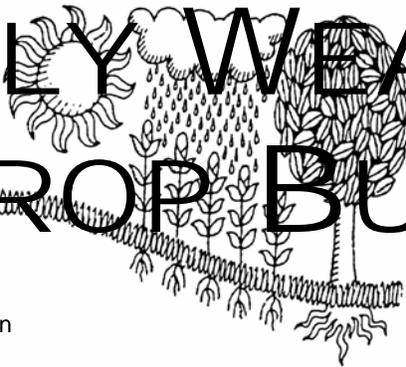
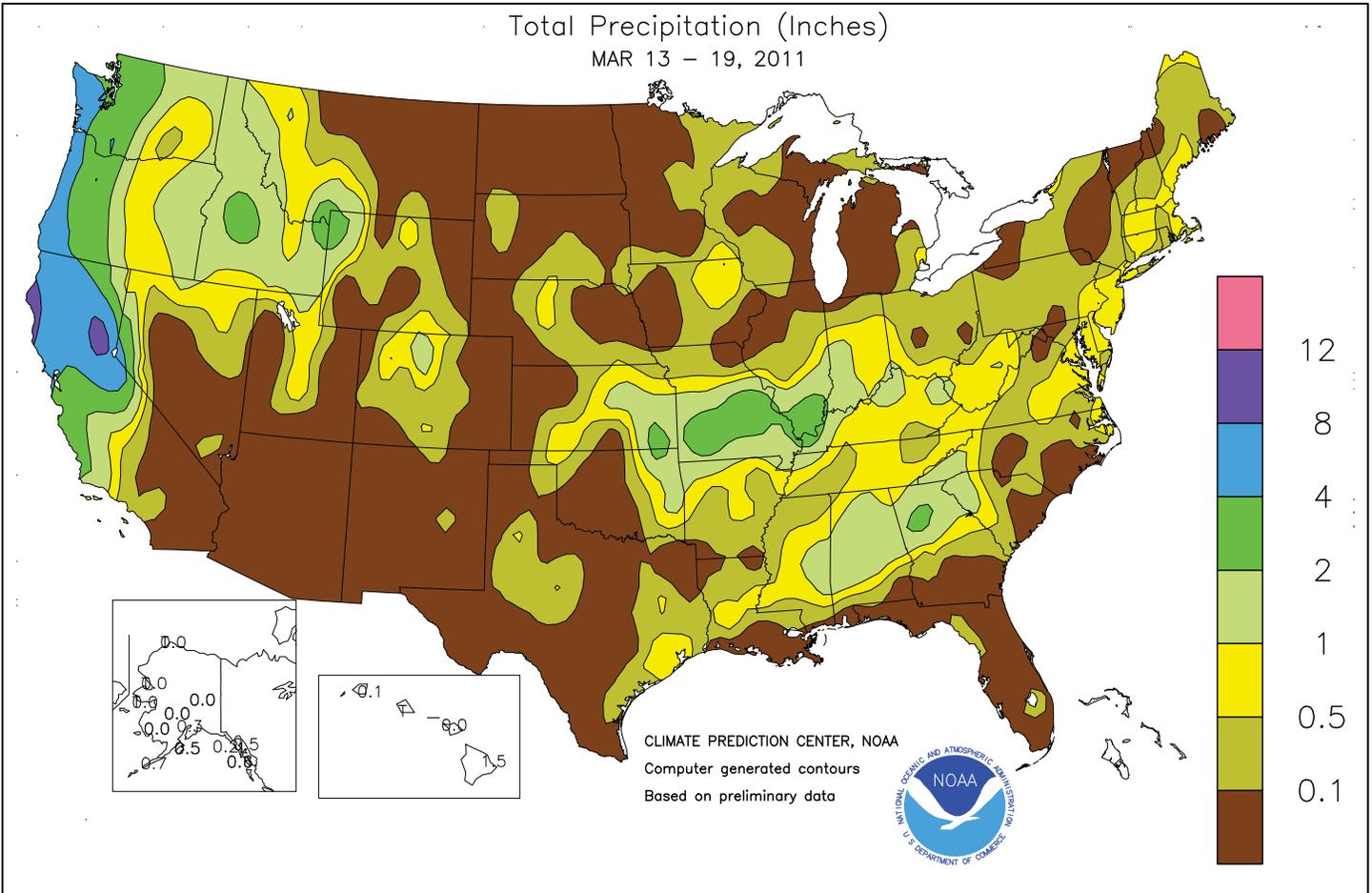


# WEEKLY WEATHER AND CROP BULLETIN



U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Weather Service

U.S. DEPARTMENT OF AGRICULTURE  
National Agricultural Statistics Service  
and World Agricultural Outlook Board



## HIGHLIGHTS March 13 - 19, 2011

*Highlights provided by USDA/WAOB*

The **Western** wet season continued its late surge, with heavy precipitation focused on **northern California**. The average water content of the **Sierra Nevada** snow pack rose to 42 inches by March 20, nearly 145 percent of the normal peak seasonal accumulation. However, precipitation continued to bypass **Arizona** and **New Mexico**, allowing for further drought expansion and intensification. The **central and southern High Plains** also continued to experience unfavorably warm, dry weather, maintaining significant stress on pastures and

*(Continued on page 7)*

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# Water Supply Forecast for the Western United States

## Highlights

La Niña persisted in February 2011, although weakening was observed. Over the equatorial Pacific, oceanic and atmospheric anomalies reflected an ongoing, mature La Niña that peaked in intensity several weeks ago.

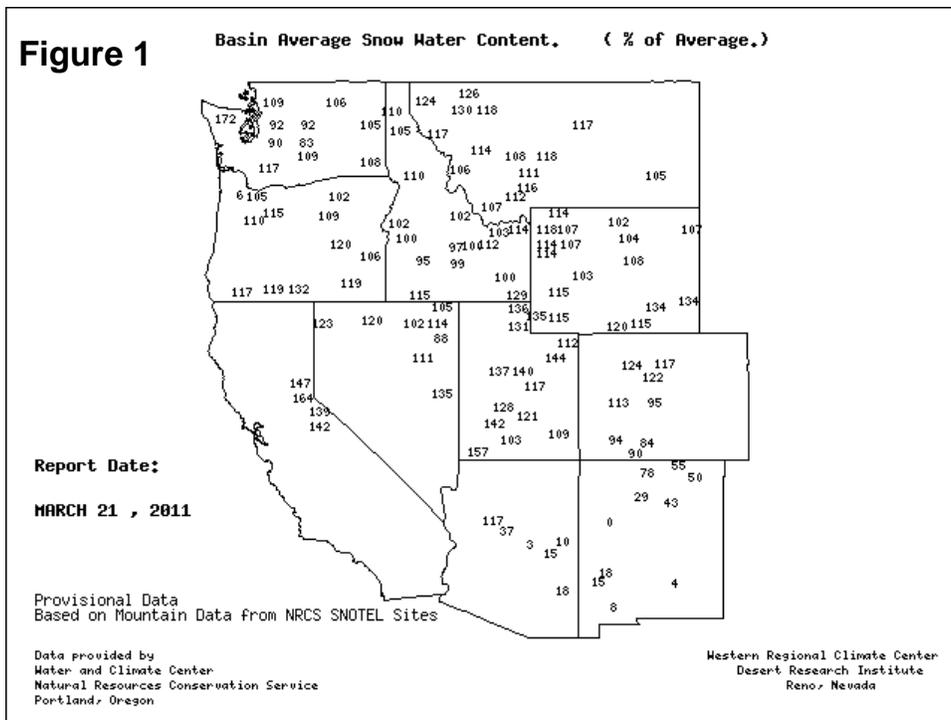
Across the western U.S., however, La Niña impacts have not been entirely typical. For example, excessive precipitation has not fallen in the Pacific Northwest, as would be expected. Heavier precipitation has been focused across the northern and central Rockies, as well as the Sierra Nevada and parts of the Great Basin and Intermountain West. Farther south, the dry signal of La Niña has been very apparent in Arizona and New Mexico. In the latter state, drought-related problems have been compounded by low reservoir levels.

Spring and summer streamflow forecasts valid March 1 called for near- to above-average runoff across the majority of the West. Exceptions included a few basins across the interior Northwest and most of Arizona and New Mexico.

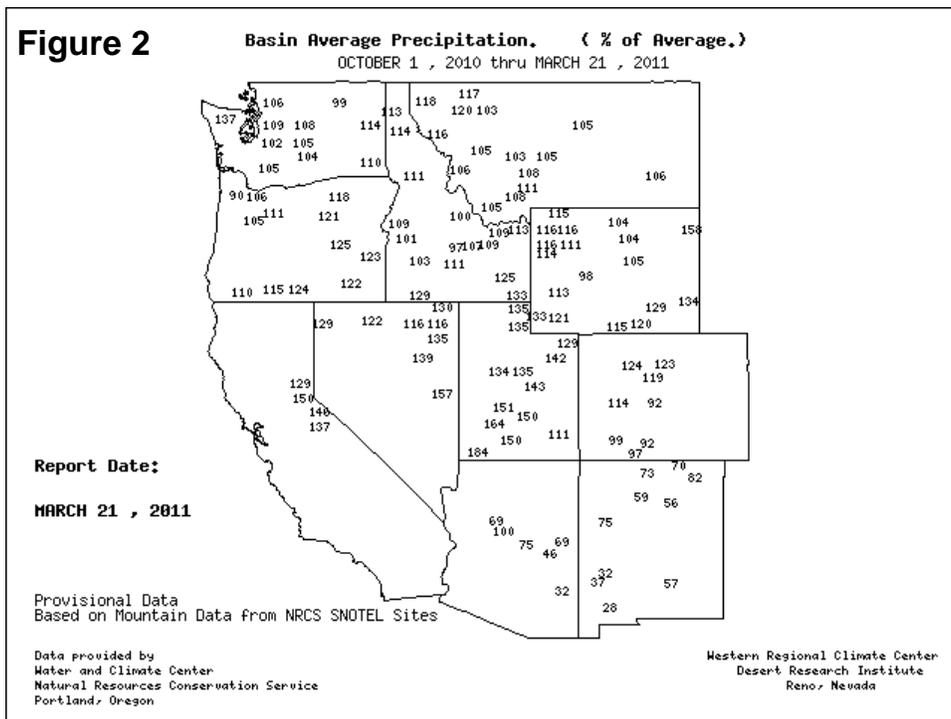
## Snowpack and Precipitation

By March 21, 2011, the snow water content map reflected below-average snow packs in the Southwest (figure 1). Storms have largely bypassed Arizona—except northwestern areas—and New Mexico. Snow packs have rebounded to near- or above-normal levels in the Northwest, except for a few basins in Washington and Idaho. In contrast, above-average snow packs dominated areas from the Sierra Nevada to the northern and central

## SNOTEL – River Basin Snow Water Content



## SNOTEL – River Basin Precipitation



Rockies. Snow packs were at least 150 percent of average in a few basins from California into southern Utah.

Season-to-date precipitation (October 1, 2010 - March 21, 2011) indicated that near- to above-normal values were noted across the northern two-thirds of the West. In contrast, many areas in southern sections of Arizona and New Mexico noted basin-average precipitation values less than 50 percent (figure 2). In some areas, including the Pacific Northwest, season-to-date precipitation totals were deceptively high due periods of warm, wet weather and lower- to middle-elevation snow melt. Season-to-date values exceeded 150 percent of average in numerous river basins from central California into southern Utah.

### Spring and Summer Streamflow Forecasts

On the strength of December's abundant precipitation, along with sustained storminess across northern and central California and the Northwest beginning in mid-February, the outlook for spring and summer streamflows remained favorable in many Western basins. Based on information through March 1, near- to above-average runoff can be expected in most basins across the northern two-thirds of the West (figure 3). In the Northwest, slightly below-average streamflow values should be mostly limited to a few basins in central Washington and central and southern Idaho. Particularly abundant runoff can be anticipated from the Sierra Nevada to the central Rockies. In stark contrast, March 1 forecasts indicated that much of Arizona and New Mexico face the prospect of less than half the average spring and summer streamflows.

### Reservoir Storage

On March 1, reservoir storage as a percent of average for the date was below average in Idaho, Nevada, New Mexico, Oregon, and Utah (figure 4). Above-average storage was noted across the remainder of the West. At publication time, March 1 information for California was not yet available.

### For More Information

The National Water and Climate Center homepage provides the latest available snowpack and water supply information. Please visit:

<http://www.wcc.nrcs.usda.gov>

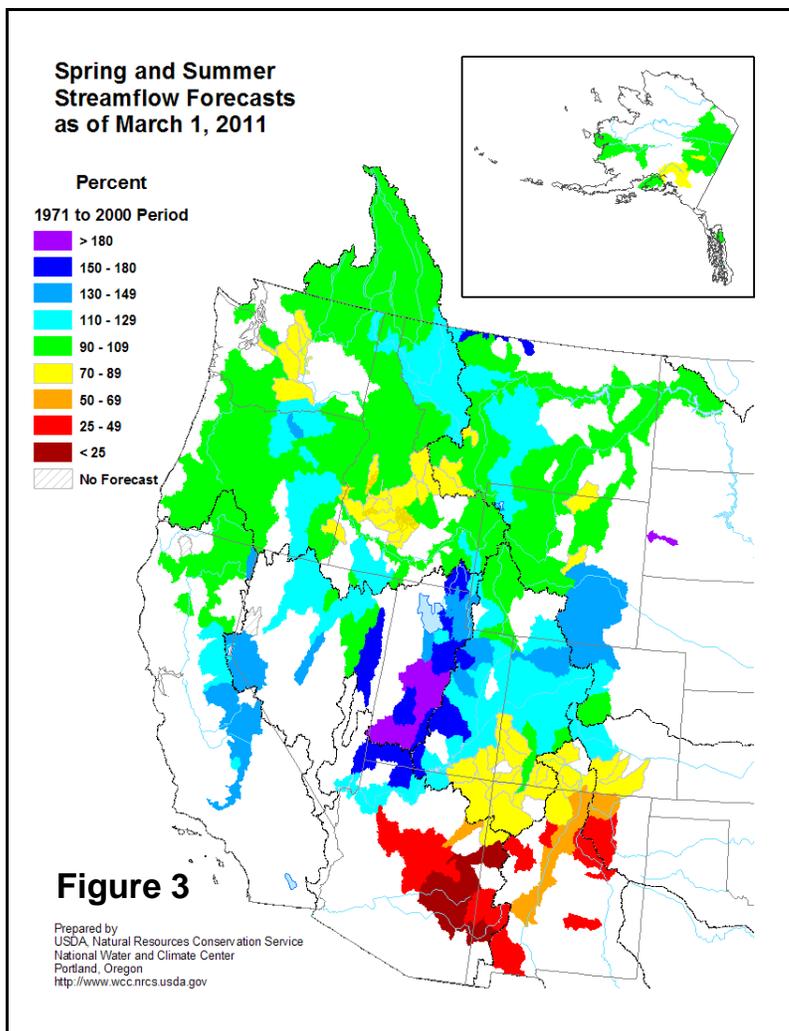


Figure 3

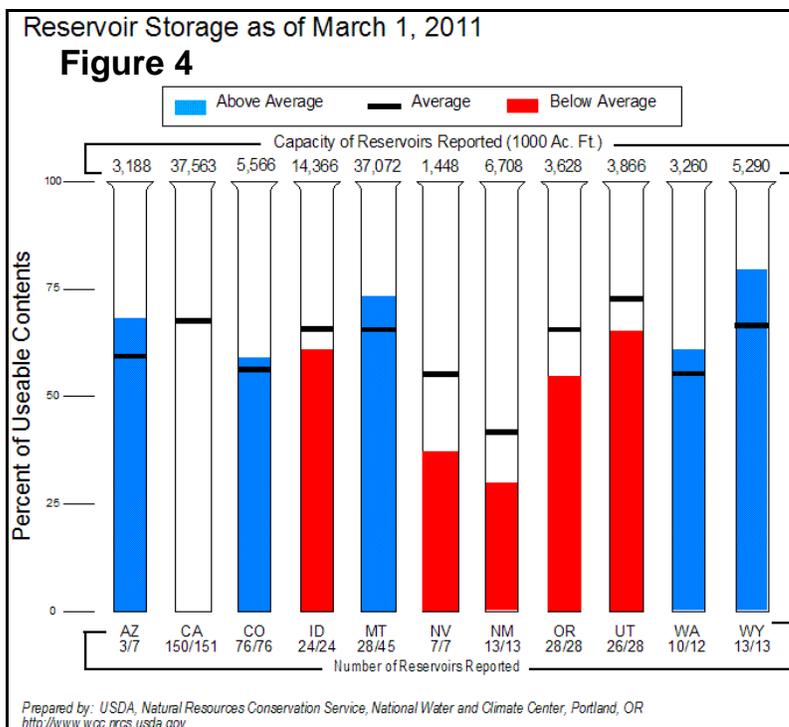


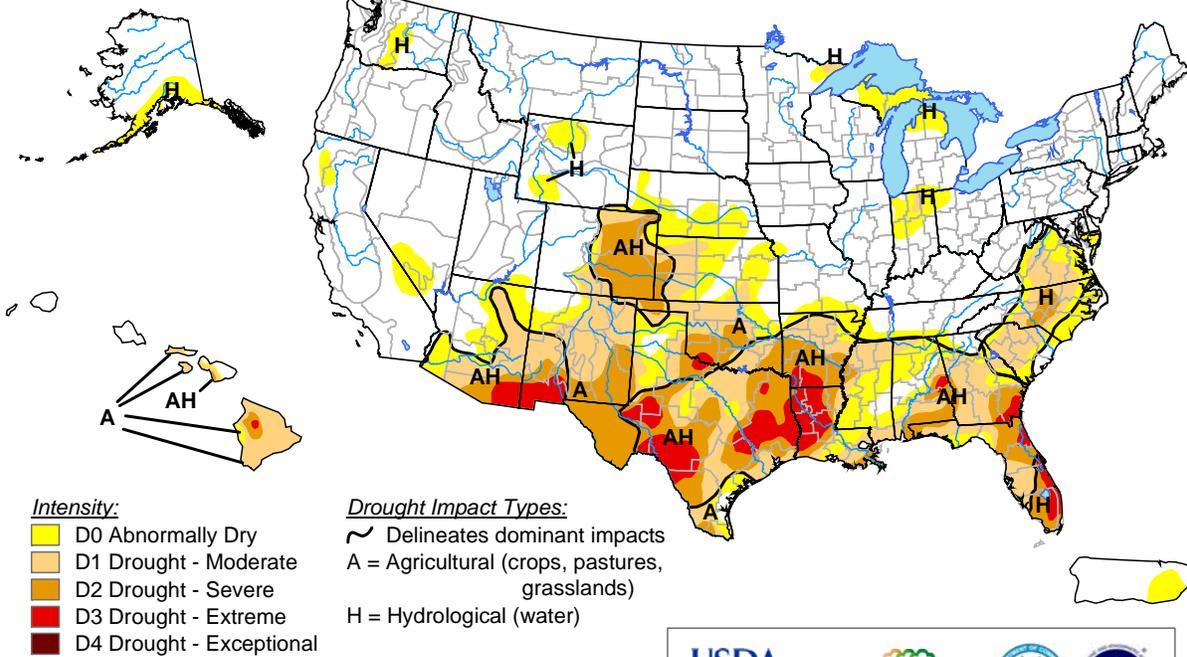
Figure 4

Prepared by: USDA, National Resources Conservation Service, National Water and Climate Center, Portland, OR  
<http://www.wcc.nrcs.usda.gov>

# U.S. Drought Monitor

March 15, 2011

Valid 8 a.m. EDT



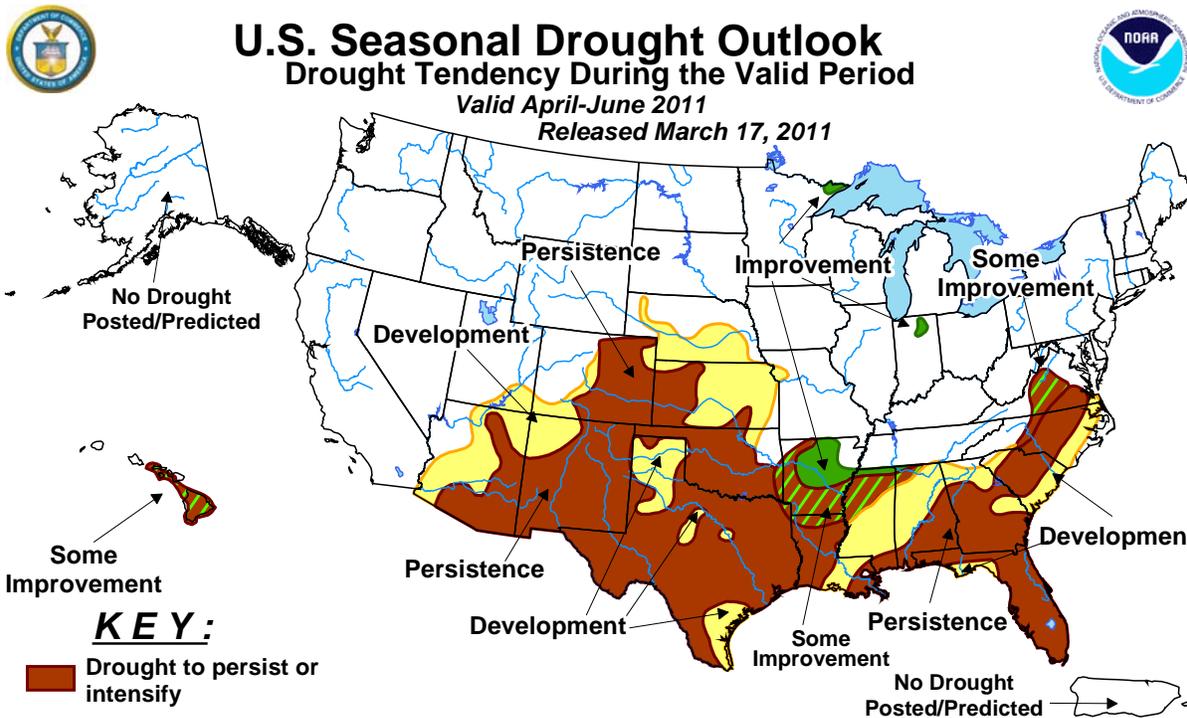
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

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



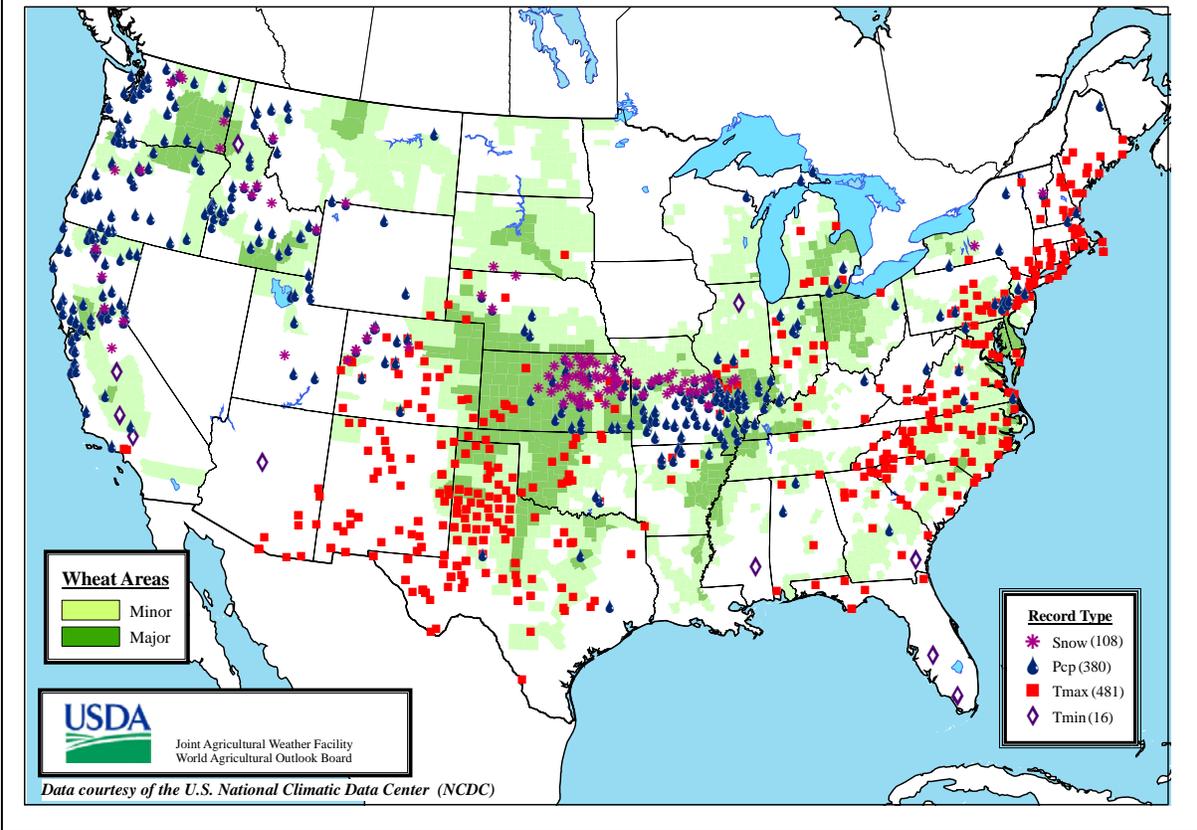
Released Thursday, March 17, 2011

Author: Laura Edwards, Western Regional Climate Center



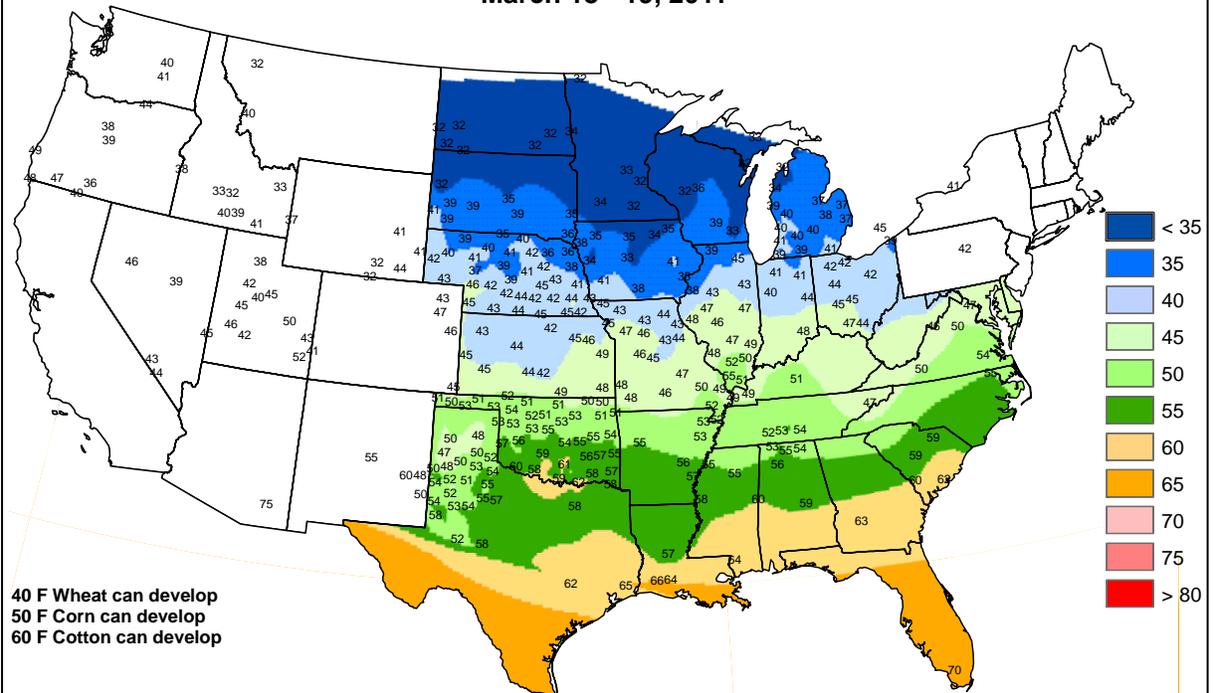
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

### Daily Weather Records (ASOS & COOP) March 13-19, 2011



### Average Soil Temperature (° F, 4" Bare)

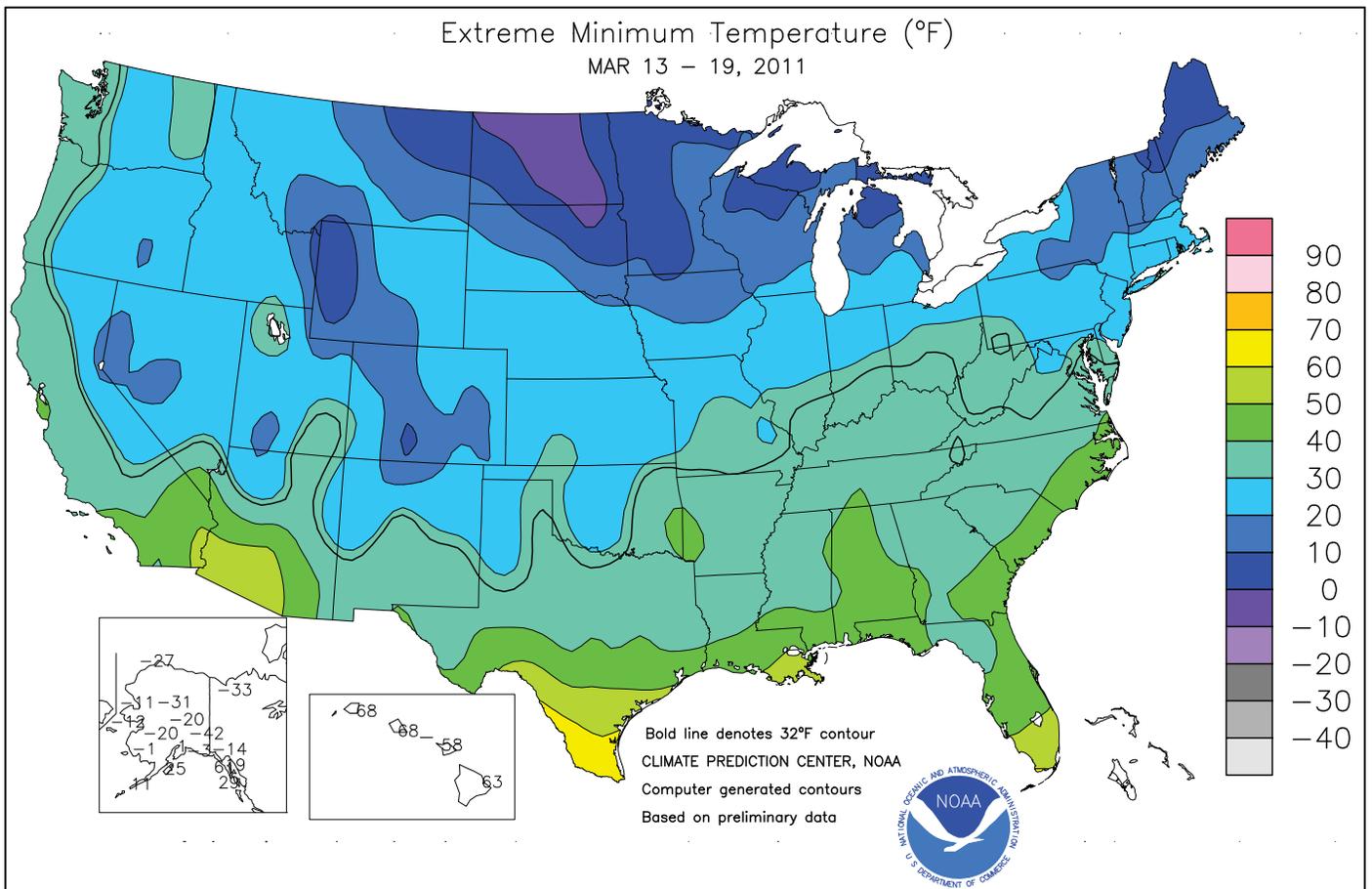
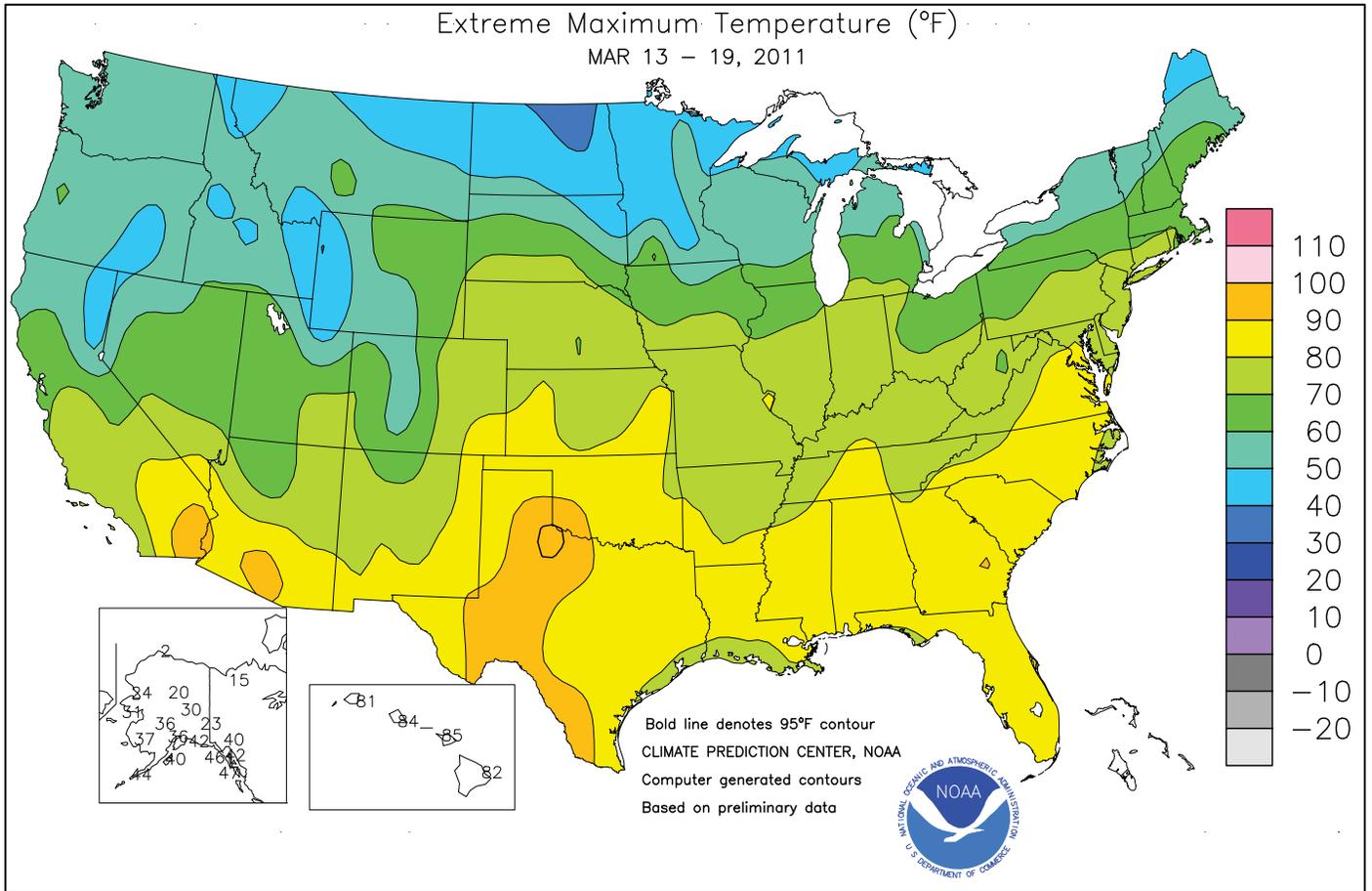
March 13 - 19, 2011



Based on preliminary data

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Supplemental data provided by Alabama A&M University, Bureau of Reclamation - Pacific Northwest Region AgriMet Program, High Plains Regional Climate Center, Illinois State Water Survey, Iowa State University, Louisiana Agrilimatic Information System, Mississippi State University, Oklahoma Mesonet, Purdue University, University of Missouri and USDA/NRCS Soil Climate Analysis Network.

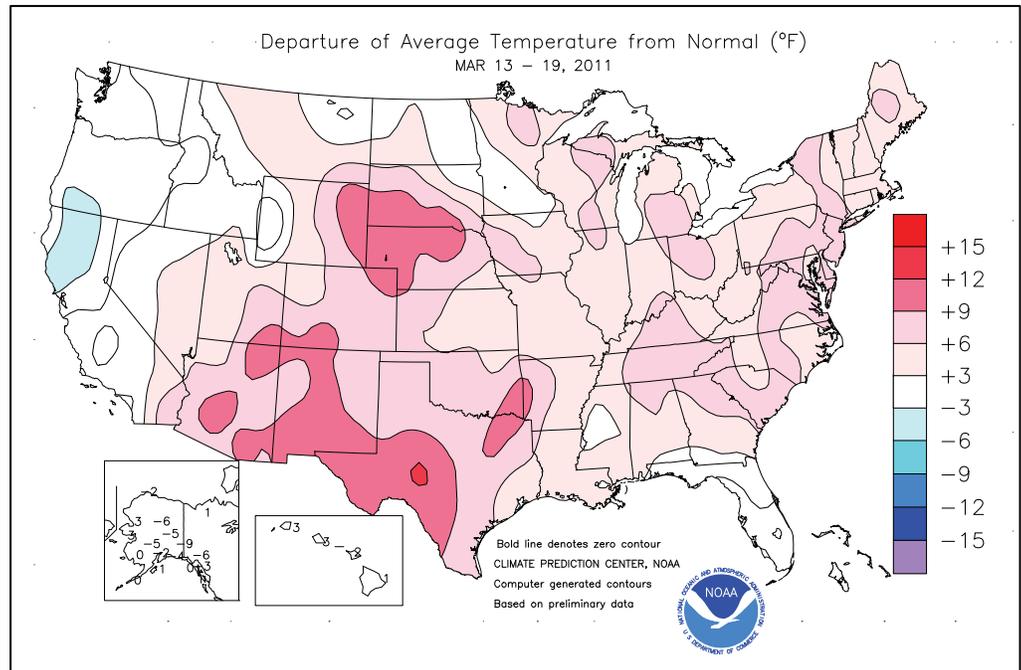


(Continued from front cover)

winter wheat. Late-week showers clipped **eastern Oklahoma** and **central and eastern Kansas**, but missed drought-affected areas farther west. Meanwhile, showers perpetuated soggy conditions across the **southern Corn Belt**, while mild weather initiated snow-melt flooding in the **northwestern Corn Belt**. Late-week showers contributed to the runoff in parts of the **upper Midwest**. Elsewhere, **Southern** warmth promoted fieldwork, development of pastures and winter grains, and emergence of newly planted summer crops. However, long-term drought remained a concern in several areas, including the **western Gulf Coast region** and the **southern Atlantic States**.

Near- to above-normal temperatures prevailed nationwide, except in parts of **northern California** and **southern Oregon**. Weekly temperatures averaged at least 10°F above normal in many locations from the **Southwest into the nation's mid-section**. On March 17, temperatures topped 90°F at several locations in the **south-central U.S.**

Early in the week, mild weather continued to melt snow across the **upper Midwest**. In **Wisconsin**, **La Crosse's** streak with at least an inch of snow on the ground ended at 100 days (December 4 - March 13)—its longest such stretch since 2007-08 (110 days from November 30 - March 18). Farther west, the **White River near Oacoma, SD**, crested 7.23 feet above flood stage on March 16—the highest level in that location since March 15, 2001 (9.44 feet). Meanwhile, some wet snow fell from the **central Plains into the lower Midwest**. Daily-record snowfall totals included 5.0 inches (on March 13) in **Valentine, NE**, and 6.0 inches (on March 14) in **Columbia, MO**. Elsewhere in **Missouri**, a daily-record precipitation total of 1.21 inches (on March 14) included 2.3 inches of snow. Most of the week's other precipitation highlights were confined to the **West**. Weekly rainfall in **Sacramento, CA**, totaled 3.93 inches, including a daily-record amount of 1.17 inches on March 13. Similarly, **Mt. Shasta City, CA**, netted a weekly sum of 5.91 inches, aided by a daily-record total of 1.45 inches on March 19. High winds accompanied the late-week storm, which produced March 19 gusts to 61 mph in **Red Bluff** and 60 mph in **Redding**. On the same day, a southerly wind gust to 99 mph was reported at **Vandenberg Air Force Base, near Lompoc, CA**. More details on the record-setting storm, which hammered **southern California** on March 20 with torrential rainfall, will appear next week.



Record-setting warmth arrived across the **Southwest** early in the week and quickly expanded eastward. **Douglas, AZ** (85°F), posted a daily-record high for March 15. The following day, record highs for March 16 soared to 85°F in **Roswell, NM**; 83°F in **Garden City, KS**; and 75°F in **Chadron, NE**. In **northern Texas**, **Dalhart** (85 and 86°) notched consecutive daily-record highs on March 16-17. **Midland, TX** (88, 91, and 90°F), tallied a trio of records from March 16-18. Toward week's end, warmth spread into the **East**. Among dozens of daily-record highs on March 18 were readings of 85°F in **Charlotte, NC**; 84°F in **Richmond, VA**; and 80°F in **Newark, NJ**. **Atlanta, GA** (82°F on March 18), recorded its first 80-degree reading since October 26, 2010. Cooler air arrived in the **Northeast** by March 19, but record warmth persisted farther south, where highs reached 90°F in **Georgia** locations such as **Alma** and **Augusta**.

Mostly dry weather prevailed in **Alaska**, except across the **state's southern tier**. From February 20 - March 15, **Valdez** experienced 24 consecutive days without any precipitation. The previous record, 20 days, was established from April 29 - May 18, 1996. Meanwhile, very cold conditions persisted across much of **interior Alaska**. **Fairbanks** reported four consecutive lows of -20°F from March 11-14. At week's end, a powerful storm struck the **Aleutian Islands**. On March 19, wind gusts were clocked to 115 mph in **Dutch Harbor** and 99 mph in **Unalaska**. Farther south, warm, mostly dry weather dominated **Hawaii**. Shower activity increased in windward areas toward week's end, when 24-hour **Big Island** totals on March 19-20 reached 1.97 inches at **Glenwood** and 1.80 inches at **Waiakea Uka**.

**Agricultural Weather Data Compiled by USDA's Stoneville Field Office**

Weather Data for the Week Ending March 19, 2011

Data Provided by the Mississippi State Delta Research and Extension Center (DREC) and the University of Missouri Commercial Agriculture Program.

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						4-INCH SOIL TEMP. °F		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE MAR01	PCT. NORMAL SINCE MAR01	TOTAL IN, SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	MISSISSIPPI																		
ND TUNICA 1W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LYON	69	47	80	34	58	-	0.17	0.17	1.30	-	4.99	-	59	53	0	0	1	0	
VANCE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PERTSHIRE	68	46	79	34	57	-	0.28	0.25	1.64	-	7.35	-	65	50	0	0	2	0	
SCOTT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SANDY RIDGE	69	47	81	33	58	-	0.34	0.33	2.13	-	7.05	-	65	-	0	0	2	0	
NE VERONA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SD STONEVILLE x	69	48	80	35	59	4	0.17	-1.09	0.17	2.36	70	7.33	55	70	53	0	0	1	0
INDIANOLA 1S*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
INVERNESS 5E	70	49	81	35	60	-	0.39	-	0.39	2.25	-	6.74	-	64	54	0	0	1	0
SIDON	72	50	83	37	61	-	0.29	-	0.29	2.01	-	6.06	-	-	-	0	0	1	0
NORTH ISSAQUENA	70	50	80	38	60	-	0.59	-	0.59	1.72	-	7.86	-	65	56	0	0	1	1
SILVER CITY	71	50	83	37	60	-	0.39	-	0.39	3.72	-	9.54	-	62	56	0	0	1	0
ONWARD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MAYDAY	73	50	82	38	62	-	0.44	-	0.44	3.82	-	10.41	-	61	-	0	0	1	0
MISSOURI																			
NW CORNING	60	33	77	23	47	5	0.00	-0.56	0.00	0.27	20	0.79	26	-	-	0	3	0	0
ALBANY	59	30	77	21	45	3	0.02	-0.60	0.02	0.52	38	1.09	32	46	40	0	5	1	0
ST. JOSEPH	57	35	75	26	46	3	0.38	-0.16	0.19	1.00	76	1.89	60	-	-	0	3	2	0
NC LINNEUS	56	35	74	28	46	4	0.22	-0.37	0.22	1.21	82	2.57	68	47	39	0	4	1	0
BRUNSWICK	56	37	75	31	47	4	0.33	-0.27	0.26	1.48	101	3.91	89	49	43	0	2	2	0
NE NOVELTY	56	35	72	27	45	3	0.00	-0.61	0.00	0.94	60	2.43	55	49	39	0	3	0	0
MONROE CITY	55	36	72	28	45	2	0.09	-0.62	0.08	0.89	56	2.95	60	47	40	0	2	2	0
WC GREEN RIDGE	56	38	74	30	47	2	0.86	0.16	0.39	1.77	107	4.28	84	51	42	0	3	3	0
C AUXVASSE	55	37	74	30	46	2	0.88	0.12	0.35	2.38	144	4.81	88	47	40	0	2	5	0
COL-SANBORN FLD	55	39	73	32	47	1	1.45	0.67	0.80	3.02	175	5.87	99	50	41	0	2	5	1
WILLIAMSBURG	55	37	77	31	46	2	1.13	0.39	0.55	2.53	149	4.91	80	49	41	0	2	4	1
COL-JEFFERS F&G	54	38	73	31	46	1	1.13	0.35	0.42	2.53	147	4.40	75	47	41	0	2	5	0
COL SOUTH FARMS	54	38	74	31	46	1	1.55	0.77	0.72	3.27	189	5.78	98	-	-	0	2	5	1
COL-BF	54	36	72	31	45	0	1.13	0.35	0.56	2.68	155	5.17	88	47	39	0	3	5	1
VERSAILLES	57	39	74	31	48	1	1.63	0.85	0.59	2.63	149	5.96	105	49	41	0	2	4	1
EC VANDALIA	55	36	73	29	45	2	0.40	-0.40	0.23	2.30	127	4.43	77	49	39	0	2	4	0
SW LAMAR	58	42	74	32	49	2	1.86	0.94	1.14	2.86	134	6.11	97	53	45	0	2	3	1
SC COOK STATION	60	36	79	26	48	1	1.96	0.93	1.30	3.79	172	8.75	126	51	44	0	2	4	1
MOUNTAIN GROVE	60	39	74	31	48	2	0.96	-0.15	0.72	2.79	114	5.38	70	53	41	0	3	4	1
SE DELTA	59	41	71	31	50	1	1.06	-0.22	0.97	3.48	133	8.51	94	54	45	0	1	3	1
CHARLESTON	59	42	72	35	51	2	1.76	0.88	1.22	4.42	192	10.66	117	54	45	0	0	3	2
GLENNONVILLE	60	44	76	34	52	2	1.01	0.10	0.91	3.28	141	8.88	104	56	49	0	0	3	1
CLARKTON	60	42	76	33	51	2	0.96	0.07	0.81	3.26	138	8.56	99	56	46	0	0	3	1
PORTAGEVILLE DC	61	45	75	37	53	3	0.90	-0.08	0.67	3.47	137	9.84	101	59	47	0	0	3	1
PORTAGEVILLE LF	60	45	74	38	53	3	0.98	0.03	0.77	3.57	144	9.65	102	56	47	0	0	2	1
STEELE	61	45	74	36	53	3	0.86	-0.09	0.65	3.48	129	10.02	101	58	48	0	0	2	1
CARDWELL	61	44	74	34	52	1	0.56	-0.37	0.47	3.90	151	9.96	104	58	48	0	0	2	0

Compiled by USDA/OCE/WAOB's Stoneville Field Office. \* Beasley Lake. X Based on 1971-2000 normals. - Sufficient data not available.

Data are preliminary and subject to revision.

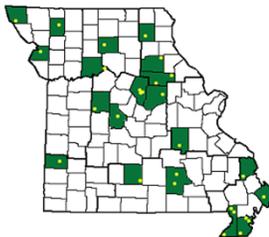
Mississippi: ND = Northern Delta; NE = Northeastern Mississippi; EC = East Central Mississippi; SD = Southern Delta.

Missouri: NW = Northwest; NC = North Central; NE = Northeast; WC = West Central; C = Central; EC = East Central; SW = Southwest; SE = Southeast;

SC = South Central. (Col=Columbia, Col-Jeffers F&G=Columbia Jefferson Farm and Gardens, Col-BF=Bradford Farm)

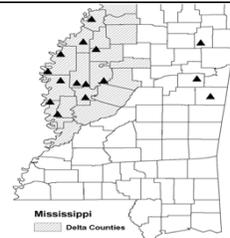
**Weather and Crop Summary for the Mississippi Delta:** Mostly warm, dry conditions prevailed around a rain event that produced less than one-half inch of rain in most locations. Fieldwork activities accelerated during periods of dry weather. A primary concern was high water levels along the Mississippi River and within the levee zones.

Missouri Weather Stations



Note: For information on the weather stations in Missouri, please visit: <http://agebb.missouri.edu/weather/stations/index.htm>

Mississippi Weather Stations



Note: For information on the weather stations in Mississippi, please visit: [http://www.deltaweather.msstate.edu/maps/weather\\_station\\_map.htm](http://www.deltaweather.msstate.edu/maps/weather_station_map.htm)

National Weather Data for Selected Cities

Weather Data for the Week Ending March 19, 2011

Data Provided by Climate Prediction Center (301-763-8000, Ext. 7503)

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN, SINCE MAR 1	PCT. NORMAL SINCE MAR 1	TOTAL, IN, SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F			
																90 AND ABOVE	82 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	74	49	84	43	61	7	1.06	-0.36	0.85	7.00	193	13.96	105	93	39	0	0	2	1
HUNTSVILLE	70	48	80	42	59	7	0.80	-0.77	0.70	6.14	148	14.10	96	86	59	0	0	2	1
MOBILE	79	50	86	45	65	5	0.04	-1.66	0.02	4.15	94	10.47	69	93	53	0	0	2	0
AK MONTGOMERY	77	47	86	42	62	4	1.68	0.19	1.27	5.67	139	12.49	89	94	41	0	0	2	1
ANCHORAGE	32	15	36	1	24	-1	0.25	0.11	0.17	0.25	61	1.57	86	71	56	0	7	2	0
BARROW	-8	-24	2	-27	-16	-1	0.01	0.01	0.01	0.11	1100	0.93	388	87	73	0	7	1	0
FAIRBANKS	23	-15	30	-20	4	-6	0.00	-0.06	0.00	0.00	0	1.83	171	77	60	0	7	0	0
JUNEAU	37	24	42	19	30	-3	0.50	-0.30	0.20	0.51	22	11.42	102	96	87	0	7	5	0
KODIAK	37	29	40	25	33	1	0.52	-0.64	0.18	2.04	64	12.97	76	78	67	0	5	4	0
NOME	21	2	31	-12	11	2	0.01	-0.10	0.01	0.09	27	2.56	128	75	60	0	7	1	0
AZ FLAGSTAFF	59	31	64	25	45	9	0.00	-0.61	0.00	0.13	7	3.44	53	74	21	0	5	0	0
PHOENIX	86	59	91	57	73	11	0.00	-0.25	0.00	0.00	0	0.70	30	37	17	2	0	0	0
PRESCOTT	69	39	73	34	54	11	0.00	-0.45	0.00	0.01	1	2.22	47	62	15	0	0	0	0
TUCSON	85	52	90	49	69	10	0.00	-0.19	0.00	0.00	0	0.25	10	30	14	1	0	0	0
AR FORT SMITH	73	51	84	43	62	10	0.52	-0.38	0.51	0.58	25	4.27	58	79	46	0	0	2	1
LITTLE ROCK	67	48	79	38	58	5	0.84	-0.23	0.84	3.41	125	8.39	87	89	58	0	0	1	1
CA BAKERSFIELD	69	44	76	37	57	0	0.11	-0.22	0.10	0.18	20	1.07	33	76	53	0	0	2	0
FRESNO	67	46	76	40	57	2	0.27	-0.25	0.23	0.38	26	3.70	65	86	57	0	0	3	0
LOS ANGELES	64	52	69	49	58	0	0.12	-0.45	0.12	0.33	19	2.61	33	84	65	0	0	1	0
REDDING	55	43	60	36	49	-3	2.59	1.38	0.72	3.81	112	9.61	62	93	71	0	0	6	4
SACRAMENTO	60	47	66	36	54	0	3.81	3.15	1.74	4.76	247	9.83	106	96	62	0	0	6	3
SAN DIEGO	68	55	71	53	62	2	0.00	-0.53	0.00	0.24	17	2.63	46	80	66	0	0	0	0
SAN FRANCISCO	59	49	64	42	54	0	2.25	1.49	0.95	2.91	130	8.64	81	85	76	0	0	6	2
STOCKTON	64	46	71	39	55	1	0.77	0.24	0.32	1.13	75	4.28	64	95	70	0	0	6	0
CO ALAMOSA	62	24	68	12	43	11	0.98	0.90	0.98	1.00	476	1.45	216	60	24	0	5	1	1
CO SPRINGS	63	30	75	22	46	9	0.00	-0.22	0.00	0.29	58	0.54	48	68	19	0	5	0	0
DENVER INTL	65	30	74	23	48	10	0.12	-0.10	0.10	0.19	35	1.22	122	68	20	0	4	2	0
GRAND JUNCTION	64	36	74	32	50	7	0.30	0.08	0.21	0.44	80	0.88	53	64	37	0	1	3	0
PUEBLO	66	28	78	20	47	6	0.00	-0.20	0.00	0.62	135	1.49	142	68	37	0	5	0	0
CT BRIDGEPORT	54	35	76	31	44	5	0.58	-0.35	0.58	2.86	121	11.97	133	75	54	0	2	1	1
HARTFORD	52	32	71	23	42	5	0.53	-0.34	0.48	5.27	236	14.48	160	77	55	0	6	2	0
DC WASHINGTON	62	41	80	35	51	5	0.64	-0.21	0.52	3.54	159	7.90	98	75	42	0	0	2	1
DE WILMINGTON	60	37	76	29	48	6	0.60	-0.31	0.51	1.80	76	7.92	92	86	39	0	2	2	1
FL DAYTONA BEACH	80	51	85	43	65	0	0.00	-0.88	0.00	0.99	44	6.56	81	96	37	0	0	0	0
JACKSONVILLE	82	46	89	39	64	3	0.00	-0.89	0.00	0.59	26	10.40	114	95	29	0	0	0	0
KEY WEST	79	67	81	65	73	-1	0.00	-0.40	0.00	0.27	27	2.91	61	79	51	0	0	0	0
MIAMI	80	63	83	60	71	-1	0.00	-0.52	0.00	0.89	66	3.67	69	76	42	0	0	0	0
ORLANDO	83	54	88	48	68	1	0.00	-0.81	0.00	1.24	60	7.41	108	90	48	0	0	0	0
PENSACOLA	76	52	82	47	64	3	0.00	-1.51	0.00	3.30	84	10.41	75	94	54	0	0	0	0
TALLAHASSEE	81	41	89	35	61	0	0.00	-1.54	0.00	1.76	44	8.79	63	94	42	0	0	0	0
TAMPA	78	57	83	48	68	1	0.00	-0.65	0.00	2.23	123	9.15	135	83	45	0	0	0	0
WEST PALM BEACH	80	60	83	55	70	0	0.00	-0.82	0.00	0.47	24	3.12	38	80	44	0	0	0	0
GA ATHENS	74	47	85	38	61	8	1.12	-0.04	0.86	3.58	113	11.61	95	84	45	0	0	2	1
ATLANTA	72	48	82	41	60	6	2.44	1.18	1.32	5.37	157	12.25	93	82	53	0	0	2	2
AUGUSTA	81	45	90	38	63	7	0.52	-0.54	0.30	1.59	55	8.00	70	91	51	1	0	2	0
COLUMBUS	77	48	87	42	63	6	0.97	-0.38	0.69	4.05	113	11.86	92	90	34	0	0	2	1
MACON	78	44	88	36	61	5	0.29	-0.84	0.29	1.98	64	9.46	75	95	38	0	0	1	0
SAVANNAH	81	47	89	42	64	5	0.00	-0.80	0.00	1.49	73	7.23	81	86	39	0	0	0	0
HI HILO	81	65	82	63	73	1	1.48	-1.77	1.16	5.12	64	12.95	49	84	68	0	0	4	1
HONOLULU	83	71	84	68	77	3	0.03	-0.40	0.02	1.05	81	5.77	91	74	66	0	0	2	0
KAHULUI	83	66	85	58	74	1	0.00	-0.52	0.00	0.65	47	7.82	105	76	66	0	0	0	0
LIHUE	80	70	81	68	75	2	0.10	-0.71	0.04	6.39	292	17.06	170	80	75	0	0	5	0
ID BOISE	53	38	58	32	45	2	0.62	0.32	0.28	1.27	157	3.12	93	77	52	0	1	6	0
LEWISTON	54	36	60	32	45	1	0.34	0.10	0.19	0.78	128	3.84	142	80	60	0	1	6	0
POCATELLO	49	31	53	28	40	3	0.65	0.35	0.40	1.73	214	3.68	124	80	59	0	5	4	0
IL CHICAGO/O'HARE	50	32	67	24	41	4	0.00	-0.54	0.00	1.67	127	6.11	130	86	54	0	5	0	0
MOLINE	54	31	68	22	43	5	0.00	-0.62	0.00	1.17	79	4.37	95	85	54	0	5	0	0
PEORIA	54	34	70	25	44	5	0.03	-0.59	0.02	1.05	67	5.24	111	86	51	0	4	2	0
ROCKFORD	55	30	67	24	43	8	0.01	-0.48	0.01	1.22	106	4.00	103	79	53	0	5	1	0
SPRINGFIELD	54	36	76	29	45	4	0.16	-0.54	0.06	1.56	88	5.32	102	86	55	0	2	3	0
IN EVANSVILLE	59	41	76	35	50	5	1.54	0.58	1.38	5.14	205	11.31	133	81	61	0	0	3	1
FORT WAYNE	53	32	70	27	43	6	0.40	-0.21	0.38	2.36	153	7.37	133	87	52	0	4	2	0
INDIANAPOLIS	56	37	74	31	46	5	0.71	-0.06	0.52	3.57	179	11.02	160	82	50	0	1	3	1
SOUTH BEND	53	29	72	20	41	4	0.03	-0.58	0.03	1.59	105	7.26	126	87	57	0	5	1	0
IA BURLINGTON	55	33	68	23	44	5	0.00	-0.65	0.00	1.12	70	2.85	64	89	49	0	4	0	0
CEDAR RAPIDS	52	27	68	19	39	3	0.03	-0.43	0.03	0.96	88	2.89	89	93	49	0	6	1	0
DES MOINES	58	31	74	23	44	6	0.00	-0.45	0.00	0.76	71	2.63	80	85	52	0	5	0	0
DUBUQUE	51	27	63	19	39	5	0.01	-0.54	0.01	0.82	62	4.10	102	90	59	0	6	1	0
SIOUX CITY	55	28	68	21	42	6	0.00	-0.43	0.00	0.25	26	2.81	128	91	61	0	6	0	0
WATERLOO	51	24	66	17	38	4	0.01	-0.43	0.01	0.46	44	3.29	112	93	71	0	6	1	0
KS CONCORDIA	57	35	72	26	46	4	0.34	-0.20	0.33	0.70	54	2.10	78	88	61	0	3	2	0
DODGE CITY	61	36	79	31	49	5	0.31	-0.09	0.31	0.69	73	1.29	58	87	40	0	3	1	0
GOODLAND	62	31	77	22	46	7	0.00	-0.28	0.00	0.42	62	1.23	79	73	41	0	4	0	0
TOPEKA	60	36	81	25	48	4	0.87	0.30	0.43	1.27	92	4.38	125	83	53	0	3	3	0

Based on 1971-2000 normals

\*\*\* Not Available

Weather Data for the Week Ending March 19, 2011

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS					
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN., SINCE MAR 1	PCT. NORMAL SINCE MAR 1	TOTAL IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
KY	WICHITA	62	40	80	26	51	6	0.14	-0.48	0.11	0.79	52	2.52	75	85	50	0	1	2	0
	JACKSON	62	41	80	36	52	6	0.97	-0.04	0.50	4.75	172	11.44	114	87	44	0	0	3	1
	LEXINGTON	59	40	77	35	50	5	1.03	0.01	0.59	4.42	162	12.68	136	83	60	0	0	3	1
	LOUISVILLE	62	43	79	39	53	7	1.14	0.12	0.81	5.01	186	12.18	132	82	51	0	0	3	1
	PADUCAH	60	43	77	36	52	5	1.40	0.46	0.98	6.64	259	13.57	136	85	49	0	0	3	1
LA	BATON ROUGE	78	53	82	44	65	5	0.13	-0.98	0.13	5.31	178	12.49	87	98	41	0	0	1	0
	LAKE CHARLES	76	55	79	44	65	4	0.00	-0.80	0.00	3.91	190	10.57	97	95	53	0	0	0	0
	NEW ORLEANS	78	57	81	54	67	5	0.00	-1.14	0.00	6.68	215	12.42	86	86	58	0	0	0	0
	SHREVEPORT	76	52	84	37	64	6	0.02	-0.90	0.02	0.87	34	8.06	71	87	45	0	0	1	0
ME	CARIBOU	39	17	47	2	28	4	0.33	-0.24	0.30	6.08	411	10.32	159	86	52	0	7	2	0
	PORTLAND	47	29	68	18	38	5	0.53	-0.39	0.41	4.11	176	10.62	111	89	50	0	5	2	0
MD	BALTIMORE	62	38	81	31	50	7	0.60	-0.31	0.39	4.29	177	9.64	108	76	40	0	1	2	0
MA	BOSTON	51	35	70	29	43	5	0.54	-0.31	0.54	1.56	70	10.70	113	79	47	0	2	1	1
	WORCESTER	47	32	64	26	40	6	0.52	-0.43	0.52	4.47	183	13.87	144	87	50	0	4	1	1
MI	ALPENA	44	17	61	1	31	4	0.00	-0.47	0.00	1.25	107	3.44	80	91	56	0	6	0	0
	GRAND RAPIDS	51	31	68	21	41	7	0.02	-0.52	0.01	2.00	156	6.27	130	84	52	0	4	2	0
	HOUGHTON LAKE	46	21	60	8	33	4	0.01	-0.43	0.01	0.98	92	4.02	102	85	53	0	6	1	0
	LANSING	51	31	69	24	41	8	0.06	-0.42	0.04	1.27	112	4.50	107	88	58	0	4	3	0
	MUSKEGON	49	31	61	21	40	7	0.02	-0.48	0.02	1.45	119	7.38	147	83	54	0	5	1	0
	TRAVERSE CITY	46	25	59	14	36	6	0.02	-0.38	0.02	0.77	80	4.07	71	87	48	0	6	1	0
MN	DULUTH	38	24	46	16	31	6	0.08	-0.28	0.05	0.41	51	1.83	66	86	66	0	6	2	0
	INT'L FALLS	41	18	51	6	30	7	0.05	-0.14	0.04	0.17	38	1.75	91	87	54	0	6	2	0
	MINNEAPOLIS	44	25	53	14	35	4	0.07	-0.33	0.04	0.38	43	2.50	92	85	57	0	6	2	0
	ROCHESTER	42	24	50	12	33	3	0.12	-0.26	0.06	0.41	49	2.02	80	90	74	0	6	3	0
	ST. CLOUD	40	21	50	9	30	3	0.18	-0.12	0.10	0.46	72	2.31	116	96	61	0	6	2	0
MS	JACKSON	74	48	82	38	61	5	0.74	-0.53	0.74	5.48	168	11.86	88	93	45	0	0	1	1
	MERIDIAN	74	44	83	35	59	2	1.21	-0.38	1.21	7.99	191	14.73	95	97	65	0	0	1	1
	TUPELO	70	47	80	38	58	5	0.28	-1.18	0.28	4.41	113	9.55	70	87	63	0	0	1	0
MO	COLUMBIA	55	38	73	31	46	3	1.98	1.28	1.11	3.82	212	7.78	136	88	59	0	2	5	1
	KANSAS CITY	58	37	79	26	47	4	0.65	0.11	0.49	1.59	115	5.10	133	86	48	0	3	3	0
	SAINT LOUIS	58	40	83	34	49	4	1.82	1.01	1.23	4.02	195	8.72	135	81	59	0	0	4	1
	SPRINGFIELD	59	41	75	31	50	4	1.91	1.08	1.02	3.18	154	6.87	107	90	62	0	3	3	2
MT	BILLINGS	55	31	60	27	43	7	0.09	-0.14	0.08	0.21	38	1.17	61	72	28	0	3	2	0
	BUTTE	42	23	47	17	33	3	0.20	0.03	0.09	0.26	59	0.96	67	85	37	0	7	3	0
	CUT BANK	45	28	51	20	36	6	0.00	-0.11	0.00	0.00	0	0.10	11	79	41	0	5	0	0
	GLASGOW	37	21	45	7	29	-1	0.04	-0.04	0.04	0.67	305	3.11	375	92	78	0	6	1	0
	GREAT FALLS	50	29	57	21	39	6	0.15	-0.07	0.10	0.18	35	2.41	141	77	34	0	5	2	0
	HAVRE	45	26	49	11	36	4	0.00	-0.15	0.00	1.20	324	2.66	222	85	66	0	7	0	0
	MISSOULA	47	29	54	25	38	1	0.04	-0.17	0.03	0.39	72	4.05	171	86	61	0	6	2	0
NE	GRAND ISLAND	57	33	73	23	45	8	0.05	-0.40	0.05	0.27	26	2.04	90	84	55	0	2	1	0
	LINCOLN	59	29	73	23	44	6	0.01	-0.48	0.01	0.34	30	2.20	89	85	57	0	5	1	0
	NORFOLK	57	31	73	23	44	8	0.00	-0.43	0.00	0.38	38	2.52	108	80	53	0	3	0	0
	NORTH PLATTE	59	30	73	27	44	7	0.17	-0.09	0.11	0.51	80	2.23	145	90	40	0	6	2	0
	OMAHA	59	31	73	25	45	6	0.00	-0.47	0.00	0.15	14	1.87	70	87	57	0	4	0	0
	SCOTTSBLUFF	63	31	74	24	47	10	0.12	-0.12	0.12	0.76	131	1.56	92	69	45	0	4	1	0
	VALENTINE	58	32	77	27	45	11	0.36	0.13	0.33	0.83	148	2.44	182	82	53	0	4	2	0
NV	ELY	53	29	59	25	41	5	0.00	-0.24	0.00	0.52	83	1.92	91	65	35	0	6	0	0
	LAS VEGAS	74	54	82	44	64	6	0.00	-0.13	0.00	0.00	0	0.08	5	31	20	0	0	0	0
	RENO	53	34	61	25	44	1	0.40	0.20	0.23	0.67	114	2.12	78	68	42	0	3	5	0
	WINNEMUCCA	52	32	59	23	42	1	0.32	0.13	0.19	1.29	274	2.92	152	79	49	0	4	3	0
NH	CONCORD	48	27	67	19	37	5	0.69	0.02	0.68	3.80	218	10.89	154	91	47	0	7	2	1
NJ	NEWARK	60	40	80	31	50	8	0.58	-0.38	0.58	4.38	179	12.27	131	62	45	0	1	1	1
NM	ALBUQUERQUE	72	44	78	38	58	11	0.00	-0.14	0.00	0.00	0	0.11	9	33	11	0	0	0	0
NY	ALBANY	50	32	62	21	41	7	0.24	-0.44	0.13	3.92	228	10.15	159	83	47	0	4	4	0
	BINGHAMTON	45	29	59	22	37	5	0.27	-0.37	0.23	2.78	165	9.41	140	86	61	0	5	3	0
	BUFFALO	46	29	61	24	37	3	0.07	-0.58	0.06	3.44	204	8.46	116	89	63	0	6	2	0
	ROCHESTER	48	30	65	22	39	6	0.10	-0.46	0.07	1.60	111	6.00	103	84	60	0	4	3	0
	SYRACUSE	48	29	61	22	39	6	0.17	-0.49	0.10	2.02	122	6.10	96	87	52	0	5	3	0
NC	ASHEVILLE	65	40	82	30	53	7	0.80	-0.25	0.75	5.42	193	10.50	98	90	51	0	1	2	1
	CHARLOTTE	70	44	85	33	57	5	0.07	-0.95	0.07	2.06	75	6.87	67	77	37	0	0	1	0
	GREENSBORO	67	45	84	38	56	7	0.22	-0.66	0.20	2.25	96	5.72	64	74	34	0	0	2	0
	HATTERAS	65	49	68	45	57	5	0.60	-0.55	0.38	2.86	96	11.98	94	85	55	0	0	2	0
	RALEIGH	69	44	85	37	57	7	0.17	-0.78	0.12	1.54	60	5.18	51	79	39	0	0	2	0
	WILMINGTON	73	48	84	42	61	7	0.14	-0.85	0.07	1.27	48	8.42	78	91	40	0	0	2	0
ND	BISMARCK	43	24	49	-4	33	4	0.01	-0.16	0.01	0.56	137	2.26	165	90	69	0	7	1	0
	DICKINSON	40	24	45	10	32	2	0.01	-0.10	0.01	0.04	19	1.84	182	92	69	0	6	1	0
	FARGO	35	20	42	4	28	2	0.10	-0.15	0.05	0.68	115	1.66	86	87	69	0	7	3	0
	GRAND FORKS	34	17	44	3	26	1	0.04	-0.15	0.04	0.57	127	1.46	85	97	75	0	7	1	0
	JAMESTOWN	36	20	42	0	28	1	0.00	-0.18	0.00	0.47	109	1.23	78	91	74	0	7	0	0
	WILLISTON	40	19	43	-1	29	1	0.01	-0.14	0.01	0.32	86	2.17	167	88	74	0	7	1	0
OH	AKRON-CANTON	50	34	67	29	42	5	0.38	-0.32	0.29	3.95	216	10.02	152	85	62	0	3	2	0
	CINCINNATI	57	39	72	33	48	5	0.74	-0.13	0.50	4.11	183	11.48	145	82	58	0	0	3	1
	CLEVELAND	49	35	66	29	42	5	0.27	-0.36	0.25	2.88	176	10.02	156	84	57	0	3	2	0
	COLUMBUS	56	37	71	29	46	5	0.13	-0.51	0.13	3.68	223	9.40	147	84	56	0	1	1	0
	DAYTON	55	36	69	31	46	6	0.42	-0.29	0.35	3.95	222	9.93	149	89	52	0	2	3	0
	MANSFIELD	5																		

Weather Data for the Week Ending March 19, 2011

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS					
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN. SINCE MAR 1	PCT. NORMAL SINCE MAR 1	TOTAL IN. SINCE JAN 01	PCT. NORMAL SINCE JAN 01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP	
																		01 INCH OR MORE	50 INCH OR MORE	01 INCH OR MORE	50 INCH OR MORE
OK TOLEDO	52	33	70	27	43	7	0.24	-0.31	0.24	2.76	199	9.01	173	84	53	0	3	1	0		
OK YOUNGSTOWN	48	32	65	26	40	4	0.29	-0.38	0.17	4.50	266	11.70	193	90	65	0	4	3	0		
OK OKLAHOMA CITY	70	43	88	27	56	6	0.01	-0.65	0.01	0.04	2	2.22	48	84	45	0	2	1	0		
OR TULSA	66	48	83	36	57	6	0.66	-0.15	0.64	0.77	37	3.91	69	84	59	0	0	3	1		
OR ASTORIA	51	42	54	37	47	1	3.19	1.51	0.88	7.28	155	26.90	121	90	78	0	0	7	2		
OR BURNS	44	26	46	18	35	-2	0.48	0.20	0.23	1.15	146	2.61	85	88	70	0	6	5	0		
OR EUGENE	54	39	65	32	46	0	1.79	0.46	0.62	4.31	115	11.27	63	89	75	0	1	7	2		
OR MEDFORD	53	37	61	31	45	-2	0.88	0.46	0.28	2.48	207	5.44	94	93	62	0	1	5	0		
OR PENDLETON	52	35	56	30	44	-1	0.45	0.17	0.16	0.92	123	3.65	107	81	52	0	2	4	0		
OR PORTLAND	51	41	57	34	46	-1	2.00	1.16	0.80	5.12	213	14.14	121	89	79	0	0	7	1		
OR SALEM	53	40	56	32	47	1	2.99	2.04	0.95	5.84	210	13.40	98	89	76	0	1	7	4		
PA ALLENTOWN	57	32	77	23	45	7	0.42	-0.38	0.35	5.12	245	11.32	136	78	45	0	3	2	0		
PA ERIE	47	32	65	24	40	4	0.05	-0.62	0.04	3.54	206	11.29	173	85	74	0	4	2	0		
PA MIDDLETOWN	57	35	76	26	46	6	0.10	-0.64	0.07	5.78	286	10.78	138	84	41	0	2	2	0		
PA PHILADELPHIA	60	40	76	33	50	8	0.69	-0.18	0.67	3.64	163	9.68	114	65	42	0	0	2	1		
PA PITTSBURGH	52	36	71	32	44	5	0.19	-0.52	0.19	3.51	190	10.88	157	83	49	0	1	1	0		
PA WILKES-BARRE	51	33	71	23	42	5	0.06	-0.52	0.03	4.23	286	9.54	158	80	48	0	4	2	0		
PA WILLIAMSPORT	54	33	74	23	44	7	0.37	-0.33	0.32	5.48	303	10.92	150	81	55	0	2	2	0		
RI PROVIDENCE	53	32	73	27	42	4	0.65	-0.33	0.63	1.75	69	10.30	100	86	51	0	4	2	1		
SC BEAUFORT	80	50	86	44	65	8	0.60	-0.21	0.59	1.41	68	6.60	71	86	35	0	0	2	1		
SC CHARLESTON	79	51	86	43	65	8	0.00	-0.92	0.00	1.03	44	6.14	64	90	35	0	0	0	0		
SC COLUMBIA	75	47	87	37	61	6	0.09	-0.96	0.05	1.12	40	7.03	62	84	52	0	0	2	0		
SC GREENVILLE	71	45	85	36	58	7	0.34	-0.92	0.24	3.60	106	10.00	83	82	39	0	0	2	0		
SD ABERDEEN	37	21	44	-7	29	-1	0.06	-0.22	0.02	0.55	87	2.75	173	93	80	0	6	3	0		
SD HURON	46	27	58	4	36	4	0.02	-0.33	0.02	0.25	31	3.29	177	90	65	0	4	1	0		
SD RAPID CITY	59	30	71	22	45	11	0.02	-0.18	0.02	0.37	76	2.07	157	90	33	0	4	1	0		
SD SIOUX FALLS	49	26	64	12	38	6	0.00	-0.38	0.00	0.15	18	2.26	122	91	67	0	7	0	0		
TN BRISTOL	64	40	75	31	52	6	0.29	-0.61	0.22	3.84	156	10.25	109	84	42	0	1	2	0		
TN CHATTANOOGA	70	46	82	38	58	7	0.62	-0.83	0.41	7.51	197	14.02	100	89	52	0	0	2	0		
TN KNOXVILLE	68	46	79	34	57	8	0.44	-0.77	0.44	4.63	144	12.14	103	77	45	0	0	1	0		
TN MEMPHIS	67	49	78	35	58	5	0.66	-0.58	0.63	3.26	100	8.11	69	81	58	0	0	2	1		
TN NASHVILLE	66	46	82	40	56	6	0.31	-0.82	0.24	2.62	87	10.47	98	79	47	0	0	2	0		
TX ABILENE	78	51	89	38	64	8	0.36	0.06	0.28	0.41	50	2.01	69	81	55	0	0	2	0		
TX AMARILLO	71	36	89	27	54	7	0.00	-0.24	0.00	0.05	9	0.54	31	81	30	0	2	0	0		
TX AUSTIN	80	57	87	34	69	8	0.01	-0.47	0.01	0.09	6	4.40	83	85	57	0	0	1	0		
TX BEAUMONT	75	56	79	44	66	4	0.28	-0.56	0.28	2.20	102	5.60	50	98	58	0	0	1	0		
TX BROWNSVILLE	83	69	85	65	76	8	0.08	-0.08	0.07	0.08	19	2.57	87	89	61	0	0	2	0		
TX CORPUS CHRISTI	78	64	83	58	71	5	0.19	-0.18	0.19	0.22	20	4.36	96	92	67	0	0	1	0		
TX DEL RIO	83	63	90	59	73	10	0.00	-0.19	0.00	0.02	4	0.25	12	82	57	1	0	0	0		
TX EL PASO	82	51	85	43	66	10	0.00	-0.05	0.00	0.00	0	0.11	11	23	9	0	0	0	0		
TX FORT WORTH	75	55	85	38	65	8	0.00	-0.70	0.00	0.02	1	2.54	41	81	49	0	0	0	0		
TX GALVESTON	71	61	74	52	66	2	0.10	-0.52	0.07	3.33	207	7.86	95	95	70	0	0	4	0		
TX HOUSTON	77	59	83	44	68	6	0.47	-0.27	0.47	0.62	31	6.36	74	88	62	0	0	1	0		
TX LUBBOCK	76	42	90	29	59	8	0.05	-0.09	0.05	0.33	83	0.82	51	75	51	1	1	1	0		
TX MIDLAND	84	48	91	34	66	11	0.05	-0.03	0.03	0.13	45	0.20	14	68	42	2	0	3	0		
TX SAN ANGELO	83	56	91	38	69	12	0.00	-0.20	0.00	0.18	29	1.17	45	74	46	2	0	0	0		
TX SAN ANTONIO	80	61	86	49	71	9	0.00	-0.41	0.00	0.01	1	3.16	69	92	50	0	0	0	0		
TX VICTORIA	80	61	84	51	71	8	0.51	0.01	0.51	0.72	53	4.28	73	91	64	0	0	1	1		
TX WACO	77	56	86	35	66	8	0.03	-0.52	0.03	0.15	9	5.67	95	82	57	0	0	1	0		
TX WICHITA FALLS	77	44	90	30	61	7	0.00	-0.50	0.00	0.97	73	1.61	40	87	47	1	1	0	0		
UT SALT LAKE CITY	56	36	64	33	46	3	0.36	-0.06	0.35	1.89	173	3.60	95	79	35	0	0	2	0		
VT BURLINGTON	43	27	58	18	35	5	0.17	-0.33	0.06	3.02	244	7.56	147	92	57	0	6	4	0		
VA LYNCHBURG	63	39	82	30	51	6	0.33	-0.55	0.31	2.17	93	5.58	62	75	37	0	1	2	0		
VA NORFOLK	65	46	83	43	55	7	0.05	-0.89	0.05	1.57	63	7.45	76	82	46	0	0	1	0		
VA RICHMOND	66	42	84	36	54	7	0.82	-0.13	0.68	3.16	126	7.72	85	77	41	0	0	3	1		
VA ROANOKE	63	43	79	35	53	7	0.12	-0.75	0.07	3.52	152	6.54	76	69	41	0	0	2	0		
WA WASH/DULLES	61	37	79	28	49	6	0.42	-0.38	0.42	4.30	202	8.38	105	77	43	0	3	1	0		
WA OLYMPIA	51	38	56	34	44	1	2.31	1.11	0.65	6.72	197	18.45	108	93	83	0	0	6	3		
WA QUILLAYUTE	49	38	51	34	44	0	3.71	1.18	1.08	9.52	131	37.57	113	97	88	0	0	7	3		
WA SEATTLE-TACOMA	52	40	55	36	46	0	1.18	0.33	0.33	4.48	188	12.51	107	87	66	0	0	5	0		
WA SPOKANE	48	34	52	30	41	2	0.50	0.16	0.18	1.91	201	5.48	128	92	53	0	2	6	0		
WV YAKIMA	52	31	56	24	42	0	0.34	0.20	0.16	0.76	190	1.66	70	83	64	0	5	4	0		
WV BECKLEY	54	36	72	29	45	4	0.89	0.06	0.58	3.49	157	8.03	95	90	58	0	2	4	1		
WV CHARLESTON	60	39	74	30	49	4	0.57	-0.33	0.37	2.95	121	9.55	108	87	43	0	2	3	0		
WV ELKINS	56	33	69	28	45	6	0.61	-0.29	0.39	3.32	138	8.11	90	93	43	0	4	3	0		
WV HUNTINGTON	59	40	75	34	50	5	1.04	0.16	0.56	4.04	170	10.46	121	85	49	0	0	2	1		
WI EAU CLAIRE	44	21	51	11	33	3	0.00	-0.38	0.00	0.01	1	1.86	70	92	52	0	6	0	0		
WI GREEN BAY	45	27	53	18	36	5	0.01	-0.43	0.01	0.62	62	3.19	99	89	62	0	6	1	0		
WI LA CROSSE	49	25	58	17	37	3	0.02	-0.37	0.02	0.40	46	2.31	76	93	45	0	6	1	0		
WI MADISON	51	27	60	19	39	6	0.00	-0.46	0.00	0.67	62	3.54	98	87	55	0	6	0	0		
WI MILWAUKEE	48	32	65	26	40	6	0.00	-0.52	0.00	1.20	97	4.66	98	80	57	0	4	0	0		
WY CASPER	54	29	61	20	42	7	0.01	-0.18	0.01	0.41	80	1.71	99	70	34	0	5	1	0		
WY CHEYENNE	56	29	68	25	43	9	0.20	-0.02	0.12	0.50	94	1.49	105	77	52	0	6	2	0		
WY LANDER	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	
WY SHERIDAN	56	26	62	19	41	6	0.22	0.02	0.20	0.59	128	1.61	89	77	43	0	6	3	0		

Based on 1971-2000 normals

\*\*\* Not Available

# National Agricultural Summary

## March 14 – 20, 2011

Weekly National Agricultural Summary provided by USDA/NASS

Much of the United States experienced unusually warm weather during the week, with temperatures averaging more than 10°F above normal across portions of the Great Plains and the Southwest. While many areas of the nation were relatively dry, a series of storm systems dumped precipitation totaling 5 inches or more on northern California.

Temperatures in Florida were mostly seasonable with little to no rainfall during the week. Field preparations for spring crops were ongoing, with some producers planting corn in the Panhandle. Sugarcane harvest was nearing completion in Hendry County, wrapping up the state's harvest of the 2010 crop. Producers in Gulf and Highlands Counties were preparing to plant corn, peas, snap beans, and watermelons. Warmer weather provided ideal conditions for increased vegetable crop growth. Market volume increased, as producers harvested winter vegetables that were less affected by the January and February freezes. Citrus producers continued to harvest Valencia oranges and grapefruit. Pea-sized (and smaller) fruit for next year's harvest were noted on citrus trees throughout the growing region.

In Georgia, small grain crops were reported as progressing well. Dairy operations were harvesting small grains for silage. Corn planting was underway in some areas, while producers elsewhere applied burn-down herbicides in preparation for planting.

Ideal weather conditions in Louisiana provided more than 5 days suitable for fieldwork during the week. Corn and rice planting were well underway, while soybean producers applied herbicides in anticipation of planting. Sugarcane producers began off-barring and fertilizing their crop. Citrus growers were wrapping up fertilizer applications and scouting orchards for insect activity.

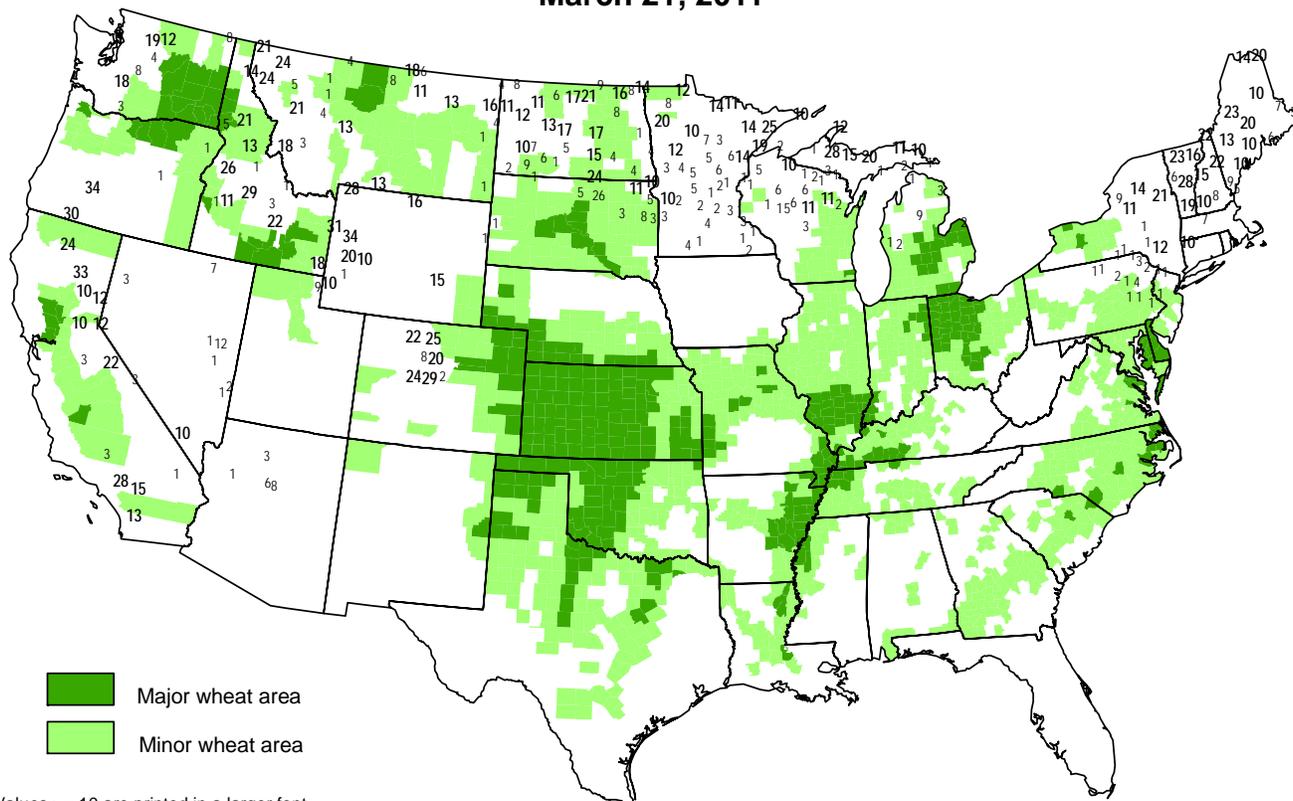
As another week of unusually dry weather conditions persisted in Oklahoma, the need for rainfall continued to be of the utmost concern for producers. Topsoil moisture was reported as being 81 percent short or very short, while subsoil moisture was 84 percent short or very short. Small grain crops were negatively impacted by the lack of soil moisture, with some producers considering grazing the remaining crop or choosing to have fields appraised for insurance. Seedbed preparations for row crops continued, although progress was behind normal for cotton, peanuts, sorghum, and soybeans.

While much of Texas noted only scattered showers, portions of East Texas, the Plains, and the Upper Coast received beneficial rainfall during the week. Irrigation was very active on small grain crops in the Northern High Plains and South Texas, while producers in the Northern Low Plains sprayed for brown wheat mites. In the Blacklands, recently emerged corn was growing well, while corn, cotton, and sorghum planting remained active in the Coastal Bend and the Lower Valley. Warm-season vegetable planting continued in East Texas. Fruit trees were blooming and chilies were planted in the Trans-Pecos.

A steady influx of storms delivered heavy rainfall and mountain snow to California during the week, causing localized flooding in some areas. Fieldwork continued in areas not affected by the storms, with producers making herbicide applications to small grain fields. In Napa County, producers sprayed pre-emergent herbicides in vineyards. Bloom sprays were made to stone fruit and cherry trees, while bee colonies continued to be placed in almond orchards. Early squash plants in Tulare County were under hot caps, with bloom expected soon.

## Snow Depth (inches)

### March 21, 2011



Major wheat area  
 Minor wheat area

Values >= 10 are printed in a larger font.

Snow depth reports obtained from the NWS Cooperative Observer Network.

## Spring Flood Outlook

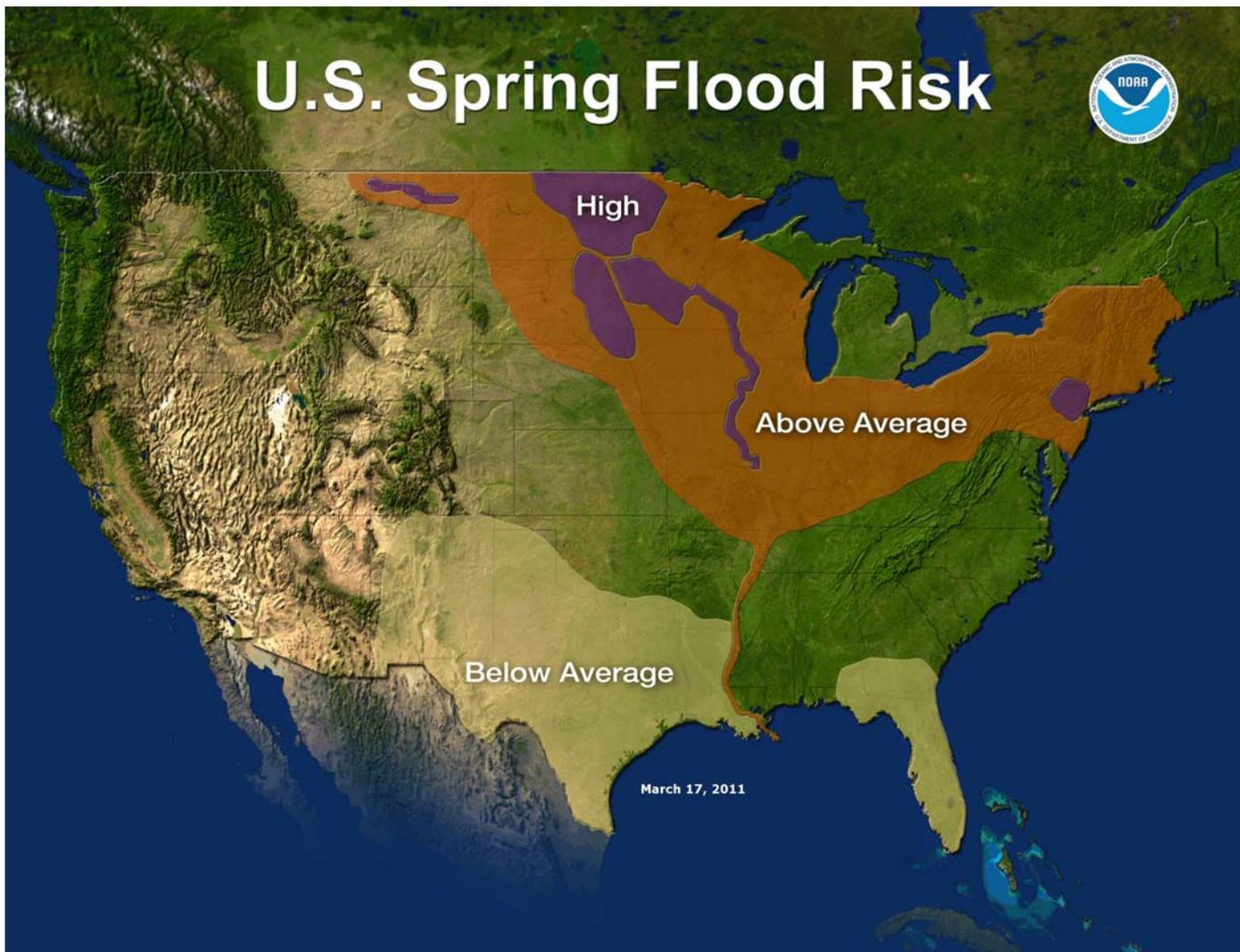
*The following information, released on March 17, 2011, was provided by the Hydrologic Information Center of the NWS.*

A broad area of the north-central U.S. is at a high risk of moderate to major spring flooding. Heavy late-summer and autumn precipitation left soils saturated and streams running high prior to the winter freeze-up. National Weather Service computer models indicate that this spring's snow pack contains a water equivalency ranked similar to the last 2 years but among the highest in the last 60 years. The flood threat area stretches from northeastern Montana into the upper Midwest, and along the Mississippi River as far south as St. Louis, Missouri. For the third consecutive year, forecasters predict major flooding along the Red River of the North. Other parts of the upper Midwest primed for major flooding include Devils Lake in North Dakota, the Milk River in northeastern Montana, the James and Big Sioux Rivers in South Dakota, the Minnesota River in Minnesota, and the Mississippi River from its headwaters downstream to St. Louis.

Recent heavy rains across the Ohio Valley have saturated soils and left rivers running high. The spring flood threat for this area is above average. As flood waters drain from the Ohio Valley and the middle and upper Mississippi Valley, the flood threat will increase along the lower Mississippi River. The magnitude and extent of flooding on the Mississippi River below St. Louis will be determined by the timing of runoff from all contributing regions.

Much of the Northeast has an above-average risk of spring flooding. This region experienced above-average snowfall and river icing. With the melt season underway and precipitation continuing to fall, rivers and streams are already running high.

Due to drought, a below-average risk of flooding exists in much of New Mexico, Texas, Louisiana, and Florida.



A complete National Hydrologic Assessment is available at: <http://www.weather.gov/oh/hic/nho/>

## International Weather and Crop Summary

March 13-19, 2011

International Weather and Crop Highlights and Summaries provided by USDA/WAOB

### HIGHLIGHTS

**EUROPE:** Warmer-than-normal weather prevailed across central and northern portions of the region, while locally heavy rain fell farther south.

**WESTERN FSU:** Warmer weather melted some of the snow cover in western and southern portions of the region, while additional snow fell in the Volga District.

**MIDDLE EAST:** Early week rain improved prospects for vegetative winter grains in Iran, while drier conditions settled over Turkey.

**NORTHWEST AFRICA:** Widespread showers maintained abundant to locally excessive soil moisture for jointing to flowering winter grains.

**SOUTH ASIA:** Heat began building in the region, affecting a small portion of winter crops in northern India and Pakistan.

**EAST ASIA:** Periodic showers provided favorable moisture to vegetative winter crops and early rice in China.

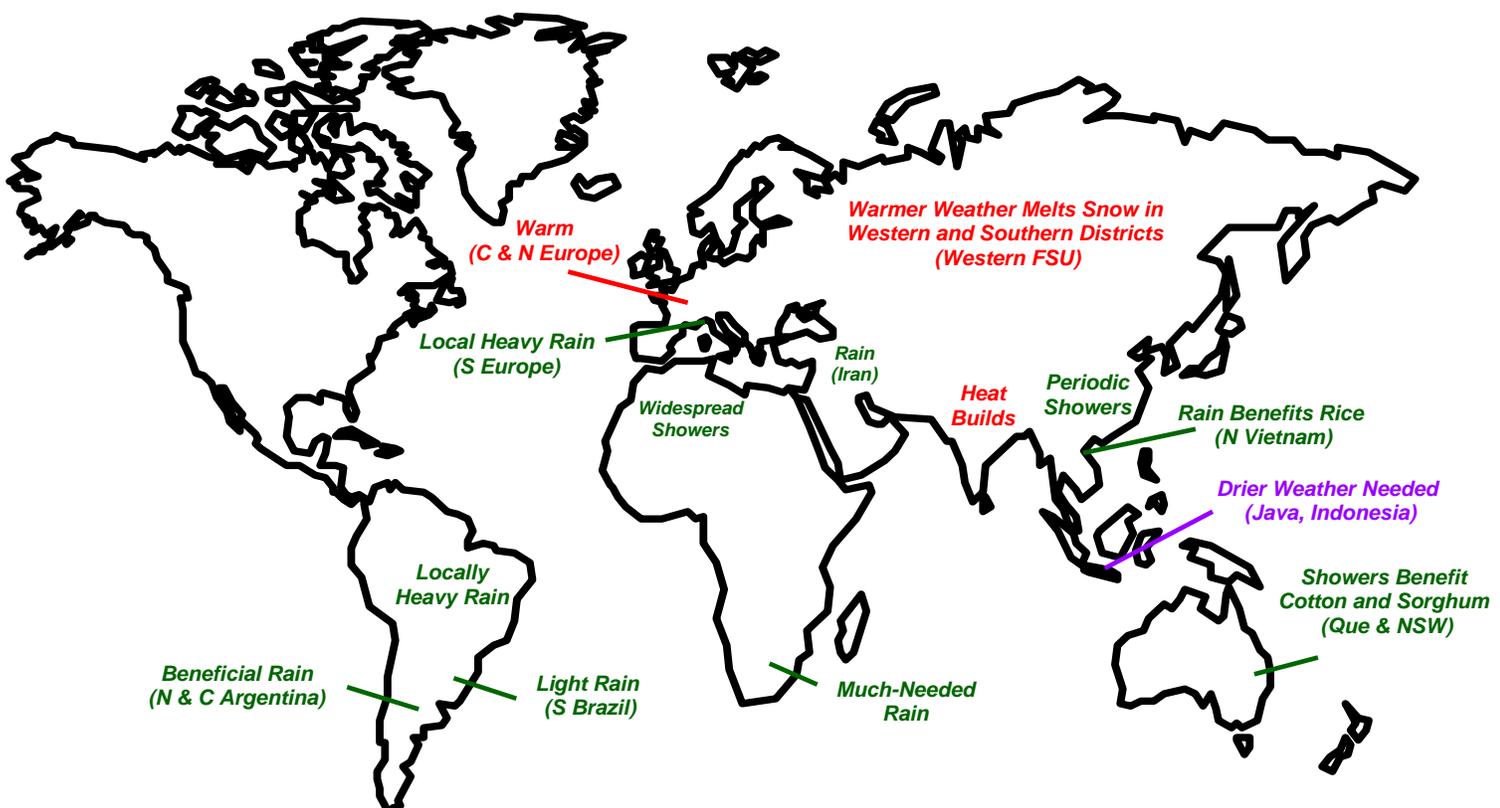
**SOUTHEAST ASIA:** Unseasonably heavy rainfall benefited spring rice in northern Vietnam, while drier weather would be welcomed for rice in Java, Indonesia.

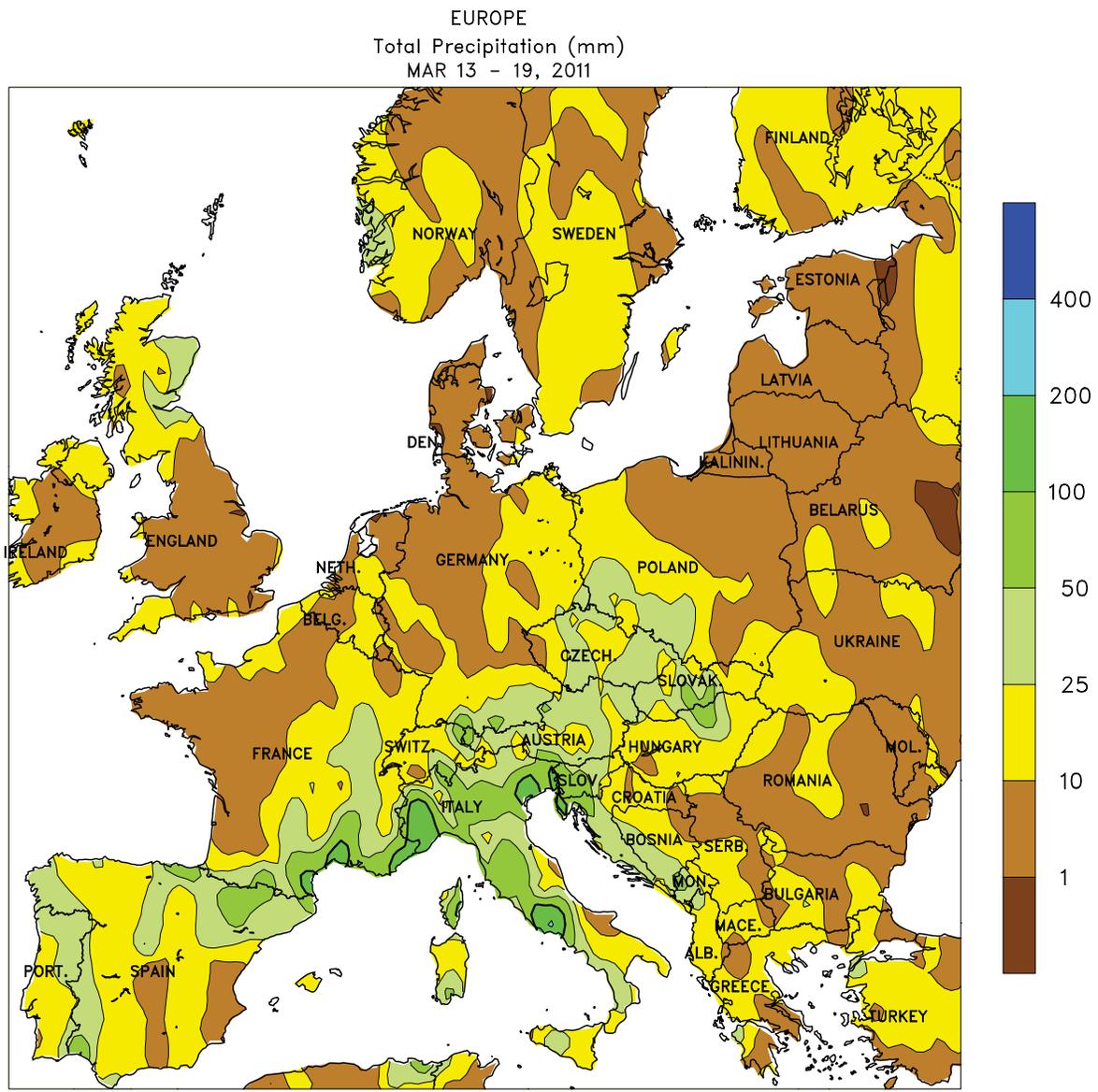
**AUSTRALIA:** Widespread showers continued to benefit immature cotton and sorghum in southern Queensland and northern New South Wales.

**SOUTH AFRICA:** Scattered showers brought some relief from dryness to the eastern corn belt.

**ARGENTINA:** Rain benefited immature summer crops in eastern farming areas of central and northern Argentina.

**BRAZIL:** Rainfall was light in southern Brazil but unfavorably heavy rain persisted in more northerly production areas.





CLIMATE PREDICTION CENTER, NOAA  
Computer generated contours  
Based on preliminary data

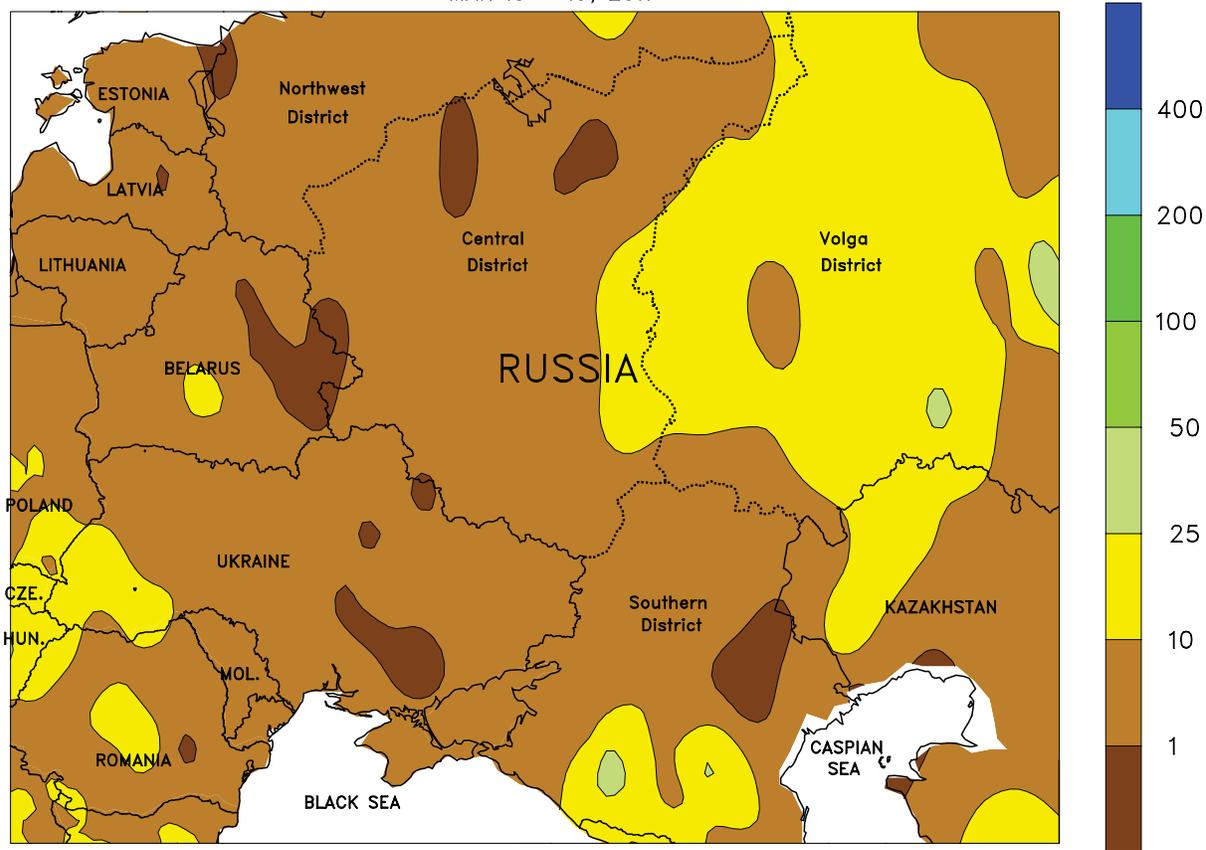


**EUROPE**

Warm weather expanded into eastern Europe, while locally heavy rain persisted across the south. A slow-moving Mediterranean storm produced moderate to heavy rain in Spain (10-80 mm) and Italy (30-140 mm); the rain was favorable for jointing winter wheat and provided an additional boost to irrigation reserves but caused lowland flooding and fieldwork delays. Precipitation across central and northern Europe's wheat belt was generally light (10 mm or less), although moderate showers (10-40 mm) from eastern Germany and western Poland into Hungary eased short-term dryness and improved soil moisture for spring growth. Temperatures

averaged up to 5°C above normal in France and Germany, encouraging additional greening of winter crops. Abnormal warmth (5-7°C above normal) from southern Poland into the Balkans began easing winter crops out of dormancy, with daytime highs in the lower 20s (degrees C) likely encouraging rapid greening of winter crops in the Danube River Valley. In the United Kingdom, cool, wet weather (10-40 mm) in northern areas kept winter crops dormant, while light showers (less than 5 mm) and above-normal temperatures (1-2°C above normal) in southeastern England favored vegetative winter grains and oilseeds.

WESTERN FSU  
Total Precipitation (mm)  
MAR 13 - 19, 2011



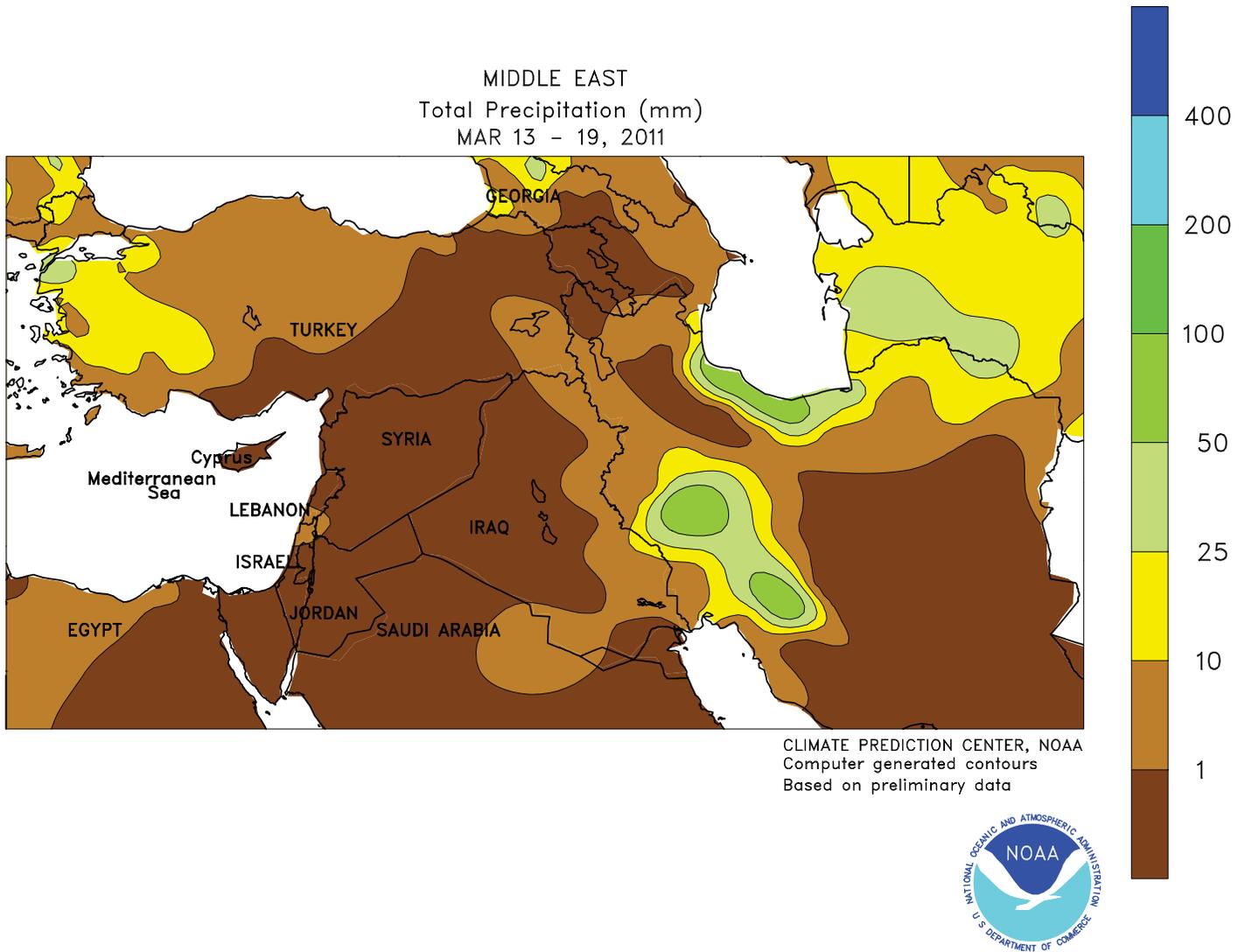
CLIMATE PREDICTION CENTER, NOAA  
Computer generated contours  
Based on preliminary data



**WESTERN FSU**

Warmer-than-normal weather in western portions of the region contrasted with additional snowfall farther east. Temperatures averaged 2 to 4°C above normal from Belarus and Ukraine into western Russia, melting some of this region’s snow cover. Despite highs reaching into the teens (degrees C), crops have been slow to break dormancy over western growing areas due to lingering hard freezes (-7 to -5°C). The winter snowpack

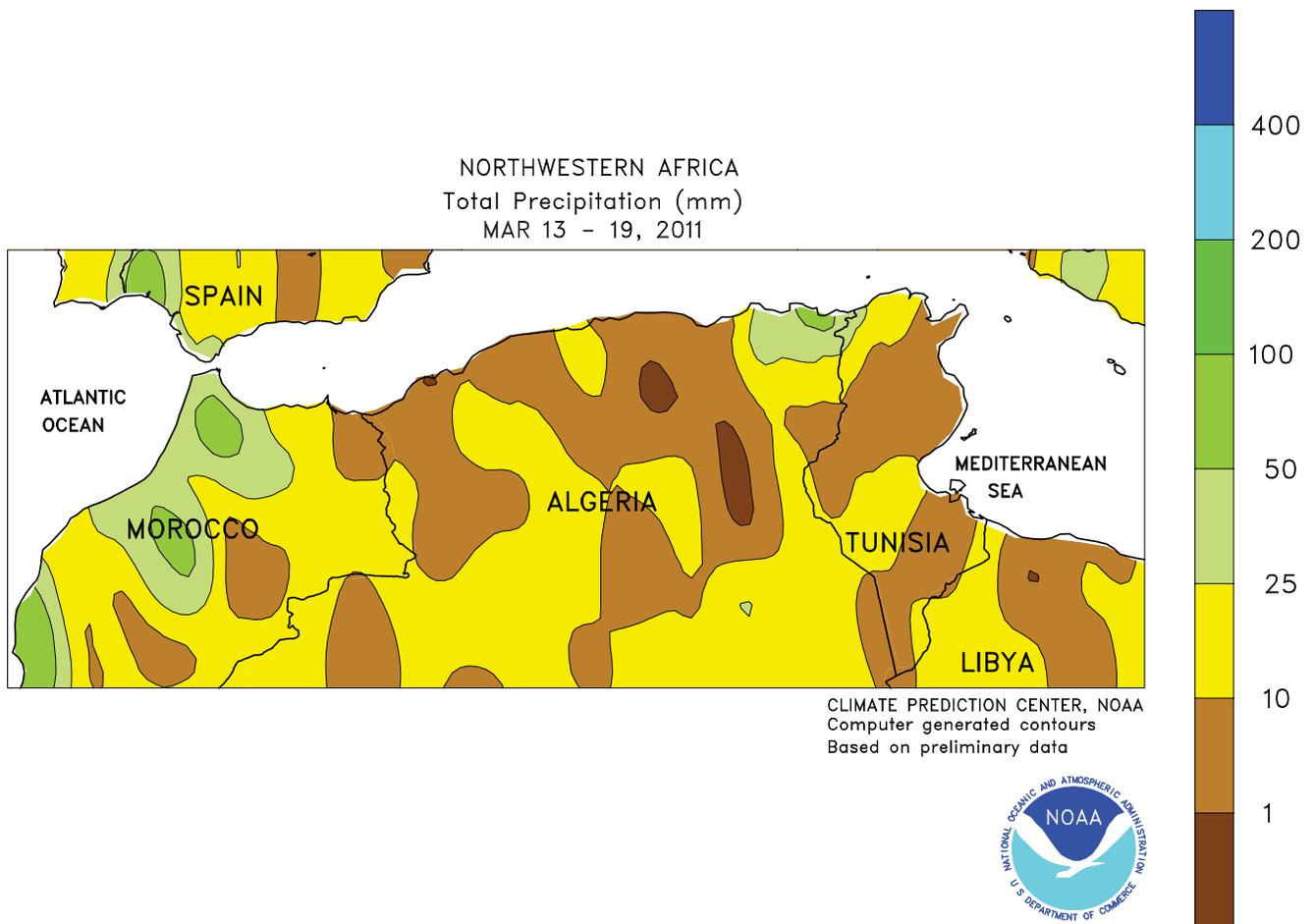
typically disappears from western Belarus, Ukraine, and the Southern District during the last 10 days of March. Meanwhile, a slow-moving storm generated light to moderate snow (5-23 mm liquid equivalent) in the eastern Volga District, keeping dormant winter crops well insulated but preventing early spring fieldwork. The Volga District’s snow cover typically lingers into mid-April before completely melting.



**MIDDLE EAST**

Early week wetness benefited crops in eastern growing areas, while dry weather briefly returned to the rest of the region. A departing storm system produced moderate to heavy rain (10-75 mm) across much of Iran, improving soil moisture and irrigation reserves for vegetative winter crops. Showers were lighter (less than 10 mm) in northwestern Iran, but still beneficial for spring growth. In contrast, dry weather settled over the rest of the region; the respite from recent heavy rain

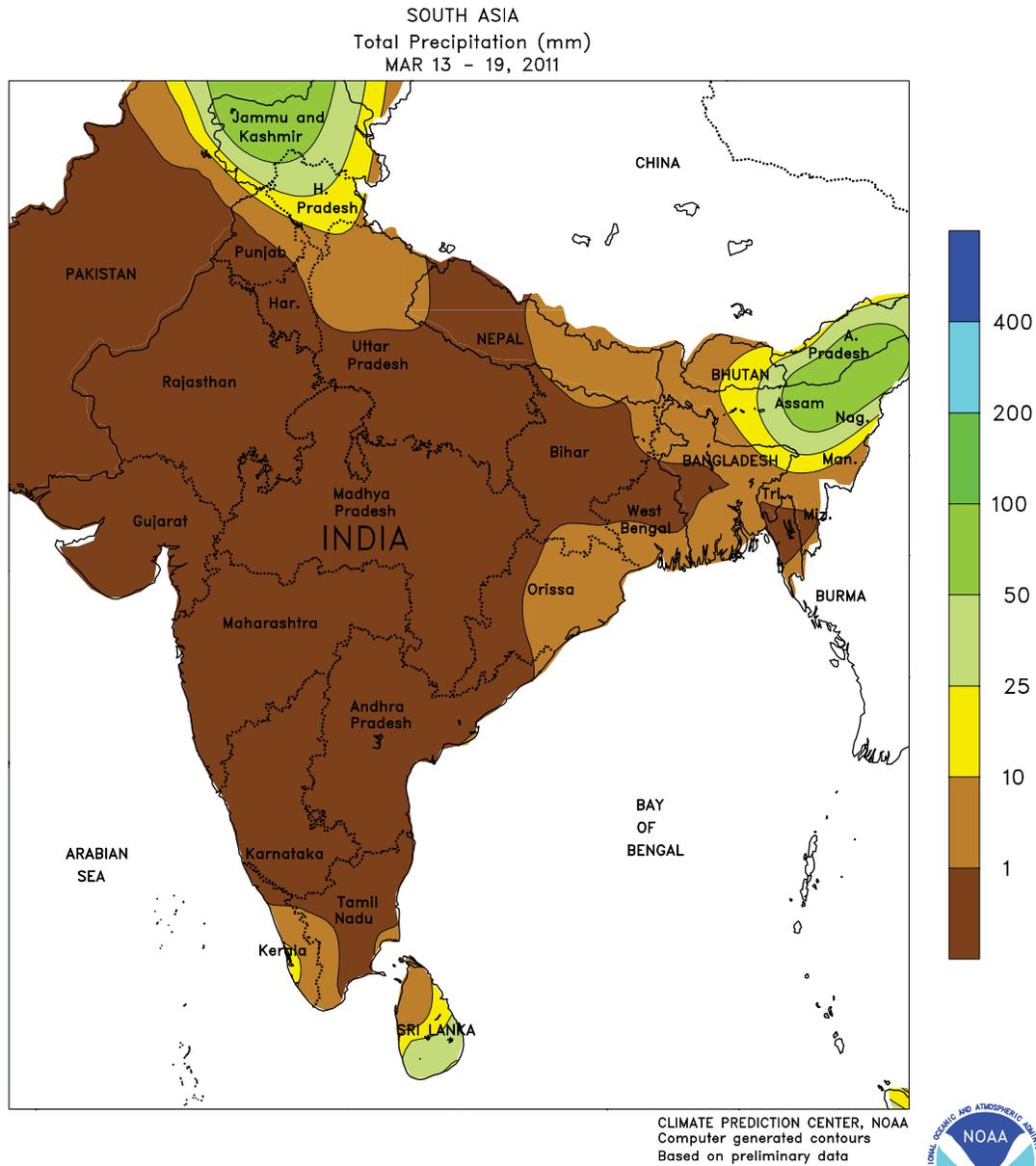
and snow was beneficial for jointing to heading winter grains and allowed producers to resume cotton planting. By week's end, however, another storm was approaching from the west, with the early stages of this system producing 10 mm or more of rain in western Turkey. Temperatures averaged 2 to 4°C above normal in Turkey and along the Mediterranean coast, while readings up to 2°C below normal accompanied the clouds and rain in western and northern Iran.



**NORTHWESTERN AFRICA**

A slow-moving storm system generated periods of rain over most of the region, maintaining favorable soil moisture for vegetative to reproductive winter grains. In Morocco, moderate to heavy rainfall (20-70 mm) boosted soil moisture reserves for reproductive winter crops and alleviated lingering dryness concerns in southern portions of the country. Light to

moderate showers (2-40 mm) across Algeria and Tunisia maintained favorable soil moisture for jointing to heading winter grains. The cloudy, rainy conditions in Morocco resulted in temperatures up to 3°C lower than normal, while a southerly wind ahead of the storm brought warmer weather (2-4°C above normal) to Algeria and Tunisia.

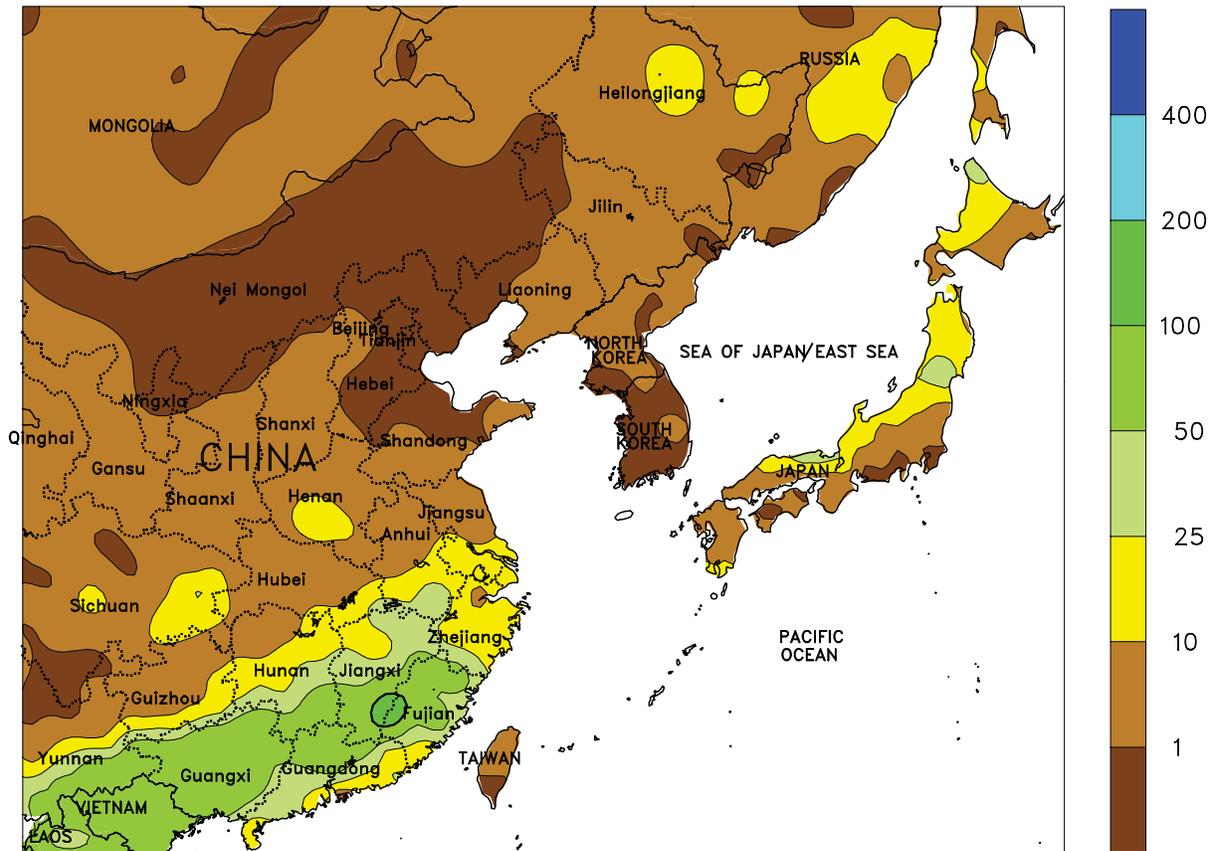


**SOUTH ASIA**

Warm weather continued across northern India and into Pakistan, with temperatures averaging up to 5°C above normal. Maximum temperatures began creeping into the upper 30s (degrees C) in wheat and rapeseed areas, while topping 40°C in central India. Winter rapeseed was

mature throughout the region and unaffected by the heat. Winter wheat, however, was mature in southern parts of Haryana, but most likely still filling farther north and into Pakistan, raising concerns over heat stress in these areas.

EASTERN ASIA  
Total Precipitation (mm)  
MAR 13 - 19, 2011



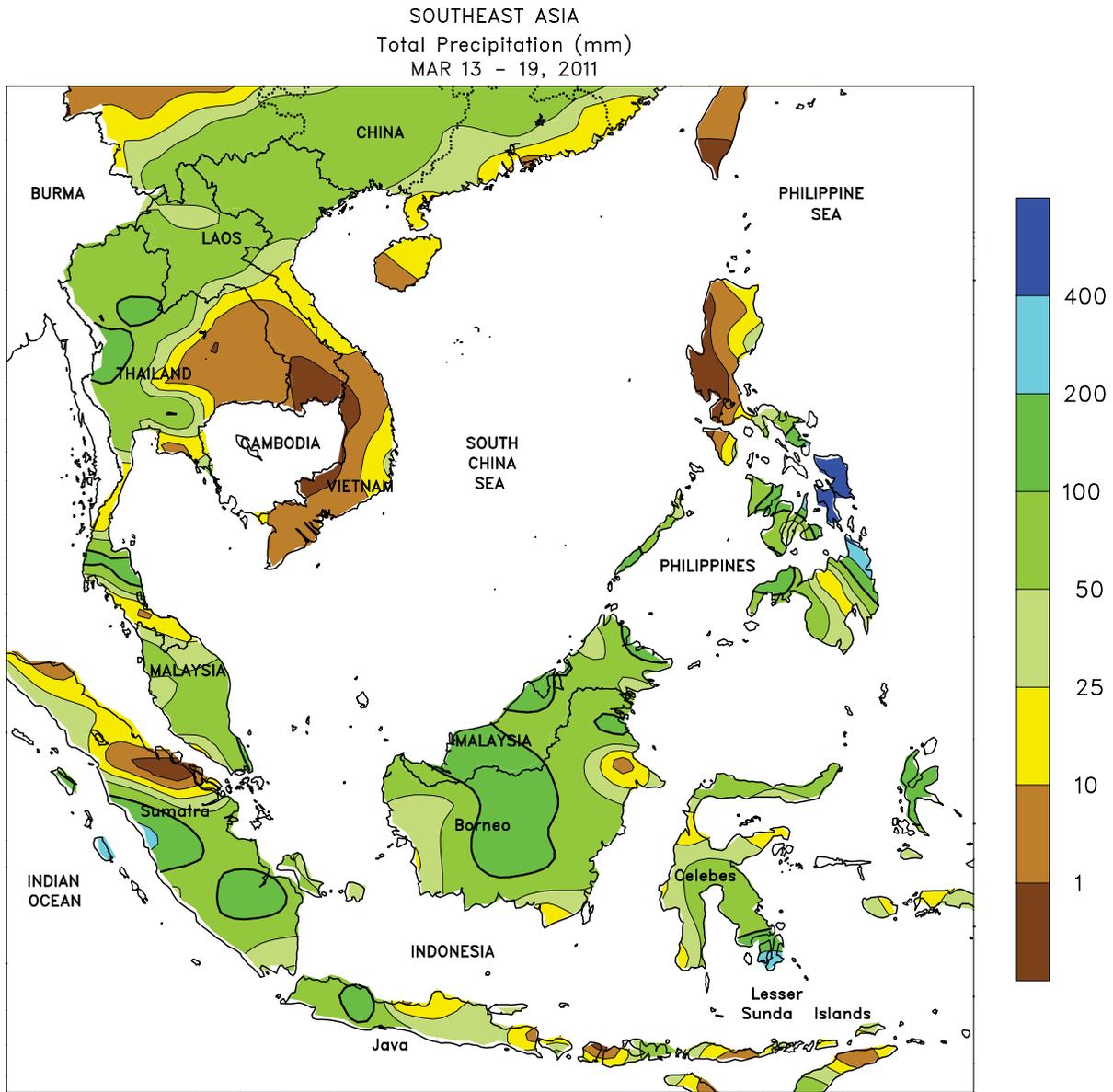
CLIMATE PREDICTION CENTER, NOAA  
Computer generated contours  
Based on preliminary data



**EASTERN ASIA**

Showers moved through the area early in the week, with more showers occurring by the end of the period. As a result, up to 10 mm of rainfall benefited vegetative winter wheat across key growing areas just south of the Yellow River. More rainfall was observed farther south, where up to 25 mm increased soil moisture for vegetative winter rapeseed and nearly 100 mm of rain benefited vegetative early rice. Subsoil moisture remained

favorable for crops, with irrigation maintaining necessary levels for proper development. Temperatures averaged between 2 and 5°C above normal in winter production zones, with only a few pockets of frost occurring. In Japan, mostly dry weather aided recovery efforts in the east, although due to the level of devastation, affected fields will likely be unavailable for cropping this season.



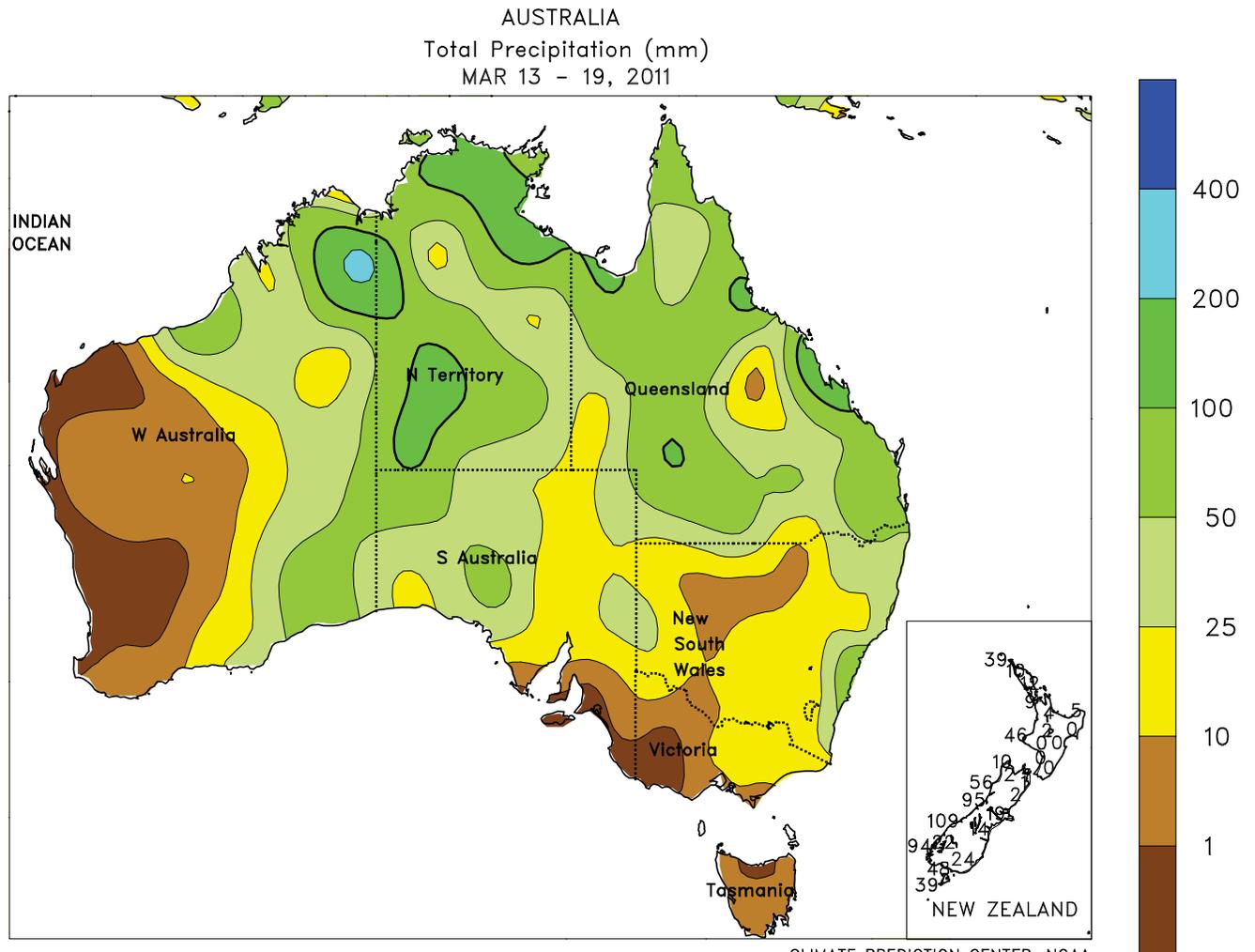
CLIMATE PREDICTION CENTER, NOAA  
Computer generated contours  
Based on preliminary data



**SOUTHEAST ASIA**

Unseasonably heavy rainfall (50-100 mm) increased soil moisture for spring rice in northern Vietnam, while also bringing an unexpected boost to reservoir levels in Thailand. Flooding continued in the southeastern Philippines, where persistent heavy rainfall has plagued minor rice and corn producing areas

(mostly as a result of La Niña conditions). Meanwhile, more seasonable rainfall (25-100 mm) returned to oil palm areas of Malaysia, allowing harvesting to proceed. In Indonesia, 25 to 100 mm of rainfall benefited oil palm, while continued showers (nearly 100 mm) in Java slowed maturation of rice.

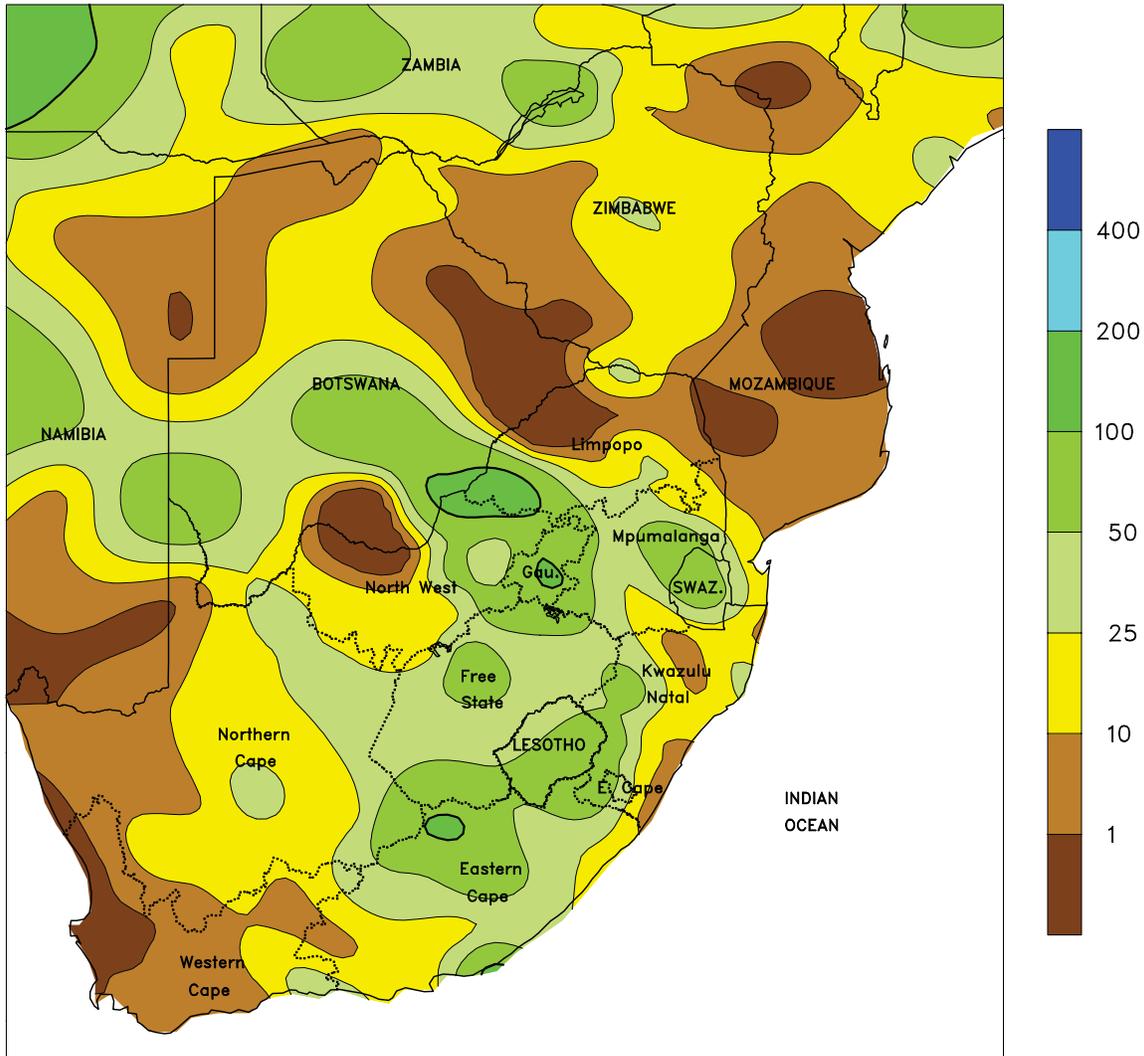


**AUSTRALIA**

Widespread showers (10-50 mm) in southern Queensland and northern New South Wales continued to benefit immature cotton and sorghum. The rain kept most dryland crops well watered and helped maintain reservoir

levels for irrigated crops. Temperatures in major summer crop areas averaged near normal, with maximum temperatures generally in the lower to middle 30s (degrees C).

SOUTH AFRICA  
 Total Precipitation (mm)  
 MAR 13 - 19, 2011



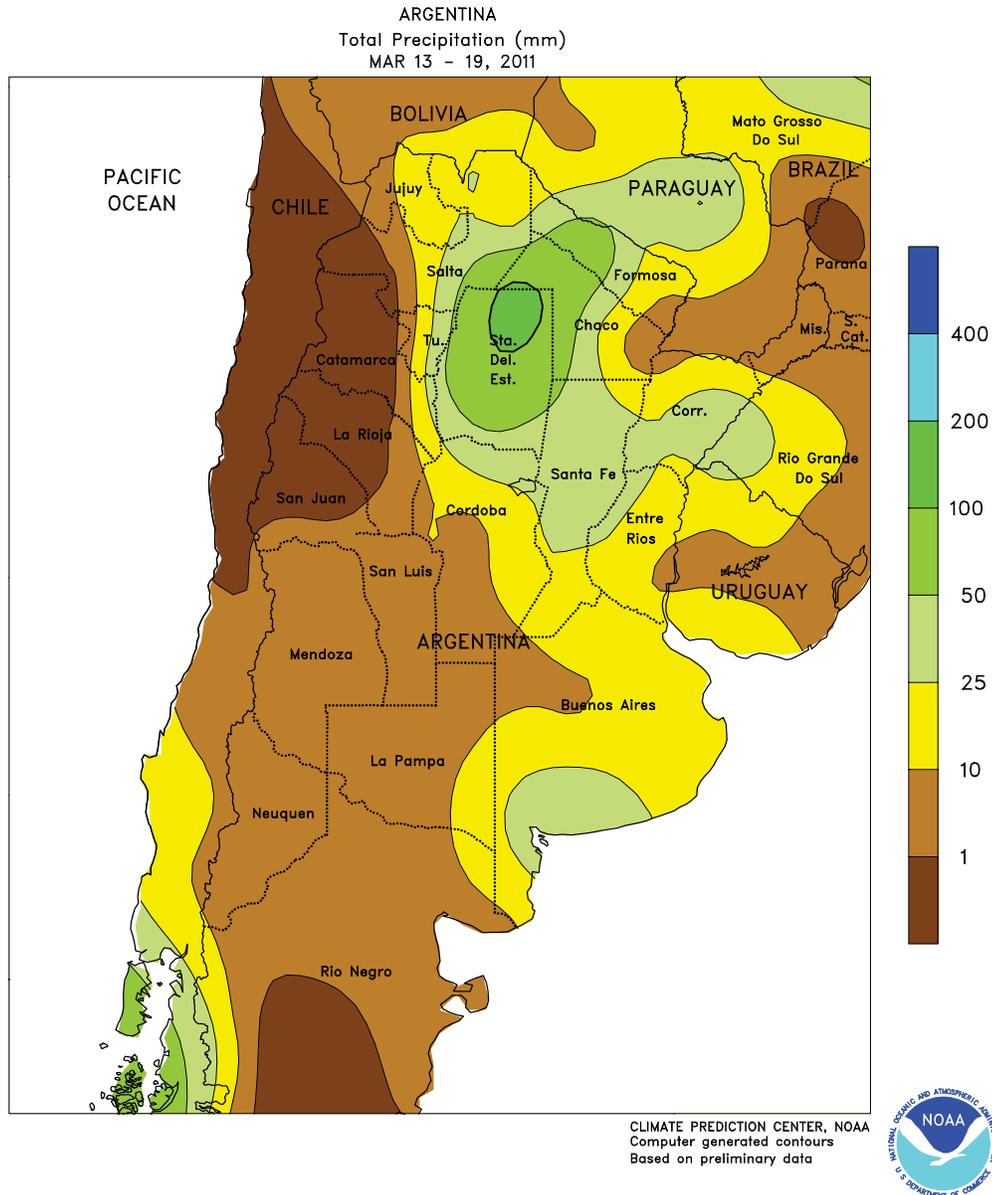
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 Computer generated contours  
 Based on preliminary data



**SOUTH AFRICA**

Rain returned to eastern sections of the corn belt, benefiting immature summer crops after an extended period of dryness. Rainfall totaled 10 to 25 mm or more in and around Mpumalanga, although pockets of dryness lingered, particularly in outlying areas of Limpopo and KwaZulu-Natal. In spite of the wetter conditions, weekly temperatures averaged 2°C above normal, with highs reaching the lower 30s (degrees C) in some spots as the rain moved into the region. Moderate to heavy rain (10-25 mm, locally exceeding 50 mm) fell in central and western sections of the corn belt, maintaining generally favorable levels of moisture for later-planted grains and oilseeds. Temperatures were more seasonable in the

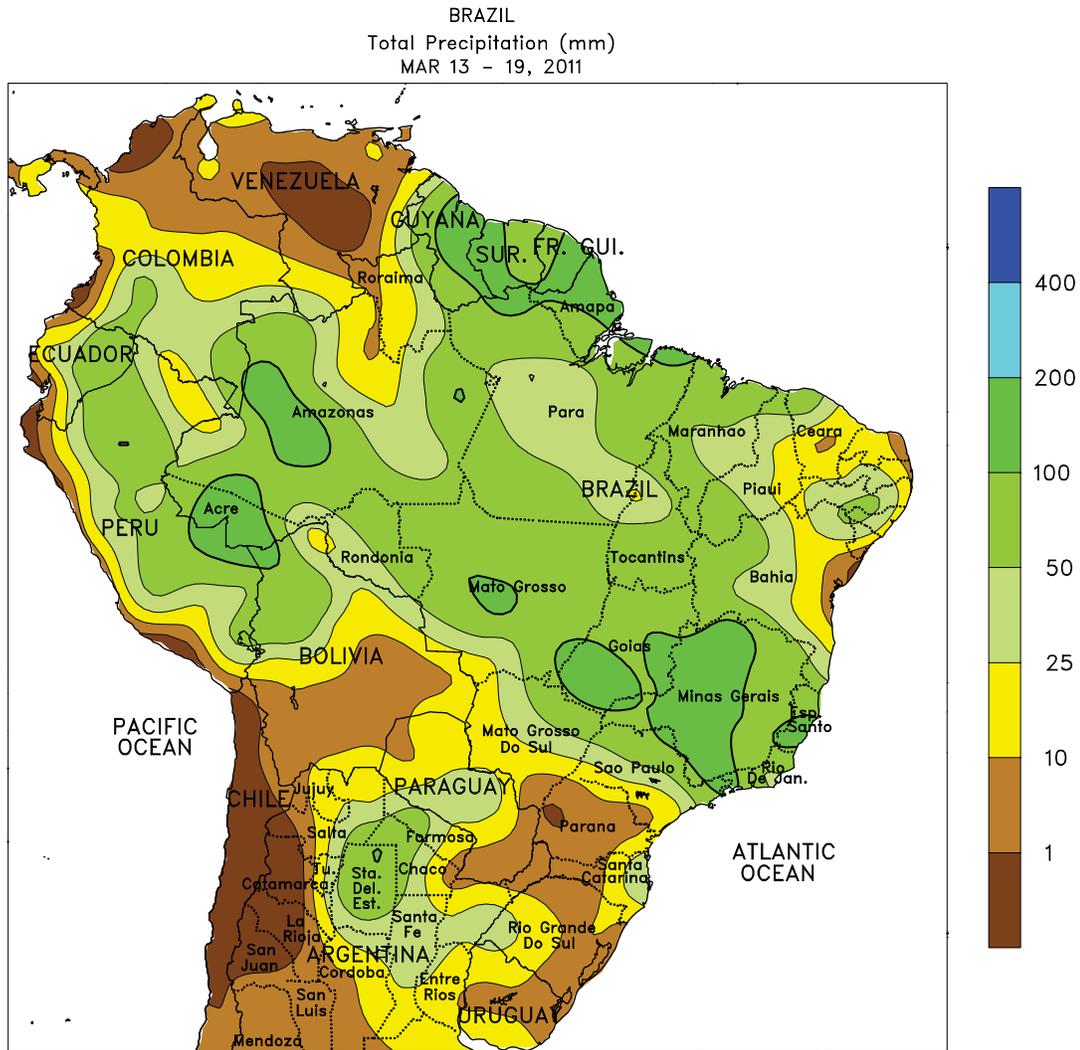
western corn areas, with highs in the upper 20s and lower 30s. Elsewhere, rain continued to be scattered and light (5-25 mm) in the sugarcane areas of KwaZulu-Natal, necessitating additional irrigation where available. Sugarcane harvesting usually begins in April. Heavy rain (locally exceeding 50 mm) returned to the Eastern Cape – Free State border region, renewing problems with localized flooding. Meanwhile, dry, unseasonably warm weather (highs reaching the upper 30s inland) promoted harvesting of tree and vine crops in Western Cape. Rain will be needed soon for winter wheat planting, particularly in the main production areas north of Cape Town, which have received negligible rainfall since December.



**ARGENTINA**

A strong cold front moving through the region early in the week brought needed rain to eastern farming areas of central and northern Argentina. Rainfall totaled 10 to 25 mm or more from southern and eastern Buenos Aires northward through Santa Fe, boosting moisture for immature summer grains, oilseeds, and cotton after several weeks of dryness. Locally heavy showers (greater than 50 mm) also fell in the western growing areas of the north (including Santiago del Estero) but drier weather (rainfall below 10 mm) prevailed in northern La Pampa, Cordoba, and northwestern Buenos Aires, which received their rain from the frontal system late

last week. The front also brought much cooler weather to the entire region, with temperatures averaging 3 to 4°C below normal. Lows fell below 5°C in some traditionally colder locations in La Pampa and Buenos Aires but warmer conditions prevailed as the week progressed, and no agricultural areas were at risk from frost. According to Argentina’s Ministry of Agriculture, sunflowers were 66 percent planted as of March 17 versus 60 percent last year. In addition, corn harvesting was reportedly progressing, and soybean harvesting was underway locally, though no national-level statistics were provided.



CLIMATE PREDICTION CENTER, NOAA  
Computer generated contours  
Based on preliminary data

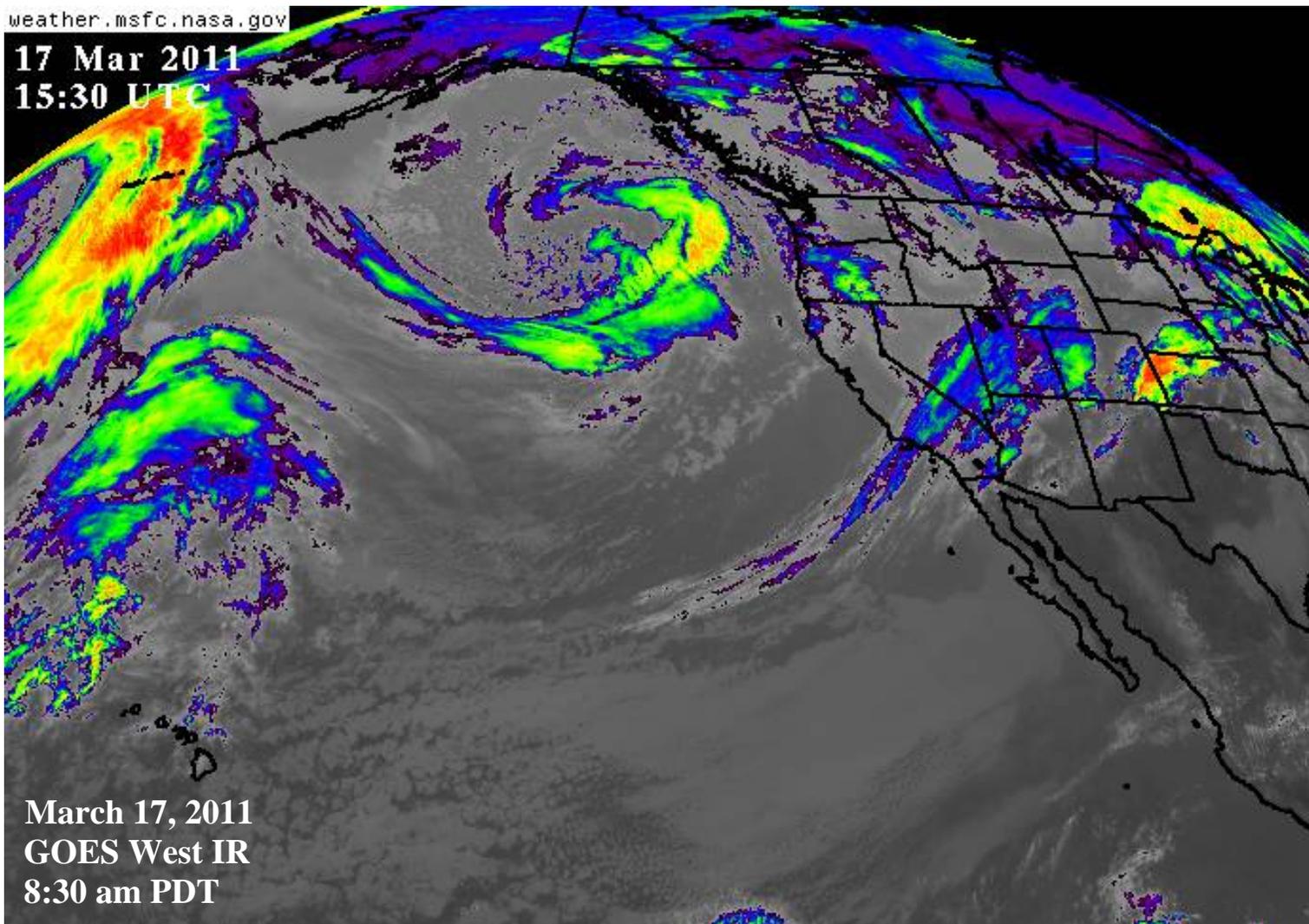


**BRAZIL**

Scattered, light showers moved into southern Brazil at week's end, bringing some needed relief from warmth and dryness. Rainfall totaled less than 10 mm in most crop areas of Parana, Santa Catarina, and Rio Grande do Sul, but the rain ended a spell of above-normal temperatures (highs in the lower 30s degrees C) that had exacerbated the effects of the dryness on filling to maturing soybeans. Although the drier conditions had been overall favorable for harvesting of earlier-planted soybeans in Parana and southern Mato Grosso do Sul, more rain is needed for winter (safrinha) corn after several weeks of unseasonable dryness. In contrast, excessive rain (50-100 mm or more, locally exceeding 200 mm) persisted from southeastern Mato Grosso do Sul

eastward through Minas Gerais, hampering fieldwork and likely causing some additional flooding of the Parana River system. Wet weather also prevailed in soybean and cotton areas of the northeastern interior (notably Tocantins and western Bahia), maintaining mostly favorable levels of moisture for immature crops but hampering early harvests. Seasonably drier conditions along the northeastern coast promoted harvesting of sugarcane and cocoa. Temperatures throughout Brazil averaged near to slightly above normal, with highs in the middle 30s (degrees C) promoting growth of safrinha corn and other secondary crops in the main production areas of the Center-West and South Regions (Mato Grosso to Parana).

17 Mar 2011  
15:30 UTC



March 17, 2011  
GOES West IR  
8:30 am PDT

On March 17, one of California's wettest late-season storms on record was poised to strike the Pacific Coast (see satellite image, above). Later, March 20 became the wettest calendar day on record in Santa Barbara, where 5.23 inches fell (previously, 4.74 inches on March 15, 2003). Meanwhile, the wettest March day on record occurred on the 20<sup>th</sup> in Camarillo (4.91 inches; previously, 4.60 inches on March 8, 1968) and Palmdale (1.29 inches; previously, 1.20 inches on March 7, 1952).

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