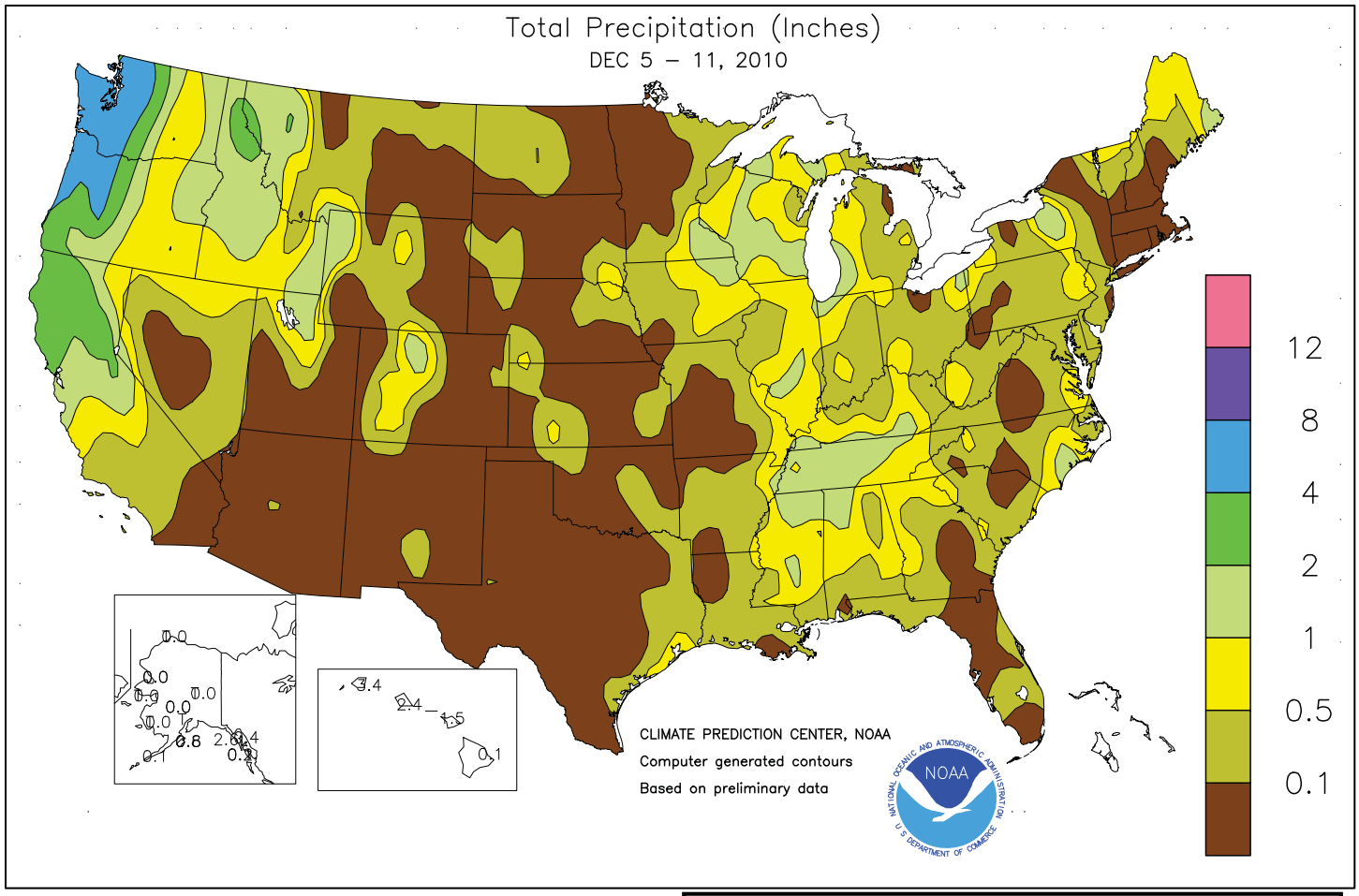
Volume 97, No. 50 http://www.usda.gov/oce/weather December 14, 2010

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

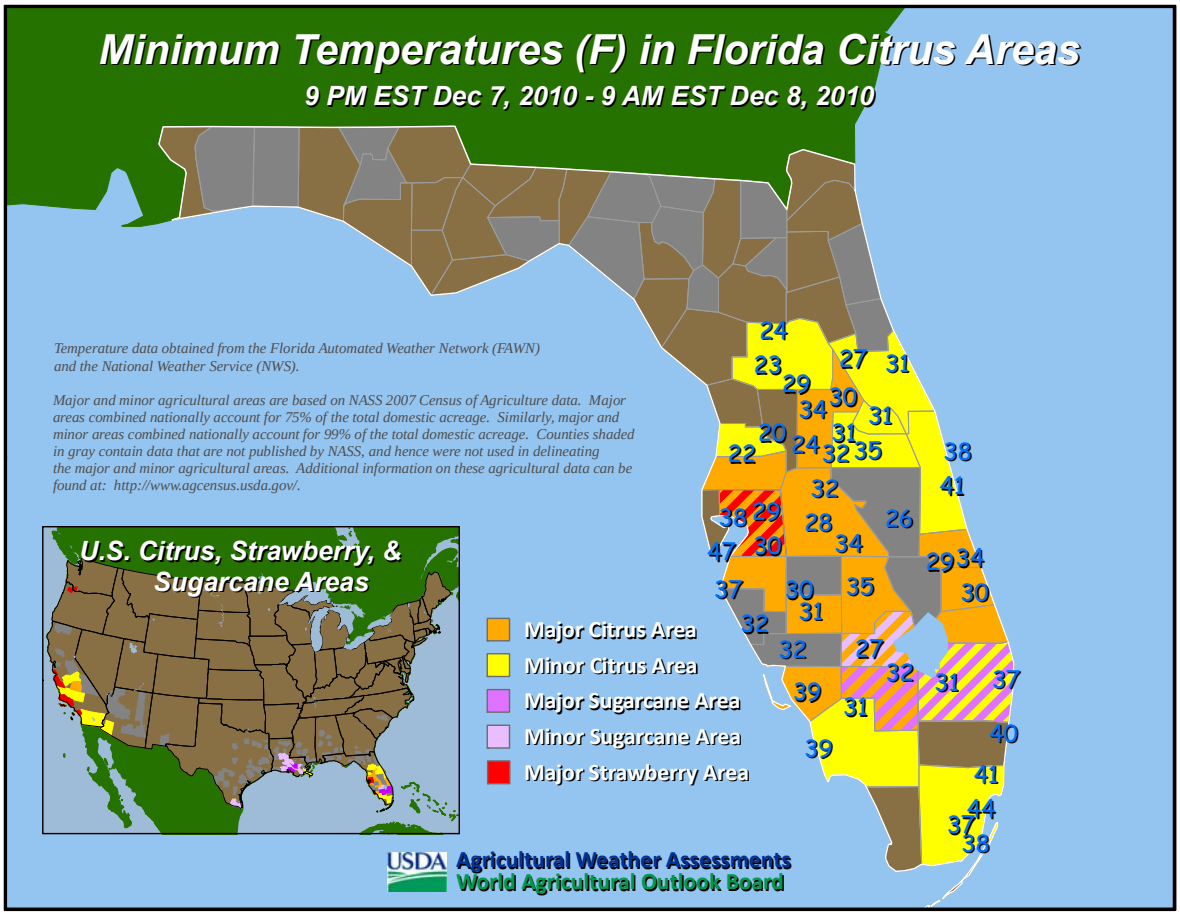
December 5 - 11, 2010

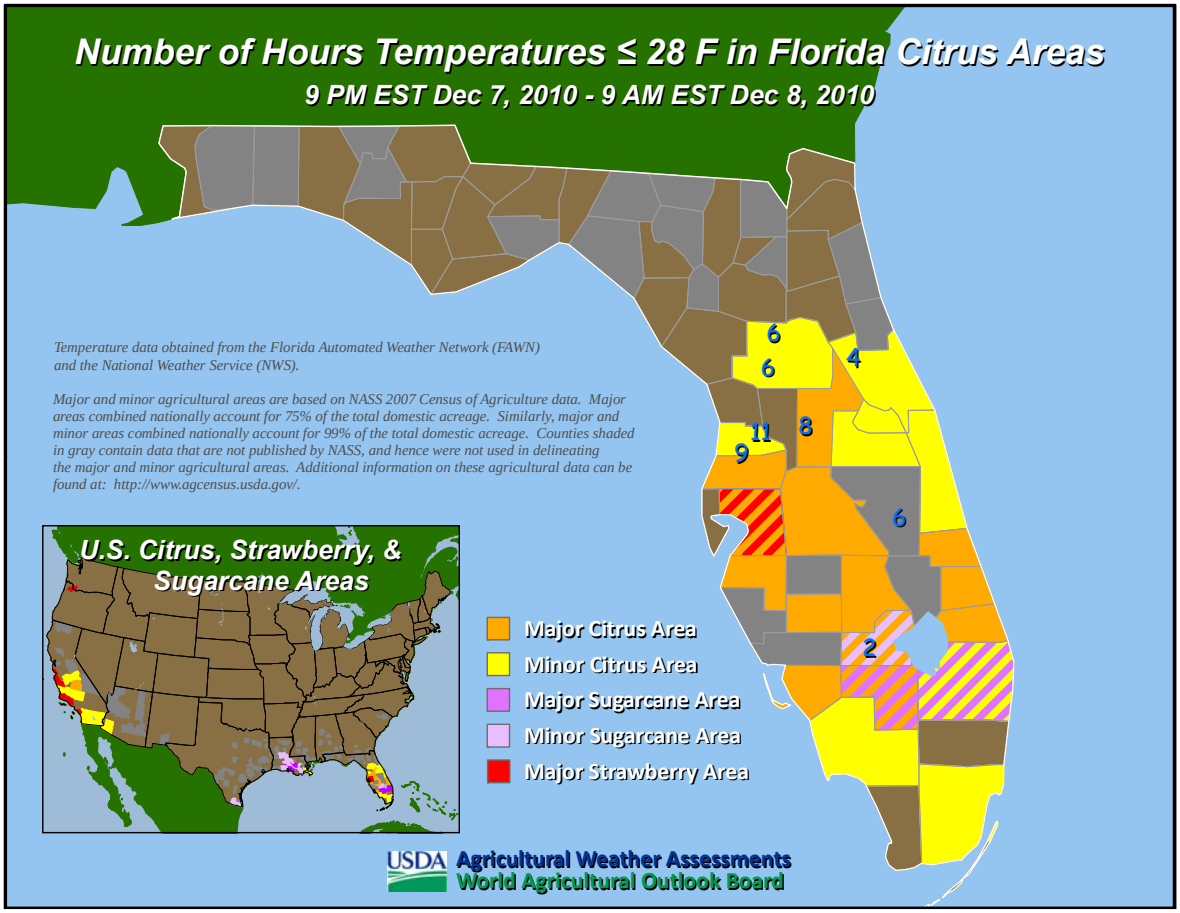
Highlights provided by USDA/WAOB

A late-week storm blanketed the **upper Midwest** with heavy snow and produced widespread, generally light precipitation elsewhere from the **Mississippi Valley to the East Coast**. By week's end, bitterly cold weather and 1- to 2-foot snow depths curtailed travel and stressed livestock in the **upper Mississippi Valley**. Meanwhile, a substantial snow cover continued to protect winter grains from weather extremes across the **northern Plains** and the **Northwest**. Additional precipitation fell during the week in the latter region. In contrast, developing drought and

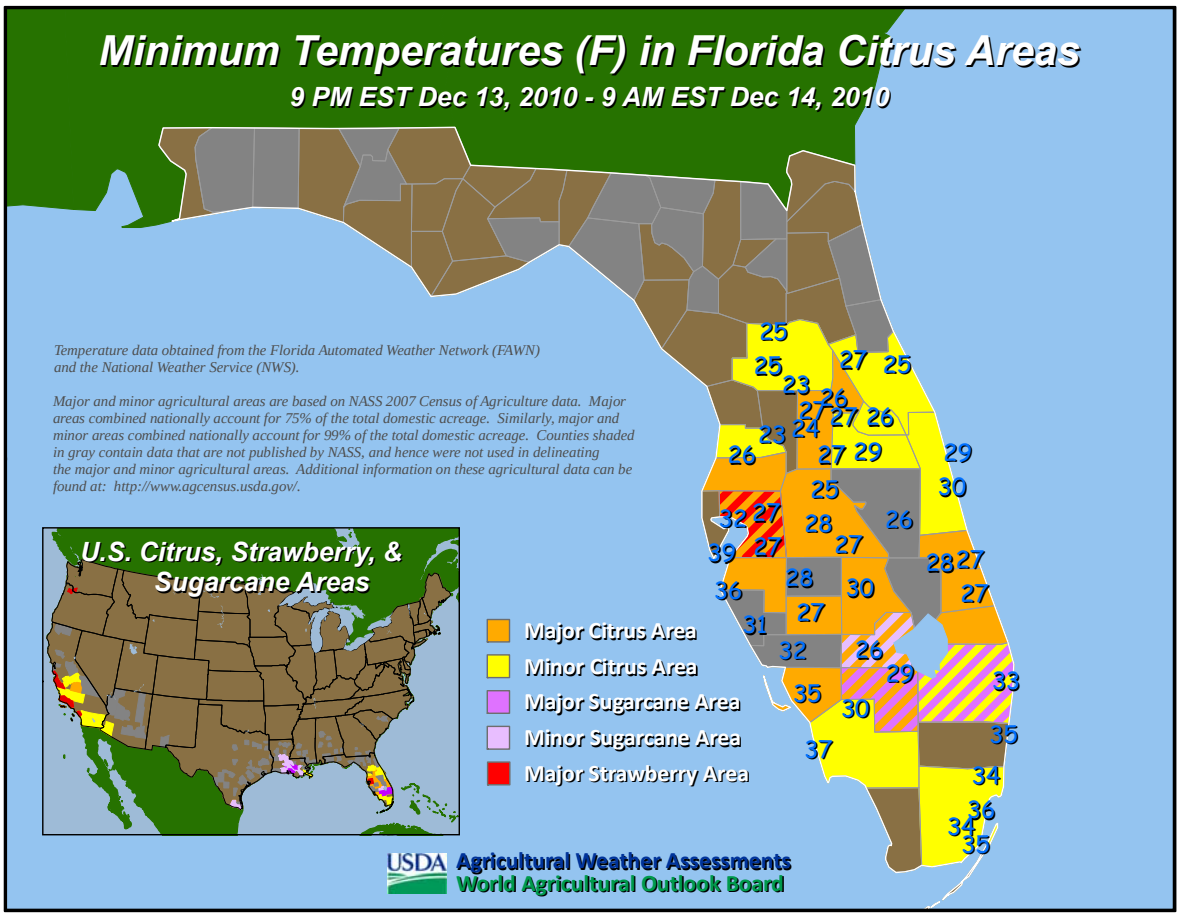
(Continued on page 5)

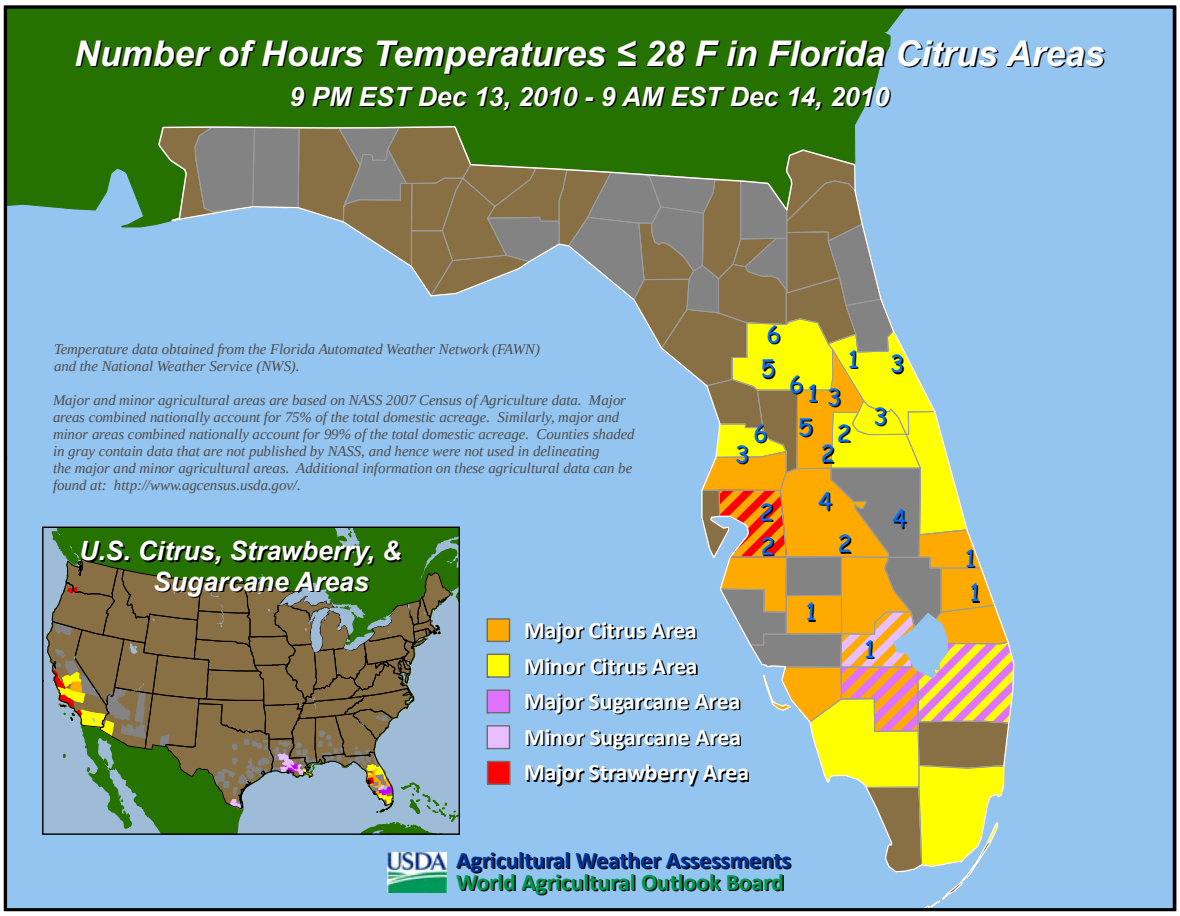
Contents





Information on the Dec. 7 freeze appeared last week.

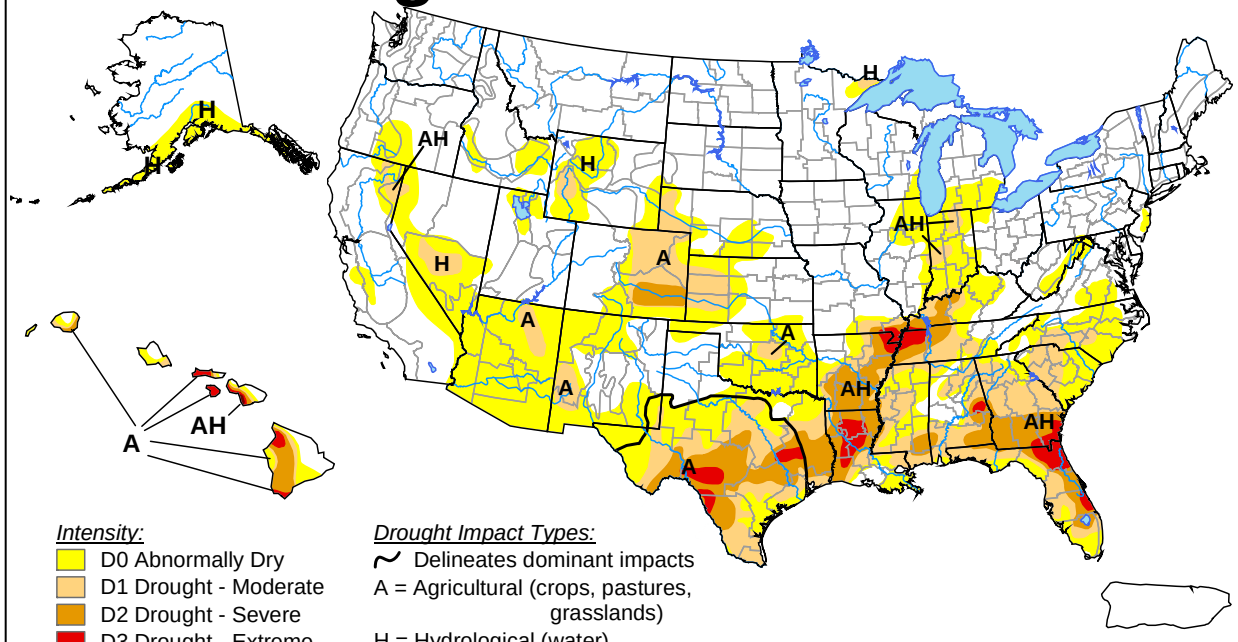




Additional information on Florida's cold spell that began on Dec. 13-14 will appear next week.

U.S. Drought Monitor

December 7, 2010
Valid 8 a.m. EDT



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

Drought Impact Types:
- ~ Delineates dominant impacts
- A = Agricultural (crops, pastures, grasslands)
- H = Hydrological (water)

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

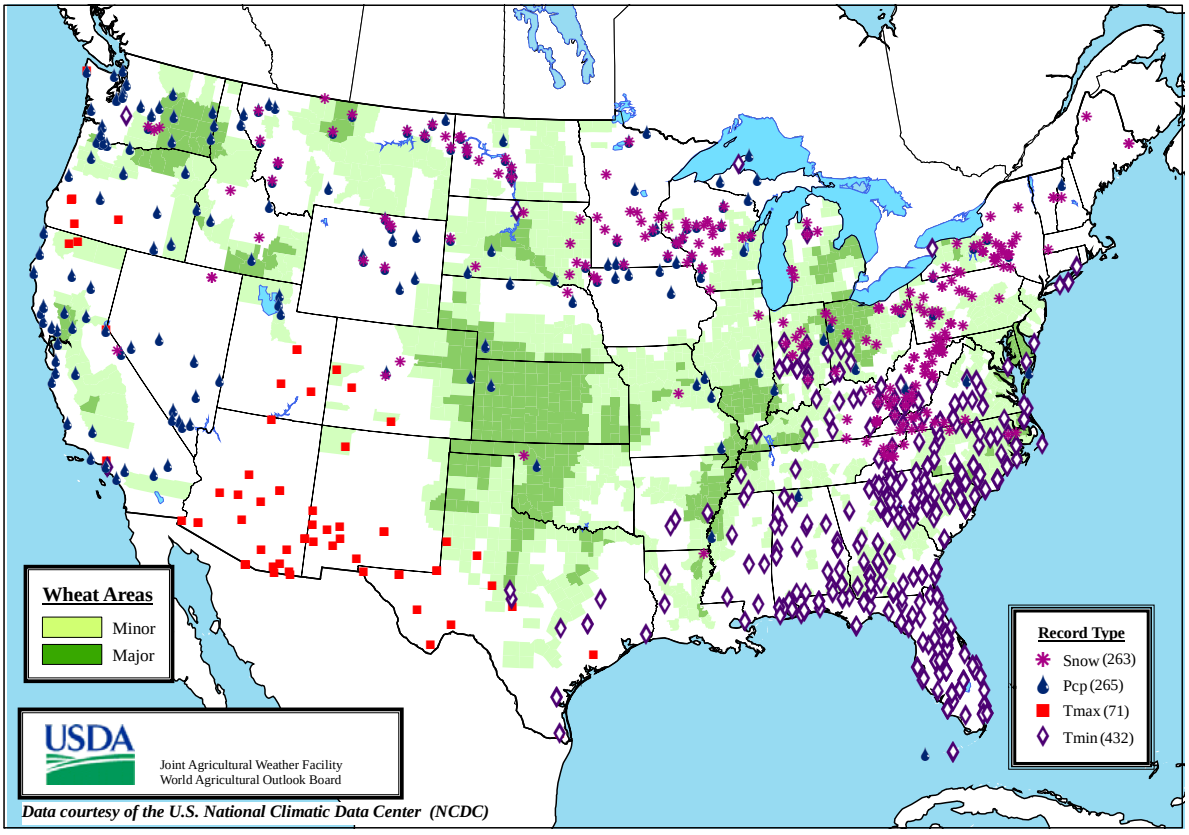
USDA National Drought Mitigation Center

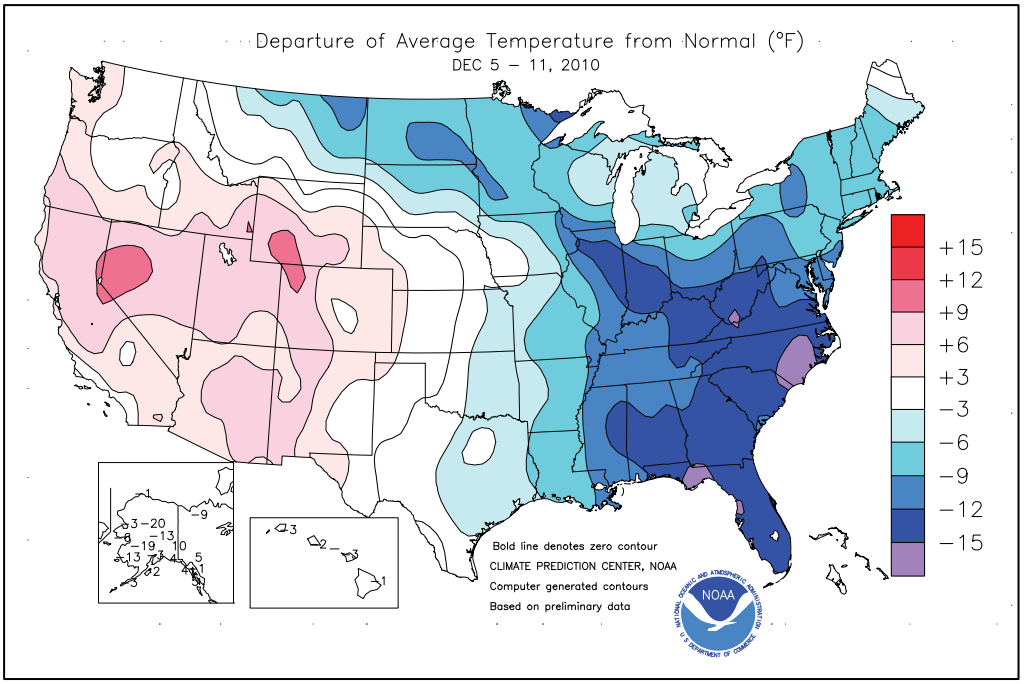
Released Thursday, December 9, 2010
Author: Rich Tinker, NOAA/NWS/NCEP/CPC

http://drought.unl.edu/dm

Daily Weather Records (ASOS & COOP)

December 5-11, 2010





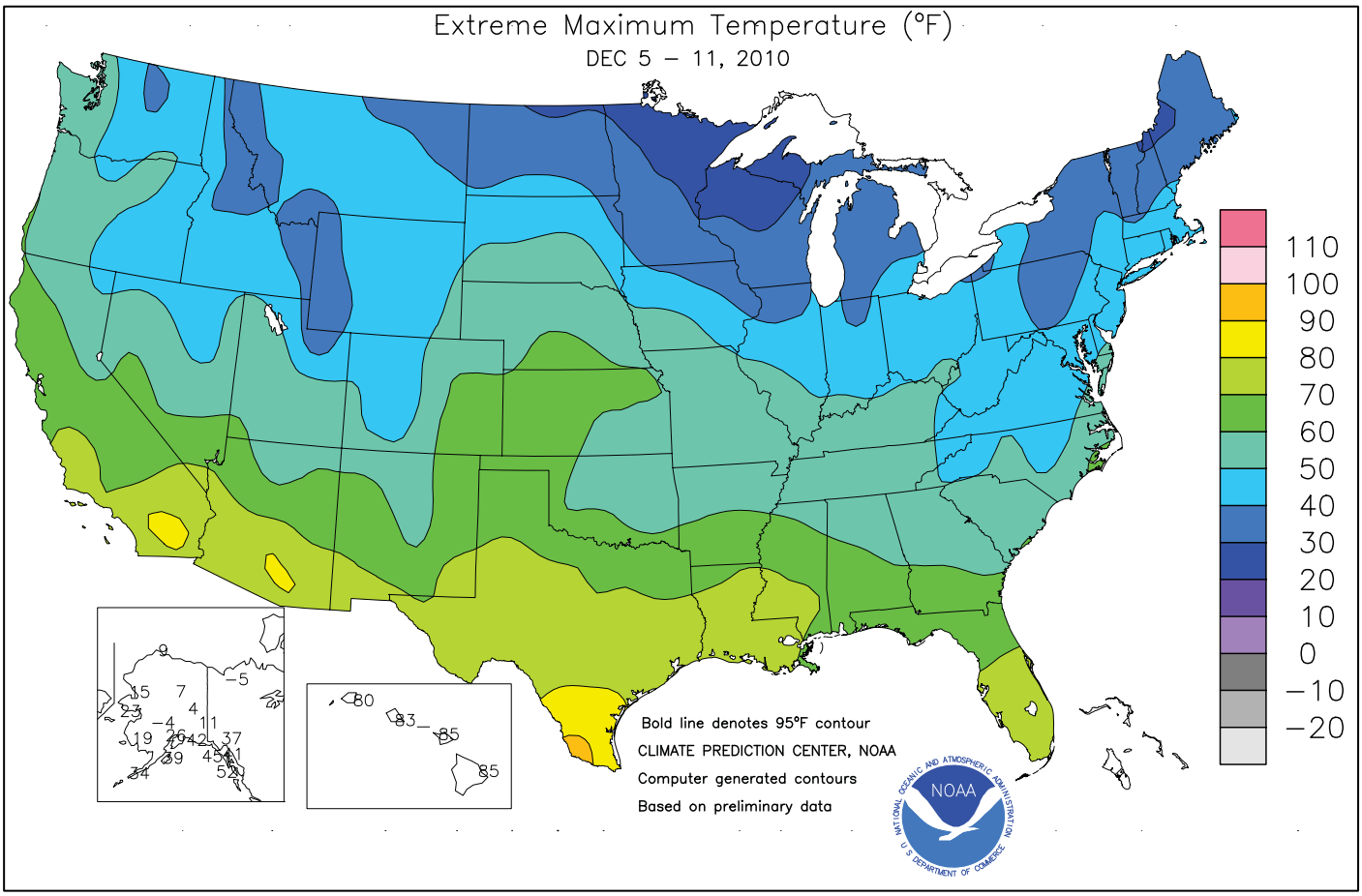
(Continued from front cover)

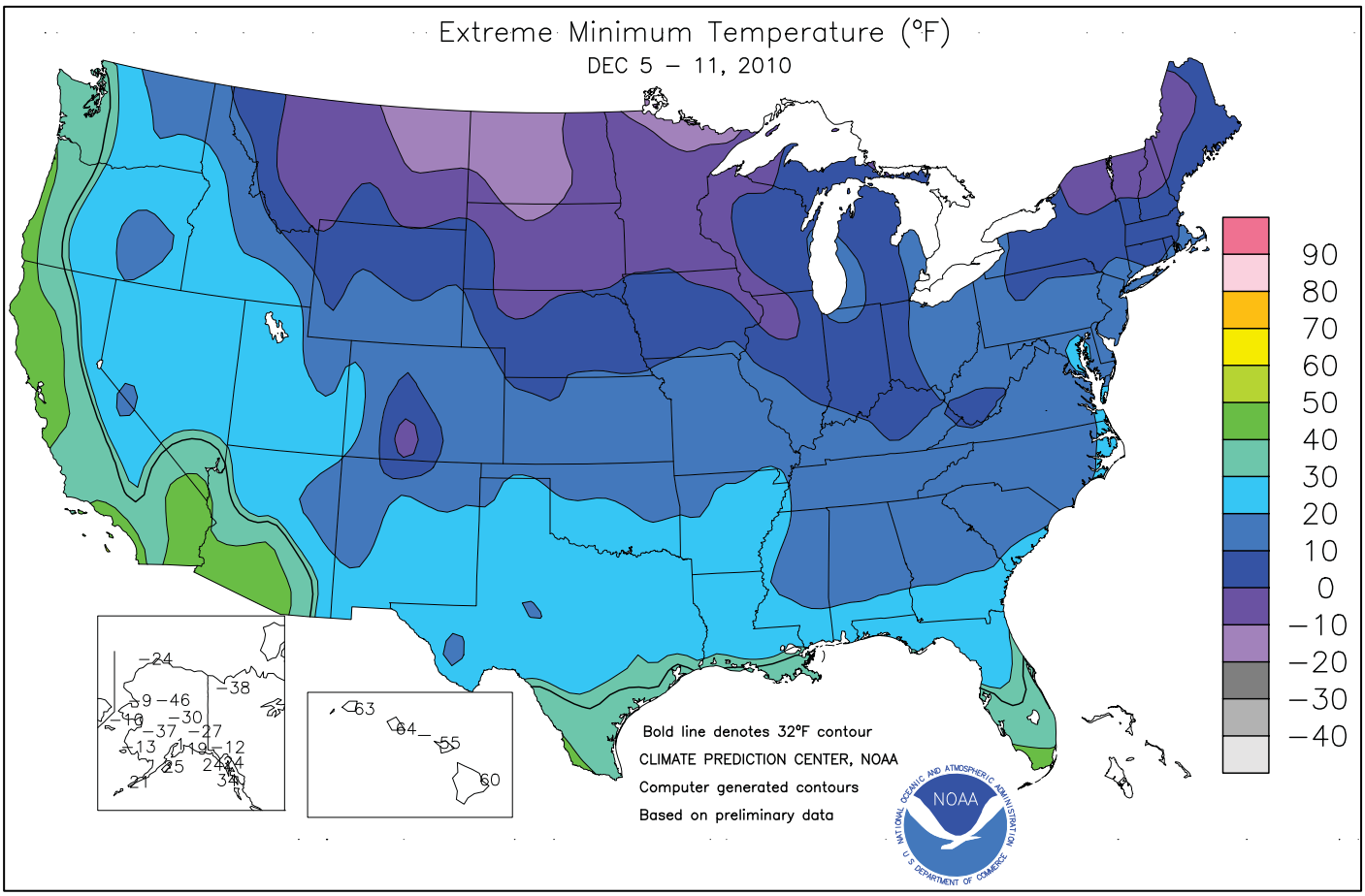
rapid temperature fluctuations maintained stress on the poorly established portion of the winter wheat crop on the **central and southern Plains**. Dry weather also continued in the **Southwest**, consistent with an evolving La Niña. In **Arizona**, cotton harvesting and other late-season fieldwork advanced under a mild, dry weather regime. Elsewhere, a period of cold, dry weather preceded late-week precipitation in the **Southeast**, while wind-driven snow squalls plagued areas downwind of the **Great Lakes**. In fact, very cold conditions dominated **northern Plains** and areas from the **Mississippi Valley to the East Coast**. Weekly temperatures averaged more than 15°F below normal in parts of the **Southeast**. Freezes struck parts of **Florida's peninsula** on December 7-8, sparing citrus but requiring protective measures for some fruit and vegetable crops. The cold weather caused local damage to tender vegetables, including beans and sweet corn, in the **northern Everglades**.

Early in the week, light snow spread from the **Ohio Valley into the southern Mid-Atlantic States**. On December 5, **Elizabeth City, NC** (0.2 inch), received a daily-record snowfall. Meanwhile, major snow squalls developed downwind of the **Great Lakes**, with local totals in excess of 4 feet noted near **Lakes Erie and Ontario**. **Syracuse, NY**, received 45.1 inches of snow from December 5-9, including daily-record amounts on December 6, 7, and 8 (12.2, 9.3, and 14.9 inches, respectively). During the second half of the week, heavy precipitation returned to the **Northwest**, while a major winter storm unfolded across the **upper Midwest**. **Northwestern** daily-record totals included 1.42 inches (on December 9) in **Portland, OR**, and 2.17 inches (on December 11) in **Quillayute, WA.** During the 7-day period from December 6-12, **Quillayute** received 9.23 inches of rain. Farther east, **Williston, ND** (14.3 inches), reported a daily-record snowfall for December 10. The following day, **Rochester, MN** (15.0 inches), experienced its snowiest December day on record. **Rochester's** previous mark of 10.3 inches was established on December 25, 1955. Other daily-record snowfall amounts for December 11 included 16.3 inches in **Minneapolis-St. Paul, MN**; 13.9 inches in **La Crosse, WI**; 7.6 inches in **Sioux Falls, SD**; and 5.9 inches in **Yakima, WA.** On December 10-11, **Minneapolis-St. Paul** set a 2-day snowfall record for December with 17.1 inches (previously, 16.5 inches on December 27-28, 1982). With 16.0 inches on December 10-11, **Rochester, MN**, experienced its snowiest 2-day period since March 18-19, 2005, when 20.1 inches fell. Blizzard conditions accompanied the storm in the **western Corn Belt**, where **Sioux Falls** clocked a northerly wind gust to 53 mph.

Very cold air settled across the **Southeast** for much of the week. **Greenwood, MS** (20°F), posted a daily-record low for December 6. The following day in **Florida**, daily-record lows for December 7 included 31°F in **Vero Beach** and 36°F in **West Palm Beach**. In the **northern Everglades**, **Belle Glade, FL** (30°F on December 7), tied a record for its earliest sub-freezing temperature on record (previously, 31°F on December 7, 1937). The record-setting chill persisted in **Florida** through December 8, when lows dipped to 21°F in **Tallahassee** and 31°F in **Orlando** and **Melbourne**. Farther north, **Southeastern** daily-record lows for December 8 dipped to 9°F in **Lynchburg, VA**; 13°F in **Florence, SC**; and 16°F in **Athens, GA.** In a final flurry of records on December 9, lows included 5°F in **Beckley, WV**; 16°F in **Anniston, AL**; and 19°F in **Hattiesburg, MS.** In contrast, consistent warmth prevailed in the **Southwest**, where **Douglas, AZ**, notched a daily-record high of 80°F on December 6. Later in **Texas**, daily-record highs reached 73°F (on December 10) in **El Paso** and 90°F (on December 11) in **McAllen**.

Mild weather in **southeastern Alaska** contrasted with bitterly cold conditions (as much as 20°F below normal) across **interior sections of the state**. **Nome** reported its first sub-zero reading of the season (-9°F) on December 9, compared to the normal date of November 15. Temperatures remained below 0°F for the entire week in **Fairbanks**, with a minimum reading of -30°F on December 9. Farther south, periods of heavy rain affected **Hawaii**, which continued to gradually emerge from a serious drought. The most impressive rain fell across the **western and central Hawaiian** islands on December 9-10, when 24-hour totals topped 6 inches in several locations on **Kauai**. **Kahului, Maui**, netted a daily-record sum of 1.52 inches on December 10.


Extreme Maximum Temperature (°F)
DEC 5 – 11, 2010
110
100
90
80
70
60
50
40
30
20
10
0
−10
−20
Bold line denotes 95°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data
NOAA


Extreme Minimum Temperature (°F)
DEC 5 – 11, 2010
90
80
70
60
50
40
30
20
10
0
−10
−20
−30
−40
Bold line denotes 32°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data
NOAA

Agricultural Weather Data Compiled by USDA's Stoneville Field Office

Weather Data for the Week Ending December 11, 2010

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			
																	TEMP. °F		PRECIP	
		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 DEC01	PCT. NORMAL SINCE DEC01	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VANCE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	PERTHSHIRE	47	29	64	24	38	-	0.41	-	0.41	0.41	-	-	-	47	40	0	6	1	0
	SCOTT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SANDY RIDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NE	VERONA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SD	STONEVILLE x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	INDIANOLA 1S*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	INVERNESS 5E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SIDON	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NORTH ISSAQUENA	51	31	69	26	41	-	0.14	-	0.14	0.00	-	-	-	51	46	0	5	1	0
	SILVER CITY	49	30	69	23	40	-	0.36	-	0.36	0.00	-	30.53	-	49	46	0	5	1	0
	ONWARD	51	30	69	23	41	-	0.38	-	0.38	0.00	-	-	-	52	45	0	6	1	0
	MAYDAY	50	28	70	19	39	-	0.14	-	0.14	0.01	-	-	-	-	-	0	6	1	0
MISSOURI																				
NW	CORNING	43	16	60	10	28	-3	0.03	-0.31	0.03	0.03	6	31.53	94	-	-	0	6	1	0
	ALBANY	41	15	56	9	27	-4	0.05	-0.41	0.05	0.05	7	36.25	104	34	33	0	7	1	0
	ST. JOSEPH	41	18	57	12	29	-3	0.04	-0.42	0.04	0.04	6	40.02	112	-	-	0	7	1	0
NC	LINNEUS	39	15	52	9	27	-5	0.10	-0.52	0.10	0.10	13	44.57	120	32	31	0	7	1	0
	BRUNSWICK	39	16	50	10	27	-6	0.08	-0.51	0.08	0.08	10	43.22	115	36	34	0	7	1	0
NE	NOVELTY	37	15	52	9	26	-6	0.15	-0.57	0.15	0.15	14	49.63	136	31	29	0	7	1	0
	MONROE CITY	37	16	52	11	26	-7	0.24	-0.50	0.24	0.24	21	46.35	127	32	31	0	7	1	0
WC	GREEN RIDGE	43	19	58	13	30	-5	0.01	-0.58	0.01	0.01	1	43.68	108	35	33	0	7	1	0
C	AUXVASSE	38	17	55	11	27	-7	0.37	-0.42	0.37	0.37	33	48.01	123	33	32	0	7	1	0
	COL-SANBORN FLD	40	19	56	13	29	-7	0.25	-0.27	0.25	0.25	26	51.71	128	35	33	0	7	1	0
	WILLIAMSBURG	38	17	55	11	27	-7	0.51	-0.08	0.51	0.51	52	39.87	96	33	32	0	7	1	1
	COL-JEFFERS F&G	40	18	56	11	29	-6	0.31	-0.20	0.31	0.31	33	42.62	106	34	33	0	7	1	0
	COL SOUTH FARMS	39	18	55	11	28	-7	0.33	-0.19	0.33	0.33	35	49.21	122	-	-	0	7	1	0
	COL-BF	40	17	56	10	27	-8	0.29	-0.23	0.29	0.29	31	43.99	109	33	32	0	7	1	0
	VERSAILLES	44	20	62	14	31	-5	0.02	-0.55	0.02	0.02	2	42.05	102	37	34	0	6	1	0
EC	VANDALIA	36	16	53	11	26	-8	0.36	-0.19	0.36	0.36	36	47.55	122	32	30	0	7	1	0
SW	LAMAR	44	23	56	18	33	-4	0.00	-0.75	0.00	0.00	0	38.36	83	39	36	0	7	0	0
SC	COOK STATION	42	16	62	9	29	-8	0.14	-0.58	0.14	0.14	11	44.57	106	37	35	0	7	1	0
	MOUNTAIN GROVE	42	20	59	13	31	-5	0.04	-0.66	0.04	0.04	3	38.50	89	37	33	0	7	1	0
SE	DELTA	38	23	49	18	31	-8	0.58	-0.21	0.58	0.58	43	34.12	80	37	34	0	7	1	1
	CHARLESTON	39	22	50	17	31	-8	0.61	-0.31	0.61	0.61	45	32.92	77	35	32	0	7	1	1
	GLENNONVILLE	41	25	51	22	33	-7	0.42	-0.41	0.42	0.42	35	26.60	67	40	37	0	7	1	0
	CLARKTON	41	23	52	19	32	-8	0.49	-0.36	0.49	0.49	39	29.67	73	40	34	0	7	1	0
	PORTAGEVILLE DC	41	25	52	21	33	-8	0.96	0.12	0.96	0.96	68	35.20	82	42	35	0	7	1	1
	PORTAGEVILLE LF	41	25	53	21	33	-8	0.78	-0.05	0.78	0.78	55	31.21	73	40	35	0	6	1	1
	STEELE	43	26	54	23	34	-8	0.90	0.02	0.90	0.90	55	34.70	77	42	35	0	7	1	1
	CARDWELL	43	24	54	20	34	-7	0.65	-0.20	0.65	0.65	46	30.39	69	44	37	0	7	1	1

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

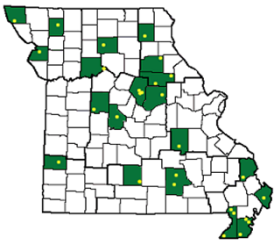
Data are preliminary and subject to revision.

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)

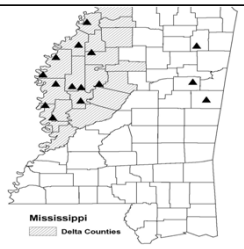
Weather and Crop Summary for the Mississippi Delta: Modified arctic air took hold of the region, resulting in multiple nights with temperatures below the freezing mark. Following the cold spell, a return to above-normal temperatures was accompanied by shower and thunderstorm activity.

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

National Weather Data for Selected Cities

Weather Data for the Week Ending December 11, 2010

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

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. °F		NUMBER OF DAYS PRECIP	
		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 DEC 1	PCT. NORMAL SINCE DEC 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	46	27	57	16	37	-11	0.51	-0.48	0.51	0.51	32	47.03	92	77	32	0	5	1	1
	HUNTSVILLE	44	28	53	19	36	-9	0.75	-0.53	0.75	0.75	37	45.14	84	67	46	0	5	1	1
	MOBILE	56	31	69	22	43	-11	0.56	-0.55	0.56	0.56	31	59.03	93	84	44	0	5	1	1
	MONTGOMERY	52	27	65	19	39	-12	0.39	-0.80	0.39	0.39	21	37.71	73	79	34	0	6	1	0
AK	ANCHORAGE	22	8	26	1	15	-3	0.04	-0.19	0.02	0.20	57	15.79	103	87	78	0	7	3	0
	BARROW	-2	-17	9	-24	-9	0	0.02	0.02	0.01	0.06	600	5.39	134	89	77	0	7	2	0
	FAIRBANKS	-11	-23	4	-30	-17	-13	0.03	-0.11	0.02	0.06	27	10.16	104	78	74	0	7	2	0
	JUNEAU	34	25	41	24	30	0	0.38	-0.81	0.24	0.95	51	52.93	97	93	81	0	7	3	0
	KODIAK	36	30	39	25	33	2	0.62	-0.98	0.29	1.22	49	65.41	93	84	72	0	4	4	0
	NOME	14	-4	23	-10	5	-6	0.01	-0.23	0.01	0.47	124	13.12	82	85	75	0	7	1	0
AZ	FLAGSTAFF	55	24	58	17	40	8	0.00	-0.39	0.00	0.00	0	24.35	112	82	26	0	7	0	0
	PHOENIX	77	49	80	48	63	7	0.00	-0.18	0.00	0.00	0	8.07	106	40	23	0	0	0	0
	PRESCOTT	63	30	66	24	47	8	0.00	-0.28	0.00	0.00	0	19.09	104	72	19	0	6	0	0
	TUCSON	77	45	82	41	61	8	0.00	-0.19	0.00	0.00	0	10.66	93	34	18	0	0	0	0
AR	FORT SMITH	51	28	57	21	40	-3	0.00	-0.92	0.00	0.00	0	33.13	79	81	39	0	6	0	0
	LITTLE ROCK	49	29	60	25	39	-6	0.15	-1.06	0.15	0.15	8	34.58	72	86	45	0	6	1	0
CA	BAKERSFIELD	67	45	71	40	56	8	0.23	0.09	0.22	0.23	105	6.90	116	85	67	0	0	2	0
	FRESNO	64	47	67	41	55	9	0.32	0.07	0.32	0.34	87	10.93	106	94	79	0	0	1	0
	LOS ANGELES	68	51	74	48	60	2	0.33	0.00	0.17	0.33	65	11.53	97	90	64	0	0	2	0
	REDDING	57	48	61	41	53	7	2.21	1.27	1.07	2.38	162	33.40	110	97	90	0	0	6	2
	SACRAMENTO	61	48	64	41	55	8	1.01	0.51	0.76	1.37	173	18.67	115	98	73	0	0	4	1
	SAN DIEGO	69	50	73	47	60	2	0.00	-0.22	0.00	0.00	0	11.27	115	88	64	0	0	0	0
	SAN FRANCISCO	60	51	62	45	55	5	1.23	0.65	0.82	1.25	137	19.40	107	92	84	0	0	3	1
	STOCKTON	62	48	66	39	55	8	0.78	0.40	0.42	1.04	173	15.55	123	97	88	0	0	3	0
CO	ALAMOSA	50	6	55	-2	28	8	0.00	-0.06	0.00	0.00	0	5.61	80	75	39	0	7	0	0
	CO SPRINGS	49	23	59	17	36	6	0.00	-0.06	0.00	0.00	0	9.30	55	67	28	0	7	0	0
	DENVER INTL	51	25	60	18	38	7	0.00	-0.06	0.00	0.01	10	12.65	94	64	29	0	5	0	0
	GRAND JUNCTION	48	28	54	25	38	7	0.00	-0.09	0.00	0.00	0	8.17	95	81	61	0	6	0	0
	PUEBLO	53	17	65	9	35	3	0.00	-0.07	0.00	0.00	0	11.17	92	65	38	0	7	0	0
CT	BRIDGEPORT	36	23	43	15	29	-9	0.00	-0.76	0.00	1.15	96	43.00	103	63	44	0	7	0	0
	HARTFORD	33	18	42	6	25	-9	0.00	-0.81	0.00	1.43	110	39.63	90	72	50	0	7	0	0
DC	WASHINGTON	39	28	47	26	34	-8	0.08	-0.58	0.08	0.87	83	33.87	91	63	40	0	7	1	0
DE	WILMINGTON	37	24	44	19	31	-8	0.09	-0.66	0.09	0.93	78	42.48	105	73	42	0	7	1	0
FL	DAYTONA BEACH	60	39	70	29	50	-12	0.30	-0.28	0.29	0.34	37	39.34	83	85	41	0	2	2	0
	JACKSONVILLE	55	32	62	24	44	-13	0.00	-0.55	0.00	0.03	3	33.10	65	83	41	0	4	0	0
	KEY WEST	66	58	74	54	62	-11	0.10	-0.34	0.07	0.10	14	38.84	104	86	62	0	0	2	0
	MIAMI	69	50	79	44	59	-12	0.07	-0.46	0.07	0.07	8	63.95	112	82	43	0	0	1	0
	ORLANDO	63	41	74	31	52	-12	0.08	-0.45	0.08	0.09	11	45.03	96	84	48	0	1	1	0
	PENSACOLA	55	33	69	27	44	-12	0.03	-0.82	0.03	0.03	2	61.51	100	76	40	0	4	1	0
	TALLAHASSEE	56	26	67	21	41	-14	0.00	-0.83	0.00	0.00	0	57.05	94	82	40	0	6	0	0
	TAMPA	60	41	71	36	51	-14	0.12	-0.40	0.12	0.12	15	39.91	92	79	43	0	0	1	0
	WEST PALM BEACH	68	46	80	36	57	-13	0.38	-0.47	0.38	0.38	27	52.47	88	80	57	0	0	1	0
GA	ATHENS	45	23	51	16	34	-13	0.00	-0.79	0.00	0.03	2	45.83	101	69	40	0	7	0	0
	ATLANTA	45	27	53	22	36	-11	0.12	-0.75	0.12	0.12	9	46.64	98	62	37	0	6	1	0
	AUGUSTA	49	23	58	16	36	-13	0.00	-0.59	0.00	0.40	44	27.85	66	78	37	0	6	0	0
	COLUMBUS	51	29	60	23	40	-11	0.07	-0.92	0.07	0.07	4	35.78	78	71	27	0	5	1	0
	MACON	50	23	59	17	37	-13	0.00	-0.83	0.00	0.00	0	43.00	102	83	30	0	7	0	0
	SAVANNAH	51	29	60	21	40	-13	0.14	-0.38	0.14	0.20	25	34.93	73	72	43	0	5	1	0
HI	HILO	80	63	85	60	72	-1	0.09	-2.76	0.06	5.16	110	61.12	51	85	69	0	0	3	0
	HONOLULU	80	67	83	64	74	-2	2.42	1.83	1.85	2.74	301	8.46	52	84	68	0	0	3	2
	KAHULUI	82	61	85	55	72	-2	1.52	0.92	1.49	1.73	186	7.66	46	81	66	0	0	2	1
	LIHUE	77	65	80	63	71	-3	3.36	2.31	2.01	4.46	269	19.10	52	86	76	0	0	4	3
ID	BOISE	42	30	45	26	36	4	0.50	0.18	0.25	1.18	231	12.94	114	93	83	0	7	4	0
	LEWISTON	44	31	56	26	38	3	0.43	0.20	0.27	0.78	211	13.47	112	85	73	0	4	3	0
	POCATELLO	39	26	42	20	33	6	0.34	0.10	0.19	0.68	179	9.94	84	94	82	0	6	4	0
IL	CHICAGO/O'HARE	28	13	37	5	20	-11	0.48	-0.13	0.45	0.97	99	36.23	104	84	68	0	7	2	0
	MOLINE	28	11	42	4	20	-10	0.35	-0.19	0.35	0.67	79	44.12	120	83	68	0	7	1	0
	PEORIA	31	12	46	5	22	-9	0.38	-0.25	0.37	0.55	54	40.92	118	84	60	0	7	2	0
	ROCKFORD	28	9	46	1	19	-9	0.41	-0.12	0.38	0.79	92	36.14	102	78	65	0	7	3	0
	SPRINGFIELD	34	17	50	11	26	-8	0.34	-0.29	0.33	0.34	34	45.63	134	83	56	0	7	2	0
IN	EVANSVILLE	38	21	50	14	29	-9	0.63	-0.28	0.63	0.76	52	31.76	75	73	54	0	7	1	1
	FORT WAYNE	29	15	39	8	22	-10	0.47	-0.20	0.26	0.55	51	32.61	94	88	71	0	7	5	0
	INDIANAPOLIS	31	16	43	5	23	-12	0.43	-0.32	0.38	0.71	59	32.68	84	82	60	0	7	4	0
	SOUTH BEND	30	18	38	7	24	-8	0.91	0.15	0.44	0.98	82	31.42	83	91	79	0	7	7	0
IA	BURLINGTON	33	15	48	10	24	-7	0.35	-0.20	0.35	0.35	40	53.00	144	91	56	0	7	1	0
	CEDAR RAPIDS	27	9	40	2	18	-9	0.45	0.06	0.45	0.45	69	40.17	123	90	68	0	7	1	0
	DES MOINES	37	15	53	9	26	-2	0.28	-0.06	0.28	0.28	51	51.30	151	80	59	0	7	1	0
	DUBUQUE	23	7	33	-2	15	-11	0.77	0.33	0.71	1.45	201	45.06	130	88	76	0	7	2	1
	SIOUX CITY	36	10	49	2	23	-2	0.52	0.36	0.52	0.52	186	31.61	123	84	67	0	7	1	1
	WATERLOO	27	9	39	2	18	-7	0.42	0.12	0.40	0.49	98	41.46	127	92	76	0	7	2	0
KS	CONCORDIA	47	20	62	14	34	1	0.02	-0.18	0.02	0.02	6	31.83	114	83	55	0	7	1	0
	DODGE CITY	50	24	64	17	37	2	0.23	0.06	0.23	0.23	88	25.14	115	82	43	0	7	1	0
	GOODLAND	49	22	61	10	35	4	0.03	-0.05	0.03	0.03	21	19.34	99	75	50	0	7	1	0
	TOPEKA	47	19	62	14	33	-1	0.00	-0.37	0.00	0.00	0	36.30	104	81	55	0	7	0	0

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending December 11, 2010

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		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 DEC 1	PCT. NORMAL SINCE DEC 1	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
	WICHITA	47	22	55	15	34	-2	0.00	-0.32	0.00	0.00	0	28.05	95	81	54	0	7	0	0
KY	JACKSON	34	21	53	11	28	-13	0.24	-0.79	0.22	0.74	45	43.04	92	82	52	0	6	3	0
	LEXINGTON	33	18	49	6	26	-13	0.34	-0.57	0.33	0.71	50	36.26	84	72	58	0	6	2	0
	LOUISVILLE	38	22	52	13	30	-11	0.23	-0.65	0.23	0.52	37	37.35	88	77	48	0	5	1	0
	PADUCAH	39	21	51	13	30	-10	0.74	-0.38	0.74	0.74	42	35.19	75	83	46	0	7	1	1
LA	BATON ROUGE	58	33	74	25	46	-8	0.23	-0.93	0.23	0.23	13	50.89	85	90	38	0	4	1	0
	LAKE CHARLES	61	38	74	29	49	-6	0.24	-0.77	0.19	0.24	15	32.81	61	89	47	0	2	2	0
	NEW ORLEANS	59	39	73	33	49	-8	0.20	-1.02	0.20	0.20	10	51.95	85	70	41	0	0	1	0
	SHREVEPORT	56	33	69	26	44	-6	0.00	-1.04	0.00	0.00	0	30.31	63	90	42	0	4	0	0
ME	CARIBOU	27	17	38	3	22	2	0.60	-0.10	0.50	2.17	195	40.58	115	91	77	0	7	6	1
	PORTLAND	32	18	41	10	25	-6	0.04	-0.94	0.01	1.03	66	49.51	115	75	49	0	7	4	0
MD	BALTIMORE	38	24	43	19	31	-8	0.14	-0.58	0.13	0.94	82	42.44	107	69	48	0	7	2	0
MA	BOSTON	35	24	45	14	29	-9	0.00	-0.84	0.00	0.38	29	46.44	116	63	41	0	7	0	0
	WORCESTER	29	17	41	7	23	-9	0.00	-0.84	0.00	1.17	87	47.42	102	82	48	0	7	0	0
MI	ALPENA	26	15	35	0	21	-6	0.25	-0.16	0.08	0.37	57	25.42	93	88	65	0	7	6	0
	GRAND RAPIDS	32	21	38	11	26	-5	0.44	-0.27	0.38	0.62	54	34.70	98	82	65	0	7	3	0
	HOUGHTON LAKE	26	16	33	2	21	-6	0.40	-0.01	0.17	0.43	66	24.78	91	89	70	0	7	5	0
	LANSING	31	20	39	10	25	-5	0.18	-0.39	0.15	0.20	22	26.28	87	83	67	0	7	2	0
	MUSKEGON	31	22	38	15	27	-4	0.73	0.08	0.47	0.90	87	29.72	95	81	73	0	7	5	0
	TRAVERSE CITY	29	20	34	3	25	-5	0.36	-0.22	0.16	0.42	46	29.28	92	92	65	0	7	7	0
MN	DULUTH	17	2	26	-4	10	-8	0.21	-0.06	0.21	0.21	46	34.51	113	82	68	0	7	1	0
	INT'L FALLS	13	-8	26	-19	3	-10	0.29	0.11	0.29	0.31	103	31.51	134	85	70	0	7	1	0
	MINNEAPOLIS	23	9	34	3	16	-6	1.23	0.98	1.16	1.75	417	31.86	111	81	67	0	7	4	1
	ROCHESTER	21	7	34	-4	14	-7	5.01	4.73	4.62	5.73	1219	41.92	136	85	79	0	7	3	1
	ST. CLOUD	20	6	31	-1	13	-5	0.38	0.22	0.38	0.80	286	32.19	120	89	63	0	7	1	0
MS	JACKSON	53	28	70	21	40	-10	0.88	-0.32	0.88	0.88	46	44.21	84	83	39	0	5	1	1
	MERIDIAN	52	24	68	17	38	-13	0.47	-0.73	0.47	0.47	25	40.92	74	87	39	0	6	1	0
	TUPELO	45	27	58	17	36	-9	0.73	-0.66	0.73	0.73	34	46.45	89	72	49	0	6	1	1
MO	COLUMBIA	39	18	54	13	28	-7	0.28	-0.39	0.28	0.28	26	43.88	113	86	54	0	7	1	0
	KANSAS CITY	43	19	59	13	31	-3	0.02	-0.41	0.02	0.02	3	41.42	112	85	48	0	7	1	0
	SAINT LOUIS	38	21	57	16	29	-8	0.26	-0.49	0.26	0.26	21	38.00	102	80	58	0	7	1	0
	SPRINGFIELD	43	20	56	14	31	-7	0.03	-0.87	0.03	0.03	2	45.44	105	88	57	0	7	1	0
MT	BILLINGS	35	18	44	7	26	-2	0.00	-0.11	0.00	0.14	74	17.94	126	82	66	0	6	0	0
	BUTTE	34	7	44	-7	20	1	0.07	-0.04	0.04	0.25	147	14.99	121	91	57	0	7	2	0
	CUT BANK	32	6	43	-16	19	-4	0.01	-0.05	0.01	0.01	11	7.25	59	85	63	0	7	1	0
	GLASGOW	20	3	40	-11	11	-8	0.33	0.27	0.33	0.44	489	17.03	156	90	84	0	7	1	0
	GREAT FALLS	37	16	44	-9	26	0	0.00	-0.11	0.00	0.29	171	18.09	126	86	59	0	5	0	0
	HAVRE	22	3	40	-7	12	-10	0.31	0.22	0.31	0.33	254	14.10	127	85	80	0	7	1	0
	MISSOULA	31	19	42	10	25	0	0.17	-0.08	0.10	0.38	100	15.21	117	88	82	0	7	4	0
NE	GRAND ISLAND	45	15	60	7	30	2	0.02	-0.16	0.01	0.02	6	29.06	114	79	53	0	7	2	0
	LINCOLN	42	11	56	6	27	-2	0.04	-0.18	0.03	0.04	11	34.21	123	86	58	0	7	2	0
	NORFOLK	39	12	55	3	26	0	0.05	-0.13	0.04	0.05	16	28.93	110	84	68	0	7	2	0
	NORTH PLATTE	46	14	60	5	30	2	0.00	-0.08	0.00	0.00	0	22.74	117	89	48	0	7	0	0
	OMAHA	40	15	52	8	28	-1	0.09	-0.17	0.08	0.09	20	34.55	116	84	63	0	7	2	0
	SCOTTSBLUFF	44	19	57	14	32	5	0.04	-0.09	0.02	0.04	19	15.30	96	86	66	0	7	2	0
	VALENTINE	43	8	57	-4	25	-1	0.18	0.10	0.17	0.18	120	17.01	88	85	67	0	7	2	0
NV	ELY	46	26	50	20	36	9	0.31	0.23	0.19	0.31	238	8.10	84	87	68	0	7	2	0
	LAS VEGAS	62	44	68	42	53	5	0.13	0.07	0.13	0.13	144	4.25	102	63	45	0	0	1	0
	RENO	56	37	62	28	47	12	0.12	-0.07	0.08	0.13	43	7.99	116	80	57	0	2	2	0
	WINNEMUCCA	50	33	52	29	42	11	0.13	-0.04	0.12	0.35	135	11.03	142	87	72	0	4	2	0
NH	CONCORD	31	16	41	1	23	-7	0.00	-0.69	0.00	1.00	91	35.36	99	72	46	0	7	0	0
NJ	NEWARK	38	26	46	17	32	-7	0.00	-0.81	0.00	1.07	82	40.66	92	68	39	0	7	0	0
NM	ALBUQUERQUE	57	32	60	28	45	7	0.00	-0.08	0.00	0.00	0	7.89	87	51	21	0	4	0	0
NY	ALBANY	30	18	44	7	24	-8	0.00	-0.63	0.00	1.39	136	36.28	100	79	52	0	7	0	0
	BINGHAMTON	25	15	35	6	20	-10	0.77	0.02	0.44	1.91	161	38.15	104	82	70	0	7	4	0
	BUFFALO	30	20	39	12	25	-8	0.44	-0.46	0.42	1.63	113	35.63	93	83	62	0	7	3	0
	ROCHESTER	29	19	39	7	24	-8	0.48	-0.17	0.24	1.86	181	36.68	114	82	72	0	7	4	0
	SYRACUSE	28	18	40	3	23	-9	4.80	4.00	1.97	6.21	481	45.25	118	89	73	0	7	5	3
NC	ASHEVILLE	37	20	48	15	29	-12	0.00	-0.76	0.00	0.10	8	43.09	96	69	41	0	7	0	0
	CHARLOTTE	42	20	50	12	31	-16	0.01	-0.65	0.01	0.55	52	35.21	85	75	30	0	7	1	0
	GREENSBORO	39	22	46	17	30	-13	0.03	-0.63	0.03	0.95	90	41.46	101	69	33	0	7	1	0
	HATTERAS	46	35	59	29	40	-12	0.39	-0.53	0.36	0.98	67	58.89	108	78	52	0	2	2	0
	RALEIGH	40	23	48	16	32	-13	0.19	-0.44	0.19	0.74	73	35.30	86	68	45	0	7	1	0
	WILMINGTON	45	27	55	19	36	-15	0.84	0.01	0.84	1.61	124	56.55	104	78	40	0	6	1	1
ND	BISMARCK	17	0	39	-17	9	-10	0.36	0.28	0.24	1.42	947	23.20	140	89	84	0	7	3	0
	DICKINSON	23	1	38	-11	12	-9	0.00	-0.08	0.00	0.12	92	14.79	92	90	73	0	7	0	0
	FARGO	16	1	36	-7	8	-8	0.12	0.01	0.12	0.32	178	28.04	135	83	71	0	7	1	0
	GRAND FORKS	15	-1	35	-8	7	-8	0.01	-0.10	0.01	0.06	33	27.11	141	93	73	0	7	1	0
	JAMESTOWN	16	-1	37	-12	8	-9	0.01	-0.07	0.01	0.16	123	23.48	129	88	71	0	7	1	0
	WILLISTON	17	-1	33	-14	8	-8	0.73	0.61	0.72	0.82	410	20.15	146	88	81	0	7	2	1
OH	AKRON-CANTON	29	20	44	17	25	-9	0.55	-0.17	0.20	0.80	70	36.70	100	85	68	0	7	7	0
	CINCINNATI	32	17	47	6	25	-12	0.31	-0.45	0.31	0.54	45	35.45	87	83	63	0	7	1	0
	CLEVELAND	32	23	44	16	27	-7	0.50	-0.29	0.20	0.58	46	34.64	94	84	58	0	7	7	0
	COLUMBUS	33	20	49	14	27	-9	0.25	-0.47	0.13	0.28	24	35.29	96	82	61	0	7	5	0
	DAYTON	31	17	46	8	24	-11	0.31	-0.42	0.29	0.45	39	32.60	87	82	58	0	7	3	0
	MANSFIELD	29	19	43	12	24	-9	0.15	-0.66	0.06	0.19	15	37.42	91	85	60	0	7	5	0

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending December 11, 2010

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		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 DEC 1	PCT. NORMAL SINCE DEC 1	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
	TOLEDO	33	20	44	9	26	-6	0.35	-0.30	0.24	0.35	34	33.51	106	80	60	0	7	4	0
	YOUNGSTOWN	29	19	42	14	24	-9	1.46	0.72	0.46	2.04	173	37.02	102	91	76	0	7	7	0
OK	OKLAHOMA CITY	50	28	58	22	39	-3	0.02	-0.39	0.02	0.02	3	32.42	94	87	41	0	6	1	0
	TULSA	48	27	58	19	38	-4	0.00	-0.65	0.00	0.00	0	33.91	83	79	51	0	6	0	0
OR	ASTORIA	53	43	56	40	48	4	3.49	1.00	1.83	3.84	97	72.14	119	85	70	0	0	6	2
	BURNS	38	21	47	17	30	3	0.63	0.35	0.40	1.36	316	12.84	132	93	86	0	7	4	0
	EUGENE	51	40	58	34	46	5	2.14	0.12	0.89	2.52	78	41.22	90	91	85	0	0	6	2
	MEDFORD	56	41	63	33	49	10	0.30	-0.40	0.20	1.25	111	18.25	110	95	65	0	0	5	0
	PENDLETON	39	30	55	25	35	0	0.38	0.04	0.16	0.80	145	16.47	139	93	79	0	4	3	0
	PORTLAND	48	40	52	38	44	3	3.88	2.51	1.72	4.09	188	42.03	125	85	75	0	0	6	2
	SALEM	52	42	59	38	47	6	3.42	1.85	1.16	3.83	153	43.33	120	90	81	0	0	7	3
PA	ALLENTOWN	34	20	42	12	27	-8	0.01	-0.77	0.01	0.23	18	47.91	111	76	50	0	7	1	0
	ERIE	32	25	44	18	28	-8	0.27	-0.65	0.21	0.97	66	38.74	96	75	60	0	7	4	0
	MIDDLETOWN	35	24	38	19	29	-8	0.10	-0.70	0.09	1.17	91	38.63	100	76	49	0	7	2	0
	PHILADELPHIA	37	26	45	21	32	-8	0.03	-0.71	0.03	1.06	91	42.28	106	62	40	0	7	1	0
	PITTSBURGH	31	21	47	17	26	-9	0.01	-0.68	0.01	0.54	50	36.82	102	81	59	0	7	1	0
	WILKES-BARRE	31	20	41	12	26	-8	0.01	-0.62	0.01	0.24	24	30.09	84	72	50	0	7	1	0
	WILLIAMSPORT	33	21	37	12	27	-7	0.06	-0.68	0.04	2.77	231	41.84	105	83	62	0	7	3	0
RI	PROVIDENCE	35	21	48	11	28	-9	0.00	-0.94	0.00	0.62	42	50.11	114	67	47	0	7	0	0
SC	BEAUFORT	52	31	62	23	41	-12	0.10	-0.49	0.10	0.13	14	36.46	77	72	37	0	5	1	0
	CHARLESTON	51	29	62	22	40	-13	0.26	-0.38	0.25	0.26	26	55.34	112	76	40	0	5	2	0
	COLUMBIA	46	25	54	16	36	-13	0.00	-0.65	0.00	0.42	42	34.49	75	74	41	0	5	0	0
	GREENVILLE	43	23	51	16	33	-13	0.00	-0.83	0.00	0.03	2	41.60	87	69	31	0	7	0	0
SD	ABERDEEN	20	1	43	-7	11	-8	0.11	0.05	0.11	0.32	356	25.77	129	88	79	0	7	1	0
	HURON	29	6	51	-4	18	-4	0.13	0.05	0.12	0.16	114	29.66	144	91	69	0	7	2	0
	RAPID CITY	40	14	53	3	27	1	0.09	0.03	0.09	0.09	100	18.72	115	87	45	0	7	1	0
	SIOUX FALLS	30	8	48	-1	19	-3	0.45	0.32	0.43	0.46	192	37.18	152	87	72	0	7	3	0
TN	BRISTOL	37	20	52	12	29	-10	0.03	-0.74	0.02	0.40	33	35.12	90	76	39	0	7	2	0
	CHATTANOOGA	43	27	52	19	35	-10	0.46	-0.65	0.46	0.47	26	40.95	80	67	38	0	6	1	0
	KNOXVILLE	40	23	53	15	32	-11	0.26	-0.75	0.23	0.50	31	43.95	97	75	42	0	6	2	0
	MEMPHIS	45	28	56	24	37	-9	0.98	-0.46	0.98	0.98	43	46.36	90	72	44	0	6	1	1
	NASHVILLE	40	25	51	14	33	-10	1.18	0.09	1.18	1.18	68	58.38	129	76	41	0	6	1	1
TX	ABILENE	60	31	72	22	46	-1	0.00	-0.25	0.00	0.00	0	26.59	116	63	38	0	4	0	0
	AMARILLO	53	27	63	21	40	1	0.00	-0.09	0.00	0.00	0	26.33	137	74	29	0	6	0	0
	AUSTIN	63	30	75	23	47	-7	0.00	-0.53	0.00	0.00	0	27.63	86	74	43	0	5	0	0
	BEAUMONT	62	40	77	28	51	-5	0.32	-0.81	0.32	0.32	18	41.78	74	90	45	0	1	1	0
	BROWNSVILLE	74	53	82	40	63	0	0.01	-0.25	0.01	0.01	2	36.56	136	82	53	0	0	1	0
	CORPUS CHRISTI	70	44	84	33	57	-3	0.23	-0.14	0.21	0.23	40	43.53	140	77	52	0	0	2	0
	DEL RIO	66	37	74	30	52	-2	0.00	-0.17	0.00	0.00	0	29.77	168	64	34	0	1	0	0
	EL PASO	67	35	73	26	51	4	0.00	-0.16	0.00	0.00	0	6.51	73	41	18	0	2	0	0
	FORT WORTH	57	36	68	30	47	-2	0.00	-0.54	0.00	0.00	0	29.65	90	78	35	0	2	0	0
	GALVESTON	63	47	73	41	55	-5	0.28	-0.52	0.28	0.28	22	31.28	75	85	52	0	0	1	0
	HOUSTON	64	39	77	31	52	-3	0.05	-0.79	0.05	0.05	4	39.74	87	86	50	0	1	1	0
	LUBBOCK	59	28	72	21	43	2	0.00	-0.14	0.00	0.00	0	26.46	145	62	30	0	6	0	0
	MIDLAND	63	28	74	20	46	0	0.00	-0.14	0.00	0.00	0	16.04	112	60	31	0	6	0	0
	SAN ANGELO	64	30	78	20	47	-1	0.00	-0.19	0.00	0.00	0	19.13	94	64	35	0	5	0	0
	SAN ANTONIO	65	38	75	31	51	-3	0.00	-0.44	0.00	0.00	0	36.73	116	79	31	0	1	0	0
	VICTORIA	66	38	79	31	52	-5	0.14	-0.41	0.14	0.14	16	45.57	118	89	51	0	1	1	0
	WACO	60	36	72	26	48	-2	0.00	-0.63	0.00	0.00	0	39.32	125	76	43	0	2	0	0
	WICHITA FALLS	56	30	69	23	43	-2	0.00	-0.37	0.00	0.00	0	28.83	104	85	42	0	4	0	0
UT	SALT LAKE CITY	44	32	47	29	38	6	0.28	0.01	0.20	0.30	70	15.98	102	96	74	0	4	5	0
VT	BURLINGTON	26	17	35	0	21	-8	0.28	-0.27	0.15	1.09	122	38.22	110	83	58	0	7	6	0
VA	LYNCHBURG	37	17	43	9	27	-13	0.02	-0.70	0.02	1.30	115	44.82	109	72	37	0	7	1	0
	NORFOLK	42	27	54	22	34	-13	0.44	-0.17	0.44	0.70	73	48.80	112	75	45	0	6	1	0
	RICHMOND	41	23	45	18	32	-11	0.30	-0.34	0.30	1.63	160	34.26	82	71	34	0	7	1	0
	ROANOKE	36	22	43	17	29	-12	0.00	-0.66	0.00	0.87	82	42.36	104	61	40	0	7	0	0
	WASH/DULLES	37	23	44	17	30	-9	0.10	-0.60	0.10	0.84	76	38.39	96	67	41	0	7	1	0
WA	OLYMPIA	50	37	54	28	43	4	3.60	1.70	1.42	3.69	122	49.78	108	96	89	0	2	5	3
	QUILLAYUTE	51	42	55	38	47	6	6.12	2.68	1.61	6.38	117	########	113	94	89	0	0	6	4
	SEATTLE-TACOMA	50	41	54	36	46	5	2.57	1.21	0.88	2.57	118	40.87	122	84	70	0	0	5	3
	SPOKANE	34	26	40	15	30	1	0.92	0.38	0.40	1.28	149	17.11	112	98	79	0	6	4	0
	YAKIMA	39	27	46	25	33	3	0.94	0.64	0.65	0.94	204	9.70	132	90	77	0	7	4	1
WV	BECKLEY	28	16	42	5	22	-15	0.17	-0.52	0.07	0.64	59	41.64	105	73	54	0	7	4	0
	CHARLESTON	35	21	52	11	28	-12	0.33	-0.47	0.21	0.71	55	42.99	102	82	48	0	7	4	0
	ELKINS	29	16	47	12	23	-12	0.27	-0.53	0.13	1.35	106	38.95	89	87	56	0	7	3	0
	HUNTINGTON	35	19	51	9	27	-13	0.09	-0.68	0.07	0.22	18	41.33	103	83	50	0	7	2	0
WI	EAU CLAIRE	21	7	30	-2	14	-8	0.57	0.30	0.54	0.65	144	35.50	113	89	65	0	7	3	1
	GREEN BAY	28	16	33	10	22	-3	0.44	0.07	0.26	0.44	71	36.66	129	81	55	0	7	3	0
	LA CROSSE	24	7	32	0	16	-10	1.12	0.79	1.01	1.57	280	42.05	133	89	65	0	7	3	1
	MADISON	27	12	37	3	19	-8	0.68	0.25	0.60	0.96	137	37.33	117	83	67	0	7	2	1
	MILWAUKEE	30	16	39	9	23	-7	0.91	0.35	0.82	1.21	136	35.62	106	80	64	0	7	2	1
WY	CASPER	43	19	50	7	31	6	0.04	-0.10	0.03	0.10	45	11.45	91	82	62	0	7	2	0
	CHEYENNE	43	22	50	15	33	5	0.08	-0.03	0.07	0.09	50	15.43	102	74	51	0	6	2	0
	LANDER	40	21	47	16	31	8	0.00	-0.14	0.00	0.00	0	13.69	105	85	48	0	7	0	0
	SHERIDAN	37	11	52	2	24	0	0.08	-0.06	0.04	0.10	45	14.23	100	82	66	0	7	2	0

Based on 1971-2000 normals ***** Not Available**

November Weather and Crop Summary

Weather

Weather summary provided by USDA/WAOB

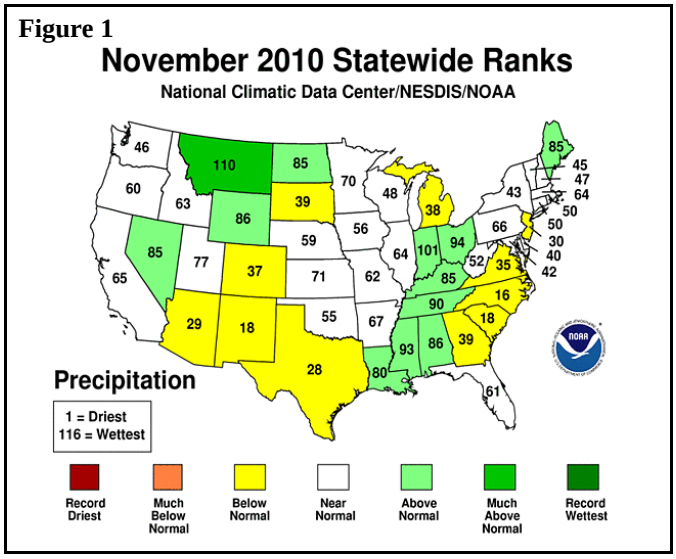
Highlights: November rainfall aided drought-stressed pastures and winter grains from the central Gulf Coast States into the Ohio Valley (figure 1). In fact, drought in the eastern Corn Belt was nearly eradicated by late-autumn precipitation. In contrast, drought developed or intensified in parts of the southern Atlantic region, particularly across Florida and Georgia.

Farther north and west, Midwestern producers were able to virtually complete corn and soybean harvesting prior to the onset of wintry weather. By month's end, snow covered parts of the upper Midwest, consistent with an evolving La Niña.

Also typical of La Niña, cold, stormy weather dominated the northern Plains and the Northwest (figure 2), where the well-established winter wheat crop was largely protected from early-season cold outbreaks by an extensive snow cover. In contrast, unfavorably dry weather covered a portion of the central and southern Plains, leaving some winter grains poorly established and vulnerable to winter weather extremes. Prior to mid-month, however, a single storm provided some much-needed moisture from northern Texas to southeastern Nebraska.

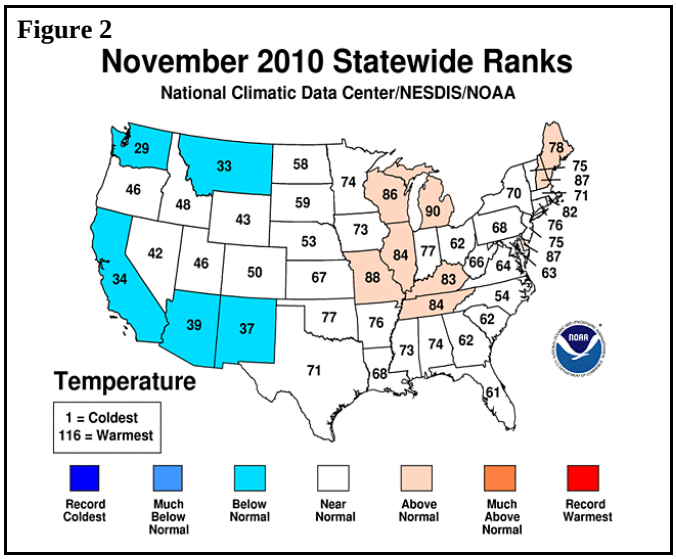
Elsewhere, a parade of storms helped to establish high-elevation snow packs from the Pacific coastal ranges to the Rockies, excluding parts of the Southwest.

Figure 1



Summary: The month opened on a warm note in Texas, where daily-record highs for November 1 included 96°F in McAllen and 90°F in Lufkin, Del Rio, and Corpus Christi. Later, record-setting warmth shifted to the northern High Plains and the West. Miles City, MT (72°F), collected a daily-record high for November 2, followed the next day by monthly record-matching highs in locations such as Santa Ana, CA (101°F; tied November 1, 1966), and Seattle, WA (74°F; tied November 4, 1949). Long Beach, CA (100°F on November 3), experienced its latest triple-digit reading, previously established with a high of 101°F on November 1, 1966. Record-breaking heat continued in California for several more days, with San Diego (100°F on November 4) and Fresno (90°F on November 5) tallying monthly record highs. Previous records had been 97°F in San Diego on November 1, 1966, and November 4, 1976, and 89°F in Fresno on November 5, 1949. It was also San Diego's first triple-digit reading since September 25, 1989, more than 21 years ago. In contrast, chilly conditions gripped the Great Lakes and Northeastern States. In Michigan, daily-record lows for November 1 dipped to 19°F in Alpena and 20°F in Flint. The following day, records for November 2 were set in locations such as Allentown, PA (23°F), and Youngstown, OH (24°F). A few days later, during a broader cold outbreak, record lows for November 6 included 19°F in South Bend, IN; 23°F in Parkersburg, WV; and 25°F in Vicksburg, MS. Meanwhile, parts of the Midwest and East experienced some early-season snow or sleet. Although amounts were generally light, daily-record totals of a trace were noted in Rockford, IL (on November 4), and Huntsville, AL (on November 5).

Figure 2



Chilly weather lingered for several more days in the Southeast, while warmth covered the nation's mid-section. On November 7, daily-record lows dipped to 26°F in Charlotte, NC, and 41°F in Lakeland, FL. On the same date, highs soared to daily-record levels in Hill City, KS (83°F), and Havre, MT (75°F). The following day, records for November 8 included a low of 34°F in Gainesville, FL, and a high of 82°F in Garden City, KS. By mid-week, warmth expanded across the Midwest in advance of an approaching storm. International Falls, MN (64°F), posted consecutive daily-record highs on November 9-10. Additional daily-record highs on the latter date included 72°F in Ottumwa, IA; 70°F in Rockford, IL; and 68°F in Minneapolis-St. Paul (MSP), MN. MSP's warm spell, which included a high of 69°F on November 9, was followed by an 8.0-inch snowfall on

November 13-14. Other official snowfall totals in Minnesota included 10.9 inches in Duluth and 10.4 inches in Chanhassen. Heavy snow also fell in a broader swath stretching from western Iowa into the upper Great Lakes region. Farther west, cold air trailed the winter-like storm. Boise, ID (28°F on November 9), experienced its second-latest first autumn freeze on record, behind only November 11, 1944. The following day in southern California, daily-record lows for November 10 included 27°F in Campo and 32°F in Ramona. Douglas, AZ (23°F), notched a daily-record low for November 13.

Before the cold air arrived, daily-record precipitation totals in the West reached 1.92 inches (on November 7) in Crescent City, CA, and 0.88 inch (on November 8) in Salt Lake City, UT. By November 11, impressive rainfall reached the central and southern Plains. On November 11-12, Concordia, KS, received consecutive daily-record amounts, totaling 2.61 inches. Medicine Lodge, KS, netted 2.75 inches, including a daily-record sum (2.60 inches) on November 12. Rain briefly changed to snow across Texas' northern panhandle, resulting in a November 12 accumulation of 3.0 inches in Amarillo. Heavy precipitation also spread into the upper Midwest, where Iowa locations such as Des Moines (1.96 inches) and Mason City (1.56 inches) collected daily-record precipitation totals for November 12. Mason City's 2-day (November 12-13) rainfall reached 2.41 inches.

Around mid-month, significant rain shifted into the South and East. Selected daily-record rainfall totals included 2.88 inches (on November 16) in Tallahassee, FL; 1.28 inches (on November 16) in London, KY; and 0.98 inch (on November 17) in Bridgeport, CT. Locally heavy precipitation also fell in the Northwest, where Troutdale, OR (1.30 inches), collected a daily-record rainfall for November 17. Within a few days, Western precipitation expanded. Daily-record precipitation amounts for November 20 reached 0.90 inch in Sacramento, CA, and 0.60 inch in Idaho Falls, ID. Windy weather prevailed during the Western transition to a colder, stormier regime. A November-record wind gust of 63 mph was clocked on the 16th in Lewiston, ID. A gust to 112 mph was reported at White Pass in the Washington Cascades. High winds also swept across parts of the East on November 16-17. On the latter date, Worcester, MA, recorded a wind gust to 59 mph. Later, another round of high winds accompanied the leading edge of frigid conditions across the West. Eureka, UT, just south of Salt Lake City, reported a gust to 77 mph on November 20. From November 18-20, 1- to 3-foot snowfall accumulations were common across the West, especially from the Cascades and Sierra Nevada to the northern Rockies. In Yellowstone National Park, 18 inches fell at Old Faithful. Elsewhere, daily-record snowfall totals for November 20 included 8.8 inches in Billings, MT; 8.0 inches in Ely, NV; and 6.6 inches in Williston, ND. Billings' 3-day (November 18-20) snowfall reached 16.2 inches. Elsewhere in Montana, daily-record lows for November 19 included -14°F in Dunkirk and -6°F in Turner.

At the same time, warmth surged across areas from the Plains eastward. On November 21, daily-record highs reached 82°F in Midland, TX, and 73°F in Wichita, KS. A day later, highs climbed to record-setting levels for November 22 in locations such as Montgomery, AL (81°F), and McAlester, OK (80°F). Warmth continued for several more days across the South, with highs soaring to 94°F on Thanksgiving Day (November 25) in McAllen, TX, and 85°F (on November 23) in Vicksburg, MS. Charleston, SC (81°F on November 25), experienced its warmest Thanksgiving Day on record, edging 80°F on November 22, 1973, and November 28, 1985. In stark contrast, a record-setting cold wave gripped much of the West. Daily-record lows included -18°F (on November 22) in Choteau, MT, and -13°F (on November 23) in Aberdeen, SD. From November 21-25, several Western locations reported readings of -20°F or lower. On November 24, daily-record lows in Montana dipped to -27°F at Rogers Pass, -24°F in Sula and Dunkirk, and -21°F in Great Falls. The following day, records for November 25 included -28°F in Crested Butte, CO, and -20°F in Ely, NV. Ely's low also set a November record (previously, -16°F on November 28, 1896). Other monthly record lows included -17°F (on November 24) in Odessa, WA, and -10°F (on November 25) in Winnemucca, NV. Winnemucca's record had stood since November 18, 1880. In California. Truckee (-9, -13, and -4°F) posted three consecutive daily-record lows from November 24-26. Needles, CA (31°F on November 27), experienced its first freeze since January 20, 2008, and first November freeze since 1994. In California's Central Valley, daily-record lows included 27°F (on November 24) in Redding and 29°F (on November 26) in Sacramento. Closer to the coast, Salinas, CA, notched three consecutive daily-record lows (30, 29, and 29°F) from November 24-26.

During the last full week of November, snow fell frequently from the Northwest into the upper Midwest. Daily-record snowfall amounts for November 22 reached 12.6 inches in Fargo, ND, and 2.5 inches in Seattle, WA. By Thanksgiving Day, November 25, snow depths included 11 inches in Billings, MT; 9 inches in Duluth, MN; 7 inches in Williston, ND; 6 inches in Pocatello, ID; and 5 inches in Spokane, WA. Billings received 14.9 inches of snow from November 18-23, representing its second-snowiest 6-day period in November behind 21.3 inches in November 1959. With 7.5 inches on November 22, Spokane, WA, noted its third-snowiest November day on record. Elsewhere, the Sierra Nevada snow pack contained an average of 6 inches of liquid by month's end, nearly 140 percent of the November 30 normal. From November 19-22, the Boreal Ski Resort near Truckee, CA, received 78 inches of snow. Farther east, November 22-25 rainfall totaled 5.19 inches in Evansville, IN. Daily-record rainfall totals topped 3 inches in Jackson, TN (3.09 inches on November 23), and St. Louis, MO (3.08 inches on November 24). In Ohio, Cincinnati received a daily-record sum of 2.62 inches on November 25 en route to a November 23-26 event total of 4.15 inches. Precipitation ended as snow in parts of the South and East, with Memphis, TN, reporting a trace of snow on both November 25 and 26.

At month's send, snow continued to blanket the northern Plains and the Northwest. Daily-record snowfall totals for November

28 included 7.0 inches in Pocatello, ID, and 6.4 inches in Billings, MT. For Pocatello, it was the snowiest November day on record, edging the mark of 6.9 inches set on November 21, 1992. With a monthly total of 23.3 inches, Billings completed its second-snowiest November behind only 25.2 inches in 1978. Elsewhere in the West, November snowfall records were broken in locations such as Spokane, WA (25.9 inches; previously, 24.7 inches in 1955), and Ely, NV (20.3 inches; previously, 17.3 inches in 1985). Meanwhile, heavy precipitation shifted into the eastern one-third of the U.S. On November 29, both Monroe, LA (1.87 inches), and Jonesboro, AR (1.72 inches), noted daily rainfall records. A multitude of daily-record precipitation totals were reported on November 30, including 4.11 inches in Asheville, NC; 3.93 inches in Huntsville, AL; 3.03 inches in London, KY; 2.95 inches in Pittsburgh, PA; 2.66 inches in Greenville-Spartanburg, SC; and 2.47 inches in Parkersburg, WV. For Pittsburgh, it was the wettest November day on record, topping the mark of 1.89 inches set just 5 days earlier. For London, it was the second-wettest November day on record, behind 3.53 inches on November 12, 1975. A severe weather outbreak accompanied the heavy rain, with approximately three dozen tornadoes spotted on November 29-30 across Louisiana, Mississippi, Alabama, Georgia, and South Carolina.

Cold weather persisted at month's end across the West, where Redding (26°F) notched a daily-record low for November 28. In Oregon, Klamath Falls (1 and -1°F) notched consecutive daily-record lows on November 28-29. On November 30, Tucson, AZ (23°F), reported its fourth-lowest temperature of the century, behind 19°F on December 29, 2003, and 20°F on both December 28, 2003, and January 15, 2007. Elsewhere in Arizona, monthly record lows were established on November 30 in locations such as Douglas (11°F; previously, 14°F on November 23, 1957) and Safford (14°F; previously 15°F on November 22, 1979, and November 26, 1992). Daily-record lows for November 30 included -13°F in Milford, UT, and -4°F in Flagstaff, AZ. Conversely, warmth prevailed in Florida, where daily-record highs included 86°F (on November 29) in Tampa and 84°F (on November 30) in Jacksonville.

The month started on a mild note in Alaska, where Eagle (45°F) posted a daily-record high for November 4. In fact, periods of mild weather continued for several weeks, with Kotzebue (33 and 32°F) posting consecutive daily-record highs on November 17-18. Snow accompanied the relative warmth, with Kotzebue receiving 7.6 inches from November 17-19. Similarly, Barrow noted a daily-record snowfall (6.4 inches) on November 17, when the community also notched a daily-record high of 31°F. Stormy weather also affected southeastern Alaska, where Pelican's monthly precipitation total of 20.89 inches was aided by a 15.74-inch sum from November 1-13. Toward month's end, mild, stormy conditions persisted in much of Alaska. King Salmon (52 and 51°F) posted consecutive daily-record highs on November 22-23. Other Alaskan daily records included 49°F (on November 23) in Kodiak and 33°F (on November 22) in Barrow. Even more impressive were some of the Alaskan precipitation totals. From November 22-24, Fairbanks received rainfall totaling 0.94 inch before precipitation changed to snow. The only greater winter rainfall event in Fairbanks' history occurred on January 20, 1937, when 0.99 inch fell. Meanwhile, monthly precipitation climbed to 2.87 inches in Anchorage, edging its November 1976 standard of 2.84 inches. Anchorage also received a daily-record snowfall of 6.7 inches on Thanksgiving Day, November 25. Elsewhere, McGrath received an astounding 2.10 inches of rain from November 21-24, while Barrow set a November record with 20.0 inches of snow (previously, 19.0 inches in 1925). It was also Barrow's third-snowiest month on record, behind October 1925 (23.2 inches) and October 2008 (21.2 inches). With 11.6 inches of snow during November, Fairbanks completed its snowiest month since March 2009 (15.5 inches).

Hawaii finally received widespread, drought-easing rainfall. During a 120-hour period from November 2-6, rainfall topped 10 inches in several locations, including West Wailuaiki, Maui (18.70 inches); Mount Waialeale, Kauai (15.12 inches); and the Oahu Forest National Wildlife Refuge (14.64 inches). Some areas received additional rain on November 18-19. By month's end, year-to-date rainfall at the state's major observation sites ranged from 5.69 inches (37 percent of normal) in Honolulu, Oahu, to 56.16 inches (49 percent) in Hilo, on the Big Island.

Fieldwork

Fieldwork summary provided by USDA/NASS

Near-normal temperatures and mostly dry weather blanketed much of the nation during November, allowing producers ample time to finish harvesting their summer row crops and seed their winter small grains. However, establishment of the 2011 winter wheat crop in the Great Plains was hampered by the lack of available soil moisture. Elsewhere, increased precipitation benefited drought-stressed pastures and recently seeded small grain crops in portions of the Southeast.

As the month began, corn producers throughout much of the Great Plains and Midwest were wrapping up this year's harvest. Nationally, 96 percent of the crop was harvested by November 7, sixty-one percentage points—or over 43 days—ahead of last year and 23 points ahead of the 5-year average.

By November 7, sorghum producers had harvested 89 percent of the nation's crop, 38 percentage points ahead of last year and 18 points ahead of the 5-year average. Warm, sunny weather during much of the harvest season contributed to a rapid fieldwork pace in the central Great Plains, pushing progress throughout the region well ahead of normal. With harvest complete or nearly complete in all 11 major estimating states, except New Mexico and Texas, nationwide progress advanced to 95 percent complete by November 21. This was 22 percentage points ahead of last year and 8 points ahead of the 5-year average.

Ninety-five percent of the 2011 winter wheat crop was seeded by November 7, nine percentage points ahead of last year and 3 points ahead of the 5-year average. Meanwhile, 82 percent of

the crop had emerged, 10 percentage points ahead of last year and 3 points ahead of the 5-year average. Emergence neared completion across much of the Pacific Northwest and Great Plains by mid-month, while near-normal temperatures promoted double-digit progress in Arkansas, California, Indiana, and North Carolina during the week ending November 21. By November 28, emergence had advanced to 94 percent complete, 5 percentage points ahead of last year and 2 points ahead of the 5-year average. Overall, 47 percent of the winter wheat crop was reported in good to excellent condition on November 28, compared with 45 percent on November 7 and 63 percent from the same time last year.

Dry, sunny weather in North Dakota, the largest sunflower producing state, promoted a rapid harvest pace as November began. By November 7, producers had harvested 79 percent of the crop nationwide, 50 percentage points ahead of last year and 10 points ahead of the 5-year average. Fieldwork remained steady in the four major estimating states for much of the month. By November 21, ninety-six percent of the sunflower crop was harvested, 19 percentage points ahead of last year and 6 points ahead of the 5-year average.

Eighty-six percent of this year's peanut crop was harvested by November 7, with progress ahead of both last year and the average in all eight major estimating states, except North Carolina and Virginia. While producers in Georgia had dug their entire crop by mid-month, portions of the crop remained to be combined. With the exception of Alabama, where progress typically trails the other peanut-producing states, harvest was complete or nearly complete by November 21.

Nationally, 71 percent of the cotton crop was harvested by November 7, thirty percentage points ahead of last year and 18 points ahead of the 5-year average. In Texas, producers had harvested 60 percent of their crop by November 7, the quickest pace since 2001, when producers had harvested 60 percent of their crop by November 3. Under mild, mostly dry weather conditions, double-digit progress was evident in California, South Carolina, and Texas from November 15-21. By November 28, producers had harvested 91 percent of this year's cotton crop, 11 percentage points ahead of last year and 10 points ahead of the 5-year average.

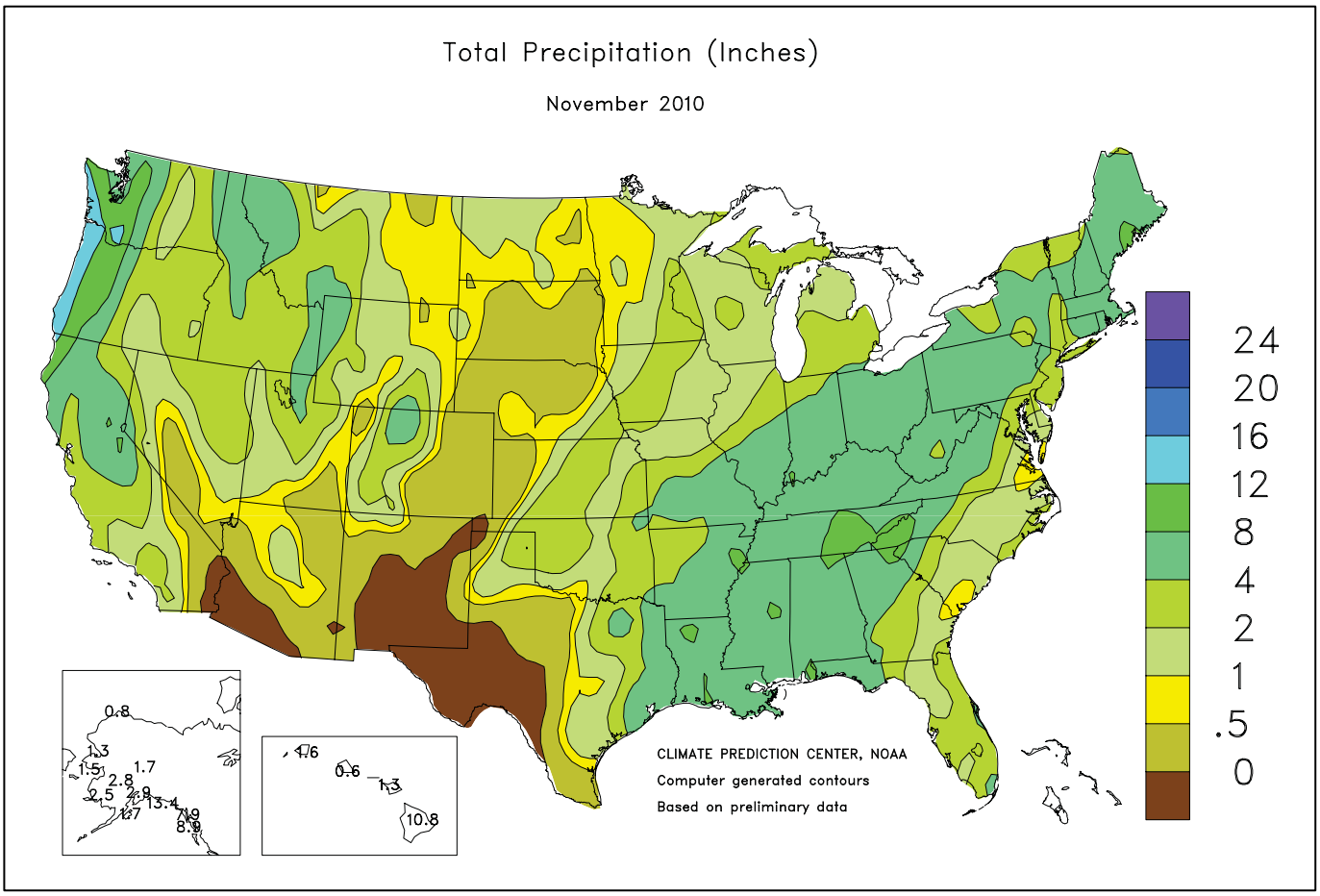
As the month began, sugarbeet producers in the Red River Valley had finished harvesting this year's crop, while growers in Idaho and Michigan were busy digging the last of their fields. Nationally, 97 percent of the sugarbeet crop was harvested by November 7, six percentage points ahead of last year and 3 points ahead of the 5-year average.

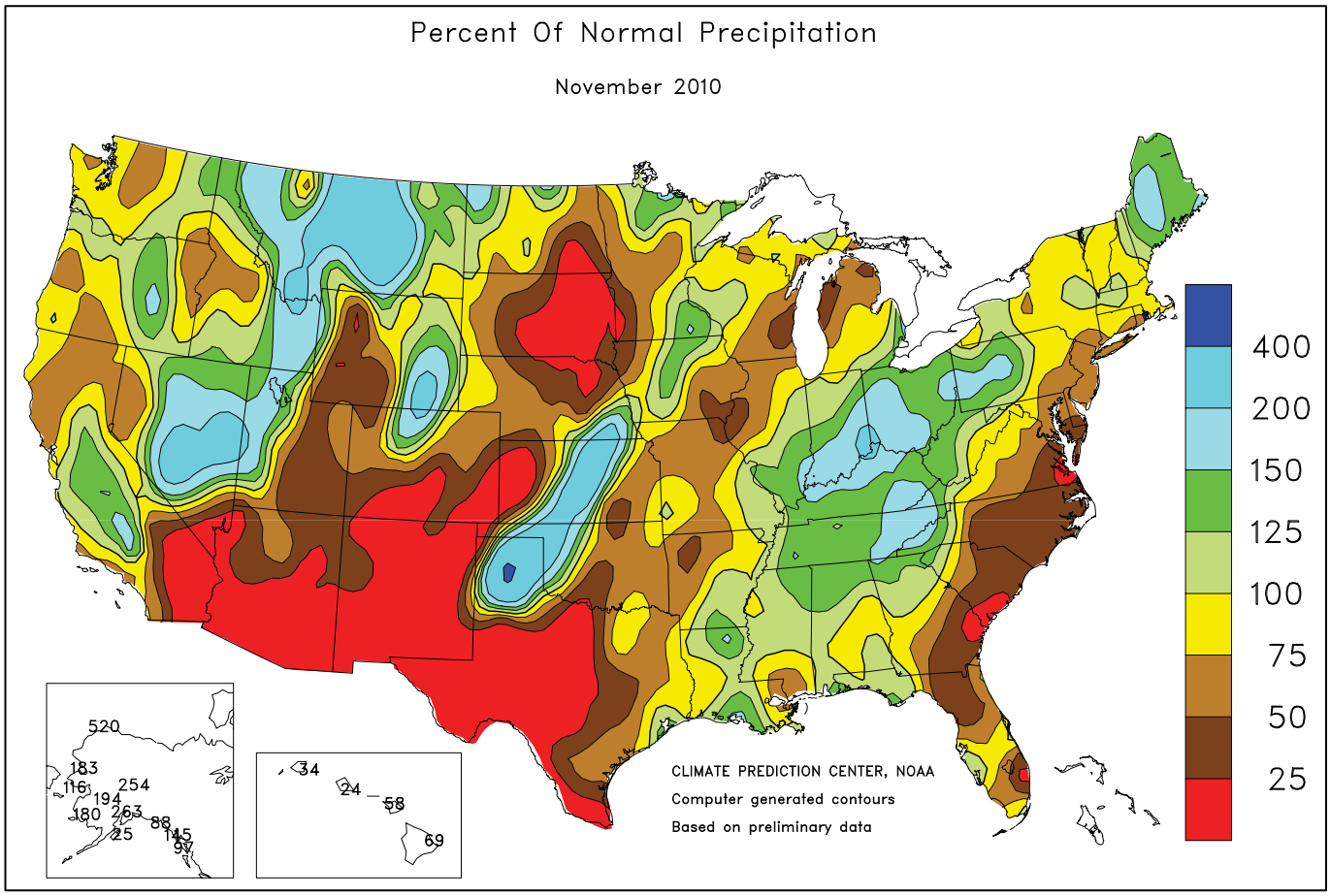
U.S. Crop Production Highlights

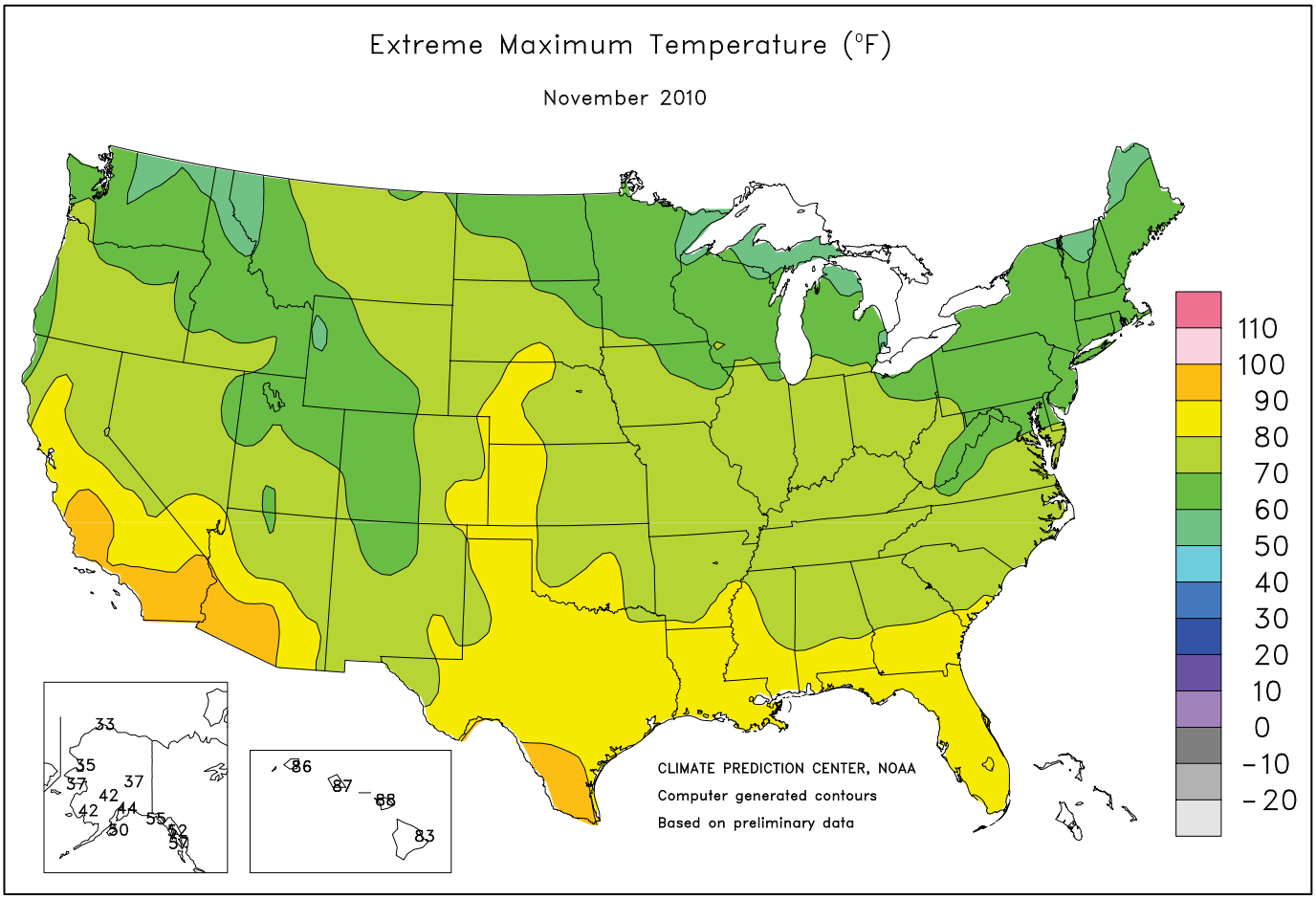
The following information was released by USDA's Agricultural Statistics Board on Dec. 10, 2010. Forecasts refer to Dec. 1.

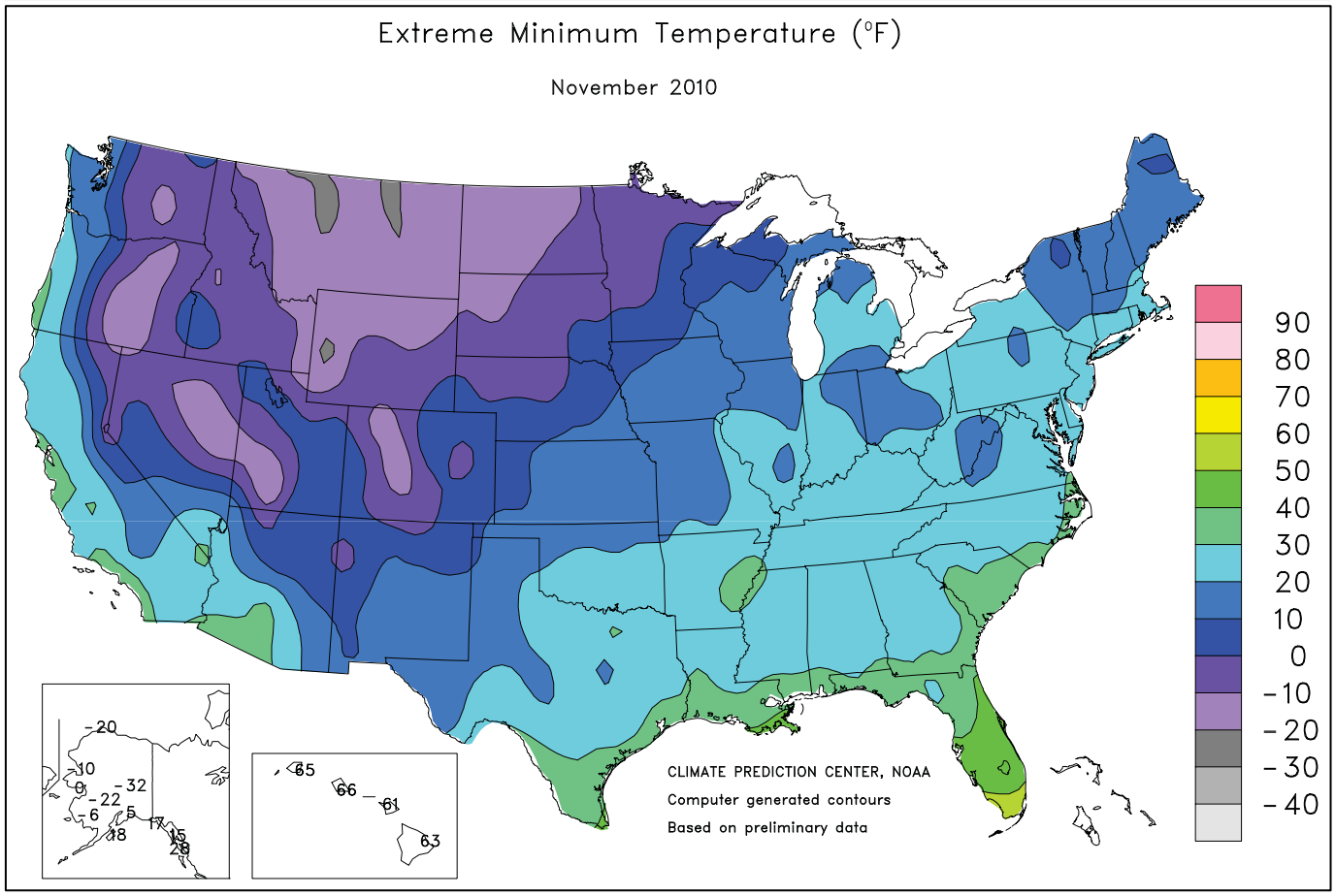
All cotton production is forecast at 18.3 million 480-pound bales, down 1 percent from last month but up 50 percent from last year's 12.2 million bales. Yield is expected to average 814 pounds per harvested acre, up 37 pounds from last year. Upland cotton production is forecast at 17.8 million 480-pound bales, down 1 percent from last month but 51 percent above 2009. Producers in Mississippi, Oklahoma, Tennessee, and Texas are expecting decreased yields from last month. American Pima production, forecast at 497,800 bales, was carried forward from last month.

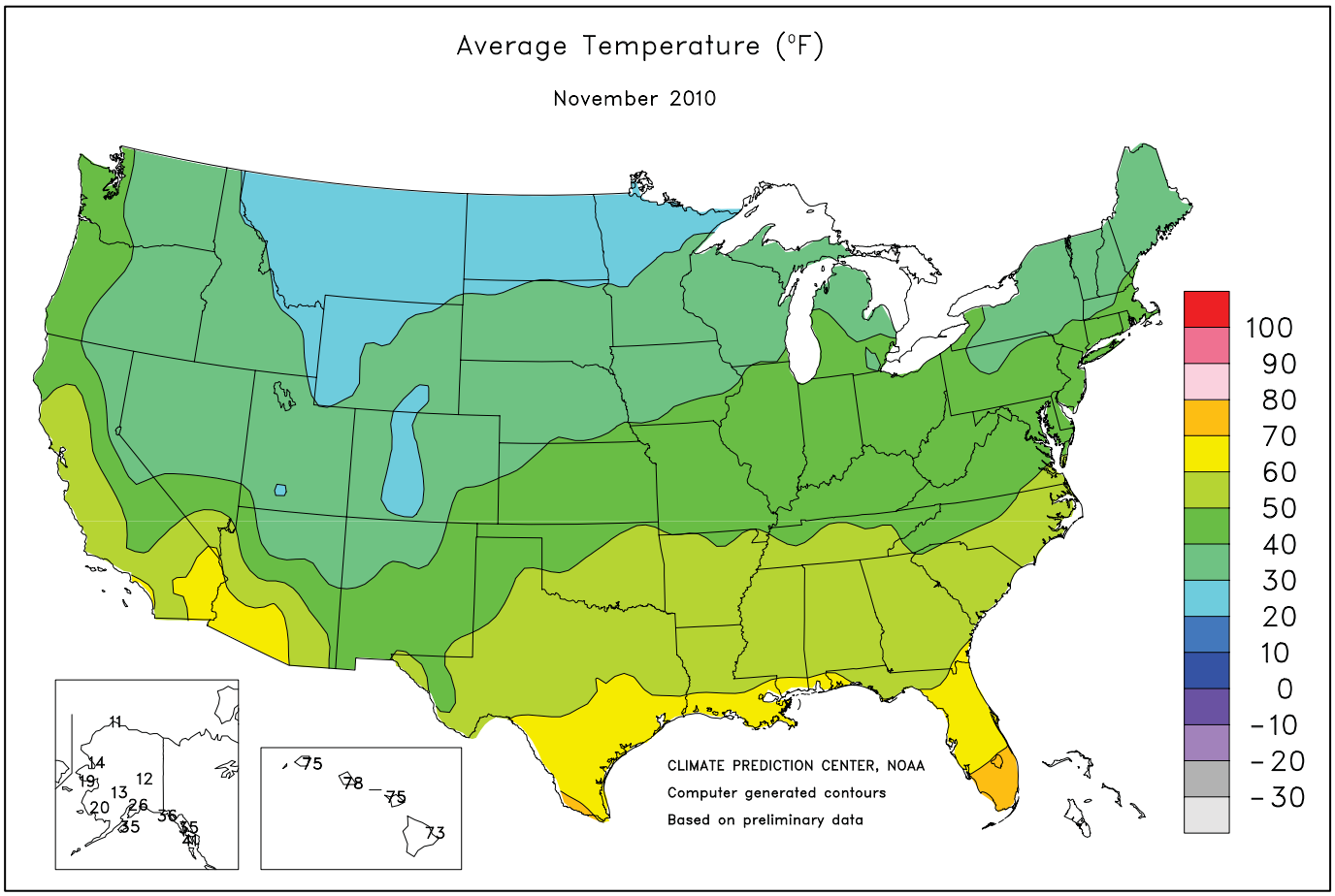
The **all orange** forecast for the 2010-2011 season is 8.93 million tons, down 1 percent from the October 1 forecast but 9 percent above the 2009-2010 final utilization. The Florida all orange forecast, at 143 million boxes (6.44 million tons), is down 2 percent the October 1 forecast but 7 percent above last season's final utilization. Early, midseason, and navel varieties in Florida are forecast at 68.0 million boxes (3.06 million tons), down 1 percent from October and 1 percent lower than last season. The Florida Valencia orange forecast, at 75.0 million boxes (3.38 million tons), is down 3 percent from the previous forecast but up 15 percent from the 2009-2010 crop. Weather conditions in the citrus-growing areas remained extremely dry. Fruit size for the non-Valencia oranges is projected to be the smallest in any non-disaster season and drop rate is projected to be above the minimum but below average. Current fruit size continues to be smaller than the previous season, while the drop rate is near the minimum and projected to be below average for the Valencia crop. California and Texas forecasts are carried forward from October.

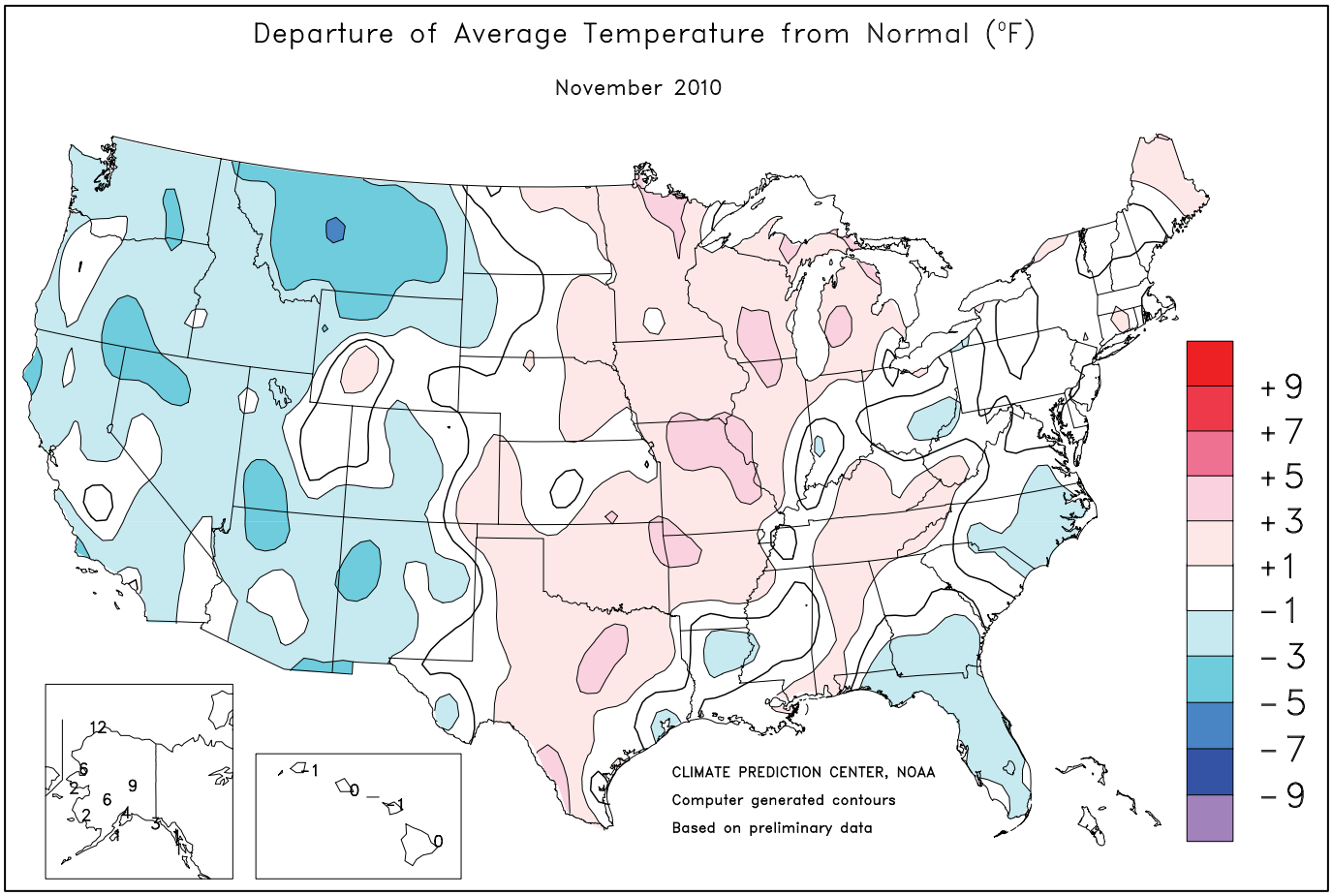

Total Precipitation (Inches)
November 2010
24
20
16
12
8
4
2
1
.5
0
0.8
.3
1.5
1.7
2.8
2.5
2.9
13.4
1.27
7.9
8.9
1.6
0.6
1.3
10.8
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data


Percent Of Normal Precipitation
November 2010
400
200
150
125
100
75
50
25
520
183
116
254
194
180
263
88
25
145
97
34
24
58
69
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data


Extreme Maximum Temperature (°F)
November 2010
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
33
35
37
37
42
42
44
55
30
52
50
86
87
88
83
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data


Extreme Minimum Temperature (°F)
November 2010
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
-20
-10
-32
-22
-6
5
18
17
25
28
65
66
61
63
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data


Average Temperature (°F)
November 2010
100
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data


Departure of Average Temperature from Normal (°F)
November 2010
+9
+7
+5
+3
+1
-1
-3
-5
-7
-9
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data

National Weather Data for Selected Cities

November 2010

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

STATES AND STATIONS	TEMP, °F		PRECIP.		STATES AND STATIONS	TEMP, °F		PRECIP.		STATES AND STATIONS	TEMP, °F		PRECIP.	
	AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE
AL BIRMINGHAM	56	3	4.82	0.19	LEXINGTON	47	1	4.46	1.02	COLUMBUS	44	0	4.34	1.15
HUNTSVILLE	53	2	7.69	2.47	LONDON-CORBIN	47	0	6.62	2.72	DAYTON	43	1	4.85	1.55
MOBILE	60	1	5.92	0.51	LOUISVILLE	50	2	5.96	2.16	MANSFIELD	42	2	4.71	0.95
MONTGOMERY	57	1	3.36	-1.17	PADUCAH	48	1	4.94	0.41	TOLEDO	41	1	3.26	0.48
AK ANCHORAGE	26	4	2.87	1.78	LA BATON ROUGE	60	1	4.96	0.20	YOUNGSTOWN	41	0	4.44	1.37
BARROW	11	12	0.84	0.68	LAKE CHARLES	61	1	4.32	-0.29	OK OKLAHOMA CITY	51	2	0.94	-1.17
COLD BAY	35	0	4.71	-0.08	NEW ORLEANS	63	2	2.75	-2.34	TULSA	52	2	1.96	-1.51
FAIRBANKS	12	10	1.73	1.05	SHREVEPORT	57	1	4.96	0.28	OR ASTORIA	45	-2	12.45	1.95
JUNEAU	35	2	7.87	2.44	ME BANGOR	38	1	4.75	1.06	BURNS	31	-2	1.70	0.59
KING SALMON	23	0	0.82	-0.72	CARIBOU	33	2	4.01	0.89	EUGENE	45	0	5.91	-2.53
KODIAK	35	1	1.67	-4.96	PORTLAND	40	2	5.00	0.28	MEDFORD	44	0	1.94	-0.99
NOME	19	2	1.48	0.20	MD BALTIMORE	47	1	2.04	-1.08	PENDLETON	38	-3	1.86	0.23
AZ FLAGSTAFF	35	-2	1.79	-0.07	MA BOSTON	45	0	2.96	-1.02	PORTLAND	45	-1	6.63	1.02
PHOENIX	63	1	0.01	-0.72	WORCESTER	40	0	4.26	-0.08	SALEM	46	1	6.44	0.05
TUCSON	58	-1	0.00	-0.67	MI ALPENA	38	3	0.77	-1.31	PA ALLENTOWN	42	0	2.99	-0.71
AR FORT SMITH	54	3	2.47	-2.33	DETROIT	42	1	3.34	0.68	ERIE	43	0	3.75	-0.21
LITTLE ROCK	53	1	6.69	0.96	FLINT	40	2	1.67	-0.98	MIDDLETOWN	45	1	2.42	-1.10
CA BAKERSFIELD	55	0	0.84	0.25	GRAND RAPIDS	42	4	2.81	-0.54	PHILADELPHIA	48	1	1.76	-1.40
EUREKA	47	-4	4.69	-1.09	HOUGHTON LAKE	37	2	1.44	-0.70	PITTSBURGH	42	0	5.97	2.95
FRESNO	54	1	1.80	0.70	LANSING	40	2	2.08	-0.58	WILKES-BARRE	42	0	2.64	-0.48
LOS ANGELES	62	0	0.58	-0.55	MUSKEGON	42	3	1.46	-1.77	WILLIAMSPORT	42	1	4.51	0.89
REDDING	52	1	2.25	-1.78	TRAVERSE CITY	40	3	0.79	-1.88	PR SAN JUAN	80	0	7.96	1.79
SACRAMENTO	53	0	2.39	0.20	MN DULUTH	31	3	2.42	0.30	RI PROVIDENCE	45	1	3.92	-0.48
SAN DIEGO	62	0	0.88	-0.19	INT'L FALLS	29	5	2.24	0.88	SC CHARLESTON	58	0	0.30	-2.36
SAN FRANCISCO	55	0	2.41	-0.08	MINNEAPOLIS	35	2	2.07	0.13	COLUMBIA	55	0	1.46	-1.42
STOCKTON	52	-1	2.38	0.61	ROCHESTER	35	4	2.86	0.85	FLORENCE	54	-1	1.54	-1.05
CO ALAMOSA	28	0	0.02	-0.46	ST. CLOUD	33	4	1.02	-0.52	GREENVILLE	52	1	3.69	-0.10
CO SPRINGS	38	2	0.07	-0.45	MS JACKSON	57	2	6.02	0.98	MYRTLE BEACH	56	-1	1.11	-1.86
DENVER	38	1	0.50	-0.10	MERIDIAN	55	-1	5.13	0.18	SD ABERDEEN	31	2	0.12	-0.63
GRAND JUNCTION	39	1	0.45	-0.26	TUPELO	53	2	5.60	0.59	HURON	33	2	0.07	-0.82
PUEBLO	38	0	0.20	-0.38	MO COLUMBIA	46	3	1.73	-1.74	RAPID CITY	32	-1	0.42	-0.19
CT BRIDGEPORT	46	1	3.14	-0.51	JOPLIN	50	3	4.42	0.36	SIOUX FALLS	34	3	0.47	-0.89
HARTFORD	42	0	3.78	-0.28	KANSAS CITY	45	2	1.85	-0.45	TN BRISTOL	47	1	4.79	1.71
DC WASHINGTON	50	1	2.22	-0.81	SPRINGFIELD	47	1	4.23	-0.23	CHATTANOOGA	52	2	8.00	3.12
DE WILMINGTON	47	1	2.29	-0.90	ST JOSEPH	43	1	1.44	-0.72	JACKSON	51	1	7.88	2.81
FL DAYTONA BEACH	65	-2	0.95	-2.08	ST LOUIS	49	4	5.34	1.63	KNOXVILLE	51	2	6.73	2.75
FT LAUDERDALE	73	-1	0.96	-3.61	MT BILLINGS	30	-4	1.89	1.14	MEMPHIS	54	2	6.57	0.81
FT MYERS	71	-1	1.75	0.04	BUTTE	25	-2	0.50	-0.10	NASHVILLE	51	2	5.41	0.96
JACKSONVILLE	61	-1	1.30	-1.04	GLASGOW	26	-2	0.34	-0.05	TX ABILENE	56	2	0.15	-1.15
KEY WEST	75	-1	2.93	0.29	GREAT FALLS	28	-4	1.74	1.15	AMARILLO	47	2	2.88	2.20
MELBOURNE	69	0	3.43	0.31	HELENA	28	-3	1.33	0.85	AUSTIN	60	0	0.92	-1.76
MIAMI	74	0	2.34	-1.09	KALISPELL	29	-2	2.53	1.08	BEAUMONT	61	0	4.04	-0.71
ORLANDO	68	-1	1.68	-0.64	MILES CITY	28	-4	0.49	-0.03	BROWNSVILLE	70	2	0.13	-1.62
PENSACOLA	62	1	7.33	2.87	MISSOULA	29	-3	1.50	0.54	COLLEGE STATION	62	2	0.90	-2.28
ST PETERSBURG	69	-1	1.79	-0.25	NE GRAND ISLAND	38	2	0.44	-0.97	CORPUS CHRISTI	65	0	1.00	-0.74
TALLAHASSEE	59	-1	3.90	0.04	HASTINGS	39	2	0.80	-0.66	DALLAS/FT WORTH	58	3	1.50	-1.07
TAMPA	69	0	2.06	0.44	LINCOLN	39	1	1.97	0.39	DEL RIO	62	2	0.01	-0.95
WEST PALM BEACH	73	0	1.38	-4.17	MCCOOK	38	0	0.34	-0.75	EL PASO	53	0	0.00	-0.42
GA ATHENS	53	0	4.91	1.20	NORFOLK	37	2	0.36	-1.08	GALVESTON	64	-1	6.90	3.26
ATLANTA	55	2	5.48	1.38	NORTH PLATTE	35	0	0.62	-0.14	HOUSTON	62	1	2.71	-1.48
AUGUSTA	55	1	1.30	-1.38	OMAHA/EPPLEY	40	2	2.38	0.56	LUBBOCK	51	3	0.07	-0.64
COLUMBUS	57	0	3.82	-0.15	SCOTTSBLUFF	36	2	0.66	-0.14	MIDLAND	53	1	0.00	-0.65
MACON	55	0	2.61	-0.61	VALENTINE	34	1	0.15	-0.57	SAN ANGELO	56	2	0.00	-1.10
SAVANNAH	58	-1	0.31	-2.09	NV ELKO	33	-2	1.55	0.50	SAN ANTONIO	62	2	0.26	-2.32
HI HILO	73	-1	10.82	-4.76	ELY	31	-2	1.65	1.02	VICTORIA	62	-1	1.63	-1.01
HONOLULU	78	0	0.55	-1.71	LAS VEGAS	56	1	0.01	-0.30	WACO	59	2	1.04	-1.57
KAHULUI	75	-1	1.25	-0.92	RENO	41	0	0.45	-0.35	WICHITA FALLS	54	2	0.23	-1.45
LIHUE	75	-1	1.61	-3.09	WINNEMUCCA	34	-3	1.38	0.58	UT SALT LAKE CITY	38	-2	2.64	1.24
ID BOISE	39	-1	1.57	0.19	NH CONCORD	38	0	3.30	-0.27	VT BURLINGTON	37	0	3.10	0.04
LEWISTON	39	-1	1.03	-0.18	NJ ATLANTIC CITY	47	1	2.09	-1.17	VA LYNCHBURG	46	-1	1.93	-1.25
POCATELLO	32	-3	1.94	0.81	NEWARK	47	1	1.83	-2.05	NORFOLK	52	0	0.43	-2.55
IL CHICAGO/O'HARE	42	3	2.51	-0.50	NM ALBUQUERQUE	45	1	0.02	-0.60	RICHMOND	50	1	1.27	-1.79
MOLINE	42	3	1.28	-1.45	NY ALBANY	40	1	3.53	0.25	ROANOKE	47	0	3.47	0.26
PEORIA	43	3	1.75	-1.24	BINGHAMTON	39	1	3.14	-0.18	WASH/DULLES	46	1	2.50	-0.81
ROCKFORD	42	5	1.33	-1.30	BUFFALO	42	2	3.55	-0.37	WA OLYMPIA	42	0	6.20	-1.93
SPRINGFIELD	45	3	1.79	-1.08	ROCHESTER	40	0	3.01	0.17	QUILLAYUTE	43	-1	12.34	-2.48
IN EVANSVILLE	47	1	8.46	4.28	SYRACUSE	41	1	2.93	-0.84	SEATTLE-TACOMA	43	-2	5.05	-0.85
FORT WAYNE	41	0	4.01	1.03	NC ASHEVILLE	47	1	5.49	1.67	SPOKANE	33	-2	3.10	0.86
INDIANAPOLIS	45	2	4.46	0.85	CHARLOTTE	51	-1	1.38	-1.98	YAKIMA	36	-1	0.83	-0.22
SOUTH BEND	41	1	2.76	-0.63	GREENSBORO	50	1	0.80	-2.16	WV BECKLEY	45	2	3.89	1.01
IA BURLINGTON	43	2	0.97	-1.75	HATTERAS	57	-1	2.34	-2.59	CHARLESTON	47	1	4.81	1.15
CEDAR RAPIDS	39	2	1.03	-1.21	RALEIGH	52	1	1.45	-1.52	ELKINS	43	2	3.11	-0.31
DES MOINES	41	3	2.29	0.19	WILMINGTON	55	-1	0.96	-2.30	HUNTINGTON	46	0	4.90	1.58
DUBUQUE	38	2	1.37	-1.12	ND BISMARCK	28	0	0.75	0.05	WI EAU CLAIRE	34	2	2.24	0.32
SIOUX CITY	37	2	0.45	-0.95	DICKINSON	28	-1	0.33	-0.26	GREEN BAY	38	4	1.33	-0.94
WATERLOO	37	2	1.51	-0.59	FARGO	29	2	0.73	-0.33	LA CROSSE	37	2	1.93	-0.17
KS CONCORDIA	42	1	2.91	1.46	GRAND FORKS	27	1	0.58	-0.41	MADISON	38	3	1.09	-1.22
DODGE CITY	43	1	1.27	0.26	JAMESTOWN	28	1	0.06	-0.65	MILWAUKEE	42	4	1.78	-0.92
GOODLAND	39	2	0.17	-0.65	MINOT	28	1	0.26	-0.60	WAUSAU	34	2	2.00	-0.20
HILL CITY	41	1	0.51	-0.23	WILLISTON	26	0	1.20	0.55	WY CASPER	33	1	0.85	0.03
TOPEKA	45	2	1.23	-1.08	OH AKRON-CANTON	42	1	4.80	1.76	CHEYENNE	34	1	0.73	0.09
WICHITA	46	2	1.24	-0.58	CINCINNATI	45	0	6.94	3.48	LANDER	33	3	0.75	-0.24
KY JACKSON	49	1	5.77	1.57	CLEVELAND	43	1	4.59	1.21	SHERIDAN	30	-1	0.52	-0.28

Based on 1971-2000 normals

***** Not Available**

Autumn Weather Review

Review provided by USDA/WAOB

Highlights: The U.S. escaped a busy Atlantic tropical season with no hurricane landfalls and minimal overall impacts. Midwestern harvest activities proceeded at a near- record to record-setting pace, with corn and soybean fieldwork nearly complete by the end of October. Meanwhile, portions of the central and southern Plains did not receive enough moisture to allow for proper establishment of winter wheat. Dry conditions also plagued parts of the eastern Corn Belt, although November precipitation provided drought relief. By the end of autumn, signs of the evolving La Niña included Northwestern wetness and dry conditions in the southern Atlantic region and much of the south-central and southwestern U.S.

According to preliminary information provided by the National Climatic Data Center, the nation experienced its 14th-warmest, 51st-driest autumn on record. The U.S. autumn average temperature of 55.7°F was 1.5°F above the 1901-2000 mean. State rankings ranged from the 53rd-coolest autumn in Washington to the fifth-warmest autumn in Rhode Island (figure 1). Meanwhile, autumn precipitation averaged 6.56 inches (98 percent of the long-term mean) across the contiguous U.S. It was the second-driest September-November period in Florida, but among the ten wettest autumns on record in Maine, Minnesota, North Dakota, and Nevada (figure 2).

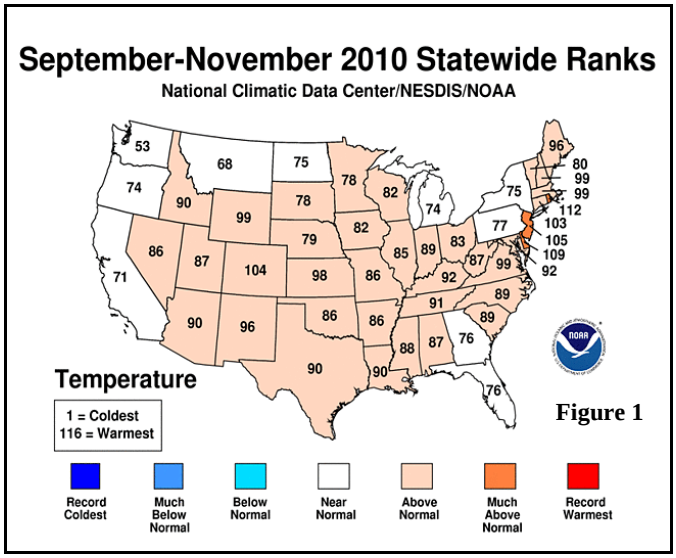


Figure 1

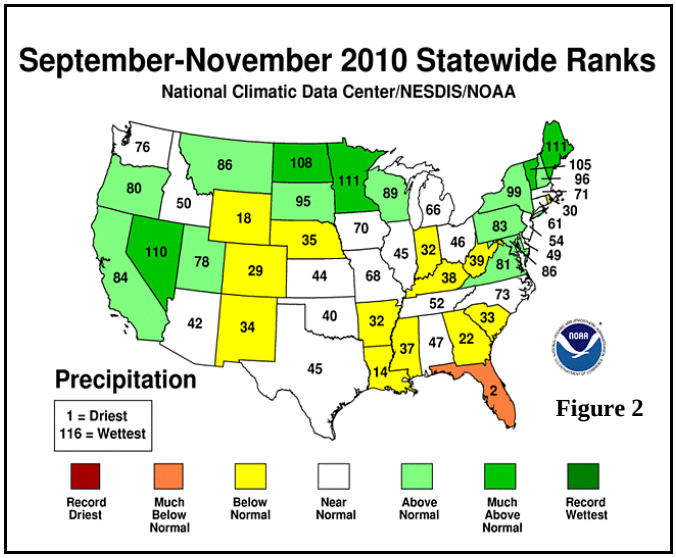


Figure 2

September: Tropical systems played a key role in moistening parts of the nation but bypassed a broad area stretching from the central Gulf Coast States into the Ohio Valley. Eight named tropical systems (four tropical storms and four hurricanes) formed over the Atlantic Basin during the month, tying a September record originally set in 2002. Although none of the eight storms officially made landfall in the U.S., Tropical Storms Hermine (early in the month) and Nicole (at month's end) played a role in soaking the south-central and eastern U.S., respectively. In addition, remnant moisture associated with former eastern Pacific Tropical Storm Georgette contributed to locally heavy showers in the Southwest, while tropical moisture interacting with a series of cold fronts helped to trigger flooding rains in the upper Midwest.

Warm weather dominated the U.S. during September, except across portions of the nation's northern tier. Late-season warmth was most impressive in the Southwest and Southeast, while unusually cool conditions stretched from the northern Plains into the Great Lakes States. On the heels of a warm growing season, Midwestern summer crops matured at an ahead-of-normal pace. Corn and soybean harvest activities quickly advanced in the eastern Corn Belt, but fieldwork stalled across the upper Midwest in the wake of mid-month downpours. Among the Midwestern States, only Minnesota and the Dakotas reported a slower-than-normal harvest pace by month's end for both corn and soybeans.

Farther south and east, late-month downpours in the East contrasted with record-setting September dryness in several locations from the central Gulf Coast into the eastern Corn Belt. Eastern rains helped to revive pastures but arrived far too late to help drought-stricken summer crops. At month's end, producers in the Mid-Atlantic States began to assess the impact of tropical downpours on open-boll cotton and other unharvested summer crops. Meanwhile on the central and southern High Plains, pockets of developing dryness became a concern with respect to the establishment of newly planted winter wheat. Elsewhere across the nation's mid-section, showers promoted winter wheat emergence. Cool, wet weather on the northern High Plains hampered late-season spring wheat harvesting. Elsewhere, Western fieldwork advanced with few problems, despite occasional showers in the Four Corners region and the Pacific Northwest. In California, harvest delays for crops such as rice and cotton were attributable to late planting and cool weather earlier in the growing season.

October: Drier-than-normal weather prevailed during October in most areas from the Plains to the East Coast, allowing summer crop harvesting to rapidly advance. In fact, the corn harvest advanced at a near-record pace, with 91 percent of the crop combined by month's end. Since records began in the mid-1970's, the only other years that the corn harvest surpassed the 90-percent mark by October 31 were 1987 and 1991 (both 92 percent). The soybean harvest—96 percent complete by the end of the month—proceeded at an unprecedented pace, edging the October 31 record of 93 percent set in 1999 and 2005. Harvest activities might have advanced even more quickly, except for a sprawling, late-month storm that blanketed parts of the northern Plains with snow and soaked portions of the Southeast and upper Midwest.

The same mild, dry conditions that promoted harvest activities were a concern with respect to winter wheat establishment. While generally favorable conditions existed across the northern Plains and the Northwest, pockets of developing or expanding drought stressed some pastures and emerging winter grains across the central and southern Plains, eastern Corn Belt, and Southeast. October conditions were especially dry across the nation's southern tier from southern Texas to Florida—a typical impact of a developing La Niña. Exceptions to the dry pattern included the Northeast and much of the West. In the latter region, wet weather occasionally slowed fieldwork but provided the mountains with some early-season snow and aided pastures, rangeland, and winter grains.

Nearly coast-to-coast warmth encouraged the growth of fall-sown crops, even in northern growing areas such as the northern High Plains and the Northwest. Monthly temperatures averaged at least 5°F above normal across parts of the northern Plains.

November: *A complete summary begins on page 11.*

National Weather Data for Selected Cities

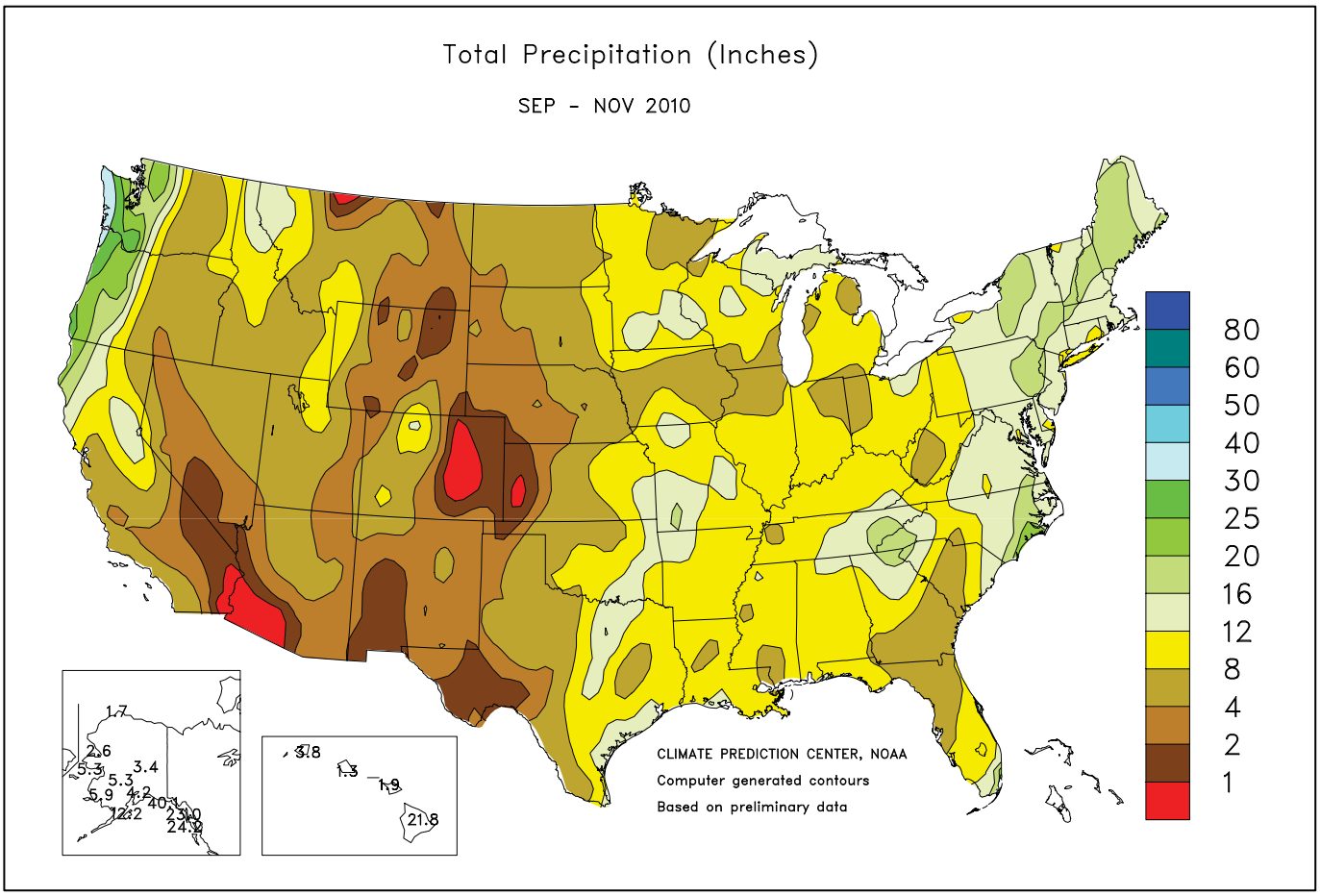
Autumn 2010

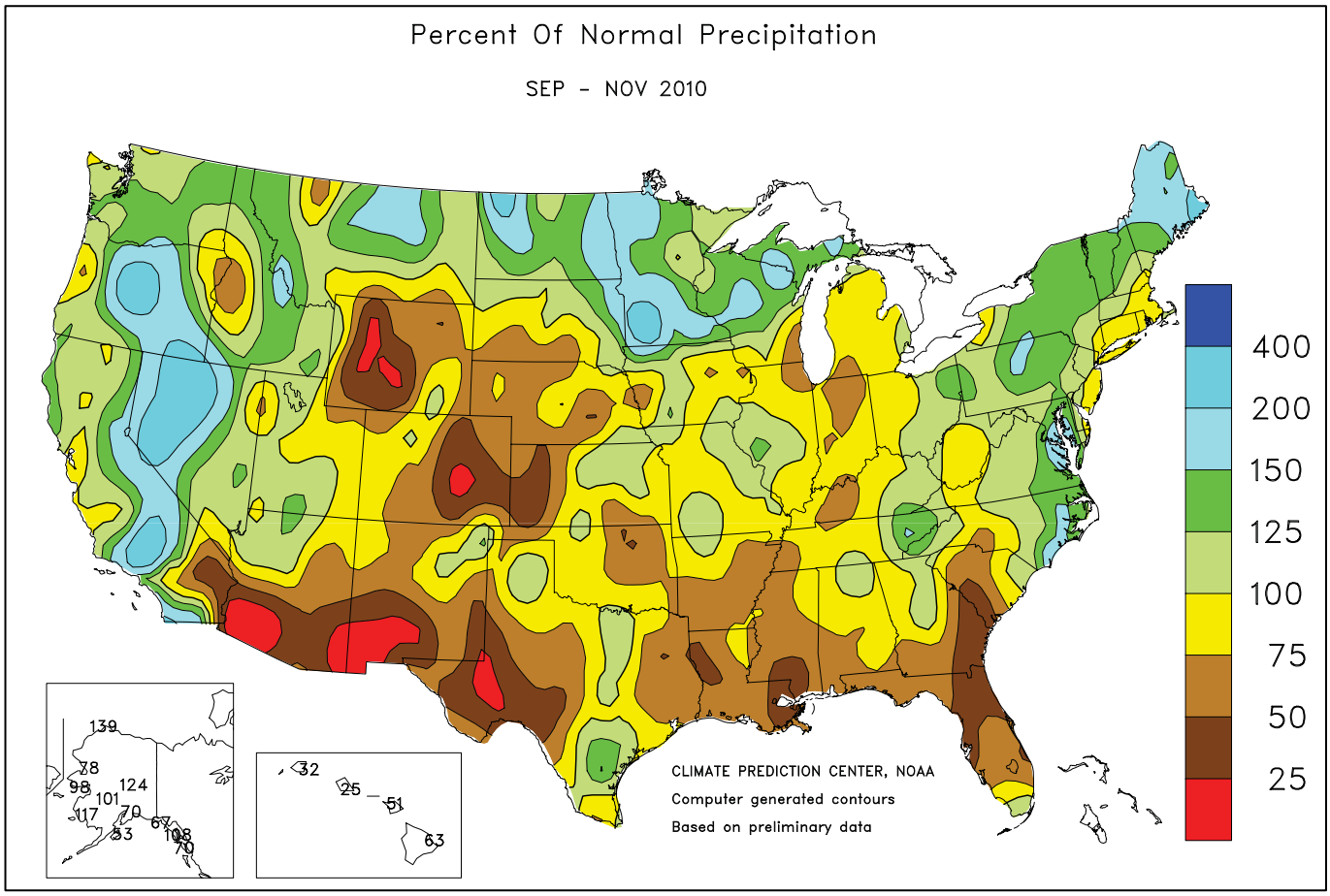
Data Provided by Climate Prediction Center (301-763-8000, Ext. 7503)

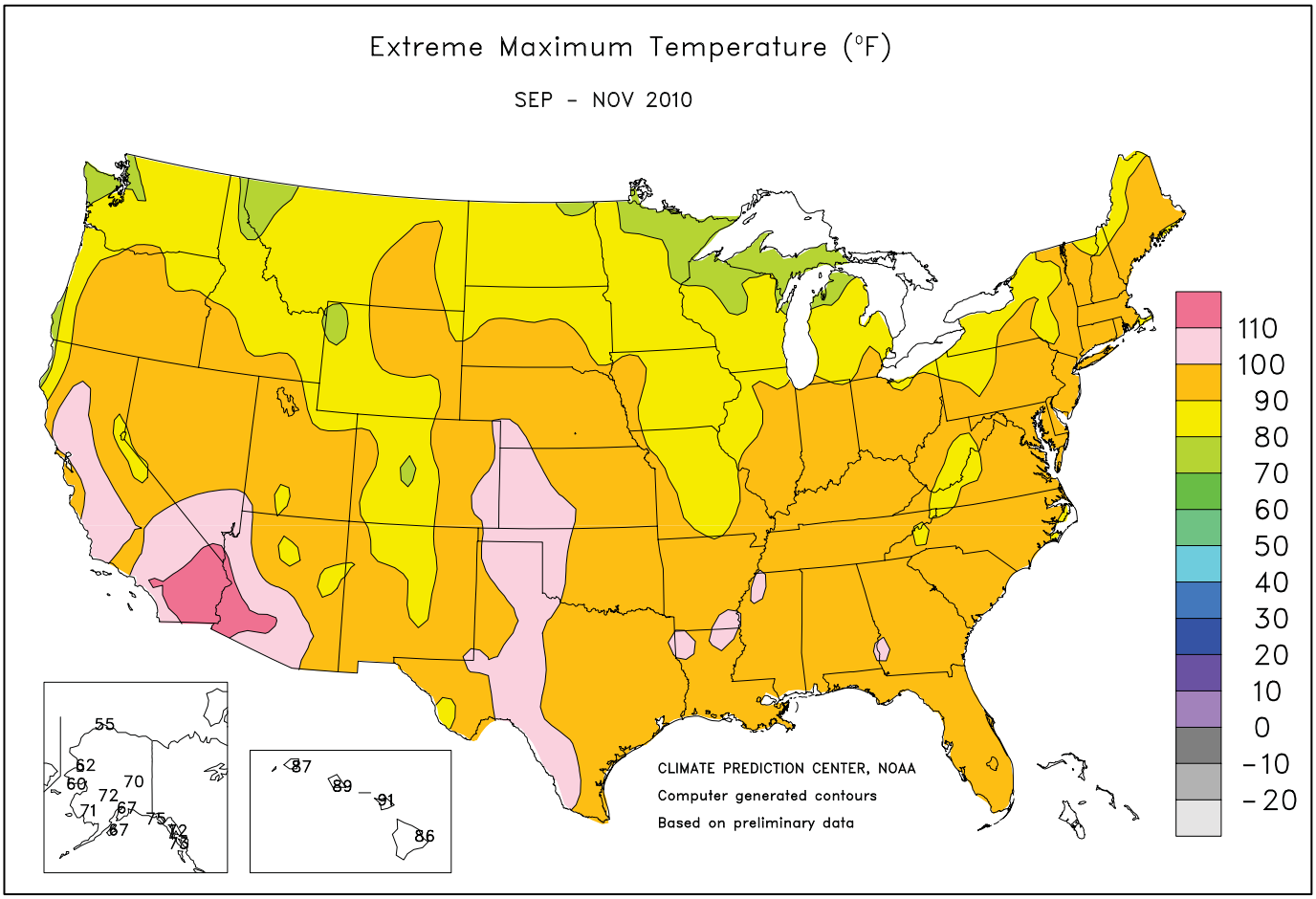
STATES AND STATIONS	TEMP, °F		PRECIP.		STATES AND STATIONS	TEMP, °F		PRECIP.		STATES AND STATIONS	TEMP, °F		PRECIP.	
	AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE
AL BIRMINGHAM	66	3	8.95	-2.96	LEXINGTON	58	1	6.31	-2.94	COLUMBUS	56	1	7.54	-0.88
HUNTSVILLE	64	2	15.28	2.23	LONDON-CORBIN	57	0	11.35	1.28	DAYTON	56	2	7.63	-1.04
MOBILE	69	1	12.06	-2.61	LOUISVILLE	63	4	7.12	-2.52	MANSFIELD	53	2	8.82	-1.06
MONTGOMERY	68	2	8.12	-3.21	PADUCAH	60	2	9.35	-2.19	TOLEDO	54	2	5.94	-2.03
AK ANCHORAGE	38	3	4.23	-1.81	LA BATON ROUGE	69	1	8.53	-4.88	YOUNGSTOWN	52	1	9.74	0.32
BARROW	24	9	1.73	0.49	LAKE CHARLES	71	2	7.48	-7.02	OK OKLAHOMA CITY	63	2	5.52	-4.21
COLD BAY	41	0	10.99	-2.85	NEW ORLEANS	72	2	3.82	-9.87	TULSA	63	1	6.04	-6.24
FAIRBANKS	29	6	3.37	0.65	SHREVEPORT	69	2	6.13	-6.21	OR ASTORIA	53	0	24.98	6.26
JUNEAU	43	1	22.95	1.68	ME BANGOR	49	1	16.31	5.75	BURNS	46	2	3.50	1.17
KING SALMON	36	1	3.52	-2.92	CARIBOU	45	3	14.01	4.63	EUGENE	54	1	12.58	-0.75
KODIAK	42	1	12.19	-10.64	PORTLAND	51	3	14.41	1.92	MEDFORD	56	1	4.79	-0.23
NOME	33	4	5.26	-0.11	MD BALTIMORE	58	2	13.25	2.99	PENDLETON	51	-1	4.59	1.34
AZ FLAGSTAFF	48	1	5.51	-0.40	MA BOSTON	56	1	8.66	-2.58	PORTLAND	55	0	13.86	3.72
PHOENIX	77	3	0.80	-1.47	WORCESTER	51	1	12.74	-0.54	SALEM	55	2	13.73	2.88
TUCSON	72	2	1.16	-2.17	MI ALPENA	47	1	6.41	-0.80	PA ALLENTOWN	54	2	15.33	3.93
AR FORT SMITH	65	3	9.96	-2.39	DETROIT	54	2	7.73	-0.43	ERIE	53	0	13.89	1.28
LITTLE ROCK	65	2	10.10	-3.59	FLINT	51	2	7.75	-1.00	MIDDLETOWN	56	1	10.43	0.47
CA BAKERSFIELD	67	1	1.42	0.38	GRAND RAPIDS	53	3	8.22	-2.21	PHILADELPHIA	60	2	10.25	0.46
EUREKA	52	-2	10.34	1.34	HOUGHTON LAKE	47	1	5.69	-1.82	PITTSBURGH	53	0	11.35	2.87
FRESNO	66	2	2.24	0.23	LANSING	51	2	9.76	1.33	WILKES-BARRE	53	1	11.48	1.48
LOS ANGELES	65	-1	2.14	0.39	MUSKEGON	53	3	9.84	0.29	WILLIAMSPORT	53	1	14.38	3.59
REDDING	63	0	7.25	0.56	TRAVERSE CITY	49	0	7.30	-1.89	PR SAN JUAN	82	1	24.69	7.86
SACRAMENTO	63	0	3.83	0.39	MN DULUTH	43	1	9.78	1.07	RI PROVIDENCE	56	2	10.32	-1.47
SAN DIEGO	66	-1	3.09	1.37	INT'L FALLS	42	2	9.48	3.11	SC CHARLESTON	68	1	9.25	-2.48
SAN FRANCISCO	63	3	3.26	-0.47	MINNEAPOLIS	50	3	9.21	2.47	COLUMBIA	66	2	5.23	-4.48
STOCKTON	63	-1	3.82	0.90	ROCHESTER	49	3	13.60	6.27	FLORENCE	65	0	11.05	1.85
CO ALAMOSA	44	2	1.44	-0.60	ST. CLOUD	46	2	10.77	4.06	GREENVILLE	63	2	7.36	-4.27
CO SPRINGS	53	5	0.59	-2.02	MS JACKSON	67	2	8.10	-3.59	MYRTLE BEACH	67	2	11.40	-0.38
DENVER	54	5	1.10	-1.41	MERIDIAN	65	-1	7.18	-4.69	SD ABERDEEN	46	1	5.23	1.04
GRAND JUNCTION	55	3	2.53	-0.09	TUPELO	64	2	9.96	-1.78	HURON	48	1	4.43	0.15
PUEBLO	54	2	0.27	-1.79	MO COLUMBIA	58	3	9.06	-1.01	RAPID CITY	49	2	2.25	-0.83
CT BRIDGEPORT	57	2	8.52	-2.25	JOPLIN	61	2	12.46	-0.76	SIOUX FALLS	48	1	5.84	-0.03
HARTFORD	54	2	11.65	-0.48	KANSAS CITY	57	1	10.44	0.17	TN BRISTOL	57	1	11.24	2.78
DC WASHINGTON	62	3	11.64	1.60	SPRINGFIELD	58	0	16.89	4.13	CHATTANOOGA	64	3	11.44	-1.01
DE WILMINGTON	58	2	13.72	3.44	ST JOSEPH	56	0	6.38	-2.97	JACKSON	62	1	9.09	-3.06
FL DAYTONA BEACH	73	-1	4.62	-9.50	ST LOUIS	61	3	10.12	0.69	KNOXVILLE	61	1	15.06	5.39
FT LAUDERDALE	78	0	16.72	-2.55	MT BILLINGS	48	1	3.15	-0.20	MEMPHIS	66	2	8.75	-3.63
FT MYERS	77	0	9.35	-2.81	BUTTE	41	1	2.28	-0.20	NASHVILLE	62	2	9.06	-1.85
JACKSONVILLE	69	-1	6.41	-7.69	GLASGOW	44	1	2.41	0.33	TX ABILENE	67	2	4.11	-3.00
KEY WEST	79	-1	18.43	6.00	GREAT FALLS	45	1	4.45	1.70	AMARILLO	61	3	5.45	1.39
MELBOURNE	75	0	9.37	-5.71	HELENA	45	1	2.62	0.43	AUSTIN	69	-1	6.13	-3.43
MIAMI	79	0	19.81	1.81	KALISPELL	43	1	4.88	1.27	BEAUMONT	71	1	8.93	-6.59
ORLANDO	74	-1	7.35	-3.46	MILES CITY	46	-1	2.62	-0.22	BROWNSVILLE	76	1	12.76	1.92
PENSACOLA	71	1	8.33	-6.01	MISSOULA	45	1	4.14	1.27	COLLEGE STATION	72	2	6.66	-4.65
ST PETERSBURG	76	0	3.48	-8.79	NE GRAND ISLAND	53	2	2.40	-2.95	CORPUS CHRISTI	73	0	16.87	6.16
TALLAHASSEE	69	0	6.61	-5.51	HASTINGS	53	1	3.66	-2.21	DALLAS/FT WORTH	69	2	11.75	2.65
TAMPA	76	0	3.19	-7.26	LINCOLN	54	1	5.83	-0.61	DEL RIO	72	2	2.08	-2.94
WEST PALM BEACH	78	0	9.67	-9.44	MCCOOK	54	2	1.38	-2.36	EL PASO	67	3	1.80	-1.04
GA ATHENS	64	2	11.68	0.97	NORFOLK	51	1	3.85	-1.56	GALVESTON	74	0	11.61	-1.28
ATLANTA	66	3	10.41	-0.89	NORTH PLATTE	50	1	2.95	-0.37	HOUSTON	72	2	7.54	-5.48
AUGUSTA	65	1	3.86	-5.61	OMAHA/EPPLEY	55	3	4.96	-2.24	LUBBOCK	63	3	3.61	-1.37
COLUMBUS	68	2	8.47	-0.90	SCOTTSBLUFF	51	4	1.46	-1.57	MIDLAND	65	1	2.34	-2.39
MACON	65	1	9.01	0.16	VALENTINE	50	2	1.74	-1.81	SAN ANGELO	68	3	4.23	-2.39
SAVANNAH	69	2	3.92	-6.68	NV ELKO	48	1	4.41	1.97	SAN ANTONIO	71	1	9.80	0.36
HI HILO	74	-1	21.80	-12.56	ELY	46	1	2.99	0.42	VICTORIA	71	-1	16.27	4.37
HONOLULU	79	-1	1.30	-3.88	LAS VEGAS	71	3	0.84	-0.02	WACO	69	1	11.52	2.36
KAHULUI	77	-1	1.85	-1.76	RENO	55	3	3.10	1.43	WICHITA FALLS	66	2	7.15	-0.83
LIHUE	78	0	3.77	-7.87	WINNEMUCCA	49	0	4.32	2.33	UT SALT LAKE CITY	55	3	4.81	0.51
ID BOISE	55	3	2.75	-0.15	NH CONCORD	50	2	10.86	0.67	VT BURLINGTON	49	1	13.51	3.50
LEWISTON	53	1	2.93	-0.04	NJ ATLANTIC CITY	58	2	9.92	0.66	VA LYNCHBURG	58	1	11.25	0.80
POCATELLO	47	0	3.39	0.40	NEWARK	59	2	9.25	-1.81	NORFOLK	64	2	15.27	4.76
IL CHICAGO/O'HARE	54	2	6.22	-2.77	NM ALBUQUERQUE	60	3	2.16	-0.53	RICHMOND	62	3	9.90	-0.74
MOLINE	55	3	8.07	-0.62	NY ALBANY	51	1	14.07	4.27	ROANOKE	59	2	12.14	1.93
PEORIA	55	2	8.31	-0.56	BINGHAMTON	50	2	12.07	2.14	WASH/DULLES	58	2	11.04	0.54
ROCKFORD	54	4	6.24	-2.43	BUFFALO	51	0	9.46	-1.49	WA OLYMPIA	51	1	18.21	3.86
SPRINGFIELD	57	2	10.72	2.40	ROCHESTER	51	1	9.67	0.78	QUILLAYUTE	51	1	33.47	4.69
IN EVANSVILLE	60	3	9.87	-0.08	SYRACUSE	51	1	12.29	1.17	SEATTLE-TACOMA	53	0	15.09	4.37
FORT WAYNE	54	2	5.95	-2.47	NC ASHEVILLE	57	1	12.58	1.87	SPOKANE	48	1	5.33	1.27
INDIANAPOLIS	58	3	6.34	-2.91	CHARLOTTE	62	0	6.68	-4.17	YAKIMA	50	1	2.45	0.48
SOUTH BEND	53	1	6.76	-3.69	GREENSBORO	62	3	10.17	-0.35	WV BECKLEY	55	2	7.83	-0.92
IA BURLINGTON	55	1	10.34	1.11	HATTERAS	67	1	15.73	-0.19	CHARLESTON	58	2	8.06	-1.72
CEDAR RAPIDS	52	1	6.66	-1.06	RALEIGH	64	3	10.42	0.01	ELKINS	52	1	9.89	-0.21
DES MOINES	55	3	6.99	-0.88	WILMINGTON	66	1	25.16	11.90	HUNTINGTON	58	2	9.73	0.88
DUBUQUE	51	2	5.34	-3.21	ND BISMARCK	44	0	5.03	1.44	WI EAU CLAIRE	47	1	10.47	2.57
SIOUX CITY	52	2	4.39	-1.42	DICKINSON	43	-1	3.61	0.06	GREEN BAY	49	2	7.92	0.37
WATERLOO	51	2	4.25	-3.29	FARGO	45	2	8.46	3.25	LA CROSSE	51	1	11.04	3.38
KS CONCORDIA	56	1	6.71	0.92	GRAND FORKS	43	1	8.30	3.65	MADISON	51	3	6.04	-1.53
DODGE CITY	58	2	2.55	-1.61	JAMESTOWN	44	1	5.77	1.92	MILWAUKEE	53	2	6.02	-2.47
GOODLAND	54	3	2.04	-0.95	MINOT	44	1	4.15	0.23	WAUSAU	46	0	12.45	3.54
HILL CITY	56	2	2.48	-1.77	WILLISTON	43	1	3.87	1.00	WY CASPER	48	3	1.69	-1.25
TOPEKA	58	2	7.23	-1.78	OH AKRON-CANTON	53	1	10.53	1.53	CHEYENNE	49	4	1.56	-1.26
WICHITA	61	3	4.85	-2.38	CINCINNATI	57	1	8.99	-0.25	LANDER	49	4	0.93	-2.57
KY JACKSON	60	2	9.50	-1.65	CLEVELAND	54	2	10.15	0.27	SHERIDAN	47	3	1.88	-1.71

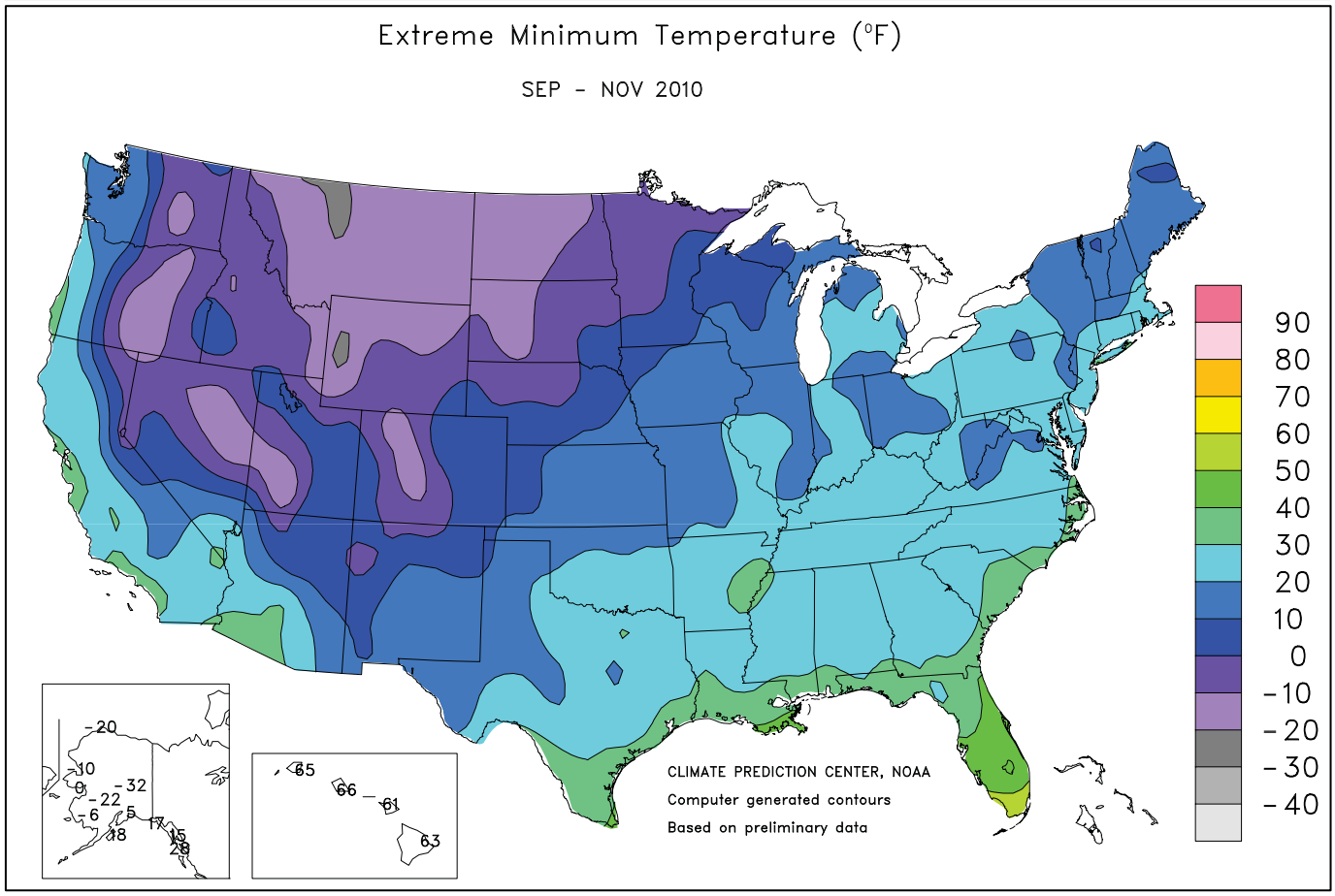
Based on 1971-2000 normals

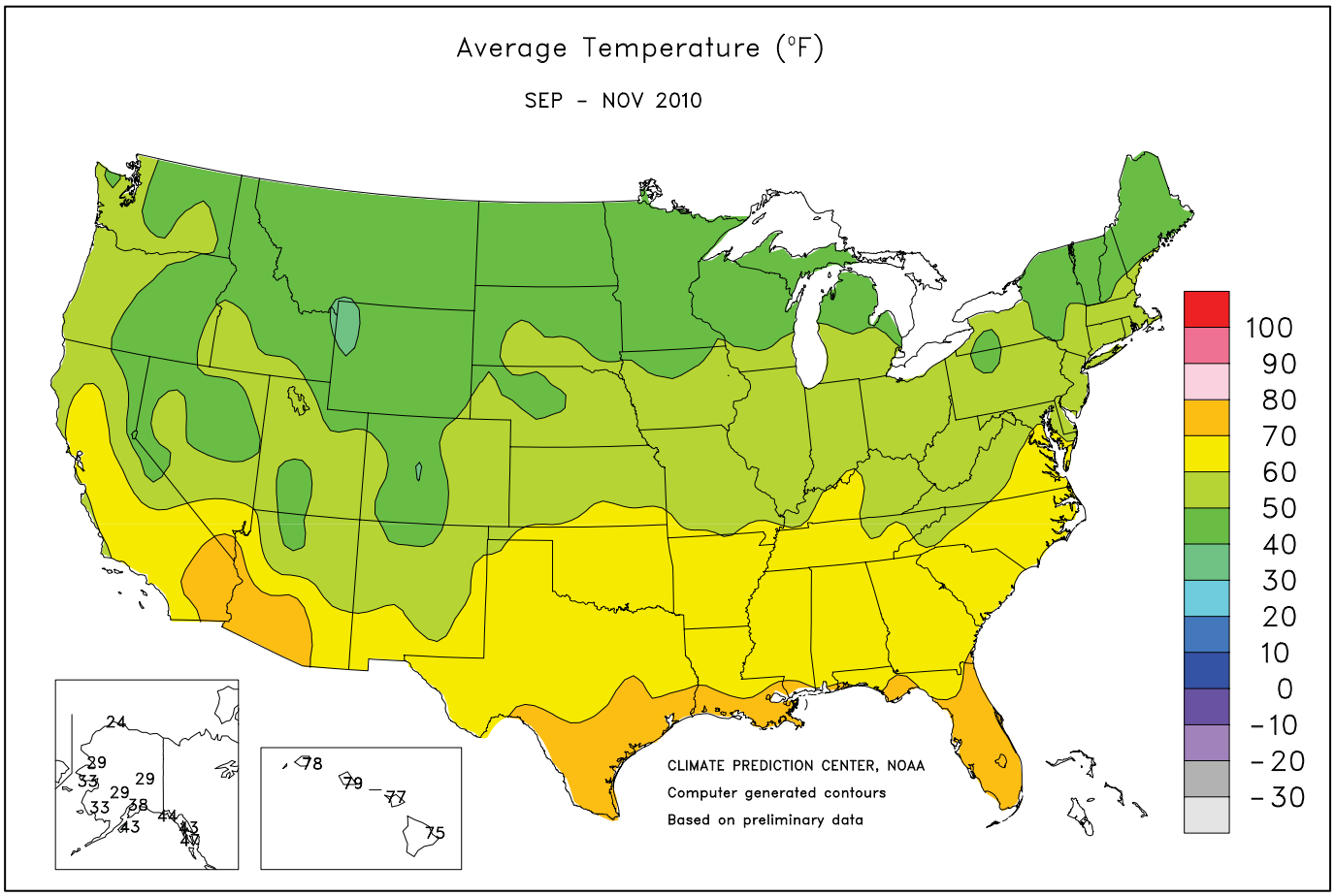
***** Not Available**

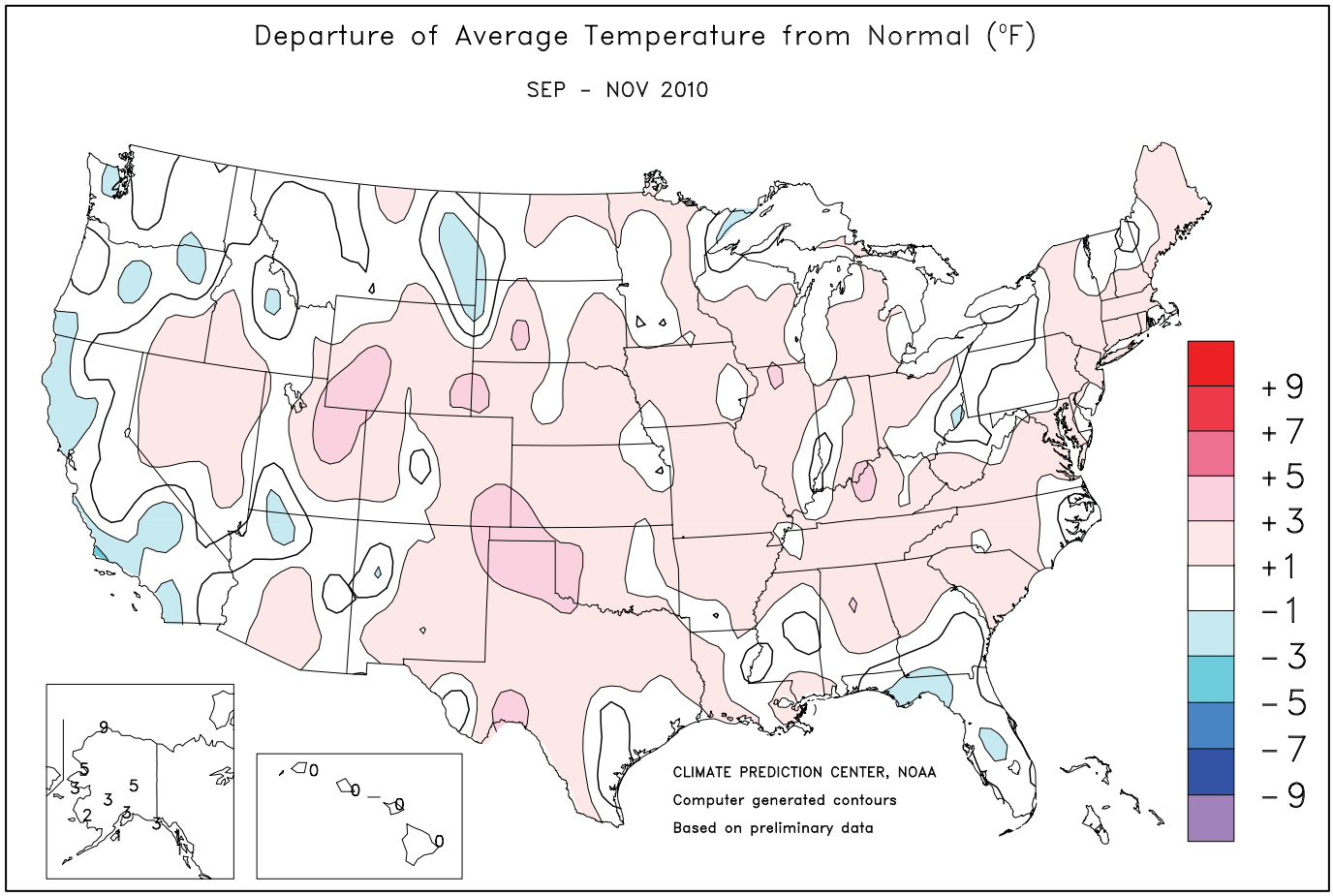

Total Precipitation (Inches)
SEP - NOV 2010
80
60
50
40
30
25
20
16
12
8
4
2
1
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data


Percent Of Normal Precipitation
SEP - NOV 2010
400
200
150
125
100
75
50
25
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data


Extreme Maximum Temperature (°F)
SEP - NOV 2010
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
55
62
60
70
72
67
71
67
75
87
89
91
86
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data


Extreme Minimum Temperature (°F)
SEP - NOV 2010
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
-20
10
-32
-22
-6
5
18
65
66
61
63
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data


Average Temperature (°F)
SEP - NOV 2010
100
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data


Departure of Average Temperature from Normal (°F)
SEP - NOV 2010
+9
+7
+5
+3
+1
-1
-3
-5
-7
-9
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data

National Agricultural Summary

December 6 – 12, 2010

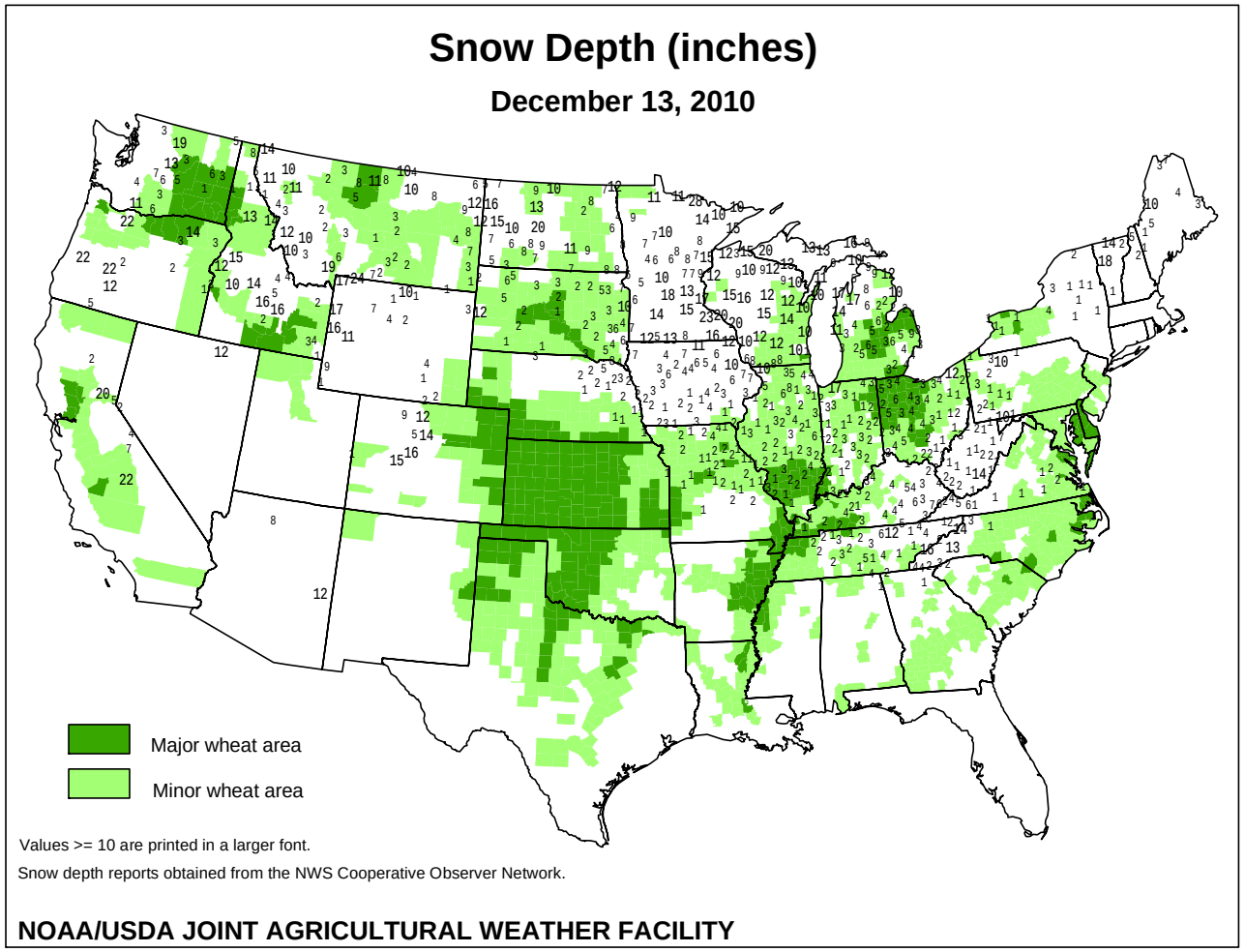
Weekly National Agricultural Summary provided by USDA/NASS

Extreme cold weather plagued much of the eastern half of the country, with a heavy snow storm hitting the upper Midwest late in the week. Weekly temperatures averaged more than 15 degrees F below normal in some areas of the Southeast. Meanwhile, dry weather prevailed in the Southwest.

Florida experienced drought and freezing temperatures during the week with temperatures 12 to 14 degrees below normal and lows in the 20s and 30s. According to the U.S. Drought Monitor as of December 7, 2010, drought conditions were present in all parts of the State, with the highest intensity (Extreme, or D3) recorded in northeastern and eastern portions of the State. The effect of the low temperatures on sugarcane was still being assessed. In the Panhandle, some wheat and oats were being planted. Statewide, cotton harvest was nearly complete by week's end. Farmers were protecting vegetable crops from the frost during the week. Highway truck restrictions in the State were eased to allow vulnerable vegetable crops to be transported quickly to processors.

Temperatures in Arizona were mostly above average and no precipitation was recorded during the week. Cotton harvest advanced to 80 percent complete, well behind both last year and the 5-year average. Alfalfa producers were busy cutting hay during the week, as harvest was active on over half of the State's acreage. Growers in both central and western portions of the State shipped a variety of vegetables, including broccoli, cabbage, cilantro, kale greens, cantaloupes, lettuce, and spinach.

In California, the start of the week saw widespread precipitation across the State. Cotton harvest was mostly complete, with some cotton fields being picked a second time before plow down. Harvested cotton fields continued to be shredded and disked to meet pink bollworm requirements. Winter wheat, oats, barley, and other winter forage crops continued to emerge due to good soil moisture levels. Rainfall continued to slow winter crop ground preparation and planting, with operators proceeding with field operations as conditions allowed. Pruning and other maintenance continued in orchards and vineyards as conditions allowed due to the ongoing wet weather.



December 9 ENSO Update

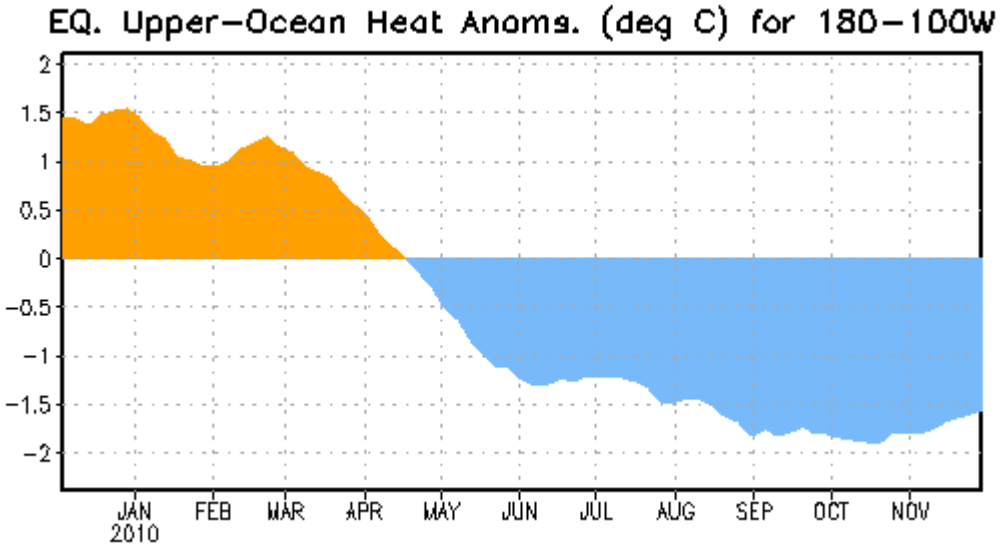


Figure 1: Area-averaged upper-ocean heat content anomalies (°C) in the equatorial Pacific (5°N-5°S, 180°-100°W). Heat content anomalies are computed as departures from the 1982-2004 base period pentad means.

Synopsis: La Niña is expected to last at least into the Northern Hemisphere spring 2011.

During November 2010, the ongoing La Niña was reflected by below-average sea surface temperatures (SSTs) across the equatorial Pacific Ocean. For the second straight month, only small changes were evident in the Niño SST indices, which ranged from –1.3°C to –1.7°C at the end of the month. The subsurface oceanic heat content (average temperatures in the upper 300m of the ocean, Fig. 1) also remained well below-average in association with a shallower-than-average thermocline across the central and eastern equatorial Pacific. Convection remained enhanced over Indonesia and suppressed over the western and central equatorial Pacific. Enhanced low-level easterly trade winds and anomalous upper-level westerly winds continued over the equatorial Pacific. Collectively, these oceanic and atmospheric anomalies reflect a moderate-to-strong La Niña.

Consistent with nearly all ENSO forecast models, La Niña is expected to peak during November-January and to continue into the Northern Hemisphere spring 2011. Thereafter, the fate of La Niña is more uncertain. The majority of forecast models and all of the multi-model combinations (thicker lines) indicate a return to ENSO-neutral conditions during the Northern Hemisphere spring and early summer. However, a smaller number of models, including the NCEP Climate Forecast System, suggest that La Niña could persist into the summer. Historically, there are more multi-year La Niña episodes than El Niño episodes, but other than support from a few model runs, there is no consensus for a multi-year La Niña at this time. Consequently, La Niña is anticipated to continue into the Northern Hemisphere spring, with no particular outcome favored thereafter.

Likely La Niña impacts during December 2010-February 2011 include suppressed convection over the central tropical Pacific Ocean, and enhanced convection over Indonesia. Impacts in the United States include an enhanced chance of above-average precipitation in the Pacific Northwest, Northern Rockies (along with a concomitant increase in snowfall), Great Lakes, and Ohio Valley. Below-average precipitation is most likely across the southern states, extending into the Mid-Atlantic region. An increased chance of below-average temperatures is predicted for the northernmost western and central states, and a higher possibility of above-average temperatures is forecast for much of the southern and central U.S.

This discussion is a consolidated effort of the National Oceanic and Atmospheric Administration (NOAA), NOAA's National Weather Service, and their funded institutions. Oceanic and atmospheric conditions are updated weekly on the Climate Prediction Center web site (El Niño/La Niña Current Conditions and Expert Discussions). Forecasts for the evolution of El Niño/La Niña are updated monthly in the Forecast Forum section of CPC's Climate Diagnostics Bulletin. The next ENSO Diagnostics Discussion is scheduled for 4 February 2010. To receive an e-mail notification when the monthly ENSO Diagnostic Discussions are released, please send an e-mail message to: ncep.list.enso-update@noaa.gov.

International Weather and Crop Summary

December 5-11, 2010

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

HIGHLIGHTS

EUROPE: Wet weather over much of the continent maintained adequate to abundant soil moisture for dormant winter crops, although fieldwork delays continued in the south.

WESTERN FSU: Milder weather ended the recent spell of arctic cold, although dormant winter crops remained adequately insulated by snow cover.

MIDDLE EAST: Heavy rain and snow eased drought from Turkey into Iraq, while unfavorable dryness persisted in Iran.

NORTHWEST AFRICA: Sunny skies promoted winter grain establishment on the heels of last week's heavy rain.

SOUTH ASIA: Wet weather overspread eastern India, slowing summer harvesting but increasing moisture supplies for winter rice.

EAST ASIA: Dry, mild conditions remained entrenched across winter growing areas.

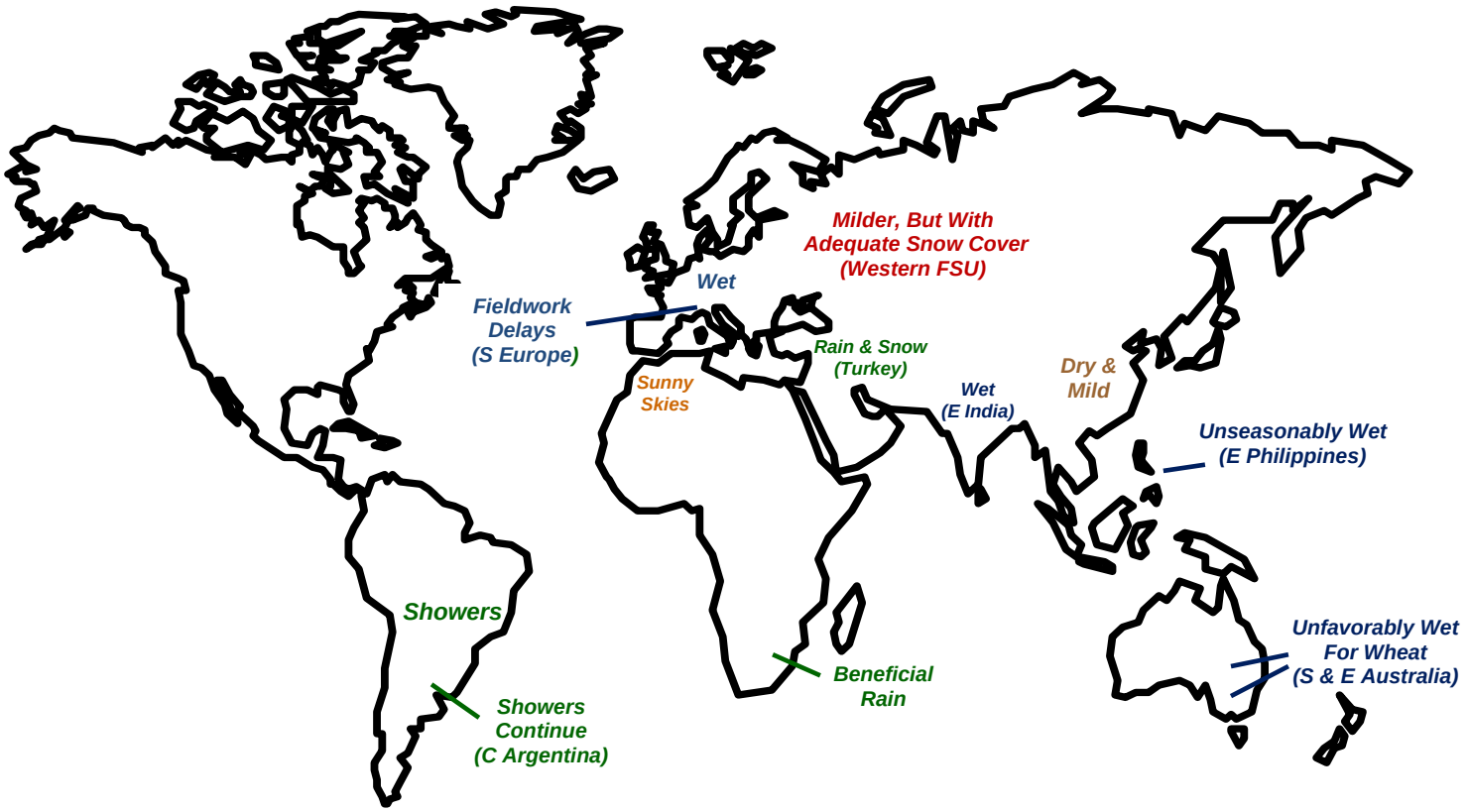
SOUTHEAST ASIA: Unseasonably wet weather continued in the eastern Philippines, maintaining abundant moisture supplies for rice and corn.

AUSTRALIA: In southern and eastern Australia, widespread, locally heavy rain continued to delay winter grain harvesting and reduce crop quality.

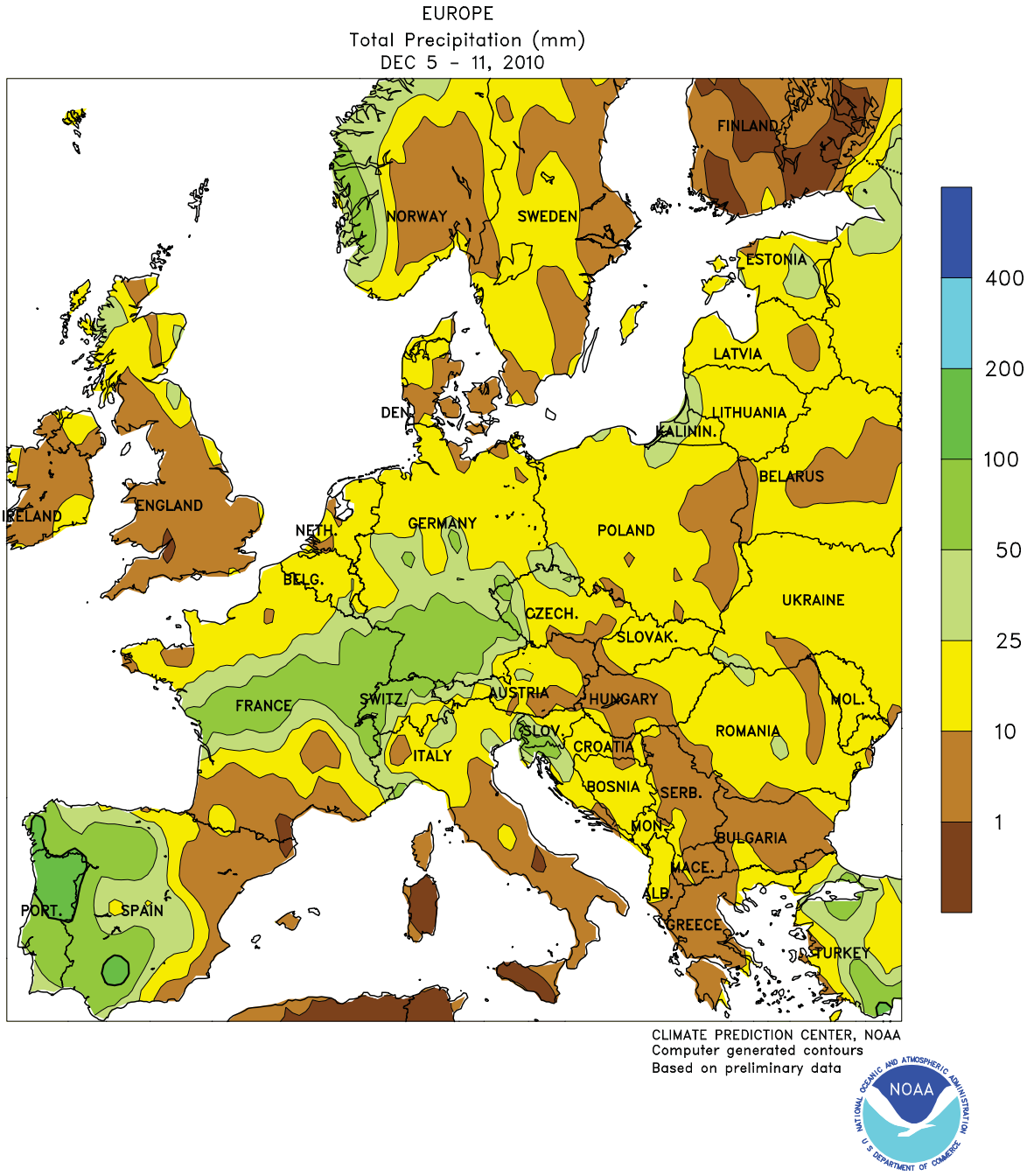
SOUTH AFRICA: Showers returned to the eastern corn belt, improving conditions for vegetative summer crops.

ARGENTINA: Scattered showers continued across central Argentina, keeping topsoils moist for germinating summer grains and oilseeds.

BRAZIL: Widespread, locally heavy rain maintained generally favorable crop prospects in major farming areas of central and southern Brazil.

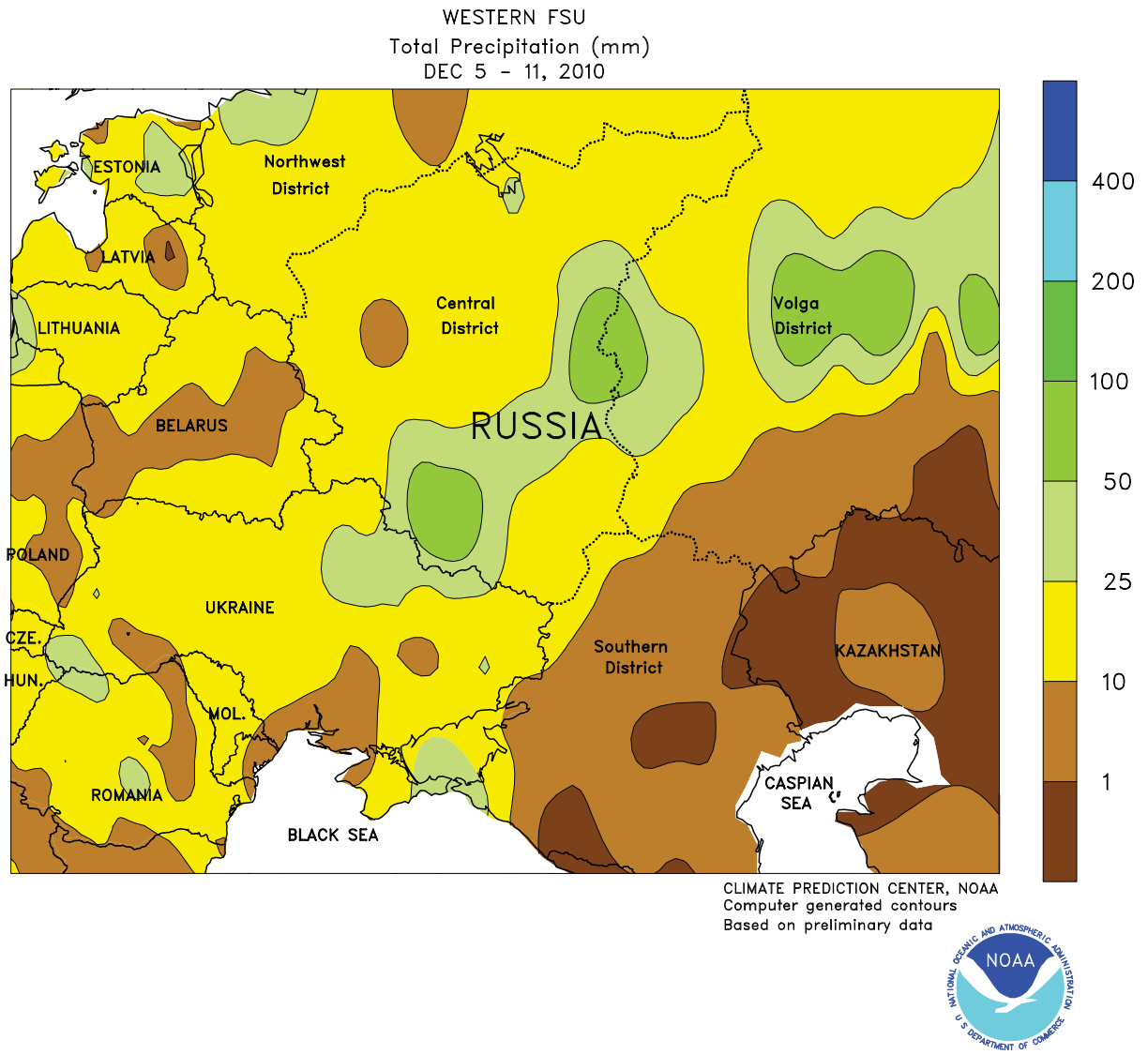


For additional information contact: meteorologists@oce.usda.gov



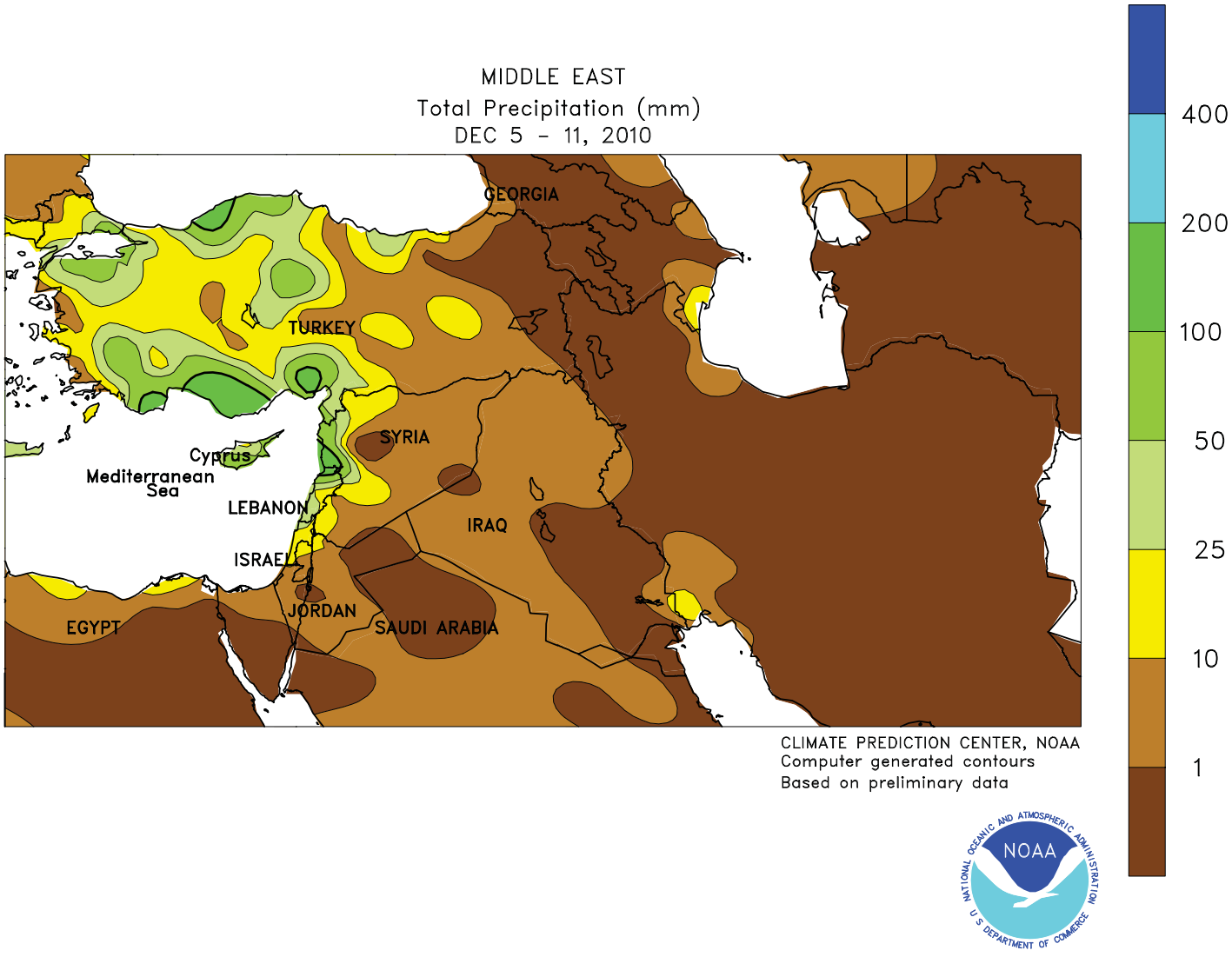
EUROPE

Locally heavy precipitation prevailed over much of the continent, although drier weather returned to southern-most growing areas. From France into Poland and the Baltic States, rain and snow (10-65 mm liquid equivalent) maintained adequate to abundant moisture reserves for dormant winter grains and oilseeds. Snow depths exceeded 10 cm from eastern and southern Germany into Poland, while snow cover was patchy and shallow (less than 5 cm) in northern Germany and the Balkans. Heavy rain (locally more than 100 mm) in Spain boosted soil moisture and irrigation reserves for winter wheat. In northern Italy, light to moderate showers (5-30 mm) continued to hamper fieldwork; winter wheat planting has likely been delayed by the recent month-long spell of excessively wet weather. Dry weather (less than 2 mm) in southern Italy and Greece favored corn and cotton harvesting. Warmer-than-normal conditions (2-5 degrees C above normal) in southern Europe contrasted with colder-than-normal readings (3-5 degrees C below normal) in northern Europe. Lows reached -20 degrees C in southern Poland, while nighttime temperatures moderated somewhat (-10 to -5 degrees C) elsewhere in northern Europe.



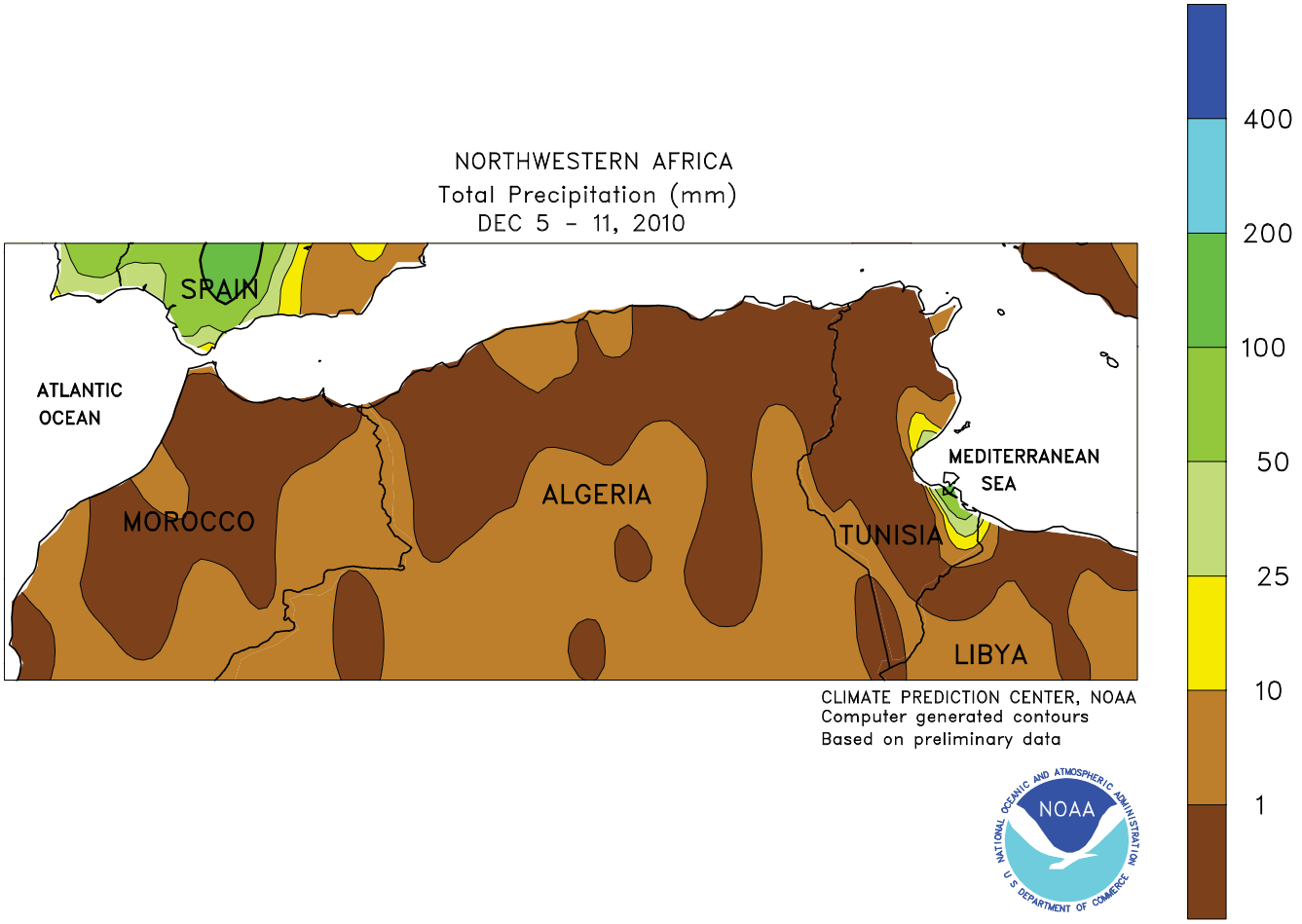
WESTERN FSU

Somewhat milder weather returned to most major crop areas, although wet conditions persisted. In the wake of last week's arctic chill, temperatures averaged 2 to 7 degrees C above normal from eastern Ukraine into central and northern Russia. Colder-than-normal readings (1-3 degrees C below normal) were confined to Belarus, northern Ukraine, and northwestern portions of the Central District. Consequently, nighttime lows (-20 to -10 degrees C) were mostly above the threshold for potential winterkill, and areas where temperatures reached -20 degrees C were protected by adequate snow cover. Precipitation, which fell as a mix of snow, freezing rain, and rain, totaled 10 to more than 50 mm from Ukraine and Belarus into Russia's Volga District. In contrast, dry conditions prevailed in southern Russia. Winter grains likely added late vegetative growth in the southern-most portions of the Southern District, which escaped last week's hard freeze and saw highs this week exceed 10 degrees C. Winter crops across the remainder of the western FSU have gone dormant.



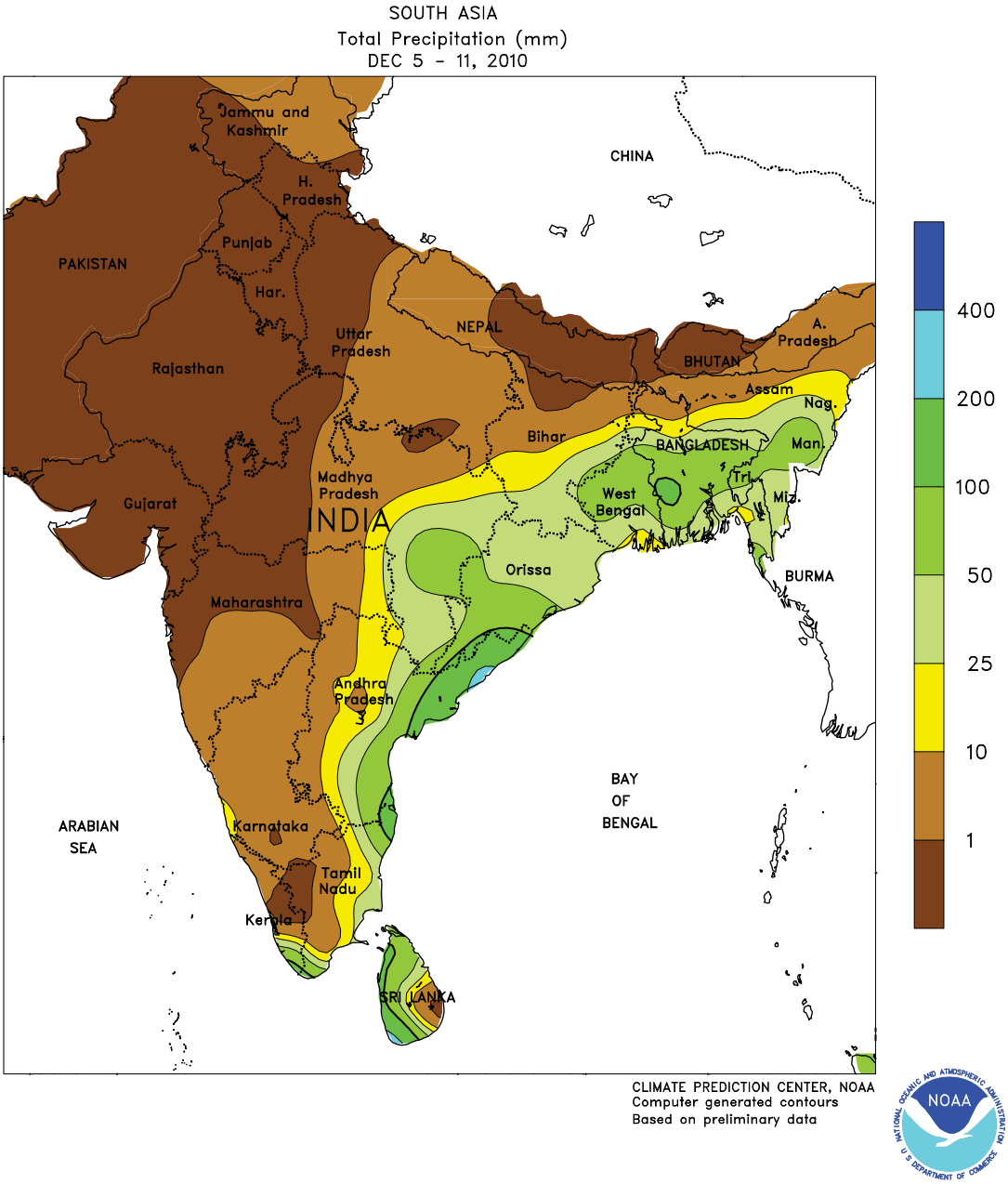
MIDDLE EAST

Much-needed drought relief in western and central growing areas contrasted with persistent dryness in Iran. A slow-moving Mediterranean storm brought moderate to heavy rain and snow (10-100 mm liquid equivalent, locally more) to Turkey and the eastern Mediterranean coast, ending a 3-month dry spell and providing moisture to parched topsoils. Winter crops are likely poorly established, if at all, due to the pronounced short-term drought that has impacted most major growing areas, and the window for crop establishment before winter sets in is limited. Farther east, showers were light (5 mm or less) in Iraq, although rain was overspreading northern portions of the country as of December 12. In Iran, unfavorable dryness persisted, maintaining or worsening short-term drought and increasing concerns over winter crop establishment. Temperatures up to 4 degrees C above normal extended the growing season for another week, although colder conditions (-10 to -1 degrees C) settled over the typically colder interior growing areas by week's end.



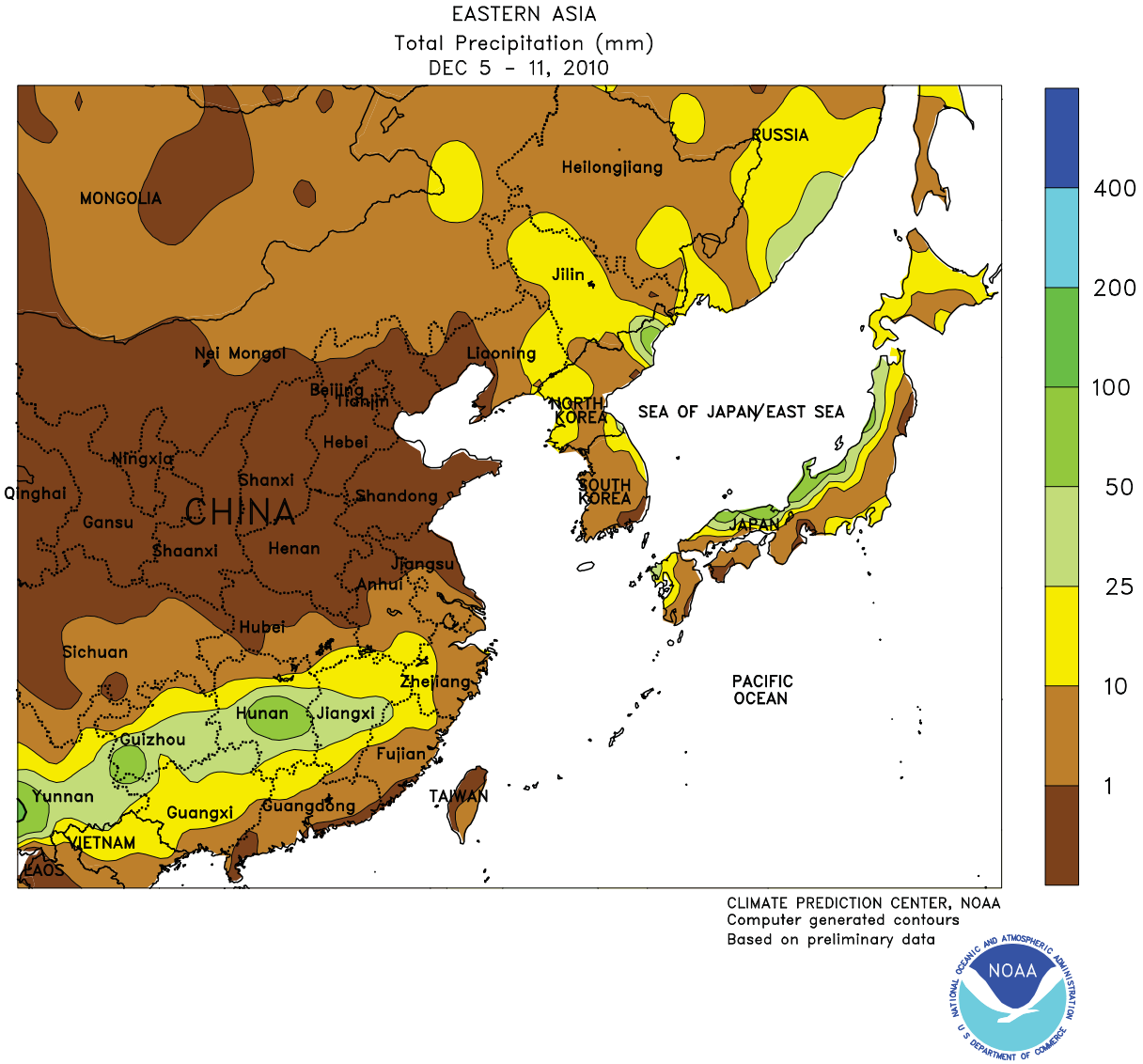
NORTHWESTERN AFRICA

Dry conditions returned to the region, providing relief from recent excessive wetness. On the heels of last week's 200 mm rainfall in northern Morocco, dry weather promoted flood recovery efforts and allowed affected producers to replant crops. Sunny skies and above-normal temperatures (up to 6 degrees C above normal) were favorable for winter wheat and barley establishment across the remainder of northern Africa's primary growing areas, with season-to-date rainfall (since September 1) at or above the long-term average in most crop districts.



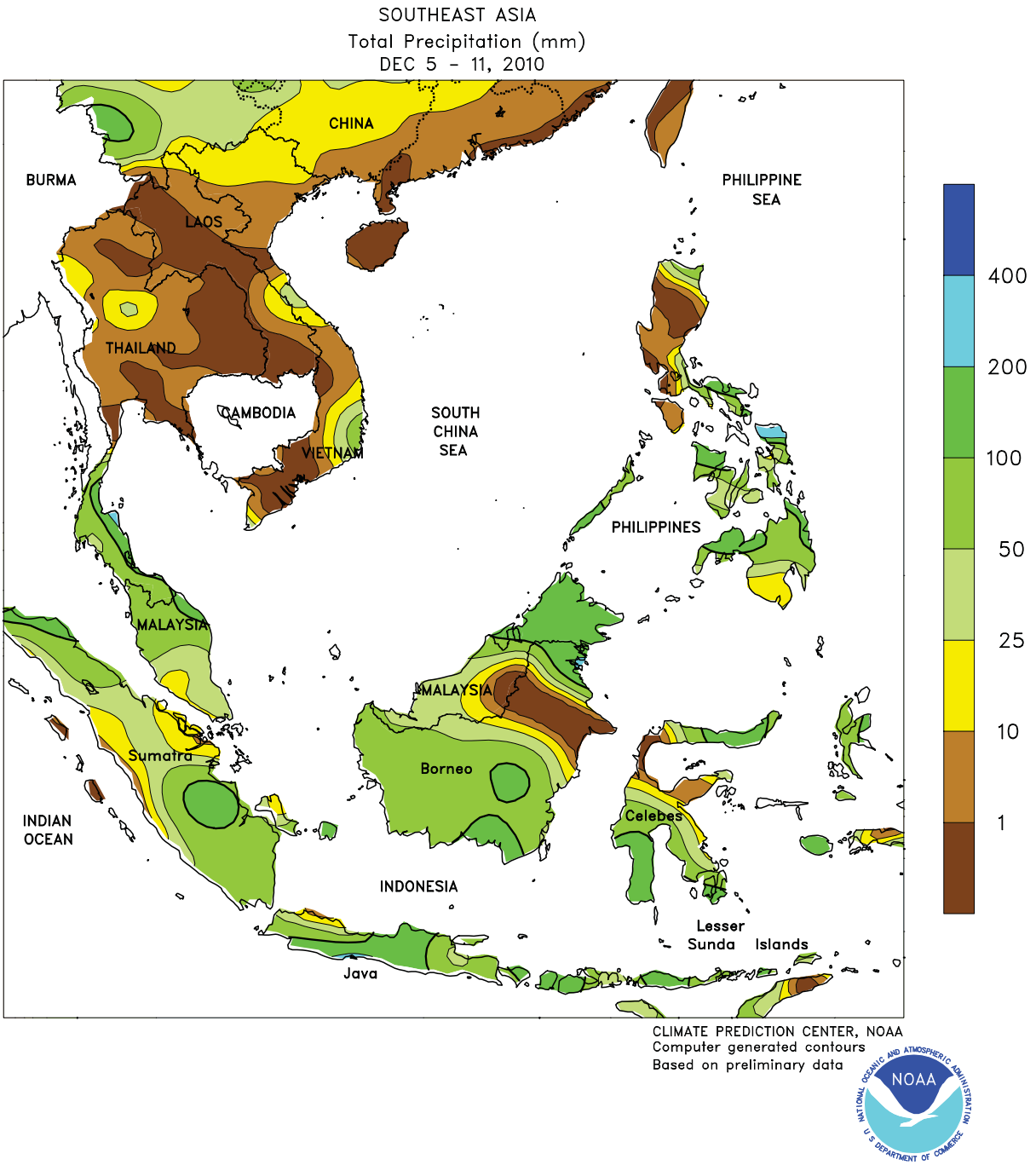
SOUTH ASIA

Unseasonably heavy rainfall (25-100 mm) overspread much of eastern India, slowing summer (kharif) harvest activities but increasing moisture supplies for winter (rabi) crops such as rice. In contrast, drier conditions prevailed in much of southern India, favoring cotton and rice harvesting after weeks of inundating rains. Meanwhile, seasonably dry weather occurred throughout winter crop areas of northern India where irrigation supplies remained favorable. Additionally, temperatures averaged 15 to 20 degrees C for the period, aiding crop development.



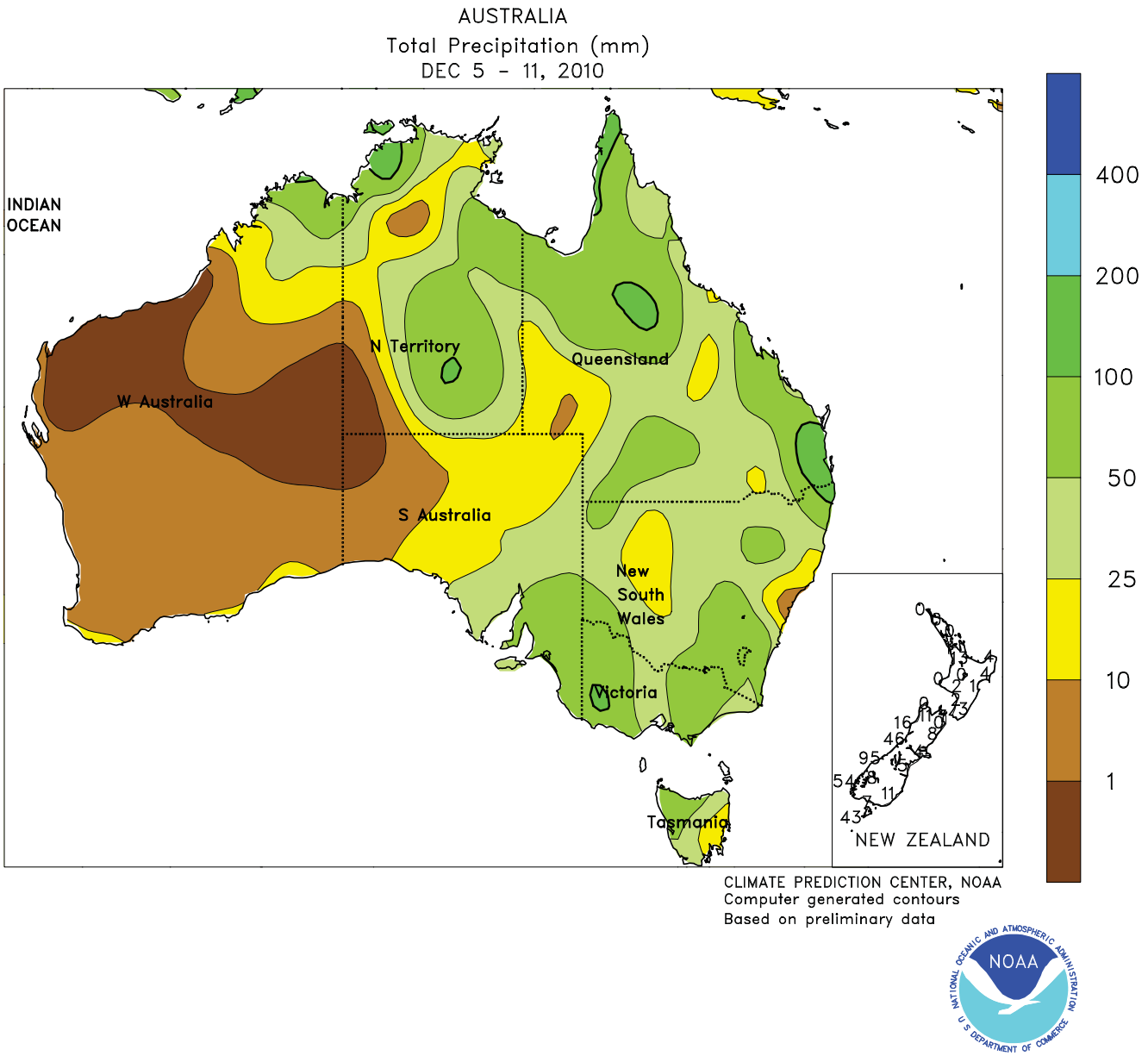
EASTERN ASIA

Unseasonably dry conditions persisted over most winter growing areas, necessitating further irrigation of crops. Temperatures up to 5 degrees C above normal favored wheat and rapeseed development but also maintained unseasonably high moisture requirements. Minimum temperatures below freezing began hardening winter crops as far south as the Yangtze Valley, but the potential for freeze injury still existed. Rainfall (10-50 mm) was confined to the Xi River Basin in southern China, favoring winter vegetables.



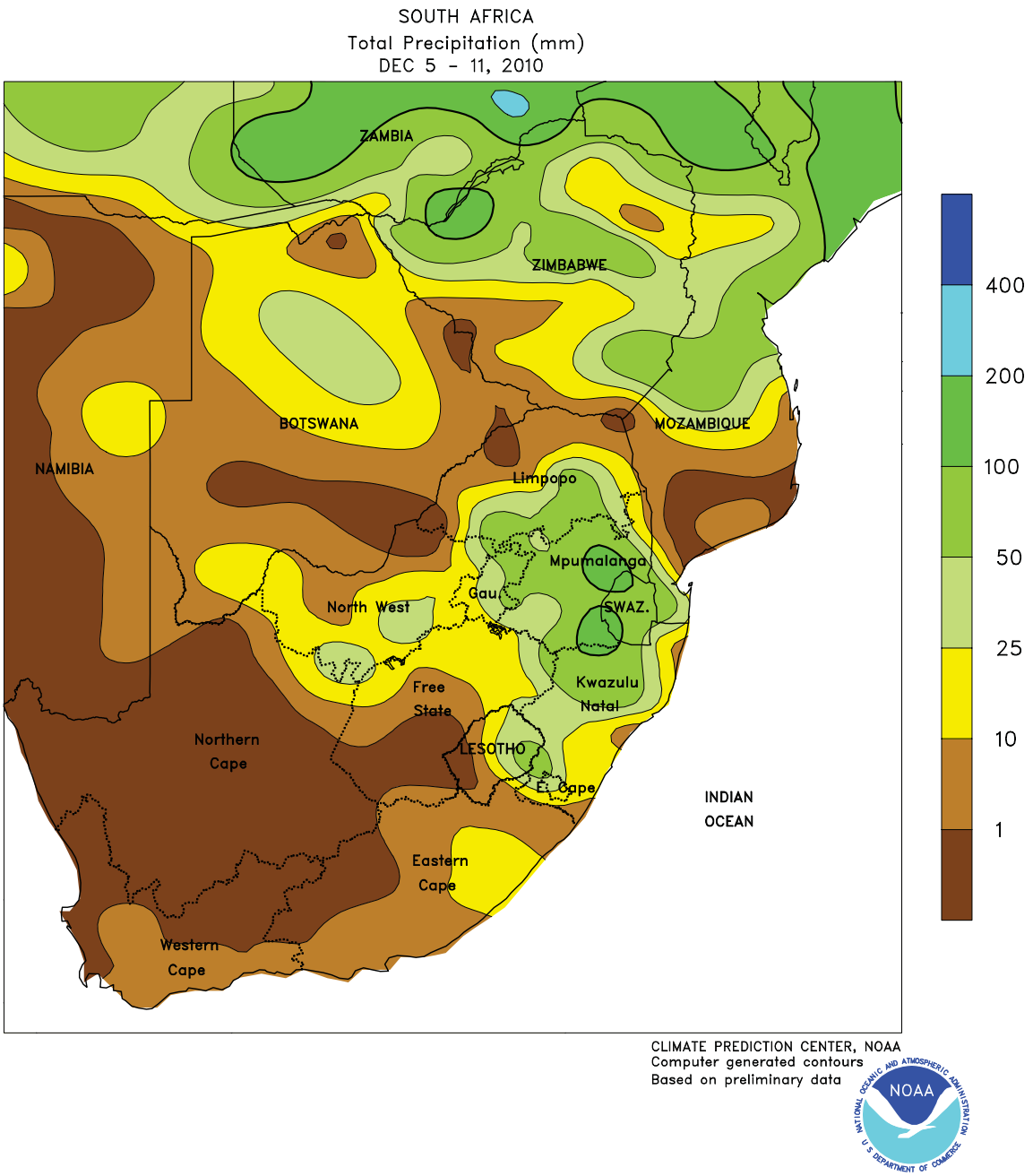
SOUTHEAST ASIA

Coffee harvesting continued with few delays in Vietnam, while light showers (less than 10 mm) added to moisture supplies for spring rice in both the Red River and Mekong Deltas. Unseasonably heavy showers (over 100 mm) continued in the eastern Philippines, ensuring abundant moisture supplies for winter-grown rice and corn, but caused some flooding. Seasonable rainfall (25-100 mm) in Malaysia and Indonesia benefited oil palm, with minor harvest delays. Meanwhile, 50 to over 100 mm of rain maintained abundant to excessive soil moisture for rice in Java, Indonesia.



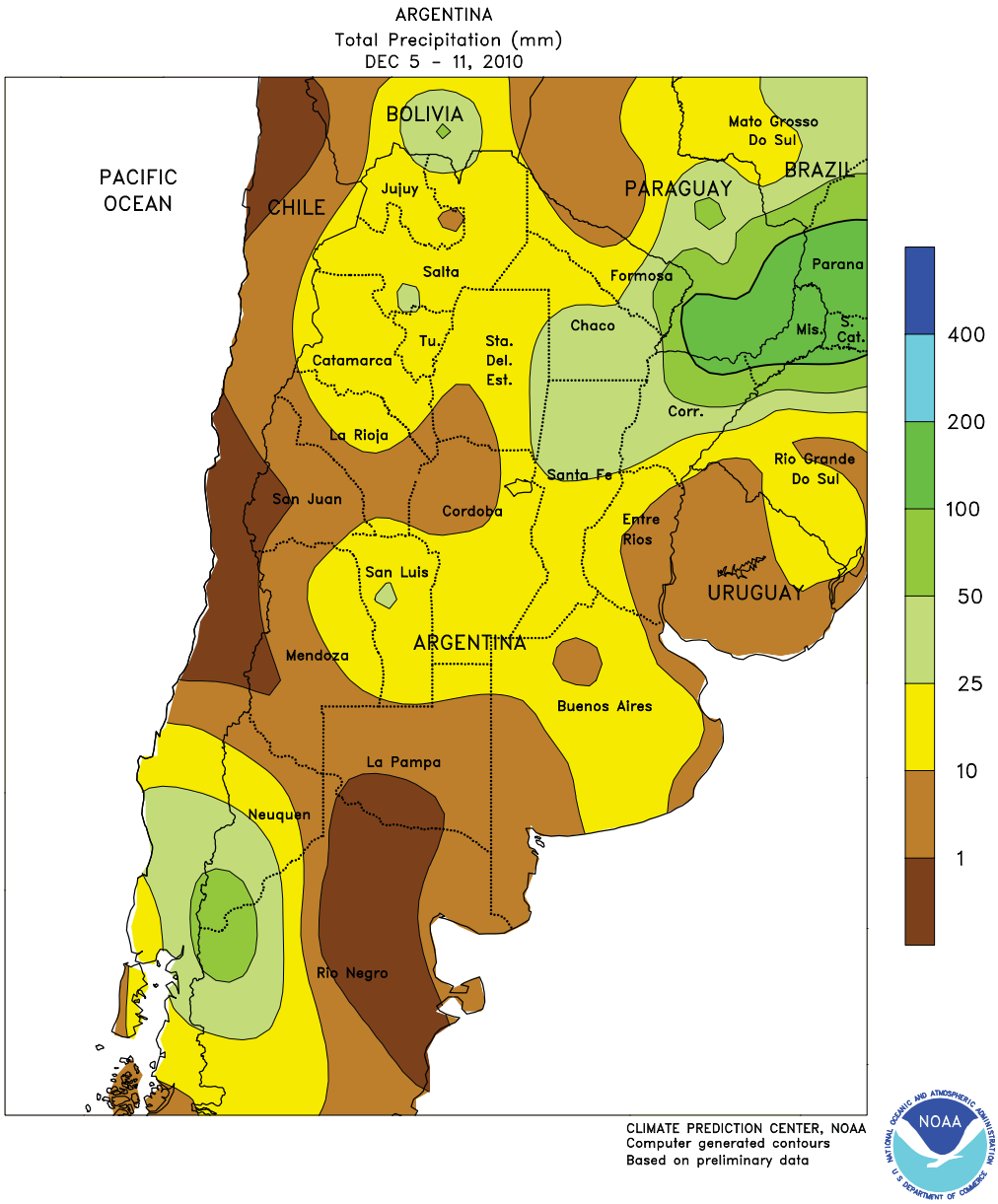
AUSTRALIA

Widespread, locally heavy rain (25-100 mm, locally more) continued to fall across much of southern and eastern Australia, further delaying winter grain harvesting and reducing crop quality. The rain maintained abundant moisture supplies for cotton and sorghum, benefiting most irrigated and dry land summer crops but causing additional local flooding. Elsewhere, mostly dry weather favored uninterrupted winter grain harvesting in Western Australia. Temperatures in the wheat belt were generally seasonable, averaging within 2 degrees C of normal.



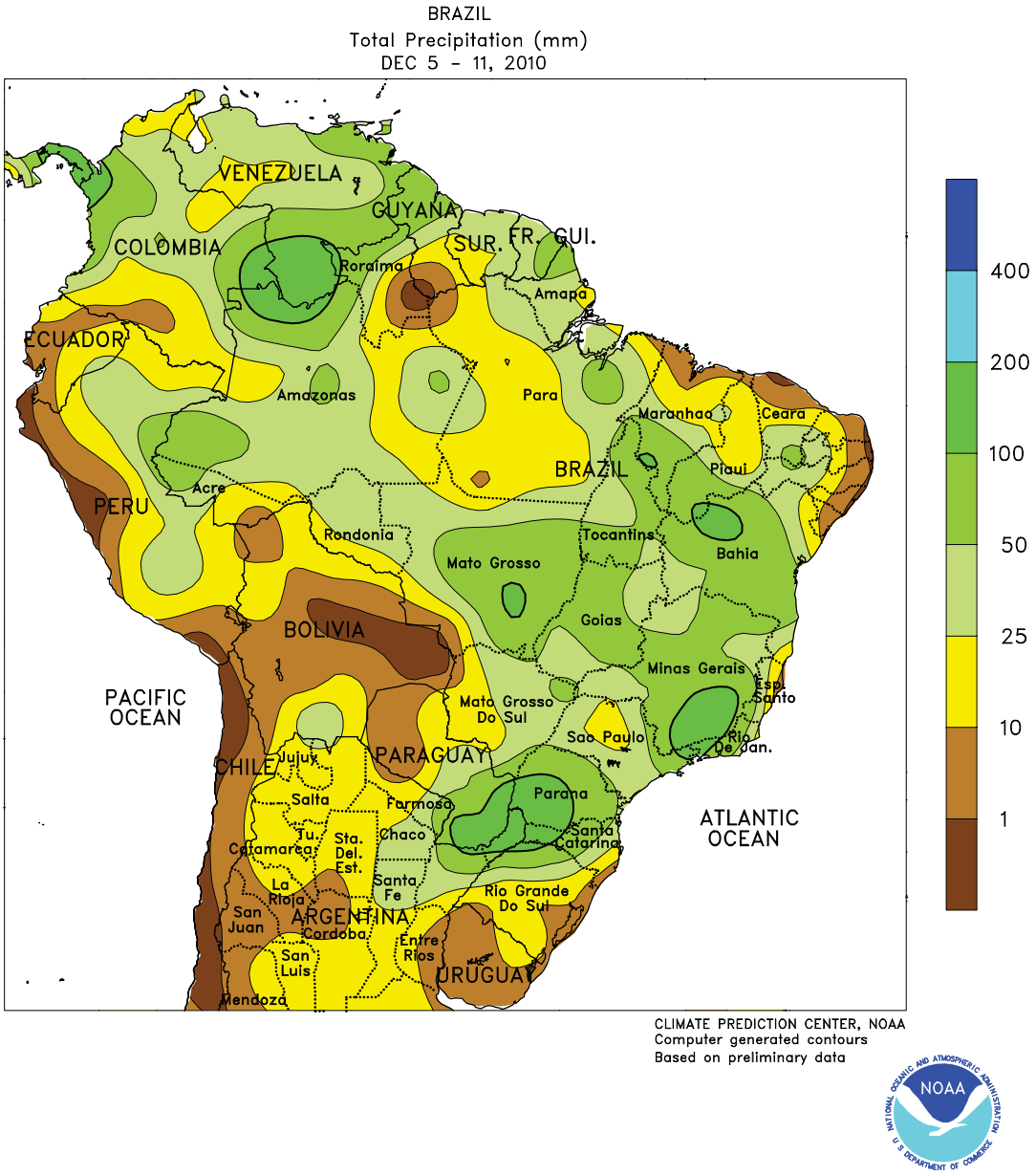
SOUTH AFRICA

Rainfall intensified over eastern sections of the corn belt, increasing moisture for vegetative summer crops. Amounts totaled 25 to 50 mm or more over a broad area stretching from southern and eastern Limpopo to northwestern KwaZulu-Natal, including Mpumalanga and nearby locations in Free State and Gauteng. For some locations, this week's rain was the heaviest since early November, making the moisture particularly timely as crops progressed through vegetative stages of development. Meanwhile, lighter rain (5-25 mm) kept topsoils moist for summer crop germination in the western half of the corn belt. Temperatures averaged near to slightly above normal across the region, with highs briefly hitting the lower 30s degrees C. Elsewhere, seasonable levels of rain (10-50 mm) returned to northern sections of KwaZulu-Natal, boosting irrigation reserves for sugarcane. Scattered showers continued in southern KwaZulu-Natal but drier conditions prevailed in Eastern Cape, with most areas receiving less than 10 mm of rainfall. Mostly dry, seasonably warm weather (highs reaching the middle 30s degrees C) advanced development of irrigated tree and vine crops in Western Cape.



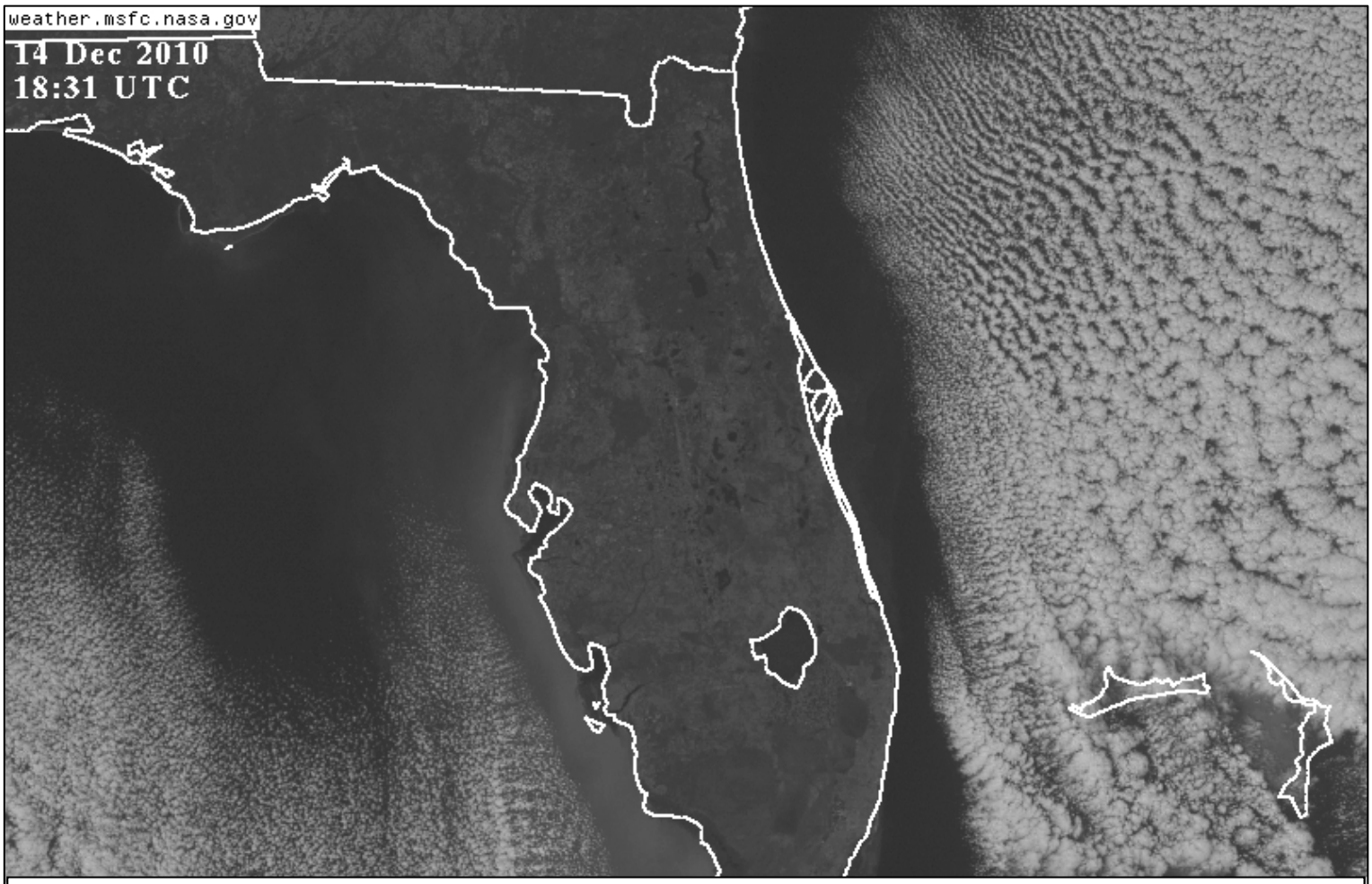
ARGENTINA

Scattered showers continued across central Argentina, providing additional moisture for germination and establishment of summer grains and oilseeds. Amounts were lower than those recorded last week, with most areas receiving less than 25 mm; however, rain was still falling as of December 12 in previously dry eastern growing areas. Additional information will appear in the next *Weekly Weather and Crop Bulletin*. Near- to above-normal temperatures (highs briefly reaching the lower and middle 30s degrees C) maintained high evaporative losses throughout central Argentina though conditions were favorable for drydown and harvesting of winter grains. Warm, showery weather also prevailed across northern Argentina, although temperatures were higher relative to normal; weekly average temperatures were at least 2 degrees C above normal in most areas with highs at or above 40 degrees C in some areas. In the main cotton producing areas, rainfall exceeding 25 mm was generally confined to northern Santa Fe and eastern sections of Chaco and Formosa. According to Argentina's Ministry of Agriculture, sunflower and corn planting was 97 and 81 percent complete, respectively, as of December 9. In addition, soybeans were 67 percent planted versus 63 percent last year. Wheat harvesting reached 35 percent, compared with 34 percent last year. Problems with dry weather hampering planting of grains, oilseeds, and cotton were reported.



BRAZIL

Widespread, locally heavy rain continued throughout major agricultural areas of central and southern Brazil, maintaining overall favorable crop prospects. In the south, the heaviest rain (greater than 100 mm) was concentrated over southwestern Parana and western Santa Catarina, though most of the region's other farming areas received at least 25 mm. Rainfall was near to above normal (25-50 mm or more) in key northern summer crops of Rio Grande do Sul for a third consecutive week, aiding soybean establishment but possibly hampering late wheat harvests. Near- to above-normal temperatures (highs in the lower and middle 30s degrees C) aided crop development throughout the south. Farther north, widespread rain (25-50 mm, locally exceeding 100 mm) sustained favorable levels of moisture for soybeans and other summer row crops in the Center-West Region (Mato Grosso, Goias, and Mato Grosso do Sul). Rainfall intensified over the main cotton and soybean areas of the interior northeast, with amounts ranging from 25 to 100 mm in key growing areas of Tocantins and western Bahia. However, mostly dry weather continued along the northeastern coast, favoring sugarcane harvesting. Summer warmth (highs in the middle 30s degrees C) promoted development of summer row crops, coffee, and other regionally important crops in central and northeastern Brazil.



GOES East Visible, December 14, 2010, 1:31 pm EST: Following the December 7-8 cold snap, another surge of unusually cold air arrived in Florida starting December 13. The latter cold blast rivaled a 1962 event as one of Florida's most significant mid-December cold outbreaks on record. On December 14, in fact, daily-record lows from 1962 were broken in Daytona Beach (24 degrees F), Vero Beach (26 degrees F), and West Palm Beach (32 degrees F). Extremely dry air accompanied the cold wave, with dewpoint temperatures falling to 0 degrees F or below on the afternoon of December 14 in locations such as Daytona Beach, Gainesville, and Melbourne.

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