United States Department of Agriculture

Natural Resources Conservation Service
P.O. Box 2890
Washington, D.C. 20013

Weekly Water and Climate Update

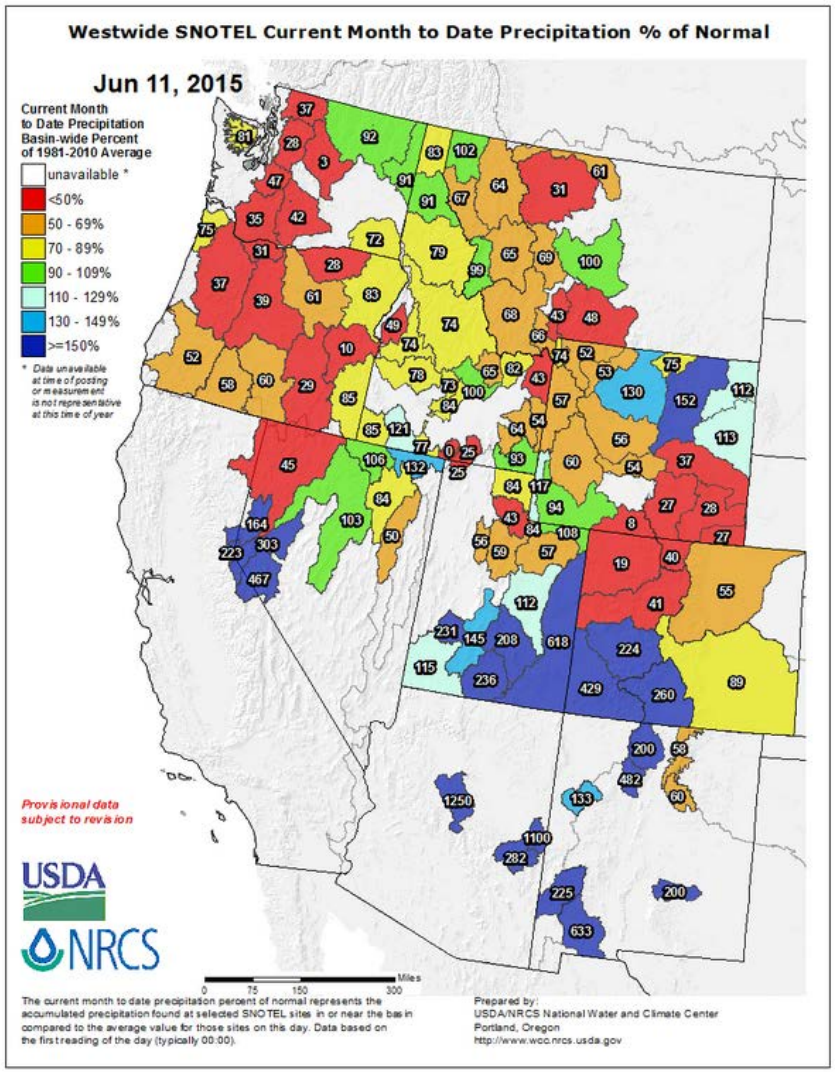
Thursday, June 11, 2015

The mouth of Siebert Creek in Clallam County, WA, showing the bar-bound characteristic that exists at Siebert and McDonald Creeks. Both are salmon/steelhead spawning streams. The photo provides a real clear view of why surface flows are so critical to these streams; they are already beginning to feel the effects of low flows in the smaller streams. Low flows are currently obstructing the migration of naturally-produced salmonids. Typically these small creeks would maintain adequate flows to assist in the smolt migration through the end of June. However, this year runoff is incredibly low, making migration almost impossible.

Stream gaging is not available at this time, however observed flows have dropped precipitously in the last few weeks and are estimated to be as low as 2-3 cubic-feet-per-second (cfs), which is not enough to push over the bar at the mouth of either the creek. Officials have since hand-trenched a connecting channel allowing migration of outgoing smolt and incoming steelhead.

Photo by Chris Burns, Jamestown S'Klallam Tribe, 5/27/2015
From the June 1, 2015 Washington Water Supply Outlook Report

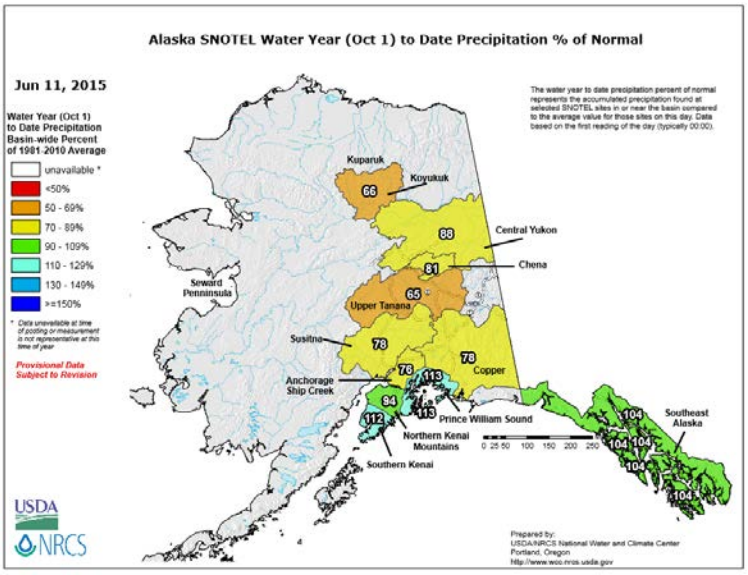
Precipitation

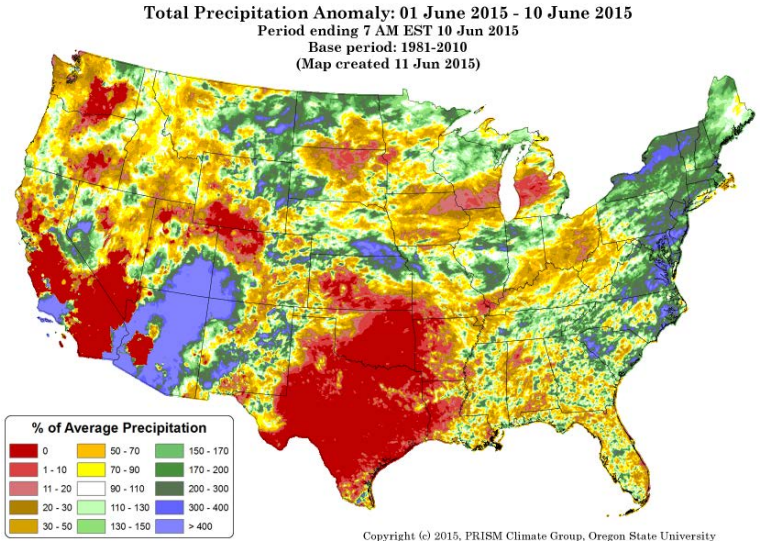


In the West, the SNOTEL current month to date precipitation % of normal map so far in June shows a pattern of generally wet conditions in the southern region and northeast Wyoming. Dry to near normal conditions were reported in the central to the northern regions of the West.

At this time of year, percent of normal may be exaggerated in normally low precipitation areas.

The Alaska SNOTEL water year to date precipitation percent of normal map shows near to above normal conditions for the Kenai and southeast Alaska. The remainder of Alaska is reporting drier than normal conditions.



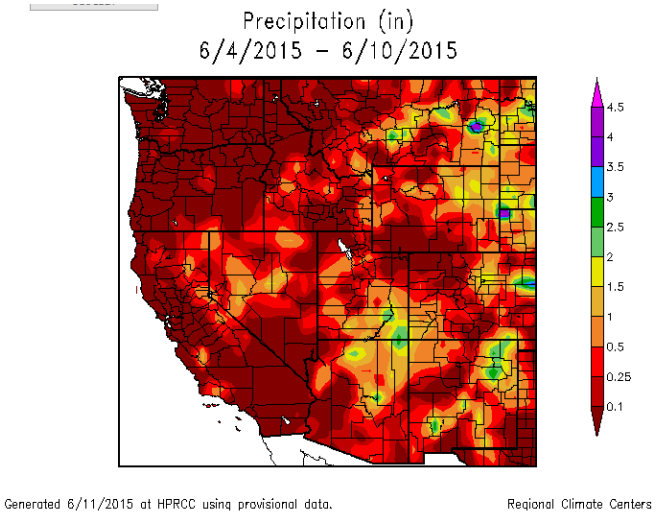


So far in June, the PRISM national total precipitation anomaly pattern reveals higher than normal precipitation in the Southwest, central and northern Midwest, and much of the East. There was little or no precipitation in parts of the West and southcentral U.S.

This preliminary daily PRISM precipitation anomaly map contains all available network data, including SNOTEL data, and is updated periodically as additional data become available and are quality controlled.

The ACIS 7-day total precipitation map for the western U.S. shows the highest precipitation total was reported in eastern Montana. Widely scattered precipitation was reported in most western states.

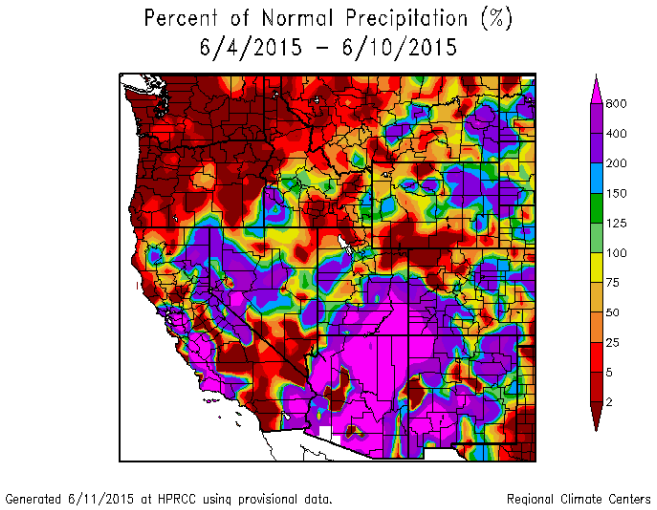
Little to no precipitation was reported along the Pacific coast and elsewhere this week (dark red).

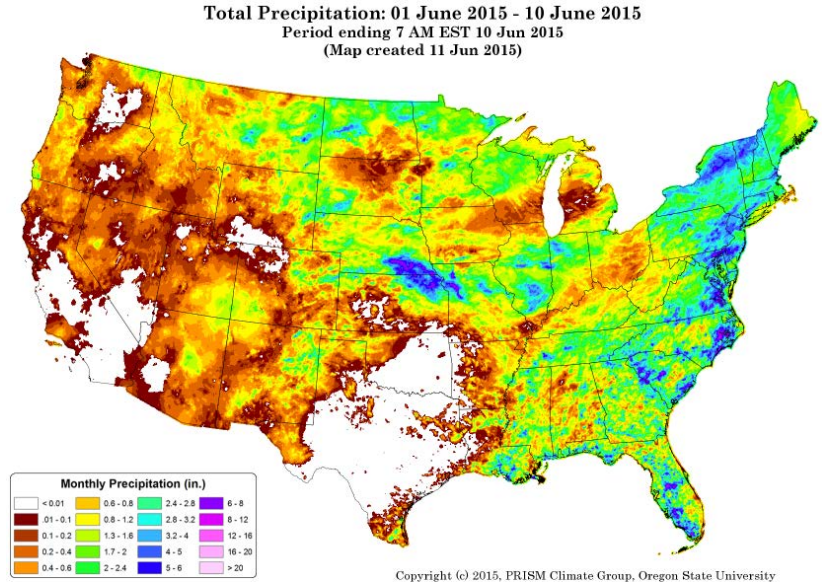


This ACIS percent of normal map for the last seven days shows that precipitation was above normal across much of the southern region of the West. The highest percent of normal precipitation fell in several states (magenta area).

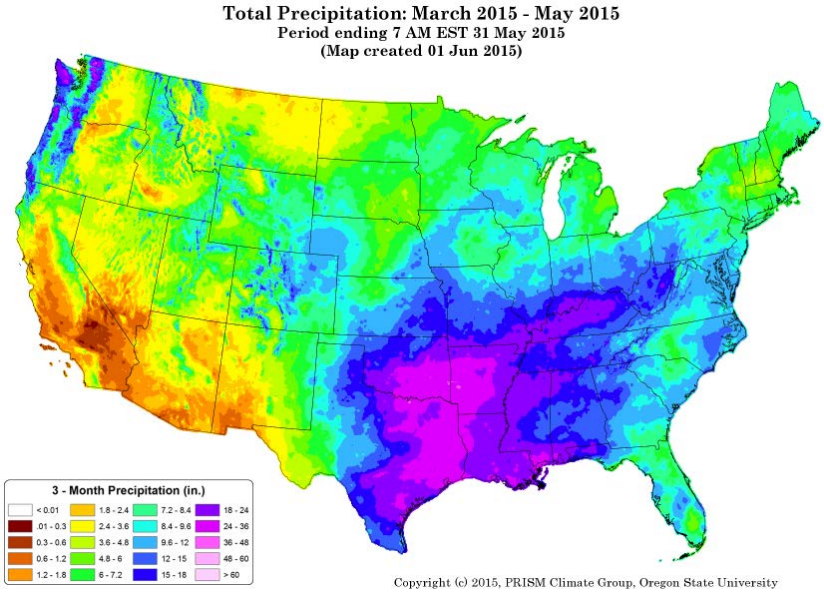
Very dry conditions for the week were reported primarily in the Pacific Northwest (dark red areas).

Percent of normal precipitation may be exaggerated in areas where the average for this seven-day period is at or near zero.





For June 2015, the total precipitation across the continental U.S. was heaviest in the East and the central Great Plains. Precipitation also fell in the South and northern Plains. In contrast, much of the southern Plains and parts of the West were mainly dry.



The national map of the PRISM three-month period (March – May) shows that the southcentral region of the nation received precipitation from 6.0 inches to greater than 36 inches. Parts of the West, especially along the north Pacific coast and in the mountains, also received significant precipitation.

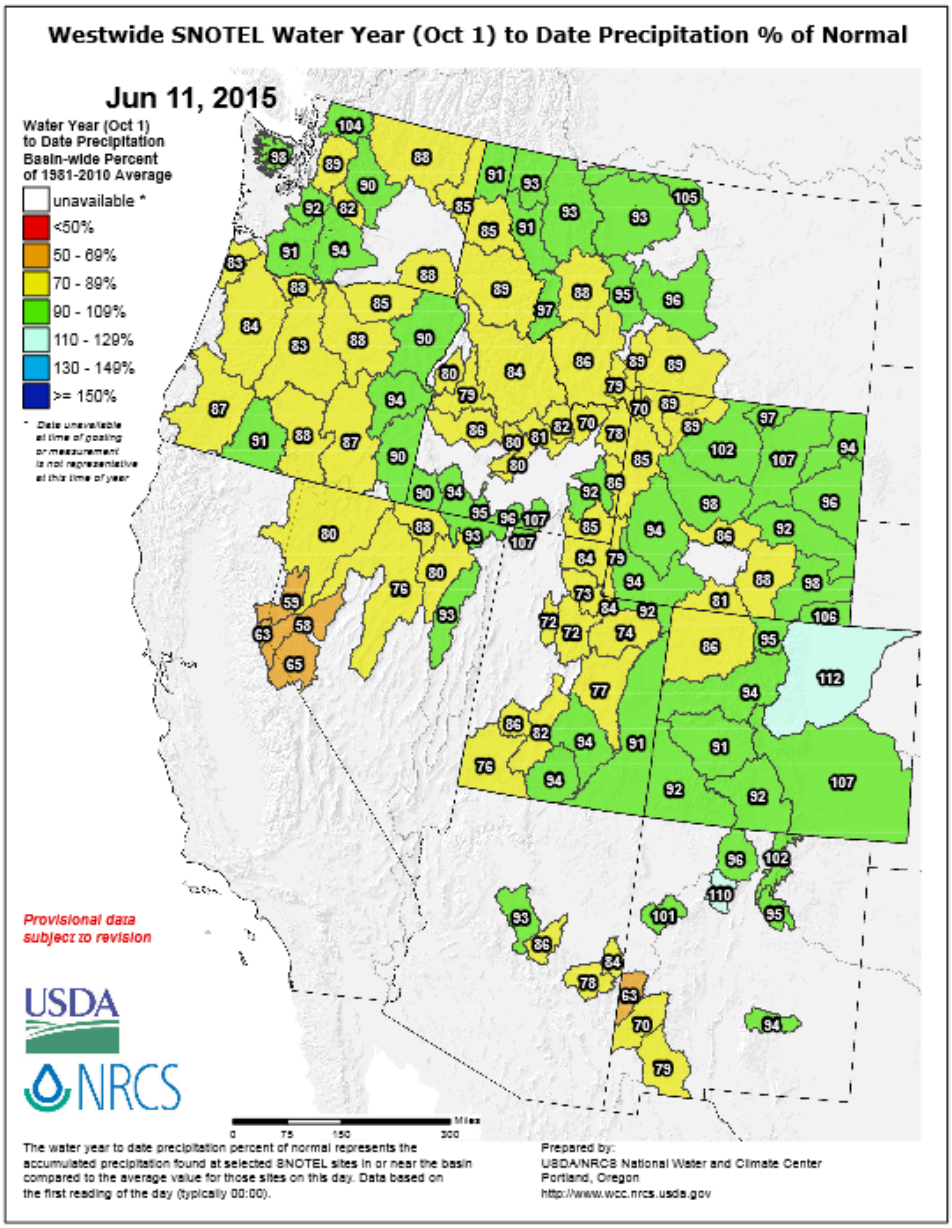
In contrast to the eastern U.S. and north Pacific coast, parts of the Southwest and the northern Great Plains received totals of less than 2.4 inches.

For the 2015 Water Year that began on October 1, 2014, there is one basin in northeastern Colorado and one in northern New Mexico reporting above normal precipitation.

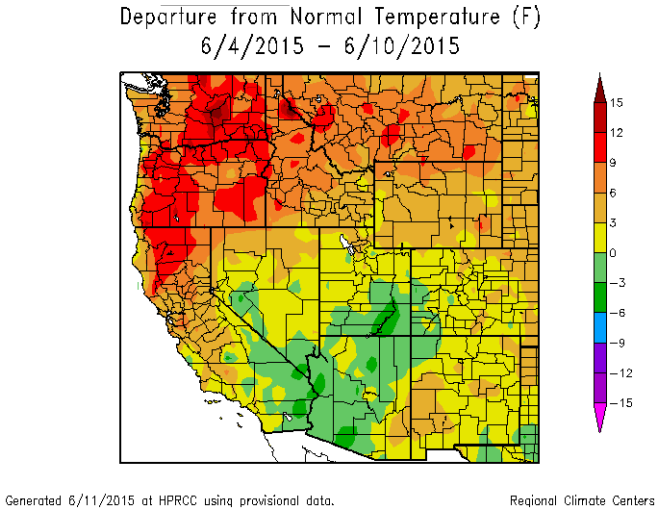
Many scattered basins across the West have near normal conditions for this part of the Water Year (mapped in green).

Other basins in the western states have less than normal precipitation (mapped in yellow and orange).

As the Water Year advances, it becomes more difficult for river basins to change categories.



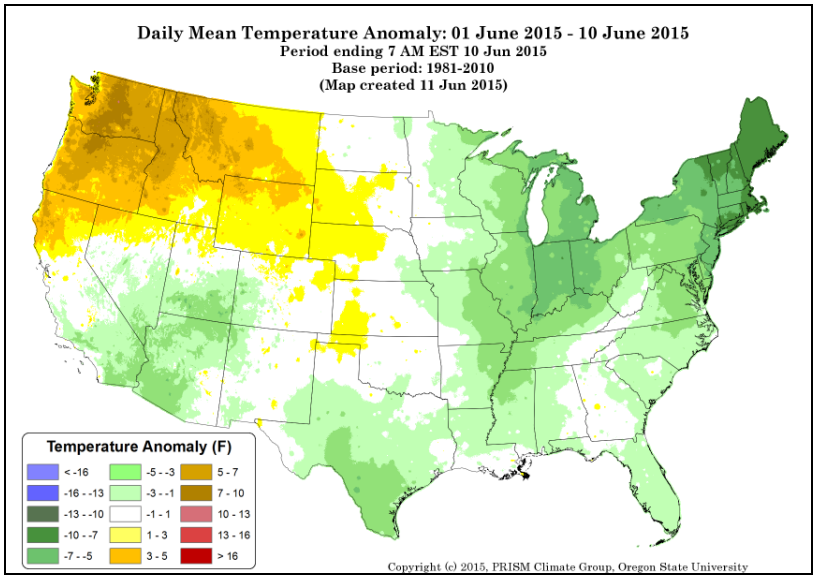
Temperature

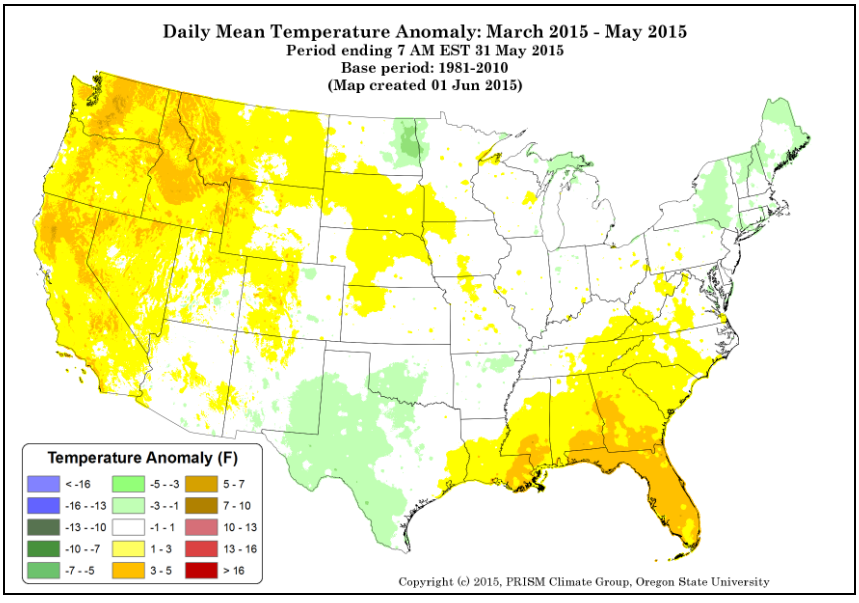


The ACIS map of the 7-day average temperature anomalies in the West ending June 10 shows that the region had primarily warm to very warm conditions, with part of the Southwest states slightly cooler than normal. The greatest positive temperature departures occurred in Washington and northern Idaho with the highest anomaly (>+15°F). The areas with the largest negative temperature departures were in southern California, southern Utah, and Arizona (<- 3°F).

This preliminary PRISM temperature map contains all available network data, including SNOTEL data, and will be updated periodically as additional data become available and are quality controlled.

For early June 2015, the national daily mean temperature anomaly map shows a cool region over much of the Northeast (< -7°F). Above normal temperatures were recorded in much of the Pacific Northwest (>+7°F).





The March - May national daily mean temperature anomalies for the U.S. in this climate map shows the West had the largest temperature departures above normal (>+7°F). The northern Great Plains had the coolest temperature anomalies in North Dakota and Minnesota (<-3°F).

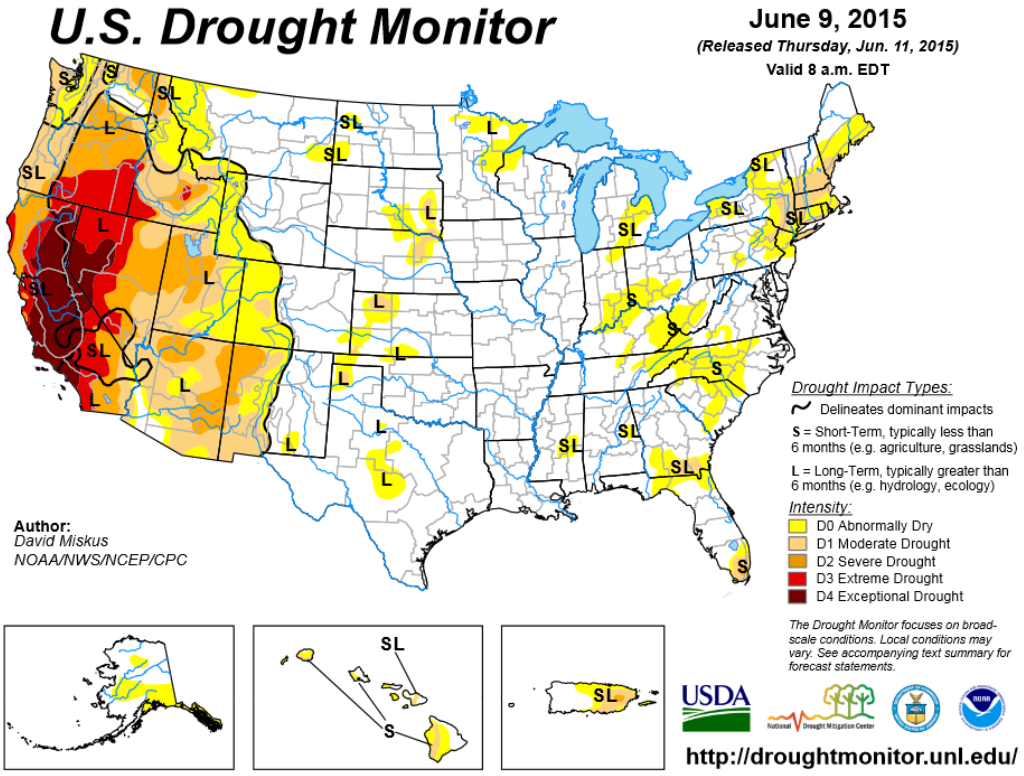
Weather and Drought Summary

National Drought Summary – June 9, 2015

The following **Weather and Drought Summary** is provided by this week's NDMC Drought Author, David Miskus, NOAA/NWS/NCEP/CPC. USDM Map Services: contains archived maps

"For the contiguous 48 states, the U.S. Drought Monitor showed 23.29 percent of the area in moderate drought or worse, compared with 24.57 percent a week earlier. Drought now affects 70,783,903 people, compared with 70,721,569 a week earlier.

For all 50 U.S. states and Puerto Rico, the U.S. Drought Monitor showed 19.52 percent of the area in moderate drought or worse, compared with 20.59 percent a week earlier. Drought now affects 72,399,806 people, compared with 72,335,224 a week earlier."



Latest Drought Impacts during the past week.

Current Drought Monitor weekly summary. Exceptional D4 levels of drought are in CA, and NV. The latest drought indicator blend and component percentiles spreadsheet is a great resource for climate division drought statistics. This link is for the latest Drought Outlook (forecast). See climatological rankings.

For more drought news, see Drought Impact Reporter. Climate Outlook: ENSO Blog.

Drought Management Resources:

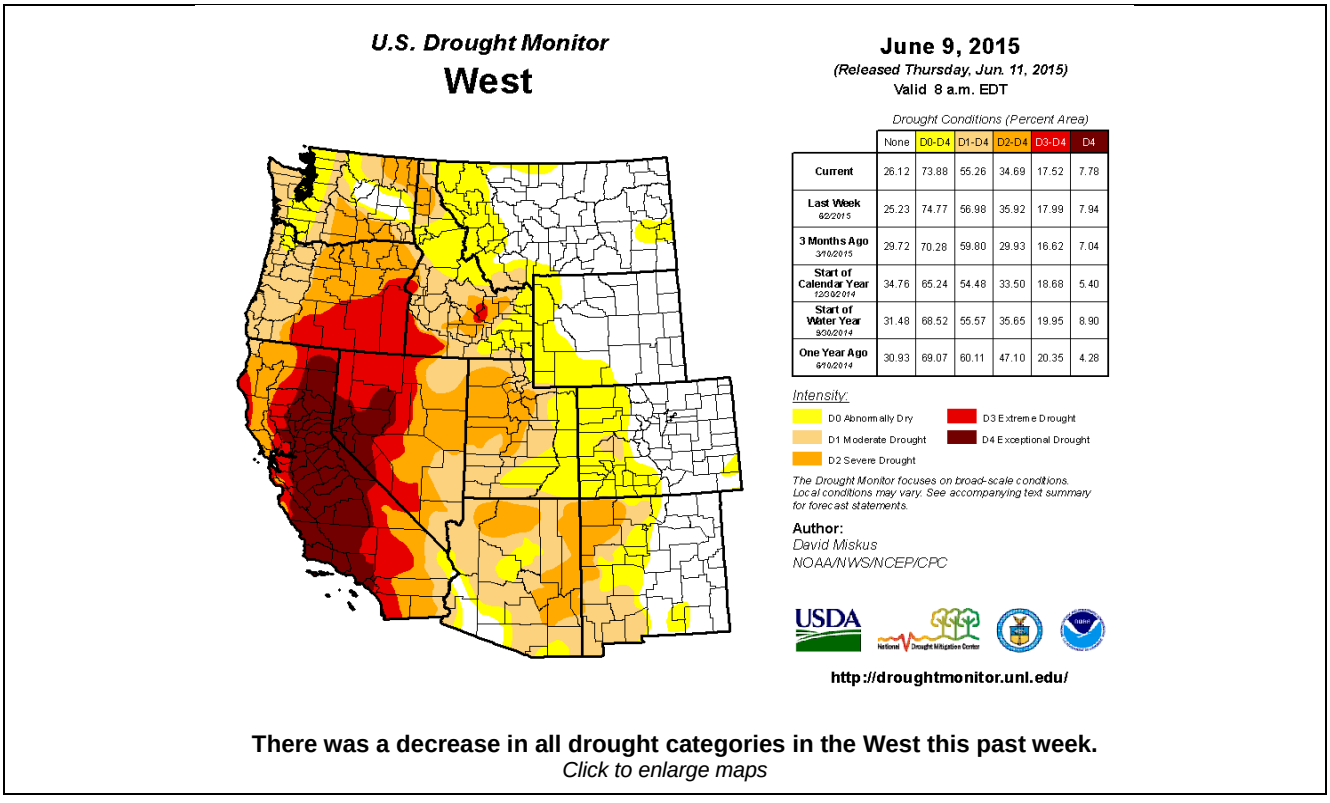
http://www.usda.gov/oce/weather/Drought/AgInDrought.pdf
Watch AgDay TV
Drought Impacts Webinar Series
NIDIS Quarterly Climate Impacts and Outlook
The Spring 2014 edition of DroughtScape
U.S. Crops in Drought

National Drought Summary for June 9, 2015

Prepared by the Drought Monitor Author: David Miskus, NOAA/NWS/NCEP/CPC.

Summary

"The NCEI (formerly NCDC) May 2015 precipitation total for the contiguous U.S. was the wettest May and month of any month in the 121-years of record keeping. State-wise, it was the wettest May in Texas, Oklahoma, and Colorado, and one of the top 5 wettest Mays in Utah, Kansas, Wyoming, Arkansas, and South Dakota. With those statistics, it is not surprising that nearly all drought from late March has been eliminated in the Plains, Midwest, and central Gulf Coast. In addition, wet spring weather in the Great Basin and Four Corners Region has continued into June, necessitating improvements to parts of these areas. During this week, stalled or slow-moving cold fronts in the north-central Plains and along the southern Atlantic and eastern Gulf Coasts triggered scattered showers and thunderstorms, some locally heavy, in parts of the northern and central Plains, upper Midwest, central Corn Belt, and from the Delmarva Peninsula southward into Florida. During the weekend, moisture from the remnants of eastern Pacific Hurricane Andres was pulled into the Southwest, producing light to moderate showers in central Arizona, southeast Utah, southwest Colorado, and New Mexico. Late in the period, additional moisture from former Pacific Hurricane Blanca streamed northward, poised to generate additional showers in the Southwest, including California. As the slow-moving cold front finally tracked far enough eastward, light to moderate rains fell on the eastern Tennessee Valley, mid-Atlantic, and western New England. Dry weather finally allowed the southern Plains to recover from weeks of copious rains and severe flooding, with mostly dry weather also occurring in the lower Mississippi and western Tennessee Valleys. Mostly dry weather continued in drought areas of Puerto Rico and Hawaii, but decent rains (2 to 8 inches) finally returned to the southeastern Panhandle of Alaska."



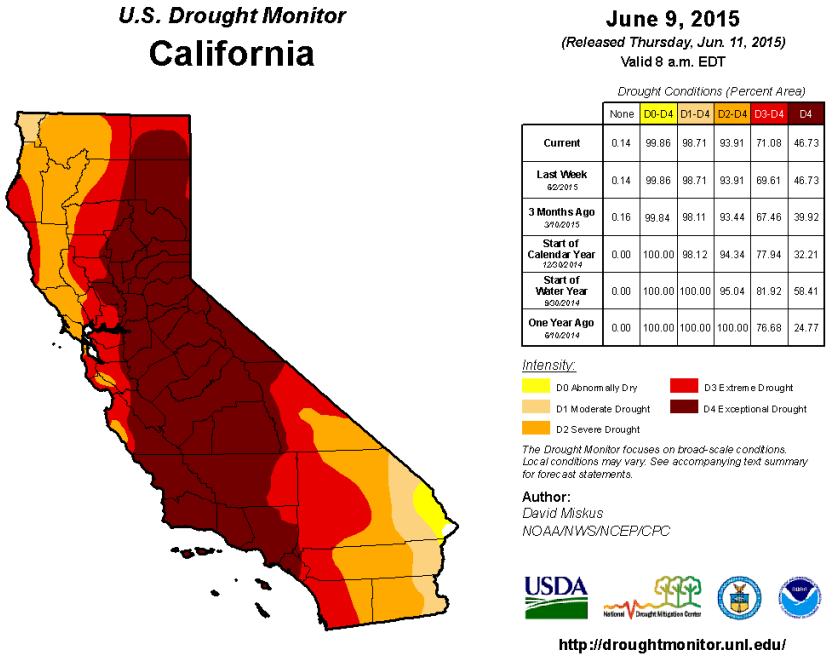
There was a decrease in all drought categories in the West this past week.

Click to enlarge maps

Risk Management Web Resources

Drought Monitor for the Western States
Drought Impact Reporter for New Mexico
California Data Exchange Center
Flood Management Intermountain West Climate Dashboard
California Sierra Nevada-related snowpack

State with D-4 Exceptional Drought



There was an increase in D3 in California for the week.
D4 covers over 46% of the state.

[CA Drought Information Resources]

[Drought News from California:]

[Drought May Cost California's Farmers Almost $3 Billion In 2015] – June 3

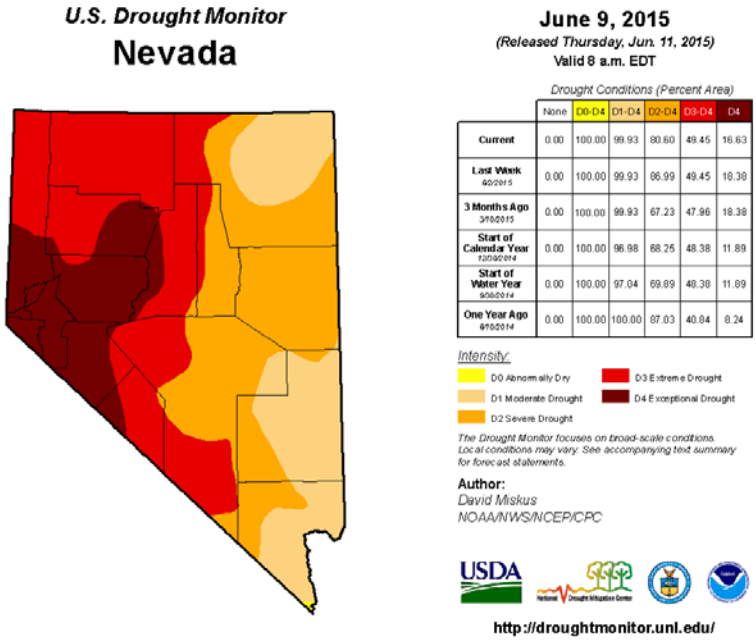
[Cal Fire suspends outdoor residential burning to prevent wildfires during drought] – June 2

[California Water Use Fell 13.5 Percent In April Amid Drought] – June 2

Nevada Drought News:

[BLM allows grazing on closed allotment to avoid confrontation] – June 5

State with D-4 Exceptional Drought



There was a decrease in D2 and D4 in Nevada this week.
D4 covers over 16% of the state.

U.S. Population in Drought

Number of people in each drought category in the U.S. for the week ending June 9, 2015

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2015-06-09	169,565,889	135,831,566	70,783,904	42,337,212	31,700,501	20,559,973
2015-06-02	166,747,842	138,649,613	70,721,569	42,458,923	31,704,738	20,564,003

Population figures affected by drought in the U.S. Drought Monitor website show that, for this week, more than 70,000,000 people in the United States were in a drought-affected area, which is a slight increase by over 60,000 people from last week.

Population Statistics Methodology:
The U.S. Drought Monitor population statistics are calculated at the county level, and aggregated to the state, regional, and national levels. The population densities have been calculated for each county. The proportion of the physical area of the county that is in drought is multiplied by the uniform population density in order to obtain a number for each county. The county values are then summed at the state, regional, and national level.

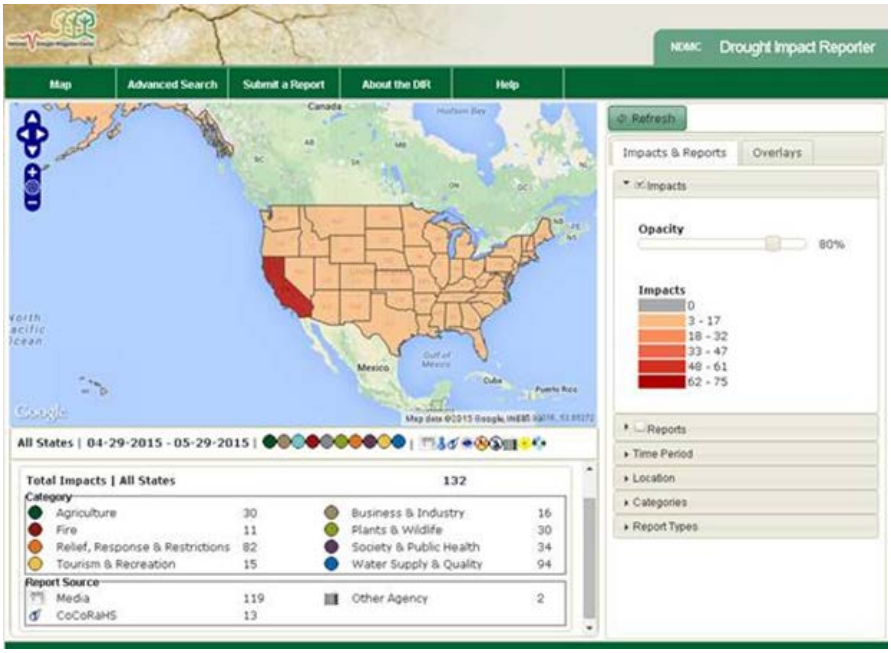
Supplemental Drought-Agriculture News

A collection of drought-related news stories from the past seven days is available on the Drought Headlines page at the NDMC website. Impact information from these articles is entered into the Drought Impact Reporter. The list is compiled by Denise D. Gutzmer, Drought Impact Specialist at the National Drought Mitigation Center.

Download archived "U.S. Crops in Drought" files

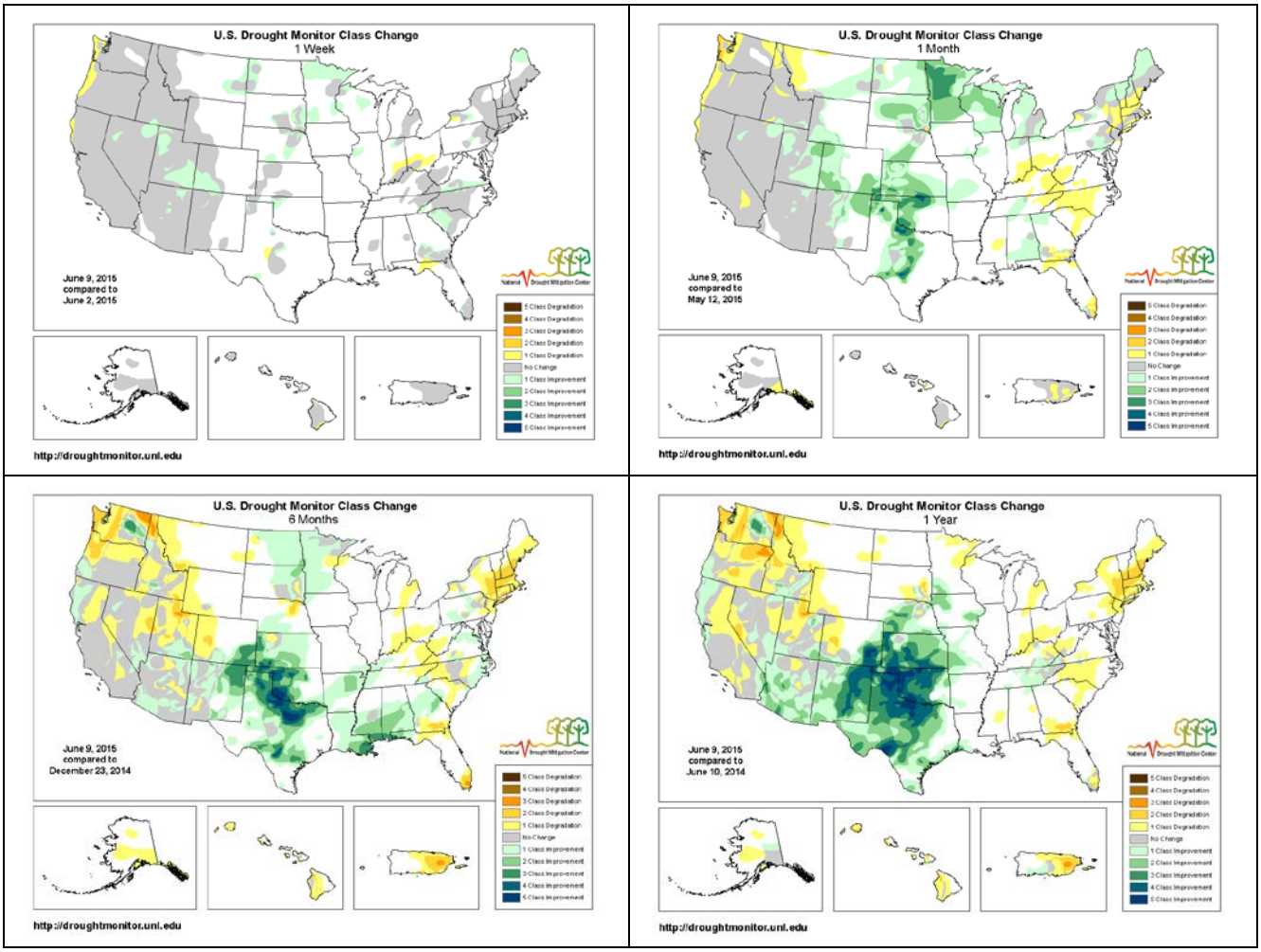
U.S. Drought Impacts during the past week

Visit the Drought Impact Reporter for more information.



Changes in Drought Monitor Categories

Over Various Time Periods



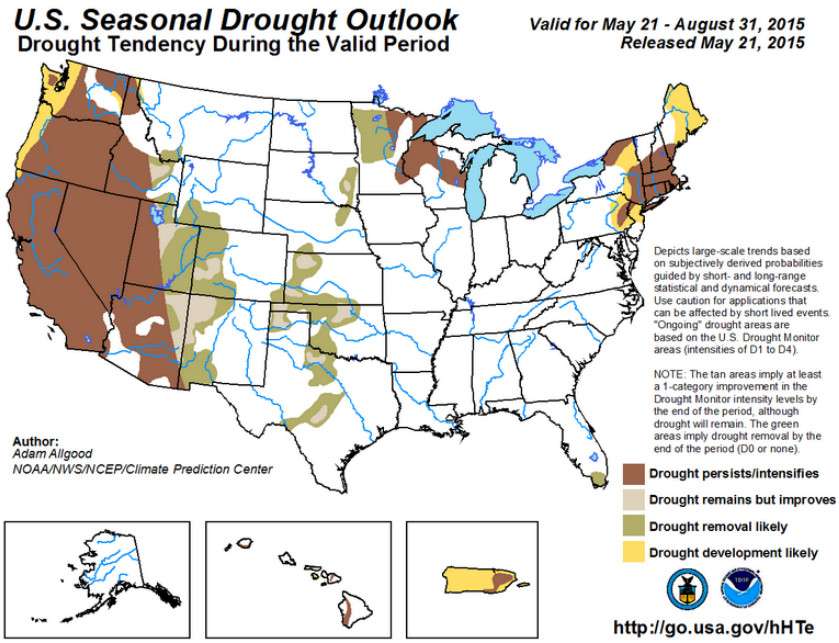
Click on any of these maps to enlarge. Note how the conditions over the Northwest, the Northeast, and the central Rockies have degraded between 6 to 12 months (lower maps). During this same time period, conditions over parts of the central and southern Great Plains and the Southwest have improved.

Supplemental Drought Information

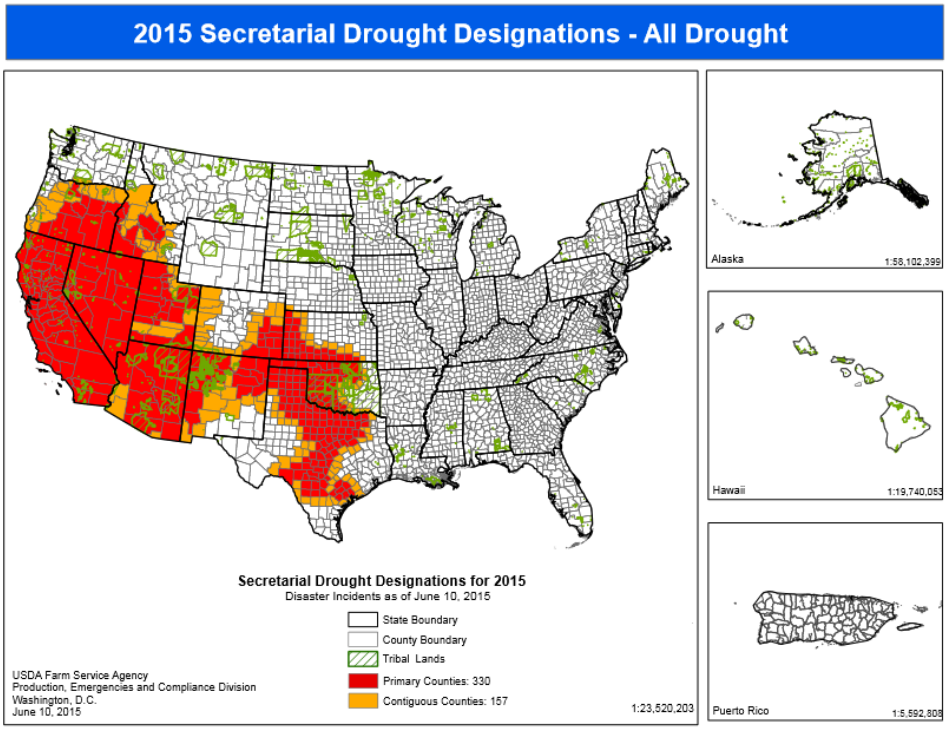
National Seasonal Drought Outlook

Nationally, drought is expected to persist or intensify over much of the west, central, and northeast U.S.

Improvements and removal of drought status are expected in the central region of the U.S. The areas of drought that are likely to develop further are in the Pacific Northwest, the Northeast, and Puerto Rico.



2015 USDA Secretarial Drought Designations



USDA Drought Assistance website

National Sustainable Agriculture Information Service.

USDA Regional Climate Hubs.

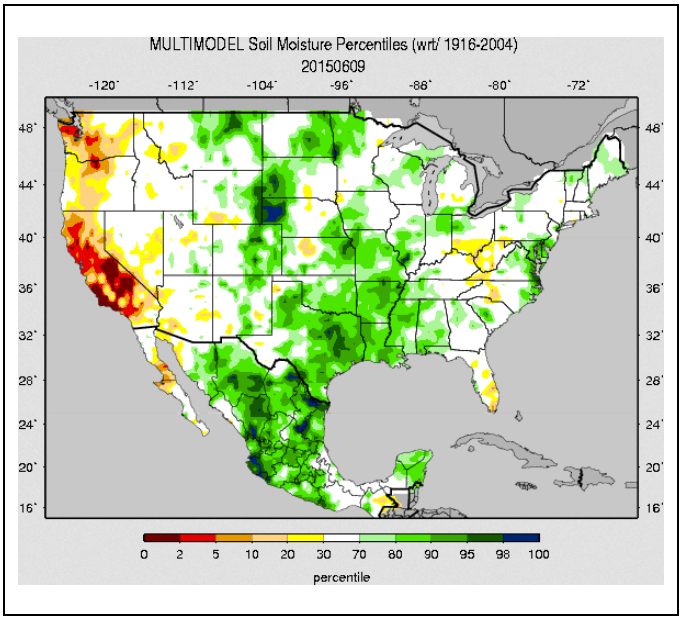
NASS Quick Stats

State Drought Activities

State government drought activities can be tracked through their drought plans. NRCS Snow Survey and Water Supply Forecasting (SSWSF) Program State Office personnel are participating in state drought committee

meetings and providing the committees and media with appropriate SSWSF information. Additional information describing the tools available from the Drought Monitor can also be found at the U.S. Drought Portal.

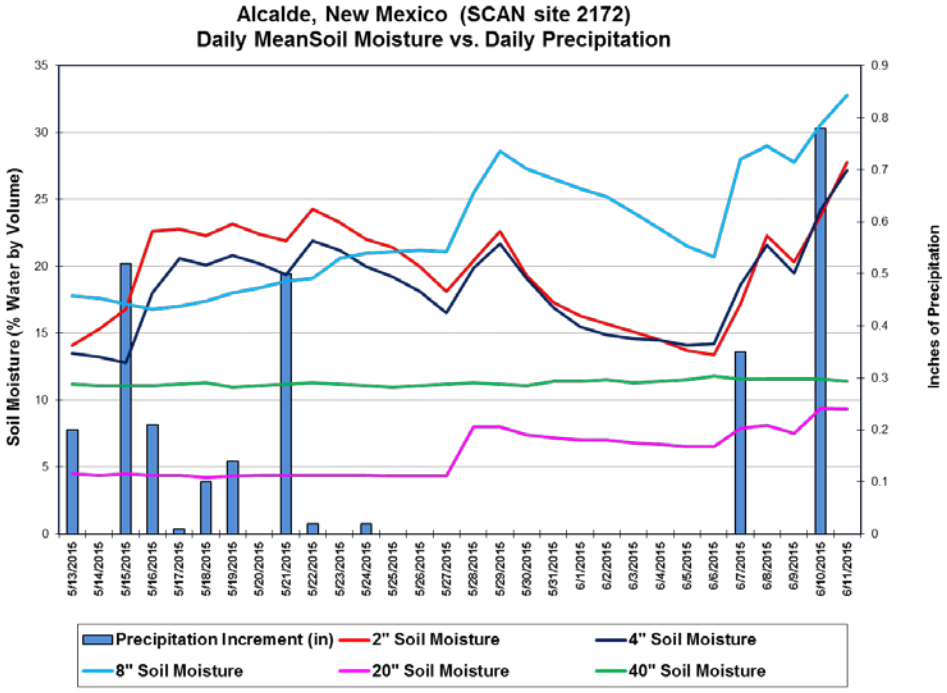
Soil Moisture



The national soil moisture model ranking in percentile as of June 9, 2015, shows dryness over most of the West. Additional drier than normal conditions are scattered across areas in many states. Moist soils dominated the southcentral region of the country. Slightly moist soils were also scattered elsewhere in the U.S.

Hydrological Links:
CRN Soil Moisture
Crop Moisture Index
Palmer Drought Severity Index
Standardized Precipitation Index
Surface Water Supply Index
Weekly supplemental maps
Minnesota Climate Working Group
Experimental High Resolution Drought Trigger Tool
NLDAS Drought Monitor
Soil Moisture

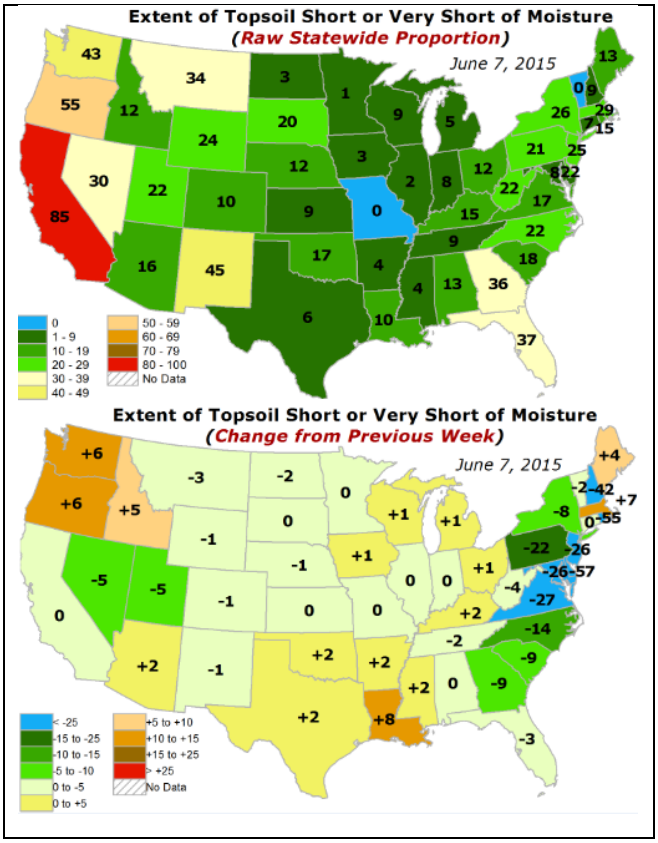
Soil Climate Analysis Network (SCAN)



This NRCS resource shows soil moisture data for the last month at the Alcalde (SCAN site 2172) in New Mexico. The area had several, large precipitation events in the last 30 days (blue bars). This recent rainfall resulted in improved soil moisture in all but the deepest soil moisture sensors (2-, 4-, 8- and 20-inch depths). The deepest (40-inch) soil moisture sensor has reported little change with recent rainfall.

Agriculture Links: Vegetation Drought Response Index; Evaporative Stress Index; Vegetation Health Index; NDVI Greenness Map; GRACE-Based Surface Soil Moisture; North American Soil Moisture Network. Monthly Wild Fire Forecast Report.

Topsoil and Pasture & Rangeland National Conditions



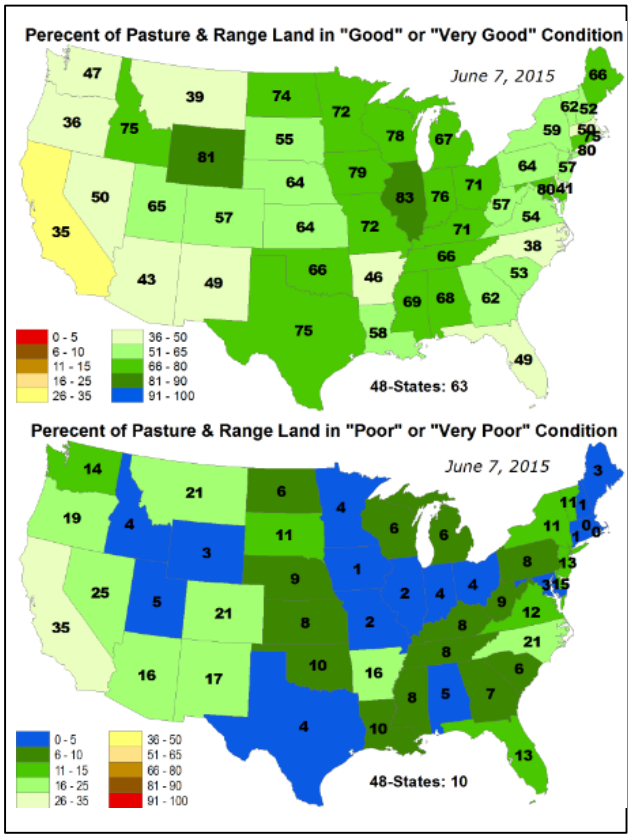
[Topsoil Moisture](#) is exceptionally poor (top) over California, with values representing more than 60% poorer conditions than the median for this time of year. Locations in the central and eastern U.S. have good soil moisture conditions.

Over the past week, good topsoil moisture dominated the central and western U.S. (bottom panel). Much of the eastern U.S. showed the largest topsoil moisture increase for the week, whereas the Pacific Northwest and parts of the west region was drying out.

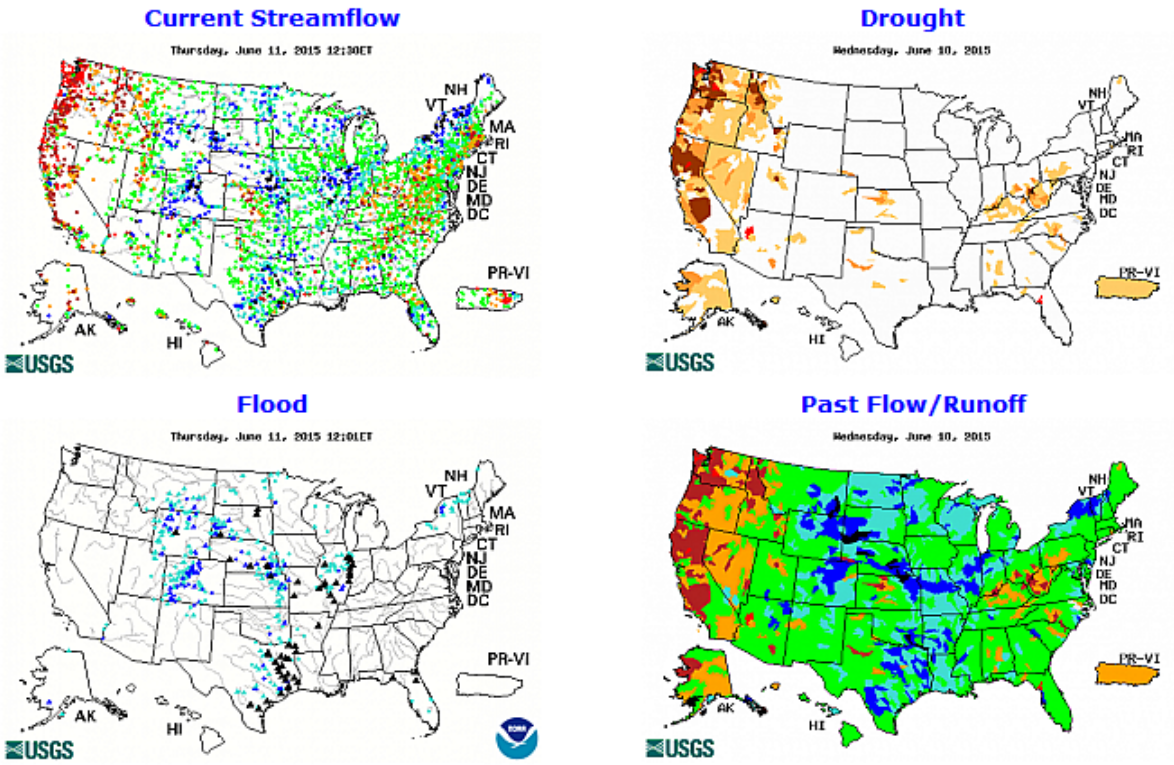
[Pasture and Rangeland](#) **conditions across the U.S:** Many states are currently reporting good conditions.

Pasture and rangelands are stressed over California.

Conditions have generally shown improvement over this past week.



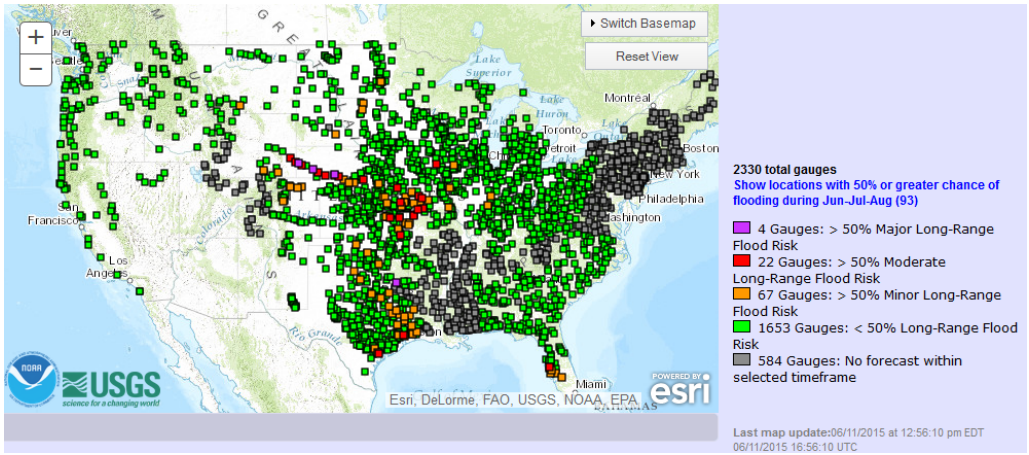
Streamflow



Nationally, stream gages primarily in the southern Great Plains are reporting much above normal streamflow. There are many gages at or above flood stage centered in the Mississippi River tributaries and southern U.S. this week.

National Long-Range Outlook

According to the National Weather Service, during the next three months there is a risk of flooding in the Midwest and the Southeast. Currently, **4** gages have a greater than 50% chance to experience major flooding; **22** gages for moderate flooding; and **67** gages for minor flooding. These numbers represent no change in the number of gages with a greater than 50 percent chance of minor flooding category since last week.



Click map to enlarge and update

Weather Outlook

June 11, 2015 National Outlook: "The return of an active weather pattern will lead to significant rainfall during the next several days in many parts of the country. Five-day rainfall totals could reach 2 to 6 inches across portions of the central and southern Plains, ending a period of favorably dry weather. In addition, totals of 2 to 4 inches can be expected from the central Rockies into the Great Lakes region. Locally heavy showers will also persist along the Gulf Coast, but little or no rain will fall in the Pacific Coast States and along the southern Atlantic Coast. Elsewhere, heat in the Northwest will subside but reappear farther south, while markedly cooler weather will arrive by week's end across much of the Plains and Midwest. The NWS 6- to 10-day outlook for June 16 – 20 calls for near- to above-normal temperatures and precipitation across most of the U.S. Cooler-than-normal conditions will be limited to the Northwest, while drier-than-normal conditions will be confined to the lower Southeast and parts of the Northwest."

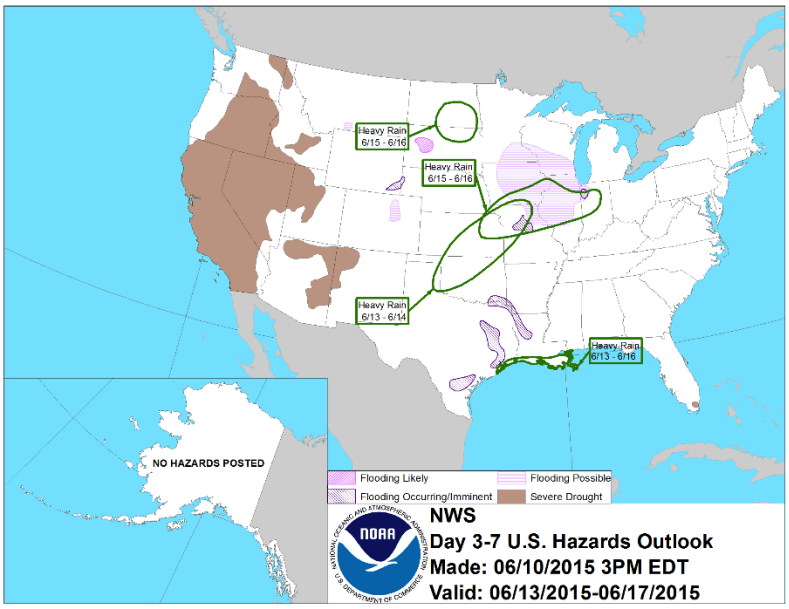
Contact: Brad Rippey, Agricultural Meteorologist, USDA/OCE/WAOB, Washington, D.C. (202-720-2397)
Website: http://www.usda.gov/oce/weather/pubs/Daily/TODAYSWX.pdf

National Weather Hazards

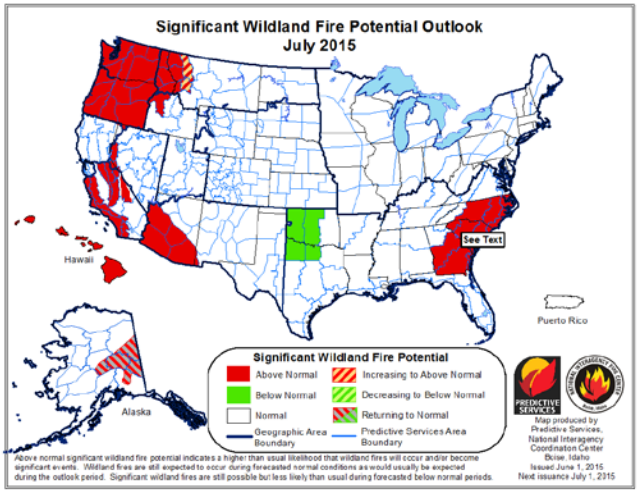
The National Weather Service map of national weather hazards for the next 3 – 7 days forecasts heavy rain in the upper Midwest and parts of the Gulf Coast (6/13-15). Flooding is occurring or possible in many parts of the northern Great Plains to the central U.S.

Severe drought remains a large issue in much of the southcentral and western U.S.

In Alaska, no hazards are posted.



National Fire Potential Outlook



July Fire Forecast

In July, much of the U.S. is forecast to have normal fire potential.

Below normal fire potential for July 2015 (in green on the map) is forecast for the southcentral U.S.

The West, Southeast, and Hawaii have above normal fire potential.

Eastern Alaska is returning to normal fire potential.

Current Reservoir Storage

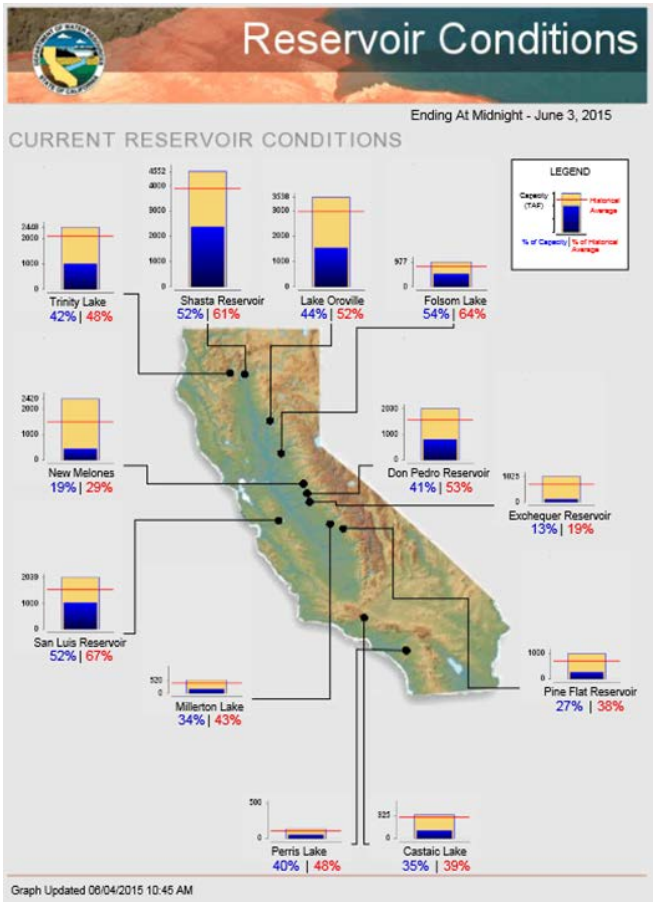
Reservoir Data and State combined Reservoir Storage.

USBR Hydromet Tea Cup Reservoir Depictions

http://www.usbr.gov/uc/water/basin/ ← Upper Colorado
http://www.usbr.gov/pn/hydromet/select.html ← Pacific Northwest/Snake/Columbia
http://www.sevierriver.org/reservoirs/teacup-diagram-of-reservoirs/ ← Sevier River Water (UT)
http://www.usbr.gov/gp/hydromet/teacup_form1.html ← Upper Missouri (also links for KS, OK, TX)

California Department of Water Resources: Reservoir Conditions

California Major Reservoir conditions **California Department of Water Resources**



More Information

The National Water and Climate Center (NWCC) website provides the latest available snowpack and water supply information. This document is available weekly. CONUS Water and Climate Updates from 2007 are available online. Reports from 2001-2006 are available on request.

This report uses data and products provided by the Interagency Drought Monitor Consortium members and the National Interagency Fire Center.

/s/

David W. Smith
Deputy Chief, Soil Science and Resource Assessment