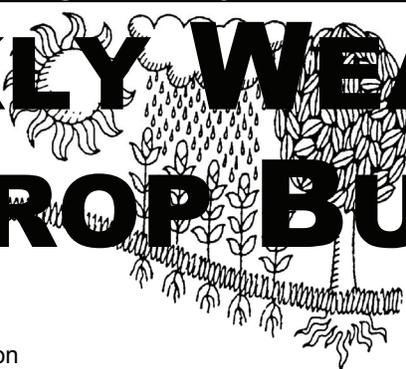


# WEEKLY WEATHER AND CROP BULLETIN

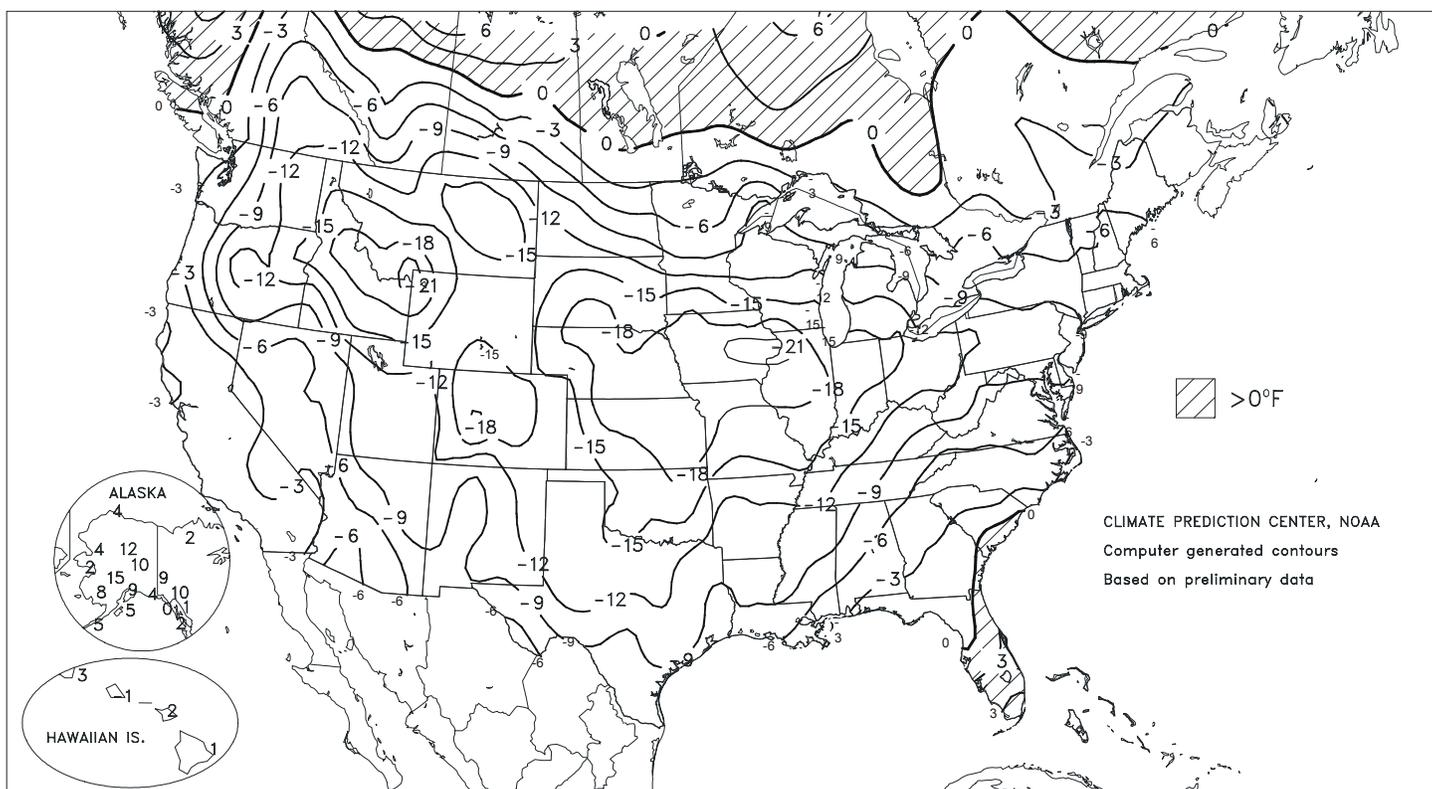


U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Weather Service

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

Departure of Average Temperature from Normal (°F)

DEC 4 - 10, 2005



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

## HIGHLIGHTS

### December 4 - 10, 2005

Highlights provided by USDA/WAOB

**A**n early-season cold snap held weekly temperatures as much as 24°F below normal in the **Midwest** and resulted in below-normal readings nearly nationwide. Above-normal temperatures were confined to **Florida**, where a return to mild weather followed last week's cool spell. Farther west, snow subsided across the **Rockies** and the **Northwest** early in the week, followed by a sharp cold snap. Temperatures below -40°F were noted in some high-elevation **Western** valleys. Meanwhile in **California**, mostly dry weather favored late-season fieldwork, although light freezes were noted at midweek as far south as the **San Joaquin**

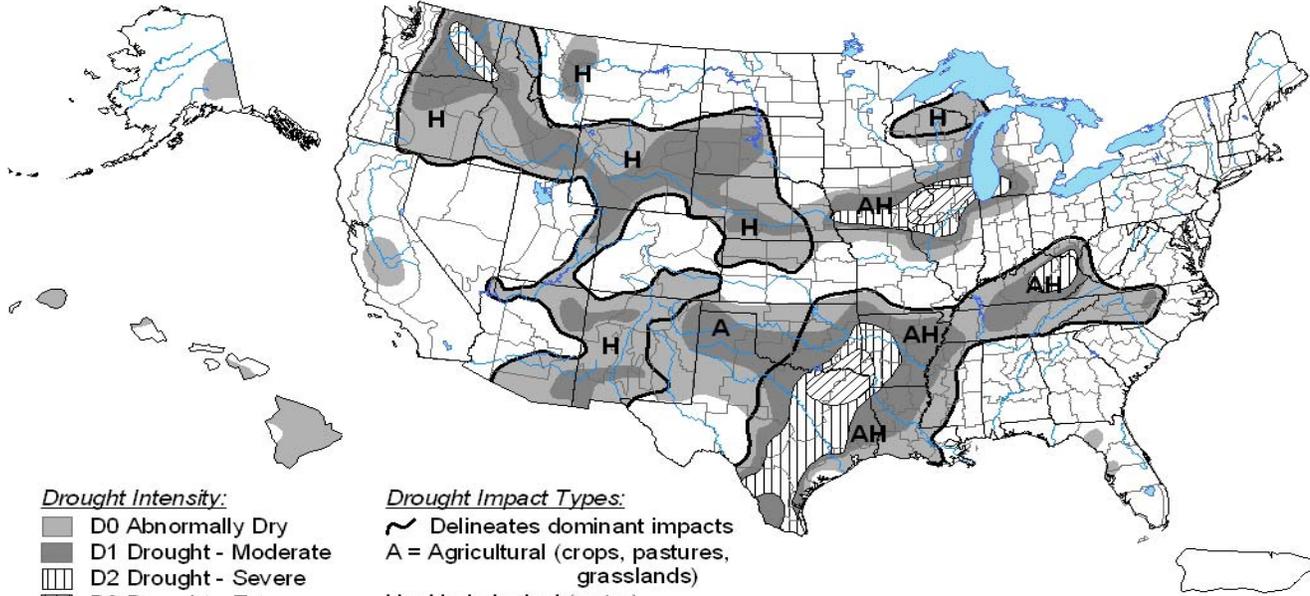
(Continued on page 5)

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# U.S. Drought Monitor

December 6, 2005  
Valid 7 a.m. EST



**Drought 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.

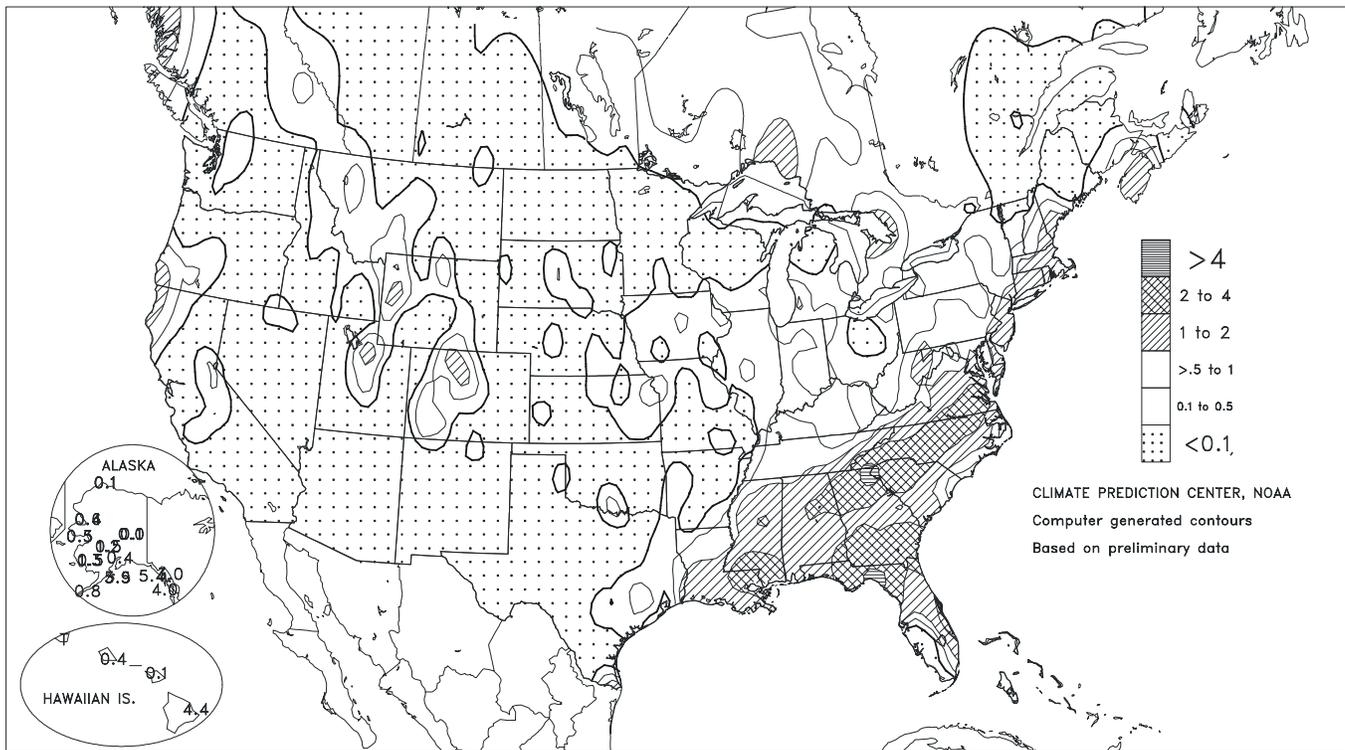
<http://drought.unl.edu/dm>



Released Thursday, December 8, 2005  
Author: Mark Svoboda and Brian Fuchs; NDMC

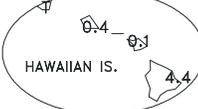
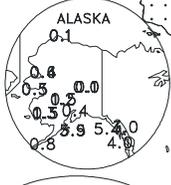
## Total Precipitation (Inches)

DEC 4 - 10, 2005



- > 4
- ▨ 2 to 4
- ▩ 1 to 2
- ▧ >.5 to 1
- 0.1 to 0.5
- ▧ <0.1

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



## U.S. Crop Production Highlights

The following information was released by USDA's Agricultural Statistics Board on December 9. Forecasts refer to December 1.

**All cotton** production is forecast at a record-high 23.7 million 480-pound bales, up 2 percent from the November forecast and 2 percent above last year. The yield is expected to average 832 pounds per acre, up 19 pounds from last month but down 23 pounds from 2004. If realized, production will surpass the previous record set last year, while yield would be the second largest on record. However, Georgia, Kansas, New Mexico, Oklahoma, and Texas are expecting record-high yields. The December area expected for harvest remains unchanged from last month at 13.7 million acres but is up 5 percent from 2004.

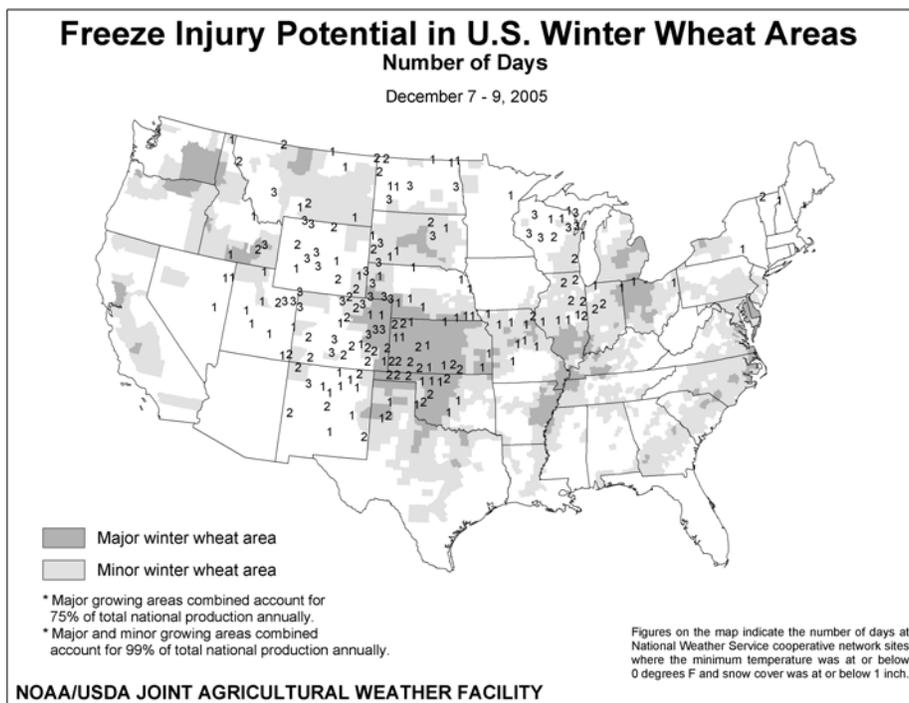
The **all orange** forecast for the 2005-06 season is 9.44 million tons, down 12 percent from the previous forecast but 4 percent above last season's final utilization of 9.11 million tons. Florida's all orange forecast, at 162 million boxes (7.29 million tons), is down 15 percent from the previous forecast but up 8 percent from the 2004-05 crop. Early, midseason, and navel varieties are forecast at 80 million boxes (3.60 million tons), 14 percent below the previous forecast but 1 percent above last season's final utilization. The Florida Valencia forecast is

reduced by 15 million boxes to 82 million boxes (3.69 million tons), down 15 percent from the previous forecast but up 16 percent from last season's final utilization. Early-midseason bearing trees are reduced from the number used to prepare the October forecast by 1.4 percent, and Valencia tree numbers are reduced by 2.4 percent. For both Valencia and early-midseason crops, projected fruit sizes will be smaller than any of the previous 10 years, and fruit drop will be above average. Arizona, California, and Texas orange production forecasts are carried forward from October.

In response to Hurricane Wilma, which struck Florida on October 24, limb-count crews revisited one-third of the previously completed orange and grapefruit samples in the two hurricane-affected areas (Indian River and Southern growing areas). The fruit per tree components of the citrus forecasts were updated from this special survey. In addition to hurricane-related updates, bearing tree numbers were revised to account for removals due to ongoing canker eradication efforts. All available data were analyzed to prepare the December 1 citrus forecasts.

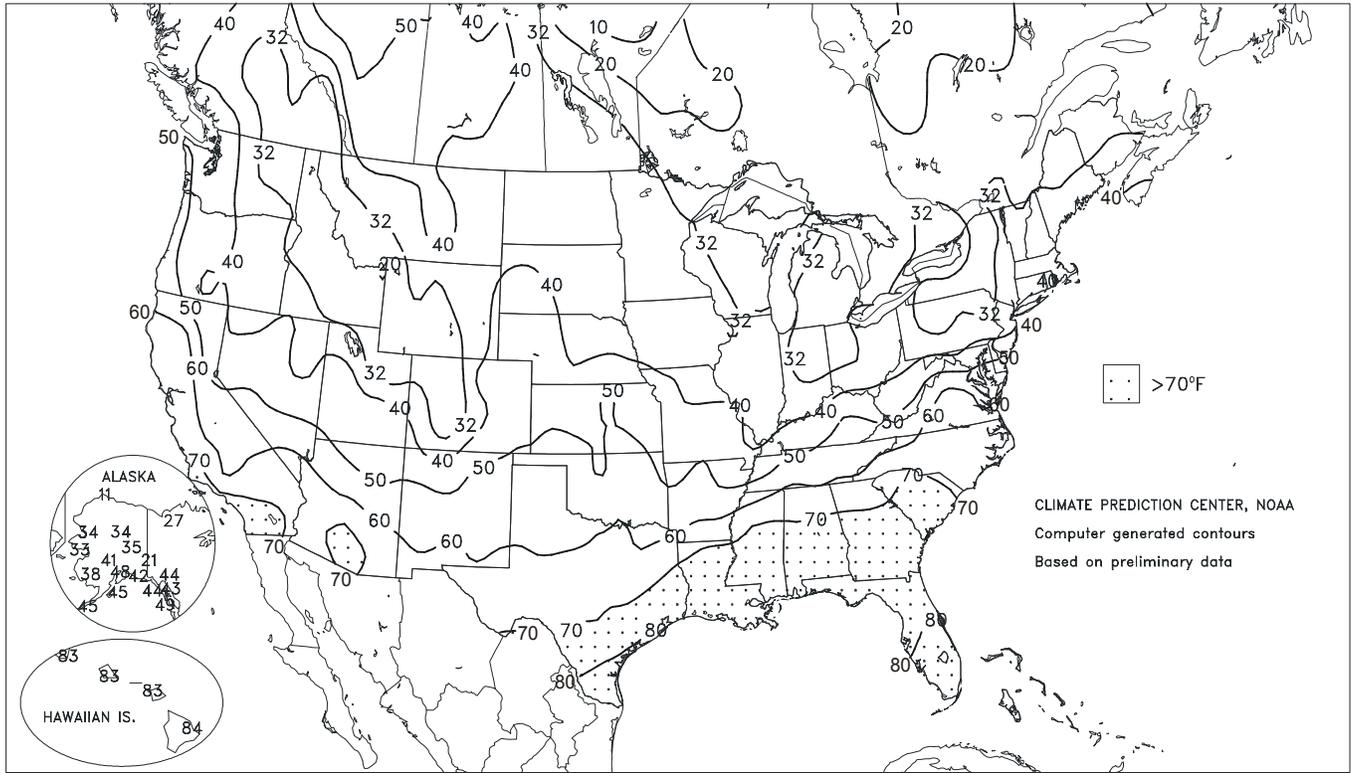
The winter wheat injury potential map (right) focuses on 3 days during the recent cold outbreak. During the cold wave, air temperatures of 0°F or below coincided with a patchy or non-existent snow cover (1 inch or less) in several wheat areas, including parts of the central and southern High Plains. The number of days such conditions (readings of 0°F or below and snow depths of 1 inch or less) were experienced from December 7-9 are shown on the map.

Of particular concern are the southern Plains' winter wheat areas, where drought stress on winter wheat was already apparent prior to the cold wave. Texas' winter wheat was rated 30 percent in very poor to poor condition on November 13, followed by 37, 49, 58, and 58 percent in subsequent weeks ending December 11. In addition, December 8 temperatures dipped below 0°F in parts of western Oklahoma and Texas' northern panhandle, which had no snow cover (see image on page 5) during the cold outbreak. (Most other Plains and Midwestern areas identified on the map had a shallow or patchy snow cover.) However, hard red winter wheat is an extremely hardy crop. Also, air temperatures at or below 0°F are not always the best indicator of winterkill for wheat, because the temperature-sensitive portion of the plant remains below ground level during dormancy. Nevertheless, the map may help to pinpoint areas of concern with respect to winter wheat freeze injury potential, especially when used with other guidance.



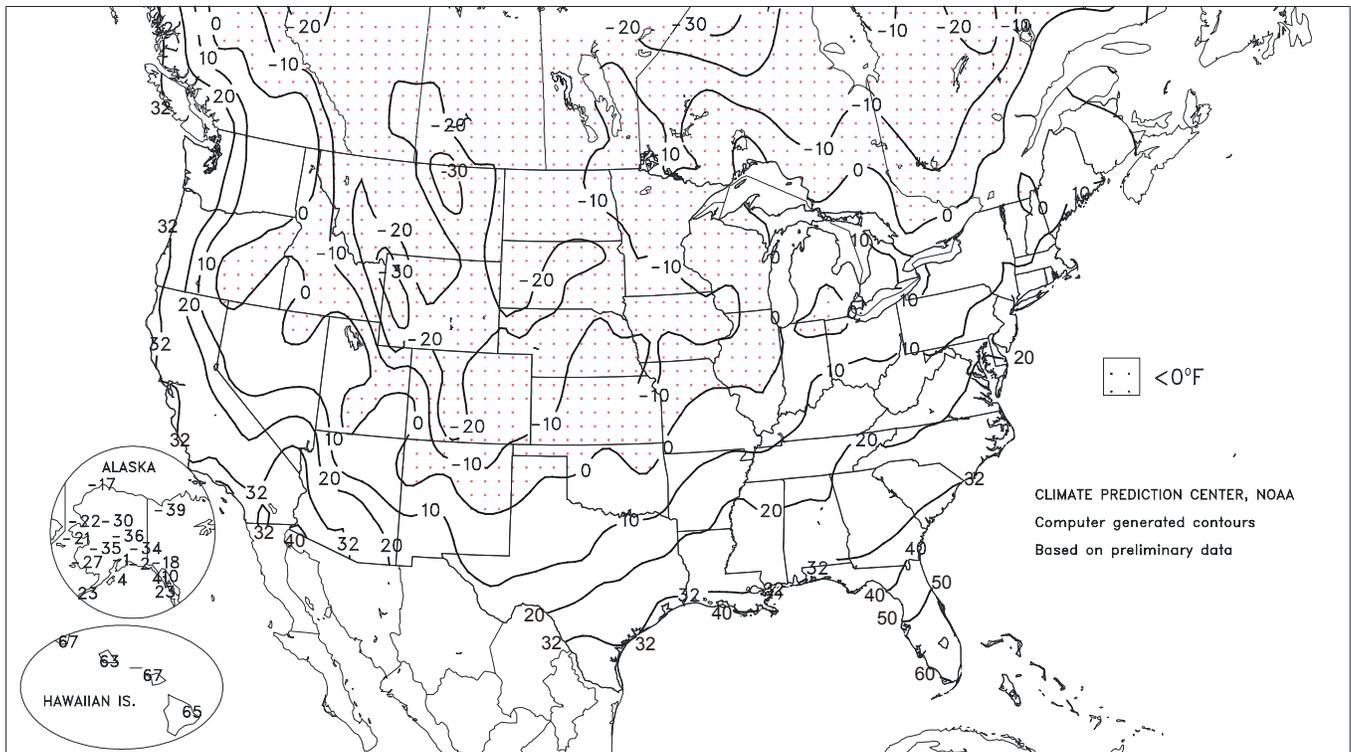
Extreme Maximum Temperature (°F)

DEC 4 - 10, 2005



Extreme Minimum Temperature (°F)

DEC 4 - 10, 2005



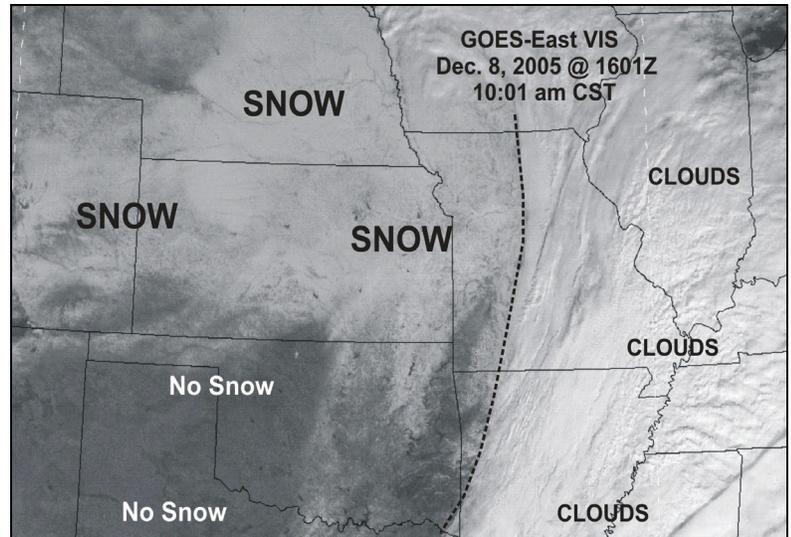
(Continued from front cover)

**Valley.** However, **California's** freezes were not of sufficient intensity or duration to significantly threaten citrus or other winter agricultural interests. Farther east, temperatures were cold enough—especially on December 8—to threaten already drought-stressed winter wheat on the **southern Plains**. Readings near  $-5^{\circ}\text{F}$  were noted as far south as **Texas' northern panhandle**. In contrast, a substantial snow cover across the **northern half of the Plains** insulated winter wheat from temperatures locally below  $-25^{\circ}\text{F}$ . Late in the week, however, milder weather on the **Plains** began to erode wheat's protective snow cover. Very cold weather persisted through week's end in the **Midwest**, maintaining stress on livestock. In addition, a December 8-9 snow storm swept across the **Corn Belt**, causing widespread travel disruptions. Elsewhere, accumulating snow fell at midweek as far south as **central and northeastern Texas**. Frozen precipitation (snow, sleet, and freezing rain) also fell across the **interior South**, including parts of **Arkansas** and **Kentucky**, and the **Mid-Atlantic and Northeastern States**. Farther south, showers and thunderstorms were heaviest across areas **east of the Delta**.

Early in the week, locally heavy showers and thunderstorms dotted the **Southeast**, while heavy snow developed in parts of the **Northwest**. Daily-record precipitation totals for December 5 included 1.61 inches in **Greensboro, NC**, and 1.30 inches in **Richmond, VA**. Some of the precipitation in **Richmond** (4.2 inches) and elsewhere in the **Mid-Atlantic States** fell in the form of snow. Other daily snowfall records (for December 6) included 4.6 inches in **Atlantic City, NJ**, and 3.8 inches in **Wilmington, DE**. Farther south, several tornadoes were spotted on December 5 in **southern Georgia** and **northern Florida**. Meanwhile in **Montana**, daily-record snowfall totals for December 5 reached 7.1 inches in **Kalispell** and 4.8 inches in **Havre**. **Billings, MT**, received measurable snow on 11 consecutive days (November 26 - December 6), totaling 11.1 inches, breaking its record of 9 days in a row set in December 1989 and 1996. Farther south, **Alta, UT**, received 28.0 inches of snow in a 24-hour period on December 5-6.

Between storms, very cold weather settled across the **Plains** and the **Midwest**. On December 5, daily-record lows dipped to  $-25^{\circ}\text{F}$  in **Aberdeen, SD**, and  $-16^{\circ}\text{F}$  in **Waterloo, IA**. Chilly weather also affected **California**, where **Ojai** (28 and  $29^{\circ}\text{F}$  on December 5 and 6, respectively) posted consecutive daily-record lows. On December 7, **West Yellowstone, MT**, registered a daily-record low of  $-45^{\circ}\text{F}$ , followed the next day by a record of  $-39^{\circ}\text{F}$  in **Crested Butte, CO**. Elsewhere on December 8, **Midland, TX** ( $6^{\circ}\text{F}$ ), observed its lowest reading since December 23, 1989, when the minimum temperature was  $-1^{\circ}\text{F}$ . December 8 lows of  $10^{\circ}\text{F}$  in **Abilene, TX**, and  $-1^{\circ}\text{F}$  in **Wichita, KS**, were the stations' lowest readings since February 4, 1996 (4 and  $-7^{\circ}\text{F}$ , respectively). Similarly, **Albuquerque, NM** ( $9^{\circ}\text{F}$  on December 8), reached the single digits for the first time since January 15, 1997, and for the first time in December since December 27, 1990. Meanwhile, **Amarillo, TX**, collected a daily-record low of  $-3^{\circ}\text{F}$  on December 8, followed the next day by record lows of  $-6^{\circ}\text{F}$  in **Bartlesville, OK**, and  $-15^{\circ}\text{F}$  in **St. Joseph, MO**. For some locations, including the **Iowa** cities of **Waterloo** ( $3.1^{\circ}\text{F}$ ) and **Des Moines** ( $9.9^{\circ}\text{F}$ ), December 1-7 average temperatures were the lowest on record. **Des Moines'** previous record of  $11.1^{\circ}\text{F}$  was established in 1886.

A disturbance embedded in the bitterly cold air reached the **central Plains** on December 7, when daily-record snowfall totals



included 7.3 inches in **Kansas City, MO**, and 6.2 inches in **Topeka, KS**. Farther south, frozen precipitation fell in locations such as **Mineral Wells, TX**, where high temperatures had topped  $90^{\circ}\text{F}$  ( $91^{\circ}\text{F}$  on December 3) just 4 days earlier. However, significant precipitation largely bypassed the drought-affected **southern Plains**, where **Oklahoma City, OK**, netted 0.01 inch on December 7. Nevertheless, **Oklahoma City's** longest spell without measurable precipitation since 2000 (54 days from July 30 - September 21) ended at 36 days (November 1 - December 6). Snow engulfed the **Midwest** on December 8, when daily-record totals included 7.7 inches in **Indianapolis, IN**, and 6.7 inches in **Chicago, IL**. **Indianapolis'** total represented its fourth-snowiest December day in more than 120 years. To the south, heavy showers in the **southern Atlantic States** resulted in daily-record totals for December 8 in locations such as **Brunswick, GA** (1.84 inches), and **Vero Beach, FL** (1.81 inches). Meanwhile in **Massachusetts**, December 9 snowfall totals of 8.6 inches in **Boston** and 12.8 inches in **Worcester** marked the seventh- and eighth-highest December daily totals on record, respectively. Elsewhere in the **Northeast**, snowfall records for December 9 included 15.1 inches in **Concord, NH**, and 10.5 inches in **Hartford, CT**.

Fairly tranquil weather prevailed in **Hawaii**, although some heavy showers fell primarily across windward sections of the **Big Island**. From December 6-8, **Honokaa** netted 5.30 inches of rain in a 48-hour period. Elsewhere on the **Big Island**, 24-hour totals on December 7-8 included 5.03 inches at **Waiakea Uka** and 3.61 inches at **Piihonua**. In contrast, December 1-10 rainfall totaled just 0.04 inch (3 percent of normal) in **Lihue, Kauai**, and 0.08 inch (9 percent) in **Kahului, Maui**. Farther north, mild weather returned to the **Alaskan mainland**, boosting weekly temperatures as much as  $15^{\circ}\text{F}$  above normal. In **Fairbanks**, temperatures rebounded from  $-36^{\circ}\text{F}$  on December 4 to  $34^{\circ}\text{F}$  just 5 days later. In fact, daily-record highs were established in several **Alaskan** locations, including **Bethel** ( $38^{\circ}\text{F}$  on December 7), **King Salmon** ( $45^{\circ}\text{F}$  on December 7), and **Anchorage** ( $48^{\circ}\text{F}$  on December 9). Widespread precipitation accompanied the mild weather; for example, **Bethel** noted measurable precipitation on each day of the week, totaling 1.11 inches (4.6 inches of snow). Heavy precipitation also returned to **southern Alaska**, where **Valdez** received 4.32 inches (21.9 inches of snow) from December 5-8.

National Weather Data for Selected Cities

Weather Data for the Week Ending December 10, 2005

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

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN. SINCE DEC01	PCT. NORMAL SINCE DEC01	TOTAL IN. SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F			
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	50	30	67	23	40	-7	2.02	1.04	1.31	2.04	143	46.81	92	93	47	0	5	3	1
AL HUNTSVILLE	48	27	65	20	37	-8	1.82	0.54	1.32	2.19	119	36.91	69	91	61	0	5	3	1
AL MOBILE	60	40	79	29	50	-4	1.09	0.00	1.03	1.09	68	71.35	113	80	53	0	2	2	1
AL MONTGOMERY	59	36	80	24	47	-4	0.80	-0.39	0.47	0.80	47	50.41	98	91	46	0	4	3	0
AK ANCHORAGE	32	21	48	-1	27	9	0.38	0.15	0.22	0.48	145	14.74	96	86	78	0	5	4	0
AK BARROW	0	-9	11	-17	-5	4	0.10	0.10	0.05	0.12	1200	4.81	119	81	78	0	7	3	0
AK FAIRBANKS	17	-6	35	-36	6	10	0.11	-0.04	0.08	0.11	55	11.72	120	90	85	0	7	2	0
AK JUNEAU	36	26	43	10	31	1	3.00	1.81	2.07	3.15	186	70.74	130	95	90	0	4	6	1
AK KODIAK	41	31	45	4	36	5	5.90	4.29	1.85	5.90	259	66.27	95	95	83	0	2	7	4
AK NOME	20	4	33	-21	12	2	0.50	0.26	0.29	0.52	153	16.30	103	85	76	0	7	4	0
AZ FLAGSTAFF	44	9	55	4	26	-5	0.02	-0.37	0.01	0.03	5	24.08	111	60	17	0	7	2	0
AZ PHOENIX	67	42	72	37	54	-1	0.00	-0.18	0.00	0.00	0	7.04	92	31	16	0	0	0	0
AZ TUCSON	67	34	73	30	50	-3	0.00	-0.19	0.00	0.00	0	9.67	85	33	17	0	4	0	0
AZ YUMA	67	47	70	44	57	-1	0.00	-0.06	0.00	0.00	0	6.30	236	25	19	0	0	0	0
AR FORT SMITH	42	19	50	9	31	-12	0.06	-0.84	0.04	0.06	5	30.54	73	80	40	0	6	2	0
AR LITTLE ROCK	45	24	54	16	34	-11	0.10	-1.09	0.10	0.25	14	38.47	80	84	41	0	6	1	0
CA BAKERSFIELD	57	37	62	33	47	-1	0.00	-0.14	0.00	0.63	315	7.52	127	87	67	0	0	0	0
CA FRESNO	57	37	58	33	47	1	0.05	-0.20	0.04	0.38	109	9.64	94	91	81	0	0	2	0
CA LOS ANGELES	71	48	74	42	59	1	0.03	-0.30	0.02	0.27	57	18.22	154	68	32	0	0	2	0
CA REDDING	61	36	69	25	49	3	0.07	-0.87	0.07	1.93	144	27.30	90	74	49	0	2	1	0
CA SACRAMENTO	57	35	64	28	46	-1	0.04	-0.46	0.04	1.12	158	14.30	88	96	49	0	3	1	0
CA SAN DIEGO	68	48	74	44	58	0	0.00	-0.22	0.00	0.16	50	14.03	143	54	23	0	0	0	0
CA SAN FRANCISCO	58	43	63	38	50	0	0.01	-0.57	0.01	1.00	120	18.66	103	83	65	0	0	1	0
CA STOCKTON	58	34	63	26	46	0	0.05	-0.32	0.02	0.22	41	12.39	99	89	77	0	3	3	0
CO ALAMOSA	30	-8	44	-20	11	-8	0.03	-0.03	0.03	0.04	44	7.96	114	71	34	0	7	1	0
CO CO SPRINGS	27	1	37	-15	14	-16	0.03	-0.03	0.02	0.38	422	11.94	70	73	30	0	7	2	0
CO DENVER INTL	28	3	38	-13	15	-15	0.09	0.03	0.08	0.47	588	12.92	96	71	42	0	7	2	0
CO GRAND JUNCTION	29	10	37	3	20	-10	0.00	-0.09	0.00	0.67	515	11.71	136	74	44	0	7	0	0
CO PUEBLO	33	2	47	-13	17	-15	0.03	-0.04	0.02	0.22	220	11.15	92	79	48	0	7	2	0
CT BRIDGEPORT	35	25	38	20	30	-8	0.95	0.19	0.73	0.95	87	43.31	104	79	56	0	7	3	1
CT HARTFORD	33	17	36	12	25	-8	0.68	-0.13	0.53	0.68	58	54.28	124	81	59	0	7	2	1
DC WASHINGTON	40	28	51	23	34	-8	0.92	0.26	0.55	0.97	103	42.01	113	85	50	0	6	4	1
DE WILMINGTON	36	24	43	17	30	-9	1.01	0.26	0.49	1.01	94	37.43	92	88	50	0	7	4	0
FL DAYTONA BEACH	73	56	79	50	65	3	1.55	0.97	1.31	1.55	187	65.60	138	93	59	0	0	3	1
FL JACKSONVILLE	68	47	76	42	58	2	2.36	1.81	1.86	2.36	299	58.99	117	95	59	0	0	4	1
FL KEY WEST	80	71	82	66	75	2	0.00	-0.44	0.00	0.00	0	50.41	135	90	74	0	0	0	0
FL MIAMI	81	69	83	60	75	4	0.86	0.34	0.34	0.86	113	66.84	117	91	66	0	0	4	0
FL ORLANDO	74	57	80	50	66	2	1.56	1.03	1.29	1.56	205	59.91	128	99	69	0	0	4	1
FL PENSACOLA	63	44	78	33	53	-2	0.81	-0.04	0.65	0.81	66	83.84	136	82	57	0	0	3	1
FL TALLAHASSEE	66	47	79	37	56	1	2.90	2.07	1.53	2.90	244	66.21	110	81	55	0	0	3	2
FL TAMPA	71	57	76	51	64	-1	0.94	0.42	0.43	0.94	127	38.64	89	92	69	0	0	5	0
FL WEST PALM BEACH	79	65	84	55	72	3	1.71	0.89	0.55	1.71	139	63.41	107	95	69	0	0	4	1
GA ATHENS	54	31	70	24	43	-4	2.10	1.31	0.94	2.15	190	56.11	124	88	55	0	4	4	2
GA ATLANTA	54	32	71	27	43	-4	1.96	1.11	1.34	2.03	162	54.79	115	86	55	0	5	4	1
GA AUGUSTA	59	36	75	24	48	-1	1.25	0.66	0.76	1.25	151	45.00	106	91	49	0	4	4	1
GA COLUMBUS	59	38	80	28	48	-3	0.56	-0.42	0.27	0.57	40	60.70	133	90	38	0	3	3	0
GA MACON	60	36	77	25	48	-1	1.82	0.99	1.23	1.83	155	45.61	108	93	44	0	4	4	1
GA SAVANNAH	62	44	70	35	53	0	1.68	1.16	0.82	1.68	227	45.12	95	95	63	0	0	5	1
HI HILO	80	66	84	65	73	1	4.41	1.63	2.00	5.24	127	122.88	102	86	77	0	0	4	2
HI HONOLULU	82	68	83	63	75	-1	0.37	-0.23	0.37	0.37	44	15.61	96	79	71	0	0	1	0
HI KAHULUI	82	70	83	67	76	2	0.11	-0.50	0.08	0.11	13	18.09	109	80	73	0	0	2	0
HI LIHUE	82	71	83	67	77	3	0.04	-1.01	0.03	0.04	3	23.98	66	73	66	0	0	2	0
ID BOISE	29	15	34	7	22	-10	0.00	-0.31	0.00	0.43	93	10.71	95	79	64	0	7	0	0
ID LEWISTON	30	16	36	10	23	-12	0.01	-0.22	0.01	0.39	118	10.57	88	79	70	0	7	1	0
ID POCATELLO	20	3	28	-9	12	-15	0.01	-0.22	0.01	0.84	247	14.57	123	83	73	0	7	1	0
IL CHICAGO/O'HARE	24	7	32	0	15	-15	0.56	-0.04	0.40	0.65	75	23.42	67	78	65	0	7	3	0
IL MOLINE	19	1	36	-11	10	-20	0.30	-0.23	0.23	0.59	77	17.26	47	84	71	0	7	4	0
IL PEORIA	21	3	35	-5	12	-19	0.22	-0.41	0.20	0.52	57	24.65	71	83	65	0	7	2	0
IL ROCKFORD	20	0	34	-8	10	-18	0.36	-0.16	0.30	0.60	79	23.22	66	79	71	0	7	3	0
IL SPRINGFIELD	23	6	36	-2	15	-18	0.24	-0.38	0.20	0.35	39	30.52	90	80	68	0	7	3	0
IN EVANSVILLE	32	16	37	3	24	-14	0.68	-0.22	0.43	0.76	58	40.99	98	87	68	0	7	2	0
IN FORT WAYNE	23	7	29	-2	15	-17	0.34	-0.33	0.31	0.52	54	30.40	88	88	72	0	7	3	0
IN INDIANAPOLIS	25	13	31	6	19	-15	0.50	-0.24	0.50	0.64	59	41.68	107	92	71	0	7	1	1
IN SOUTH BEND	22	7	29	-1	15	-17	0.64	-0.12	0.54	0.90	83	26.42	70	83	72	0	7	5	1
IA BURLINGTON	27	8	41	-1	17	-14	0.47	0.01	0.22	0.51	72	24.82	68	78	51	0	6	3	0
IA CEDAR RAPIDS	15	-6	35	-19	4	-23	0.32	-0.07	0.30	0.55	96	26.03	80	93	74	0	7	3	0
IA DES MOINES	17	0	37	-8	9	-19	0.26	-0.07	0.12	0.40	83	27.35	81	84	67	0	7	4	0
IA DUBUQUE	15	-4	35	-15	6	-20	2.06	1.63	1.52	3.22	503	26.90	78	83	75	0	7	4	1
IA SIOUX CITY	15	-4	38	-16	5	-20	0.24	0.09	0.09	0.29	121	27.92	109	81	75	0	7	4	0
IA WATERLOO	15	-8	36	-18	4	-21	0.43	0.13	0.31	0.87	198	30.43	94	84	74	0	7	3	0
KS CONCORDIA	28	5	57	-4	16	-16	0.15	-0.05	0.14	0.18	60	26.63	96	72	57	0	7	2	0
KS DODGE CITY	31	8	52	-5	20	-15	0.03	-0.14	0.03	0.04	17	21.13	97	73	47	0	7	1	0
KS GOODLAND	30	6	46	-11	18	-13	0.07	-0.01	0.04	0.11	100	15.83	81	76	58	0	7	3	0
KS TOPEKA	25	6	44	-7	16	-18	0.36	0.00	0.33	0.36	67	46.30	133	75	59	0	7	2	0

Based on 1971-2000 normals

NOTE: Kalispell, MT replaced by Cut Bank, MT

\*\*\* Not Available

Weather Data for the Week Ending December 10, 2005

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN. SINCE DEC01	PCT. NORMAL SINCE DEC01	TOTAL IN. SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
KY	WICHITA	29	8	51	-1	19	-17	0.05	-0.26	0.05	0.05	11	36.18	123	77	63	0	7	1	0
	JACKSON	40	24	53	18	32	-9	0.85	-0.17	0.60	1.12	76	38.26	82	84	58	0	7	2	1
	LEXINGTON	35	20	50	16	27	-12	0.74	-0.17	0.71	1.08	83	32.21	75	86	71	0	7	2	1
	LOUISVILLE	32	20	38	13	26	-14	0.40	-0.47	0.40	0.64	51	38.47	91	86	61	0	7	1	0
	PADUCAH	34	16	39	8	25	-14	0.47	-0.64	0.47	0.68	43	36.46	78	88	59	0	7	1	0
LA	BATON ROUGE	58	37	81	28	47	-7	1.55	0.39	0.80	1.59	96	45.85	77	89	46	0	1	3	2
	LAKE CHARLES	58	37	78	31	48	-7	1.96	0.96	1.95	1.96	135	56.16	104	80	48	0	1	2	1
	NEW ORLEANS	60	44	81	36	52	-4	0.68	-0.53	0.58	0.75	43	58.42	96	78	59	0	0	3	1
	SHREVEPORT	53	31	71	23	42	-8	0.32	-0.72	0.32	0.35	24	32.09	67	76	37	0	4	1	0
ME	CARIBOU	23	11	27	6	17	-3	0.05	-0.64	0.04	1.66	166	49.50	140	83	58	0	7	2	0
	PORTLAND	33	17	38	12	25	-6	0.59	-0.38	0.58	0.61	44	62.45	145	80	50	0	7	2	1
MD	BALTIMORE	39	23	50	18	31	-8	1.12	0.40	0.63	1.15	111	46.37	117	88	51	0	7	4	1
MA	BOSTON	34	24	37	19	29	-9	0.75	-0.08	0.63	0.75	63	42.99	107	74	48	0	7	2	1
	WORCESTER	30	18	34	13	24	-8	0.80	-0.03	0.63	0.80	67	56.97	123	79	49	0	7	2	1
MI	ALPENA	25	12	32	3	19	-8	0.07	-0.34	0.03	0.45	78	24.96	92	85	60	0	7	3	0
	GRAND RAPIDS	25	12	29	2	18	-12	0.61	-0.09	0.33	0.91	89	33.29	94	90	70	0	7	7	0
	HOUGHTON LAKE	23	14	27	8	18	-9	0.10	-0.30	0.05	0.42	72	24.83	91	85	71	0	7	3	0
	LANSING	24	12	29	3	18	-12	0.38	-0.18	0.16	0.61	75	31.27	104	86	69	0	7	6	0
	MUSKEGON	25	14	32	2	20	-11	0.71	0.07	0.23	1.27	137	27.98	90	82	70	0	7	7	0
	TRAVERSE CITY	26	18	35	13	22	-7	0.02	-0.56	0.02	0.62	75	23.96	76	88	62	0	7	1	0
MN	DULUTH	16	5	31	-6	10	-7	0.02	-0.24	0.01	0.02	5	29.86	98	83	68	0	7	2	0
	INT'L FALLS	16	0	32	-14	8	-4	0.11	-0.06	0.05	0.11	42	27.63	118	87	74	0	7	4	0
	MINNEAPOLIS	19	3	36	-7	11	-11	0.01	-0.23	0.01	0.11	31	32.54	113	85	67	0	7	1	0
	ROCHESTER	15	-3	34	-12	6	-15	0.09	-0.18	0.06	0.25	61	33.18	108	82	75	0	7	3	0
	ST. CLOUD	18	1	36	-8	10	-8	0.01	-0.14	0.01	0.05	21	32.77	123	85	68	0	7	1	0
MS	JACKSON	52	29	70	22	41	-8	0.82	-0.38	0.77	0.82	48	48.05	92	88	48	0	6	3	1
	MERIDIAN	55	30	79	23	43	-8	0.80	-0.40	0.50	0.81	47	54.72	99	87	52	0	5	3	1
	TUPELO	50	26	68	20	38	-7	1.06	-0.33	0.62	1.20	61	47.63	92	83	57	0	6	2	1
MO	COLUMBIA	26	10	39	0	18	-17	0.23	-0.42	0.14	0.24	25	40.52	105	80	57	0	7	3	0
	KANSAS CITY	24	7	44	-5	16	-18	0.47	0.05	0.39	0.48	77	46.46	126	79	54	0	7	4	0
	SAINT LOUIS	27	13	39	5	20	-17	0.16	-0.58	0.16	0.21	19	36.85	100	78	61	0	7	1	0
	SPRINGFIELD	33	14	44	4	23	-15	0.06	-0.82	0.04	0.06	5	34.88	81	79	57	0	7	2	0
MT	BILLINGS	24	6	42	-13	15	-13	0.13	0.02	0.08	0.24	141	15.11	106	75	58	0	7	3	0
	BUTTE	15	-12	25	-28	2	-17	0.03	-0.08	0.03	0.31	194	13.03	105	84	60	0	7	1	0
	CUT BANK	24	1	41	-18	13	-10	0.01	-0.05	0.01	0.01	13	13.68	112	76	58	0	7	1	0
	GLASGOW	14	-8	39	-23	3	-15	0.16	0.10	0.05	0.23	288	10.96	100	84	77	0	7	5	0
	GREAT FALLS	24	5	38	-10	15	-11	0.05	-0.06	0.05	0.16	100	15.53	108	77	59	0	7	1	0
	HAVRE	15	-6	39	-27	5	-16	0.18	0.09	0.14	0.26	200	10.94	99	76	70	0	7	2	0
	MISSOULA	18	-1	29	-16	8	-17	0.05	-0.20	0.04	0.18	51	14.06	108	83	73	0	7	2	0
NE	GRAND ISLAND	20	0	40	-7	10	-18	0.52	0.34	0.22	1.23	456	29.82	117	86	75	0	7	5	0
	LINCOLN	19	-2	40	-10	9	-20	0.19	-0.02	0.09	0.42	131	24.49	88	81	70	0	7	4	0
	NORFOLK	17	-2	40	-10	8	-18	0.14	-0.03	0.09	0.14	54	25.85	98	78	70	0	7	2	0
	NORTH PLATTE	22	-2	42	-14	10	-17	0.03	-0.05	0.02	0.16	133	18.71	97	84	61	0	7	2	0
	OMAHA	18	1	39	-8	10	-18	0.09	-0.16	0.04	0.22	59	22.92	77	83	71	0	7	3	0
	SCOTTSBLUFF	26	0	46	-20	13	-14	0.10	-0.03	0.06	0.10	53	17.64	111	78	61	0	7	3	0
	VALENTINE	18	-7	40	-20	6	-19	0.03	-0.05	0.02	0.08	67	26.10	135	78	69	0	7	2	0
NV	ELY	36	8	40	5	22	-5	0.00	-0.08	0.00	0.21	175	12.60	131	84	58	0	7	0	0
	LAS VEGAS	55	37	61	34	46	-2	0.00	-0.07	0.00	0.00	0	7.75	185	36	25	0	0	0	0
	RENO	42	25	46	18	33	-2	0.01	-0.18	0.01	0.52	186	6.05	88	77	64	0	6	1	0
	WINNEMUCCA	37	16	41	10	26	-5	0.01	-0.16	0.01	0.08	33	8.03	103	89	71	0	7	1	0
NH	CONCORD	31	13	35	9	22	-7	0.71	0.03	0.64	0.72	73	53.29	150	88	51	0	7	2	1
NJ	NEWARK	35	25	37	21	30	-9	1.04	0.24	0.61	1.04	89	41.76	95	78	57	0	7	4	1
NM	ALBUQUERQUE	42	20	51	9	31	-6	0.00	-0.08	0.00	0.00	0	11.32	124	40	16	0	7	0	0
NY	ALBANY	31	19	35	11	25	-6	0.19	-0.43	0.14	0.19	21	44.97	124	78	54	0	7	2	0
	BINGHAMTON	26	17	29	9	22	-8	0.25	-0.49	0.11	0.35	33	39.72	108	86	65	0	7	4	0
	BUFFALO	28	19	33	10	24	-8	0.52	-0.38	0.35	0.58	45	37.32	98	87	59	0	7	4	0
	ROCHESTER	30	21	33	11	25	-7	0.19	-0.46	0.07	0.22	24	34.32	107	79	59	0	7	4	0
	SYRACUSE	30	20	33	8	25	-7	0.39	-0.39	0.21	0.61	53	38.20	100	84	59	0	7	4	0
NC	ASHEVILLE	46	26	66	18	36	-5	1.48	0.72	0.67	1.50	136	45.26	101	90	49	0	6	4	2
	CHARLOTTE	51	29	68	21	40	-6	2.35	1.69	1.72	2.40	253	39.03	95	95	49	0	6	4	1
	GREENSBORO	48	29	63	23	39	-4	2.28	1.62	1.57	2.29	241	31.92	78	98	58	0	5	4	1
	HATTERAS	58	42	65	34	50	-2	0.79	-0.12	0.43	0.80	61	62.78	115	92	66	0	0	3	0
	RALEIGH	50	30	68	23	40	-5	1.94	1.31	1.27	1.96	215	35.48	87	91	54	0	5	4	1
	WILMINGTON	60	38	69	28	49	-2	0.41	-0.41	0.25	0.41	35	67.90	125	92	55	0	3	4	0
ND	BISMARCK	18	-2	39	-18	8	-10	0.02	-0.06	0.01	0.12	92	18.48	112	80	67	0	7	2	0
	DICKINSON	14	-1	36	-14	7	-13	0.00	-0.08	0.00	0.01	8	21.30	132	88	68	0	7	0	0
	FARGO	17	1	37	-13	9	-7	0.07	-0.04	0.03	0.12	75	29.23	141	86	77	0	7	4	0
	GRAND FORKS	17	-2	36	-9	8	-7	0.10	-0.01	0.07	0.12	75	24.59	128	94	74	0	7	3	0
	JAMESTOWN	18	0	37	-10	9	-8	0.00	-0.08	0.00	0.00	0	21.00	116	86	69	0	7	0	0
	WILLISTON	16	-4	39	-19	6	-10	0.04	-0.07	0.02	0.11	65	13.63	99	81	69	0	7	3	0
OH	AKRON-CANTON	27	13	34	7	20	-13	0.25	-0.46	0.10	0.46	45	40.35	110	87	73	0	7	4	0
	CINCINNATI	30	18	34	13	24	-13	0.49	-0.26	0.49	0.75	69	38.35	95	84	74	0	7	1	0
	CLEVELAND	28	12	35	1	20	-14	0.35	-0.43	0.24	0.73	65	38.60	105	84	64	0	7	3	0
	COLUMBUS	30	18	35	13	24	-12	0.21	-0.50	0.20	0.24	23	38.86	106	81	67	0	7	2	0
	DAYTON	27	13	31	9	20	-14	0.39	-0.34	0.37	0.50	48	43.90	117	87	71	0	7	2	0
	MANSFIELD																			

Weather Data for the Week Ending December 10, 2005

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE DEC01	PCT. NORMAL SINCE DEC01	TOTAL IN, SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP.	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
OK TOLEDO	25	11	29	-1	18	-14	0.59	-0.06	0.50	0.72	77	28.79	91	83	70	0	7	4	1
OK YOUNGSTOWN	28	14	36	1	21	-12	0.35	-0.38	0.16	0.51	48	39.51	109	84	69	0	7	5	0
OK OKLAHOMA CITY	38	16	58	6	27	-14	0.00	-0.41	0.00	0.00	0	21.67	63	79	40	0	7	0	0
OR TULSA	34	13	53	0	24	-18	0.13	-0.50	0.12	0.13	14	28.02	68	71	52	0	7	2	0
OR ASTORIA	46	33	52	30	40	-3	0.05	-2.43	0.00	1.25	35	56.92	94	86	75	0	3	1	0
OR BURNS	26	6	32	-4	16	-10	0.00	-0.28	0.00	0.70	179	12.63	131	81	72	0	7	0	0
OR EUGENE	40	30	43	23	35	-5	0.05	-1.95	0.05	1.57	54	25.69	56	93	83	0	4	1	0
OR MEDFORD	42	30	51	26	36	-3	0.31	-0.39	0.22	2.07	205	18.60	113	99	87	0	6	2	0
OR PENDLETON	33	17	42	8	25	-10	0.00	-0.34	0.00	0.11	22	9.54	81	91	80	0	7	0	0
OR PORTLAND	42	32	44	25	37	-4	0.01	-1.35	0.01	1.06	54	29.69	89	83	71	0	3	1	0
OR SALEM	41	30	45	24	35	-6	0.00	-1.56	0.00	1.49	66	28.21	79	86	74	0	4	0	0
PA ALLENTOWN	32	20	34	11	26	-9	0.43	-0.35	0.26	0.43	38	48.22	112	77	56	0	7	3	0
PA ERIE	29	21	35	15	25	-10	0.36	-0.56	0.10	0.56	42	38.16	95	79	67	0	7	5	0
PA MIDDLETOWN	34	22	37	12	28	-8	0.73	-0.06	0.55	0.79	69	37.31	97	84	52	0	7	3	1
PA PHILADELPHIA	36	25	39	20	30	-10	1.07	0.34	0.48	1.07	102	40.44	102	80	51	0	7	4	0
PA PITTSBURGH	30	16	35	7	23	-12	0.41	-0.27	0.22	0.45	46	39.94	111	90	61	0	7	3	0
PA WILKES-BARRE	29	20	31	9	25	-9	0.58	-0.05	0.44	0.58	64	34.74	97	86	57	0	7	2	0
PA WILLIAMSPORT	31	18	34	11	25	-8	0.73	0.00	0.49	0.74	69	46.13	116	81	58	0	7	3	0
RI PROVIDENCE	35	22	39	19	28	-8	1.53	0.60	1.30	1.53	114	55.13	126	80	58	0	7	3	1
SC BEAUFORT	63	44	70	36	53	1	1.33	0.74	0.68	1.33	158	55.33	116	95	57	0	0	4	2
SC CHARLESTON	64	42	72	34	53	1	1.65	1.00	0.77	1.65	179	44.50	90	91	55	0	0	4	1
SC COLUMBIA	57	35	76	25	46	-3	1.36	0.71	0.73	1.36	146	43.53	95	94	55	0	4	4	1
SC GREENVILLE	51	31	67	24	41	-4	2.21	1.38	0.97	2.42	205	50.90	107	91	49	0	5	4	2
SD ABERDEEN	16	-6	37	-25	5	-14	0.07	0.01	0.05	0.20	250	18.34	92	84	76	0	6	2	0
SD HURON	18	-4	36	-15	7	-15	0.03	-0.05	0.02	0.20	167	25.53	124	86	74	0	7	2	0
SD RAPID CITY	23	1	45	-13	12	-14	0.04	-0.02	0.04	0.11	138	14.50	89	75	55	0	6	1	0
SD SIOUX FALLS	14	-4	36	-13	5	-16	0.06	-0.07	0.02	0.26	130	30.96	127	83	78	0	7	3	0
TN BRISTOL	45	25	55	17	35	-4	1.28	0.51	0.60	1.32	119	36.16	93	94	49	0	6	4	1
TN CHATTANOOGA	48	28	61	21	38	-6	1.37	0.27	0.76	1.68	105	44.12	86	84	57	0	5	3	2
TN KNOXVILLE	48	27	56	20	38	-5	0.33	-0.68	0.32	0.57	40	36.18	80	89	42	0	6	2	0
TN MEMPHIS	43	25	49	18	34	-11	0.30	-1.13	0.30	0.42	20	38.52	75	75	45	0	6	1	0
TN NASHVILLE	42	23	61	15	32	-11	0.69	-0.39	0.53	0.92	59	37.79	84	86	53	0	6	2	1
TX ABILENE	46	21	60	10	34	-13	0.00	-0.26	0.00	0.00	0	19.55	86	62	38	0	7	0	0
TX AMARILLO	37	11	52	-3	24	-14	0.00	-0.09	0.00	0.00	0	14.92	78	80	32	0	7	0	0
TX AUSTIN	56	29	73	20	43	-11	0.19	-0.35	0.17	0.19	25	22.45	70	65	47	0	5	2	0
TX BEAUMONT	59	40	80	32	49	-6	0.26	-0.87	0.24	0.26	16	42.11	75	82	47	0	1	2	0
TX BROWNSVILLE	64	47	83	35	56	-6	1.21	0.95	1.03	1.21	318	14.28	53	83	66	0	0	2	1
TX CORPUS CHRISTI	61	43	80	33	52	-7	0.21	-0.16	0.17	0.21	40	25.18	81	75	61	0	0	2	0
TX DEL RIO	57	35	69	23	46	-8	0.00	-0.17	0.00	0.00	0	20.87	118	64	36	0	3	0	0
TX EL PASO	52	24	60	13	38	-8	0.00	-0.17	0.00	0.00	0	12.87	145	34	15	0	6	0	0
TX FORT WORTH	47	24	59	15	36	-12	0.03	-0.52	0.03	0.03	4	18.67	57	70	33	0	6	1	0
TX GALVESTON	58	46	77	38	52	-8	0.06	-0.73	0.03	0.06	5	25.95	63	81	54	0	0	2	0
TX HOUSTON	55	37	78	31	46	-9	0.41	-0.42	0.40	0.41	34	35.25	78	81	49	0	2	2	0
TX LUBBOCK	46	15	58	4	30	-11	0.00	-0.14	0.00	0.00	0	15.15	83	62	33	0	7	0	0
TX MIDLAND	49	18	60	6	33	-13	0.00	-0.14	0.00	0.00	0	17.92	125	59	40	0	7	0	0
TX SAN ANGELO	50	21	62	11	36	-12	0.00	-0.19	0.00	0.00	0	20.35	101	62	40	0	7	0	0
TX SAN ANTONIO	57	34	71	27	46	-8	0.02	-0.42	0.02	0.02	3	16.48	52	74	37	0	3	1	0
TX VICTORIA	57	36	79	28	47	-10	0.22	-0.33	0.20	0.25	32	34.28	89	83	53	0	3	2	0
TX WACO	51	25	60	17	38	-12	0.24	-0.39	0.24	0.24	27	23.72	75	78	51	0	6	1	0
TX WICHITA FALLS	44	18	62	9	31	-14	0.00	-0.37	0.00	0.00	0	24.07	87	71	49	0	7	0	0
UT SALT LAKE CITY	30	12	35	5	21	-11	0.10	-0.16	0.10	0.38	100	16.12	103	76	48	0	7	1	0
VT BURLINGTON	30	19	34	8	24	-4	0.14	-0.40	0.13	0.17	22	37.50	108	80	54	0	7	2	0
VA LYNCHBURG	43	24	64	16	33	-7	1.20	0.49	0.58	1.28	125	36.08	88	89	55	0	6	4	1
VA NORFOLK	49	32	65	24	40	-6	2.10	1.49	1.16	2.25	259	43.92	101	93	55	0	4	4	2
VA RICHMOND	44	27	64	22	35	-8	1.34	0.70	1.31	1.46	159	36.91	89	91	60	0	6	3	1
VA ROANOKE	42	27	63	22	35	-6	1.12	0.47	0.37	1.25	133	36.83	91	84	58	0	6	4	0
WA WASH/DULLES	39	23	49	14	31	-7	0.88	0.19	0.64	0.96	96	42.83	108	84	52	0	6	5	1
WA OLYMPIA	42	29	44	22	36	-3	0.00	-1.88	0.00	0.77	28	40.89	90	95	89	0	4	0	0
WA QUILLAYUTE	47	32	53	27	39	-2	0.13	-3.29	0.08	0.41	8	84.62	92	91	87	0	4	2	0
WA SEATTLE-TACOMA	44	33	46	29	39	-2	0.00	-1.35	0.00	0.37	19	29.17	87	76	70	0	4	0	0
WA SPOKANE	22	5	27	-3	14	-14	0.00	-0.54	0.00	0.21	27	14.75	97	92	81	0	7	0	0
WA YAKIMA	30	11	34	6	21	-9	0.00	-0.30	0.00	0.13	30	6.07	83	87	75	0	7	0	0
WV BECKLEY	36	19	50	14	27	-10	0.69	0.00	0.29	1.12	114	32.38	82	84	71	0	7	4	0
WV CHARLESTON	38	23	45	17	30	-10	0.66	-0.14	0.47	0.90	78	39.97	95	87	58	0	7	3	0
WV ELKINS	37	19	51	9	28	-7	1.11	0.32	0.51	1.47	129	41.32	94	85	59	0	7	4	1
WV HUNTINGTON	37	22	43	16	29	-10	0.58	-0.19	0.43	0.93	85	36.37	91	88	57	0	7	2	0
WI EAU CLAIRE	18	1	34	-7	10	-11	0.01	-0.25	0.01	0.04	10	25.91	82	86	62	0	7	1	0
WI GREEN BAY	20	3	27	-3	11	-13	0.03	-0.33	0.02	0.26	48	25.39	90	84	62	0	7	2	0
WI LA CROSSE	18	0	35	-8	9	-16	0.08	-0.24	0.06	0.32	67	30.07	95	89	62	0	7	2	0
WI MADISON	19	2	31	-6	11	-15	0.23	-0.20	0.17	0.56	89	24.25	76	81	67	0	7	2	0
WI MILWAUKEE	23	7	29	-1	15	-14	0.31	-0.24	0.23	0.65	81	25.39	76	80	61	0	7	4	0
WY CASPER	23	1	34	-23	12	-13	0.09	-0.05	0.04	0.11	55	10.88	86	69	51	0	7	3	0
WY CHEYENNE	27	1	37	-20	14	-14	0.00	-0.11	0.00	0.00	0	14.36	95	59	39	0	7	0	0
WY LANDER	22	-3	33	-18	9	-14	0.19	0.05	0.12	0.19	90	11.62	89	74	62	0	7	2	0
WY SHERIDAN	24	-1	39	-17	12	-12	0.21	0.07	0.10	0.26	130	17.58	123	78	66	0	7	3	0

Based on 1971-2000 normals

NOTE: Kalispell, MT replaced by Cut Bank, MT

\*\*\* Not Available

## November Weather and Crop Summary

### Weather

*Weather summary provided by USDA/WAOB*

Stormy November weather across much of the North and East contrasted with mostly dry conditions from southern California to the southern Plains. In the Northwest, abundant rain and snow showers aided winter grains, established high-elevation snowpacks, and eased long-term drought. Meanwhile, little or no precipitation fell in the Southwest, although drought concerns were tempered by the aftereffects (e.g., full reservoirs) of the phenomenal 2004-05 winter wet season and the knowledge that the majority of the 2005-06 season lies ahead. Farther east, however, extremely dry conditions severely stressed pastures and winter grains on the southern Plains, where many locations reported monthly rainfall of a trace or less. Soil moisture shortages were also observed farther north, especially in South Dakota, until a post-Thanksgiving storm blanketed the northern half of the Plains with snow. The northern Plains' winter wheat benefited from the late-November snowfall, which provided moisture and insulation. Late-month snow also covered much of the Midwest, although a core drought area persisted from southern Iowa to near the southern tip of Lake Michigan. Elsewhere, drought continued to adversely affect pastures and winter grains in many areas from southern and eastern Texas to the Delta, while frequent showers eased previously dry conditions in the Southeast. Significant precipitation also fell in the Northeast, maintaining soggy conditions in the wake of record-setting October wetness.

During the first half of November, a record-setting warm spell produced numerous monthly record highs from the central and southern Plains into the Southeast. In fact, November temperatures averaged above normal nearly nationwide, despite a late-month cooling trend. Monthly temperatures averaged more than 6°F above normal on parts of the northern Plains and were at least 2°F above normal across the Southwest, Delta, Midwest, and the remainder of the Plains. Cooler-than-normal weather was confined to the Northwest, where readings were as much as 4°F below normal.

Early- to mid-November warmth set a slew of monthly record highs across the Plains and the South, starting with Norfolk, NE (83°F on November 2). Norfolk's record had survived since November 4, 1909. Subsequently, monthly records were set in locations such as Childress, TX (93°F on November 3); Gage, OK (91°F on November 3); Meridian, MS (87°F on November 8); and Chattanooga, TN (84°F on November 8). During the second half of November, warm weather still made occasional forays northward. In southern California, Riverside posted daily-record highs on November 14 and 19 (90 and 91°F, respectively). Farther east, highs in Texas on November 27 included 90°F in San Antonio and 99°F in Laredo. By month's end, however, chilly weather began to settle across most of the Nation in the wake of a sprawling post-Thanksgiving storm. On

November 28, daily-record lows included -4°F at Arizona's Grand Canyon Airport and 0°F in Cedar City, UT. Daily-record warmth clung through November 29, however, in Eastern locations such as Elizabeth City, NC (75°F), and Syracuse, NY (70°F). For the month, it was the second-warmest November in Las Vegas, NV (59.3°F, or 4.3°F above normal), and the eighth-warmest November in Goodland, KS (43.5°F, or 6.1°F above normal).

The post-Thanksgiving storm produced heavy snow across the Intermountain West, while wind-driven snow paralyzed travel across parts of the northern and central Plains. The storm temporarily closed many major highways, including nearly 350 miles of Interstate 70 from Denver, CO, to Russell, KS. In addition, freezing rain caused widespread electrical disruptions from northern Nebraska to western Minnesota. November 27-28 precipitation totaled 3.54 inches in Huron, SD, where a period of heavy freezing rain was followed by 14.8 inches of snow on the 28<sup>th</sup>. Elsewhere in South Dakota, storm-total snowfall reached 20.0 inches in Kennebec. Meanwhile, November 27-28 peak wind gusts were clocked to 79 m.p.h. in Flagler, CO, 77 m.p.h. in Ruleton, KS, and 74 m.p.h. in Broken Bow, NE. Farther north, Great Falls, MT, received 19.8 inches of snow during the last 5 days of November, nudging the monthly total (24.9 inches) past its November 1955 record sum of 22.1 inches. Great Falls also set a 3-day (November 26-28) snowfall record of 18.1 inches, surpassing its 1973 (April 19-21) mark of 17.6 inches. Across the Midwest and East, daily-record rainfall totals included 1.30 inches (on November 28) in Lincoln, IL, and 3.68 inches (on November 29) in Williamsport, PA.

The November 27-28 storm also affected the southern Plains, although winds in excess of 50 m.p.h. were accompanied by precipitation totals of 0.25 inch or less. On November 28, visibilities below 1 mile were reported near the Lubbock Airport, while winds were clocked to 62 m.p.h. just to the south near Tahoka, TX. During the week ending December 2, more than two dozen large wildfires (100 acres or greater) charred more than 50,000 acres of vegetation in Oklahoma, mostly across the eastern part of the State.

November thunderstorm outbreaks resulted in 117 tornadoes and 27 fatalities, according to preliminary information from the Storm Prediction Center. Tornado-related deaths were reported on November 6 (IN), 12 (IA), 15 (KY), and 27 (AR and MO). The Indiana twister, which struck around 2 a.m. local time, resulted in 23 deaths near Evansville. Four of the five deadly tornadoes, including the Evansville storm, were rated F3, with winds estimated at 158 to 206 m.p.h. Meanwhile, Tropical Storms Gamma, Delta, and Epsilon formed in November, boosting the record-setting Atlantic Basin total to 26 (previously, 21 tropical storms in 1933). Epsilon later became the strongest December hurricane on record (and 14<sup>th</sup> hurricane of the season, further topping the 1969 standard of 12), with maximum sustained winds reaching 85 m.p.h. on December 4.

While wet conditions prevailed during November across much of the North and East, monthly rainfall totaled zero or a trace in numerous locations from southern California to the southern Plains. Longer-term dryness was noted in core drought areas centered on northern Illinois and the Arklatex region. In northern Illinois, both Chicago and Rockford noted their driest March-November periods on record. Chicago netted 16.54 inches (54 percent of normal) during that 9-month span, edging its 1887 standard of 17.23 inches. Similarly, only 17.83 inches (56 percent of normal) fell from March to November in Rockford, bettering its 1971 mark of 18.98 inches. Farther south, January-November precipitation deficits topped 20 inches in locations such as Alexandria, LA (23.99 inches below normal), and De Queen, AR (22.07 inches below normal). In both Alexandria (31.06 inches) and De Queen (27.79 inches), year-to-date rainfall stood at 56 percent of normal. In stark contrast, January-November precipitation was unparalleled in Portland, ME, where the 61.15-inch total (147 percent of normal) surpassed its standard of 58.56 inches set during the first 11 months of 1979.

#### Record-Low November Precipitation Totals (Inches)

<u>Location</u>	<u>Total</u>	<u>Normal</u>	<u>Previous Record</u>
Las Vegas, NV	0.00	0.31	0.00 in 1999 and earlier
El Paso, TX	0.00	0.42	0.00 in 1999 and earlier
Tucson, AZ	0.00	0.67	0.00 in 1999 and earlier
Phoenix, AZ	0.00	0.73	0.00 in 1999 and earlier
San Angelo, TX	0.00	1.10	0.00 in 1988 and earlier
Wichita Falls, TX	0.00	1.68	0.00 in 1903, '04, '12, '49
Okla. City, OK	Trace	2.11	Trace in 1910 and 1949

In contrast, monthly precipitation totaled more than 200 percent of normal in several Northwestern locations, including Klamath Falls, OR (4.67 inches, or 262 percent of normal), and Great Falls, MT (1.69 inches, or 286 percent). Other locations scattered across the North reporting more than twice the normal November precipitation included Fargo, ND (2.84 inches, or 268 percent of normal); Huron, SD (3.95 inches, or 444 percent); Muskegon, MI (6.77 inches, or 210 percent); and Millinocket, ME (9.07 inches, or 247 percent). Huron also netted 20.0 inches of snow (290 percent of normal), nearly all of which fell on November 28 and 30 (14.8 and 5.0 inches, respectively). Monthly snowfall totaled more than 15 inches at several other Northern sites, including Grand Rapids, MI (17.3 inches, or 225 percent of normal), and Caribou, ME (17.6 inches, or 150 percent). In contrast, only a trace of snow (12.2 inches below normal) fell during November in Flagstaff, AZ.

From November 1-18, locally heavy showers dotted Hawaii during a period of trade winds. By November 23, the first cold front of the 2005-06 wet season reached Hawaii, approximately 1 month later than normal. On the Big Island, Hilo received nearly 90 percent (11.42 inches) of its monthly total during the first half of November and collected 6.43 inches on November 8-9. Hawaiian monthly rainfall totals included 12.75 inches (82 percent of normal) in Hilo, 1.76 inches (81 percent) in Kahului, Maui, and 1.43 inches (30 percent) in Lihue, Kauai. Aided by

the presence of a second cold front, 1.43 inches of Kahului's rain fell on November 27.

Mainland Alaska experienced persistently cold weather, while southeastern Alaska received heavy precipitation. Monthly temperatures averaged more than 10°F below normal at several locations in southwestern Alaska, including Bethel (6.1°F, or 11.2°F below normal) and King Salmon (10.7°F, or 12.5°F below normal). Despite the cold weather, King Salmon received snowfall totaling 12.6 inches (200 percent of normal), just 5.3 inches shy of its November 1994 record. Meanwhile in Fairbanks, the highest temperature during the month was 15°F on November 9, 10, 17, and 18, its second-lowest November maximum on record behind 14°F in 1977. It was also Fairbanks' coldest November since 1989. Farther south, monthly precipitation totaled 34.41 inches in Pelican, AK, aided by an exceptionally wet 10-day period from November 15-24, when 30.11 inches fell. Elsewhere in southeastern Alaska, monthly totals included 19.77 inches (162 percent of normal) on Annette Island and 13.67 inches (253 percent) in Juneau, where the former November record of 11.22 inches was set in 1956.

#### Fieldwork

*Fieldwork summary provided by USDA/NASS*

Temperatures averaged above normal across most of the Nation, exceeding normal by generally 4 to 6°F on the Great Plains. Only the Pacific Northwest experienced below-normal temperatures. Meanwhile, a lack of rainfall in the Southwest and Great Plains stressed pastures and crops, particularly winter wheat on the southern Great Plains. Precipitation totals were higher in the Mississippi Delta but still well below normal. Moderate precipitation across the Corn Belt helped to maintain adequate soil moisture for winter wheat without seriously hampering final harvest of corn and soybeans. In the Pacific Northwest, persistent rain and snow showers provided moisture and protection for winter wheat. Heavy precipitation, including some snow, fell along the middle and northern Atlantic Coast. In the Southeast, dry conditions through midmonth gave way to showers toward month's end, improving soil moisture.

The corn harvest continued to progress ahead of the normal pace. By midmonth, growers had combined 95 percent of their crop, 10 percentage points ahead of last year and 4 points ahead of normal. Harvest progress was at or ahead of the normal pace in all States, except Ohio and Texas, which were only 1 and 2 points behind normal, respectively. Only in Colorado, the northern Corn Belt, and Ohio River Valley was harvest less than 95 percent complete.

Sorghum harvest began the month slightly behind the normal pace but surged ahead of normal by the end of the first week. At month's end, 96 percent of the acreage had been harvested, compared with 84 percent last year and 93 percent for the 5-year average. In New Mexico, where harvest progress was as much as 24 points behind normal at midmonth, growers harvested

30 percent of their acreage during the final week to pull within 4 points of the normal pace. In all other States, progress was at or ahead of normal.

On November 6, 95 percent of the winter wheat crop had been sown, 4 points ahead of last year and 3 points ahead of normal. Planting was at or ahead of the normal pace in all States, except North Carolina and the Pacific Coast States. Emergence of the crop also progressed ahead of normal, reaching 94 percent by month's end. In California, Oregon, and Washington, the crop emerged behind the normal pace due to cool weather, while in Texas, dry conditions slowed emergence. Progress was at or ahead of normal in all other States.

The soybean harvest reached 96 percent complete on November 6, compared with 87 percent last year and 91 percent for the 5-year average. Progress was at or ahead of normal in all States, exceeding the average pace by 28 points in Tennessee. Harvest was complete in Iowa, Louisiana, Mississippi, Nebraska, and the Dakotas and was over 90 percent complete in all States, except Kentucky, at 87 percent, and North Carolina, at 32 percent.

Sunflower growers had harvested 97 percent of their acreage by month's end, 12 points ahead of last year and 4 points ahead of normal. Harvest was over 95 percent complete and ahead of the normal pace in the four major producing States.

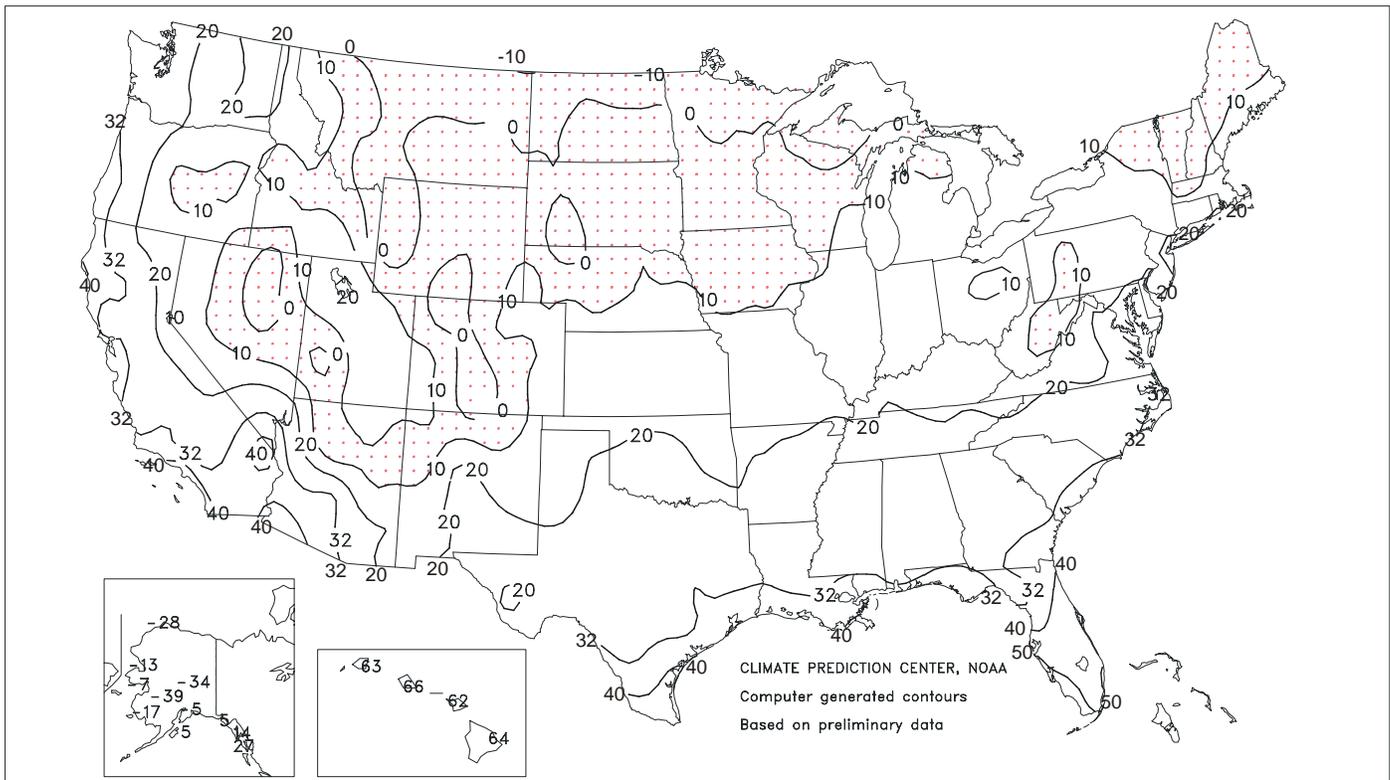
The Nation's peanut harvest began the month at 78 percent complete, 3 points behind normal. However, harvest progressed rapidly during the month, exceeding the normal pace by November 13 and reaching 98 percent complete by November 20, compared with 94 percent last year and 95 percent for the 5-year average. Georgia growers slightly trailed normal, while producers in all other States were at or ahead of the normal harvest pace.

On October 31, cotton growers had harvested 53 percent of their acreage, 4 points ahead of last year but 2 points behind normal. Progress was ahead of normal in the Mississippi Delta but trailed normal across the southern Great Plains, Southwest, and parts of the Southeast. Early in the month, however, dry weather in most growing areas favored fieldwork, allowing harvest to accelerate. Harvest had overtaken the normal pace by midmonth and reached 84 percent complete by November 27, 12 points ahead of last year and 3 points ahead of normal. At month's end, only Arizona, California, and Oklahoma producers trailed the normal harvest pace.

The sugarbeet harvest was 96 percent complete on November 6, compared with 95 percent for last year and the 5-year average. Michigan growers trailed 3 points behind the normal pace, while in Idaho and Minnesota, progress was slightly ahead of normal.

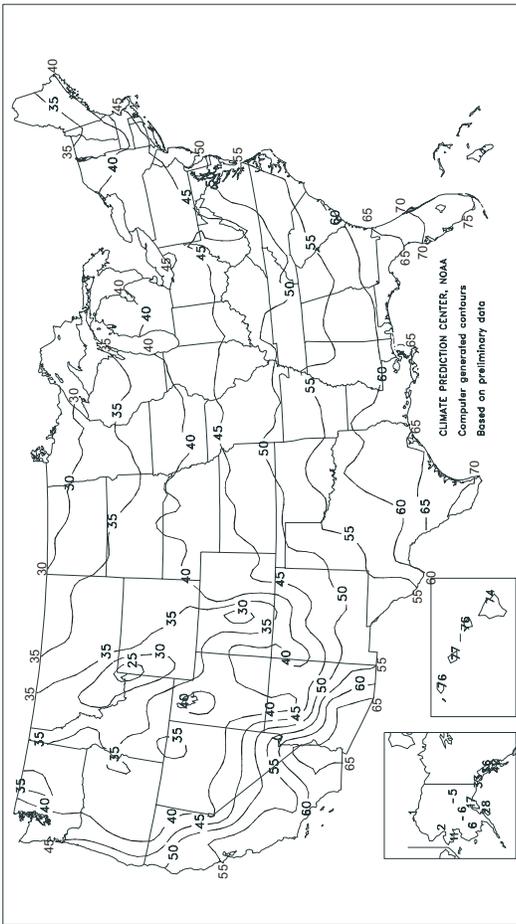
Extreme Minimum Temperature (°F)

November 2005



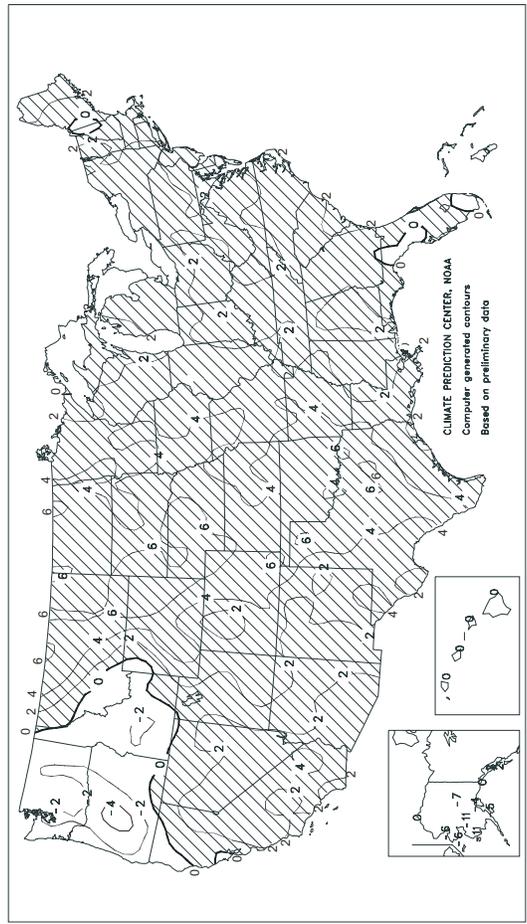
Average Temperature (°F)

November 2005



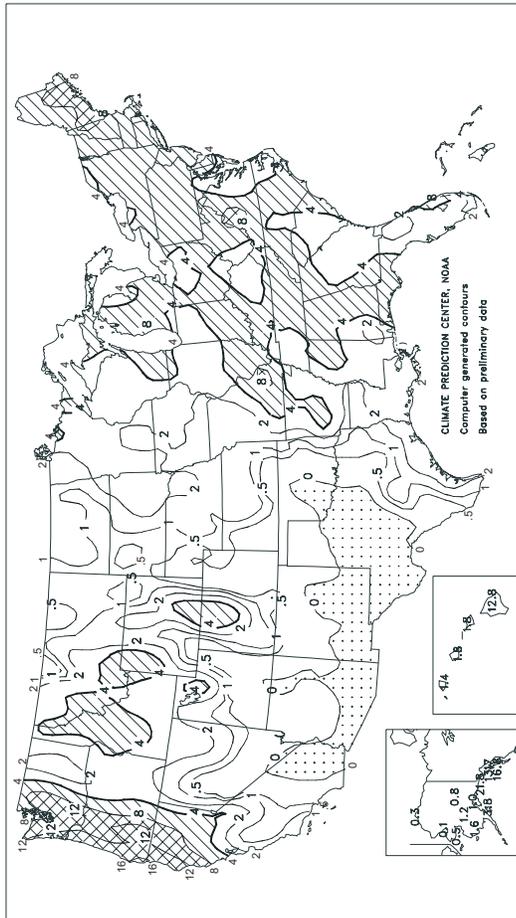
Departure of Average Temperature from Normal (°F)

November 2005



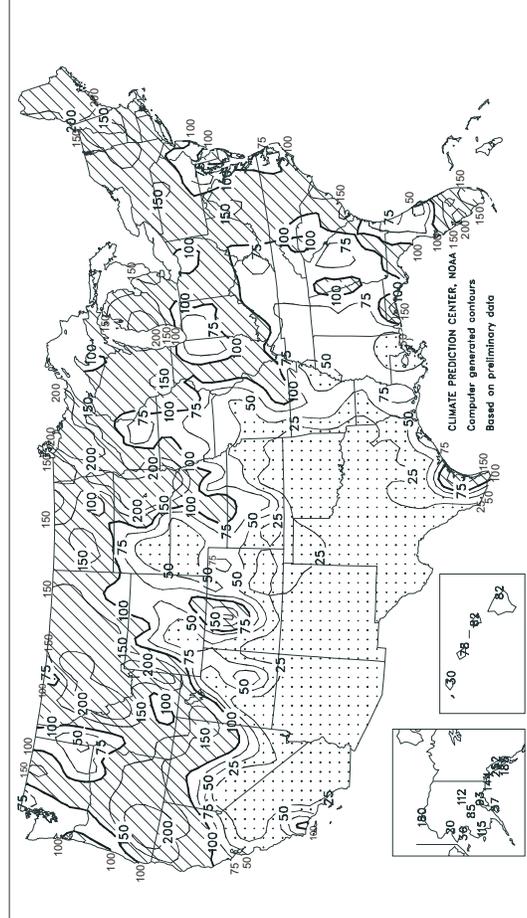
Total Precipitation (inches)

November 2005



Percent of Normal Precipitation

November 2005



TEMPERATURE AND PRECIPITATION SUMMARY

November 2005

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	3.63	-1.00	LEXINGTON	47	1	1.77	-1.67	COLUMBUS	45	1	3.32	0.13
HUNTSVILLE	53	2	2.96	-2.26	LONDON-CORBIN	47	0	3.48	-0.42	DAYTON	44	2	3.64	0.34
MOBILE	61	2	2.22	-3.19	LOUISVILLE	49	1	3.53	-0.27	MANSFIELD	43	3	2.43	-1.33
MONTGOMERY	58	2	2.42	-2.11	PADUCAH	50	3	2.06	-2.47	TOLEDO	43	3	4.02	1.24
AK ANCHORAGE	17	-5	1.01	-0.08	LA BATON ROUGE	61	2	2.88	-1.88	YOUNGSTOWN	44	3	3.63	0.56
BARROW	-1	0	0.29	0.13	LAKE CHARLES	63	3	2.40	-2.21	OK OKLAHOMA CITY	54	5	0.00	-2.11
COLD BAY	31	-4	3.33	-1.46	NEW ORLEANS	64	3	0.81	-4.28	TULSA	54	4	0.32	-3.15
FAIRBANKS	-5	-7	0.76	0.08	SHREVEPORT	61	5	1.06	-3.62	OR ASTORIA	45	-2	10.55	0.05
JUNEAU	36	3	13.67	8.24	ME BANGOR	39	2	7.48	3.79	BURNS	34	1	2.16	1.05
KING SALMON	11	-12	1.23	-0.31	CARIBOU	33	2	6.35	3.23	EUGENE	42	-3	5.19	-3.25
KODIAK	28	-6	3.77	-2.86	PORTLAND	41	3	7.67	2.95	MEDFORD	43	-1	5.93	3.00
NOME	11	-6	0.46	-0.82	MD BALTIMORE	48	2	2.12	-1.00	PENDLETON	39	-2	1.11	-0.52
AZ FLAGSTAFF	39	2	0.21	-1.65	MA BOSTON	46	1	3.75	-0.23	PORTLAND	44	-2	4.98	-0.63
PHOENIX	66	4	0.00	-0.73	WORCESTER	42	2	4.77	0.43	SALEM	43	-2	6.04	-0.35
TUCSON	63	4	0.00	-0.67	MI ALPENA	37	2	2.93	0.85	PA ALLENTOWN	45	3	3.58	-0.12
AR FORT SMITH	54	3	0.83	-3.97	DETROIT	43	2	4.70	2.04	ERIE	46	3	4.98	1.02
LITTLE ROCK	55	3	4.07	-1.66	FLINT	41	3	3.93	1.28	MIDDLETOWN	46	2	2.11	-1.41
CA BAKERSFIELD	58	3	0.23	-0.36	GRAND RAPIDS	40	2	5.29	1.94	PHILADELPHIA	49	2	2.86	-0.30
EUREKA	48	-3	8.52	2.74	HOUGHTON LAKE	37	2	4.15	2.01	PITTSBURGH	44	2	4.05	1.03
FRESNO	58	5	0.17	-0.93	LANSING	42	4	4.53	1.87	WILKES-BARRE	44	2	3.40	0.28
LOS ANGELES	64	2	0.47	-0.66	MUSKOGON	41	2	6.77	3.54	WILLIAMSPORT	43	2	6.77	3.15
REDDING	53	2	4.84	0.81	TRAVERSE CITY	39	2	4.24	1.57	PR SAN JUAN	80	0	7.31	1.14
SACRAMENTO	55	2	0.84	-1.35	MN DULUTH	31	3	3.02	0.90	RI PROVIDENCE	46	2	5.60	1.20
SAN DIEGO	63	1	0.12	-0.95	INTL FALLS	28	4	3.29	1.93	SC CHARLESTON	60	2	3.34	0.68
SAN FRANCISCO	57	2	1.23	-1.26	MINNEAPOLIS	37	4	1.53	-0.41	COLUMBIA	55	0	2.82	-0.06
STOCKTON	56	3	0.36	-1.41	ROCHESTER	36	5	2.38	0.37	FLORENCE	56	1	3.70	1.11
CO ALAMOSA	33	5	0.08	-0.40	ST. CLOUD	33	4	2.55	1.01	GREENVILLE	53	2	3.81	0.02
CO SPRINGS	41	5	0.08	-0.44	MS JACKSON	57	2	3.20	-1.84	MYRTLE BEACH	59	2	4.71	1.74
DENVER	43	6	0.48	-0.12	MERIDIAN	57	1	2.77	-2.18	SD ABERDEEN	33	4	1.35	0.60
GRAND JUNCTION	41	3	0.24	-0.47	TUPELO	55	4	3.93	-1.08	HURON	35	4	3.95	3.06
PUEBLO	43	5	0.00	-0.58	MO COLUMBIA	47	4	1.08	-2.39	RAPID CITY	40	7	0.25	-0.36
CT BRIDGEPORT	46	1	3.40	-0.25	JOPLIN	51	4	1.09	-2.97	SIoux FALLS	37	6	2.96	1.60
HARTFORD	43	1	4.35	0.29	KANSAS CITY	47	4	1.15	-1.15	TN BRISTOL	48	2	2.46	-0.62
DC WASHINGTON	50	1	1.92	-1.11	SPRINGFIELD	48	2	2.52	-1.94	CHATTANOOGA	52	2	3.57	-1.17
DE WILMINGTON	48	2	2.41	-0.78	ST JOSEPH	44	2	0.99	-1.17	JACKSON	51	1	2.55	-2.52
FL DAYTONA BEACH	68	1	1.87	-1.16	ST LOUIS	49	4	3.35	-0.36	KNOXVILLE	51	2	3.43	-0.55
FT LAUDERDALE	74	0	3.55	-1.02	MT BILLINGS	39	5	1.39	0.64	MEMPHIS	56	4	2.33	-3.43
FT MYERS	72	0	3.75	2.04	BUTTE	28	1	0.95	0.35	NASHVILLE	51	2	3.29	-1.16
JACKSONVILLE	64	2	1.05	-1.29	CUT BANK	36	7	0.03	-0.39	TX ABILENE	57	3	0.00	-1.30
KEY WEST	76	0	2.57	-0.07	GLASGOW	34	6	0.63	0.24	AMARILLO	48	3	0.19	-0.49
MELBOURNE	70	1	1.21	-1.91	GREAT FALLS	37	5	1.69	1.10	AUSTIN	63	3	0.34	-2.34
MIAMI	75	1	2.70	-0.73	HELENA	35	4	0.77	0.29	BEAUMONT	64	3	2.33	-2.42
ORLANDO	69	0	0.62	-1.70	MILES CITY	37	5	0.48	-0.04	BROWNSVILLE	71	3	1.85	0.10
PENSACOLA	63	2	7.47	3.01	MISSOULA	32	0	1.68	0.72	COLLEGE STATION	64	4	1.01	-2.17
ST PETERSBURG	73	3	1.23	-0.81	NE GRAND ISLAND	42	6	1.03	-0.38	CORPUS CHRISTI	68	3	5.02	3.28
TALLAHASSEE	63	3	4.35	0.49	HASTINGS	43	6	1.48	0.02	DALLAS/FT WORTH	61	6	0.02	-2.55
TAMPA	70	1	0.90	-0.72	LINCOLN	42	4	2.03	0.45	DEL RIO	62	2	0.00	-0.96
WEST PALM BEACH	74	1	5.79	0.24	MCCOOK	43	5	1.08	-0.01	EL PASO	56	3	0.00	-0.42
GA ATHENS	54	1	2.78	-0.93	NORFOLK	41	6	2.15	0.71	GALVESTON	67	2	3.86	0.22
ATLANTA	55	2	2.91	-1.19	NORTH PLATTE	40	5	0.48	-0.28	HOUSTON	64	3	2.72	-1.47
AUGUSTA	56	2	1.87	-0.81	OMAHA/EPPLEY	42	4	1.04	-0.78	LUBBOCK	52	4	0.00	-0.71
COLUMBUS	59	2	5.07	1.10	SCOTTSBLUFF	40	6	0.26	-0.54	MIDLAND	54	2	0.01	-0.64
MACON	57	2	1.78	-1.44	VALENTINE	39	6	0.35	-0.37	SAN ANGELO	57	3	0.00	-1.10
SAVANNAH	60	1	2.84	0.44	NV ELKO	37	2	1.27	0.22	SAN ANTONIO	65	5	0.20	-2.38
HI HILO	74	0	12.75	-2.83	ELY	38	5	0.84	0.21	VICTORIA	64	1	1.68	-0.96
HONOLULU	77	-1	1.77	-0.49	LAS VEGAS	60	5	0.00	-0.31	WACO	62	5	0.51	-2.10
KAHULUI	76	0	1.78	-0.39	RENO	46	5	0.18	-0.62	WICHITA FALLS	56	4	0.00	-1.68
LIHUE	76	0	1.43	-3.27	WINNEMUCCA	39	2	0.65	-0.15	UT SALT LAKE CITY	42	2	0.90	-0.50
ID BOISE	38	-2	1.71	0.33	NH CONCORD	38	0	5.14	1.57	VT BURLINGTON	40	3	4.50	1.44
LEWISTON	40	0	0.48	-0.73	NJ ATLANTIC CITY	48	2	2.80	-0.46	VA LYNCHBURG	48	1	4.05	0.87
POCATELLO	35	0	0.87	-0.26	NEWARK	49	3	3.74	-0.14	NORFOLK	55	3	3.79	0.81
IL CHICAGO/O'HARE	42	3	2.31	-0.70	NM ALBUQUERQUE	48	4	0.00	-0.62	RICHMOND	53	4	3.81	0.75
MOLINE	43	4	1.72	-1.01	NY ALBANY	42	3	5.71	2.43	ROANOKE	50	3	3.63	0.42
PEORIA	43	3	3.52	0.53	BINGHAMTON	41	3	4.91	1.59	WASH/DULLES	48	3	2.50	-0.81
ROCKFORD	40	3	2.81	0.18	BUFFALO	43	3	5.72	1.80	WA OLYMPIA	42	0	7.21	-0.92
SPRINGFIELD	45	3	3.96	1.09	ROCHESTER	44	4	3.19	0.35	QUILLAYUTE	43	-1	10.94	-3.88
IN EVANSVILLE	48	2	5.94	1.76	SYRACUSE	44	4	4.66	0.89	SEATTLE-TACOMA	43	-2	5.52	-0.38
FORT WAYNE	43	2	3.28	0.30	NC ASHEVILLE	48	2	3.74	-0.08	SPOKANE	34	-1	2.02	-0.22
INDIANAPOLIS	44	1	3.64	0.03	CHARLOTTE	51	-1	3.06	-0.30	YAKIMA	36	-1	1.60	0.55
SOUTH BEND	42	2	2.21	-1.18	GREENSBORO	52	3	3.63	0.67	WV BECKLEY	45	2	3.04	0.16
IA BURLINGTON	44	3	1.72	-1.00	HATTERAS	59	1	2.10	-2.83	CHARLESTON	48	2	3.56	-0.10
CEDAR RAPIDS	39	2	3.54	1.30	RALEIGH	53	2	3.72	0.75	ELKINS	44	3	3.54	0.12
DES MOINES	42	4	1.34	-0.76	WILMINGTON	58	2	4.11	0.85	HUNTINGTON	48	2	1.66	-1.66
DUBUQUE	38	2	2.63	0.14	ND BISMARCK	34	6	0.74	0.04	WI EAU CLAIRE	36	4	2.53	0.61
SIoux CITY	39	4	1.91	0.51	DICKINSON	33	4	1.05	0.46	GREEN BAY	37	3	3.07	0.80
WATERLOO	38	3	1.58	-0.52	FARGO	31	4	2.84	1.78	LA CROSSE	38	3	2.23	0.13
KS CONCORDIA	45	4	0.95	-0.50	GRAND FORKS	29	3	1.33	0.34	MADISON	38	3	3.36	1.05
DODGE CITY	48	6	0.39	-0.62	JAMESTOWN	32	5	0.60	-0.11	MILWAUKEE	40	2	3.65	0.95
GOODLAND	43	6	0.50	-0.32	MINOT	32	5	1.17	0.31	WAUSAU	34	2	2.44	0.24
HILL CITY	44	4	0.65	-0.09	WILLISTON	33	7	0.85	0.20	WY CASPER	38	6	0.56	-0.26
TOPEKA	46	3	0.91	-1.40	OH AKRON-CANTON	43	2	2.58	-0.46	CHEYENNE	39	6	0.30	-0.34
WICHITA	48	4	0.02	-1.80	CINCINNATI	45	0	4.13	0.67	LANDER	35	5	0.41	-0.58
KY JACKSON	51	3	2.65	-1.55	CLEVELAND	45	3	2.68	-0.70	SHERIDAN	38	7	0.62	-0.18

Based on 1971-2000 normals

NOTE: Kalispell, MT replaced by Cut Bank, MT

\*\*\* Not Available

## Autumn Weather Review

*Review provided by USDA/WAOB*

**Highlights:** The Southern and Eastern States continued to experience the effects of a record-setting Atlantic tropical season, enduring strikes from Hurricanes Rita (southwestern Louisiana, September 24) and Wilma (southern Florida, October 24). Aside from the tropical activity, drier-than-normal weather prevailed across the South, promoting rapid summer crop harvesting. Farther north, however, dry September weather in the Northeast was followed by relentless October downpours. Soggy, occasionally snowy weather persisted in the Northeast through the end of autumn. Farther west, wet September weather caused some early harvest delays in the upper Mississippi Valley, but autumn fieldwork proceeded with few delays elsewhere across the Plains and Midwest. Toward the end of autumn, a post-Thanksgiving blizzard across the northern half of the Plains increased livestock stress but helped to establish a protective snow cover for winter wheat. Subsequent snow also blanketed much of the Midwest. Farther south, however, increasingly dry conditions stressed pastures and winter grains on the southern Plains, where some fields were blown out by late-autumn winds and some wheat planting was delayed by drought. In contrast, a wetter-than-normal autumn in the Northwest aided winter grains, eased long-term drought, and established high-elevation snowpacks.

Near- to slightly below-normal autumn temperatures were confined to the West, while warmer-than-normal weather prevailed from the Plains to the East Coast. Despite a late-autumn cooling trend, September-November temperatures averaged as much as 5°F above normal across the central Plains and upper Midwest.

**September:** On September 24, Hurricane Rita moved ashore in Cameron Parish, Louisiana, near the Texas-Louisiana border, with maximum sustained winds of 120 m.p.h. and a storm surge in excess of 10 feet. The category 3 hurricane caused significant property damage across easternmost Texas and southern and western Louisiana. In addition, heavy rain and gusty winds adversely affected unharvested crops, including southern Louisiana's sugarcane and the Delta's open-boll cotton. Farther east, Category 1 Hurricane Ophelia grazed North Carolina's Outer Banks on September 14-15, primarily buffeting coastal areas with high winds, heavy rain, and pounding surf. Meanwhile, unusually dry weather prevailed during September across much of the Plains and the East, promoting summer crop maturation and harvesting but stressing pastures and reducing soil moisture for newly planted winter wheat. Corn and soybean harvesting advanced on schedule in much of the Midwest, although increasingly wet conditions plagued the upper Mississippi Valley. Across the southern and eastern Corn Belt, the interaction of Rita's remnants and a cold front briefly slowed fieldwork but provided generally beneficial, late-month rainfall. Elsewhere, much-needed precipitation arrived in the Northwest

at month's end, improving topsoil moisture for winter wheat emergence and establishment. Autumn fieldwork proceeded with few delays elsewhere in the West.

Cool weather prevailed during September west of the Rockies, but the remainder of the Nation experienced unusual warmth. Monthly temperatures averaged as much as 5°F below normal in California but generally ranged from 3 to 7°F above normal from the Plains to the East Coast.

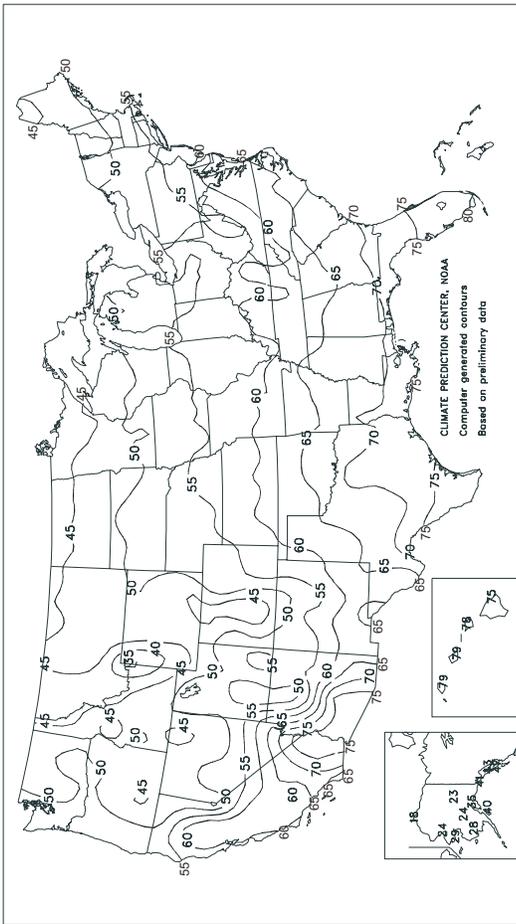
**October:** Tropical Storm Tammy (October 5) and Hurricane Wilma (October 24) became the sixth and seventh Atlantic basin systems, respectively, to make landfall this year in the United States, following Tropical Storms Arlene (June 11) and Cindy (July 6) and Hurricanes Dennis (July 10), Katrina (August 25 and 29), and Rita (September 24). (In addition, Hurricane Ophelia passed within a few miles of the North Carolina coast on September 14-15.) Tammy's interaction with an approaching cold provided the Northeast with its first in a series of record-breaking downpours. Wilma, a category 3 storm with maximum sustained winds near 125 m.p.h. at landfall, caused extensive damage to citrus, sugarcane, vegetables, nursery crops, and farm infrastructure in southern Florida. In contrast, little or no rain fell during October across the South from the western Gulf Coast region to the Appalachians. In the lower Mississippi Valley, dry conditions favored final summer crop harvesting but stressed pastures and newly planted winter grains. Mostly dry weather also prevailed in the Corn Belt, allowing summer crop harvesting and winter wheat planting to proceed with few delays. Even the previously saturated upper Midwest turned dry after the first week of October. By month's end, however, diminishing Midwestern soil moisture was a concern in winter wheat areas from the lower Ohio Valley to Michigan. Farther west, highly variable conditions existed with respect to winter wheat establishment. For example, favorably moist conditions on the central High Plains contrasted with limited moisture supplies in South Dakota and Texas' northern panhandle. Meanwhile in the Northwest, late-month precipitation slowed fieldwork but established high-elevation snowpacks and aided pastures and winter grains. Elsewhere, locally heavy, midmonth showers briefly interrupted an otherwise mostly dry regime in southern California and the Southwest.

Aside from chilly weather along California's coast, near- to above-normal temperatures prevailed nationwide. In many areas, however, including the Plains and the South, a late-month cold outbreak helped to offset the effects of earlier warmth. Monthly temperatures ranged from as much as 4°F below normal in coastal California to 4°F above normal in parts of the Great Lakes region.

**November:** A complete summary begins on page 9.

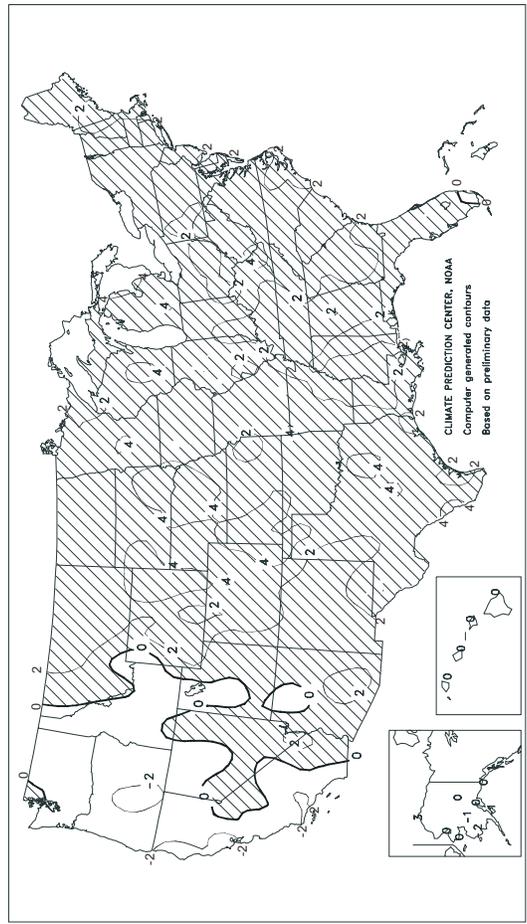
Average Temperature (°F)

SEP - NOV 2005



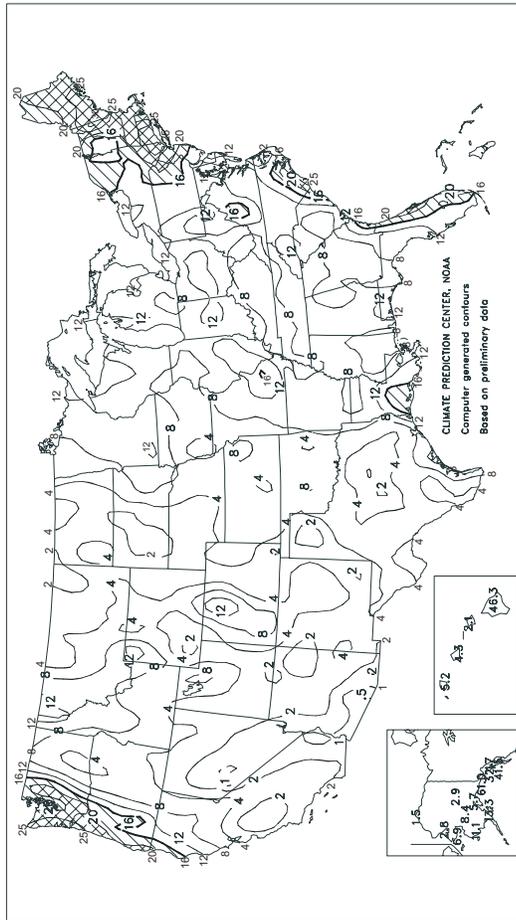
Departure of Average Temperature from Normal (°F)

SEP - NOV 2005



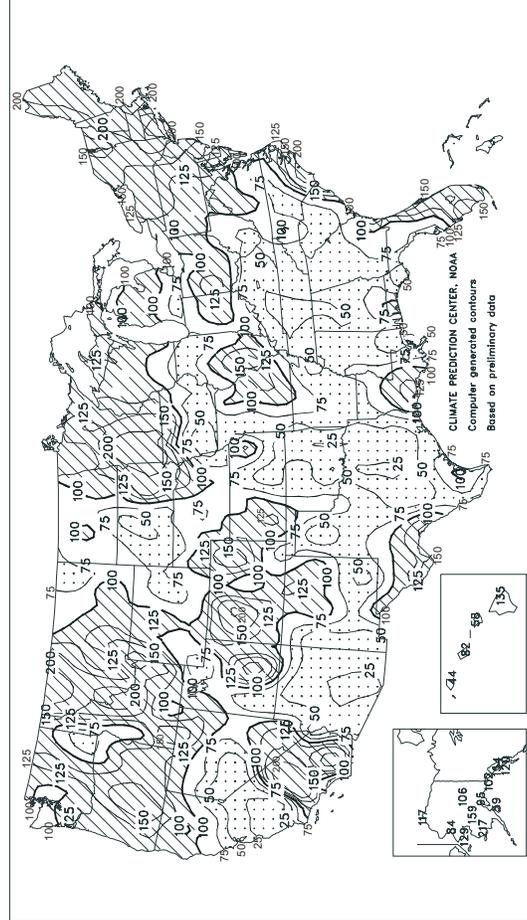
Total Precipitation (inches)

SEP - NOV 2005



Percent of Normal Precipitation

SEP - NOV 2005



TEMPERATURE AND PRECIPITATION SUMMARY  
Fall 2005

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	5.87	-6.04	LEXINGTON	59	2	3.60	-5.65	COLUMBUS	57	2	7.56	-0.86
HUNTSVILLE	64	2	5.97	-7.08	LONDON-CORBIN	59	2	5.87	-4.20	DAYTON	55	1	14.12	5.45
MOBILE	70	2	4.77	-9.90	LOUISVILLE	61	2	5.67	-3.97	MANSFIELD	54	3	7.90	-1.98
MONTGOMERY	67	1	7.47	-3.86	PADUCAH	60	2	5.66	-5.88	TOLEDO	55	3	7.11	-0.86
AK ANCHORAGE	35	0	5.73	-0.31	LA BATON ROUGE	71	3	15.74	2.33	YOUNGSTOWN	54	3	10.34	0.92
BARROW	18	3	1.45	0.21	LAKE CHARLES	72	3	19.35	4.85	OK OKLAHOMA CITY	65	4	3.06	-6.67
COLD BAY	40	-1	11.77	-2.07	NEW ORLEANS	72	2	8.08	-5.61	TULSA	65	3	4.99	-7.29
FAIRBANKS	23	0	2.89	0.17	SHREVEPORT	70	3	8.13	-4.21	OR ASTORIA	52	-1	20.67	1.95
JUNEAU	43	1	32.71	11.44	ME BANGOR	50	2	24.36	13.80	BURNS	45	1	3.37	1.04
KING SALMON	32	-3	8.36	1.92	CARIBOU	45	3	18.78	9.40	EUGENE	52	-1	9.18	-4.15
KODIAK	40	-1	13.34	-9.49	PORTLAND	51	3	24.52	12.03	MEDFORD	55	0	6.81	1.79
NOME	29	0	6.92	1.55	MD BALTIMORE	59	3	12.02	1.76	PENDLETON	51	-1	3.15	-0.10
AZ FLAGSTAFF	48	1	2.30	-3.61	MA BOSTON	56	1	14.95	3.71	PORTLAND	54	-1	10.10	-0.74
PHOENIX	78	4	0.33	-1.94	WORCESTER	53	3	23.16	9.88	SALEM	53	0	11.07	0.22
TUCSON	73	3	0.37	-2.96	MI ALPENA	49	3	6.13	-1.08	PA ALLENTOWN	56	4	17.50	6.10
AR FORT SMITH	65	3	8.57	-3.78	DETROIT	55	3	6.46	-1.70	ERIE	55	2	12.43	-0.18
LITTLE ROCK	66	3	8.75	-4.94	FLINT	53	4	9.73	0.98	MIDDLETOWN	58	3	10.69	0.73
CA BAKERSFIELD	66	0	0.48	-0.56	GRAND RAPIDS	53	3	9.82	-0.61	PHILADELPHIA	60	2	11.75	1.96
EUREKA	51	-3	11.00	2.00	HOUGHTON LAKE	49	3	8.43	0.92	PITTSBURGH	55	2	8.84	0.36
FRESNO	66	2	0.26	-1.75	LANSING	54	5	7.88	-0.55	WILKES-BARRE	54	2	11.89	1.89
LOS ANGELES	65	-1	1.78	0.03	MUSKEGON	53	3	10.98	1.43	WILLIAMSPORT	55	3	14.44	3.65
REDDING	62	-1	5.24	-1.45	TRAVERSE CITY	52	3	8.11	-1.08	PR SAN JUAN	82	1	23.10	6.27
SACRAMENTO	62	-1	0.99	-2.45	MN DULUTH	46	4	11.48	2.77	RI PROVIDENCE	56	2	25.26	13.47
SAN DIEGO	66	-1	0.68	-1.04	INT'L FALLS	42	2	7.82	1.45	SC CHARLESTON	69	2	9.73	-2.00
SAN FRANCISCO	60	0	1.39	-2.34	MINNEAPOLIS	52	5	11.42	4.68	COLUMBIA	66	2	5.31	-4.40
STOCKTON	64	0	0.85	-2.07	ROCHESTER	51	5	10.39	3.06	FLORENCE	66	1	7.22	-1.98
CO ALAMOSA	45	3	2.38	0.34	ST. CLOUD	48	4	12.90	6.19	GREENVILLE	64	3	8.11	-3.52
CO SPRINGS	52	4	1.24	-1.37	MS JACKSON	67	2	6.34	-5.35	MYRTLE BEACH	68	3	21.34	9.56
DENVER	54	5	2.71	0.20	MERIDIAN	67	1	7.32	-4.55	SD ABERDEEN	48	3	3.52	-0.67
GRAND JUNCTION	54	2	4.18	1.56	TUPELO	65	3	8.23	-3.51	HURON	51	4	11.21	6.93
PUEBLO	54	2	2.54	0.48	MO COLUMBIA	58	3	9.66	-0.48	RAPID CITY	52	5	1.70	-1.31
CT BRIDGEPORT	57	2	17.61	6.84	JOPLIN	62	3	7.03	-6.19	SIOUX FALLS	51	4	9.38	3.51
HARTFORD	54	2	22.17	10.04	KANSAS CITY	59	3	8.88	-1.39	TN BRISTOL	59	3	4.67	-3.79
DC WASHINGTON	62	3	11.44	1.40	SPRINGFIELD	60	2	10.29	-2.47	CHATTANOOGA	63	2	6.24	-6.21
DE WILMINGTON	59	3	10.64	0.36	ST JOSEPH	56	0	7.73	-1.62	JACKSON	62	1	7.03	-5.12
FL DAYTONA BEACH	74	0	22.73	8.61	ST LOUIS	60	2	10.17	0.74	KNOXVILLE	62	2	6.25	-3.42
FT LAUDERDALE	79	1	23.09	3.82	MT BILLINGS	50	3	4.19	0.84	MEMPHIS	66	2	4.72	-7.66
FT MYERS	77	0	18.74	6.58	BUTTE	41	1	3.29	0.81	NASHVILLE	62	2	4.75	-6.16
JACKSONVILLE	71	1	13.30	-0.80	CUT BANK	44	2	3.51	1.44	TX ABILENE	67	2	4.00	-3.11
KEY WEST	80	0	14.56	2.13	GLASGOW	47	4	1.83	-0.25	AMARILLO	59	1	0.75	-3.31
MELBOURNE	75	0	21.06	5.98	GREAT FALLS	47	3	4.06	1.31	AUSTIN	72	2	3.56	-6.00
MIAMI	79	0	18.10	0.10	HELENA	47	3	2.43	0.24	BEAUMONT	72	2	12.43	-3.09
ORLANDO	75	0	12.50	1.69	MILES CITY	49	2	2.99	0.15	BROWNSVILLE	77	2	5.98	-4.86
PENSACOLA	72	2	14.66	0.32	MISSOULA	45	1	4.67	1.80	COLLEGE STATION	73	3	3.12	-8.19
ST PETERSBURG	78	2	6.07	-6.20	NE GRAND ISLAND	55	4	4.62	-0.73	CORPUS CHRISTI	75	2	12.60	1.89
TALLAHASSEE	72	3	6.03	-6.09	HASTINGS	57	5	3.35	-2.52	DALLAS/FT WORTH	71	4	2.27	-6.83
TAMPA	76	0	5.89	-4.56	LINCOLN	56	3	5.07	-1.37	DEL RIO	73	3	8.74	3.72
WEST PALM BEACH	78	0	19.13	0.02	MCCOOK	56	4	4.06	0.32	EL PASO	66	2	4.13	1.29
GA ATHENS	65	3	5.92	-4.79	NORFOLK	55	5	6.42	1.01	GALVESTON	75	1	8.43	-4.46
ATLANTA	65	2	4.96	-6.34	NORTH PLATTE	53	4	1.69	-1.63	HOUSTON	73	3	7.04	-5.98
AUGUSTA	67	3	5.95	-3.52	OMAHA/EPPLEY	56	4	2.71	-4.49	LUBBOCK	63	3	2.89	-2.09
COLUMBUS	69	3	6.95	-2.42	SCOTTSBLUFF	51	4	3.25	0.22	MIDLAND	65	1	3.76	-0.97
MACON	67	3	3.82	-5.03	VALENTINE	52	4	3.35	-0.20	SAN ANGELO	67	2	3.74	-2.88
SAVANNAH	69	2	10.27	-0.33	NV ELKO	47	0	3.36	0.92	SAN ANTONIO	73	3	2.74	-6.70
HI HILO	75	0	46.34	11.98	ELY	47	2	2.38	-0.19	VICTORIA	73	1	9.18	-2.72
HONOLULU	79	-1	4.27	-0.91	LAS VEGAS	71	3	1.45	0.59	WACO	71	3	1.97	-7.19
KAHULUI	78	0	2.08	-1.53	RENO	55	3	0.21	-1.46	WICHITA FALLS	67	3	7.82	-0.16
LIHUE	78	0	5.17	-6.47	WINNEMUCCA	48	-1	1.87	-0.12	UT SALT LAKE CITY	54	2	2.21	-2.09
ID BOISE	51	-1	2.48	-0.42	NH CONCORD	50	2	22.10	11.91	VT BURLINGTON	51	3	13.46	3.45
LEWISTON	53	1	2.22	-0.75	NJ ATLANTIC CITY	59	3	12.38	3.12	VA LYNCHBURG	59	2	11.46	1.01
POCATELLO	47	0	3.27	0.28	NEWARK	60	3	17.41	6.35	NORFOLK	65	3	12.09	1.58
IL CHICAGO/O'HARE	55	3	6.36	-2.63	NM ALBUQUERQUE	59	2	3.87	1.18	RICHMOND	63	4	7.63	-3.01
MOLINE	56	4	4.20	-4.49	NY ALBANY	53	3	16.91	7.11	ROANOKE	60	3	8.92	-1.29
PEORIA	57	4	8.91	0.04	BINGHAMTON	51	3	14.78	4.85	WASH/DULLES	59	3	11.88	1.38
ROCKFORD	54	4	4.91	-3.76	BUFFALO	54	3	13.25	2.30	WA OLYMPIA	50	0	14.70	0.35
SPRINGFIELD	57	2	10.71	2.39	ROCHESTER	54	4	11.65	2.76	QUILLAYUTE	50	0	28.63	-0.15
IN EVANSVILLE	60	3	8.67	-1.28	SYRACUSE	54	4	12.81	1.69	SEATTLE-TACOMA	52	-1	9.49	-1.23
FORT WAYNE	55	3	7.76	-0.66	NC ASHEVILLE	58	2	5.28	-5.43	SPOKANE	47	0	3.91	-0.47
INDIANAPOLIS	57	2	9.95	0.70	CHARLOTTE	63	1	8.08	-2.77	YAKIMA	48	-1	2.20	0.23
SOUTH BEND	54	2	6.52	-3.93	GREENSBORO	62	3	6.78	-3.74	WV BECKLEY	55	2	5.60	-3.15
IA BURLINGTON	56	2	8.03	-1.20	HATTERAS	66	0	19.19	3.27	CHARLESTON	59	3	7.97	-1.81
CEDAR RAPIDS	53	2	7.05	-0.67	RALEIGH	64	3	6.60	-3.81	ELKINS	55	4	9.31	-0.79
DES MOINES	56	4	3.68	-4.19	WILMINGTON	67	2	27.44	14.18	HUNTINGTON	59	3	4.92	-3.93
DUBUQUE	52	3	5.02	-3.53	ND BISMARCK	47	3	2.21	-1.38	WI EAU CLAIRE	50	4	7.44	-0.46
SIOUX CITY	54	4	7.24	1.43	DICKINSON	45	1	2.81	-0.74	GREEN BAY	51	4	7.74	0.19
WATERLOO	52	3	5.08	-2.46	FARGO	47	4	6.92	1.71	LA CROSSE	53	3	9.54	1.88
KS CONCORDIA	58	3	4.30	-1.49	GRAND FORKS	44	2	4.76	0.11	MADISON	52	4	6.07	-1.50
DODGE CITY	61	5	5.05	0.89	JAMESTOWN	47	4	4.24	0.39	MILWAUKEE	54	3	8.77	0.28
GOODLAND	55	4	3.44	0.45	MINOT	46	3	3.54	-0.38	WAUSAU	49	3	10.19	1.28
HILL CITY	57	3	3.15	-1.10	WILLISTON	45	3	2.33	-0.54	WY CASPER	49	4	1.97	-0.97
TOPEKA	58	2	13.63	4.62	OH AKRON-CANTON	54	2	9.47	0.41	CHEYENNE	50	5	2.41	-0.47
WICHITA	61	3	2.80	-4.43	CINCINNATI	57	1	8.34	-0.90	LANDER	48	3	2.70	-0.80
KY JACKSON	61	3	4.73	-6.42	CLEVELAND	55	3	8.76	-1.12	SHERIDAN	48	4	3.30	-0.29

Based on 1971-2000 normals

NOTE: Kalspell, MT replaced by Cut Bank, MT

\*\*\* Not Available

# National Agricultural Summary

December 5 - 11, 2005

Weekly National Agricultural Summary provided by USDA/NASS

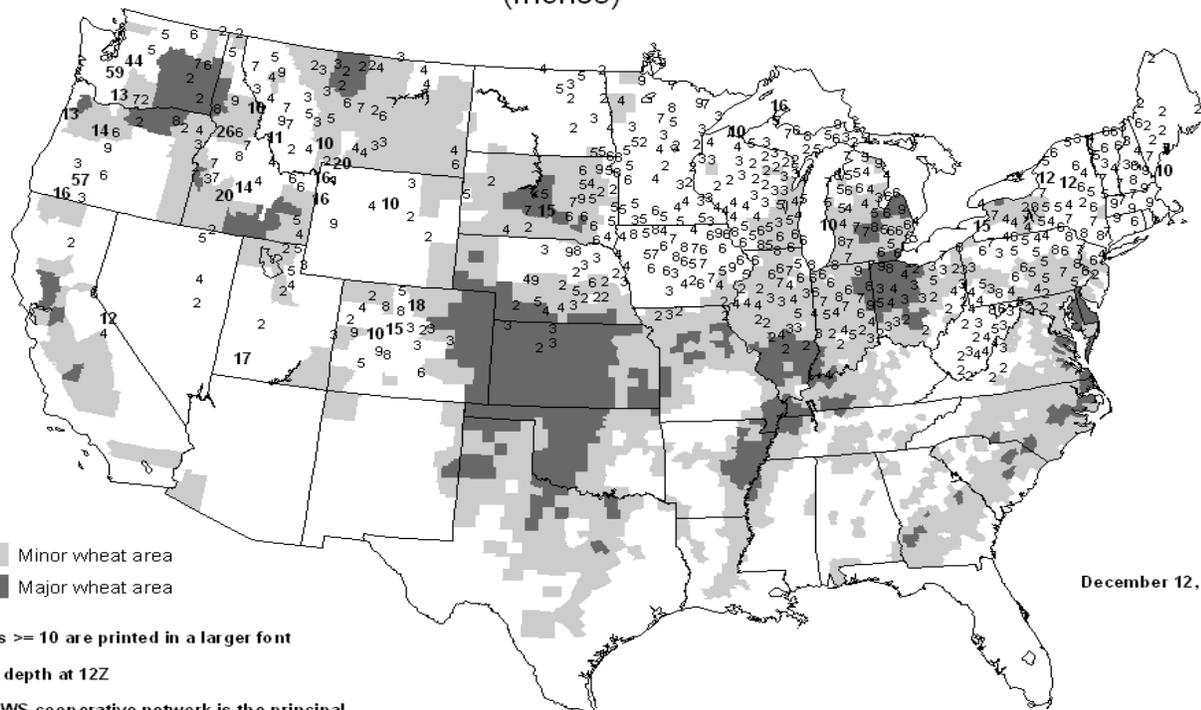
## HIGHLIGHTS

Temperatures averaged well below normal nearly nationwide. Across much of the Corn Belt and Great Plains, average temperatures were over 15 degrees Fahrenheit below normal. The bitterly cold weather was particularly worrisome in the southern Great Plains, where the winter wheat crop lacked the protection of snow cover and had not yet entered dormancy. In contrast, much of the Corn Belt received snowfall, providing protection from the low temperatures. Across the Southeast, moderate precipitation improved soil moisture, but the cold weather limited the growth of pastures. The Pacific Northwest and Southwest were mostly dry, causing soil moisture shortages. Conditions were dry across the Great Plains, with only small areas of light precipitation.

winter wheat crop was slow to emerge due to inadequate moisture and below-normal temperatures. In Arizona, the cotton harvest was 87 percent complete. Small grain planting was well underway, and harvest of vegetables, citrus crops, and alfalfa was active. Small grains in Texas suffered from freezing temperatures and high winds as well as a continued lack of precipitation. Harvest of vegetables and sugarcane continued in more southerly areas of the State. Rainfall in North Carolina replenished soil moisture in areas where it was badly needed but hampered cotton and soybean harvest and small grain planting. Georgia's cotton and soybean harvests were ongoing but nearly complete, while small grain planting was hindered by rainfall. Precipitation in Florida replenished soil moisture in several areas but slowed strawberry harvest.

In California's San Joaquin Valley, the table grape harvest was nearly complete, while the

United States Snow Depth  
(Inches)



December 12, 2005

Minor wheat area  
Major wheat area

Values  $\geq 10$  are printed in a larger font

Snow depth at 12Z

The NWS cooperative network is the principal source of the snow depth reports

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

## International Weather and Crop Summary

December 4 - 10, 2005

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

### HIGHLIGHTS

**EUROPE:** Widespread rain and snow provided moisture for dormant winter wheat, while milder conditions in central Europe melted much of the region's protective snow cover.

**FSU-WESTERN:** Unseasonably mild weather and widespread precipitation provided favorable overwintering conditions for winter grains.

**MIDDLE EAST:** A second week of dry, warm weather promoted winter grain emergence and establishment but increased moisture deficits in eastern growing areas.

**EASTERN ASIA:** A cold snap dropped minimum temperatures well below freezing throughout much of China as winter crops were entering dormancy.

**SOUTHEAST ASIA:** Heavy monsoon showers continued in oil palm areas in Sumatra and Malaysia, while strong easterly winds brought flooding rain to the eastern Philippines and central Vietnam.

**AUSTRALIA:** Rain in eastern Australia maintained adequate to abundant moisture supplies for vegetative summer crops, while showers in western and southeastern Australia caused only temporary delays in winter grain harvesting.

**NORTHWESTERN AFRICA:** Drier weather returned to Morocco in the wake of Tropical Storm Delta, while heavy rain benefited winter grains in Algeria.

**SOUTH AFRICA:** Mostly dry weather promoted planting in the western corn belt.

**BRAZIL:** Moderate to heavy rain covered the nation's main soybean areas, including previously dry locations in the south.

**ARGENTINA:** Drier weather promoted fieldwork in southern and western summer crop areas.

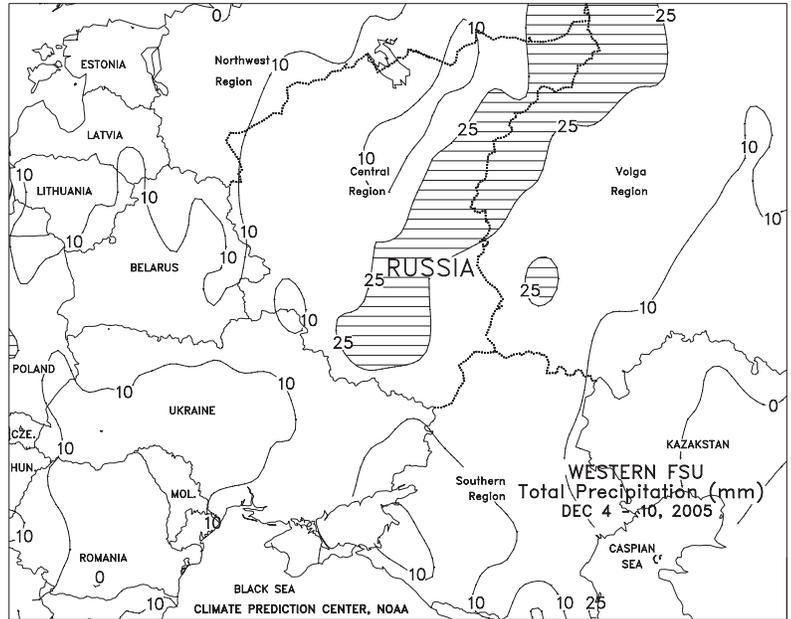
### EUROPE

Widespread rain and snow provided moisture for dormant winter grains, while milder conditions in central Europe melted much of the region's protective snow cover. A pair of cold fronts triggered moderate to heavy showers (20-60 mm) across France, western Germany, and the Benelux countries, providing moisture for dormant winter wheat. However, the rainfall, coupled with temperatures up to 3 degrees C above normal in central Europe, melted much of the region's protective snow cover. Lighter showers (less than 10 mm) in England and Portugal maintained topsoil moisture for semi-dormant winter grains, while dry weather in Spain promoted late summer crop harvesting. Farther east, a strong storm brought locally heavy rain and snow (20-60 mm of liquid equivalent) to much of eastern Europe, providing the first significant precipitation to Poland, Hungary, and the Czech Republic since mid-September. Locally excessive rain (greater than 100 mm) in Croatia and Bosnia caused flooding, while generally dry weather (less than 5 mm) across the remainder of the Balkans favored late-season fieldwork. Elsewhere, rain (15-75 mm) in central and southern Italy slowed fieldwork but maintained adequate to abundant moisture supplies for recently planted barley, while light snow (5-10 mm of liquid equivalent) in the Baltics provided insulation for dormant winter grains.



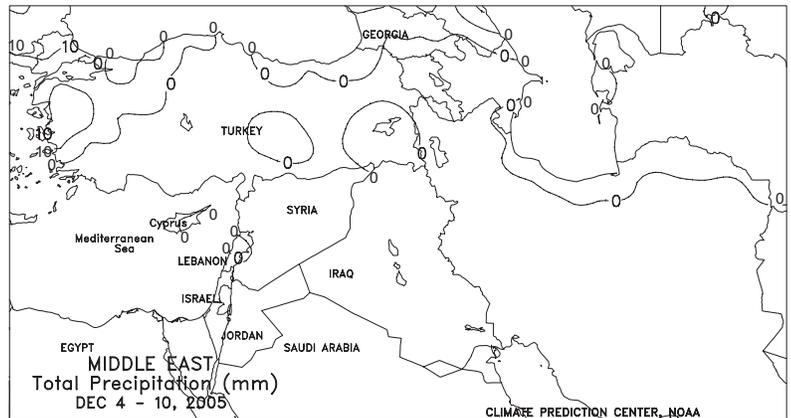
**FSU-WESTERN**

Unseasonably mild weather prevailed across most of the region, providing favorable overwintering conditions for winter grains. Although winter grains were dormant in most areas, temperatures were high enough to allow some growth in southernmost growing areas of Ukraine and Russia. Widespread precipitation (3-25 mm or more of liquid equivalent) fell mostly as rain in Ukraine and the Southern Region in Russia, while rain changed to snow from Belarus eastward across the Central and Volga Regions in Russia. Weekly temperatures averaged near to slightly above normal in Belarus, 1 to 4 degrees C above normal in northern Russia, and 2 to 6 degrees C above normal in Ukraine and the Southern Region in Russia. Extreme maximum temperatures ranged from 5 to 15 degrees C in Ukraine and the Southern Region in Russia, and -2 to 5 degrees C over the remainder of Russia and Belarus. The unseasonably mild weather kept major winter wheat areas in Ukraine and the Southern Region in Russia snow-free, leaving crops vulnerable to potential winterkill conditions. By week's end, a shallow to moderate snow cover blanketed winter grain areas that stretched from Belarus eastward across northern Russia.



**MIDDLE EAST**

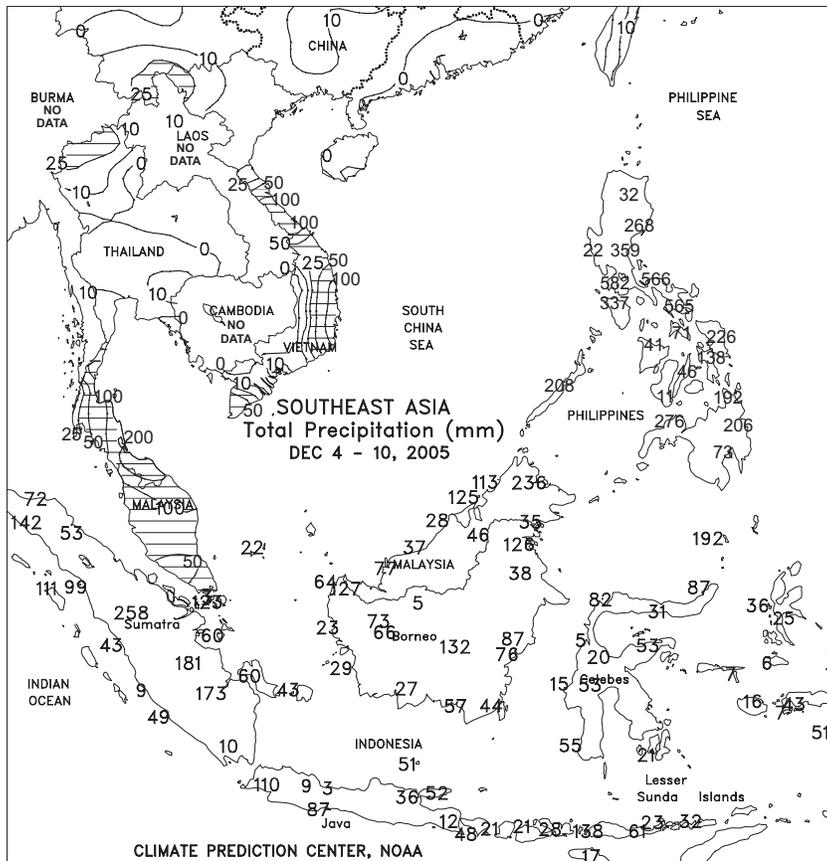
A second consecutive week of dry, warm weather promoted winter grain establishment in Turkey but increased moisture deficits in eastern growing areas. A northward-displaced jet stream allowed unseasonably mild weather (3-8 degrees C above normal) to persist across Turkey, promoting winter grain establishment but melting the region's protective snow cover. Farther east, dry weather depleted topsoil moisture for winter grain establishment from northern and eastern Syria eastward into northwestern Iran, where rain and snow are needed to ease increasing moisture deficits. Temperatures in northwestern Iran averaged 5 to 9 degrees C above normal, with daytime highs reaching 22 degrees C. The anomalous warmth melted the remainder of the region's protective snow cover, leaving winter grains vulnerable to extreme cold.



**EASTERN ASIA**

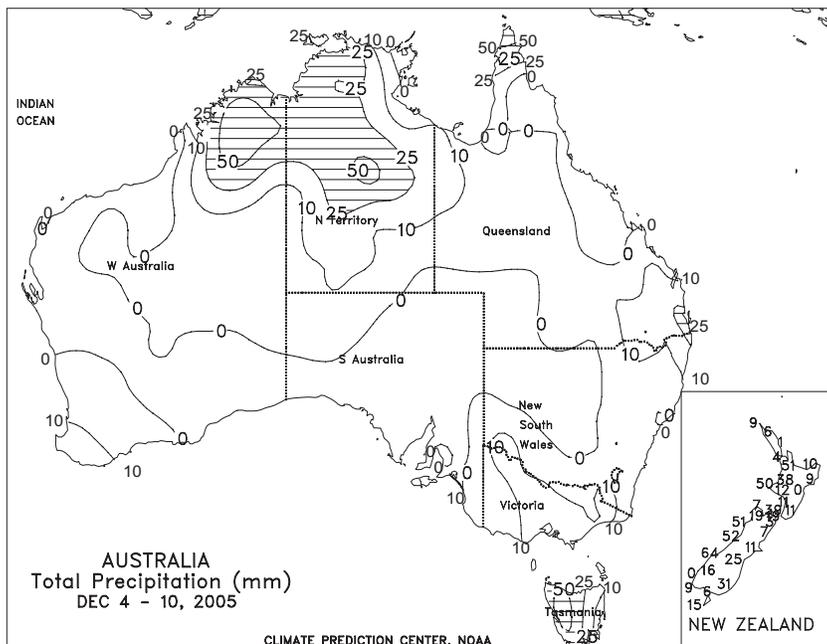
Seasonably dry weather prevailed throughout most of China, while light showers (generally less than 25 mm) fell in southern provinces. Temperatures were 3 to 5 degrees C below normal throughout China with average temperatures of -5 to 0 degrees C along the North China Plain. The colder weather accelerated the hardening of dormant winter wheat as minimum temperatures plunged to well below freezing (-10 to -5 degrees C, with some areas near -15 degrees C). Unprotected dormant winter wheat can withstand temperatures of nearly -17 degrees C. Elsewhere, seasonably cold, dry weather prevailed on the Korean peninsula with rain and snow falling in western Japan.





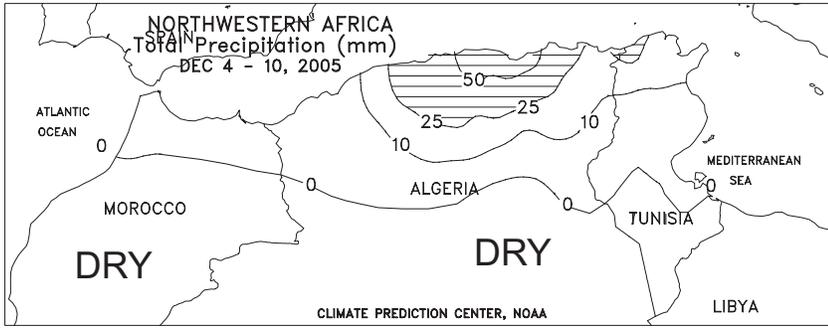
**SOUTHEAST ASIA**

Showers (10-25 mm, locally more) were generally lighter than in previous weeks across Java, but continued to maintain moisture supplies for main-season rice. Widespread heavy monsoon showers (50-200 mm) continued in oil palm areas of Sumatra and Malaysia, halting harvesting and potentially causing problems with crop pollination. Strong easterly winds continued to bring flooding rain to the eastern Philippines. The heavy rain helped elevate reservoir levels but likely caused damage to winter-grown crops. The unusually strong winds also brought heavy rain (50-200 mm) to central Vietnam, slowing coffee harvesting, while well-below-normal temperatures slowed rice development in the north. Second-season rice areas of Thailand received heavy monsoon rain, increasing moisture supplies for the crop.



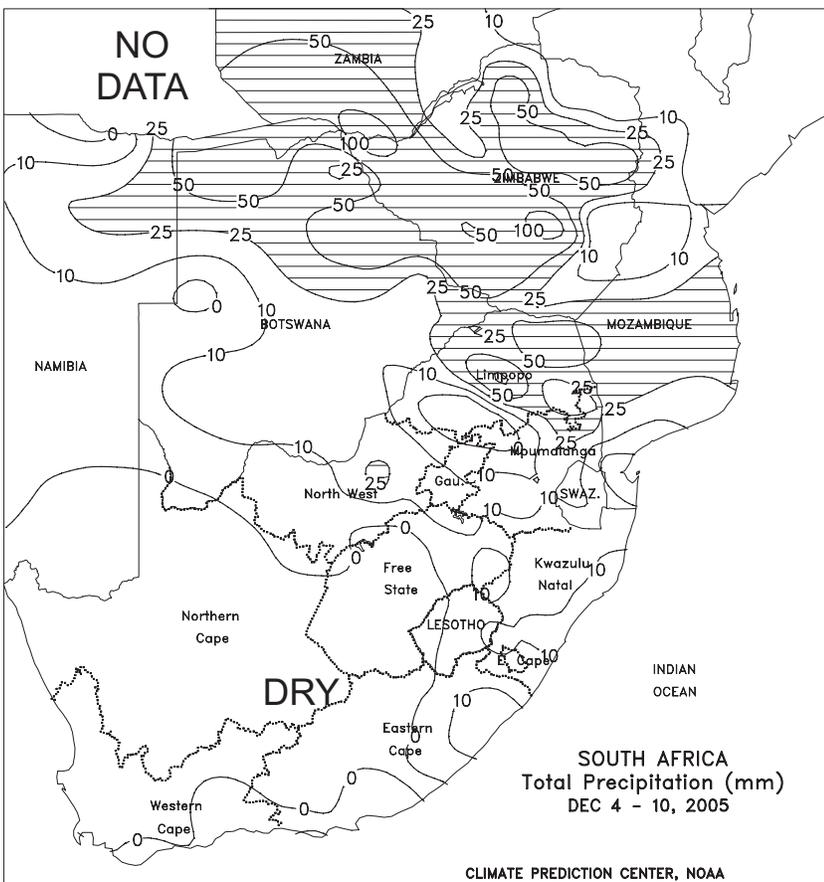
**AUSTRALIA**

Light showers (generally 2-6 mm) across portions of western and southeastern Australia caused only temporary delays in winter wheat and barley harvesting. The rain was mostly too light to have a significant negative impact on winter grain quality. In extreme northern New South Wales and southern Queensland, more widespread rain (6-15 mm, locally more) further improved moisture supplies for vegetative summer crops. The rain boosted topsoil moisture and increased reservoir levels, maintaining adequate to abundant moisture supplies for irrigated cotton and dryland sorghum. Temperatures in eastern Australia averaged about 2 to 3 degrees C above normal, hastening summer crop development. In contrast, temperatures in southeastern and western Australia averaged about 2 to 3 degrees C below normal, slowing winter grain maturation.



**NORTHWESTERN AFRICA**

Drier weather returned to Morocco in the wake of Tropical Storm Delta, while heavy rain benefited grains in eastern Algeria. Following Tropical Storm Delta's record-making landfall in Morocco the previous week, dry weather returned to Morocco and western Algeria. The respite favored late winter grain planting, which is typically completed by the end of December. Meanwhile, a westward-moving storm in the Mediterranean Sea triggered widespread, locally heavy rain (25-100 mm) across northeastern Algeria, providing moisture for barley and winter wheat but halting fieldwork. Farther east, lighter showers (5-15 mm) maintained favorable prospects for winter wheat in northern Tunisia. Temperatures averaged near normal across the entire region, with nighttime lows remaining above freezing.



**SOUTH AFRICA**

Mostly dry, seasonably mild weather dominated the corn belt, spurring summer crop planting in western growing areas that benefited from the previous week's timely rainfall. However, on several days in southern Gauteng and neighboring locations of North West and Mpumalanga, showers (greater than 10 mm) increased topsoil moisture for corn and other crops. Light showers (5-20 mm) also covered sugarcane areas of KwaZulu-Natal and nearby farmland of Eastern Cape, but the remainder of the Cape Provinces was dry, sustaining moisture demands of that region's agriculture.



**BRAZIL**

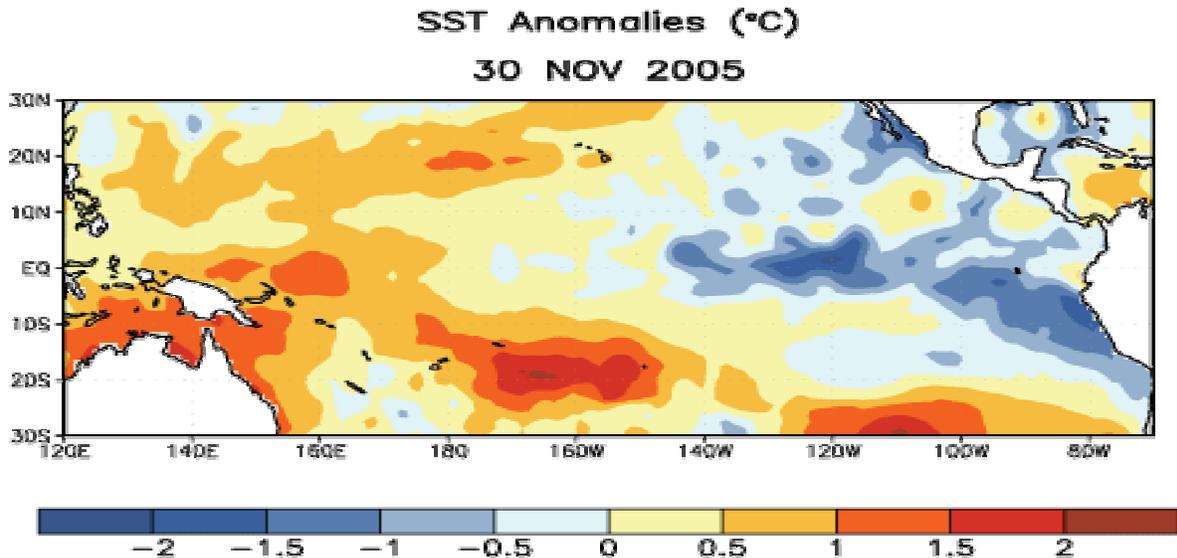
Widespread, moderate to heavy showers (25-100 mm or more) maintained adequate to abundant topsoil moisture levels for germination and establishment of soybeans and other summer crops, including previously dry sections of the south (Parana and Rio Grande do Sul). In addition, near-normal temperatures (highs in the lower and middle 30s degrees C) promoted development of emerging summer crops and tree crops such as coffee and citrus. Late in the week, drier weather improved conditions for fieldwork in disease-prone growing areas of the center-west (Mato Grosso, southern Goias, and Mato Grosso do Sul). According to independent analyst Safras e Mercado, soybeans were 94 percent planted nationally as of December 9, compared with 96 percent last year. Of the major production states, soybean planting lagged last year's pace by 10 percentage points only in Minas Gerais (80 percent planted versus 96 percent last year), which typically accounts for about 5 percent of the total national production.



**ARGENTINA**

Following several weeks of beneficial rain, mostly dry weather aided summer crop planting in La Pampa, southwestern Buenos Aires, and southern growing areas of Cordoba. Light to moderate showers (10-25 mm or more) maintained generally favorable moisture levels for grain and oilseed germination elsewhere in central Argentina, but the rainfall likely caused some delays in the winter wheat harvest. In addition, below-normal temperatures (2-4 degrees C below normal, with lows falling below 5 degrees C again in central and southeastern Buenos Aires) slowed early summer crop growth and late winter grain development. Farther north, moderate to heavy showers (25-50 mm or more) increased moisture for germination and establishment of cotton and other summer crops, and further benefited livestock and pastures. According to Argentina's Agricultural Secretariat (SAGPyA), corn and soybeans were 79 and 70 percent planted, respectively, as of December 8. Sowing of both crops lagged last season's pace by less than 10 percentage points. Sunflower planting was nearing completion at 93 percent, compared with 96 percent last season. SAGPyA also reported that winter wheat was 22 percent harvested, compared with 35 percent last year.

## December 8 ENSO Update



**Figure 1.** Sea surface temperature (SST) anomalies (°C) for the week centered on 30 November 2005. The SST anomalies are computed with respect to the 1971-2000 base period means (Smith and Reynolds, 1998, *J. Climate*, 11, 3320-3323).

**Synopsis:** ENSO-neutral or weak La Niña conditions are likely during the next 6-9 months.

By the end of November, equatorial SST anomalies greater than +0.5°C were restricted to the region between Indonesia and 170°E, while negative anomalies less than -0.5°C were observed at most locations between 145°W and the South American coast (Fig. 1). The SST departures in the Niño 3, Niño 3.4, and Niño 1+2 regions were negative, while weak positive departures were observed in the Niño 4 region. During the last several months surface and subsurface temperature anomalies have decreased in the region between 180°W and the South American coast. During the same period persistent stronger-than-average low-level equatorial easterly winds were observed over the central Pacific, while near-average patterns of convection and sea level pressure occurred over most of the tropical Pacific. Collectively, the present oceanic and atmospheric anomalies are consistent with a trend toward La Niña conditions in the tropical Pacific.

The spread of the most recent statistical and coupled model forecasts (weak La Niña to weak El Niño) indicates some uncertainty in the outlooks.

However, current conditions (stronger-than-average easterly winds over the central equatorial Pacific) and recent observed trends (decreasing SST anomalies throughout the central and eastern equatorial Pacific) do not support the development of El Niño. Rather, they support either a continuation of ENSO-neutral conditions or the development of weak La Niña conditions.

This discussion is a consolidated effort of NOAA and its funded institutions. Weekly updates for SST, 850-hPa wind, OLR and features of the equatorial subsurface thermal structure are available on the Climate Prediction Center web page at <http://www.cpc.ncep.noaa.gov> ([Weekly Update](#)). 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 12 January 2006. To receive an e-mail notification when the monthly ENSO Diagnostic Discussions are released, please send an e-mail message: [ncep.list.ens0-update@noaa.gov](mailto:ncep.list.ens0-update@noaa.gov).

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