



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

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## Weekly Report - Snowpack / Drought Monitor Update

Date: 28 June 2012

### SNOTEL SNOWPACK AND PRECIPITATION SUMMARY

**Temperature:** [SNOTEL](#) and ACIS 7-day temperature anomaly showed values cooler over the West Coast States and warmer over the Central and Southern Rockies. Elsewhere, temperatures were within 5 degrees of the long term average (Fig. 1). ACIS [7-day](#) average temperature anomalies show the greatest positive temperature departures eastern Colorado ( $>+6^{\circ}\text{F}$ ) and the greatest negative departures over parts of the Southern Oregon Cascades ( $<-6^{\circ}\text{F}$ ) (Fig. 1a).

**Precipitation:** [ACIS](#) 7-day average precipitation amounts for the period ending yesterday shows the wettest areas over the Cascades, northern Idaho, and Montana Rockies (Fig. 2). In terms of percent of normal, this same region is also highlighted with above normal amounts (Fig. 2a). Isolated thunderstorm activity over parts of Arizona and New Mexico reflects a weak start to the Southwest Monsoon. Since the start of the [2012 Water-Year](#) that began on 1 October 2011, the seasonal moisture has continued to favor the Northern Tier States. Over much of the southern half of the West, drier conditions dominate (Fig. 2b). This is helping to drive an active early fire season. Since the start of [June](#) the Cascades and Northern Rockies have been much wetter than the long term average due to a persistent trough over the Northeastern Pacific. Elsewhere, extremely dry conditions dominate (Fig. 2c).

**Weather Summary:** A cool front brought showers and thunderstorms to the central and northern Plains and Upper Midwest early during this U.S. Drought Monitor (USDM) week, but it weakened as it scraped against high pressure over the eastern U.S., dropping minimal precipitation in the Ohio Valley. Another front brought limited rain later in the period. Tropical Storm Debby inundated Florida with flooding rains beginning Saturday, June 23. Areas of rain peppered the Northeast and Mid-Atlantic States as the fronts limped eastward. An upper-level trough brought waves of rain to parts of the Pacific Northwest and extreme northern Rockies, and small areas of very light convection developed in the Southwest as the summer monsoon tried to get started. Otherwise, upper-level high pressure dominated with hot, dry, and windy weather blanketing much of the West and central Plains. The hot and dry air mass spread eastward as the week progressed. It was a drier-than-normal week for Puerto Rico but the precipitation pattern was mixed for Alaska and Hawaii.

**The West:** Pacific fronts associated with an upper-level trough brought an inch or more of rain to the coastal areas of Oregon and Washington and lesser amounts further inland this week, and a few tenths of an inch of rain fell with scattered showers over the Four Corners States, but otherwise the West continued bone dry. By the end of the week, temperatures topped 100 degrees from Tucson, Arizona to Glasgow, Montana. The tinder dry conditions, hot temperatures and gusty winds fanned wildfires across the West, from New Mexico to Montana and California to Colorado, with twice as many large wildfires burning by the end of the week as at the beginning. June 24 USDA reports indicated most of the topsoil in New Mexico (93%) and Colorado (90%) was rated short or very short of moisture, with over half so rated in Wyoming (73%) and Utah (63%). More than half of the pasture and range land was rated in poor or very poor condition in New Mexico (90%), Arizona (72%), Colorado (70%), Wyoming (66%), Nevada

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(61%), and California (60%). The Standardized Precipitation Index (SPI) measures moisture deficits. SPI values, at time scales from 30 days to 12 months, were in the D4 equivalent category in many areas across the West. To reflect these conditions, a general one-category degradation of the USDM D0-D2 areas was made across Colorado, with D0-D2 expanding across Wyoming. D2 –D3 expanded across parts of the Intermountain Basin. D2 expanded in New Mexico, D0-D1 in Montana, and D0 in southeast Idaho. The SL/S impact boundary in north central Utah was shifted north. Author: Richard Heim, National Climatic Data Center, NOAA.

***A comprehensive narrative describing drought conditions for the nation can be found at the end of this document.***

### Drought Impacts Definitions

The possible impacts associated with **D4 (S, L)** drought include widespread crop/pasture losses and shortages of water in reservoirs, streams, and wells creating water emergencies. The possible impacts associated with **D3 (S, L)** drought include major crop/pasture losses and widespread water shortages or restrictions. Possible impacts from **D2 (S, L)** drought are focused on water shortages common and water restrictions imposed and crop or pasture losses likely. The possible impacts associated with **D1 (S, L)** drought are focused on water shortages developing in streams, reservoirs, or wells, and some damage to crops and pastures (Figs. 3 through 3c).

### Soil Moisture

Soil moisture (Fig. 4), is simulated by the [VIC macroscale hydrologic model](#). The detailed, physically-based VIC model is driven by observed daily precipitation and temperature maxima and minima from approximately 2130 stations, selected for reporting reliably in real-time and for having records of longer than 45 years (and various other criteria). Another good resource can be found at: <http://www.emc.ncep.noaa.gov/mmb/nldas/drought/>.

### Soil Climate Analysis Network (SCAN)

Figure 5 provides supplemental data on soil conditions (moisture and temperatures at various depths from 2 inches to 80 inches. For more information about SCAN see ([brochure](#)).

### U.S. Historical Streamflow

This map, (Fig. 6) shows the 7-day average streamflow conditions in hydrologic units of the United States and Puerto Rico for the day of year. The colors represent 7-day average streamflow percentiles based on historical streamflow for the day of the year. Thus, the map shows conditions adjusted for this time of the year. Only stations having at least 30 years of record are used. Sub-regions shaded gray indicate that insufficient data were available to compute a reliable 7-day average streamflow value. During winter months, this situation frequently arises due to ice effects. The data used to produce this map are provisional and have not been reviewed or edited. They may be subject to significant change.

### **Fire Conditions**

Fig. 7 comes from the [Predictive Services](#) (USFS) facilitates integration of comprehensive climate, weather, situation and fuels information in geospatial format.

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### State Activities

State government drought activities can be tracked at the following URL: <http://drought.unl.edu/mitigate/mitigate.htm>. NRCS SS/WSF State Office personnel are participating in state drought committee meetings and providing the committees and media with appropriate SS/WSF information - <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>. Additional information describing the products available from the Drought Monitor can be found at the following URL: <http://drought.unl.edu/dm/> and <http://www.drought.gov>.

### For More Information

The National Water and Climate Center Homepage provide the latest available snowpack and water supply information. Please visit us at <http://www.wcc.nrcs.usda.gov>. This document is available from the following location on the NWCC homepage - <http://www.wcc.nrcs.usda.gov/water/drought/wdr.pl>. Reports from 2007 are available on-line while ones from 2001-2006 can be acquired upon request.

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

/s/

Micheal L. Golden  
Deputy Chief, Soil Survey and Resource Assessment

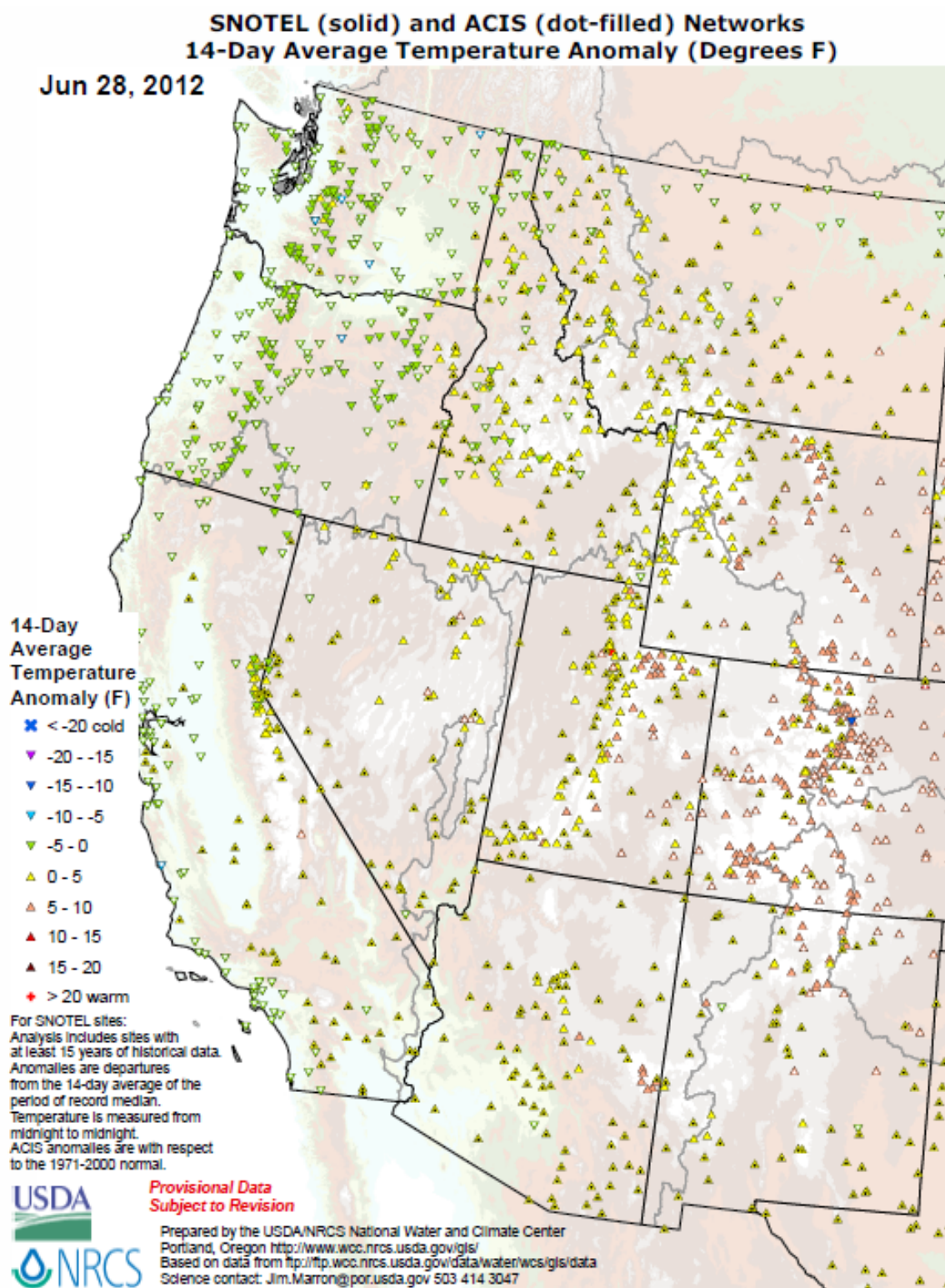
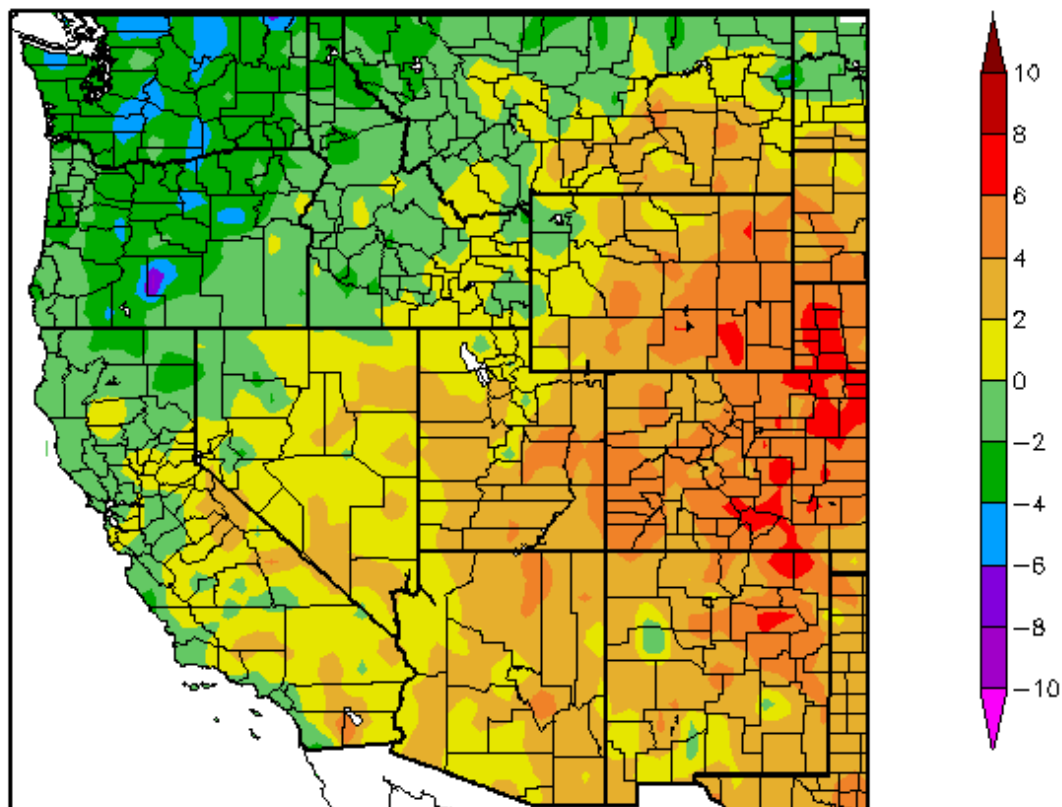


Fig. 1: [SNOTEL](#) and ACIS 7-day temperature anomaly showed values cooler over the West Coast States and warmer over the Central and Southern Rockies. Elsewhere, temperatures were within 5 degrees of the long term average.

Departure from Normal Temperature (F)  
5/29/2012 – 6/27/2012



Generated 6/28/2012 at HPRCC using provisional data.

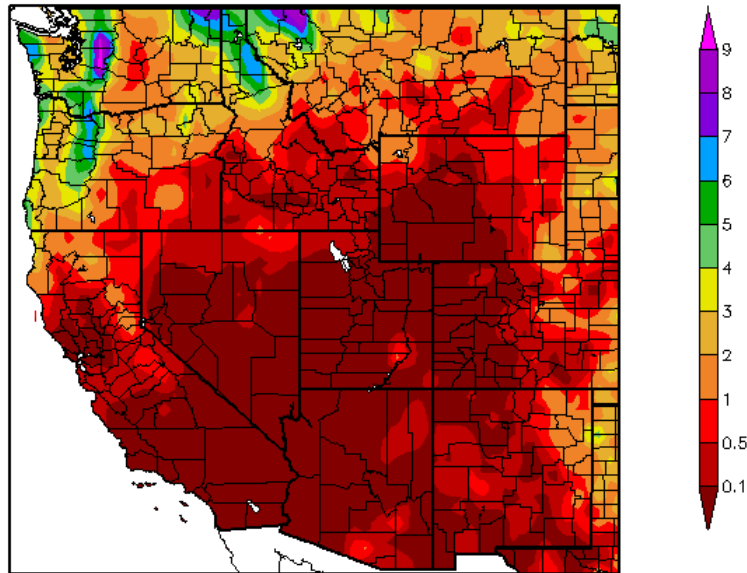
Regional Climate Centers

**Fig. 1a:** ACIS 7-day average temperature anomalies show the greatest positive temperature departures eastern Colorado (**>+6°F**) and the greatest negative departures over parts of the Southern Oregon Cascades (**<-6°F**).



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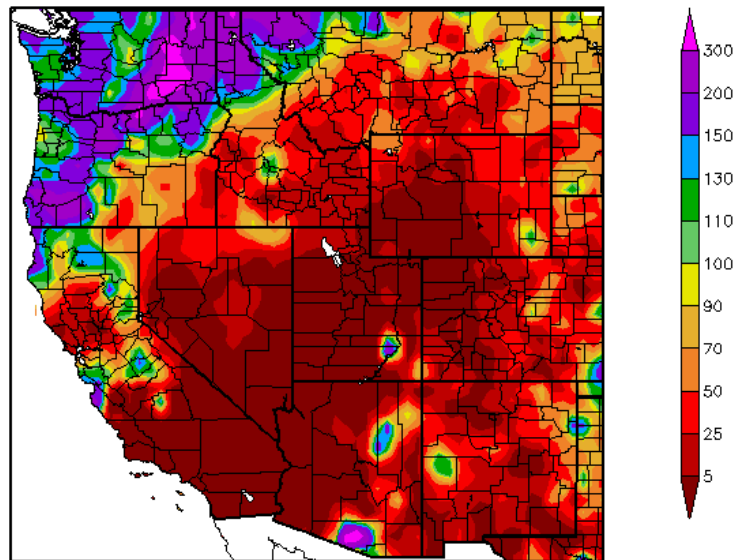
Precipitation (in)  
5/29/2012 – 6/27/2012



Generated 6/28/2012 at HPRCC using provisional data.

Regional Climate Centers

Percent of Normal Precipitation (%)  
5/29/2012 – 6/27/2012



Generated 6/28/2012 at HPRCC using provisional data.

Regional Climate Centers

**Fig. 2 and 2a:** [ACIS](#) 7-day average precipitation amounts for the period ending yesterday shows the wettest areas over the Cascades, northern Idaho, and Montana Rockies (top). In terms of percent of normal, this same region is also highlighted with above normal amounts (bottom). Isolated thunderstorm activity over parts of Arizona and New Mexico reflects a weak start to the Southwest Monsoon.

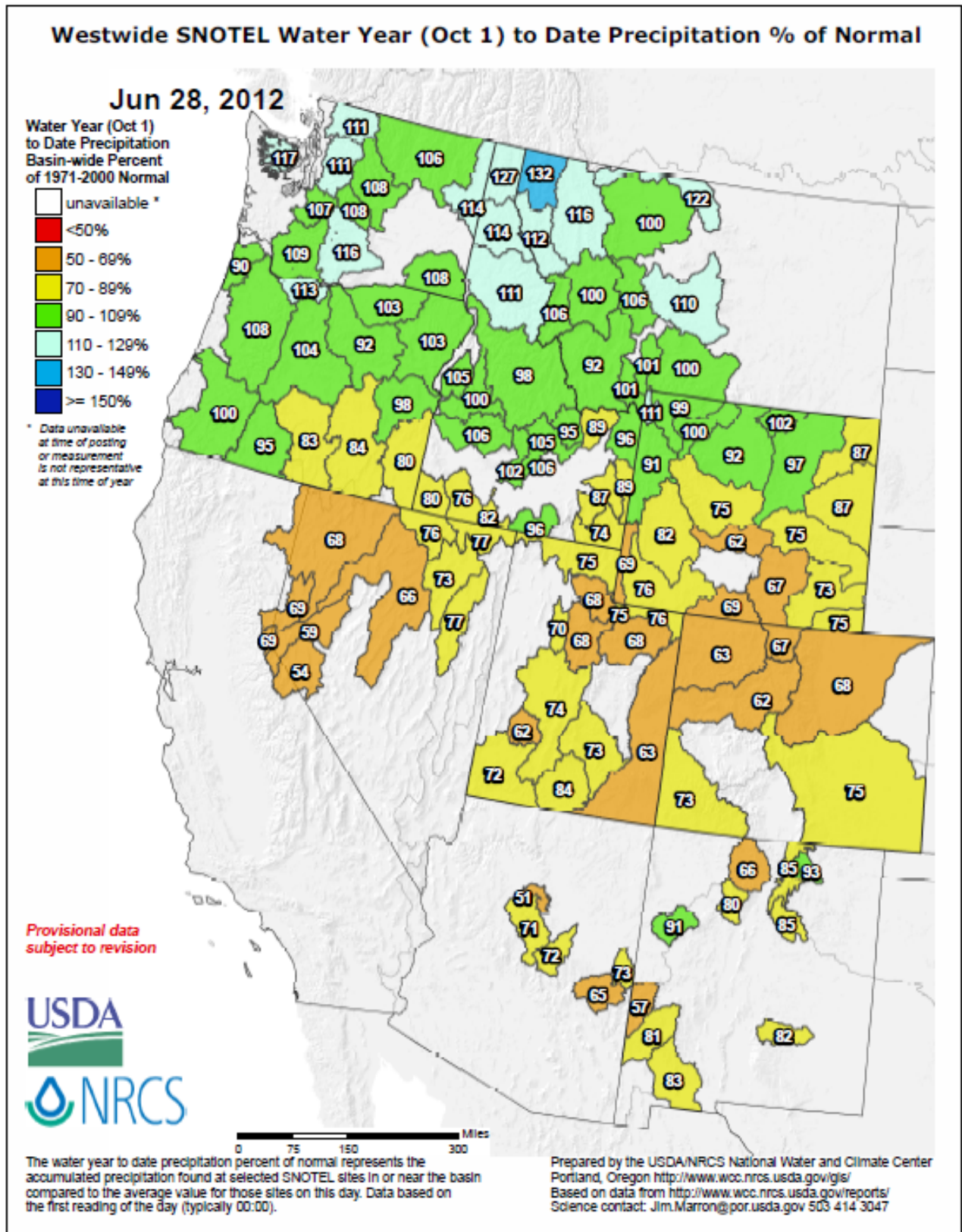


Fig 2b: Since the start of the [2012 Water-Year](#) that began on 1 October 2011, the seasonal moisture has continued to favor the Northern Tier States. Over much of the southern half of the West, drier conditions dominate. This is helping to drive an active early fire season.

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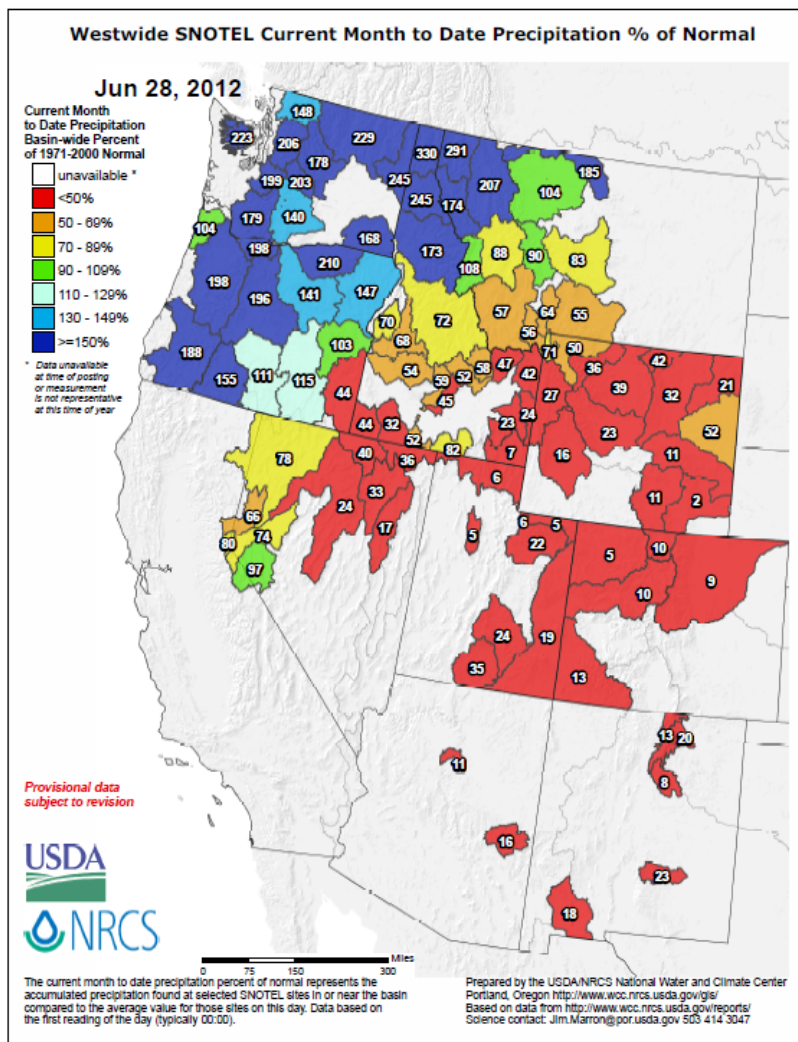


Fig 2c: Since the start of [June](#), the Cascades and Northern Rockies have been much wetter than the long term average due to a persistent trough over the Northeastern Pacific. Elsewhere, extremely dry conditions dominate.

### Useful Precipitation Links:

- Total precipitation (plotted by the [USGS](#), [NOAA National Weather Service \[NWS\]](#), and [NOAA High Plains Regional Climate Center \[HPRCC\]](#));
- percent of normal precipitation and precipitation percentiles ([NWS](#), [HPRCC station observations](#), [Leaky Bucket model](#));
- NCDC [statewide precipitation ranks](#);
- USGS [number of days with precipitation](#) and [maximum number of consecutive dry days](#);
- temperature departures from normal ([HPRCC](#)) and percentiles ([Leaky Bucket](#));
- NCDC [statewide temperature ranks](#);
- number of [record warm daily low temperatures](#), [record daily high temperatures](#), [record daily low temperatures](#), and [record cool daily high temperatures](#) set in May 2012 (from NCDC's [daily records analysis](#)); and
- [Utah's last precipitation](#) occurrence (in days).



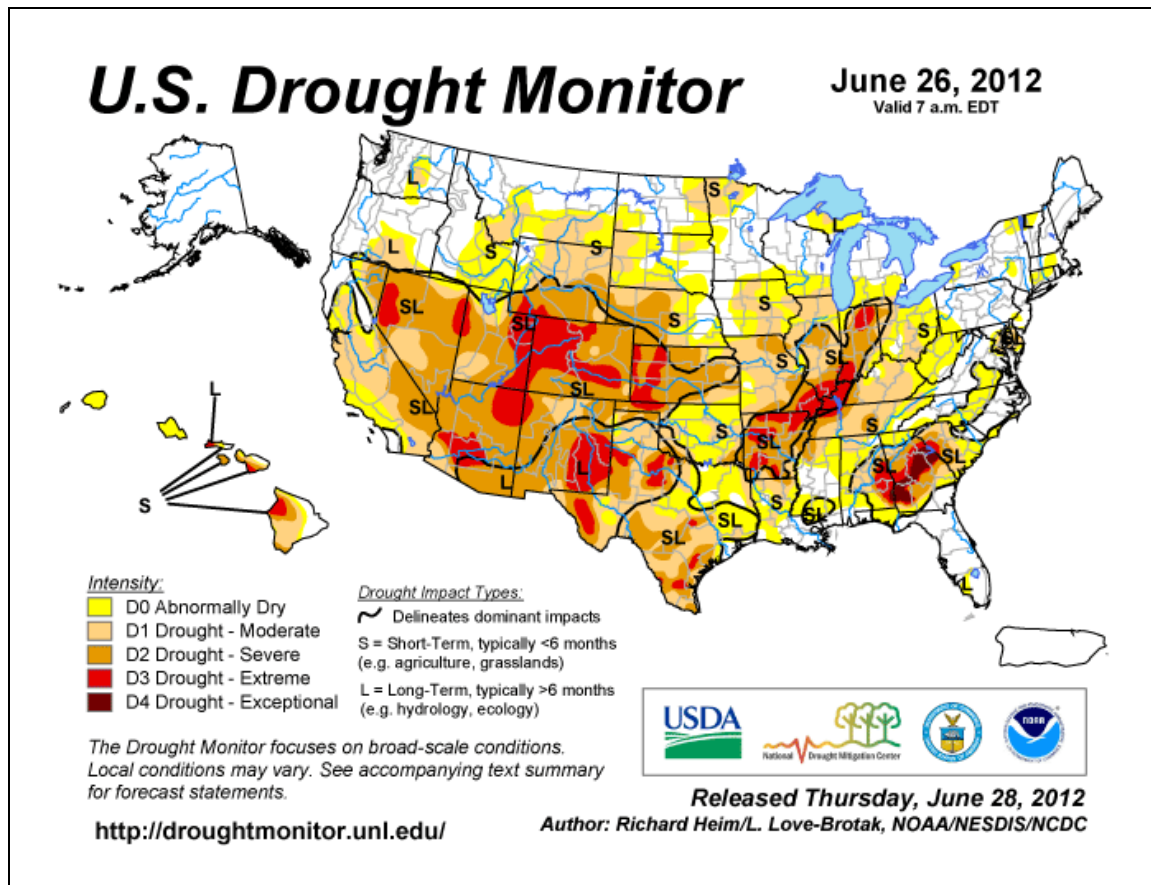


Fig. 3: Current [Drought Monitor](#) weekly summary. The exceptional D4 levels of drought are found over the Southeast US. For more drought news, see [Drought Impact Reporter](#). Click for the latest statistics for [California Reservoirs](#). The monthly [drought indicator blend and component percentiles](#) spreadsheet is a great resource for climate division drought statistics. A number of these articles will be posted on the [Drought Headlines](#) page at the [NDMC website](#).

Drought Monitor	Forecasts	What's New	Current Conditions	About Us	Archive	Contact Us	Links
Drought Condition (Percent Area): United States							
Conditions for the U.S., including Alaska, Hawaii and Puerto Rico							
Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
One Year Ago	05/14/11	68.11	31.89	22.69	18.21	13.72	7.54
Start of Water Year	09/27/11	63.45	36.55	24.42	19.61	14.87	9.50
Start of Calendar Year	12/27/11	58.88	41.12	23.89	15.88	8.37	2.76
3 Months Ago	03/20/12	53.05	46.95	32.09	16.09	5.75	1.84
Last Week	06/12/12	47.52	52.38	33.24	16.04	3.29	0.24
Current	06/19/12	39.42	60.58	39.12	20.32	4.35	0.24
Conditions for the Contiguous U.S.							
Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
One Year Ago	05/14/11	66.95	33.05	27.12	21.79	16.42	9.03
Start of Water Year	09/27/11	56.45	43.55	29.13	23.44	17.90	11.37
Start of Calendar Year	12/27/11	50.89	49.11	28.49	18.95	10.01	3.31
3 Months Ago	03/20/12	43.91	56.09	38.31	19.19	6.88	2.21
Last Week	06/12/12	37.47	62.53	39.68	19.14	3.92	0.29
Current	06/19/12	31.22	68.78	46.72	24.27	5.19	0.29

National Drought Mitigation Center

39.12% of the U.S. (including Alaska and Hawaii) are in drought now compared to 22.7% a year ago. For the CONUS, 46.7% of the area is in drought compared to 27.1% a year ago.

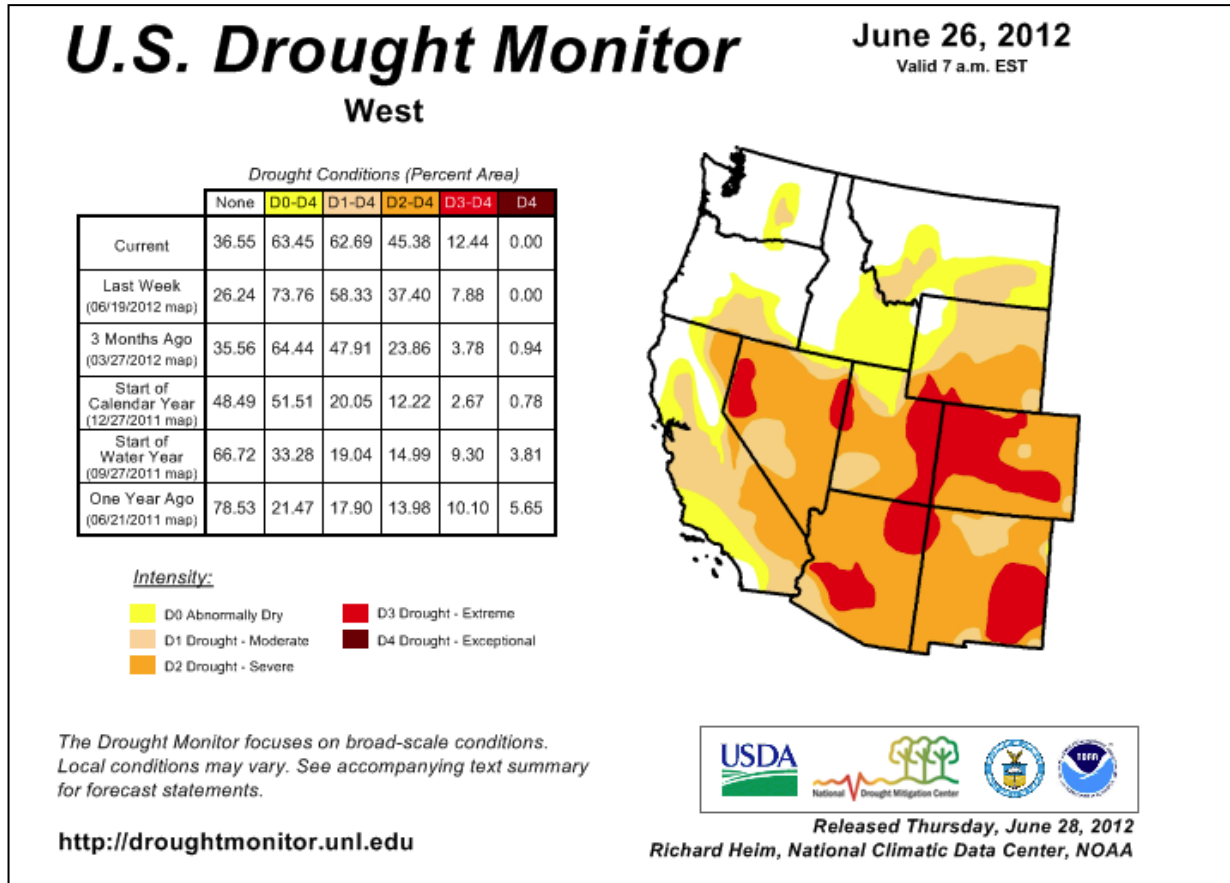
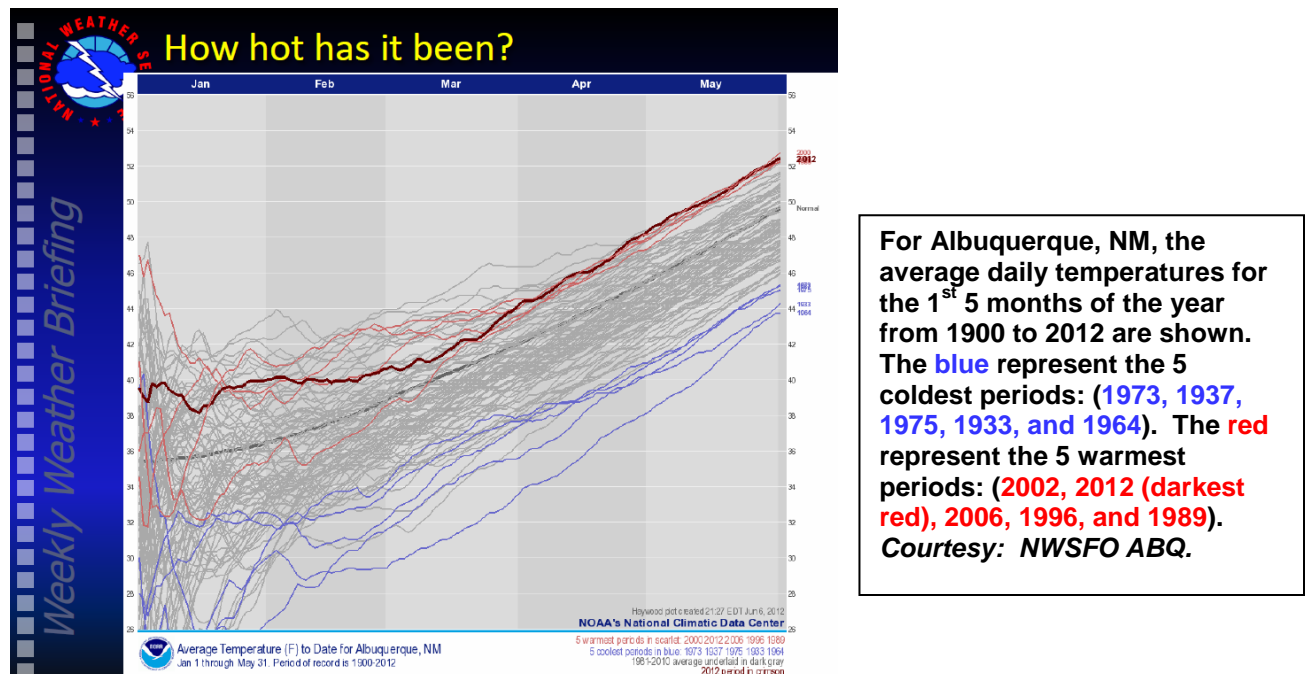


Fig. 3a: Drought Monitor for the [Western States](#) with statistics over various time periods. Note some deterioration in D1-D3 this week (e.g. >4% increase in D3). See: CLIMAS [June issue](#).



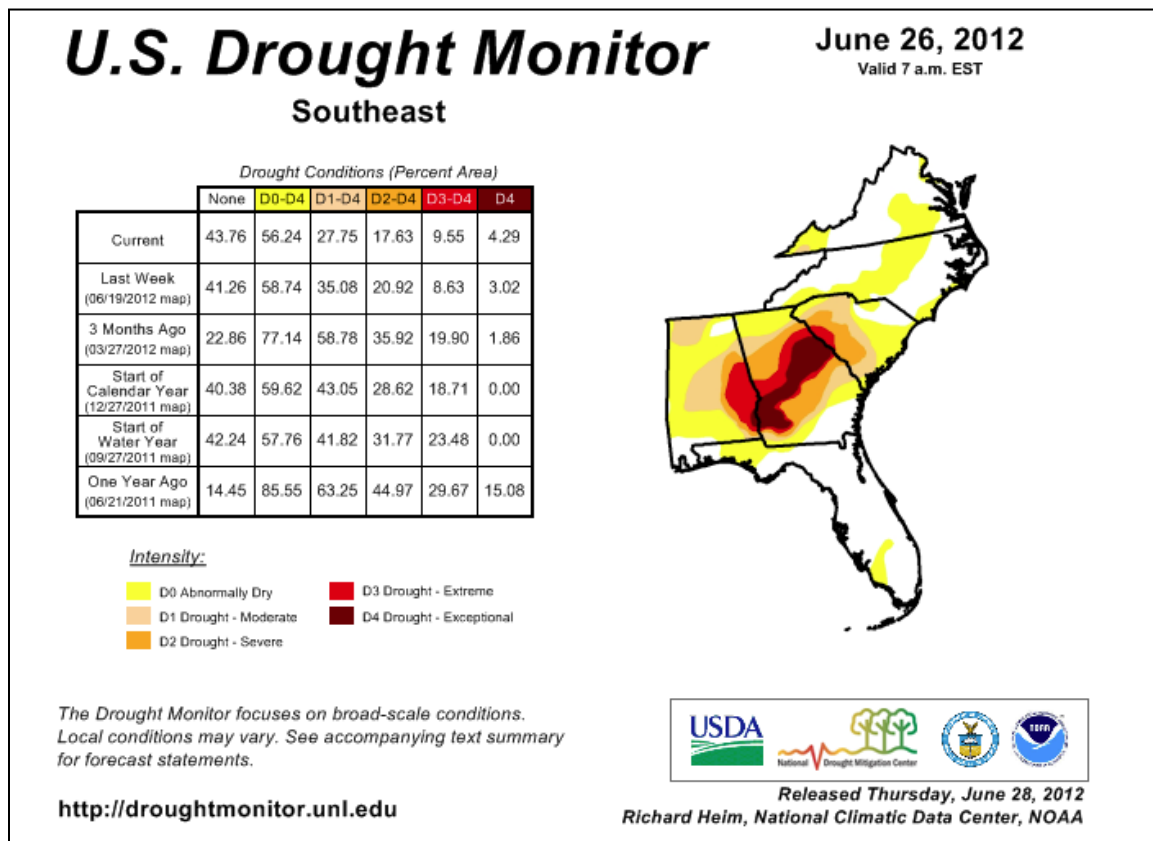


Fig. 3b: Drought Monitor for the [Southeastern States](#) with statistics over various time periods. Note slight improvement in D1-D3 this week but slight deterioration in D4. Heavy rainfall over Florida has helped to eliminate drought over the entire state.

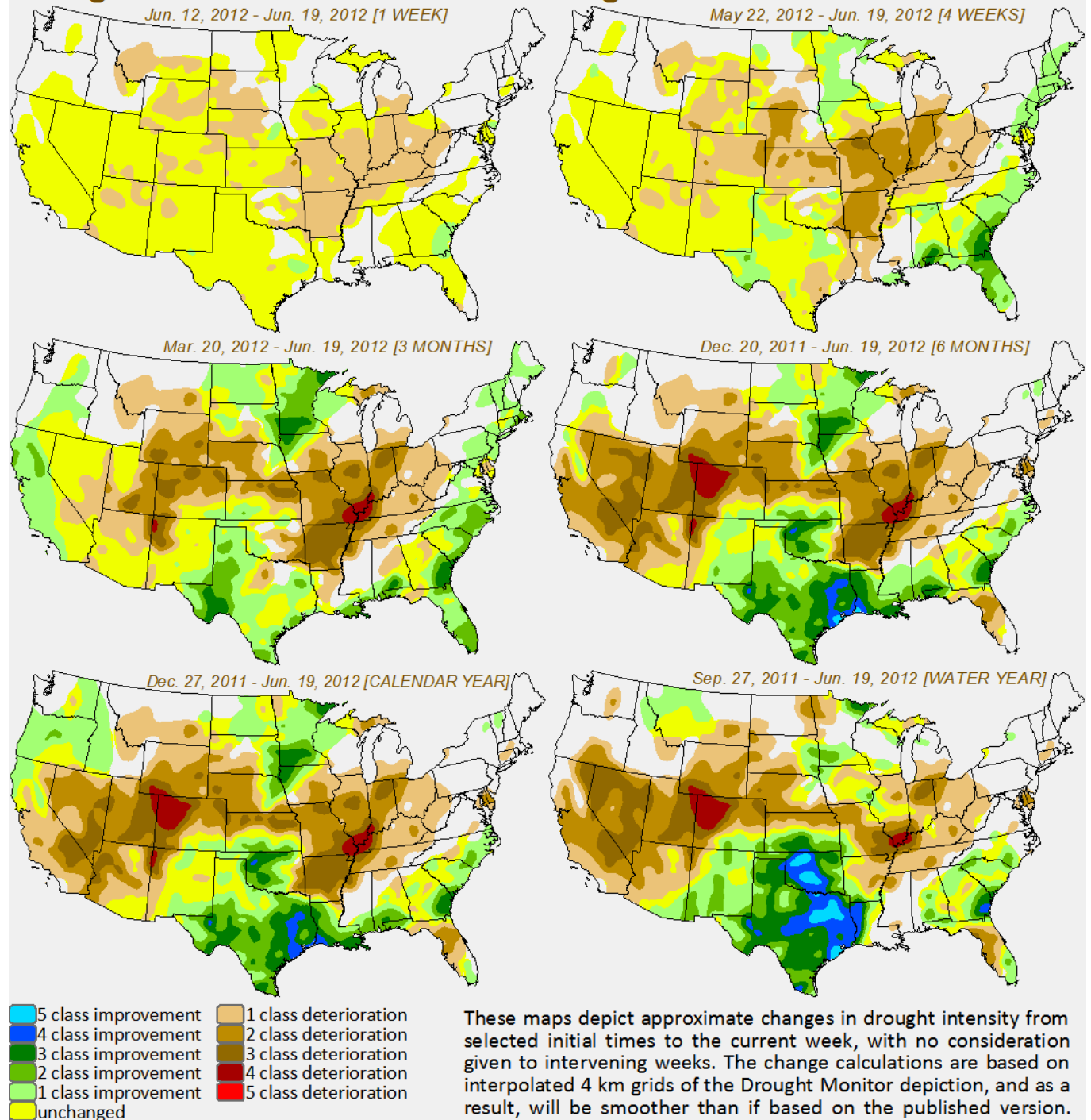
## GA

According to the National Agriculture Statistics Service's Georgia Field Office, there were 6.6 days suitable for fieldwork for the week ending Sunday, June 24, 2012. Statewide topsoil moisture was rated at 10% very short, 43% short, 42% adequate, 5% surplus. Subsoil moisture 16% very short, 42% short, 38% adequate, 4% surplus. Precipitation estimates for the state ranged from no rain up to 2.4 inches. Average high temperatures ranged from the mid 70's to the low 90's. Average low temperatures ranged from the high 50's to the low 70's.

## SC

The official start to summer was observed during the week ending June 24, 2012. Typical summer weather patterns were present with temperatures reaching the mid-nineties during the day and the sixties at night. Very little rainfall was observed during the week. A few isolated showers fell around the Orangeburg area but most farm operators across the State reported little to no rain. Field crops and pastures began to show signs of stress due to the heat and lack of precipitation. Soil moisture conditions dropped to 4% very short, 29% short, 66% adequate and 1% surplus. The State average rainfall for the period was 0.3 inches. The State average temperature for the period was near normal with 6.3 days suitable for fieldwork.

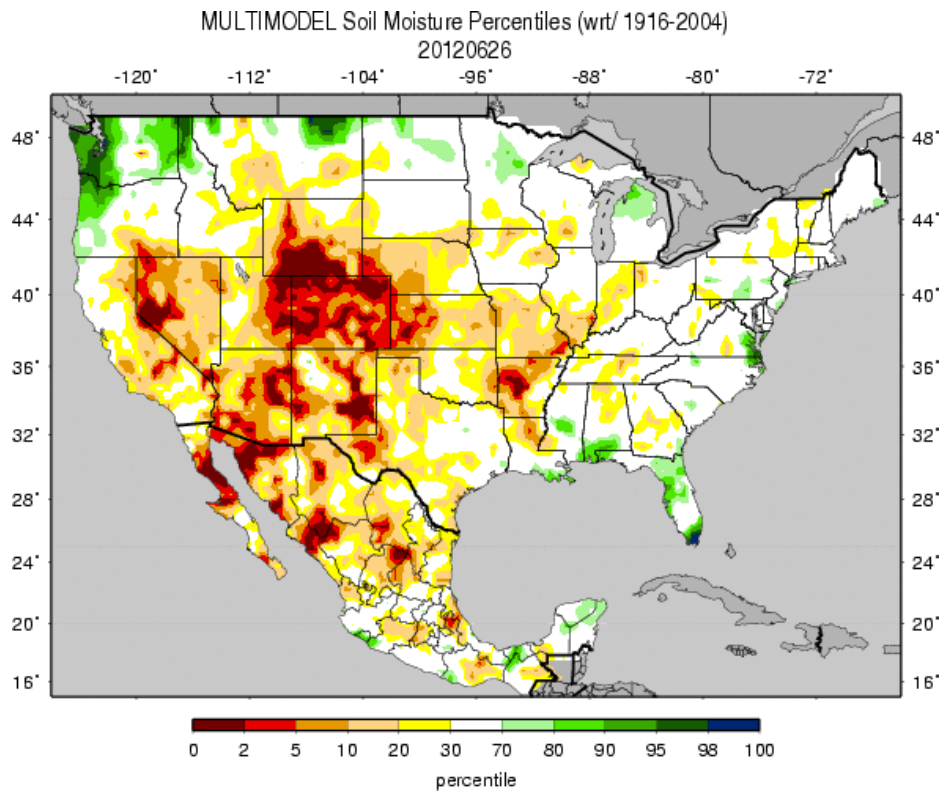
## Drought Monitor Classification Changes for Selected Time Periods



**Fig 3c: [DM Classification Changes](#)** over various time periods show recent deterioration over much of the Mississippi River Drainage and Central Plains and improvements over Florida and the immediate Eastern Seaboard. *For latest update, click link above.*



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Figs. 4: Soil Moisture ranking in [percentile](#) as of 26 June shows dryness over Missouri, the Central Rockies, the Southwest, and the Western Great Basin.

### *Useful Hydrological Links:*

USDA western U.S. mountain snow water content anomaly map.

- USGS (U.S. Geological Service) [observed streamflow](#);
- NOAA Climate Prediction Center (CPC) modeled runoff [anomalies](#) and [percentiles](#);
- VIC (University of Washington Variable Infiltration Capacity macro scale hydrologic model) [1-](#), [2-](#), [3-](#), and [6-](#)month and [water year-to-date](#) runoff percentiles;
- NLDAS (North American Land Data Assimilation System) modeled streamflow [anomalies](#) and [percentiles](#);
- NLDAS model runoff [anomalies](#) and [percentiles](#);
- USGS groundwater observations ([real-time network](#), [climate response network](#), [total active network](#));
- USDA snow water content observations for the West (SNOTEL station [percentiles](#) and [percent of normal](#), SNOTEL basin [percent of normal](#) and [percent of average](#)) and Alaska ([SNOTEL station percent of normal](#), [SNOTEL basin percent of normal](#));
- USDA reservoir storage as [percent of capacity](#).

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### Soil Climate Analysis Network ([SCAN](#))

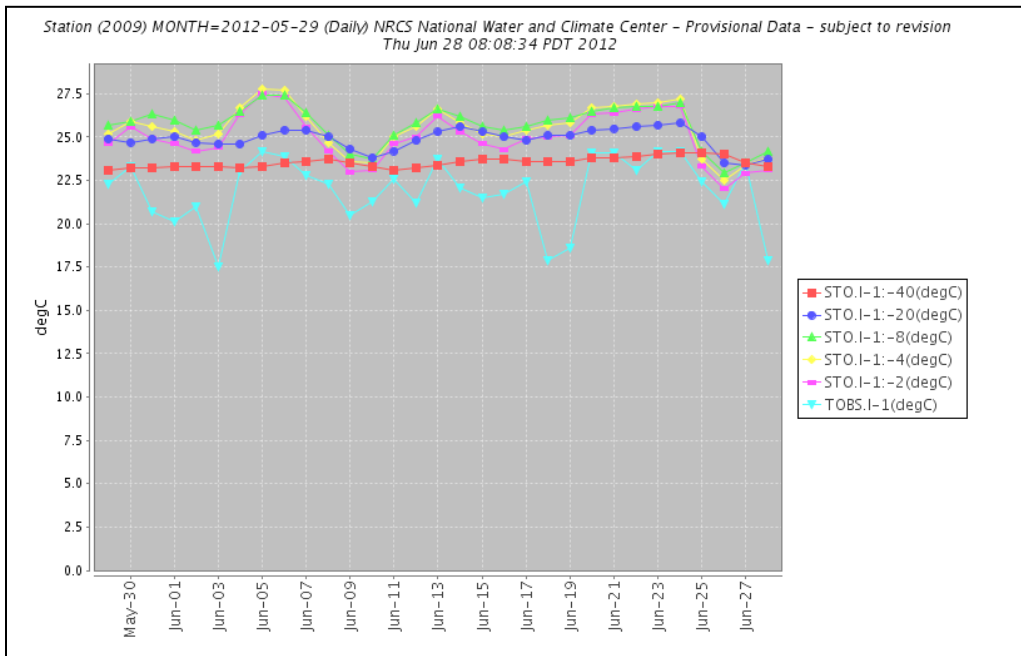


Fig. 5: This NRCS resource shows a site over the [Panhandle of Florida](#) with abundant soil moisture responding to recent heavy rains.

#### Useful Agriculture Links:

- USDA (U.S. Department of Agriculture) [observed soil moisture conditions](#), [departures and percentiles](#), and comparison to [5-year average](#) and [10-year average](#);
- the Palmer [Crop Moisture Index \(CMI\)](#), which intensified during the month in the West and Lower to Mid-Mississippi Valley (weeks [1](#), [2](#), [3](#), [4](#), [5](#));
- CPC modeled soil moisture [anomalies](#) and [percentiles](#) for end of May, and [soil moisture anomaly change](#) compared to previous month;
- CPC's Leaky Bucket model [soil moisture percentiles](#);
- NLDAS modeled soil moisture percentiles for the [top soil layer](#) and [total soil layer](#);
- VIC modeled [soil moisture percentiles](#), and [soil moisture percentile change](#) compared to previous month;
- USDA observed [pasture and rangeland conditions](#);
- [Vegetation Drought Response Index \(VegDRI\)](#);
- the NOAA/NESDIS satellite-based [Vegetation Health Index \(VHI\)](#);
- the USGS agro-hydrologic model ([Soil Water Index](#), [Water Requirement Satisfaction Index](#));
- Selected [SNOTEL Sites](#) (measured 2" soil moisture depth);

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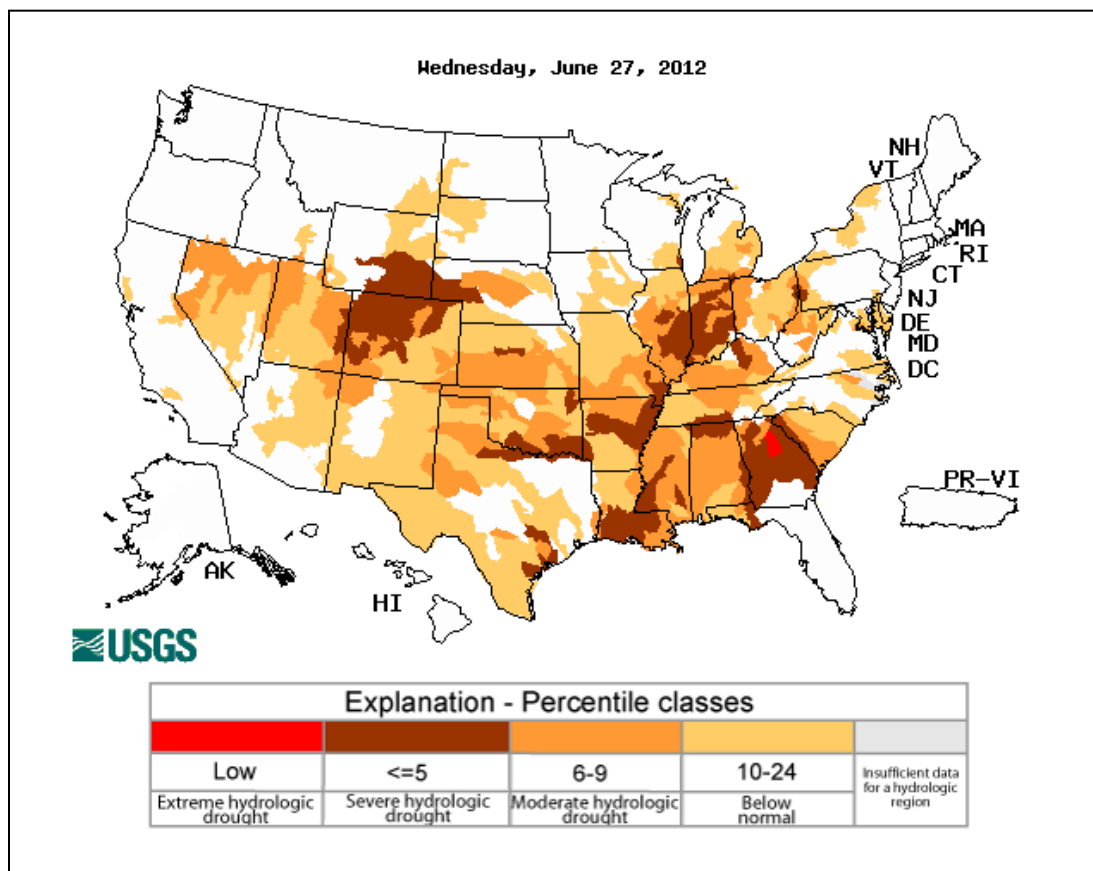


Fig. 6: Map of below normal 7-day average [streamflow](#) compared to historical streamflow for the day of year. **Extreme** conditions exist over northern Georgia.

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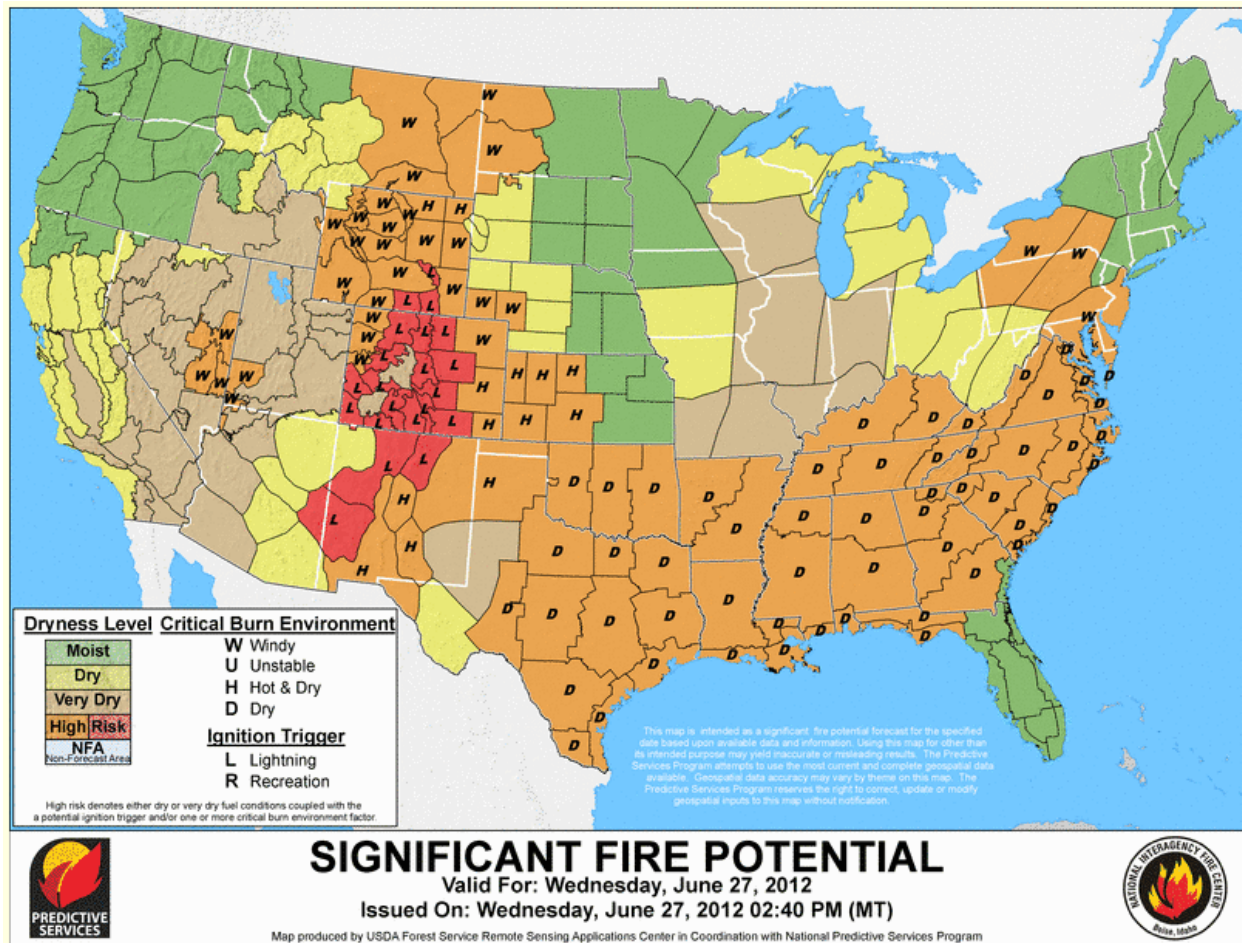


Fig. 7: [Significant fire potential](#) from yesterday. This resource also provides forecasts out to 7 days. Also check out: [NOAA's Fire Server](#). Risk has increased over Wyoming during the past several days. Also see: [Experimental Southwest area wildland fire smoke impact awareness page](#) and the latest, [National Interagency Fire Agency Report](#). Note high risk over much of Colorado and parts of southern Wyoming and New Mexico.



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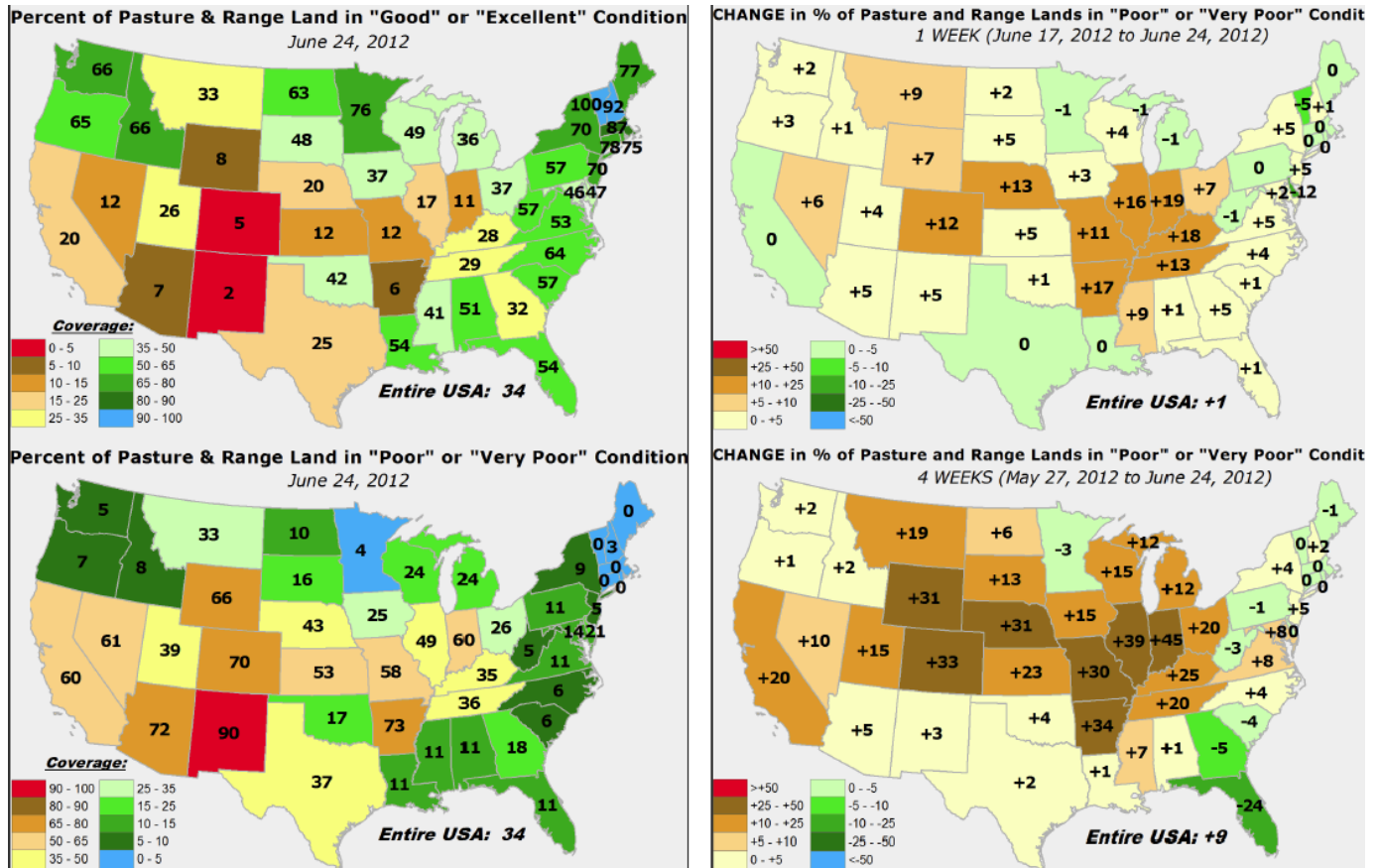


Fig. 8: [Pasture and range land conditions](#) and changes during the past week. New Mexico has the most poor or very poor conditions (lower left panel) and Colorado and Montana have experienced the worst declines this week over the West (upper right panel).

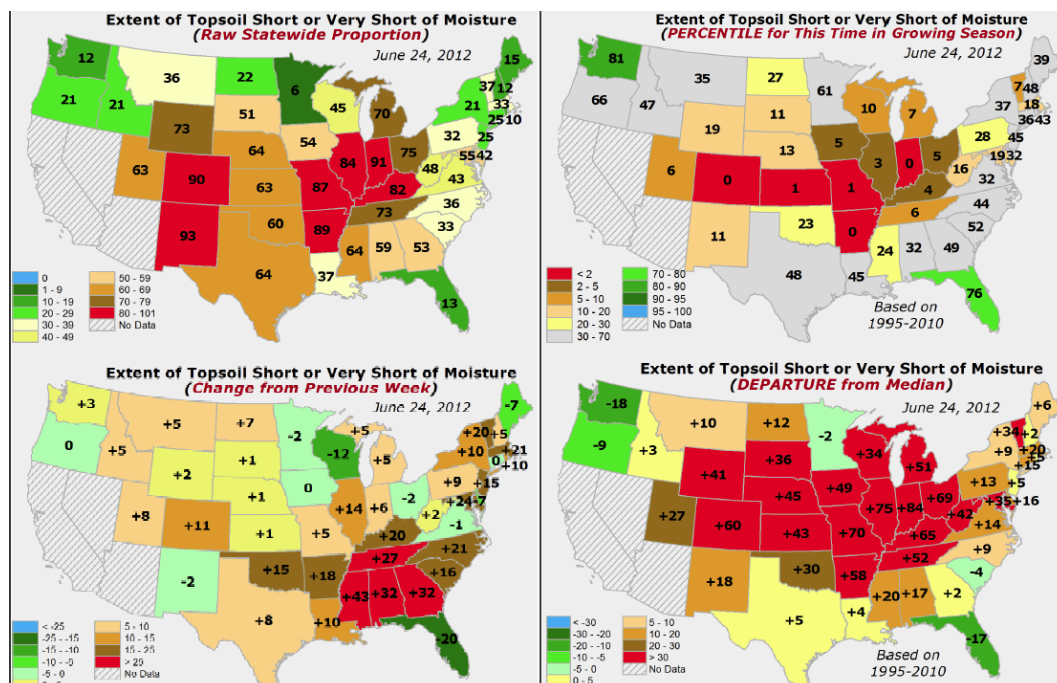


Fig. 9: [Topsoil](#) statistics shows a significant amount of dryness over the Mid-West and Central & Southern Rockies (upper left) but has deteriorated the most over the Southeast (lower left).

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### National Drought Summary -- June 26, 2012

*The discussion in the Looking Ahead section is simply a description of what the official national guidance from the National Weather Service (NWS) National Centers for Environmental Prediction is depicting for current areas of dryness and drought. The NWS forecast products utilized include the HPC 5-day QPF and 5-day Mean Temperature progs, the 6-10 Day Outlooks of Temperature and Precipitation Probability, and the 8-14 Day Outlooks of Temperature and Precipitation Probability, valid as of late Wednesday afternoon of the USDM release week. The NWS forecast web page used for this section is:*  
<http://www.cpc.ncep.noaa.gov/products/forecasts/>.

**Weather Summary:** A cool front brought showers and thunderstorms to the central and northern Plains and Upper Midwest early during this U.S. Drought Monitor (USDM) week, but it weakened as it scraped against high pressure over the eastern U.S., dropping minimal precipitation in the Ohio Valley. Another front brought limited rain later in the period. Tropical Storm Debby inundated Florida with flooding rains beginning Saturday, June 23. Areas of rain peppered the Northeast and Mid-Atlantic States as the fronts limped eastward. An upper-level trough brought waves of rain to parts of the Pacific Northwest and extreme northern Rockies, and small areas of very light convection developed in the Southwest as the summer monsoon tried to get started. Otherwise, upper-level high pressure dominated with hot, dry, and windy weather blanketing much of the West and central Plains. The hot and dry air mass spread eastward as the week progressed. It was a drier-than-normal week for Puerto Rico but the precipitation pattern was mixed for Alaska and Hawaii.

**The Northeast and Mid-Atlantic:** Areas of showers and thunderstorms moved across the Northeast this week with rains locally over 2 inches along the coast and in Maine. Above-normal rain fell over the D0 (abnormally dry) areas of Massachusetts and Connecticut, but it was not enough to ease long-term deficits. The week was drier than normal further inland. With above-normal temperatures and limited rainfall, topsoil moisture continued to decline in most states. According to June 24 reports from the U.S. Department of Agriculture (USDA), 55% of the topsoil in Maryland was short or very short (dry or very dry). Spots of D0 were added to southeast New York and northern Vermont-northeast New York where deficits from 7 days to 6 months were greatest. D0 and D1 (moderate drought) expanded into the Washington, D.C. area and adjacent northern Virginia where rainfall has been spotty, deficits abound, and yard impacts were being reported. D0 expanded in central and south central Virginia.

**The Southeast and Deep South:** Tropical Storm Debby dropped 5 inches or more of rain over most of the Florida drought areas, with widespread 10+ inch storm totals. Up to 23 inches of rain was reported by a CoCoRaHS observer in Wakulla County. The tropical inundation all but eliminated drought from Florida. Only a small patch of D0 (with an L impact designation) remained along the southwest coast where Debby's rainfall totals of only an inch or two did little to eliminate deficits which have accumulated over several months. D0 also remained over parts of the Florida panhandle. Extreme southern and southeast Georgia received rain from the northern edge of Debby, with pullback of the southern edge of the D0-D4 (exceptional drought) areas.

Soaring temperatures and little to no rain expanded drought across other parts of the Southeast. Temperatures consistently topped 90 degrees Fahrenheit by the end of the USDM week across northern parts of Alabama and Georgia, baking the dry soils. Topsoil moisture content declined 30 to 40% compared to last week in the Gulf Coast states, exceeding 50%

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short or very short by June 24 in Mississippi (64%), Alabama (59%), and Georgia (53%). D0-D4 expanded in Georgia, and D0-D3 (extreme drought) expanded in Alabama. D0 expanded in central North Carolina and in the Southern Mountains of North Carolina, where stream and groundwater levels were low, and in Upstate South Carolina. The shifting drought boundaries and growing short-term deficits resulted in the L drought impacts area in the Southeast being changed to SL impacts.

The Deep South states of Mississippi and Louisiana saw expansion of D0 and D1 (moderate drought). D2 (severe drought) grew in northern Louisiana. Arkansas experienced expansion of D1-D2 and the appearance of several D3 areas. D1-D3 grew slightly in southern Missouri. In Arkansas, June 24 USDA reports rated 89% of the topsoil short or very short and 73% of the pastures and range land in poor or very poor condition.

**The Midwest and Tennessee Valley:** Showers in the Upper Midwest brought relief to some drought areas. But further to the south, it was another dry week with 90+ degree temperatures which continued to dry soils, stress crops, and lower stream levels, with abnormally dry and drought conditions expanding over a large area. D1-D3 grew from Tennessee to Indiana and Illinois, D1 expanded in Ohio, and D0 expanded into southern Wisconsin and eastern Tennessee and slightly in West Virginia. An oval of D1 was introduced to northeast Tennessee-southwest Virginia and to southern Wisconsin-northern Illinois. Expansion and contraction of D0 occurred in Wisconsin and of D0 and D1 areas in Iowa. Beneficial 1-2 inch rains shrank the D0-D1 in Upper Michigan and the D0 areas in Minnesota. USDA reports indicated a rapid deterioration in pasture and range land condition, with the poor to very poor percentages in several Ohio Valley states jumping 10 to 20% in the past week and 30 to 45% in the past 4 weeks. As of June 24, more than half of the pastures and range land were rated in poor to very poor condition in Missouri (58%) and Indiana (60%), and nearly half in Illinois (49%). More than two-thirds of the topsoil was rated short or very short in Indiana (91%), Missouri (87%), Illinois (84%), Kentucky (82%), Ohio (75%), Tennessee (73%), and Michigan (70%). As of June 25, Lawrenceburg, Tennessee, was 15.38 inches of precipitation below normal for the year, Paducah, Kentucky was 13.01 inches behind, and Evansville, Indiana 11.94 inches behind.

**The Plains:** Excessive heat occurred in the Plains this week, with daily maximum temperatures soaring past 100 degrees late in the week. Healy, Kansas, whose record spans 111 years, set an all-time record high for the month of June when the temperature reached 113 degrees on June 25. In all, over 500 daily maximum temperature records were broken nationwide during this USDM week (June 19-25). According to June 24 USDA reports, over half of the topsoil was rated short or very short in Texas (64%), Nebraska (64%), Kansas (63%), Oklahoma (60%), and South Dakota (51%), and half of the pasture and rangeland was rated poor or very poor in Kansas (53%). For a second week in a row, bands of heavy thunderstorms moved across southeast Nebraska to northeast Kansas. The 1-3 inch rains (and locally 3+ inches in northeast Kansas) trimmed the D1-D2 areas, but elsewhere widespread expansion of D0-D2 occurred in Nebraska and D1-D3 in Kansas. To the south, D0-D3 expanded across parts of Oklahoma and Texas, and to the north, D0 expanded in North Dakota. South Dakota had both expansion (where it continued dry) and contraction (where beneficial rains fell) of D0-D1. The L/SL impacts boundary in Texas was moved westward.

**The West:** Pacific fronts associated with an upper-level trough brought an inch or more of rain to the coastal areas of Oregon and Washington and lesser amounts further inland this week, and a few tenths of an inch of rain fell with scattered showers over the Four Corners States, but otherwise the West continued bone dry. By the end of the week, temperatures topped 100

## Weekly Snowpack and Drought Monitor Update Report

degrees from Tucson, Arizona to Glasgow, Montana. The tinder dry conditions, hot temperatures and gusty winds fanned wildfires across the West, from New Mexico to Montana and California to Colorado, with twice as many large wildfires burning by the end of the week as at the beginning. June 24 USDA reports indicated most of the topsoil in New Mexico (93%) and Colorado (90%) was rated short or very short of moisture, with over half so rated in Wyoming (73%) and Utah (63%). More than half of the pasture and range land was rated in poor or very poor condition in New Mexico (90%), Arizona (72%), Colorado (70%), Wyoming (66%), Nevada (61%), and California (60%). The Standardized Precipitation Index (SPI) measures moisture deficits. SPI values, at time scales from 30 days to 12 months, were in the D4 equivalent category in many areas across the West. To reflect these conditions, a general one-category degradation of the USDM D0-D2 areas was made across Colorado, with D0-D2 expanding across Wyoming. D2 –D3 expanded across parts of the Intermountain Basin. D2 expanded in New Mexico, D0-D1 in Montana, and D0 in southeast Idaho. The SL/S impact boundary in north central Utah was shifted north.

**Hawaii, Alaska and Puerto Rico:** Continued below-normal precipitation, combined with above-normal temperatures, below-normal streamflow and spreading large wildfires, contributed to the expansion of D0 into northeast and east central Alaska. It was another drier-than-normal week for Puerto Rico, but streamflows continued generally near normal, so the island remained free of a drought or abnormally dry designation. The rainfall pattern in Hawaii was mixed, with many windward stations receiving 3 inches or more of rain while the leeward stations were drier than normal with only a few tenths of an inch of rainfall. No new drought impacts were reported, so no change was made to the drought depiction.

**Looking Ahead:** During the June 28-July 2, 2012 time period, a high pressure ridge is forecast to dominate the central and eastern United States. Showers and thunderstorms may develop along the northern and western fringe of the ridge, bringing a chance for rain to states in an arc from New Mexico to the Dakotas to Ohio, with the greatest chance for half an inch or more total from eastern Nebraska to northern Illinois. Rain is possible in the Pacific Northwest and in the Northeast, southern Texas, and southern Florida. Otherwise, conditions will be very dry. Very hot temperatures will affect most of the country from the Intermountain Basin to the East Coast. This temperature pattern is expected to continue for July 3-11, with below-normal precipitation stretching from the Intermountain Basin to the central and southern Plains, across the Midwest, to the interior Northeast. Above-normal precipitation may occur over New Mexico, from coastal Florida to South Carolina, and (early in the period) over the Upper Mississippi Valley. Northern Alaska is expected to be drier and warmer than normal and southern coastal Alaska wetter and cooler than normal.

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### Dryness Categories

D0 ... Abnormally Dry ... used for areas showing dryness but not yet in drought, or for areas recovering from drought.

### Drought Intensity Categories

D1 ... Moderate Drought

D2 ... Severe Drought

D3 ... Extreme Drought

D4 ... Exceptional Drought



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### **Drought or Dryness Types**

S ... Short-Term, typically <6 months (e.g. agricultural, grasslands)

L ... Long-Term, typically >6 months (e.g. hydrology, ecology)

*Updated June 27, 2012*