



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

Weekly Report - Snowpack / Drought Monitor Update

Date: 19 May 2011

SNOTEL SNOWPACK AND PRECIPITATION SUMMARY

Snow: SNOTEL Snow-Water Equivalent (SWE) percent of normal values for 19 May 2011 shows very high values for many SNOTEL sites 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 past the peak SWE, values can increase statistically but in most cases the "total" SWE is actually less than the preceding week (Fig. 1). The 7-Day snow depth changes reflect rapid melt except over the Sierra SNOTEL sites where there was some net accumulation. Some near-term flooding can be anticipated across portions of the West in the coming weeks. (Fig.1a). For example, some potential flooding concerns exist 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 the West with the exception of slightly above normal temperatures over Idaho and the Montana Rockies (fig. 2). ACIS 7-day average temperature anomalies show that the greatest positive temperature departures across north-central Idaho and northwest Montana (>+4°F) and the greatest negative departures over northern California and the High Plains of Wyoming and Colorado (<-10°F) (Fig. 2).

Precipitation: ACIS 7-day average precipitation amounts for the period ending 18 May shows the bulk of the heaviest precipitation confined to the Washington Cascades and Sierra (Fig. 3). In terms of percent of normal, the precipitation was highest over the Western third of the West, the Utah Ranges, and the Central Western High 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

Moderate to heavy rains (1 to 3 inches) fell on central and northeast Colorado, most of Nebraska, and parts of eastern Kansas and central and eastern Oklahoma. A 1-category improvement was made where the largest totals occurred. In addition, the eastern edge of the drought (D0-D2) in the central Great Plains was trimmed as decent rains fell there. In Nebraska, releases on the Platte River from Lake McConaughy increased on May 17. Flows doubled to 4000 cfs, with 7000 cfs entering the lake. Low land flooding will increase in intensity with North Platte River stage expected to reach the 1971 record. A more dire situation is possible as 2 million acre feet of water is estimated in the central Rockies snow pack, but only a million acre feet of storage is available in McConaughy now. Any additional heavy rains in this region will aggravate conditions.

The Southwest: Little or no rain fell on much of Arizona, New Mexico, southern Utah, and southeastern Colorado. Normal precipitation totals in the Southwest are generally low during the spring months, although rainfall will usually increase during the late summer southwestern monsoon. An exception to this is in the southern High Plains (west Texas, eastern New Mexico,

Weekly Snowpack and Drought Monitor Update Report

and eastern Colorado) where precipitation typically increases during mid- to late spring. Unfortunately, the spring rains have failed to materialize in the southern High Plains, and with the subnormal winter precipitation courtesy of the strong La Nina, deficits have gradually accumulated. During the past 90 days, less than 5 percent of normal precipitation has fallen on southwestern Texas and the southern two-thirds of New Mexico, and less than 25 percent was measured in west Texas, southeastern Colorado, the Oklahoma Panhandle, and eastern Arizona. Since mid-November (6-months), less than 5 percent of normal precipitation fell on southwestern Texas and southeastern New Mexico, and less than 25 percent in southeastern Arizona, southern half of New Mexico, and west Texas. For example, Midland-Odessa, TX, has received only 0.11 inches since October 1, 2010 (normally about 6 inches, or 2 percent of normal). With deteriorating pasture and range conditions and poor to very poorly rated non-irrigated crops, D3 was expanded northward into northeastern New Mexico & southeastern Colorado, and D4 increased into nearly all of southwest Texas, eastern New Mexico, and extreme southeastern Colorado. 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>.

Weekly Snowpack and Drought Monitor Update Report

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>

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

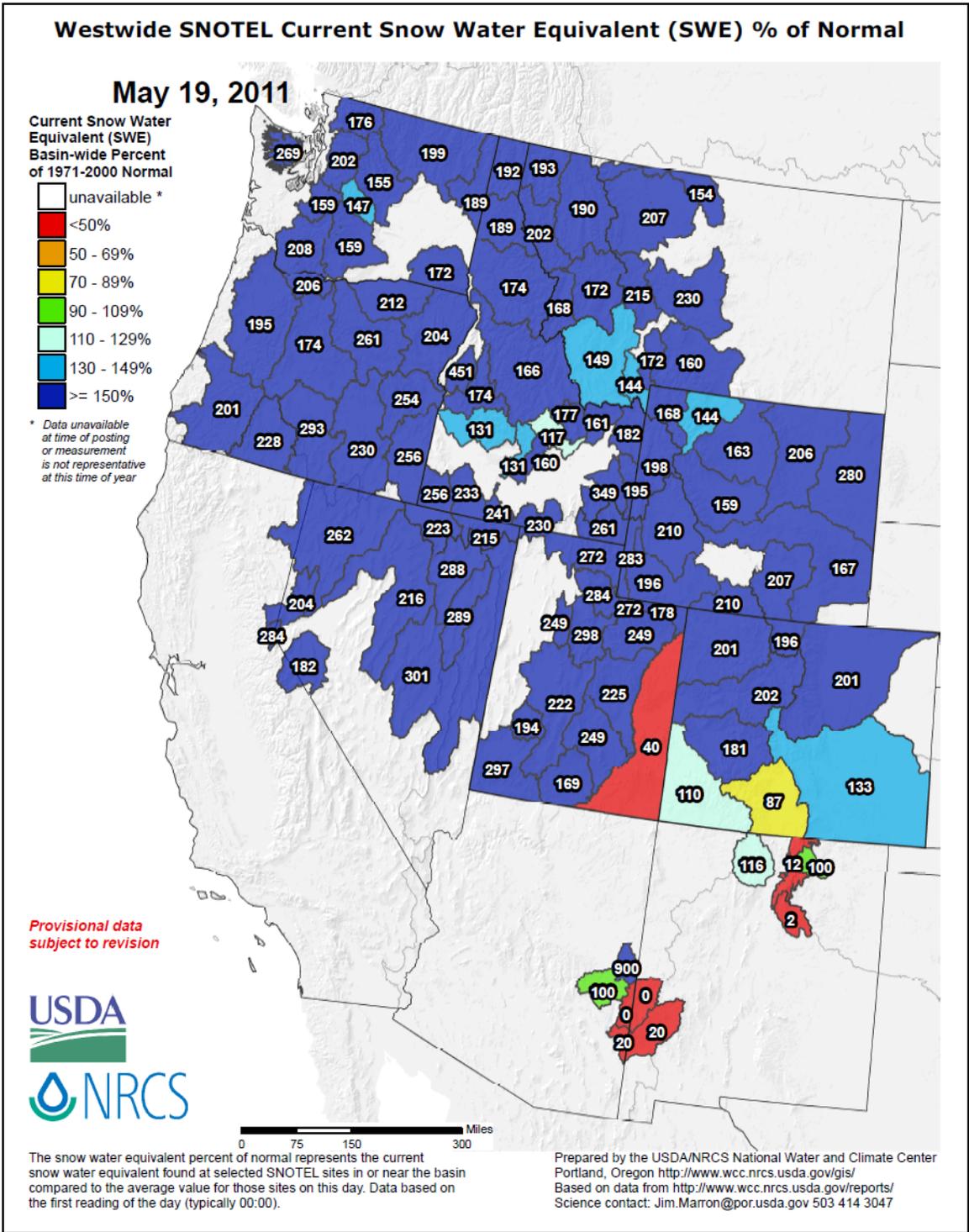


Fig. 1: SNOTEL Snow-Water Equivalent (SWE) percent of normal values for 19 May 2011 shows very high values for many SNOTEL sites since seasonal snowmelt has been delayed somewhat due to cooler than average temperatures for this time of year and additional snowfall at higher altitudes. Since we are past the peak SWE, values can increase statistically but in most cases the “total” SWE is actually less than the preceding week. 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 18, 2011

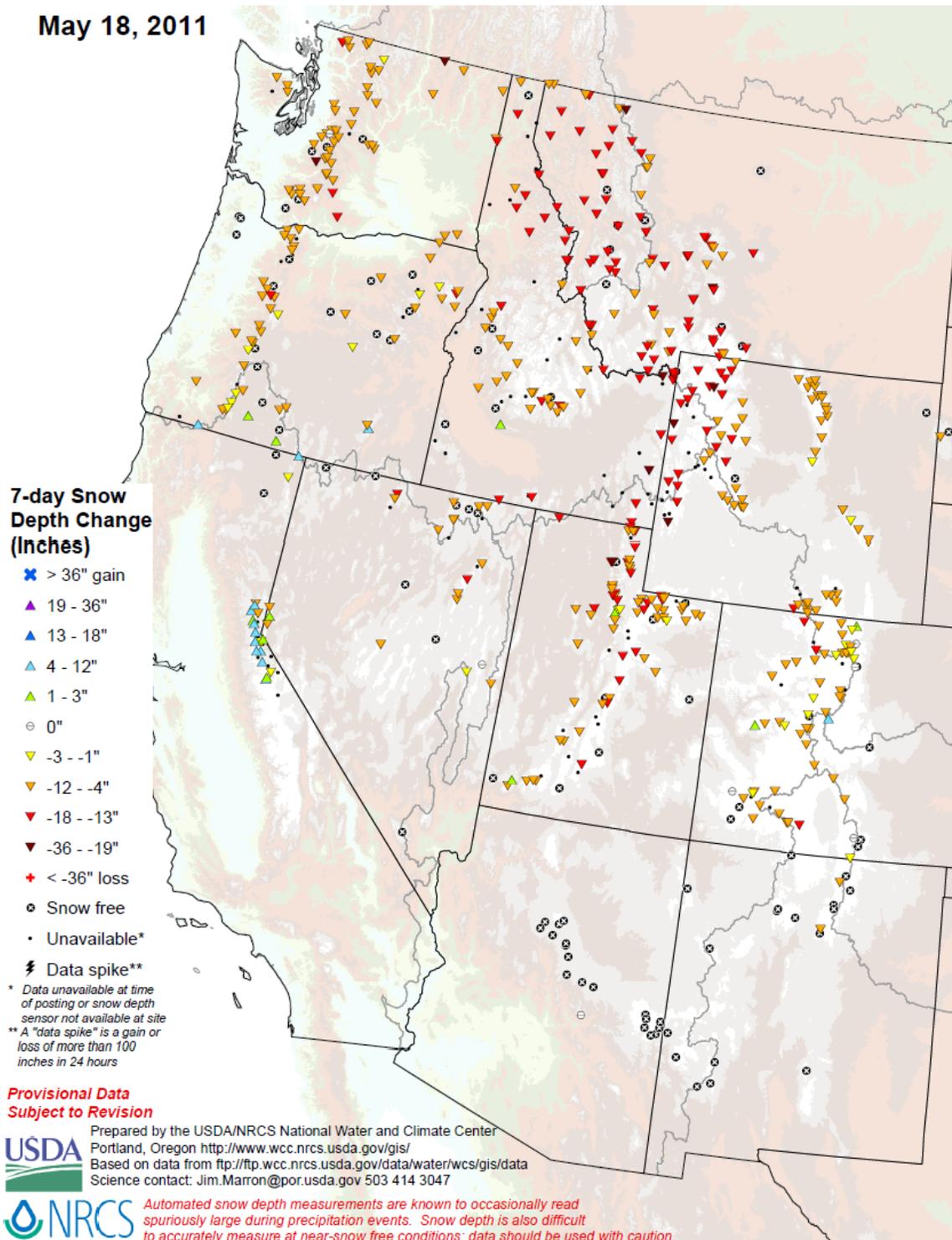


Fig. 1a: 7-Day snow depth changes reflect rapid melt except over the Sierra SNOTEL sites where there was some net accumulation. Some near-term flooding can be anticipated across portions of the West in the coming weeks.

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

Weekly Snowpack and Drought Monitor Update Report

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

May 18, 2011

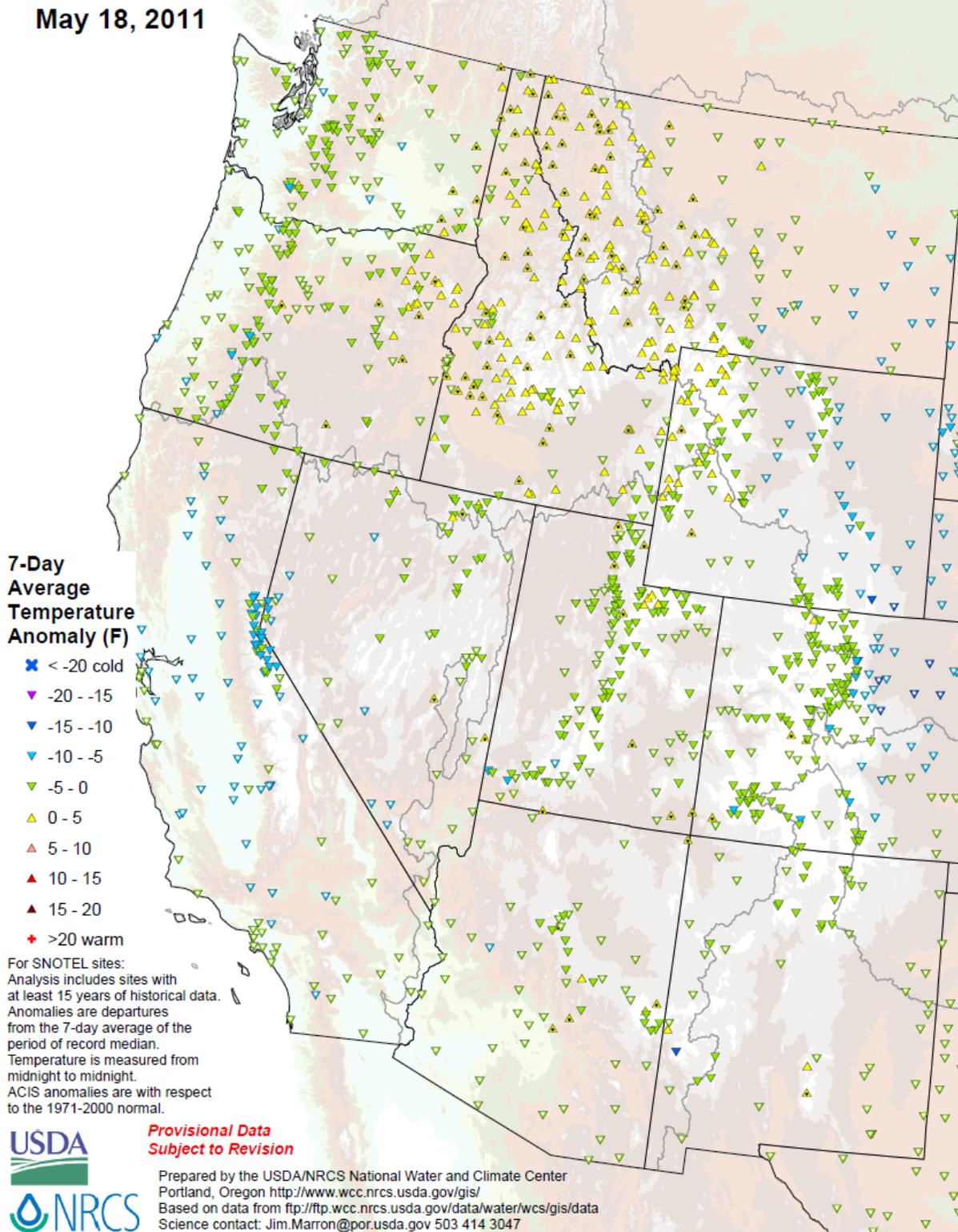
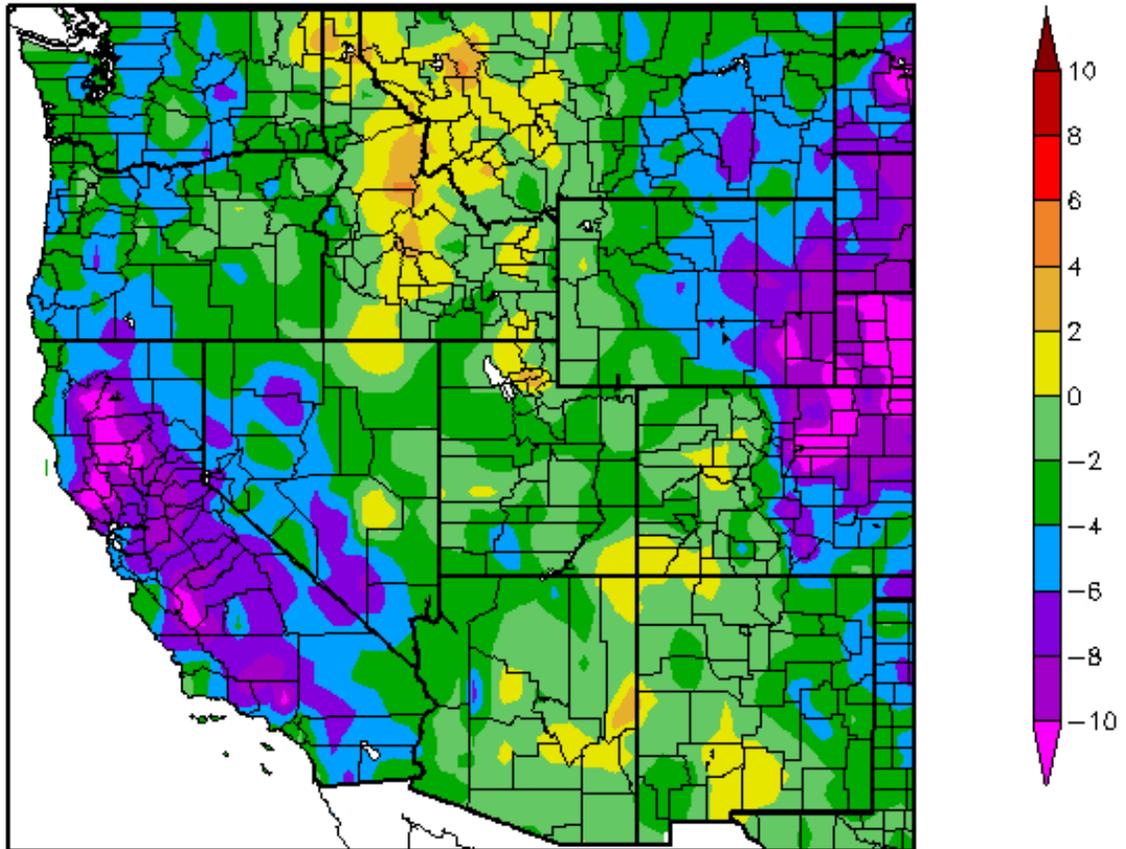


Fig. 2: SNOTEL and ACIS 7-day temperature anomaly shows a rather cool week over the West with the exception of slightly above normal temperatures over Idaho and the Montana Rockies.

Departure from Normal Temperature (F)
5/12/2011 – 5/18/2011



Generated 5/19/2011 at HPRCC using provisional data.

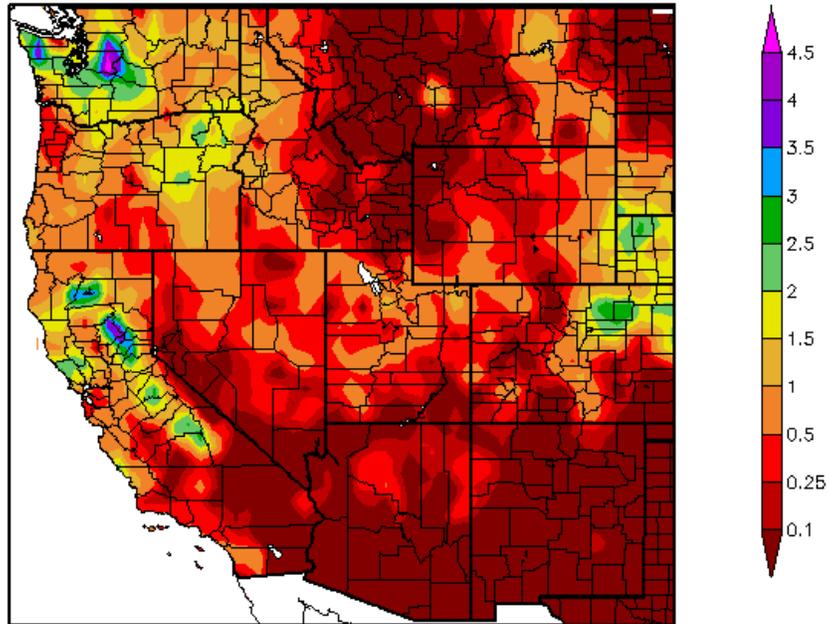
Regional Climate Centers

Fig. 2a: ACIS 7-day average temperature anomalies show that the greatest positive temperature departures across north-central Idaho and northwest Montana (>+4°F) and the greatest negative departures over northern California and the High Plains of Wyoming and Colorado (<-10°F).

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

Weekly Snowpack and Drought Monitor Update Report

Precipitation (in)
5/12/2011 – 5/18/2011



Percent of Normal Precipitation (%)
5/12/2011 – 5/18/2011

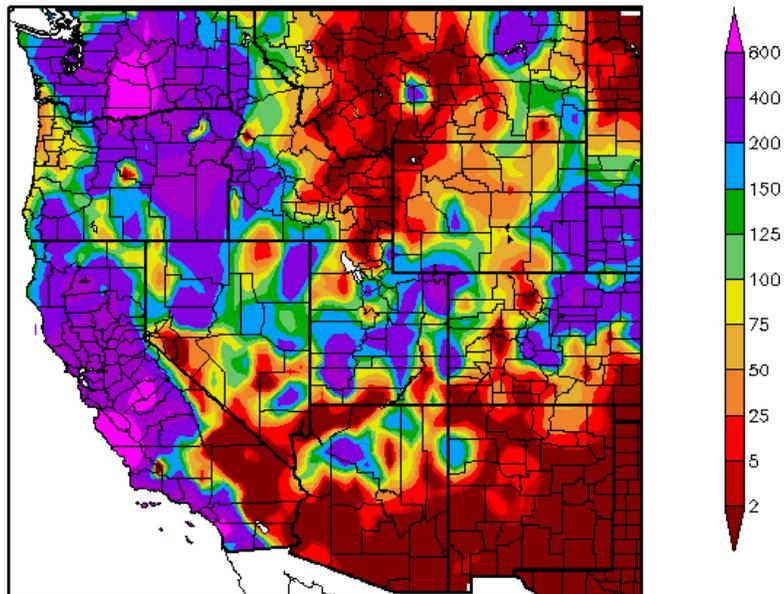


Fig. 3 and 3a: ACIS 7-day average precipitation amounts for the period ending 18 May shows the bulk of the heaviest precipitation confined to the Washington Cascades and Sierra (Fig. 3). In terms of percent of normal, the precipitation was highest over the Western third of the West, the Utah Ranges, and the Central Western High Plains (Fig 3a).

Ref: <http://www.hprcc.unl.edu/maps/current/>

Weekly Snowpack and Drought Monitor Update Report

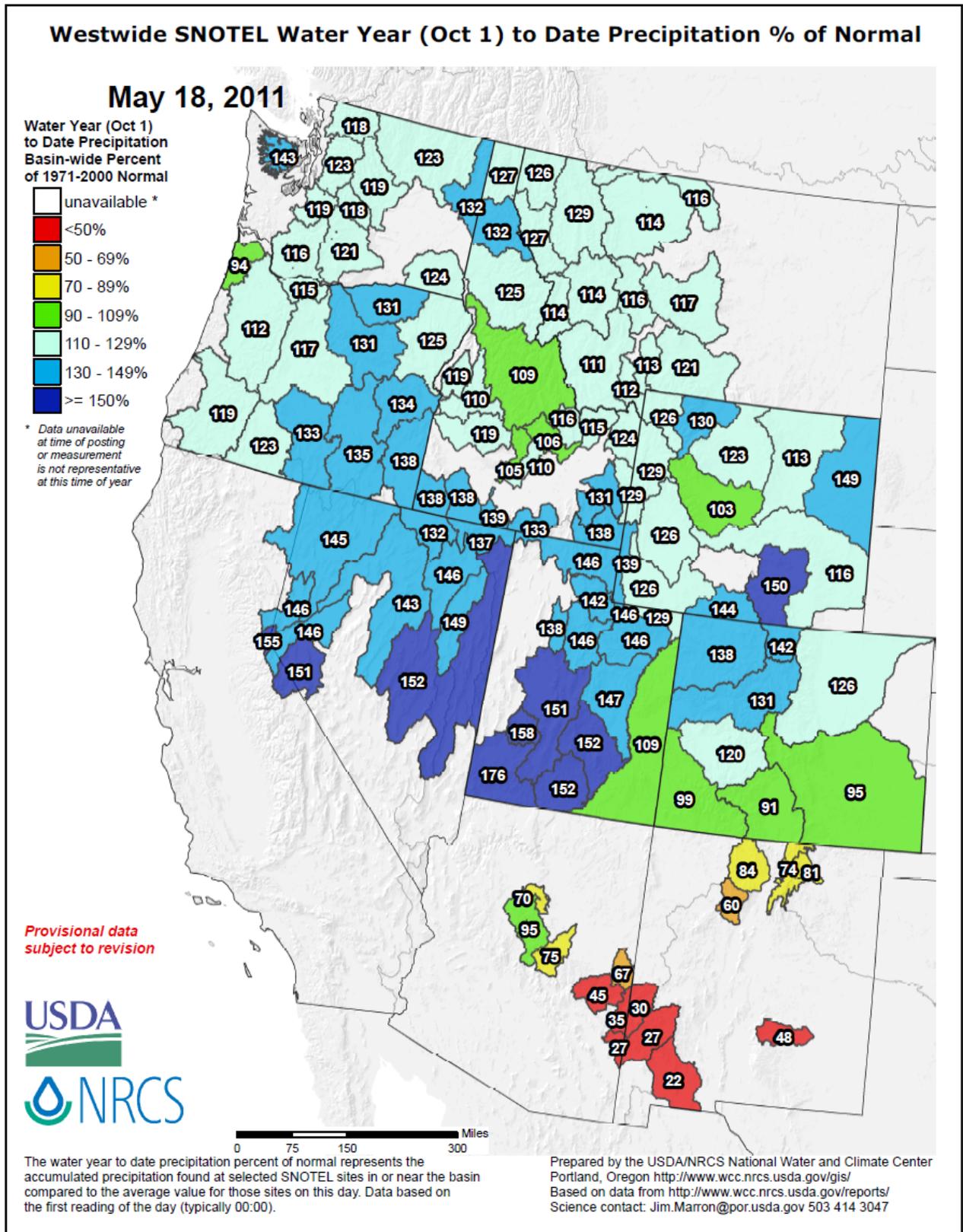


Fig 3b: For the 2011 Water-Year that began on 1 October 2010, the greatest deficits are found over the extreme southern reaches of the Southwest. Areas with the highest values are found over the Great Basin, Cascades, and parts of Northern and Central Rockies.

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

U.S. Drought Monitor

May 17, 2011
Valid 8 a.m. EDT

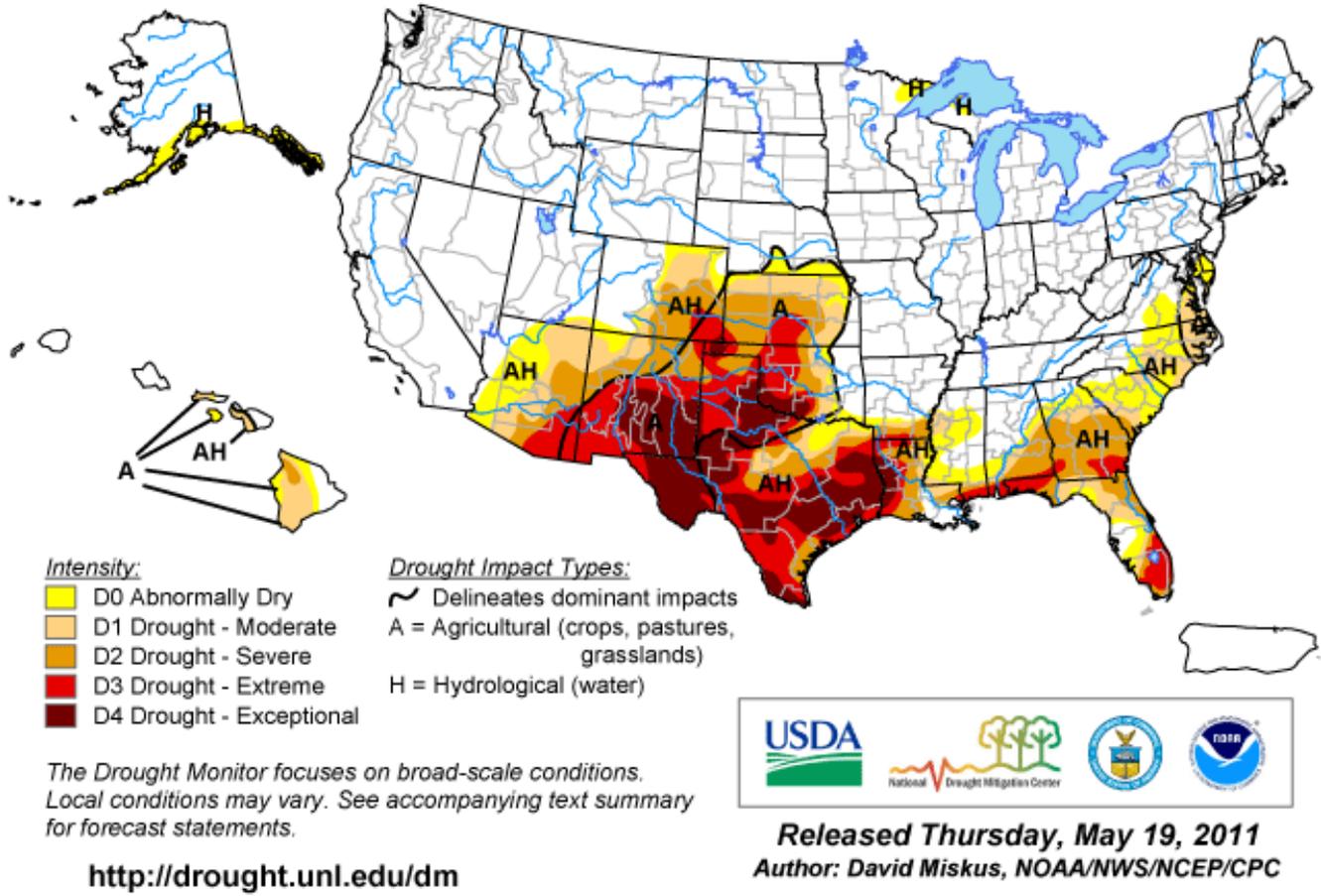


Fig. 4: Current Drought Monitor weekly summary. The exceptional D4 levels of drought are found over New Mexico, Texas, Oklahoma, and Louisiana. Ref: <http://www.drought.unl.edu/dm/monitor.html>

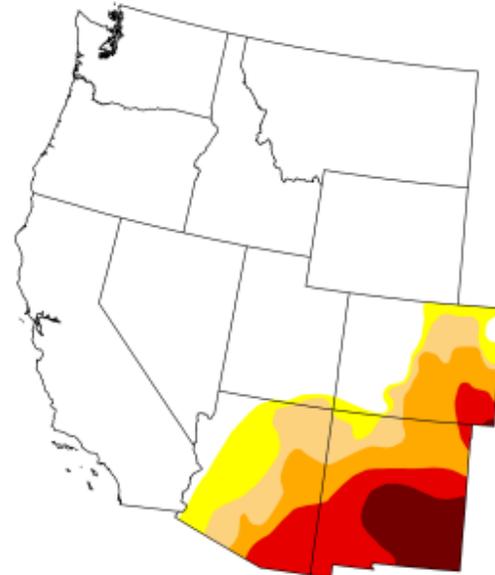
U.S. Drought Monitor

West

May 17, 2011
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	76.18	23.82	19.58	14.72	8.78	3.28
Last Week (05/10/2011 map)	75.89	24.11	20.08	15.56	8.04	3.09
3 Months Ago (02/15/2011 map)	72.99	27.01	13.79	4.34	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 (05/11/2010 map)	50.68	49.32	18.57	4.91	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.



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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.

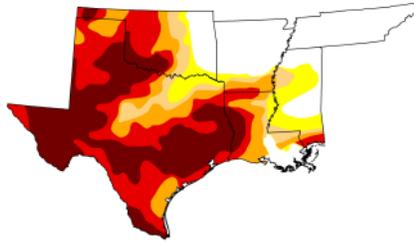
Ref: http://www.drought.unl.edu/dm/DM_west.htm

Weekly Snowpack and Drought Monitor Update Report

U.S. Drought Monitor South

May 17, 2011
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	24.63	75.37	67.88	61.38	49.24	27.15
Last Week (05/10/2011 map)	24.26	75.74	68.94	62.96	50.20	27.03
3 Months Ago (02/15/2011 map)	8.58	91.42	61.15	31.17	6.39	0.00
Start of Calendar Year (12/29/2010 map)	8.86	91.14	67.85	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 (05/11/2010 map)	77.79	22.21	8.71	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.

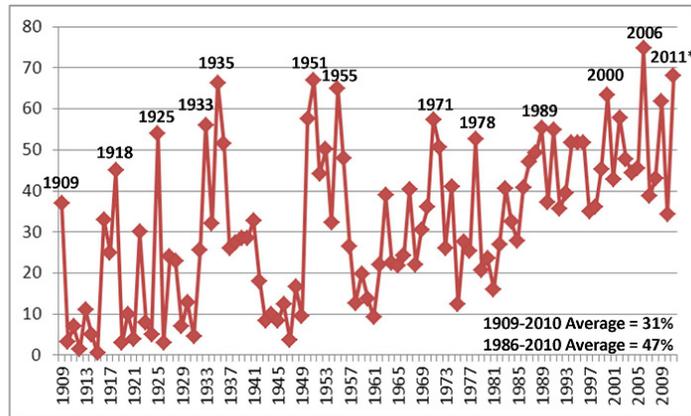
<http://drought.unl.edu/dm>



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David Miskus, NOAA/NWS/NCEP/CPC

Fig. 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

Percent Winter Wheat Abandonment in Texas 1909-2011



* The value of 68% for 2011 is preliminary, based on the latest Prospective Plantings and Crop Production reports.

Fig. 4c: Texas, suffering its longest dry-spell on record,—dubbed “exceptional” by climatologists—jumps from 26 percent of the state to 48 percent this week. So far at least 9,000 wildfires have destroyed or damaged more than 400 homes and scorched 2.2 million acres (890,000 hectares) across Texas. Texas new wheat crop has largely withered (68% abandonment—2nd highest ever) while pastures and rangeland are so poor they cannot sustain grazing cattle. Texas farmers have nearly given up harvesting much of the state’s new wheat crop, 3/4 of which is rated by AG officials as in poor or very poor condition.

U.S. Drought Monitor

New Mexico

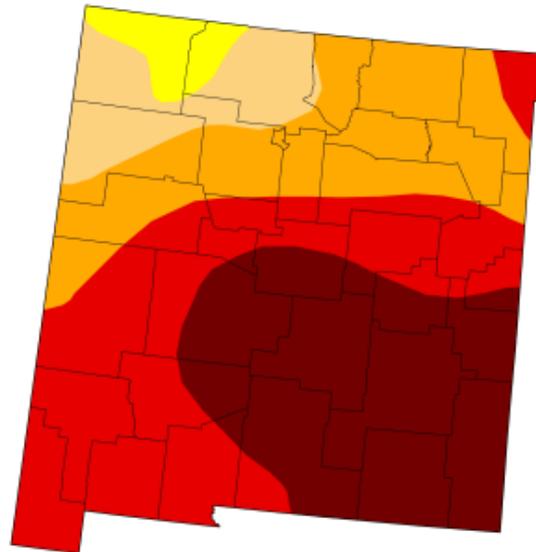
May 17, 2011
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	96.66	87.36	64.59	31.67
Last Week (05/10/2011 map)	0.00	100.00	96.59	87.36	61.02	30.14
3 Months Ago (02/15/2011 map)	7.79	92.21	52.89	22.86	0.00	0.00
Start of Calendar Year (12/28/2010 map)	6.16	93.84	40.40	0.00	0.00	0.00
Start of Water Year (09/28/2010 map)	76.66	23.34	0.00	0.00	0.00	0.00
One Year Ago (05/11/2010 map)	79.29	20.71	0.02	0.00	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.

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

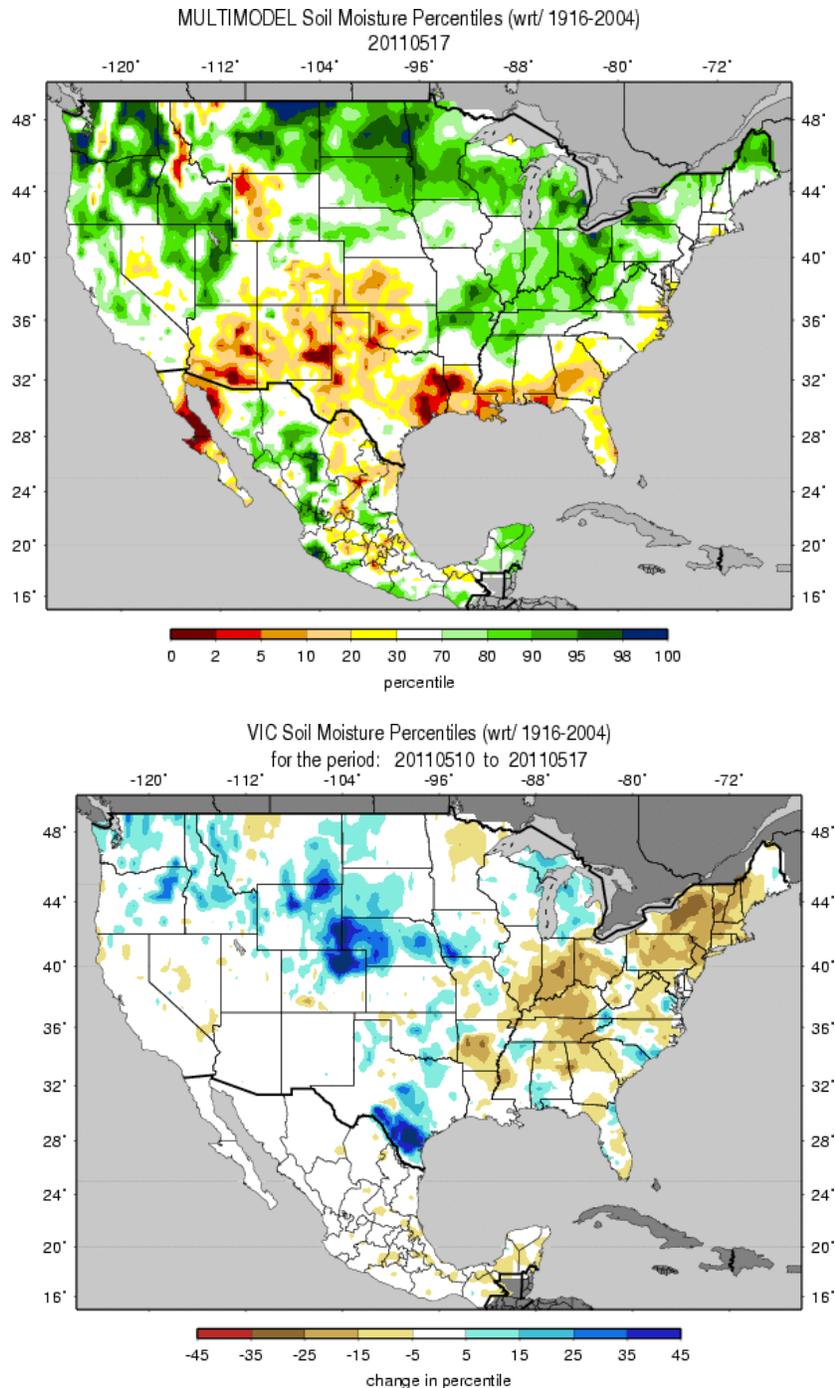


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Fig. 4d: Drought Monitor for New Mexico with statistics over various time periods. An increase in D3 and D4 is noted this week. All but 3.5% of the state is in some sort of drought.

Ref: http://www.drought.unl.edu/dm/DM_state.htm?NM.W

Weekly Snowpack and Drought Monitor Update Report



Figs. 5a and 5b: Soil Moisture ranking in percentile as of 17 May (top) shows moist conditions over much of the Northern Tier States and the Appalachians with dryness over Arizona and across to the extreme Lower Mississippi River (top). Dryness over Idaho and northwest Wyoming might be due to the frozen ground or data issues. For the past week, the Central Rockies and western Texas experienced the greatest increases in soil moisture while much of the eastern half of the nation has dried out.

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

Weekly Snowpack and Drought Monitor Update Report

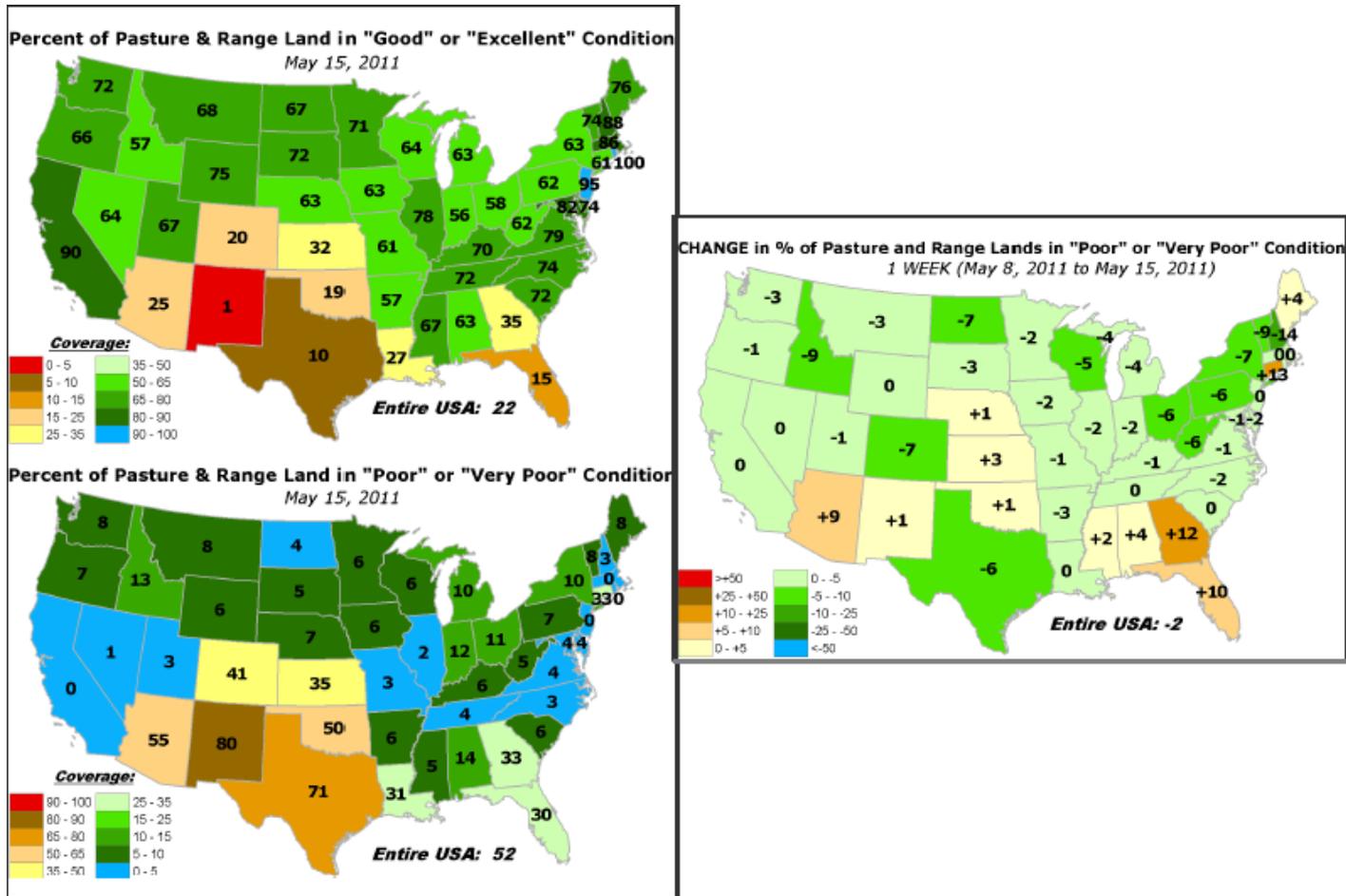
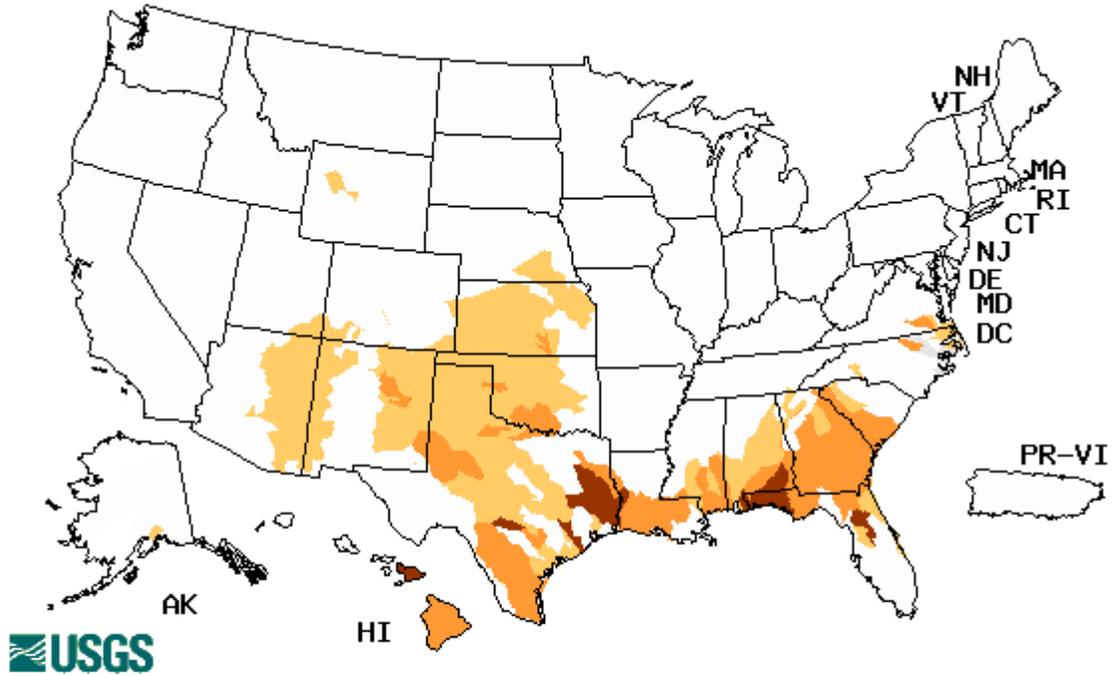


Fig. 6a: Pasture land conditions mirror topsoil conditions across the West. Conditions are improving over Idaho and Colorado but are worsening over Arizona during the past week (right panel).

Ref: <http://www.cpc.ncep.noaa.gov/products/predictions/experimental/edb/pasture-range-statewide-conditions.pdf>

Weekly Snowpack and Drought Monitor Update Report

Wednesday, May 18, 2011

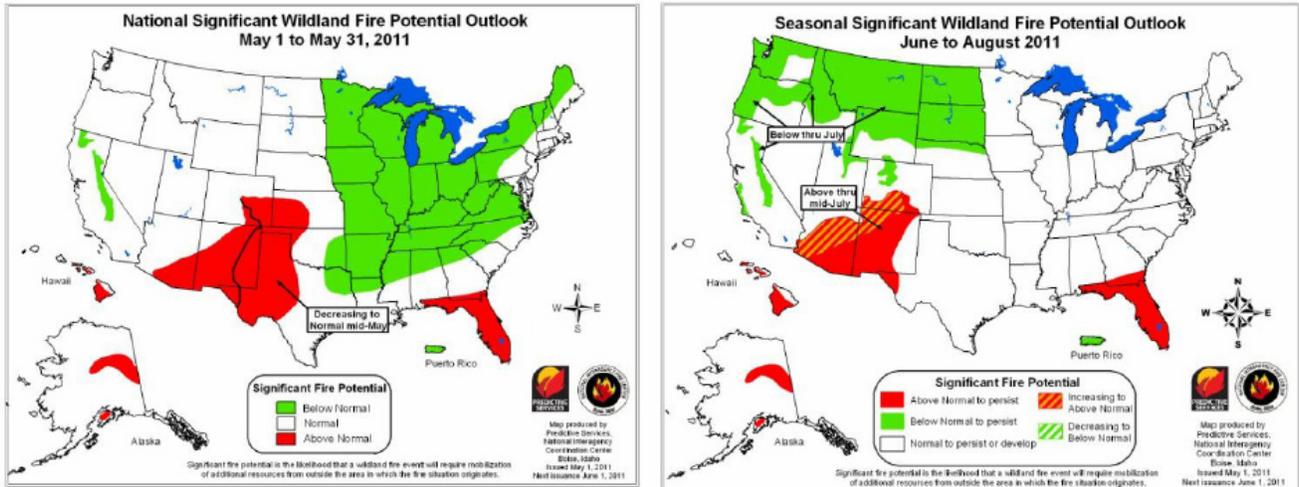


Explanation - Percentile classes				
Low	≤5	6-9	10-24	Insufficient data for a hydrologic region
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

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 the north-central Florida are indicating severe conditions. Note: northern-most gauges are becoming more reliable as rivers and streams start to thaw.

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

Weekly Snowpack and Drought Monitor Update Report



Note: Significant fire potential is defined as the likelihood that a wildland fire event will require mobilization of additional resources from outside the area in which the fire situation originates.

Fig. 8: Wildland fire threat reveals high rise over Florida and the Southwest.

Ref: http://www.predictiveservices.nifc.gov/outlooks/monthly_seasonal_outlook.pdf

Weekly Snowpack and Drought Monitor Update Report

National Drought Summary -- May 17, 2011

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 weather pattern brought widespread light to moderate rains to most of the eastern half of the Nation, and a series of Pacific frontal systems dropped unseasonable precipitation on the Northwest and parts of California. A slow-moving upper-air low meandered along a stalled front, traveling from the central High Plains to the Ohio Valley and then tracking southeastward into the Carolinas. The system triggered numerous showers and thunderstorms from northeastern Colorado eastward to the mid-Atlantic and Carolinas, while welcome rains fell on drought-stricken portions of central and eastern Texas and central Oklahoma. More rain fell on the saturated middle Mississippi, Tennessee, and Ohio Valleys, although totals were much less than previous weeks. The record crests along the lower Mississippi River flood waters were diverted into central Louisiana's Atchafalaya River Basin (via the Morganza spillway) to ease the potential flooding of Baton Rouge and New Orleans, LA. Unfortunately, little or no rain fell on drought-hit areas of the Southwest, parts of the southern High Plains, and along sections of the central Gulf Coast. Temperatures were subnormal along the West Coast and in the Plains and above-normal in the northern Rockies and eastern third of the U.S.

Upper Great Lakes Region: Light to moderate rains (1 to 2 inches) across most of northern Wisconsin, the Upper Peninsula of Michigan, and northern Lower Michigan was enough to alleviate D0(H) in much of the region. Precipitation has been 1.5 to 2 times above-normal at the short and medium-term (30-, 60-, and 90-days), and even above normal at the long-term (180- and 365-days). USGS average stream flows (1-, 7-, 14-, and 28-days) were mostly in the upper 75th percentile and soil moistures indicated wet conditions. However, there were a few spots where the precipitation was less than the surrounding areas, and this included the Arrowhead of Minnesota and the Upper Peninsula of Michigan's Keweenaw Peninsula and adjacent area. In Minnesota, stream discharge was in the lower end of normal, fire danger was moderate, and April 1-May 16 precipitation was near to somewhat below normal. In the Upper Peninsula of Michigan, long-term deficits remained (e.g. Houghton, MI was 85 percent of normal during the past 34 months, with a deficit of 13.87 inches). Accordingly, D0(H) remained in these two areas.

South Atlantic Seaboard and Eastern Gulf Coast States: Scattered showers and thunderstorms provided localized relief to some areas in Virginia and the Carolinas where the rains exceeded 2 inches (near Richmond, VA, Wilmington, NC, Myrtle Beach, SC, and north-central South Carolina and south-central North Carolina), but elsewhere overall precipitation (0.5 to 1 inch) kept conditions status-quo. An exception to this was in extreme eastern North Carolina where weekly rain totals were less than 0.3 inches and short-term precipitation remained well below-normal (30-days: 25-50 percent; 60-days: 30 to 70 percent; 90-days: 40 to 75 percent). The two separate D1 areas in southeast Virginia and southeast North Carolina were merged to include northeastern North Carolina, with D1(A) emphasizing the short-term

Weekly Snowpack and Drought Monitor Update Report

dryness. Additionally, the D0(A) was pushed northward into the Delmarva Peninsula where precipitation totals for the past 30-, 60-, 90-, and 180-days were less than 75 percent of normal.

Farther south, another week of subnormal rainfall in southern Mississippi, southern Alabama, most of Georgia, and western South Carolina, combined with near to above-normal temperatures, produced deteriorating soil moisture conditions along the central and eastern Gulf Coast. Both short- and long-term deficits exist, and USGS average stream flows have dropped into the lower 10th percentile in much of this region. Along the Gulf Coast where La Nina-induced winter precipitation shortages (6-months: 50 to 70 percent of normal), the spring rains have also been disappointing. As a result, D3 was added to areas where less than 50 percent of normal precipitation was observed at 30-, 60-, and 90-days. D1 and D2 were also edged northward in eastern Alabama and central Georgia, and extended into southwest South Carolina. Fortunately some rain (0.75 to 1.5 inches) fell on southeastern Georgia, maintaining D3 conditions there. In Florida, a general increase in shower activity provided some stability to conditions, and where heavier rains (1 to 3 inches) fell, some slight improvements were made. This included parts of north-central, central, and southwestern Florida.

Lower Mississippi Valley: The opening of the Morganza Spillway has relieved pressure on Mississippi River levees downriver, producing lower crests earlier than what had been predicted at Baton Rouge and New Orleans, LA. While sparing Louisiana's largest cities from widespread Mississippi River flooding, hundreds of thousands of acres of farmland and thousands of homes in south-central Louisiana will be flooded as water from the spillway pours out into the Atchafalaya River basin. Since the last time this area was intentionally flooded (1973), the heart of Cajun country is much drier and absorbing more water, thus slowing the flow. Accordingly, this area of south-central Louisiana is depicted with no drought as drawn last week. And fortunately, little or no rain fell on most of Louisiana, western Mississippi, and southern Arkansas, preventing additional runoff into the lower Mississippi River basin but providing no relief to drought-stricken and non-flooded locations. Additional moderate-heavy rains (1.5 to 3 inches) fell on northern Arkansas, western Tennessee, and northern Mississippi, with the latter region receiving some improvement in the D0 and D1 areas.

Central and Southern Plains: Persistent rains that had brought relief to parts of north-central and northeastern Texas since early April finally became more widespread and heavier, soaking parts of central and eastern Texas, near Del Rio, TX, and portions of the TX Panhandle with 1.5 to 4 inches. Unfortunately, little or no rain fell on southwestern, extreme western, west-central, and extreme southern Texas, and along the western Gulf Coast. Accordingly, where the heaviest rains occurred, a 1-category improvement was made, while continued dryness in the west & southwest maintained or expanded D3 and D4. In north-central Texas where 2 to 4 inches of rain fell, conditions improved to D1 from Runnels and Coleman counties northeastward to Tarrant county, and to D0 from Tarrant and Dallas counties to the Oklahoma border (Grayson to Bowie counties). D2-D4 was also improved by one category in surrounding areas where the rainfall was greatest. Similarly, in south-central Texas, 1.5 to 4 inches of rain eased D4 conditions near Del Rio (Val Verde County), in La Salle, Dimmit, and Webb counties, and Bell, Burnet, & Llano counties. In eastern Texas, D4 was eased from Houston, northern Trinity, Angelina, southern Nacogdoches, and southern Cherokee counties. Although this week's rains fell on the watershed for Sam Rayburn Reservoir, the lake continued to drop, reaching 1.99 million acre-feet (normally at 2.9 million acre-feet), and much of what remained was inaccessible. In the extreme northern Panhandle, 1 to 2 inches of rain diminished the D3 in Hansford & Sherman counties. Farther north, moderate to heavy rains (1 to 3 inches) fell on central and northeast Colorado, most of Nebraska, and parts of eastern Kansas and central and eastern Oklahoma. A 1-category improvement was made where the largest totals occurred. In

Weekly Snowpack and Drought Monitor Update Report

addition, the eastern edge of the drought (D0-D2) in the central Great Plains was trimmed as decent rains fell there. In Nebraska, releases on the Platte River from Lake McConaughy increased on May 17. Flows doubled to 4000 cfs, with 7000 cfs entering the lake. Low land flooding will increase in intensity with North Platte River stage expected to reach the 1971 record. A more dire situation is possible as 2 million acre feet of water is estimated in the central Rockies snow pack, but only a million acre feet of storage is available in McConaughy now. Any additional heavy rains in this region will aggravate conditions.

In contrast, exceptional short-term dryness continued in western sections of the state, expanding D4 into the Big Bend region and D3 into the northern Texas Panhandle. Elsewhere, another dry week in northeastern New Mexico pushed D3 northward and into southeastern Colorado. According to AHPS precipitation, this region has observed less than 10 percent of normal precipitation the past 90-days, and less than 25 percent the past 6 months. Similar conditions existed in western Oklahoma northward into south-central Kansas, and D3 was added here. According to the USDA/NASS, May 15 state winter wheat conditions rated very poor or poor included: CO 41 percent; KS 55 percent; OK 80 percent, and TX 75 percent. Similarly, May 15 pasture and range conditions considered very poor or poor included: AZ 55 percent; CO 41 percent; KS 35 percent; NM 80 percent; OK 50 percent, and TX 71percent.

The Southwest: Little or no rain fell on much of Arizona, New Mexico, southern Utah, and southeastern Colorado. Normal precipitation totals in the Southwest are generally low during the spring months, although rainfall will usually increase during the late summer southwestern monsoon. An exception to this is in the southern High Plains (west Texas, eastern New Mexico, and eastern Colorado) where precipitation typically increases during mid- to late spring. Unfortunately, the spring rains have failed to materialize in the southern High Plains, and with the subnormal winter precipitation courtesy of the strong La Nina, deficits have gradually accumulated. During the past 90 days, less than 5 percent of normal precipitation has fallen on southwestern Texas and the southern two-thirds of New Mexico, and less than 25 percent was measured in west Texas, southeastern Colorado, the Oklahoma Panhandle, and eastern Arizona. Since mid-November (6-months), less than 5 percent of normal precipitation fell on southwestern Texas and southeastern New Mexico, and less than 25 percent in southeastern Arizona, southern half of New Mexico, and west Texas. For example, Midland-Odessa, TX, has received only 0.11 inches since October 1, 2010 (normally about 6 inches, or 2 percent of normal). With deteriorating pasture and range conditions and poor to very poorly rated non-irrigated crops, D3 was expanded northward into northeastern New Mexico & southeastern Colorado, and D4 increased into nearly all of southwest Texas, eastern New Mexico, and extreme southeastern Colorado.

Hawaii and Alaska: Scattered light to moderate (1 to 3 inches) showers fell on the eastern (Kauai and Oahu) and western (Big Island) Hawaiian Islands, while little or no rains fell on the middle (Maui, Molokai, Lanai) islands. Recent past rains, however, have been adequate enough to maintain current conditions. According to the May 5 Hawaii drought information statement from Honolulu, agricultural conditions have recovered enough from rains earlier in the year in parts of Maui to justify the improvement of D2 to D1 in southwestern sections. On the Big Island, rain totals increased in April over the leeward slopes, but it was too soon to determine how much improvement would occur over the existing drought areas. On Molokai, water levels in the Waimanelo Reservoir remained steady during the past month, leaving the mandatory 30 percent cutbacks in irrigation water consumption in place.

In Alaska, mostly dry and seasonable temperatures were observed across the state. Weekly temperatures generally averaged within 2 to 4 degrees F of normal, and the largest precipitation

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totals (0.5 to 1.5 inches) were found in the southwest and southeast sections of Alaska. No changes were made to this week's depiction as adequate precipitation fell on most of the D0 area last week. However, as temperatures normally begin to increase during the late spring and summer months, subnormal rainfall will need to be closely monitored.

Looking Ahead: During the next 5 days (May 19-23), heavy precipitation (more than 2 inches) is forecast for the north-central Rockies and Plains (Wyoming and South Dakota), and for the central and south-central Great Plains and lower Missouri Valley. Additional light to moderate rains may fall on northeastern and central Texas. Unsettled weather is also expected across the Midwest and Northeast, and in the Great Basin. Unfortunately, little or no rain is forecast for most of the Southwest, southern High Plains, and the central and eastern Gulf and southern Atlantic Coast States. Temperatures are expected to average below normal in the western half of the Nation, and above-normal in the Southeast.

The 6-10 day CPC outlook (May 24-28) calls for a continued wet pattern across the northern portion of the Nation, from the Pacific Northwest to the north-central Plains to the Ohio Valley and northern Appalachians. Odds favor subnormal precipitation along the southern tier of the U.S., from southern California to the southern Great Plains and along the Gulf Coast into Florida. Above-normal temperatures are expected along the Gulf and Atlantic Coast States, with subnormal readings forecast for the North-Central States. Alaska should have mostly dry and mild conditions, especially in the northern half of the state.

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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

Drought or Dryness Types

A ... Agricultural

H ... Hydrological

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