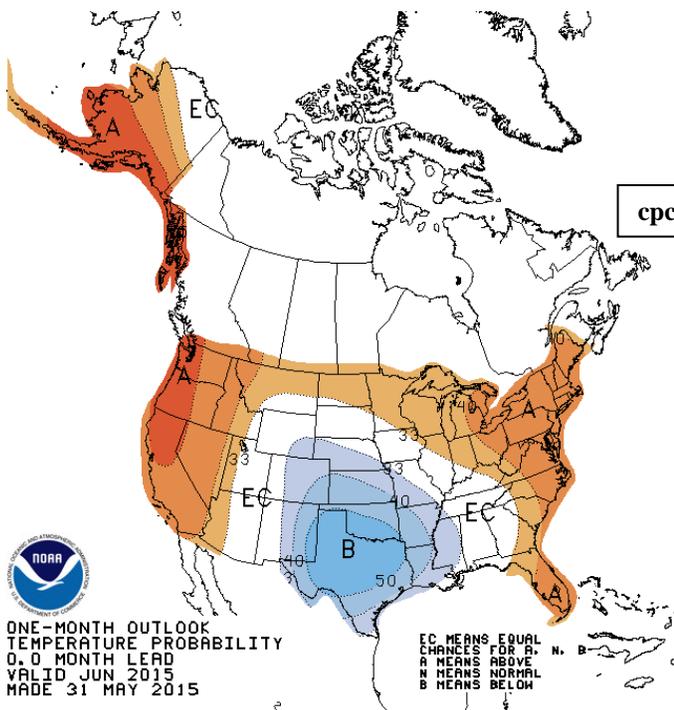
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

David Miskus
NOAA/NWS/NCEP/CPC



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

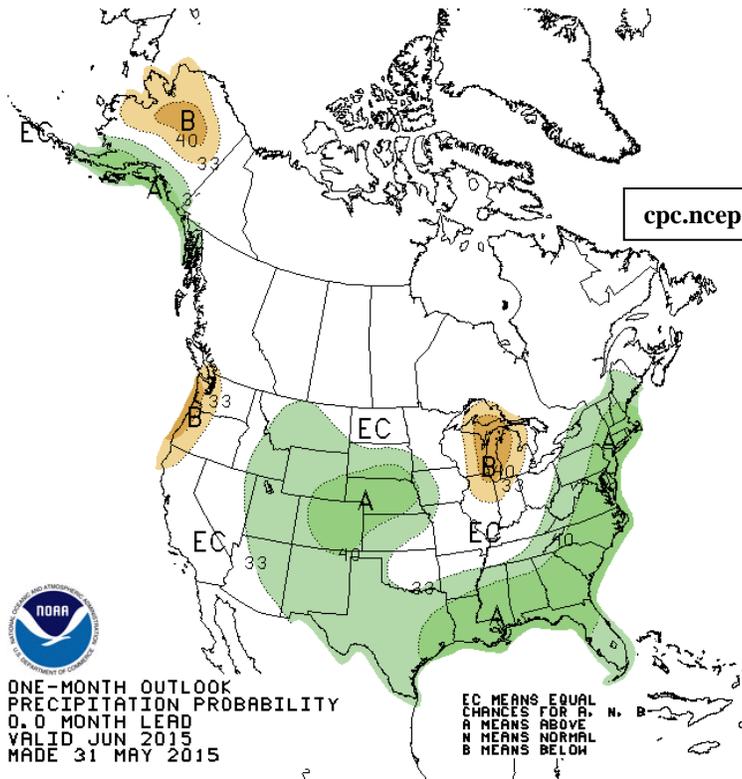


cpc.ncep.noaa.gov/products/predictions/30day/off15_temp.gif



ONE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.0 MONTH LEAD
VALID JUN 2015
MADE 31 MAY 2015

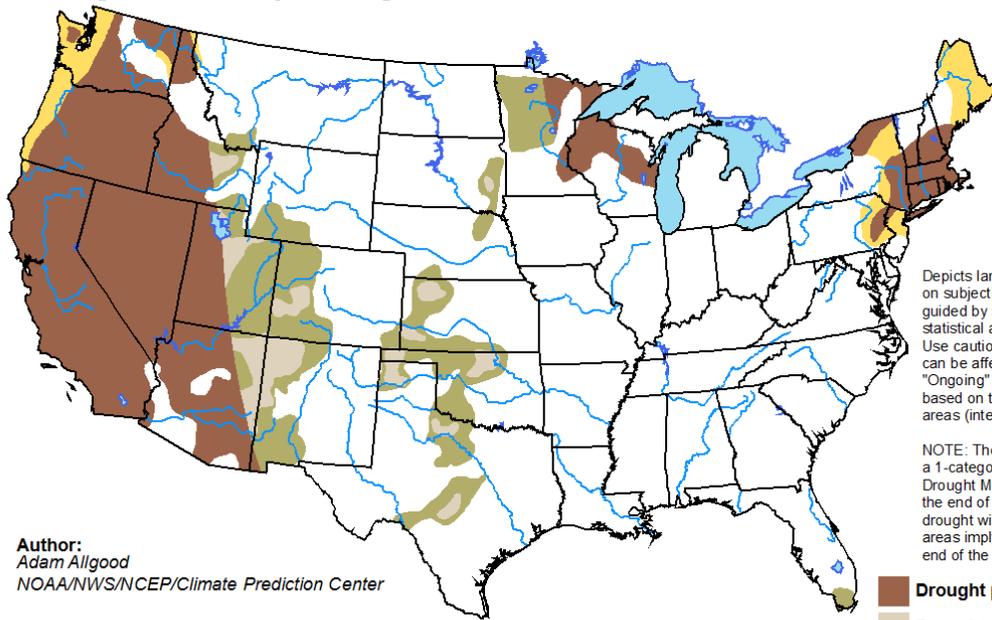
EC MEANS EQUAL
CHANCES FOR A,
N MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW



cpc.ncep.noaa.gov/products/predictions/30day/off15_prpc.gif

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for May 21 - August 31, 2015
Released May 21, 2015

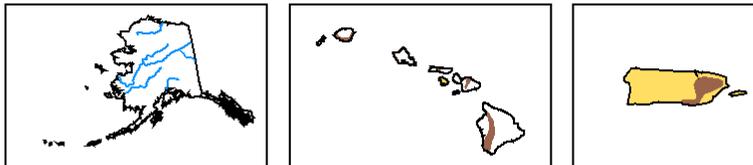


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Author:
Adam Allgood
NOAA/NWS/NCEP/Climate Prediction Center

- Drought persists/intensifies
- Drought remains but improves
- Drought removal likely
- Drought development likely

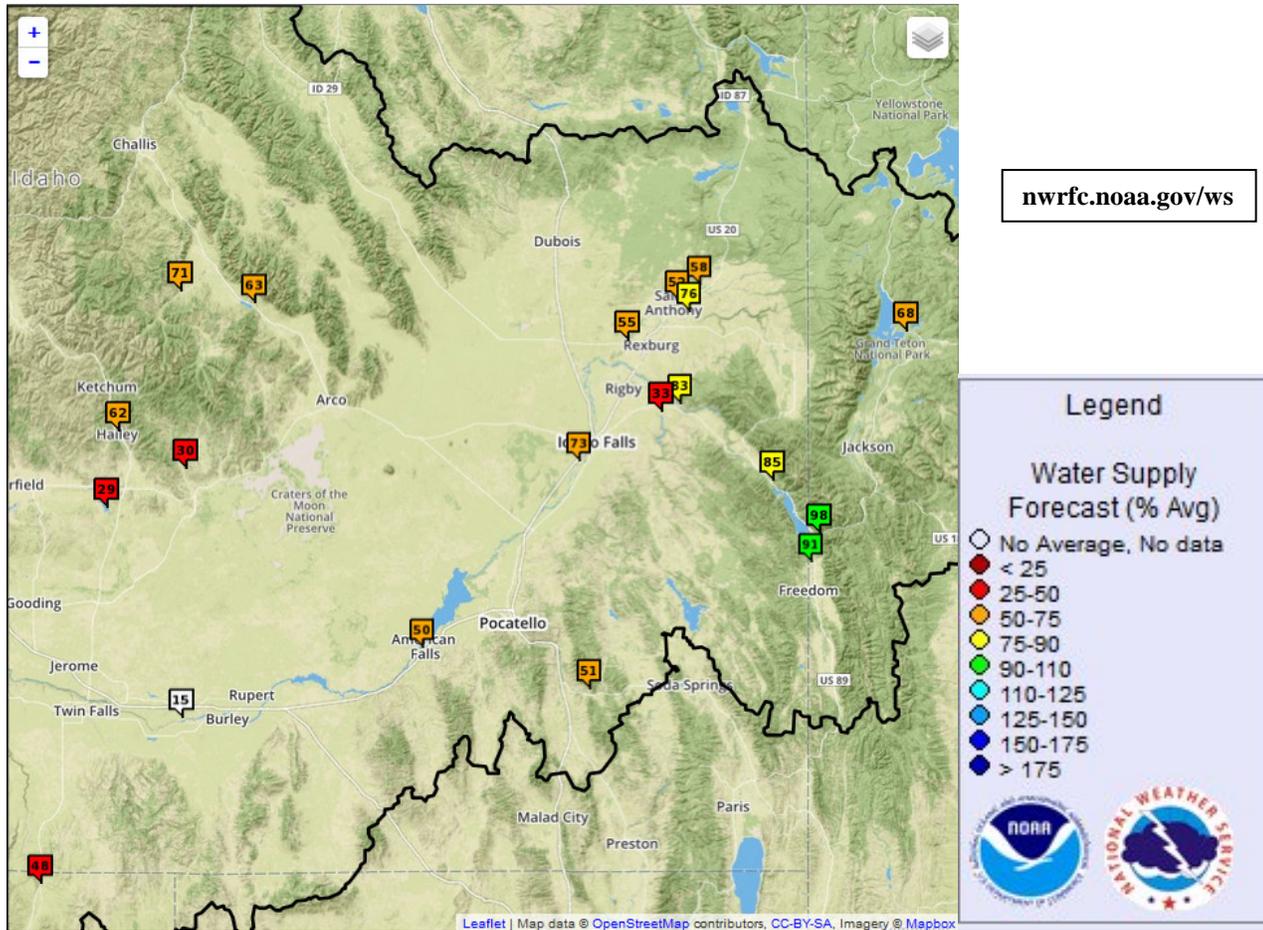


<http://go.usa.gov/hH7e>

cpc.ncep.noaa.gov/products/expert_assessment/season_drought.png

Water Supply:

NWRFC Water Supply Volume Forecast Map (6/9/15):



CBRFC Water Supply Forecast Report for Bear River basin (June 1 Forecast):

Water Supply Volume Percent Average/Median Condition
 ▲ <70 ▲ 70-90 ▲ 90-110 ▲ 110-130 ▲ >130 ▲ Regulated

Options (on/off): Plot
 Area: CBRFC Green Colorado San Juan Great Sevier Virgin Low Col WGRFC ABRFC

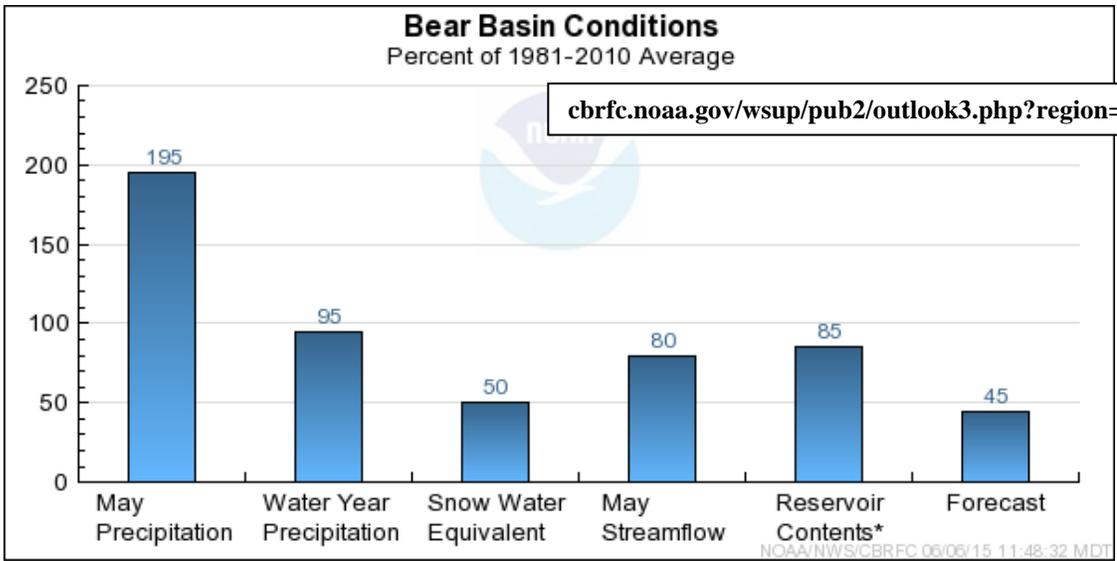
Columns (on/off): Area Sub Area NWS ID DS River Location Forecast Date Avg Cond Med Cond Forecast Period Min 90 MP 50 Max 10 Avg Med Pct Avg Pct Med

Click column heading to sort by that data. Click ID to view point info. Click Area, Sub Area, or Forecast Period to show only those points.

	NWS ID	River	Location	Forecast Date	Avg Cond	Med Cond	Forecast Period	Min 90	MP 50	Max 10	Avg	Med	Pct Avg	Pct Med
1	BERU1	Bear	Utah	2015-6-1	▲	▲	Apr 01-Jul 31	71	74	81	112	106	66	70
2	BERU1	Bear	Utah	2015-6-1	▲	▲	Jun 01-Jul 31	38	41	48	66	63	62	65
3	BEAW4	Bear	Woodruff Narrows Rsvr	2015-6-1	▲	▲	Apr 01-Jul 31	54	56	63	121	110	46	51
4	BEAW4	Bear	Woodruff Narrows Rsvr	2015-6-1	▲	▲	Jun 01-Jul 31	23	25	32	57	44	44	57
5	BORW4	Smiths Fork	Border	2015-6-1	▲	▲	Apr 01-Jul 31	82	84	88	89	80	94	105
6	BORW4	Smiths Fork	Border	2015-6-1	▲	▲	Jun 01-Jul 31	37	39	43	50	43	78	91
7	STDH1	Bear	Montpelier	2015-6-1	▲	▲	Apr 01-Jul 31	63	67	78	182	117	37	57
8	STDH1	Bear	Montpelier	2015-6-1	▲	▲	Jun 01-Jul 31	37	41	52	91	53	45	77

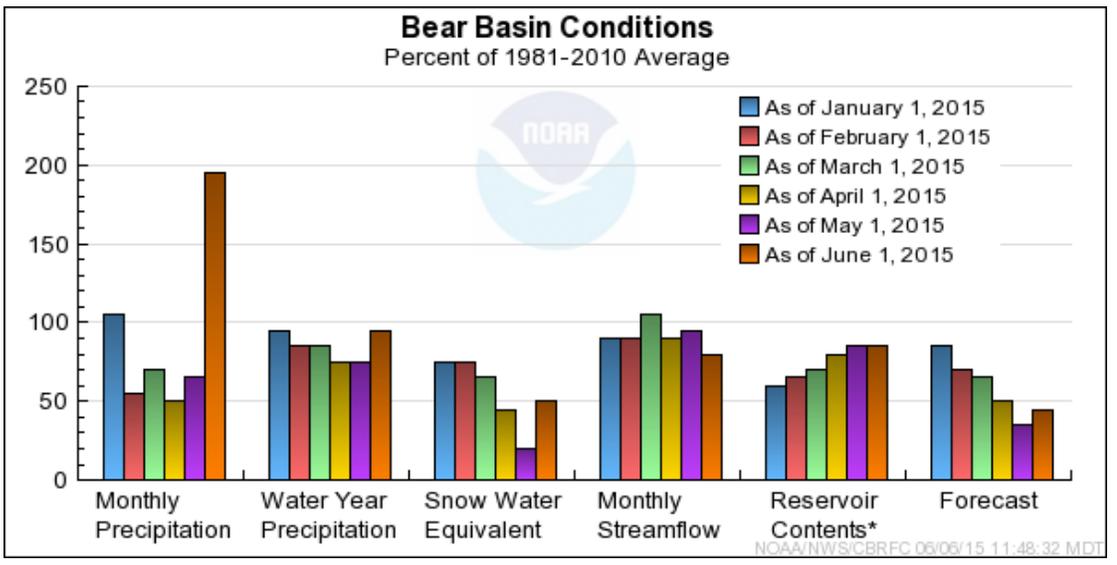
cbrfc.noaa.gov/rmap/wsup/wsulist.php

Bear River Basin Conditions:



Snow Water Equivalent in Percent of Median.

* Percent usable capacity, not percent average contents.



cbrfc.noaa.gov/wsup/pub2/graph/png/br.cond.2015.3.png

cc:
Mike Schaffner, Western Region HCSD
Joe Intermill, Hydrologist-in-Charge, Northwest River Forecast Center
Steve King, Development and Operations Hydrologist, Northwest River Forecast Center
Michelle Stokes, Hydrologist-in-Charge, Colorado Basin River Forecast Center
Greg Smith, Acting Service Coordination Hydrologist, Colorado Basin River Forecast Center
John Lhotak, Development and Operations Hydrologist, Colorado Basin River Forecast Center
Hydrometeorological Information Center
Dean Hazen, Meteorologist-in-Charge, Pocatello, Idaho
Dawn Harmon, Acting Science and Operations Officer, Pocatello, Idaho
Vern Preston, Warning Coordination Meteorologist, Pocatello, Idaho
Troy Lindquist, Senior Service Hydrologist, Boise, Idaho
Brian McInerney, Senior Service Hydrologist, Salt Lake City, Utah
Kevin Berghoff, Senior Hydrologist, Northwest River Forecast Center
Taylor Dixon, Hydrologist, Northwest River Forecast Center
Brent Bernard, Hydrologist, Colorado Basin River Forecast Center
PIH Mets/HMT's

End

cbl