

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: June YEAR: 2016
TO: Hydrologic Operations Division, W/OH2 National Weather Service National Oceanic and Atmospheric Administration Silver Spring, Maryland 20910	SIGNATURE Corey Loveland Service Hydrologist
DATE: July 18, 2016	
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:

June brought well below normal precipitation across the Hydrologic Service Area (HSA), particularly the Snake River plain, mostly 0.1 to one inch across the area. Mostly below 50 percent of normal fell. The greater amount of precipitation fell near the Mud Lake area. Temperature departures from normal for June show that across the HSA, we ranged above normal, mostly three to six degrees F above normal. Mean average temperatures ranged from 50 to 72 degrees F across the HSA. All river basins remain near normal for water year-to-date precipitation thus far.

As far as the short-term 8 to 14 day Climate Prediction Center Outlook is concerned, the forecast is for a 60 percent chance of above normal temperatures across the HSA and a 40 percent chance of below normal precipitation across Idaho. The one-month forecast graphics are found below. For the three-month outlook, the temperature is forecast to be warmer than normal across the West; with a 60 percent chance of above normal temperatures in Idaho. As for three-month outlook for precipitation; the outlook is for a 33 to 40 percent chance of below normal precipitation across southern Idaho.

Of the data available for the month, the station within the HSA reaching the highest 24-hour temperature was the Minidoka Dam station reaching 103°F on the 28th. The station (non-SNOTEL and non-RAWS) with the lowest recorded temperature was the Stanley COOP station at 22°F on June 25th. The highest recorded 24-hr precipitation (non-SNOTEL) occurred at the Driggs COOP station where 0.68 inches fell on the 30th. The highest recorded precipitation total (non-SNOTEL) occurred at the Howe COOP station where 1.60 total inches was recorded for the month. The Stickney Mill, Giveout and Smiley Mountain SNOTELs all recorded 1.50 inches of total precipitation for the month. The basins receiving the greatest precipitation were the Big lost above Mackay and the Big Lost River basin receiving 54% and 51% of average precipitation respectively for the month of June-based on SNOTEL data.

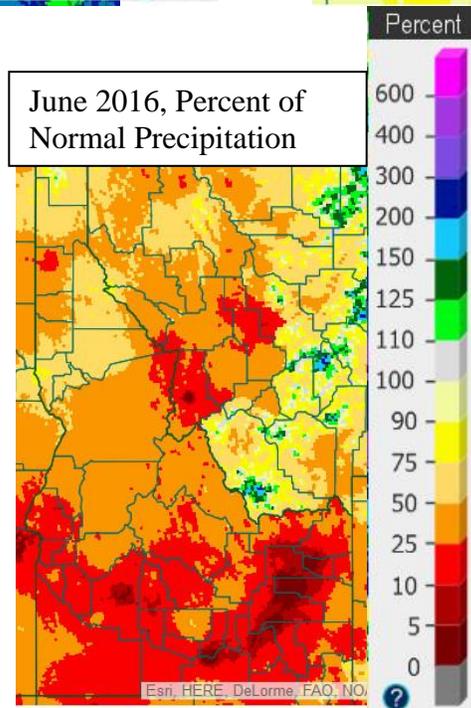
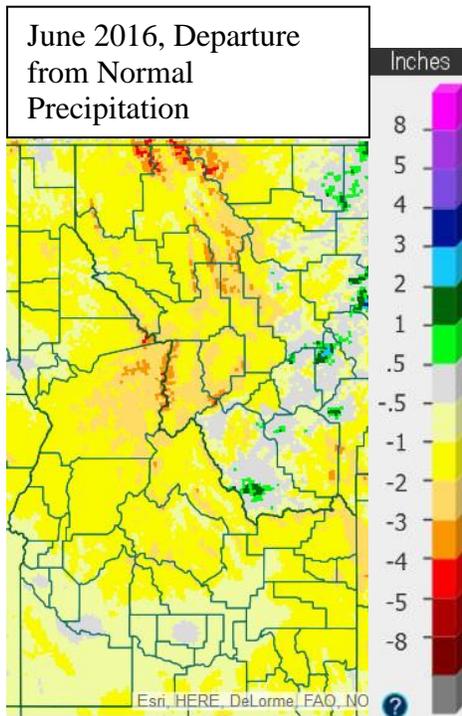
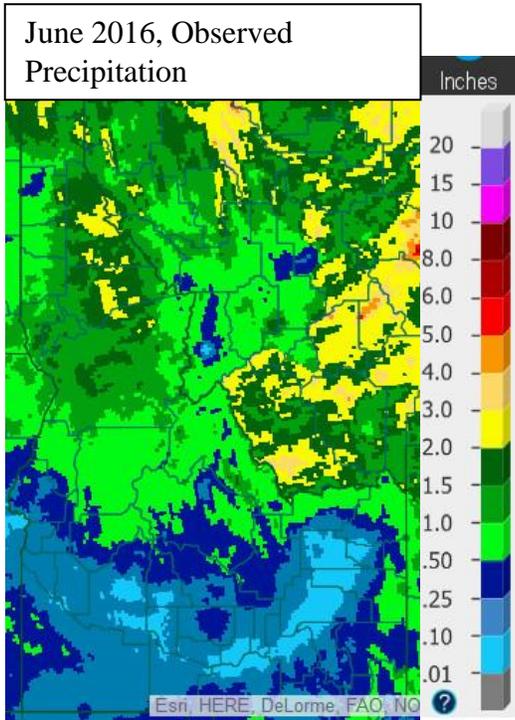
Reservoirs last month decreased capacity overall by around 24% in the upper Snake River basin system (a decrease of about 969 KAF occurred over the month and is currently sitting at 60% of capacity overall). Compared to last year at this time, it was about 70% of capacity. According to the Natural Resources Conservation Service and U.S. Bureau of Reclamation reservoir data, the most notable increase in storage capacity was the American Falls and Island Park reservoirs decreasing percent capacity by 28% and 21%

respectively. Magic reservoir is currently at 136% of average. American Falls and Oakley reservoirs are currently at 69% and 77% of average, respectively.

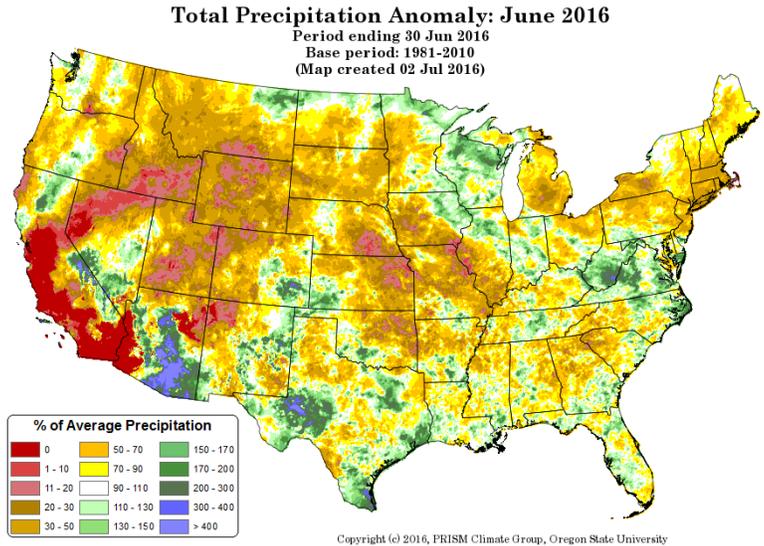
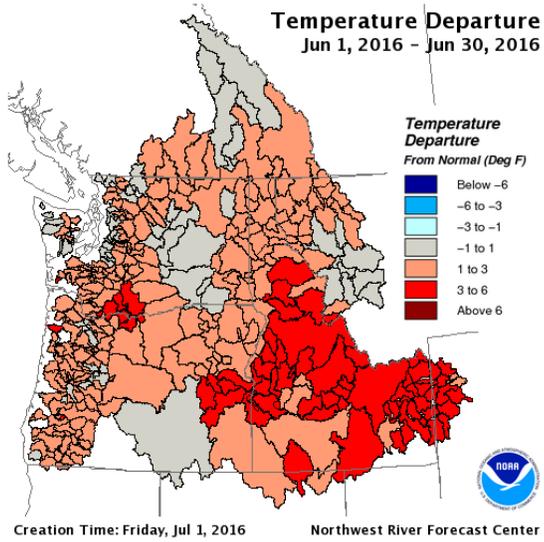
Current streamflow conditions in eastern Idaho are mostly near to below normal for monthly streamflows for the majority of the unregulated streams (see graphic below).

Conditions across eastern Idaho have predictably dried out which is reflected on the latest Drought Monitor update where Abnormally Dry conditions have expanded in Madison, Teton, Bonneville, Bingham, Bannock and Caribou counties. Currently, about 60 percent of the state is in Abnormally Dry drought status with no areas in Moderate Drought. The latest U.S. Seasonal Drought Outlook shows a clear forecast of no drought conditions within the HSA.

Precipitation:

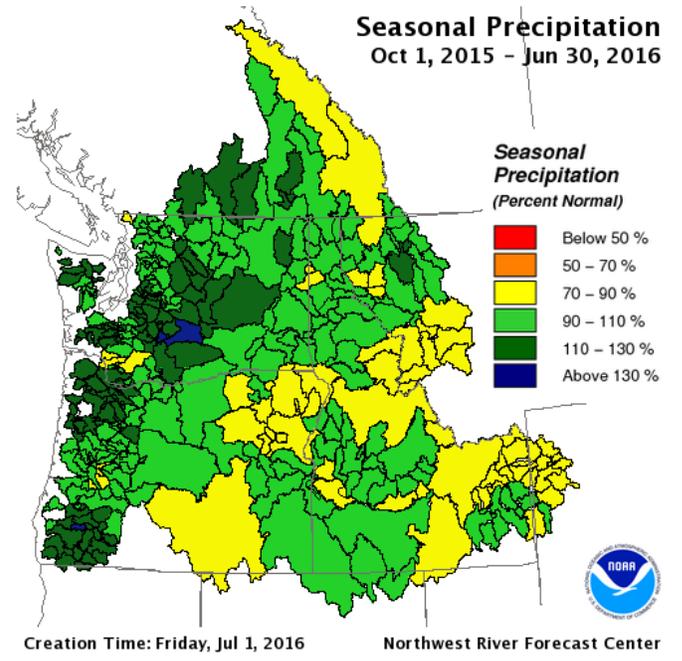
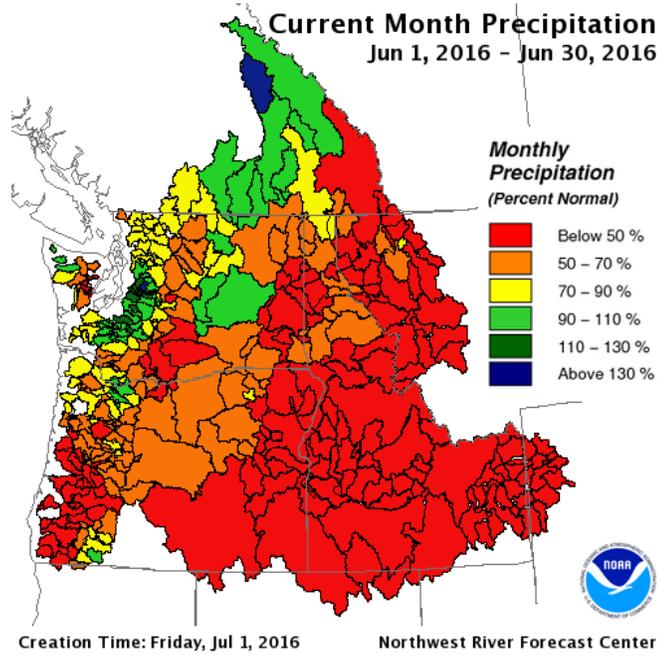


water.weather.gov/precip/#



nwrfc.noaa.gov/WAT_RES_wy_summary/20160701/CurMonMAT_2016Jun30_2016070116.png

prism.oregonstate.edu/



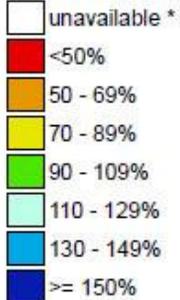
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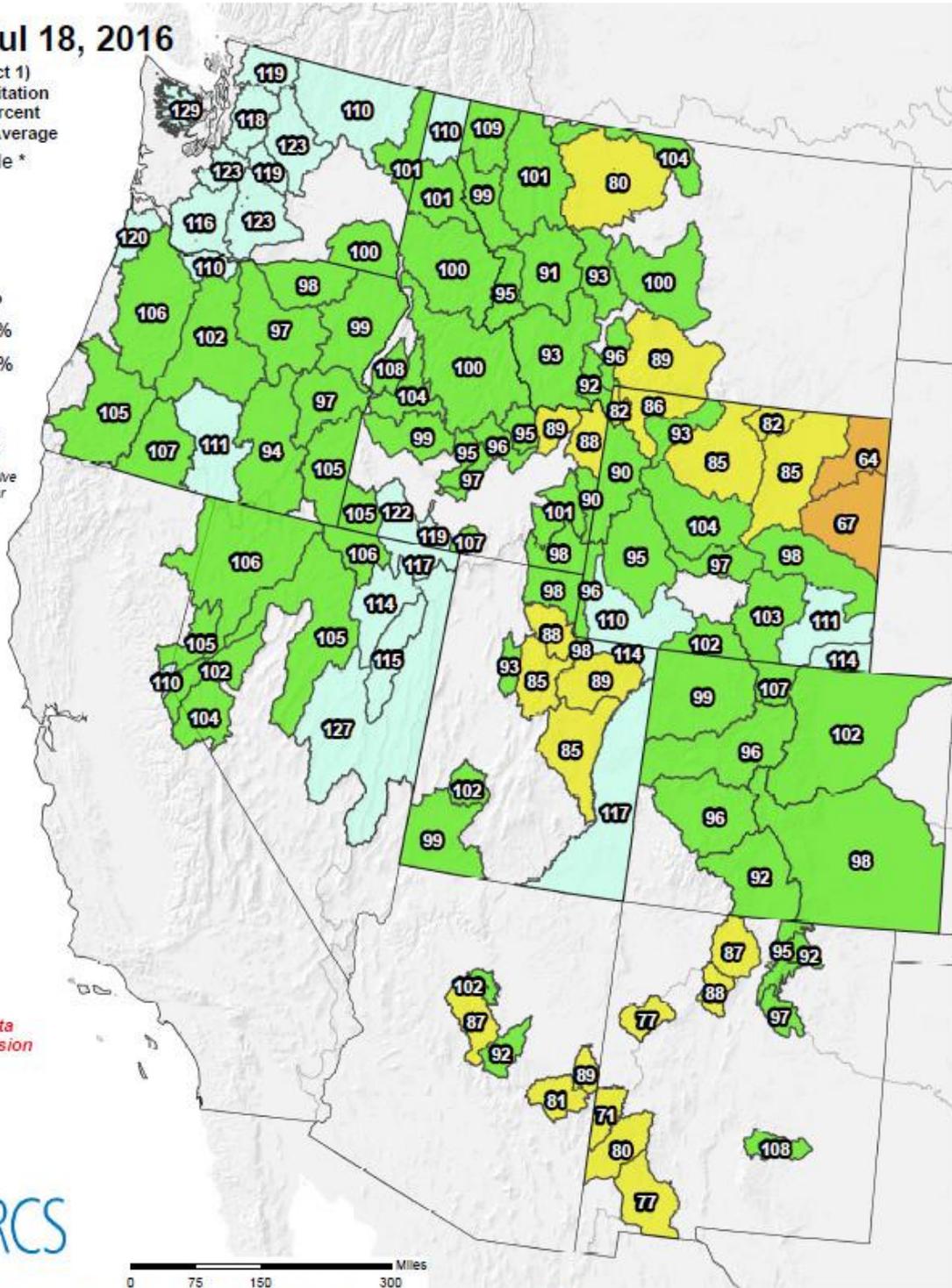
Westwide SNOTEL Water Year (Oct 1) to Date Precipitation % of Normal

Jul 18, 2016

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_wytdprecptnormal_update.pdf

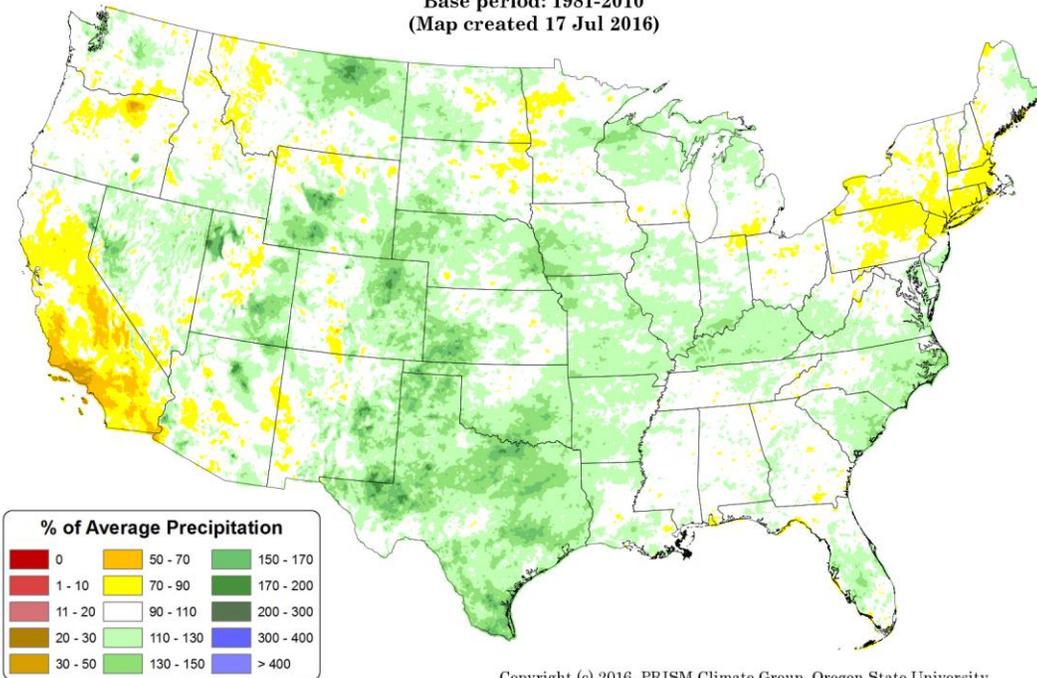
Past 2 Years of Precipitation % of Average:

Total Precipitation Anomaly: July 2014 - 16 July 2016

Period ending 7 AM EST 16 Jul 2016

Base period: 1981-2010

(Map created 17 Jul 2016)



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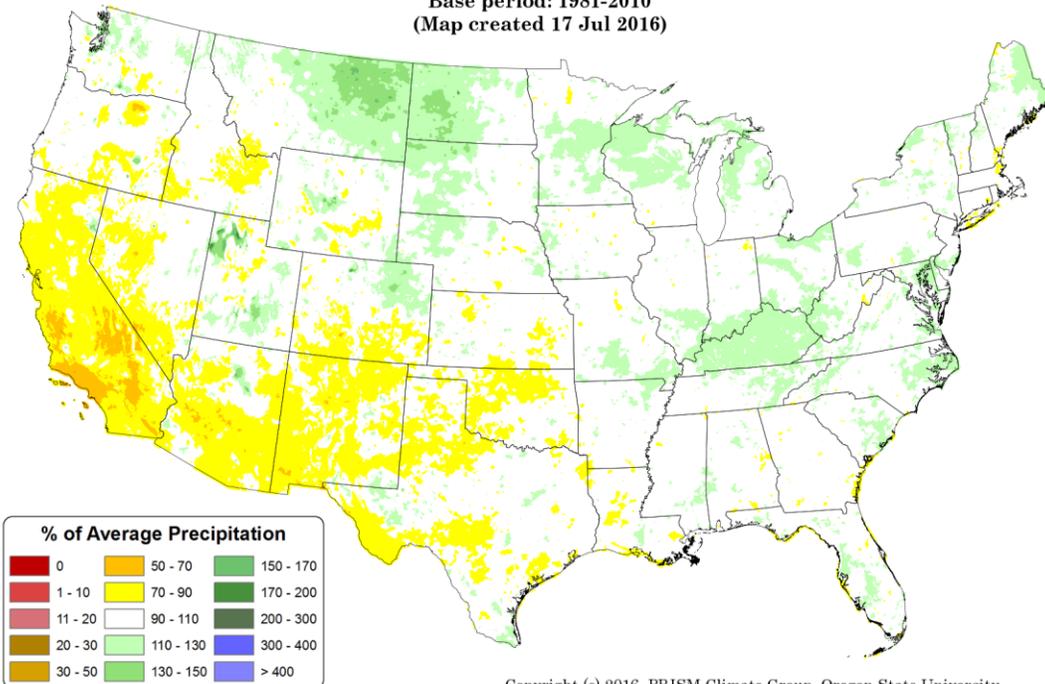
Past 6 Years of Precipitation % of Average:

Total Precipitation Anomaly: July 2010 - 16 July 2016

Period ending 7 AM EST 16 Jul 2016

Base period: 1981-2010

(Map created 17 Jul 2016)



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prism.oregonstate.edu/comparisons/drought.php

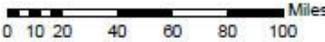
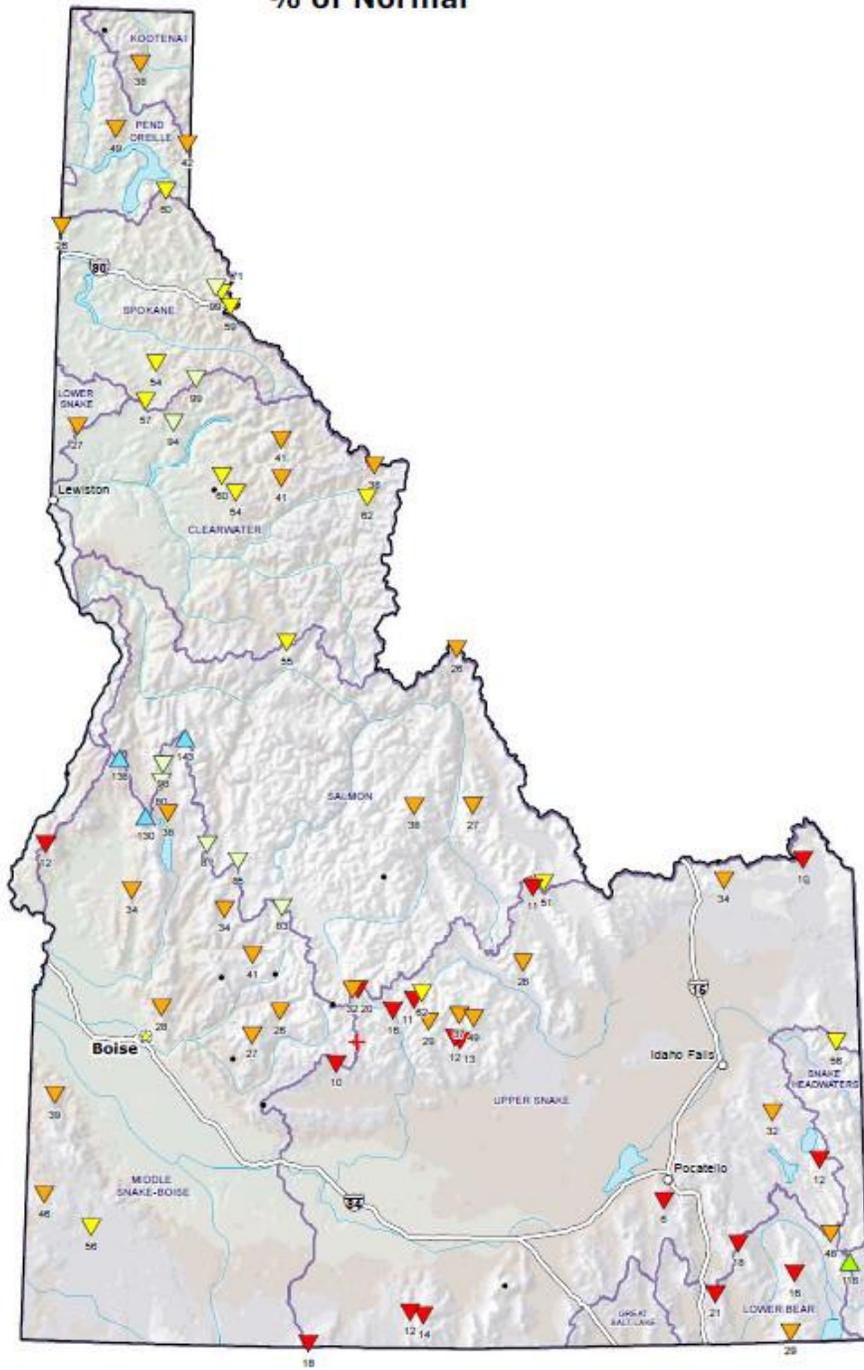
Idaho SNOTEL Month to Date (MTD) Precipitation % of Normal

Jul 18, 2016

**Current MTD
Precipitation
% of 1981-2010
Average**

- ▲ > 200%
- ▲ 150-200%
- ▲ 125-149%
- ▲ 100-124%
- ▼ 75-99%
- ▼ 50-74%
- ▼ 25-49%
- ▼ 1-24%
- +
- Unavailable*

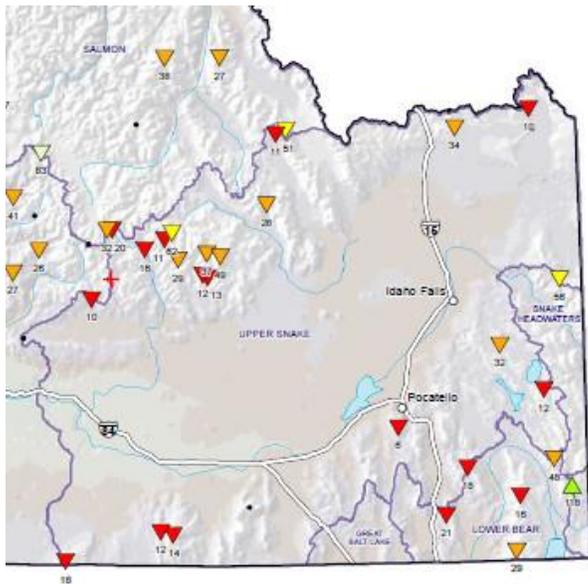
*Provisional Data
Subject to Revision*



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

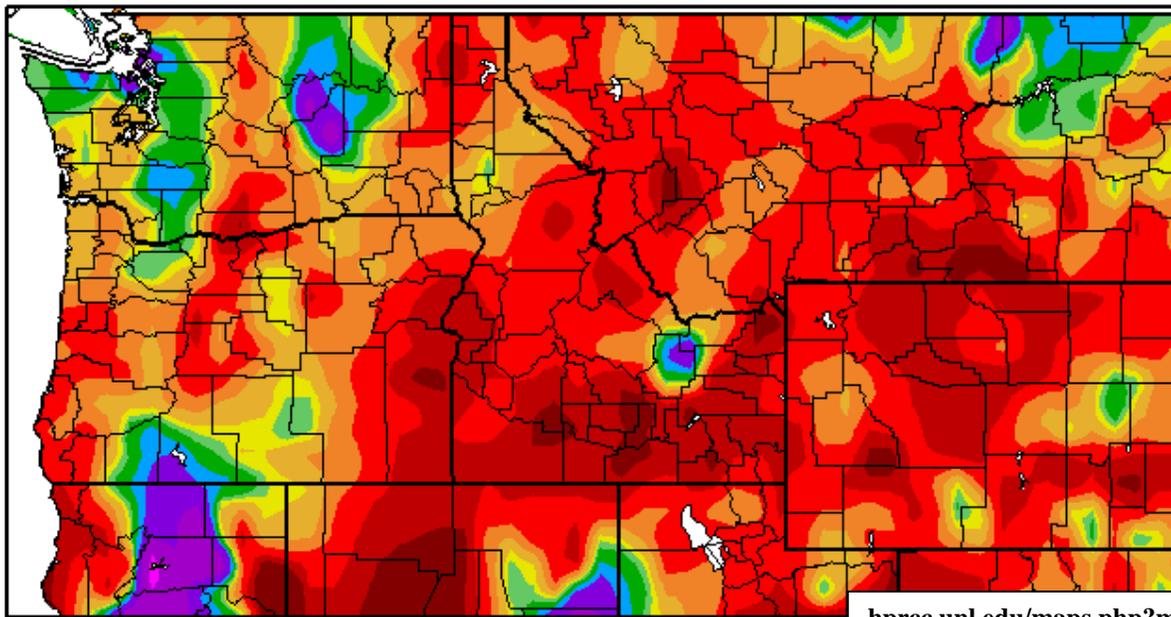
** Data unavailable at time of posting or
unavailable long-term normal.*

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



**SNOTEL MTD % of Normal
Precipitation for end of June 2016**
(image is cropped from above image)

Percent of Normal Precipitation (%)
6/1/2016 – 6/30/2016



hprcc.unl.edu/maps.php?map=ACISClimateMaps



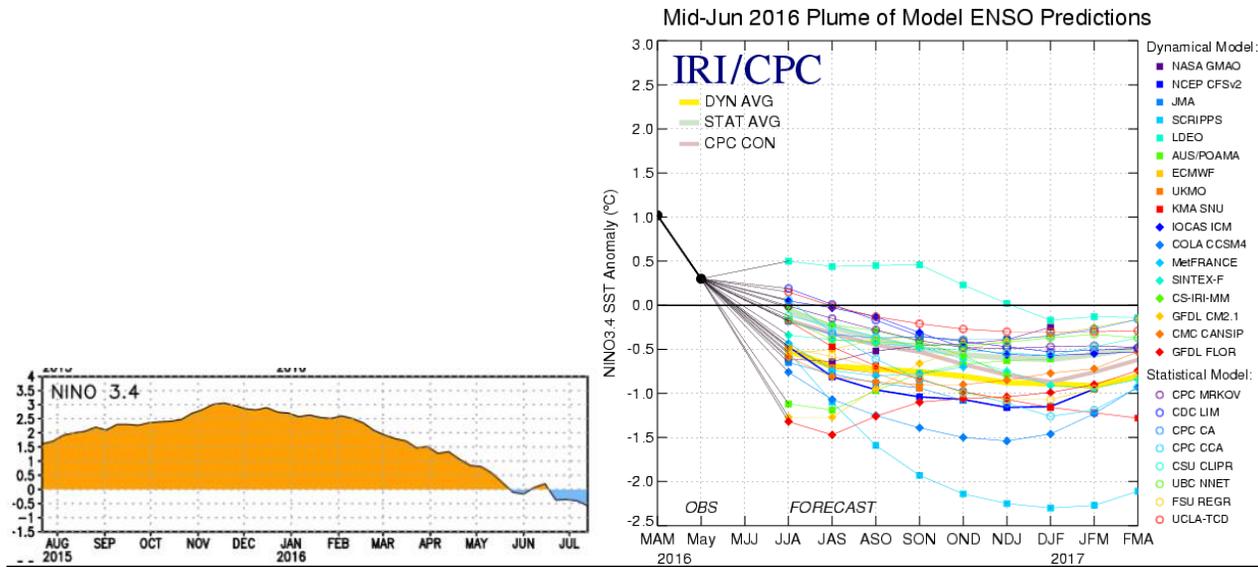
Generated 7/11/2016 at HPRCC using provisional data.

Regional Climate Centers

June was fairly warm and dry for southeastern Idaho, especially along the Snake River plain. Butte county and southeastern Clark county received well above normal precipitation (over 200% of Normal), but was the only area where above normal rainfall occurred. Upper Snake area was the driest. Most of Idaho was dry and warm as well as WY, MT, eastern OR and NV.

ENSO Update:

Latest Observed SST Departure: Niño 3.4 ~ -0.6 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: La Niña Watch continues, ENSO-neutral conditions present, but a La Niña is favored to develop during the summer, then a 75% chance of La Niña during this fall and winter.

Note: Equatorial sea surface temperature (SSTs) are near or below average in the east-central and eastern equatorial Pacific Ocean. MJO signal is weak. The Pacific Decadal Oscillation (PDO) is currently positive.

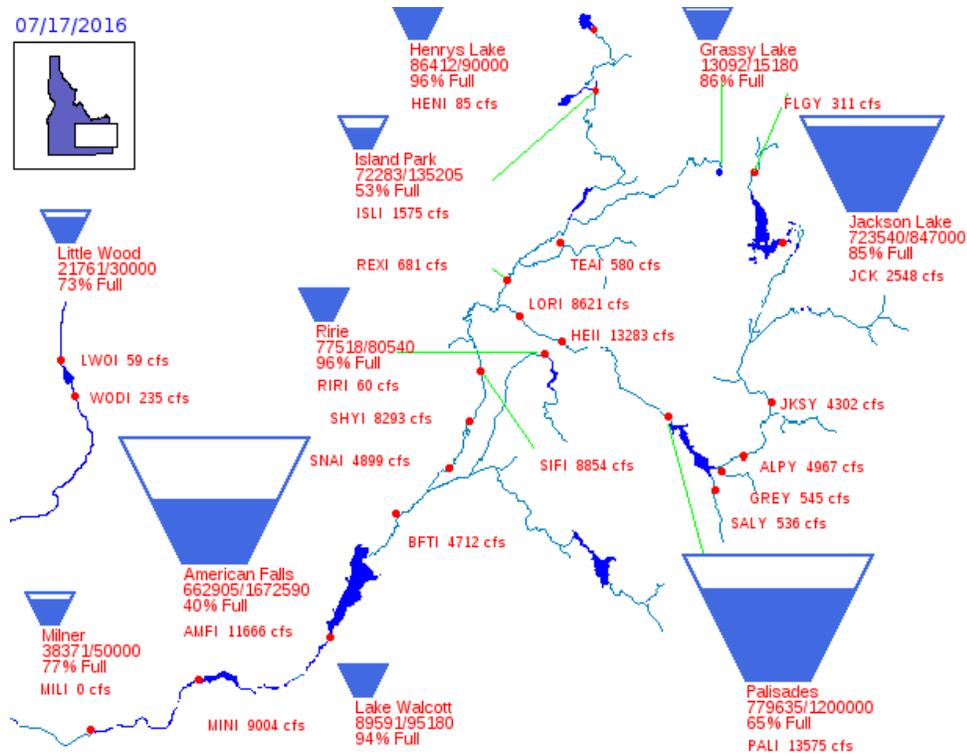
Reservoirs:

Reservoir	% Capacity May 31 ¹	% Capacity June 30 ²	Percent Change	% of Average ²	% of Average Last Year ²
Jackson Lake	93	92	-1	112	116
Palisades	85	84	-1	98	109
Henrys Lake	99	98	-1	103	102
Island Park	100	79	-21	85	85
Grassy Lake	101	98	-3	103	100
Ririe	99	99	0	115	92
Blackfoot	81	75	-6	111	89
American Falls	81	53	-28	69	78
Mackay	94	95	1	126	100
Little Wood	99	88	-11	105	57
Magic	94	88	-6	136	42
Oakley	44	33	-11	77	61
Bear Lake	49	50	1	88	89
Lake Walcott	93 ³	94 ⁴	1	n/a	n/a
Milner	79 ³	77 ⁴	-2	n/a	n/a

Source: (1) NRCS May 31, 2016; (2) NRCS June 30, 2016.
 (3) US Bureau of Reclamation (BOR) June 7, 2016 (4) BOR July 17, 2016

wcc.nrcs.usda.gov/ftpref/support/water/SummaryReports/ID/BRes_7_2016.pdf

07/17/2016

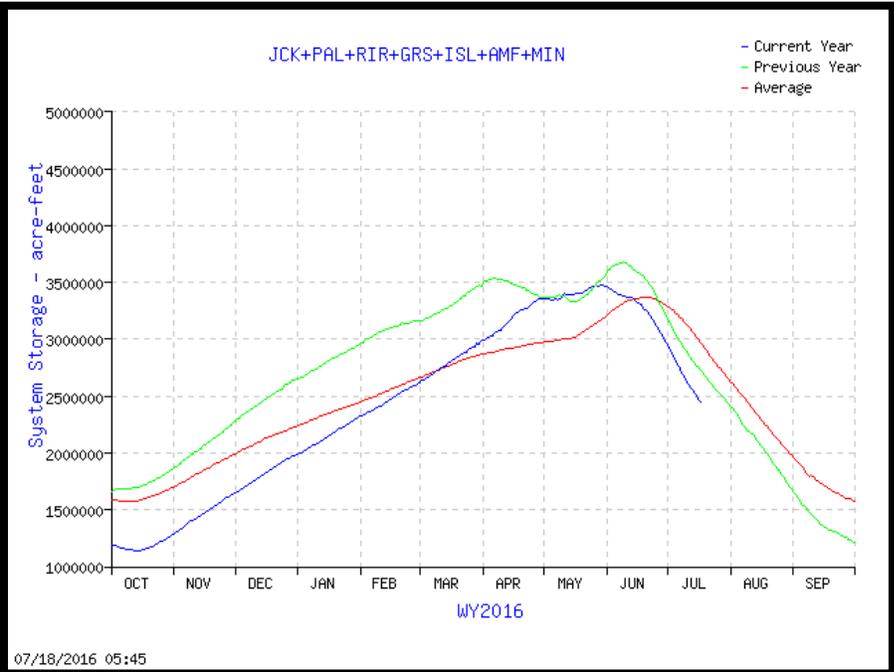


**60% of Capacity
in Upper Snake
River System**
(Jackson Lake, Palisades,
Grassy Lake, Island Park,
Ririe, American Falls &
Lake Walcott)

usbr.gov/pn/hydromet/burtea.html

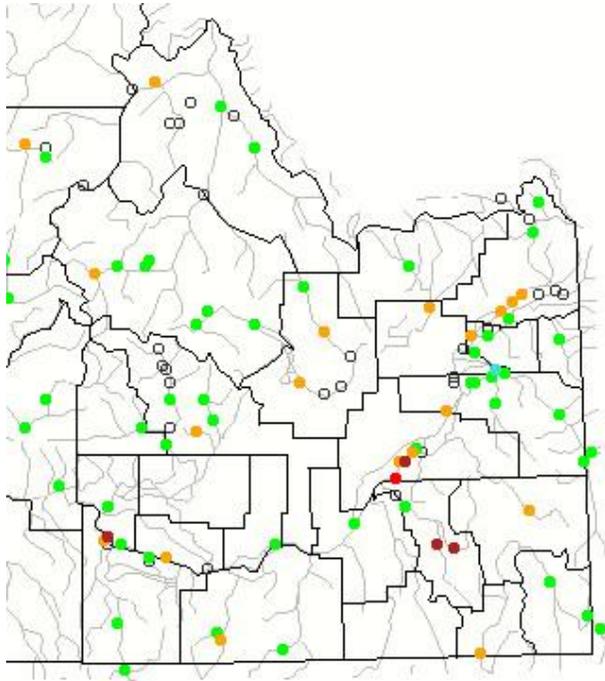
Upper Snake River:
Total Space Available: 1,627,131 AF
Total Storage Capacity: 4,045,695 AF

**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 June 2016.



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

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

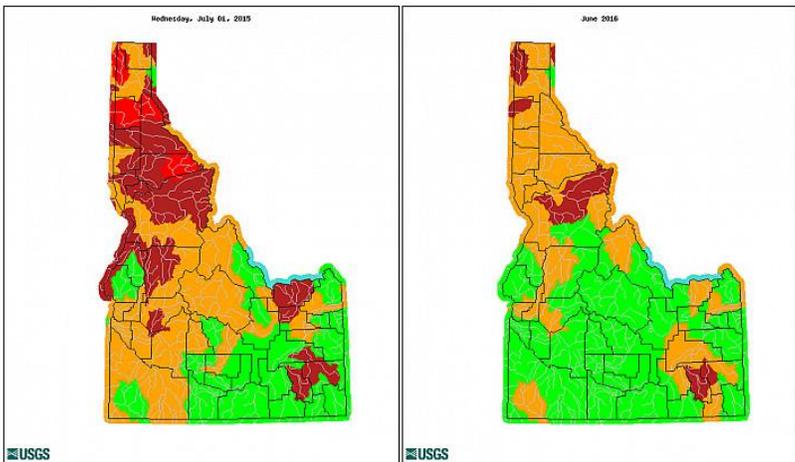
Comparison of Streamflow Maps

Geographic area: Water resource region: GO

Map type: Sub type:

Date (YYYYMM):

Date (YYYYMM):



Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	No Data

waterwatch.usgs.gov/index.php

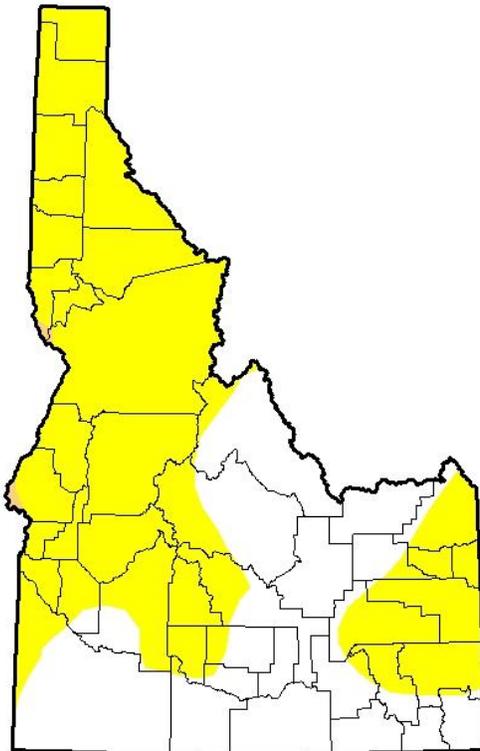
Drought:

**U.S. Drought Monitor
Idaho**

July 12, 2016
(Released Thursday, Jul. 14, 2016)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	40.04	59.96	0.30	0.00	0.00	0.00
Last Week 7/5/2016	43.21	56.79	0.30	0.00	0.00	0.00
3 Months Ago 4/12/2016	91.97	8.03	0.00	0.00	0.00	0.00
Start of Calendar Year 12/29/2015	10.98	89.02	64.05	24.35	1.18	0.00
Start of Water Year 9/29/2015	0.00	100.00	85.59	47.55	29.26	0.00
One Year Ago 7/14/2015	0.00	100.00	85.95	52.35	7.01	0.00



Intensity:

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

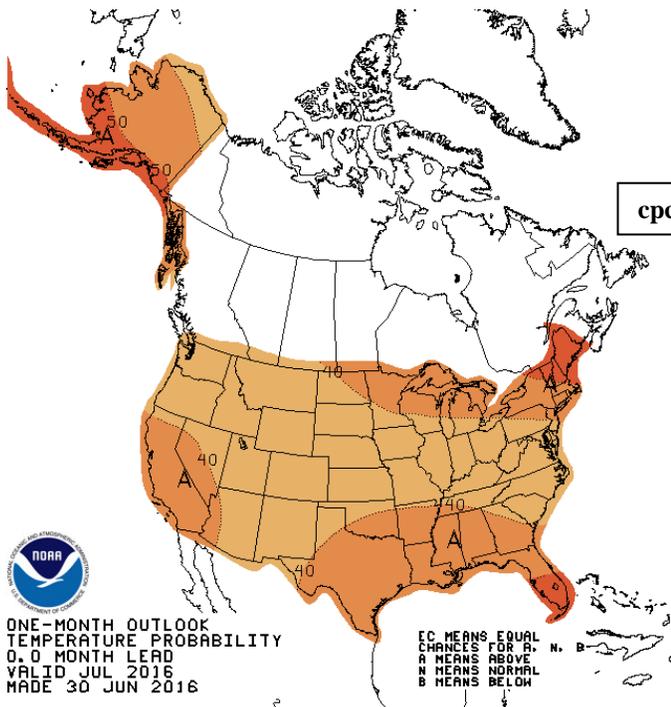
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

David Miskus
NOAA/NWS/NCEP/CPC

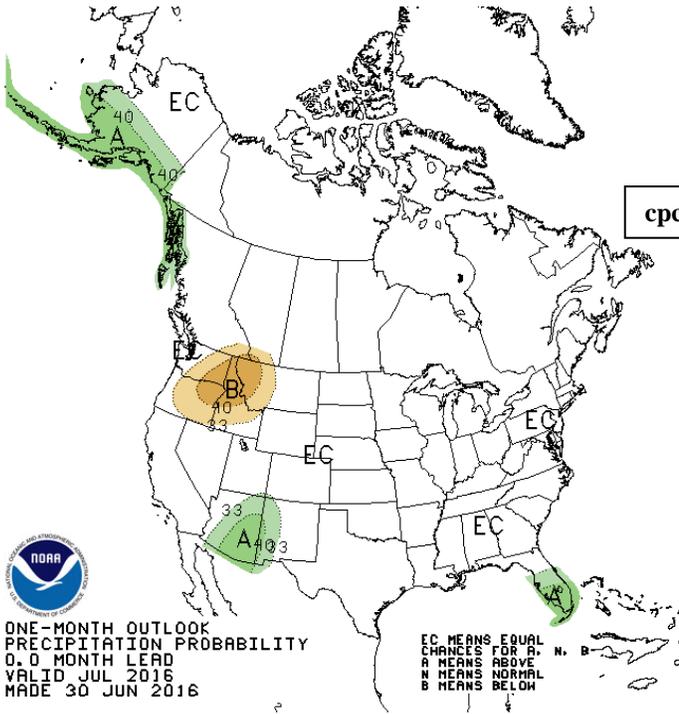


<http://droughtmonitor.unl.edu/>



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

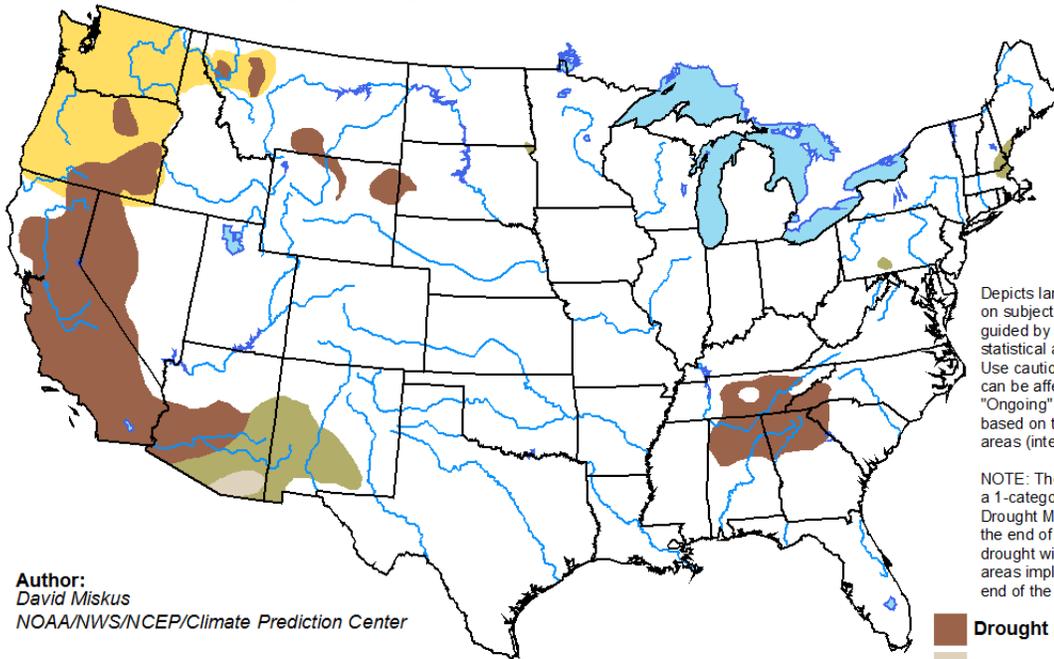
cpc.ncep.noaa.gov/products/predictions/30day/off15_prpcp.gif



U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for June 16 - September 30, 2016
Released June 16, 2016

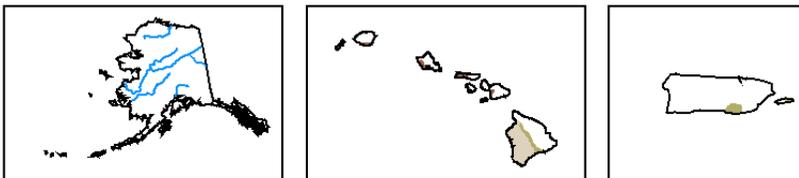


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to 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:
David Miskus
NOAA/NWS/NCEP/Climate Prediction Center

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



<http://go.usa.gov/3eZ73>

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

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PIH Mets/HMT (pih.ops)

End

cbl