



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

Weekly Report - Snowpack / Drought Monitor Update

Date: 26 May 2011

SNOTEL SNOWPACK AND PRECIPITATION SUMMARY

Snow: SNOTEL Snow-Water Equivalent (SWE) percent of normal values for 26 May 2011 shows very high values for many SNOTEL basins since seasonal snowmelt has been delayed somewhat due to cooler than average temperatures for this time of year and additional snowfall at higher altitudes. Since we are well past the peak SWE, values can increase statistically but in most cases the "total" SWE is actually less than the preceding week. Some snow fell at the higher elevations in Arizona this week (very rare occurrence) and resulted in the >200% values (Fig. 1). 7-Day snow depth changes reflect rapid melting of one to two feet. However, additional snow depth increases occurred over some SNOTEL sites in Colorado and the Bighorn Mountains of Wyoming. Some significant flooding can be anticipated across portions of the West in the coming weeks (Fig.1a). For example, there is some potential flooding concerns over the Colorado River Basin. For the latest outlook, see: <http://www.cbrfc.noaa.gov/fop/fop.cgi>.

Temperature SNOTEL and ACIS 7-day temperature anomaly shows a rather cool week over most of the West with the exception of slightly above normal temperatures over northern Montana, Idaho and the Washington (fig. 2). ACIS 7-day average temperature anomalies show that the greatest positive temperature departures across north-central Idaho and northwest Montana (>+2°F) and the greatest negative departures over eastern Utah (<-12°F) (Fig. 2).

Precipitation: ACIS 7-day average precipitation amounts for the period ending 25 May shows the bulk of the heaviest precipitation (thunderstorms) confined to southern Montana-northern Wyoming (Fig. 3). In terms of percent of normal, the precipitation was highest in a large swatch extending from southern Arizona to the Northern Great Plains (Fig 3a). For the 2011 Water-Year that began on 1 October 2010, the greatest deficits are found over the extreme southern reaches of the Southwest. Areas with the highest values are found over the Great Basin, Cascades, and parts of Northern and Central Rockies (Fig 3b).

The Eastern Region of the West

In Nebraska and Colorado, additional moderate to heavy (1.5 to 4 inches) rains erased D0 across Nebraska except for a few small pockets where medium- and long-term shortages (at both 90-days and since October 1; less than 70 percent) lingered. This included extreme southeastern and south-central sections of the state. Farther west in Colorado, another wet week brought 2 to 3 inches of precipitation to northern and western portions of the state, providing a second week of additional improvements to the moisture conditions. A 1-category reduction in drought (D0 to D2) was made across northeastern Colorado where 2 to 3 inches fell, but with lower amounts to the south, D2 and D3 remained, especially in the southeast. A slight expansion of D2 into the San Luis Valley in south-central Colorado as winter precipitation was lower than surrounding regions. Even with the recent rains, USDA/NASS pasture and winter wheat conditions rated poor or very poor stood at 48 and 40 percent for Colorado.

Weekly Snowpack and Drought Monitor Update Report

The Southwest: Although little or no rain fell on southern sections of the Southwest (southern Arizona, southern and eastern New Mexico, west Texas, southeastern Colorado), unsettled weather did make it far enough south into the Four Corners Region to drop unseasonably heavy precipitation (0.5 to 2 inches) on parts of central Arizona, northwestern New Mexico, southwestern Colorado, and southeastern Utah). Flagstaff, AZ, was now at normal for the year with the latest round of precipitation. Even heavier amounts were reported north of this area. As a result, some slight improvements to D0 to D2 edges were made in central Arizona, D0 and D1 were trimmed in northwestern New Mexico, and D0 was removed from southwestern Colorado. In southwest Texas, another week of rain (0.5 inches) in western Crockett and northeastern Pecos counties slightly reduced D4 there. Author: David Miskus, NOAA/NWS/NCEP/CPC

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

DROUGHT IMPACTS DEFINITIONS (<http://drought.unl.edu/dm/classify.htm>)

The possible impacts associated with **D4 (H, A)** drought include widespread crop/pasture losses and shortages of water in reservoirs, streams, and wells creating water emergencies. The possible impacts associated with **D3 (H, A)** drought include major crop/pasture losses and widespread water shortages or restrictions. Possible impacts from **D2 (H, A)** drought are focused on water shortages common and water restrictions imposed and crop or pasture losses likely. The possible impacts associated with **D1 (H, A)** drought are focused on water shortages developing in streams, reservoirs, or wells, and some damage to crops and pastures (Figs. 4, 4a, 4b, 4c, and 4d).

U.S. HISTORICAL STREAMFLOW

http://water.usgs.gov/cgi-bin/waterwatch?state=us&map_type=dryw&web_type=map.

This map, (Fig. 7) 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.

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://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>

Weekly Snowpack and Drought Monitor Update Report

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

/s/ JEFF GOEBEL
Acting Director, Resource Inventory Division

Weekly Snowpack and Drought Monitor Update Report

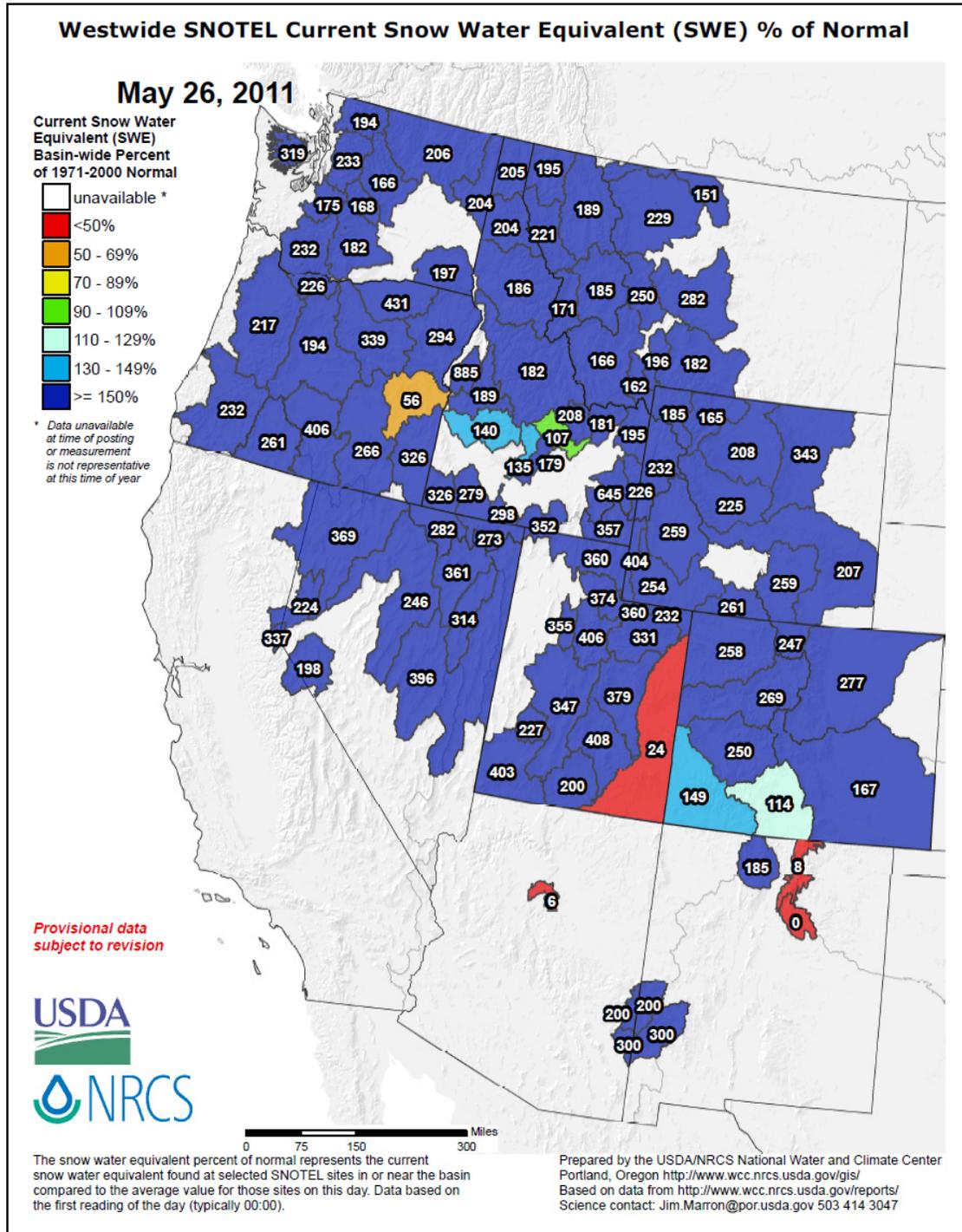


Fig. 1: SNOTEL Snow-Water Equivalent (SWE) percent of normal values for 26 May 2011 shows very high values for many SNOTEL basins since seasonal snowmelt has been delayed somewhat due to cooler than average temperatures for this time of year and additional snowfall at higher altitudes. Since we are well past the peak SWE, values can increase statistically but in most cases the “total” SWE is actually less than the preceding week. Some snow fell at the higher elevations in Arizona this week (very rare occurrence) and resulted in the >200% values.

Ref: http://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/west_swepctnormal_update.pdf

Weekly Snowpack and Drought Monitor Update Report

SNOTEL 7-Day Snow Depth Change (Inches)

May 26, 2011

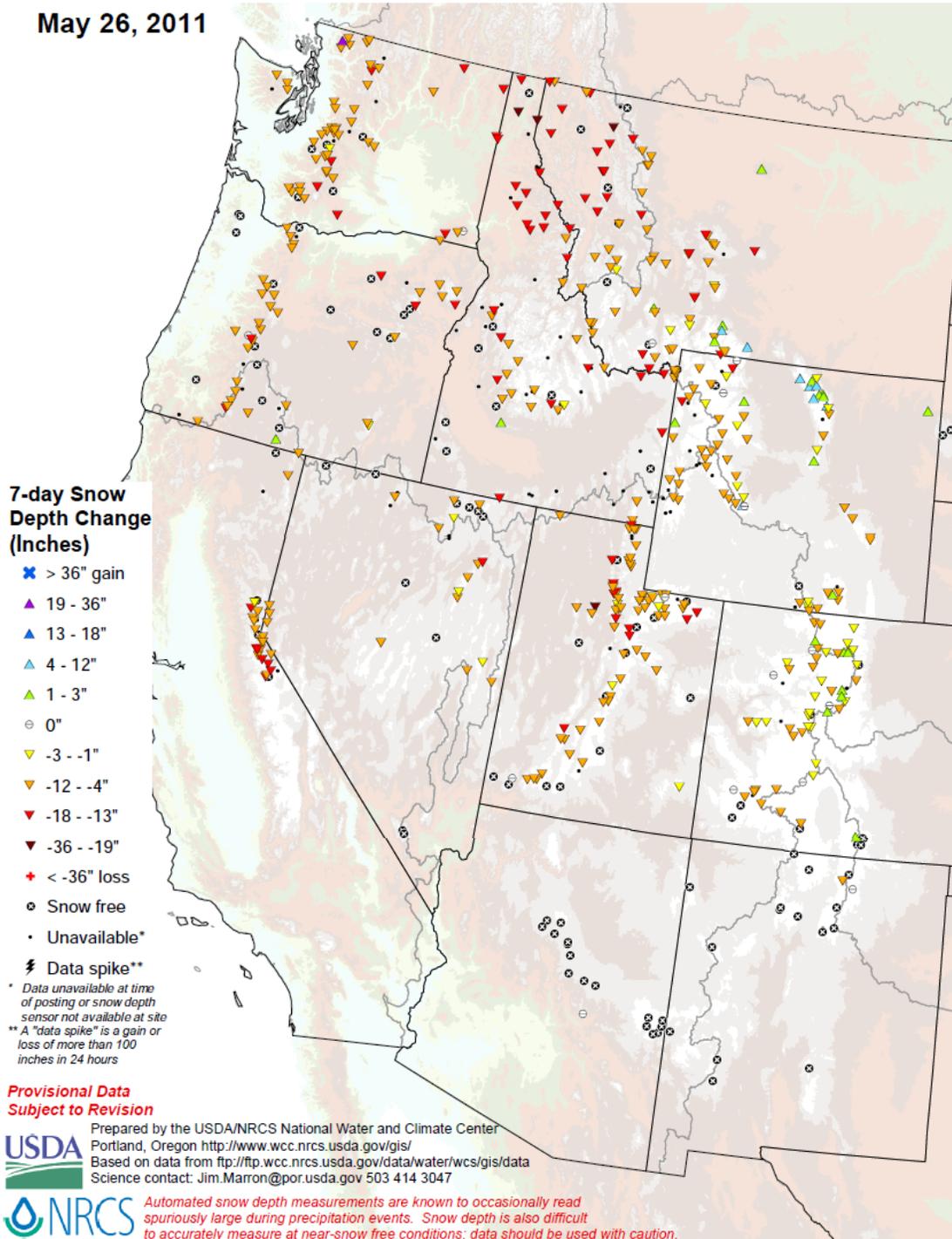


Fig. 1a: 7-Day snow depth changes reflect rapid melting of one to two feet. However, additional snow depth increases occurred over some SNOTEL sites in Colorado and the Bighorn Mountains of Wyoming. Some significant flooding can be anticipated across portions of the West in the coming weeks.

Ref: http://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/west_snowdepth_7ddelta.pdf

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SNOTEL (solid) and ACIS (dot-filled) Networks 7-Day Average Temperature Anomaly (Degrees F)

May 26, 2011

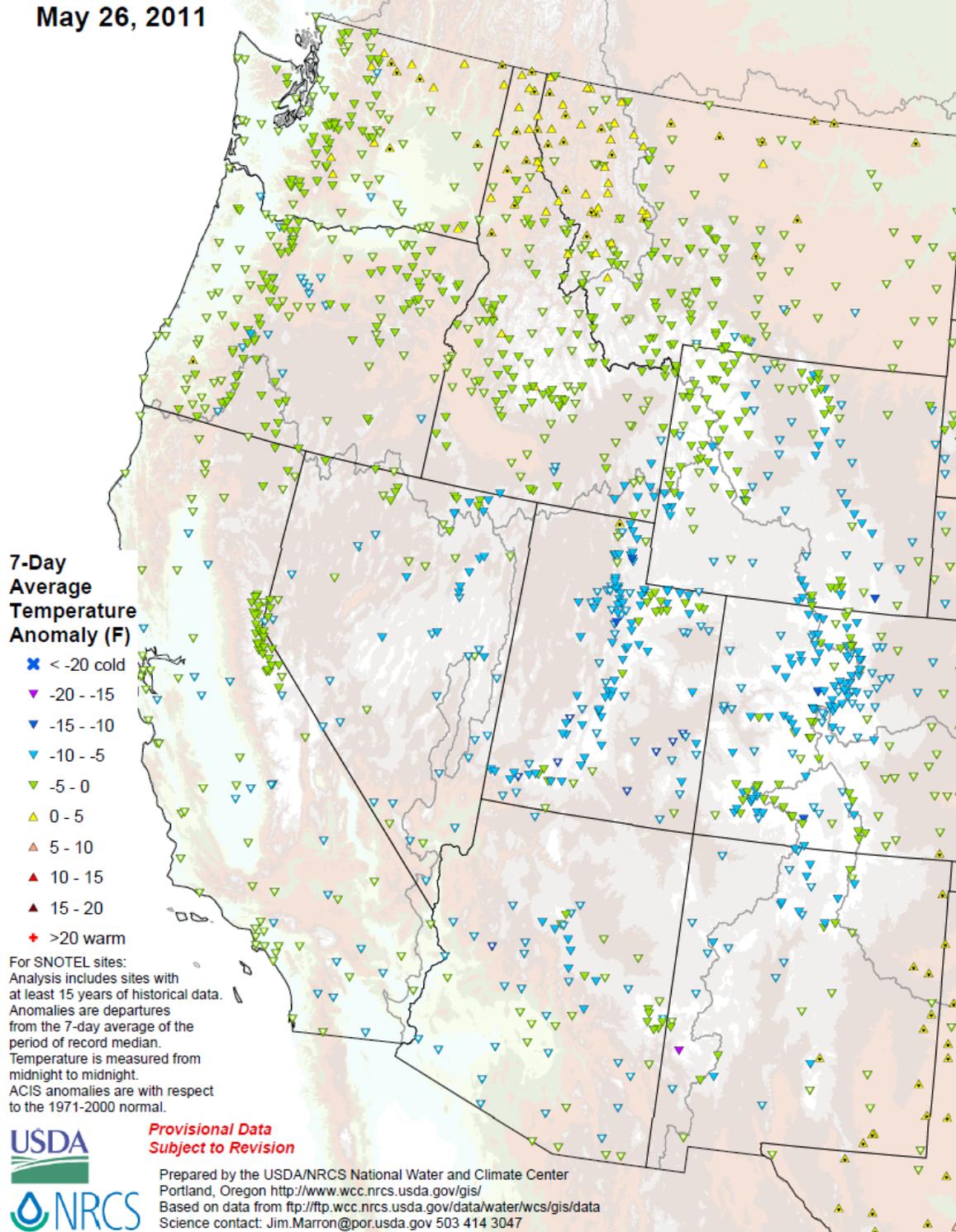
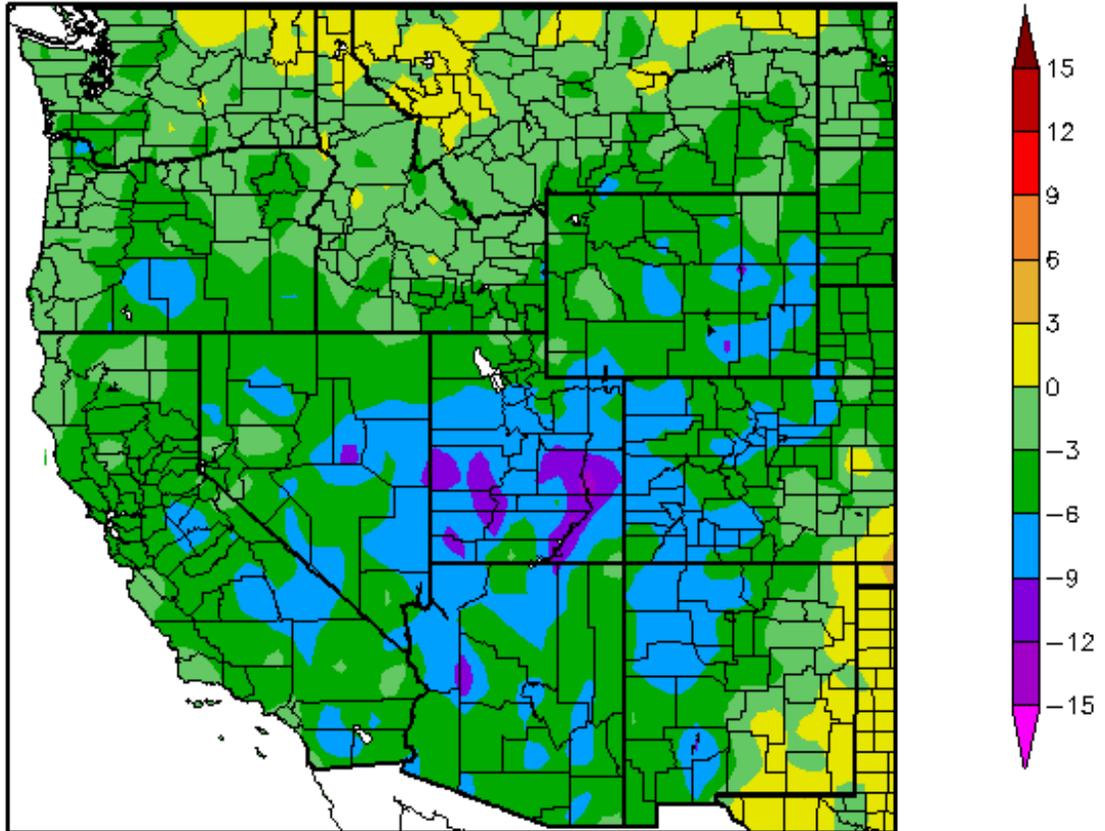


Fig. 2: SNOTEL and ACIS 7-day temperature anomaly shows a rather cool week over most of the West with the exception of slightly above normal temperatures over northern Montana, Idaho and the Washington.

Ref: <http://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/WestwideTavg7dAnomalyAcis.pdf>

Departure from Normal Temperature (F)
5/19/2011 – 5/25/2011



Generated 5/26/2011 at HPRCC using provisional data.

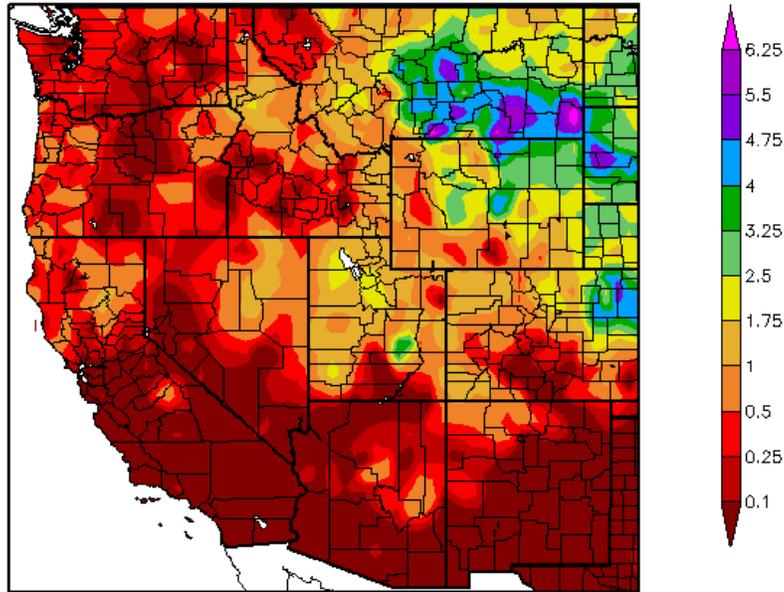
Regional Climate Centers

Fig. 2a: ACIS 7-day average temperature anomalies show that the greatest positive temperature departures across north-central Idaho and northwest Montana (>+2°F) and the greatest negative departures over eastern Utah (<-12°F).

Ref: http://www.hprcc.unl.edu/maps/current/index.php?action=update_daterange&daterange=7d

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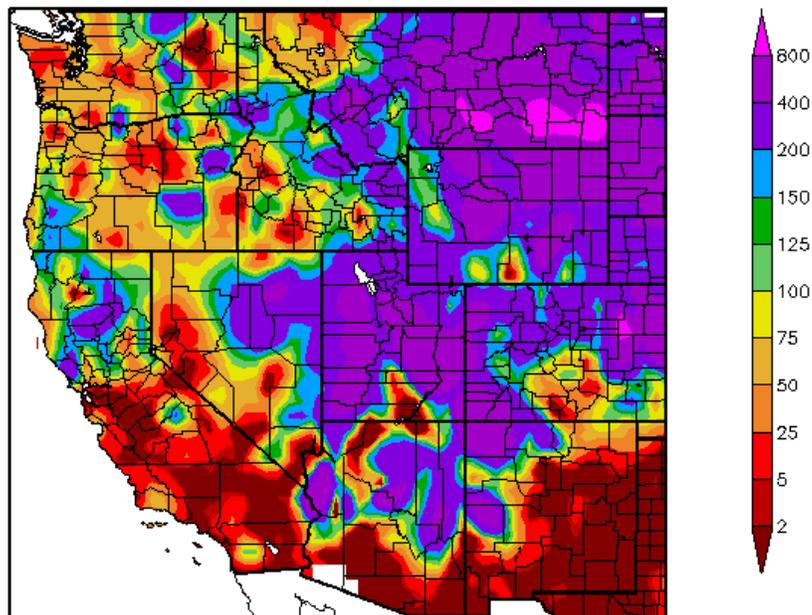
Precipitation (in)
5/19/2011 – 5/25/2011



Generated 5/26/2011 at HPRCC using provisional data.

Regional Climate Centers

Percent of Normal Precipitation (%)
5/19/2011 – 5/25/2011



Generated 5/26/2011 at HPRCC using provisional data.

Regional Climate Centers

Fig. 3 and 3a: ACIS 7-day average precipitation amounts for the period ending 25 May shows the bulk of the heaviest precipitation (thunderstorms) confined to southern Montana-northern Wyoming (Fig. 3). In terms of percent of normal, the precipitation was highest in a large swatch extending from southern Arizona to the Northern Great Plains (Fig 3a). Ref: <http://www.hprcc.unl.edu/maps/current/>

Weekly Snowpack and Drought Monitor Update Report

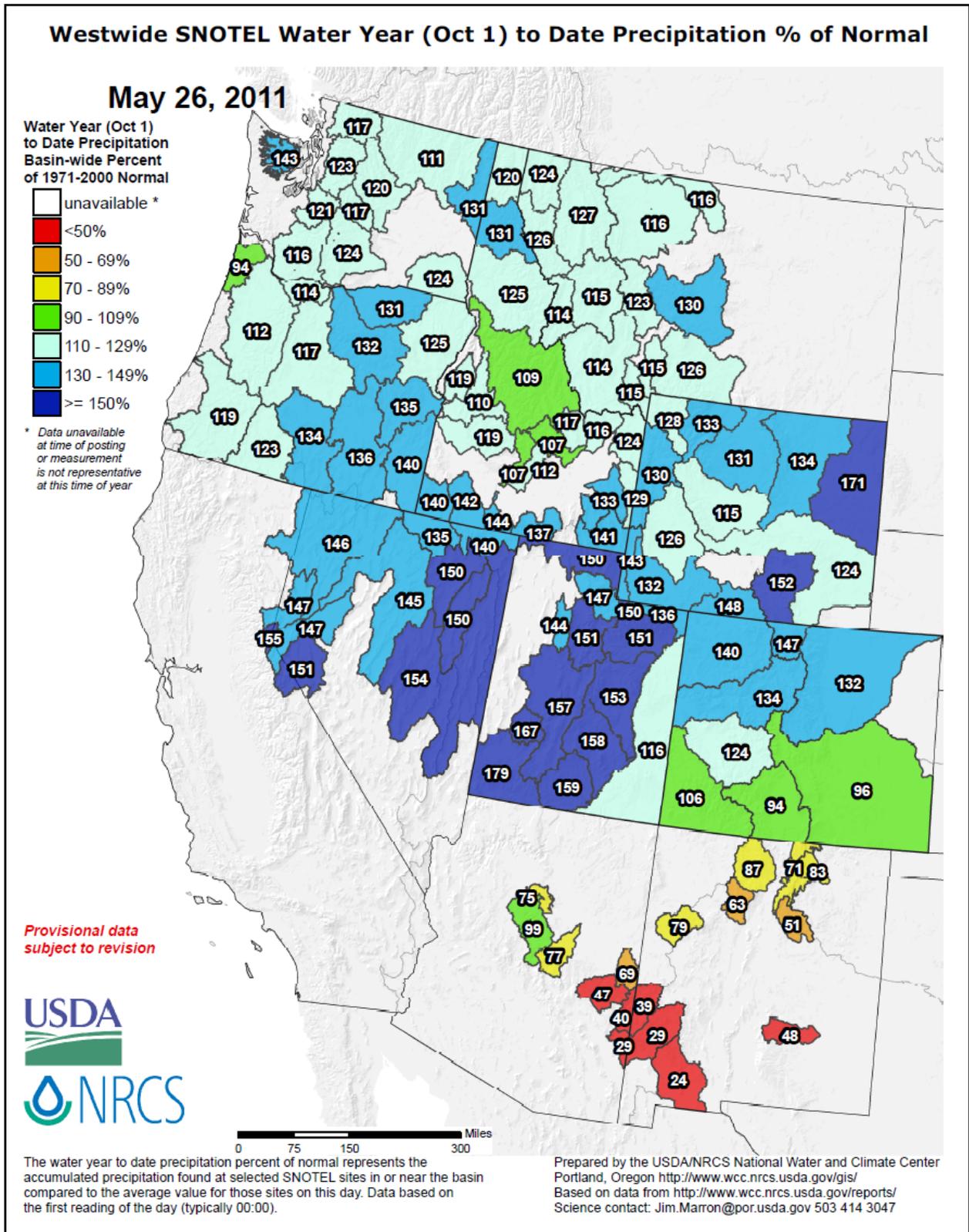


Fig 3b: For the 2011 Water-Year that began on 1 October 2010, the greatest deficits are found over the extreme southern reaches of the Southwest. Areas with the highest values are found over the Great Basin, Cascades, and parts of Northern and Central Rockies.

Ref: http://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/west_wytdprecptnormal_update.pdf

U.S. Drought Monitor

May 24, 2011
Valid 8 a.m. EDT

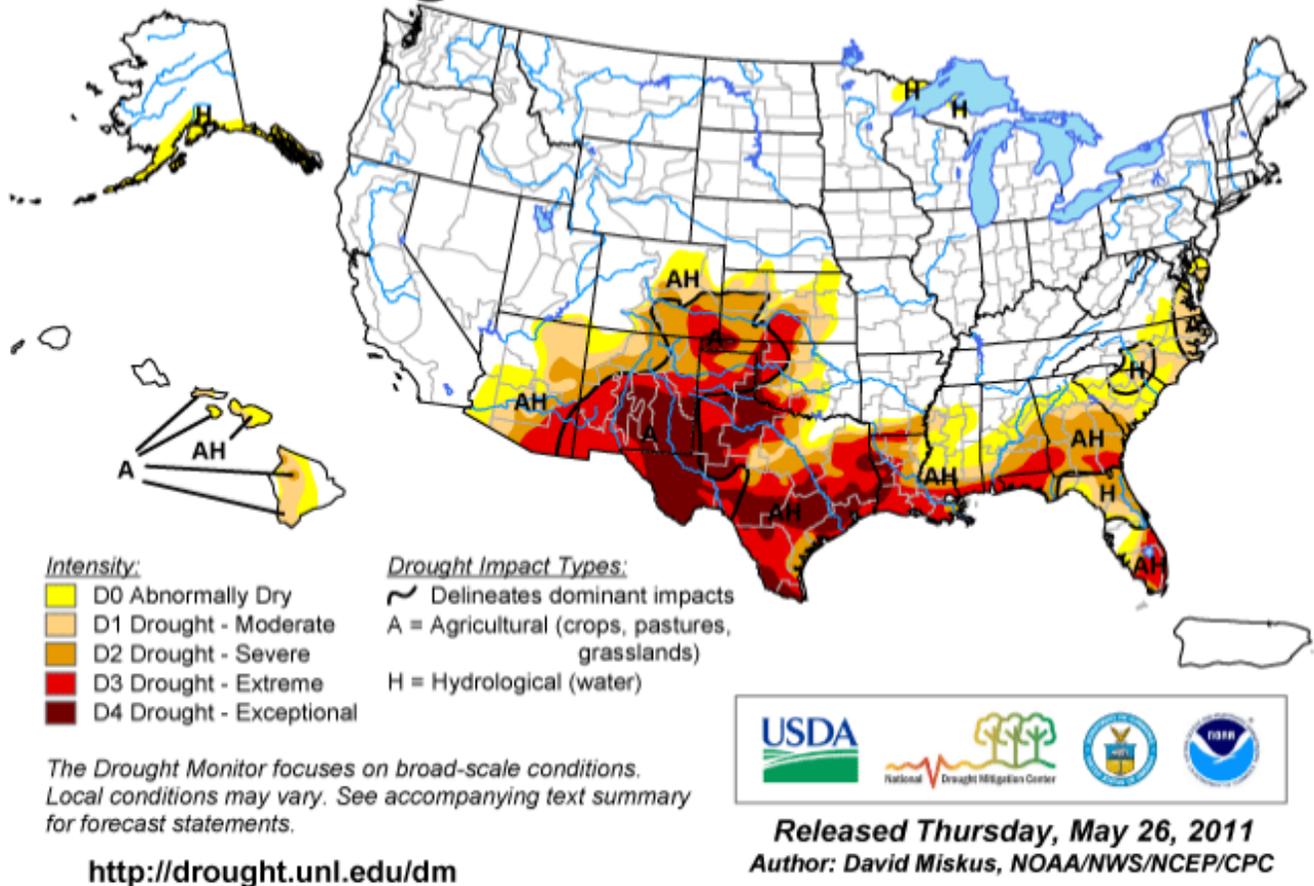


Fig. 4: Current Drought Monitor weekly summary. The exceptional D4 levels of drought are found over New Mexico, Texas, Oklahoma, and Louisiana. Ref: <http://www.drought.unl.edu/dm/monitor.html>

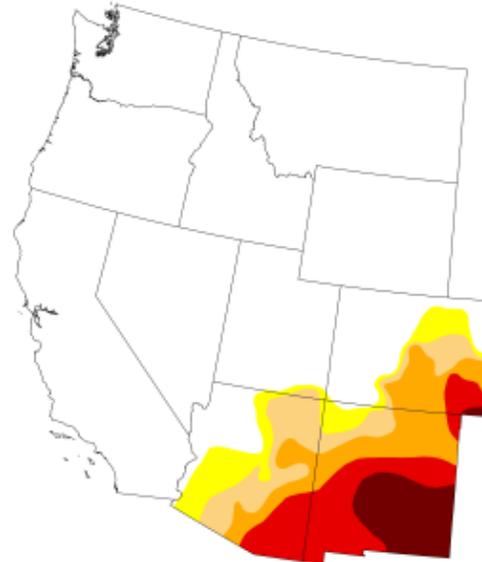
U.S. Drought Monitor

West

May 24, 2011
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	77.97	22.03	18.33	14.01	8.80	3.33
Last Week (05/17/2011 map)	76.18	23.82	19.58	14.72	8.78	3.28
3 Months Ago (02/22/2011 map)	76.19	23.81	15.02	5.41	0.00	0.00
Start of Calendar Year (12/28/2010 map)	73.26	26.74	11.98	0.89	0.00	0.00
Start of Water Year (09/28/2010 map)	62.50	37.50	8.14	0.56	0.00	0.00
One Year Ago (05/18/2010 map)	56.83	43.17	17.72	4.79	0.00	0.00



Intensity:

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

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



Released Thursday, May 26, 2011
David Miskus, NOAA/NWS/NCEP/CPC

<http://drought.unl.edu/dm>

Fig. 4a: Drought Monitor for the Western States with statistics over various time periods. Regionally there was no significant change during the past week.

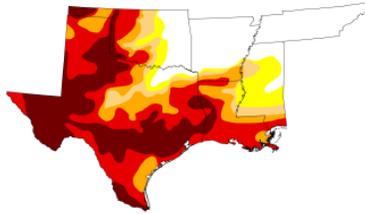
Ref: http://www.drought.unl.edu/dm/DM_west.htm

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U.S. Drought Monitor South

May 24, 2011
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	24.18	75.82	68.41	61.94	49.55	24.50
Last Week (05/17/2011 map)	24.63	75.37	67.88	61.38	49.24	27.15
3 Months Ago (02/22/2011 map)	4.04	95.96	74.59	38.29	10.03	0.00
Start of Calendar Year (12/28/2010 map)	8.86	91.14	67.65	35.21	10.17	0.00
Start of Water Year (09/28/2010 map)	54.23	45.77	20.04	6.79	0.83	0.00
One Year Ago (05/18/2010 map)	82.24	17.76	6.95	0.00	0.00	0.00



Intensity:



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

<http://drought.unl.edu/dm>



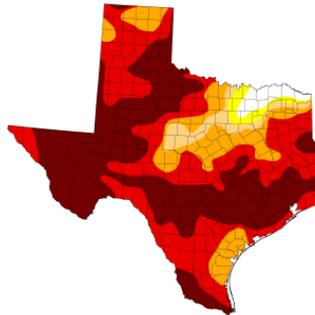
Released Thursday, May 26, 2011
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Fig. 4b: Drought Monitor for the South-Central States with statistics over various time periods. This region has had no significant changes in any drought category over the past week. Ref: http://www.drought.unl.edu/dm/DM_south.htm

U.S. Drought Monitor Texas

May 24, 2011
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	2.30	97.70	95.77	91.97	78.49	43.97
Last Week (05/17/2011 map)	0.00	100.00	97.01	92.40	80.02	47.87
3 Months Ago (02/22/2011 map)	5.08	94.92	69.74	45.24	12.64	0.00
Start of Calendar Year (12/28/2010 map)	7.89	92.11	69.43	37.46	9.59	0.00
Start of Water Year (09/28/2010 map)	75.57	24.43	2.43	0.99	0.00	0.00
One Year Ago (05/18/2010 map)	90.07	9.93	3.51	0.00	0.00	0.00

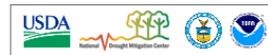


Intensity:



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

<http://drought.unl.edu/dm>



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David Miskus, NOAA/NWS/NCEP/CPC

Fig. 4c: Slight improvement over the State this week.

The economic losses imposed on Texas agriculture by the last seven droughts.

- 2009: \$3.6 billion, • 2008: \$1.4 billion, • 2006: \$4.1 billion, • 2002: \$316 million, • 2000: \$1.1 billion, • 1999: \$223 million, • 1998: \$2.4 billion.

Texas' farmers and ranchers are coping with their eighth drought in the last 13 years, and this one, while still young, has a chance of slamming producers with their biggest losses ever, officials said.

Texas AgriLife Extension Service experts have estimated that from November 2010 through May, Texas ranchers lost \$1.2 billion because pastures have not greened up and high-priced feed products have been needed longer than normal.

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It's still too early to get a good read on the state's crop losses, but the outlook in areas without irrigation is not encouraging.

The extension service, in a report last week, set a \$274 million value on Texas wheat crop, less than half of the five-year average for that commodity.

While the projected losses are still far short of the \$4.1 billion hit that Texas agriculture in the record 2006 drought, totals will grow rapidly if the rain does not come soon. Cotton, livestock and other agricultural prices have stayed high, meaning farmers and ranchers with less to sell at those prices will miss out on chances for big profits.

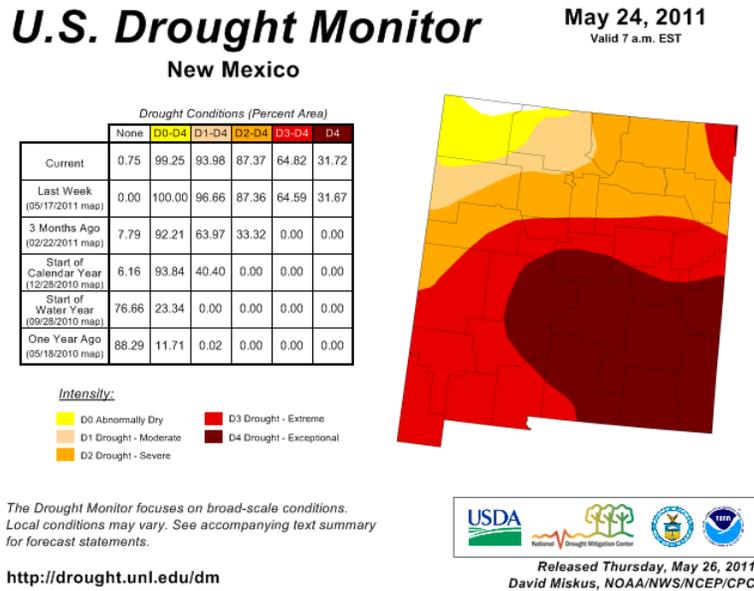
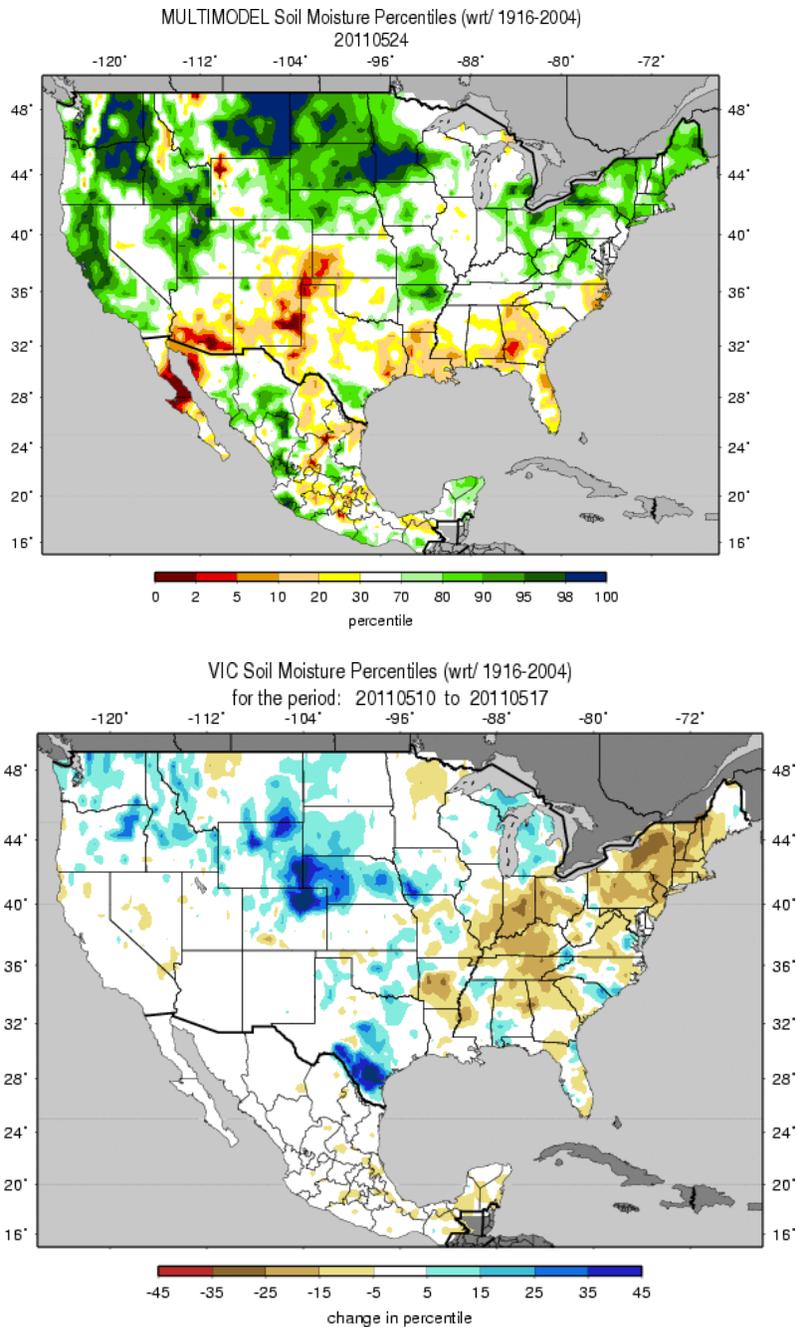


Fig. 4d: Drought Monitor for New Mexico with statistics over various time periods. A slight worsening is noted this week. All but 0.75% of the state is in some sort of drought or water stressed situation. Ref: http://www.drought.unl.edu/dm/DM_state.htm?NM,W

NM Summer Precip (June – August) after poor spring snowpack (since 1967)

- Nine of eleven summers saw statewide summer rainfall range from near normal to well above normal.
- Average statewide summer precipitation for the eleven years in the study was 114% of normal.
- **Four of eleven summers averaged 134% of normal or higher for June – August statewide precipitation.**
- Only 2002 (74% of normal) and 1970 (87% of normal) saw significantly below normal summer rainfall.
- The wettest June – August summer was 2006 with 161% of normal statewide rainfall.
- ***Odds favor, but don't guarantee, a normal to wetter-than-normal 2011 "Monsoon" season.***

Weekly Snowpack and Drought Monitor Update Report



Figs. 5a and 5b: Soil Moisture ranking in percentile as of 24 May (top) shows moist conditions over much of the Northern Tier States and the Appalachians with dryness over Arizona and the Western High Plains and southern Texas (top). Dryness dominates the eastern third of the Nation.

http://www.hydro.washington.edu/forecast/monitor/curr/conus.mexico/CONUS.MEXICO.multimodel.sm_qnt.gif
http://www.hydro.washington.edu/forecast/monitor/curr/conus.mexico/CONUS.MEXICO.vic.sm_qnt.1wk.gif

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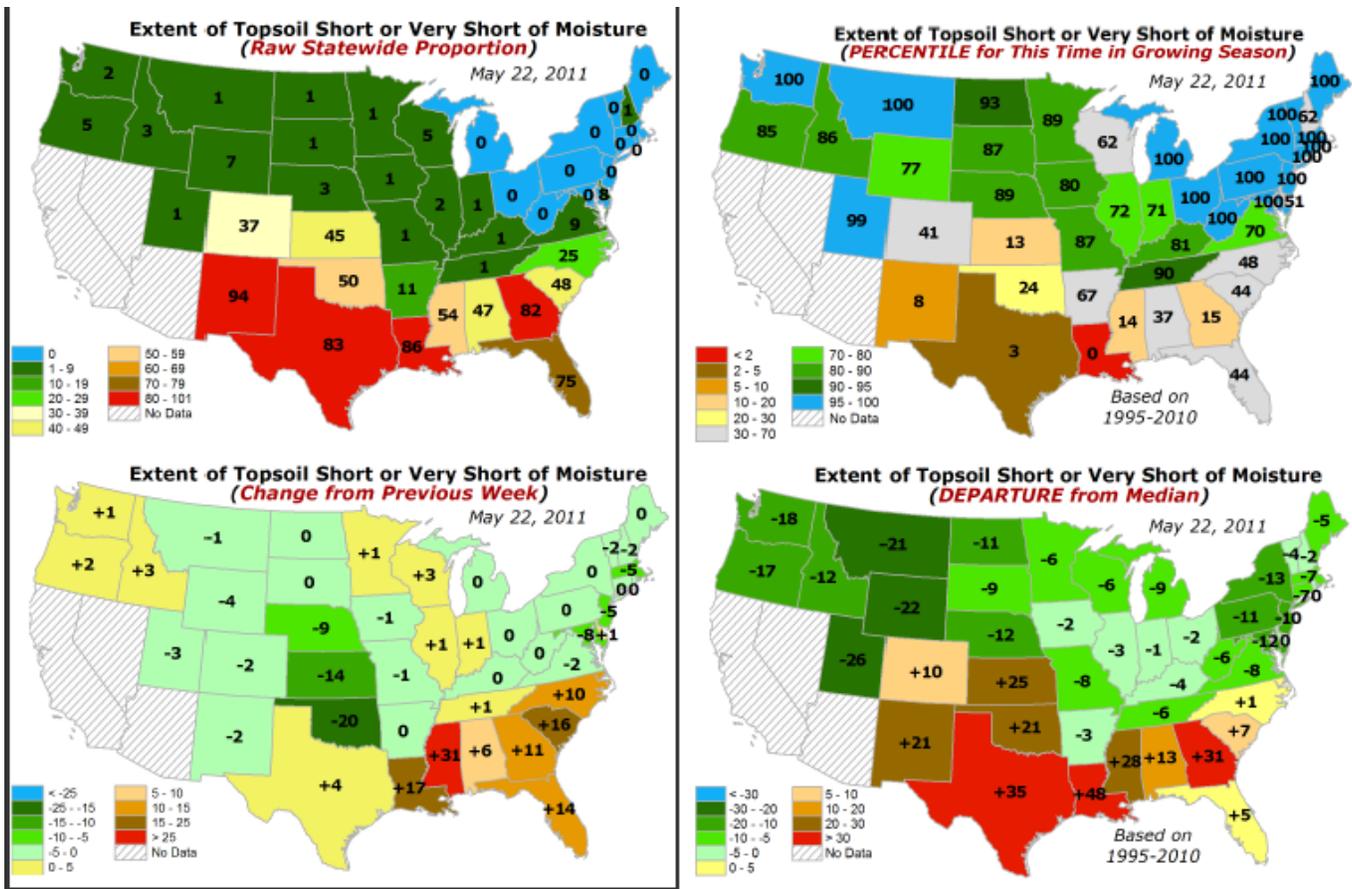
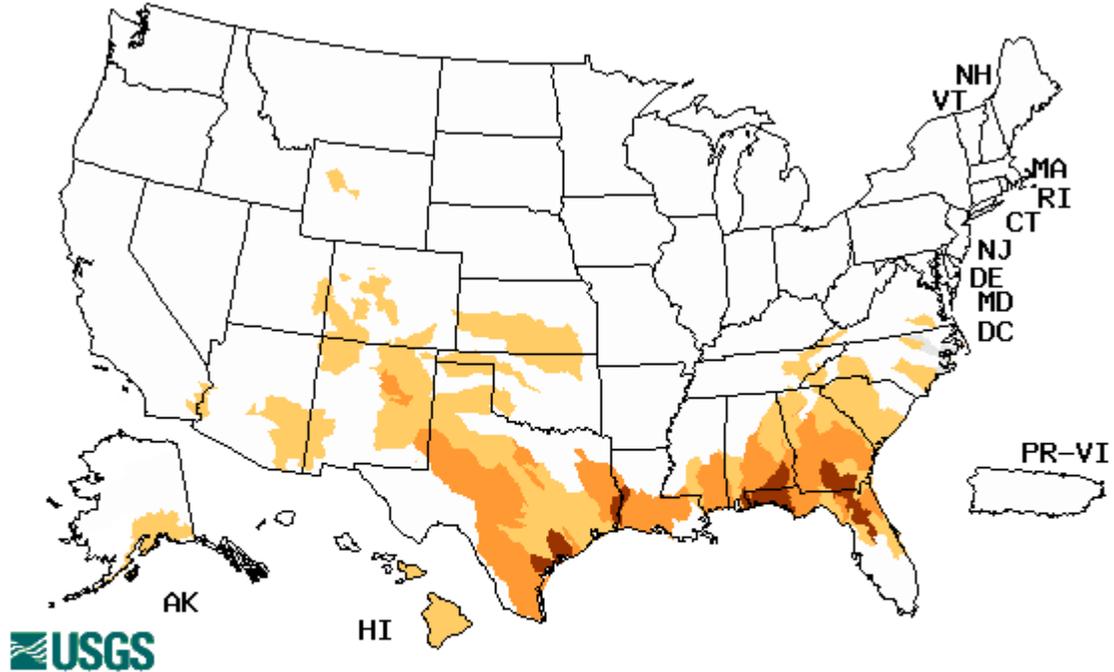


Fig. 6: Topsoil moisture is changed little this week over the West.

Ref: <http://www.cpc.ncep.noaa.gov/products/predictions/experimental/edb/topsoil-statewide-statistics.pdf>

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Wednesday, May 25, 2011



Explanation - Percentile classes				
Low	≤5	6-9	10-24	Insufficient data for a hydrologic region
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

Fig. 7: Map of below normal 7-day average streamflow compared to historical streamflow for the day of year. Portions of the Texas, western Louisiana, southern Alabama and Georgia, and the north-central Florida are indicating severe conditions.

Ref: <http://waterwatch.usgs.gov/?m=dryw&r>

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*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/>.*

Weekly Weather Summary: An unsettled and stormy weather pattern dominated much of the lower 48 States, unfortunately highlighted by a deadly and destructive bout of tornadoes in the Nation's midsection. The southwest Missouri city of Joplin took a direct hit on May 22 from an EF-5 twister, taking the lives of at least 120 people and injuring at least 750, with numerous people still missing. Two days later, additional tornadoes touched down in Oklahoma and Arkansas, killing at least a dozen people. This stormy weather pattern also dumped moderate to heavy rains across much of the northern half of the U.S. and on much of the Plains, greatly easing drought conditions in the south-central and central Plains. Unfortunately, little or no rain fell along the extreme southern tier of States, from southern Arizona into southern Texas and eastward along the Gulf and southern Atlantic Coasts. Temperatures averaged below-normal in the West, north-central Plains, and Southeast, and above-normal in the southern Plains, upper Midwest, Northeast, and Alaska.

Important Note: The drought depiction for **south-central Louisiana** has been changed this week to show the areas of drought in the Atchafalaya Basin. As a result, this does not take into account the areas of flooding that were released into this basin from the Morganza Spillway courtesy of the lower Mississippi River flooding. The actual flooded areas have been less extensive and slower to spread than initially forecast; however, the amount of flooding is still significant.

For the latest text information about river levels in the region:

<http://www.srh.noaa.gov/lmrfc/?n=lmrfc-mississippiandohioriverforecast>

For satellite images (via ASTER on NASA's Terra satellite) of the Morganza Spillway:

<http://earthobservatory.nasa.gov/IOTD/view.php?id=50659&src=iotdrss>

Upper Great Lakes Region: Light rains (0.5 to 1 inch) were reported in northeastern Minnesota and the UP of Michigan, with heavier totals just to the south of the D0 areas. Stream flows and soil moisture indices have shown some improvement recently, but this area still could use a good widespread soaking to eliminate the lingering long-term (12- to 18-months) dryness.

South Atlantic Seaboard and Eastern Gulf Coast States: Little or no rain fell on most of the drought-affected areas (southern and eastern Mississippi, most of Alabama, Georgia, and Florida, and eastern sections of the Carolinas) as moderate to heavy precipitation (1.5 to 4 inches) was recorded just to the north. There was enough rain; however, in central Virginia (0.75 to 1.25 inches) to trim away some of the western D0 edge as deficits have gradually been replaced with near-normal or small surpluses during the past 90-days. At Norfolk, VA, and Elizabeth City, NC, however, 90-day deficiencies were 4.08 and 3.64 inches, respectively, and D1(A) remained. Similar deficits existed on the Delmarva Peninsula of Maryland as D1 was

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added, while D1 was removed just to the south on Virginia's Delmarva Peninsula as 2 inches of rain fell earlier in the week. Farther south, light rains (0.2 to 0.7 inches) maintained conditions in the central Carolinas, but an H Impact Line was added to delineate adequate short-term conditions from longer-term shortages in south-central North Carolina and north-central South Carolina.

In contrast, subnormal rainfall continued across the eastern Gulf and southern Atlantic States. The last week that this region received widespread, soaking precipitation was in late March and early April, and conditions continued to deteriorate. USGS stream flows at 1-, 7-, 14-, and 28-days continued to drop, and many in southern sections of Mississippi and Alabama, most of Georgia, northern Florida, and parts of the Carolinas were in the lower tenth percentile as of May 24. According to USDA/NASS state reports, topsoil moisture rated short or very short increased this week to 82, 75, 54, 48, and 47 percent, in Georgia, Florida, Mississippi, South Carolina, and Alabama, respectively. Similarly, pasture and range lands rated poor or very poor rose to 41 and 47 percent in Florida and Georgia. In southern Florida, the combination of short-term dryness (90-days: 25 to 50 percent of normal rainfall) and long-term deficits (since October 1: Miami 8.83 inches; West Palm Beach 21.39 inches; Ft. Lauderdale 20.97 inches; Naples 11.52 inches) have greatly lowered river and lake levels and some wells. Lake Okeechobee stood at 10.41 feet (normal 13.19 feet) on May 22, below the critical line for water shortages. Accordingly, D0 through D3 was incrementally increased northward in Mississippi, Alabama, and into western Georgia and northern Florida, and in extreme southern Florida (D3 in Monroe and Dade counties) in response to the growing short-term deficiencies.

Lower Mississippi Valley: As mentioned in the above "Important Note", the opening of the Morganza Spillway on May 15 (last opened in 1973) had projected to flood much of the Atchafalaya River basin in south-central Louisiana by now. But due to the basin's hydrological complexity and uncertainty, especially in the southern end, the rate and extent of flooding was less than initially forecast. Where it has flooded, however, the flooding is still significant. In contrast, where the flood waters had not yet reached, U.S. Forestry officials reported that many marshes were dry with fish kills from lack of oxygen in the remaining pools of water in coastal parishes of southwest and south Louisiana. Therefore, due to the severity of the ongoing drought and the lack of a recent image of actual flooded land, the area of drought depiction was returned to all of Louisiana. And of course, the flooded regions of the Atchafalaya basin (not depicted) would be drought free.

Elsewhere across southern Louisiana, little or no rain fell once again. Light rains (0.5 to 1 inch) occurred in northeastern Louisiana and southeastern Arkansas, while 1.5 to 2.5 inches fell on western Louisiana and eastern Texas. Unfortunately, additional heavy rains (2 to 8 inches) inundated the already-saturated upper Delta region (western and northern Arkansas, southern Missouri), adding more water into the swollen main stems of the Mississippi River. The rainfall did provide some basis for slight drought reduction in eastern Texas, western Louisiana, and southern Arkansas as a 1-category improvement was made to areas with weekly totals of 2 inches or more. However, large long-term (12-months) deficits (15 to 20 inches) remained in portions of the lower Mississippi River Valley, and were between 25 to 35 inches at 18-months.

Central and Southern Plains: Numerous and widespread showers and thunderstorms, including many cells that became severe with tornadic activity (e.g. Joplin, MO), dropped copious amounts of rain (2 to 10 inches) on parts of northeastern Texas, most of Oklahoma (except the Panhandle), much of Kansas (except the southwest), Nebraska (and northward),

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and parts of Colorado. Needless to say, many areas of drought (D0 to D4) were improved by 1-category, and in some places, by 2-categories, especially where more than 4 inches fell.

In Texas, eastern sections were improved by 1-category where 1.5 inches or more rain was measured as the rains should improve forage grass growth and conditions. In northeastern Texas along the Red River, a 1-category improvement meant that some locations were finally out of drought (D-nothing). In east-central Texas (e.g. Robertson County), less improvement was made as hydrological conditions were worse than other areas to the north and east. In northern Texas, 2 to 3 inches of rain along the Oklahoma border eased drought by 1-category, but farther west near Childress, D4 remained as deficits were large, and rainfall totals were less. Where little or no rain fell (southern and western Texas), D4 was expanded into Brazoria, Bexar, and Wilson counties. USGS stream flows continued to be in the lower tenth percentile in southern and south-central Texas, but improving to near-normal in the northeast. According to USDA/NASS, Texas winter wheat was rated 76 percent poor or very poor, while similarly-rated pastures and ranges stood at 73 percent.

In Oklahoma and Kansas, one and even some two-category improvements were made where the amounts were the greatest. In Oklahoma and Kansas, a 1-category improvement was made to any D0-D3 area that received 1.5 inches or more, and a 2-category swing was made where rainfall exceeded 4 inches. In southwest Oklahoma where 2 to 6 inches fell, only a 1-category improvement to the D4 area was made as soils were so dry (down to at least 8 feet) that time is needed to see if the soil moisture recharge holds out. In Harmon County, the rains (1 to 2 inches) did little to moisten the soil profile except to the top 2 inches, and this area remained in D4. Where little or no rain fell on western sections of Oklahoma and Kansas, drought persisted, and in some instances increased. D4 was expanded northward into Ellis and Harper counties where no summer crops are expected following the failure of the winter wheat crop. In the Panhandle, D4 was increased in Cimarron and Texas Counties as less than 40 percent of normal precipitation has occurred over the past 180 days. USDA/NASS winter wheat and pasture conditions rated poor and very poor for Oklahoma were 80 and 42 percent, while Kansas was 55 and 36 percent.

In Nebraska and Colorado, additional moderate to heavy (1.5 to 4 inches) rains erased D0 across Nebraska except for a few small pockets where medium- and long-term shortages (at both 90-days and since October 1; less than 70 percent) lingered. This included extreme southeastern and south-central sections of the state. Farther west in Colorado, another wet week brought 2 to 3 inches of precipitation to northern and western portions of the state, providing a second week of additional improvements to the moisture conditions. A 1-category reduction in drought (D0 to D2) was made across northeastern Colorado where 2 to 3 inches fell, but with lower amounts to the south, D2 and D3 remained, especially in the southeast. A slight expansion of D2 into the San Luis Valley in south-central Colorado as winter precipitation was lower than surrounding regions. Even with the recent rains, USDA/NASS pasture and winter wheat conditions rated poor or very poor stood at 48 and 40 percent for Colorado.

The Southwest: Although little or no rain fell on southern sections of the Southwest (southern Arizona, southern and eastern New Mexico, west Texas, southeastern Colorado), unsettled weather did make it far enough south into the Four Corners Region to drop unseasonably heavy precipitation (0.5 to 2 inches) on parts of central Arizona, northwestern New Mexico, southwestern Colorado, and southeastern Utah). Flagstaff, AZ, was now at normal for the year with the latest round of precipitation. Even heavier amounts were reported north of this area. As a result, some slight improvements to D0 to D2 edges were made in central Arizona, D0 and D1

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were trimmed in northwestern New Mexico, and D0 was removed from southwestern Colorado. In southwest Texas, another week of rain (0.5 inches) in western Crockett and northeastern Pecos counties slightly reduced D4 there.

Hawaii and Alaska: Scattered light to moderate (0.5 to 2 inches) showers fell on the eastern (Big Island) and western (Kauai and Oahu) Hawaiian Islands while little or no rain was reported in the central (Maui, Molokai, Lanai) islands. On Maui, abnormal dryness was expanded to cover the rest of the island as low irrigation ditches were reported in eastern sections, along with lower yields at the Up county Agriculture Park due to lower irrigation flows. Reduced forage has also led to an encroachment of deer onto farms and pastures. In contrast, the Big Island saw some improvement with recent rains. The D2 area was split in half as the mid-slopes received good April rains, and the pastures recovered. Unfortunately, the vegetation did not recover in the lower elevations near Kawaihae and upper elevations near Pohakuloa as D2 remained. On the western Big Island lower Kona slopes, ample rains have eliminated lingering D0 as farmers in much better shape than last year. Lastly, the southern Big Island improved from D1 to D0 near Kapapala and Pahala area with continued shower activity. Elsewhere, conditions stayed the same.

In Alaska, light to moderate precipitation (0.3 to 1 inch) fell on portions of the south-central and southeastern coasts, and on west-central interior sections. Locally, 2 to 4 inches of rain was observed on Kodiak Island and on the eastern Kenai Peninsula, but amounts were not large enough to eliminate long-term deficits. In the short-term (30- to 90-days), precipitation in southwestern and southeastern Alaska is close to or above-normal, however, in the long-term (since September 1, 2010, the start of the cold season), much larger deficits have accumulated. This included departures of -10 to -30 inches since September 1 along the normally wetter coastal locations. Accordingly, the D0(H) area was slightly modified to depict the larger long-term deficits.

Looking Ahead: During the next 5 days (May 26-30), a cold front will gradually push eastward out of the Nation's midsection and off the East Coast later this week, bringing showers and thunderstorms to the eastern third of the Nation. Meanwhile, a series of Pacific storm systems will impact the Northwest and track into the northern Plains and upper Midwest, dropping light to moderate precipitation across the northern third of the U.S. Unfortunately, the southern tier of States will see little or no precipitation, although the Southeast may receive some light rain from the frontal passage. Shower activity may increase over the weekend in southern Florida. Above-normal readings will gradually spread from the southern Plains and South and push northward into the Midwest and East, while the West remains cool. Highs near 100 deg F may occur in parts of the Southeast by May 31.

The 6-10 day CPC outlook (May 31-June 4) calls for enhanced odds of subnormal precipitation from the central and southern Rockies across the south-central Plains and eastward throughout most of the Southeast and Atlantic Coast States. Above-normal precipitation is expected in the Northwest and upper Midwest. Subnormal temperatures are forecast for the Far West while unseasonable warmth envelops the eastern half of the Nation. In Alaska, wetter and warmer weather is probable in the southwest while drier and cooler conditions are expected in the east.

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Dryness Categories

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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

Drought or Dryness Types

A ... Agricultural

H ... Hydrological

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