

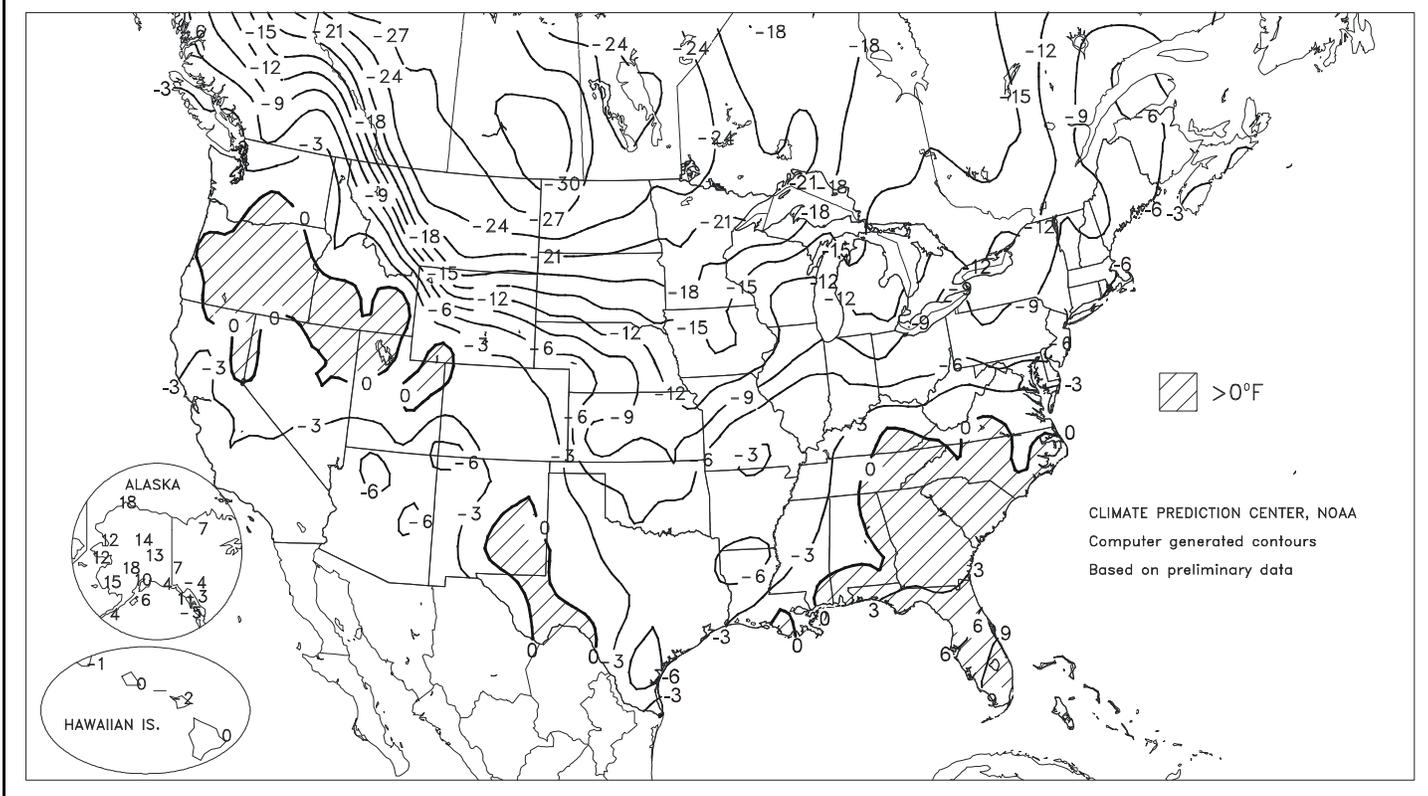
# WEEKLY WEATHER AND CROP BULLETIN

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)

MAR 2 - 8, 2003



## HIGHLIGHTS

March 2 - 8, 2003

Highlights provided by USDA/WAOB and CPC/NOAA

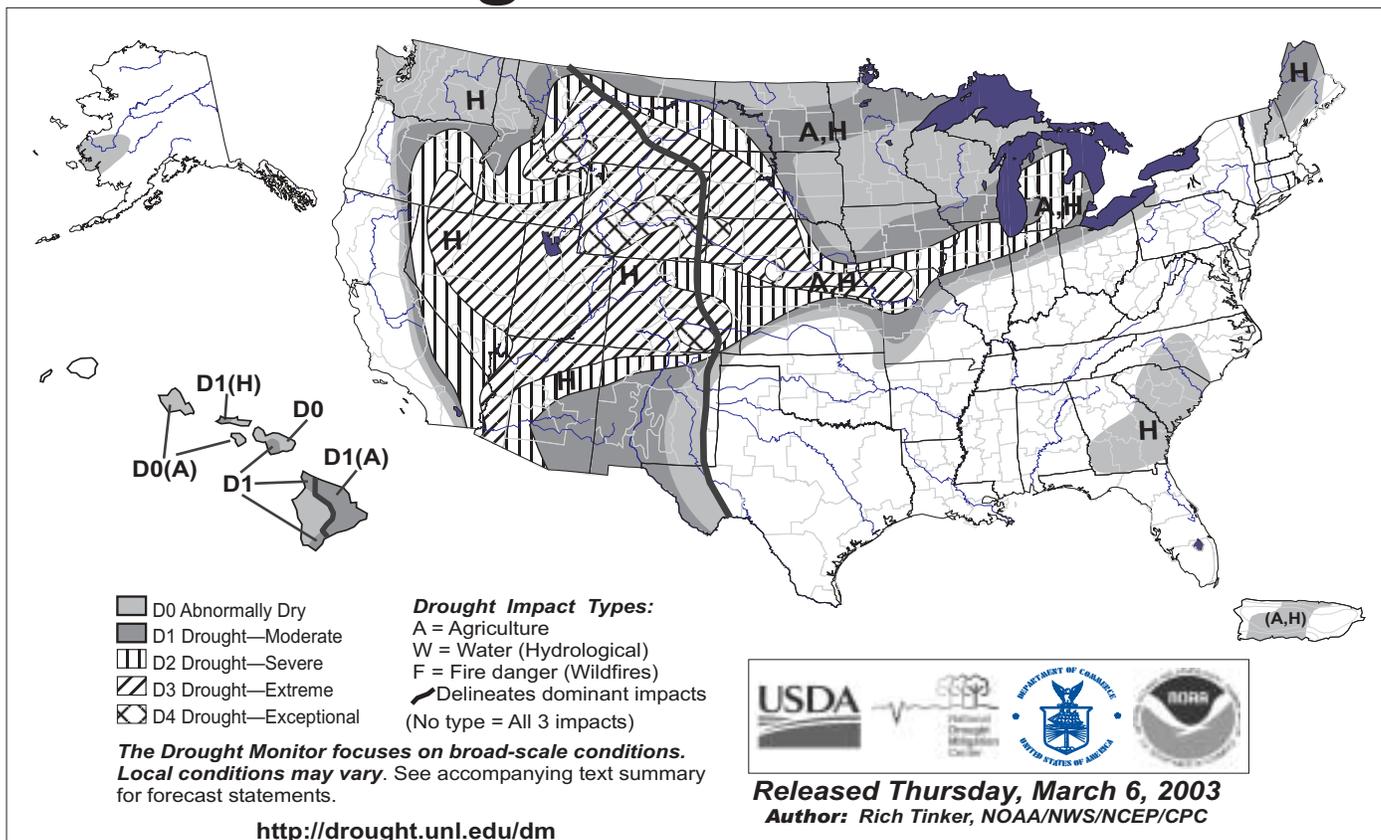
**S**hifting weather patterns brought a return of drier weather to the **Southwest** and an increase in precipitation across the **Northwest**. Despite recent improvements in topsoil moisture and mountain snowpacks, much of the **West** neared the end of a disappointing winter wet season, with many areas facing summer water-supply concerns. Meanwhile, another strong push of frigid air swept across the **Plains**, keeping winter wheat dormant across all but southernmost portions of the region. The southward and eastward push of Arctic air kept weekly temperatures more than 6°F below normal throughout the **Plains, Midwest, and Northeast**,  
*(Continued on page 3)*

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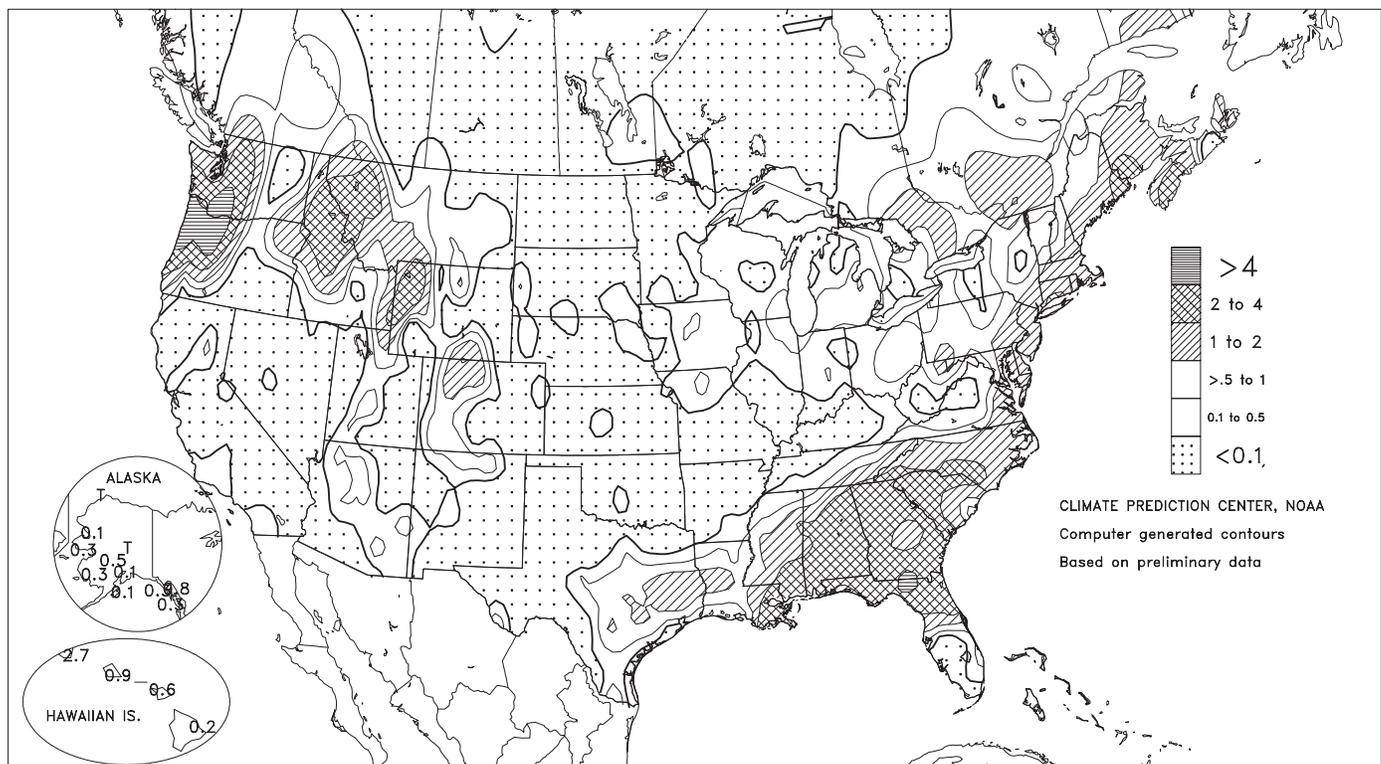
# U.S. Drought Monitor

March 4, 2003  
Valid 7 a.m. EST



## Total Precipitation (Inches)

MAR 2 - 8, 2003



(Continued from front cover)

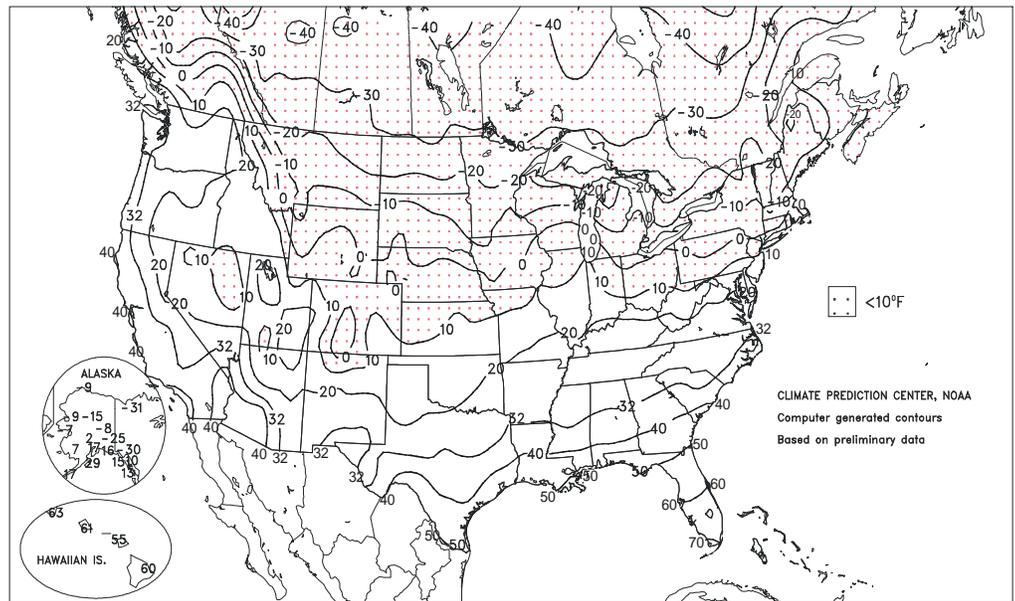
including departures between -24 and -32°F in the **northern Plains and upper Midwest**. Warm weather returned to the **southern Plains** after midweek, promoting the most significant wheat growth since a mid-February warm spell. Farther north, concerns for winter wheat persisted on the drought-affected **northern and central High Plains** due to soil moisture shortages and a shallow protective snow cover (generally 4 inches or less) during recent cold outbreaks. A reinforcing shot of Arctic air overspread the **northern Plains and upper Midwest** toward week's end, maintaining stress on livestock. Earlier in the week, one of the most widespread **Midwestern** storms of the winter had dumped 2 to 10 inches of snow across much of the **Corn Belt**, providing a much-needed boost in topsoil moisture but briefly disrupting rural travel. Farther south, occasional heavy rainfall from an active storm track continued to slow planting preparations from the **western Gulf Coast region to the southern Atlantic States**. The exception was **southern Florida**, where very warm, mostly dry weather favored citrus during the bloom season and spring fieldwork.

Consistent warmth was confined to **southern Florida**, although warmer-than-normal weather made a significant push across the **South and East** by week's end. In **Florida**, **Miami** set or tied six daily-record highs during the first 8 days of March, including their earliest reading of 90°F or higher on March 2 (previously, March 5, 1964). **Miami** posted highs of 90°F on March 2 and 4. In stark contrast, **Williston, ND**, collected five daily-record lows from March 1-8, including minima of -30°F on March 2, 5, and 8. Elsewhere in **North Dakota**, highs failed to reach 0°F on March 8 in locations such as **Fargo** (-1°F) and **Devils Lake** (-4°F). In the **Northeast**, cold air arrived in two surges, peaking in intensity on March 3 and 7. Locations setting daily-record lows on both dates included **New York's Central Park** (11 and 11°F) and **Binghamton, NY** (-3 and -5°F). Elsewhere on March 3, **Mt. Mansfield** (**Vermont's** highest peak) recorded a low of -31°F, while **Marquette, MI** (-30°F), shattered their monthly record low, previously set on March 1, 1962, by 3°F. Unofficially, **Ewen, MI**, on the western part of the **Upper Peninsula**, posted a March 3 low of -42°F.

Early in the week, a departing storm system produced heavy precipitation (locally 1 inch or more), mostly rain, in the **coastal Northeast**. On March 2, **Trenton, NJ** (0.89 inch), measured a daily-record rainfall. A day later, widespread showers developed in the **Gulf Coast and southern Atlantic States**, where **Daytona Beach, FL** (1.48 inches), collected a daily-record total. Additional heavy rain fell across the **South** at midweek. Farther north, a band of heavy snow developed across the **Corn Belt**. From March 3-5, **Midwestern** snowfall totals

Extreme Minimum Temperature (°F)

MAR 2 - 8, 2003



included 8.5 inches in **Davenport, IA**, and 6.6 inches in **Flint, MI**. The snow nearly doubled **Davenport's** season-to-date total, which reached 18.8 inches by week's end. In the storm's wake, snow showers lingered in the **Great Lakes region**. **Muskegon, MI**, received at least a trace of snow on each of the first 8 days in March, totaling 8.8 inches. Farther west, heavy precipitation overspread areas from the **Pacific Northwest to the northern High Plains**. Snow was especially heavy in the **Cascades**, where weekly snowfall totals in the 3- to 6-foot range were common. In **northwestern Oregon**, a reporting station on the slopes of **Mt. Hood** (upper meadows) received 55 inches of snow from March 3-8, including 29 inches in 24 hours on March 6-7. Farther east, highly beneficial snow developed on the **northern Plains**, although a portion of the winter wheat crop had already been exposed to very cold weather in late February and early March. March 5-8 snowfall in **Montana** included 15.4 inches at the National Weather Service office in **Billings** and 5.8 inches in **Glasgow**.

Only light showers were observed in **Hawaii** until after midweek, when locally heavy rain overspread areas from **Kauai to Maui**. The heaviest rain fell across **Kauai** and **Oahu** on March 6-7, resulting in scattered 24-hour totals of 1 to 2 inches or more. **Kalaheo, Kauai**, netted 2.46 inches during the 24-hour period. Meanwhile, sharply colder weather arrived in **southeastern Alaska**, but temperatures remained above normal elsewhere across the State. **Annette Island, AK**, posted a daily-record high of 50°F on March 2, followed 6 days later by a daily-record low of 11°F. Meanwhile, mid- to late-week record highs across **northern and western Alaska** included 19°F (on March 6) in Barrow and 32°F (on March 7) in Kotzebue. Unsettled weather brought surplus weekly precipitation to most of western and central Alaska, including 1.03 inches at **Cold Bay**, 1.02 inches at **Bettles**, 0.96 inch at **Galena**, and 0.52 inch at **McGrath**, while drier-than-normal conditions covered the southern and southeastern sections of the state.

# Weather Data for Mississippi and the Missouri Bootheel

## Weather Data for the Week Ending March 8, 2003

Data provided by the Mississippi State Delta Research and Extension Center (DREC),  
the Southern Regional Climate Center (SRCC), and the University of Missouri.

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						4-INCH SOIL TEMP. °F		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN. SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL IN. SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F			
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
MS BATESVILLE X	52	36	69	23	44	-4	0.10	-1.18	0.10	0.10	7%	9.93	94%	-	-	0	3	1	0
MS BELZONI X	55	39	63	32	47	-6	1.02	-0.33	1.02	1.02	67%	12.5	107%	-	-	0	1	1	1
MS CLARKSDALE X	53	36	64	29	45	-6	0.40	-0.80	0.36	0.40	29%	9.15	81%	-	-	0	2	3	0
MS CLEVELAND X	53	34	63	30	44	-9	0.33	-0.99	0.32	0.33	22%	9.58	89%	-	-	0	2	2	0
MS GREENVILLE X	53	38	63	31	46	-7	0.13	-1.13	0.12	0.13	9%	-	-	-	-	0	1	2	0
MS GREENWOOD X	59	39	70	28	49	-5	0.31	-0.91	0.29	0.31	22%	9.13	84%	-	-	0	3	2	0
MS INDIANOLA 1S	57	39	68	32	48	-	0.31	-	0.21	0.31	-	7.75	-	51	46	0	1	3	0
MS INVERNESS 5E	59	42	68	33	50	-	0.40	-	0.37	0.40	-	9.05	-	51	48	0	0	2	0
MS LYON	56	35	69	29	46	-	0.17	-	0.17	0.17	-	6.26	-	53	42	0	2	1	0
MS MACON	61	41	69	32	51	-	1.28	-	1.25	1.28	-	11.6	-	56	49	0	0	3	1
MS MOORHEAD X	53	37	63	33	45	-8	0.38	-0.91	0.31	0.39	27%	11.2	98%	-	-	0	0	4	0
MS ONWARD	58	41	69	35	49	-	0.66	-	0.62	0.66	-	9.47	-	52	47	0	0	3	1
MS PERTHSHIRE	55	36	68	31	45	-	0.09	-	0.08	0.09	-	6.75	-	53	42	0	2	2	0
MS ROLLING FORK X	55	38	63	32	46	-6	0.89	-0.44	0.85	0.90	60%	10.9	92%	-	-	0	1	2	1
MS SCOTT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MS SIDON	60	41	71	32	50	-	0.31	-	0.29	0.31	-	8.08	-	56	45	0	0	2	0
MS STARKVILLE	60	39	69	31	49	-2	0.84	-0.48	0.67	0.84	56%	12.2	101%	56	47	0	1	2	1
MS TUNICA X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MS TUNICA 1W	57	35	68	29	46	-	0.02	-	0.01	0.02	-	2.37	-	49	42	0	3	2	0
MS VANCE	55	35	68	30	45	-	0.11	-	0.11	0.11	-	6.11	-	47	43	0	2	1	0
MS VERONA	60	38	69	30	49	-	0.51	-	0.28	0.51	-	8.83	-	56	44	0	1	2	0
MS VICKSBURG X	56	41	64	35	48	-8	0.43	-0.95	0.33	0.47	30%	11.6	92%	-	-	0	0	5	0
MS YAZOO CITY X	56	36	63	30	46	-8	0.44	-1.03	0.39	0.44	26%	9.44	77%	-	-	0	3	3	0
MS STONEVILLE X	54	36	63	32	45	-6	0.23	-1.09	0.18	0.23	15%	9.28	72%	55	44	0	1	4	0
MO DELTA	51	28	70	24	39	-5	0.01	-1.04	0.01	0.01	1%	3.64	42%	46	35	0	7	1	0
MO STEELE	54	34	68	30	44	-1	0.04	-1.27	0.02	0.04	3%	7.40	82%	47	39	0	3	3	0
MO GLENNONVILLE	53	31	68	27	42	-3	0.02	-0.91	0.01	0.02	2%	5.23	73%	48	37	0	5	2	0
MO PORTAGEVILLE LF	53	32	68	29	42	-3	0.03	-1.18	0.02	0.03	2%	6.78	80%	50	37	0	4	2	0
MO CLARKTON	53	30	70	25	41	-4	0.02	-0.91	0.01	0.02	2%	5.96	83%	47	36	0	6	2	0
MO CARDWELL	54	31	68	27	43	-3	0.00	-1.23	0.00	0.00	0%	6.69	78%	49	39	0	3	0	0
MO CHARLESTON	51	30	68	26	40	-4	0.01	-0.93	0.01	0.01	1%	5.84	73%	48	37	0	6	1	0
MO PORTAGEVILLE DC	53	32	68	28	42	-3	0.02	-1.19	0.02	0.02	2%	6.36	75%	49	38	0	6	1	0

Compiled by USDA/OCE/WAOB's Stoneville Field Office.

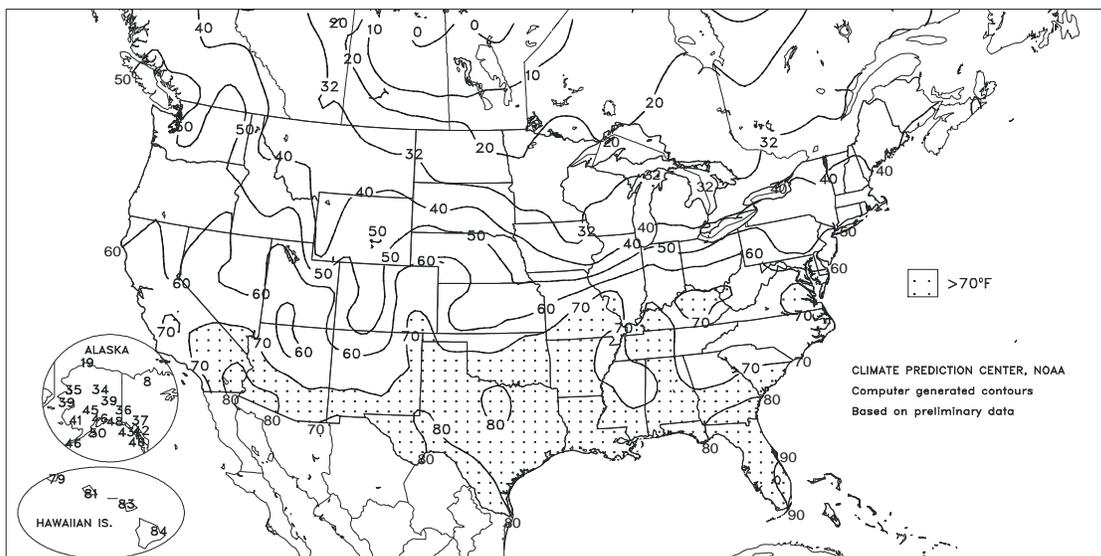
X Based on 1971-2000 normals.

- Sufficient data not available.

**Weather and Crop Summary:** Cloudy skies during the majority of the week slowed evaporation rates, but sunny skies and warmer weather aided field drying by week's end. Unlike previous weeks, lower amounts of rainfall did not lead to accumulation, and overall flooding declined considerably. Spring burn down continued in anticipation of corn planting that should begin next week.

Extreme Maximum Temperature (°F)

MAR 2 - 8, 2003



National Weather Data for Selected Cities

Weather Data for the Week Ending March 8, 2003

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

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN. SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL IN. SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP.	
																90 AND ABOVE	32 AND BELOW	0.1 INCH OR MORE	5.0 INCH OR MORE
AL BIRMINGHAM	63	40	71	30	52	0	2.76	1.46	2.23	2.76	188	10.78	97	94	63	0	1	3	2
AL HUNTSVILLE	60	38	71	30	49	0	0.51	-1.01	0.27	0.51	29	9.79	80	90	71	0	1	2	0
AL MOBILE	66	52	74	44	59	1	0.73	-0.86	0.40	0.79	44	6.91	55	93	74	0	0	5	0
AL MONTGOMERY	65	46	73	37	55	0	1.76	0.25	1.33	1.76	102	6.55	54	99	69	0	0	2	1
AK ANCHORAGE	39	26	46	17	33	10	0.11	-0.06	0.11	0.11	58	1.26	78	67	54	0	5	1	0
AK BARROW	8	-5	19	-9	2	18	0.01	0.01	0.01	0.01	100	0.21	88	88	82	0	7	1	0
AK FAIRBANKS	29	8	39	-8	18	13	0.01	-0.05	0.01	0.01	17	1.08	110	89	80	0	7	1	0
AK JUNEAU	32	25	42	10	29	-3	0.77	-0.12	0.55	1.48	145	8.60	87	71	56	0	4	3	1
AK KODIAK	42	33	50	29	37	6	0.13	-1.06	0.12	0.22	16	23.67	155	67	58	0	5	2	0
AK NOME	28	11	39	-7	19	11	0.29	0.16	0.23	0.30	200	1.60	88	86	74	0	7	2	0
AZ FLAGSTAFF	43	17	55	6	30	-5	0.08	-0.59	0.06	0.20	26	3.09	56	89	38	0	7	2	0
AZ PHOENIX	69	49	78	46	59	-2	0.00	-0.26	0.00	0.00	0	3.74	197	72	43	0	0	0	0
AZ TUCSON	64	41	74	34	53	-4	0.22	0.00	0.22	0.23	92	1.33	63	85	49	0	0	1	0
AZ YUMA	72	50	80	47	61	-4	0.00	-0.06	0.00	0.00	0	1.11	154	55	39	0	0	0	0
AR FORT SMITH	61	32	75	24	46	-3	0.00	-0.85	0.00	0.01	1	3.71	63	93	46	0	4	0	0
AR LITTLE ROCK	58	34	72	28	46	-5	0.01	-0.95	0.01	0.01	1	5.72	71	98	57	0	2	1	0
CA BAKERSFIELD	66	40	70	38	53	-3	0.00	-0.33	0.00	0.00	0	1.65	60	79	59	0	0	0	0
CA FRESNO	65	42	70	40	53	-1	0.08	-0.47	0.08	0.08	13	1.73	35	89	63	0	0	1	0
CA LOS ANGELES	61	48	64	46	55	-3	0.17	-0.50	0.17	0.17	22	4.99	73	92	72	0	0	1	0
CA REDDING	63	35	64	31	49	-2	0.01	-1.27	0.01	0.01	1	9.02	67	89	60	0	2	1	0
CA SACRAMENTO	63	40	67	35	51	-3	0.00	-0.74	0.00	0.00	0	2.67	32	94	42	0	0	0	0
CA SAN DIEGO	62	51	65	49	57	-2	0.16	-0.37	0.13	0.16	26	5.05	102	83	66	0	0	2	0
CA SAN FRANCISCO	60	46	62	43	53	0	0.00	-0.85	0.00	0.00	0	3.91	41	87	73	0	0	0	0
CA STOCKTON	65	36	68	33	50	-4	0.00	-0.57	0.00	0.00	0	1.68	29	93	70	0	0	0	0
CO ALAMOSA	48	10	56	1	29	-1	0.00	-0.08	0.00	0.00	0	0.29	53	76	39	0	7	0	0
CO CO SPRINGS	46	21	61	4	34	-1	0.02	-0.15	0.02	0.11	58	0.70	85	72	31	0	5	1	0
CO DENVER INTL	50	19	63	7	35	-1	0.06	-0.13	0.06	0.06	27	0.56	82	74	26	0	7	1	0
CO GRAND JUNCTION	51	29	62	24	40	-1	0.00	-0.20	0.00	0.21	95	1.36	103	77	49	0	7	0	0
CO PUEBLO	55	25	71	18	40	1	0.02	-0.13	0.02	0.09	53	0.91	120	74	49	0	5	1	0
CT BRIDGEPORT	38	20	44	10	29	-7	1.55	0.71	0.96	1.63	170	7.18	94	81	56	0	6	3	1
CT HARTFORD	38	13	45	-6	26	-8	0.74	-0.06	0.53	0.74	81	6.30	82	84	51	0	6	3	1
DC WASHINGTON	50	29	68	20	39	-4	0.76	-0.05	0.43	0.77	84	8.62	128	83	50	0	5	3	0
DE WILMINGTON	42	24	53	16	33	-6	1.59	0.73	0.78	1.59	162	8.63	120	90	56	0	6	3	1
FL DAYTONA BEACH	76	61	87	56	69	6	3.83	3.02	1.55	4.18	454	9.86	145	99	67	0	0	4	3
FL JACKSONVILLE	69	55	86	50	62	3	1.34	0.51	0.67	5.75	612	10.50	135	97	72	0	0	5	2
FL KEY WEST	84	76	86	71	80	7	0.01	-0.35	0.01	0.01	2	1.80	43	90	71	0	0	1	0
FL MIAMI	88	73	90	70	81	10	0.00	-0.48	0.00	0.00	0	1.26	28	93	55	2	0	0	0
FL ORLANDO	82	63	89	58	72	6	0.48	-0.26	0.28	0.50	60	2.87	51	98	65	0	0	5	0
FL PENSACOLA	67	53	77	45	60	1	1.40	-0.01	0.57	1.49	93	7.39	64	98	76	0	0	6	1
FL TALLAHASSEE	69	56	85	49	63	4	2.45	0.99	1.22	4.31	260	11.50	99	96	74	0	0	7	1
FL TAMPA	78	65	83	58	72	6	0.40	-0.29	0.25	0.40	51	3.42	60	95	72	0	0	3	0
FL WEST PALM	89	70	93	67	80	11	0.16	-0.51	0.16	0.16	21	2.09	30	99	65	4	0	1	0
GA ATHENS	61	41	62	32	51	0	1.93	0.76	1.04	2.00	149	8.28	79	97	67	0	1	4	2
GA ATLANTA	60	43	65	32	52	0	2.22	0.96	1.50	2.22	154	7.76	70	94	70	0	1	4	2
GA AUGUSTA	64	45	71	34	55	2	1.17	0.11	0.49	2.16	180	7.89	80	95	71	0	0	5	0
GA COLUMBUS	65	48	72	38	57	2	2.72	1.41	1.50	2.98	199	10.80	100	97	59	0	0	6	2
GA MACON	64	47	72	34	56	3	1.10	-0.06	0.55	1.83	139	8.46	78	94	68	0	0	6	1
GA SAVANNAH	66	50	79	43	58	1	3.55	2.83	1.63	4.39	535	8.46	110	10	77	0	0	7	2
HI HILO	80	63	84	60	72	0	0.19	-2.63	0.09	0.19	6	6.89	32	85	71	0	0	4	0
HI HONOLULU	80	67	81	61	74	0	0.95	0.45	0.83	0.95	167	3.26	58	84	72	0	0	3	1
HI KAHULUI	82	60	83	55	71	-2	0.58	0.08	0.58	0.58	102	8.34	125	85	72	0	0	1	1
HI LIHUE	78	65	79	63	72	0	2.67	1.87	1.87	2.72	299	9.23	105	85	77	0	0	3	2
ID BOISE	51	34	56	24	42	0	0.11	-0.19	0.11	0.14	41	2.62	91	74	54	0	4	1	0
ID LEWISTON	46	34	50	27	40	-3	1.55	1.33	0.89	1.55	620	5.24	224	85	70	0	3	7	1
ID POCATELLO	45	28	53	19	36	1	0.01	-0.29	0.01	0.01	3	1.44	58	75	52	0	6	1	0
IL CHICAGO/O'HARE	32	14	42	8	23	-10	0.68	0.23	0.45	0.68	133	1.22	31	90	69	0	7	5	0
IL MOLINE	31	12	36	3	22	-12	0.29	-0.22	0.21	0.29	51	1.19	33	87	64	0	7	6	0
IL PEORIA	36	17	48	12	27	-8	0.12	-0.44	0.11	0.13	21	1.73	46	95	65	0	7	2	0
IL ROCKFORD	29	11	35	6	20	-12	0.65	0.26	0.39	0.65	148	1.15	36	88	67	0	7	6	0
IL SPRINGFIELD	42	21	63	14	32	-6	0.02	-0.61	0.02	0.03	4	1.93	47	87	63	0	7	1	0
IN EVANSVILLE	50	27	71	20	39	-3	0.00	-0.91	0.00	0.00	0	6.06	86	86	72	0	6	0	0
IN FORT WAYNE	34	14	46	2	24	-10	0.22	-0.32	0.09	0.25	40	2.94	64	88	61	0	7	3	0
IN INDIANAPOLIS	42	21	63	10	31	-7	0.34	-0.38	0.20	0.34	41	5.05	88	92	63	0	7	4	0
IN SOUTH BEND	34	15	49	4	25	-8	0.36	-0.18	0.24	0.37	61	2.50	51	86	66	0	7	3	0
IA BURLINGTON	33	14	38	9	24	-12	0.17	-0.40	0.17	0.17	27	1.83	52	90	60	0	7	1	0
IA CEDAR RAPIDS	27	8	31	3	17	-15	0.10	-0.27	0.05	0.11	27	1.01	39	92	58	0	7	3	0
IA DES MOINES	28	8	39	3	18	-16	0.09	-0.27	0.08	0.11	27	2.27	86	85	65	0	7	2	0
IA DUBUQUE	27	9	34	5	18	-13	0.07	-0.39	0.07	0.07	13	0.74	23	85	66	0	7	1	0
IA SIOUX CITY	28	6	42	-7	17	-15	0.03	-0.29	0.03	0.03	8	1.21	77	78	64	0	7	1	0
IA WATERLOO	27	5	32	-2	16	-15	0.08	-0.27	0.05	0.08	20	0.93	41	82	64	0	7	4	0
KS CONCORDIA	39	17	53	8	28	-11	0.00	-0.45	0.00	0.00	0	1.22	65	88	68	0	7	0	0
KS DODGE CITY	43	19	56	10	31	-10	0.00	-0.32	0.00	0.02	6	1.40	85	92	67	0	7	0	0
KS GOODLAND	47	16	64	0	32	-5	0.01	-0.23	0.01	0.01	4	0.86	75	87	68	0	7	1	0
KS TOPEKA	41	18	55	11	30	-10	0.04	-0.44	0.04	0.05	9	1.93	72	89	74	0	7	1	0

Based on 1971-2000 normals

\*\*\* Not Available

## Weather Data for the Week Ending March 8, 2003

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS					
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL IN, SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP.		
																90 AND ABOVE	32 AND BELOW	0.1 INCH OR MORE	5.0 INCH OR MORE	
KY	WICHITA	46	22	61	15	34	-8	0.00	-0.53	0.00	0.00	0	2.06	84	95	73	0	7	0	0
	JACKSON	55	33	70	22	44	1	0.16	-0.86	0.10	0.16	14	10.14	121	84	46	0	5	4	0
	LEXINGTON	51	27	70	19	39	-3	0.04	-0.97	0.04	0.04	3	5.84	75	83	69	0	6	1	0
	LOUISVILLE	53	29	73	22	41	-2	0.18	-0.81	0.10	0.18	16	5.44	71	83	48	0	6	3	0
	PADUCAH	52	27	71	20	39	-5	0.10	-0.84	0.02	0.10	9	7.85	93	96	55	0	6	1	0
LA	BATON ROUGE	66	50	74	43	58	0	1.02	-0.07	0.96	1.02	82	8.80	70	99	71	0	0	3	1
	LAKE CHARLES	66	49	74	43	57	-2	0.32	-0.42	0.27	0.32	38	6.88	71	95	76	0	0	4	0
	NEW ORLEANS	66	53	75	48	60	0	0.70	-0.44	0.65	0.73	56	5.49	43	96	86	0	0	3	1
	SHREVEPORT	59	38	70	35	48	-8	0.39	-0.56	0.26	0.39	36	8.48	86	98	67	0	0	2	0
ME	CARIBOU	23	0	33	-13	12	-8	0.62	0.09	0.36	0.62	102	4.71	84	83	58	0	7	4	0
	PORTLAND	34	14	38	-2	24	-6	1.24	0.41	0.97	1.24	131	5.72	70	81	52	0	6	2	1
MD	BALTIMORE	46	25	60	17	35	-5	0.96	0.07	0.46	0.96	94	10.26	137	88	67	0	5	3	0
MA	BOSTON	39	20	46	9	30	-6	1.12	0.31	0.85	1.12	120	7.02	86	85	52	0	5	3	1
	WORCESTER	36	14	44	1	25	-6	1.39	0.51	1.16	1.39	139	8.18	100	89	50	0	7	4	1
MI	ALPENA	24	-1	32	-15	12	-12	0.01	-0.40	0.01	0.01	2	0.51	14	86	54	0	7	1	0
	GRAND RAPIDS	29	8	40	-4	19	-12	0.34	-0.10	0.27	0.34	69	1.86	46	89	58	0	7	3	0
	HOUGHTON LAKE	27	0	44	-20	13	-12	0.15	-0.22	0.07	0.15	36	0.50	15	83	59	0	7	4	0
	LANSING	30	7	40	-9	19	-11	0.36	-0.02	0.26	0.36	84	0.92	26	84	58	0	7	3	0
	MUSKEGON	30	10	35	-3	20	-10	0.21	-0.21	0.17	0.21	44	0.73	17	89	62	0	7	4	0
	TRAVERSE CITY	25	-2	32	-16	11	-16	0.22	-0.11	0.11	0.22	59	0.92	18	91	52	0	7	4	0
MN	DULUTH	12	-8	24	-18	2	-19	0.00	-0.27	0.00	0.00	0	0.43	19	75	52	0	7	0	0
	INT'L FALLS	9	-17	25	-30	-4	-23	0.06	-0.09	0.05	0.07	41	0.26	16	79	43	0	7	2	0
	MINNEAPOLIS	20	2	28	-6	11	-17	0.34	0.04	0.23	0.34	103	1.12	52	76	57	0	7	3	0
	ROCHESTER	22	3	28	-7	13	-13	0.01	-0.26	0.01	0.01	3	0.97	49	82	65	0	7	1	0
	ST. CLOUD	16	-5	25	-17	6	-18	0.07	-0.13	0.06	0.07	32	0.83	53	83	49	0	7	2	0
MS	JACKSON	63	42	71	33	52	-2	1.83	0.66	1.73	1.84	138	12.26	107	97	67	0	0	3	1
	MERIDIAN	63	42	71	35	53	-2	0.95	-0.57	0.76	0.95	55	9.32	72	92	75	0	0	3	1
	TUPELO	60	36	69	30	48	-2	0.27	-1.16	0.24	0.27	17	9.51	83	94	79	0	2	2	0
MO	COLUMBIA	47	20	67	16	34	-6	0.07	-0.58	0.07	0.08	11	2.35	50	87	53	0	7	1	0
	KANSAS CITY	42	16	53	10	29	-11	0.10	-0.39	0.10	0.13	23	1.34	44	88	63	0	7	1	0
	SAINT LOUIS	52	26	77	18	39	-3	0.05	-0.69	0.05	0.06	7	3.00	57	84	68	0	6	1	0
	SPRINGFIELD	53	24	73	20	39	-4	0.00	-0.72	0.00	0.00	0	4.04	78	90	64	0	7	0	0
MT	BILLINGS	23	2	37	-9	12	-22	0.24	0.05	0.10	0.24	114	1.44	91	88	62	0	7	3	0
	BUTTE	32	10	38	-3	21	-6	0.18	0.02	0.14	0.20	111	1.75	148	91	55	0	7	2	0
	GLASGOW	11	-12	29	-25	0	-27	0.07	-0.01	0.02	0.07	78	0.47	67	83	71	0	7	4	0
	GREAT FALLS	17	-2	40	-20	8	-23	0.07	-0.11	0.03	0.09	45	0.82	59	90	59	0	7	4	0
	HAVRE	15	-9	38	-22	3	-26	0.16	0.03	0.12	0.16	107	0.52	53	83	75	0	7	4	0
	KALISPELL	29	15	40	3	22	-10	0.10	-0.15	0.06	0.10	36	1.17	40	86	69	0	7	4	0
	MISSOULA	34	23	41	12	29	-5	0.61	0.42	0.24	0.63	286	3.28	160	96	76	0	7	7	0
NE	GRAND ISLAND	37	14	54	7	26	-8	0.00	-0.36	0.00	0.00	0	1.64	101	84	63	0	7	0	0
	LINCOLN	34	12	51	3	23	-12	0.05	-0.33	0.05	0.06	14	2.09	119	84	62	0	7	1	0
	NORFOLK	33	10	50	2	22	-11	0.01	-0.33	0.01	0.01	3	1.12	65	82	57	0	7	1	0
	NORTH PLATTE	44	14	62	7	29	-6	0.00	-0.22	0.00	0.00	0	0.84	73	91	49	0	7	0	0
	OMAHA	31	11	46	5	21	-14	0.11	-0.26	0.11	0.11	26	1.78	89	80	63	0	7	1	0
	SCOTTSBLUFF	44	15	58	3	30	-5	0.07	-0.13	0.07	0.07	30	0.78	58	86	64	0	7	1	0
	VALENTINE	34	1	51	-14	18	-14	0.13	-0.07	0.07	0.13	59	0.71	71	86	67	0	7	4	0
NV	ELY	46	17	56	1	32	-2	0.04	-0.18	0.04	0.08	32	0.78	45	78	45	0	7	1	0
	LAS VEGAS	63	42	72	37	52	-4	0.01	-0.16	0.01	0.08	42	2.21	150	63	38	0	0	1	0
	RENO	58	26	66	21	42	0	0.01	-0.22	0.01	0.01	4	0.40	17	67	36	0	7	1	0
	WINNEMUCCA	53	22	62	9	38	-2	0.00	-0.17	0.00	0.01	5	1.90	116	73	43	0	5	0	0
NH	CONCORD	35	8	43	-8	22	-7	0.87	0.25	0.71	0.87	123	6.77	112	89	52	0	7	3	1
NJ	NEWARK	43	22	51	11	33	-6	1.45	0.58	0.63	1.45	146	8.31	105	75	53	0	5	3	1
NM	ALBUQUERQUE	54	31	65	26	43	-2	0.00	-0.12	0.00	0.00	0	1.02	95	63	27	0	5	0	0
NY	ALBANY	34	11	42	-2	22	-9	0.27	-0.34	0.23	0.27	39	5.88	110	82	53	0	7	2	0
	BINGHAMTON	31	6	43	-5	18	-11	0.38	-0.23	0.21	0.39	57	5.11	89	80	67	0	7	3	0
	BUFFALO	31	10	43	-3	21	-10	0.83	0.22	0.42	0.83	120	5.80	93	90	60	0	7	4	0
	ROCHESTER	33	10	46	-1	22	-8	0.39	-0.13	0.25	0.39	66	4.39	88	86	60	0	7	5	0
	SYRACUSE	35	11	46	-4	23	-7	0.48	-0.10	0.26	0.48	73	4.52	84	83	50	0	7	4	0
NC	ASHEVILLE	59	34	71	26	46	3	1.09	0.05	0.70	1.13	96	6.78	75	92	54	0	4	2	1
	CHARLOTTE	59	38	64	29	49	-1	1.46	0.45	1.26	2.04	177	7.62	88	98	60	0	3	4	1
	GREENSBORO	60	37	67	30	48	2	0.76	-0.09	0.62	1.17	121	8.44	111	89	51	0	4	3	1
	HATTERAS	55	43	62	37	49	-1	1.14	0.06	0.51	1.16	95	6.70	61	98	71	0	0	5	1
	RALEIGH	60	36	67	27	48	0	1.02	0.07	0.77	1.34	124	7.87	92	93	61	0	4	4	1
	WILMINGTON	63	44	71	34	53	1	1.11	0.13	0.47	1.18	105	6.90	74	99	63	0	0	5	0
ND	BISMARCK	14	-12	28	-19	1	-25	0.05	-0.09	0.02	0.05	31	0.55	49	77	61	0	7	4	0
	DICKINSON	16	-15	31	-22	1	-26	0.04	-0.02	0.04	-0.04	57	0.19	22	88	59	0	7	1	0
	FARGO	11	-10	25	-19	1	-21	0.03	-0.17	0.03	0.03	13	0.49	31	81	58	0	7	1	0
	GRAND FORKS	7	-18	18	-25	-5	-26	0.04	-0.12	0.04	0.04	22	0.44	31	81	57	0	7	1	0
	JAMESTOWN	12	-10	24	-23	1	-22	0.01	-0.14	0.01	0.01	6	0.16	12	82	56	0	7	1	0
	WILLISTON	9	-23	29	-31	-7	-32	0.10	-0.03	0.05	0.11	79	1.07	100	88	77	0	7	4	0
OH	AKRON-CANTON	37	14	53	2	26	-8	0.78	0.12	0.39	0.79	105	4.50	82	87	71	0	7	4	0
	CINCINNATI	46	23	69	12	35	-5	0.35	-0.46	0.19	0.35	38	5.60	85	85	71	0	7	5	0
	CLEVELAND	39	15	54	2	27	-7	0.56	-0.03	0.18	0.56	84	5.28	97	84	59	0	7	5	0
	COLUMBUS	41	19	62	8	30	-8	0.51	-0.08	0.24	0.55	81	5.16	95	83	70	0	7	5	0
	DAYTON	40	18	62	6	29	-7	0.41	-0.22	0.17	0.43	60	3.72	66	88	57	0	7	5	0
	MANSFIELD	42	18	58	0	30	-3	0.60	0.07	0.30	0.60	98</								

Weather Data for the Week Ending March 8, 2003

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS					
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL IN, SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP.		
																90 AND ABOVE	32 AND BELOW	0.1 INCH OR MORE	5.0 INCH OR MORE	
OK	TOLEDO	35	12	47	-1	24	-9	0.35	-0.14	0.23	0.36	64	3.53	81	83	64	0	7	4	0
	YOUNGSTOWN	38	13	54	0	25	-8	0.58	-0.02	0.22	0.60	88	4.53	90	86	71	0	7	4	0
	OKLAHOMA CITY	57	24	76	15	41	-7	0.00	-0.63	0.00	0.00	0	0.87	24	92	47	0	6	0	0
OR	TULSA	53	26	75	18	40	-8	0.00	-0.74	0.00	0.00	0	1.92	44	94	71	0	7	0	0
	ASTORIA	49	40	51	33	44	-1	2.66	0.90	0.63	2.78	138	20.29	104	96	88	0	0	7	2
	BURNS	49	25	56	13	37	2	0.00	-0.30	0.00	0.03	9	1.38	52	81	54	0	5	0	0
	EUGENE	51	41	56	32	46	1	1.67	0.26	0.76	1.77	109	11.23	72	95	86	0	1	6	1
	MEDFORD	56	37	62	30	47	1	0.02	-0.43	0.01	0.07	13	4.29	84	91	54	0	2	2	0
	PENDLETON	51	37	53	31	44	1	0.36	0.08	0.14	0.36	116	4.34	146	80	70	0	1	4	0
	PORTLAND	49	39	51	32	44	-2	1.95	1.04	1.00	1.96	188	12.32	120	95	86	0	1	7	1
	SALEM	51	41	56	31	46	1	1.59	0.53	0.82	1.59	130	11.75	97	94	86	0	1	7	1
PA	ALLENTOWN	41	18	47	8	29	-6	0.93	0.17	0.39	0.93	108	5.45	77	82	61	0	6	3	0
	ERIE	37	12	51	1	25	-8	0.32	-0.30	0.14	0.32	46	6.21	113	89	78	0	7	4	0
	MIDDLETOWN	41	19	48	10	30	-7	1.00	0.26	0.57	1.00	118	7.54	114	93	61	0	6	3	1
	PHILADELPHIA	45	26	54	18	35	-5	1.85	1.05	0.83	1.85	203	8.82	123	80	56	0	5	3	2
	PITTSBURGH	41	17	60	4	29	-7	0.51	-0.16	0.19	0.56	74	5.58	96	90	57	0	7	4	0
	WILKES-BARRE	38	13	48	0	26	-8	0.28	-0.24	0.16	0.29	49	3.33	65	82	52	0	7	2	0
	WILLIAMSPORT	37	13	44	1	25	-9	0.16	-0.49	0.15	0.23	31	5.24	85	85	71	0	7	2	0
RI	PROVIDENCE	39	18	45	8	29	-6	1.80	0.90	1.26	1.82	178	7.62	86	79	57	0	7	3	1
SC	BEAUFORT	64	51	75	43	58	3	1.88	1.14	1.44	2.07	246	6.10	76	98	71	0	0	4	1
	CHARLESTON	66	50	76	42	58	3	1.86	1.01	0.81	2.40	250	5.88	72	96	64	0	0	4	2
	COLUMBIA	64	44	70	35	54	2	2.05	1.04	0.90	2.65	230	7.61	79	94	67	0	0	5	1
	GREENVILLE	61	39	68	31	50	1	1.23	-0.03	0.90	1.33	93	7.28	72	96	57	0	1	4	1
SD	ABERDEEN	19	-4	35	-12	7	-19	0.00	-0.21	0.00	0.00	0	0.69	58	76	53	0	7	0	0
	HURON	23	1	37	-8	12	-16	0.00	-0.27	0.00	0.00	0	1.26	93	80	48	0	7	0	0
	RAPID CITY	31	5	45	-1	18	-14	0.00	-0.17	0.00	0.00	0	0.54	53	85	63	0	7	0	0
	SIOUX FALLS	21	0	36	-12	11	-17	0.27	0.00	0.17	0.27	90	1.23	93	79	60	0	7	2	0
TN	BRISTOL	59	33	67	25	46	3	0.68	-0.23	0.50	0.68	65	9.47	119	94	40	0	4	4	1
	CHATTANOOGA	61	37	68	28	49	1	1.12	-0.27	0.66	1.13	71	11.54	97	93	59	0	2	3	1
	KNOXVILLE	60	36	70	28	48	1	0.65	-0.52	0.49	0.65	49	12.53	126	94	49	0	2	4	0
	MEMPHIS	59	36	72	30	47	-3	0.17	-1.02	0.16	0.17	13	9.29	94	91	50	0	2	2	0
	NASHVILLE	58	34	72	25	46	-1	0.16	-0.95	0.10	0.16	13	10.20	114	92	50	0	2	3	0
TX	ABILENE	64	37	78	24	51	-3	0.02	-0.28	0.01	0.02	6	1.16	47	81	55	0	2	2	0
	AMARILLO	61	24	72	15	42	-3	0.00	-0.20	0.00	0.00	0	0.24	17	81	25	0	5	0	0
	AUSTIN	62	40	79	34	51	-8	0.39	-0.15	0.28	0.41	67	5.97	133	90	65	0	0	3	0
	BEAUMONT	65	50	75	44	58	-2	0.30	-0.47	0.27	0.30	34	7.72	78	98	71	0	0	2	0
	BROWNSVILLE	75	58	80	53	67	0	0.01	-0.14	0.01	0.01	6	1.27	47	96	86	0	0	1	0
	CORPUS CHRISTI	66	50	76	43	58	-6	0.07	-0.34	0.06	0.08	17	2.44	62	98	85	0	0	2	0
	DEL RIO	75	52	82	47	63	2	0.15	-0.05	0.10	0.15	63	0.92	52	91	69	0	0	3	0
	EL PASO	64	39	72	35	52	-3	0.04	-0.03	0.04	0.04	50	1.41	153	62	25	0	0	1	0
	FORT WORTH	61	39	80	26	50	-5	0.00	-0.74	0.00	0.00	0	3.31	65	94	53	0	2	0	0
	GALVESTON	62	52	69	48	57	-5	0.11	-0.47	0.11	0.11	17	3.00	41	98	78	0	0	1	0
	HOUSTON	64	48	76	43	56	-4	0.94	0.22	0.87	0.94	115	7.11	95	96	77	0	0	2	1
	LUBBOCK	67	29	77	17	48	0	0.00	-0.15	0.00	0.00	0	0.10	7	70	34	0	5	0	0
	MIDLAND	67	38	79	28	52	-1	0.00	-0.12	0.00	0.00	0	1.00	80	79	49	0	2	0	0
	SAN ANGELO	66	40	77	31	53	-1	0.26	0.01	0.24	0.26	90	2.15	94	90	71	0	2	2	0
	SAN ANTONIO	67	45	80	40	56	-4	0.39	-0.03	0.31	0.40	83	3.53	91	95	65	0	0	3	0
	VICTORIA	65	48	78	40	57	-4	0.35	-0.15	0.20	0.38	67	4.08	81	96	82	0	0	3	0
	WACO	60	42	79	32	51	-5	0.73	0.11	0.71	0.76	106	3.91	77	95	72	0	1	2	1
	WICHITA FALLS	62	31	78	19	47	-4	0.00	-0.49	0.00	0.00	0	0.91	28	87	54	0	4	0	0
UT	SALT LAKE CITY	48	31	58	24	40	0	0.41	0.01	0.20	0.50	111	2.19	70	81	43	0	4	3	0
VT	BURLINGTON	30	5	39	-10	17	-9	0.08	-0.35	0.05	0.08	16	2.05	47	86	57	0	7	2	0
VA	LYNCHBURG	57	31	70	24	44	1	0.59	-0.26	0.31	0.69	72	7.96	105	86	46	0	4	3	0
	NORFOLK	57	37	69	31	47	1	1.55	0.65	0.64	1.55	150	9.12	110	96	61	0	2	5	1
	RICHMOND	56	32	71	23	44	0	1.23	0.32	0.46	1.26	121	7.63	101	89	63	0	5	4	0
	ROANOKE	57	33	68	26	45	1	0.23	-0.61	0.17	0.34	35	7.59	104	84	54	0	4	3	0
WA	WASH/DULLES	48	23	61	14	35	-5	0.37	-0.41	0.20	0.39	44	8.21	122	90	67	0	5	3	0
	OLYMPIA	47	35	51	29	41	-1	1.20	-0.08	0.37	1.20	82	12.98	86	97	87	0	1	6	0
	QUILLAYUTE	46	34	50	30	40	-3	1.38	-1.38	0.40	1.38	44	18.57	64	95	85	0	4	7	0
	SEATTLE-TACOMA	46	38	50	34	42	-3	0.90	0.01	0.50	0.90	88	10.65	103	93	82	0	0	4	1
	SPOKANE	42	27	46	25	35	-2	0.04	-0.32	0.02	0.04	10	3.95	106	89	55	0	7	2	0
	YAKIMA	54	29	56	24	42	2	0.00	-0.15	0.00	0.00	0	2.48	115	77	48	0	5	0	0
WV	BECKLEY	51	27	66	20	39	0	0.15	-0.67	0.07	0.15	16	7.00	98	85	74	0	6	4	0
	CHARLESTON	53	29	72	21	41	-1	0.27	-0.63	0.19	0.27	26	9.54	128	96	55	0	6	3	0
	ELKINS	48	22	65	12	35	-2	0.37	-0.51	0.14	0.37	37	6.94	91	96	50	0	6	4	0
	HUNTINGTON	52	27	72	19	40	-2	0.17	-0.71	0.11	0.17	17	7.36	101	92	54	0	6	3	0
WI	EAU CLAIRE	23	2	29	-10	12	-14	0.16	-0.11	0.10	0.16	53	1.12	52	84	42	0	7	3	0
	GREEN BAY	27	4	35	-5	15	-12	0.06	-0.27	0.04	0.06	16	1.21	47	84	56	0	7	3	0
	LA CROSSE	27	7	34	-2	17	-13	0.13	-0.15	0.09	0.13	42	1.22	49	82	45	0	7	3	0
	MADISON	28	8	36	2	18	-12	0.17	-0.19	0.15	0.17	41	1.02	35	80	67	0	7	2	0
	MILWAUKEE	29	14	35	9	22	-9	0.26	-0.16	0.15	0.26	54	1.04	26	88	66	0	7	6	0
WY	CASPER	42	11	52	5	26	-6	0.01	-0.18	0.01	0.02	9	0.64	44	81	53	0	7	1	0
	CHEYENNE	43	20	54	6	31	-1	0.02	-0.17	0.02	0.02	10	0.32	29	76	40	0	6	1	0
	LANDER	38	20	48	4	29	-3	0.01	-0.19	0.01	0.04	17	1.45	112	74	55	0	6	1	0
	SHERIDAN	26	2	40	-3	14	-18	0.15	-0.01	0.12	0.17	94	1.34	88	85	71	0	7	3	0

Based on 1971-2000 normals

## February Weather and Crop Summary

### Weather

*Weather summary provided by USDA/WAOB and CPC/NOAA*

Following an uncharacteristically tranquil January, much of the Nation experienced a return to stormy weather in February. Specifically, wet weather re-developed across the South (excluding southern Florida and portions of the southern High Plains), while some locations from the Ohio Valley to the northern Mid-Atlantic States and southern New England endured record-setting snowfall totals. Southern wetness slowed or halted spring planting preparations from the western Gulf Coast region to the southern Atlantic States, including the Delta. Farther north, however, drought gradually intensified in parts of the Midwest, primarily from northern Missouri to Lower Michigan. Meanwhile, the Plains received varying amounts of precipitation. Dryness persisted across northern Texas, but late-month snowfall on the central Plains boosted soil moisture reserves and insulated the winter wheat crop from a late-season cold snap. On the northern Plains, however, only a shallow snow cover protected wheat from temperatures as low as -30°F. Elsewhere, areas from the Southwest to the Rockies received beneficial precipitation that boosted topsoil moisture and mountain snow packs, but provided only limited relief from long-term drought. Much of the West faced water-supply concerns due to the combination of low reservoir levels, near-to below-normal snowpacks, and poor spring and summer runoff prospects.

Monthly temperatures were within a few degrees of normal west of the Rockies and up to 4°F above normal in southern Florida, but significantly below normal elsewhere. The coldest areas, relative to normal, were the Plains, Midwest, and Northeast, where monthly readings ranging from 2 to 10°F below normal maintained stress on livestock.

In a complete reversal from January, wet weather developed across the Southwest, while the Northwest turned dry. Vestiges of the Western warm spell lingered into early February, propelling Las Vegas, Nevada, to their earliest 80-degree reading (81°F on February 1). The record was previously established with a high of 81°F on February 17, 1996. Later, however, Las Vegas collected 2.13 inches of rain (309 percent (%) of normal and their sixth-greatest February sum) and received measurable precipitation on 6 consecutive days from February 24-March 1 (tying their all-time record set in April 1943 and January 1949). Monthly rainfall totaled 4.88 inches (239 percent of normal) in San Diego, California, (their wettest February since 7.65 inches fell in 1998), including 1.20 inches on February 12 and 1.48 inches on February 25. The latter sum was San Diego's greatest daily total since 1.59 inches fell on February 21, 2000. Drier weather prevailed farther north, where only 3 inches of water equivalent was added to the Sierra Nevada snowpack during February. According to the California Department of Water Resources, the Sierra Nevada water equivalent stood at 21 inches (84% of normal) at month's end, compared with 18 inches (102%) on February 1.

Farther east, a pair of storm systems produced the majority of the month's snowfall across the central Plains and much of the Midwest. The first storm crossed the Midwest at midmonth, and the second deposited most of its snow on the central Plains on February 23. Midwestern snowfall was closer to normal than in previous months, but seasonal totals remained far below typical levels. For example Dubuque, Iowa, measured 6.8 inches (77% of normal) during February, accounting for more than half of their season-to-date total of 12.0 inches (35% of normal). Rockford, Illinois, in the midst of the area of

developing Midwestern drought, received December-February precipitation totaling 1.28 inches (27% of normal), including 8.0 inches of snow (28% of normal). Farther west, February 23 snowfall totaled 7.0 inches in Tulsa, Oklahoma, and 10.2 inches in Wichita, Kansas. The storm helped Tulsa achieve their snowiest February (10.5 inches) and gave Wichita their greatest storm-total snowfall since 11.3 inches fell on March 19, 1998.

The central Plains' snow blanketed winter wheat in advance of a strong cold outbreak, but less favorable insulation/protection existed farther north. On February 24, some locations in Montana and Wyoming noted their lowest temperatures in 4 to 6 years. Sheridan, Wyoming (-20°F), had their lowest reading since December 21, 1998, while Billings, Montana (-17°F), was the coldest since January 27, 1997. Elsewhere in Montana, locations with consecutive daily-record lows on February 24-25 included Wisdom (-49 and -41°F) and West Yellowstone (-45 and -42°F). Farther south, the high temperature of 15°F on February 24 in Oklahoma City, Oklahoma, was their lowest maximum since February 3, 1996, when the high was 12°F. Meanwhile in North Dakota, Grand Forks' high temperatures never exceeded the freezing mark during the month, peaking at 32°F on February 2 and 19.

February cold was most persistent in the North Central United States, holding monthly temperatures to 7.3°F (9.5°F below normal) in Williston, North Dakota, and 8.1°F (7.6°F below normal) in Marquette, Michigan. But for the winter as a whole, consistently cold conditions were confined to the East. From December-February, high temperatures climbed to 60°F or higher on only 15 of winter's 90 days in Muscle Shoals, Alabama, their fewest since 1976-77. Farther north, Burlington, Vermont, experienced their coldest winter since 1978-79, when the average was 16.9°F. Burlington's average temperature of 17.6°F was 3.3°F below normal, but 11.1°F below last year's record-high winter average.

The precipitation highlights across the South and East were a slow-moving storm system at midmonth, followed by a moisture-laden system a week later. The Feb. 15 system included the year's first reported tornadoes (in Mississippi, Alabama, and Florida), followed by 2003's first tornado fatalities (2) a week later (in Kentucky). However, several other storms also produced significant rain or snow. For example, 23.8 inches of snow buried Caribou, Maine, on February 2-3, accompanied by wind gusts to 47 mph. A few days later, 6.6 inches in Washington, DC, on February 6-7 was their greatest February snowfall since 6.8 inches fell on February 16, 1996. Similarly, Mitton (Blue Hill Observatory), Massachusetts, had 17.0 inches, their largest February storm since 17.8 inches fell from February 8-10, 1994.

The Valentine's Day to President's Day storm produced the greatest storm-total snowfall on record in Baltimore, Maryland (28.2 inches), and the fourth-highest total in New York's Central Park (19.8 inches). Boston, Massachusetts (27.5 inches in 24 hours on February 17-18), broke storm-total and 24-hour snowfall records. Farther south, 72-hour (February 14-17) rainfall topped 8 inches at some eastern Tennessee locations. Days later, heavy rain swept across the South and East, while snow fell in the eastern Corn Belt. College Station, Texas, measured 4.76 inches on February 20, breaking their February daily record of 3.81 inches (on February 27, 1927).

For the month, it was the wettest February on record in Jackson, Kentucky (7.89 inches), and the second-wettest in Charleston, West Virginia (7.46 inches), behind only 8.10 inches in 1887. February snowfall records were established in several locations from the Ohio

Valley eastward, and it was the snowiest month on record in Baltimore, Maryland (40.5 inches), and Wilmington, Delaware (31.6 inches). Just to the north and west, however, February precipitation totals were among the lowest on record. In Michigan, Muskegon's monthly total of 0.16 inch (10% of normal) broke their February 1934 record of 0.29 inch.

In Hawaii, a fairly tranquil weather pattern was interrupted by heavy, midmonth rainfall. Monthly totals in Lihue, Kauai (4.42 inches, or 136 percent of normal), and Kahului, Maui (5.34 inches, or 226 percent), were above normal only because of the midmonth downpours. Kahului measured most of its monthly rain (4.82 inches) on February 14-15. Meanwhile, Alaska's mild winter continued, accompanied by widespread precipitation (mostly rain at lower elevations). Temperatures averaged 10 to 20°F above normal across western and interior Alaska, with only the extreme northern and southeastern sections close to normal. Surplus precipitation was the norm across the State, except in southeastern locations. Significant totals included 6.89 inches (538%) at Talkeetna, 3.68 inches (497%) at McGrath, 3.02 inches (495%) at Bettles, 2.72 inches (299%) at Kenai, and 14.21 inches (257%) at Valdez.

**Highest February Precipitation (Inches)**

Location	Total	Normal	Previous Record/Year
Jackson, KY	7.89	3.68	7.61 in 1989
McGrath, AK	3.68	0.74	3.05 in 1944
Dillon, MT	0.85	0.20	0.77 in 1952

**Highest Monthly Snowfall (Inches)**

Location	Total	Normal	Previous Record/Month
Baltimore, MD	40.5	6.4	33.9 in February 1899
Wilmington, DE	31.6	6.7	27.5 in February 1979

**Highest February Snowfall (Inches)**

Location	Total	Normal	Previous Record/Year
Boston, MA	41.6	10.4	41.3 in 1969
Baltimore, MD	40.5	6.4	33.9 in 1899
Clarksburg, WV	37.9	8.0	25.0 in 1979
Dulles Apt., VA	34.9	6.2	27.6 in 1979
Wilmington, DE	31.6	6.0	27.5 in 1979
Pittsburgh, PA	25.3	8.5	24.2 in 1972
Indianapolis, IN	21.7	6.1	21.0 in 1910
Tulsa, OK	10.5	2.3	10.1 in 1960

**Fieldwork**

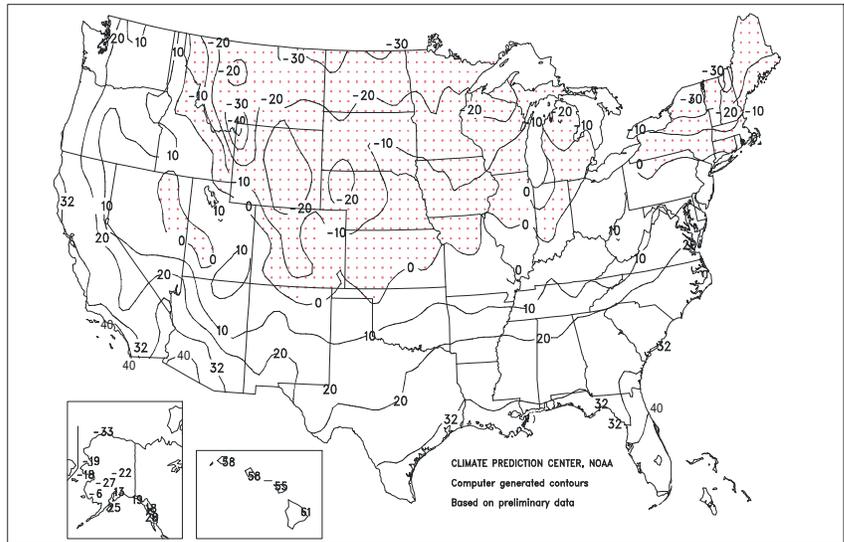
*Fieldwork summary provided by USDA/NASS*

Seasonally heavy precipitation in the Pacific Northwest alleviated dry soil conditions in some areas but were not as helpful in others. Soil moisture was generally adequate throughout California, with some growers supplementing with irrigation. Abnormally dry soil conditions remained throughout much of the Southwest, Rocky Mountains, and Great Plains. Snowpack measurements generally were greater than during 2002 but still ranged from below normal to significantly below normal in most locations. Low reservoir levels and water shortages remained a concern. Soil moisture was adequate to surplus across a wide swath from Texas, through the Tennessee Valley, to New England.

Winter wheat emergence was aided by warmer weather and adequate

Extreme Minimum Temperature (°F)

February 2003



rainfall in eastern Washington, while some western fields were flooded by heavy precipitation. Continued mild weather allowed some winter wheat to emerge from dormancy in Idaho. By midmonth, rainfall in California restricted fieldwork, but was beneficial to wheat, barley, oats, and alfalfa. The season's first cutting of alfalfa hay took place in early February. Rainfall late in the month slowed the picking of citrus fruit, which helped packinghouses clear inventories. Winter pastures were in good condition throughout the month, with the best conditions reported in the northern half of the State. Vegetable planting was active, and many fields thrived in the warm weather.

Cool weather in Florida slowed the development of vegetables and pastures, while dry, windy conditions lowered soil moisture supplies early in the month. Significant rains fell around the middle and end of the month, replenishing soil moisture in some areas. The citrus harvest was active for early- and mid-season oranges. Sugarcane harvesting continued in the Everglades.

Very dry subsoil conditions remained across the northern Corn Belt. Rainfall in the southern Corn Belt helped alleviate soil moisture deficits, with most locations rated dry to adequate. Iowa reported an average of 1 inch of snow cover. Illinois and Indiana experienced extreme cold weather at midmonth.

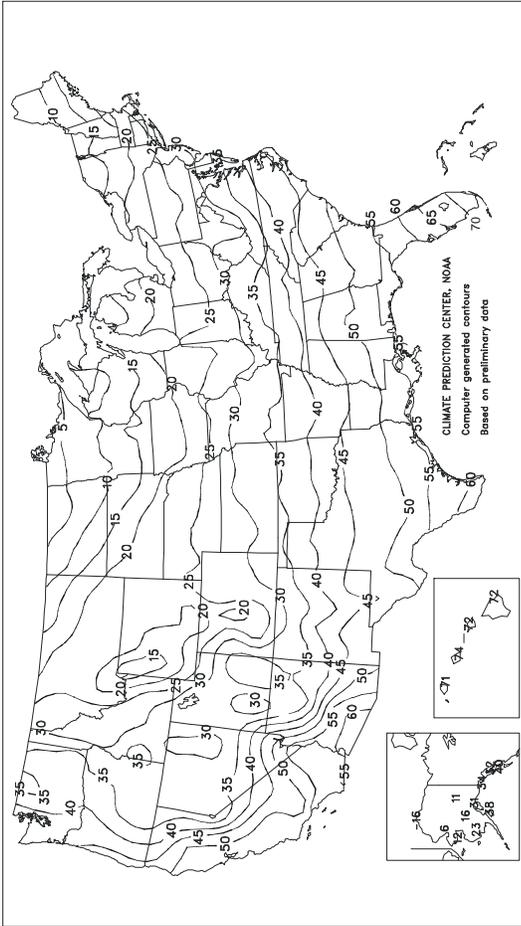
In the Lower Rio Grande Valley of Texas, sugarcane, citrus, and vegetables were harvested, and cotton, corn, and sorghum planting began. Deep-breaking occurred in some areas, but fieldwork was nonexistent in much of the State due to a barrage of snow, rain, and ice. Corn producers were delayed in land preparation, and planting was well behind the average. The adverse conditions stressed livestock in Texas and Oklahoma, forcing farmers and ranchers to feed extra amounts of hay.

In South Dakota, February brought some periods of cold weather and snowfall, but most of the State experienced continuing mild winter weather. With dry soil conditions and little snow cover, there was concern for the condition of winter crops. Minnesota conditions have been relatively mild, with some cold weather and minimal snow cover.

In North Carolina, wet, cold weather combined with poor pasture conditions increased hay and feed grain demands for livestock operations. Onion planting in Georgia was behind schedule due to continued wet weather.

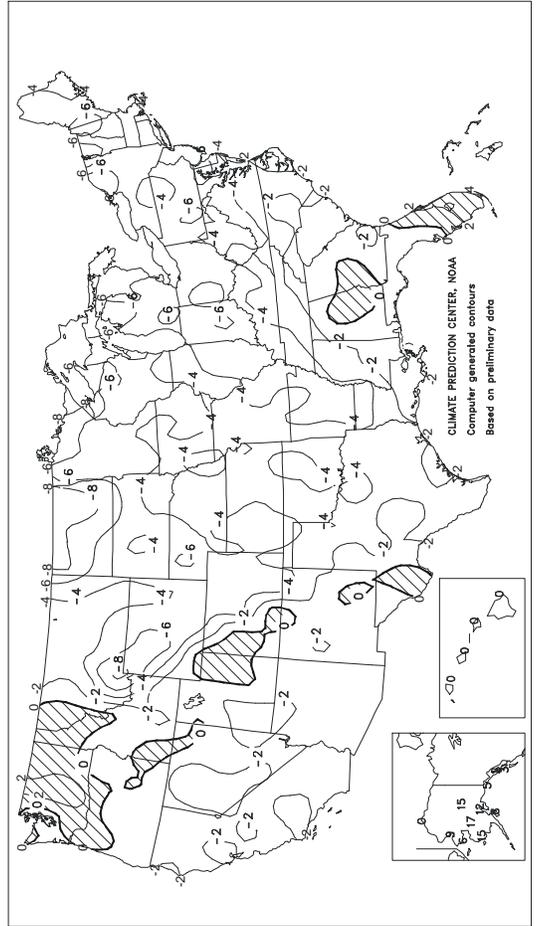
Average Temperature (°F)

February 2003



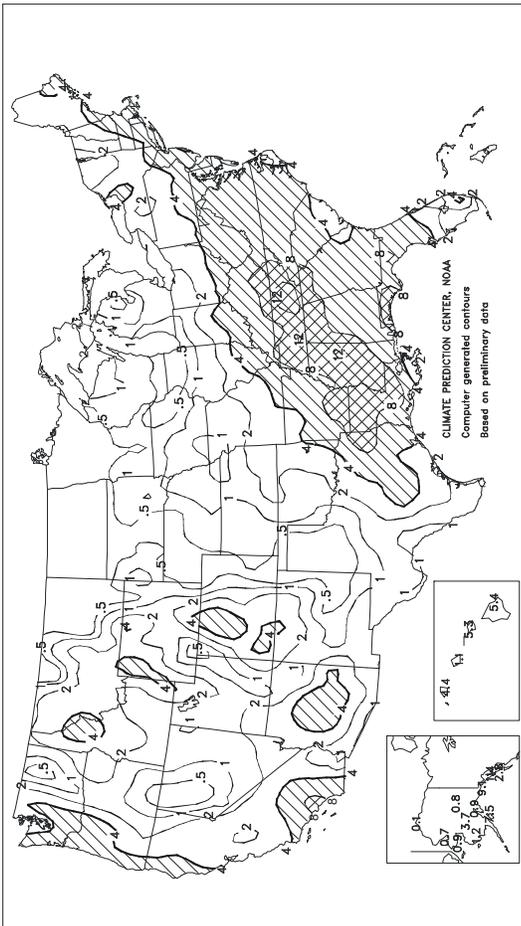
Departure of Average Temperature from Normal (°F)

February 2003



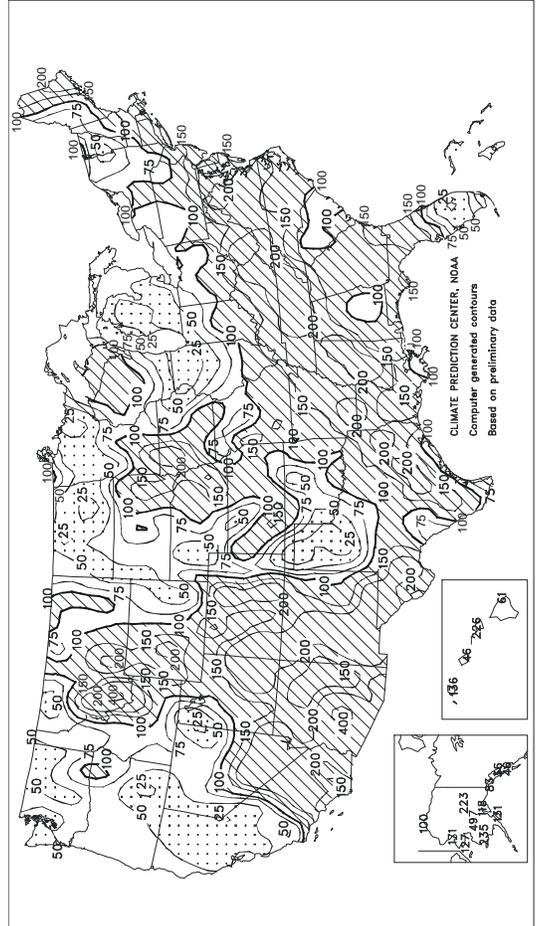
Total Precipitation (inches)

February 2003



Percent Of Normal Precipitation

February 2003



# TEMPERATURE AND PRECIPITATION SUMMARY

## February 2003

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	47	0	5.80	1.59	LEXINGTON	32	-4	4.85	1.58	COLUMBUS	27	-5	2.96	0.76
HUNTSVILLE	43	-1	7.83	2.88	LONDON-CORBIN	35	-4	6.47	2.75	DAYTON	24	-6	2.23	-0.06
MOBILE	54	-1	5.57	0.47	LOUISVILLE	33	-5	4.12	0.87	MANSFIELD	22	-5	1.96	-0.21
MONTGOMERY	50	-1	3.61	-1.84	PADUCAH	35	-3	6.60	2.67	TOLEDO	24	-3	1.87	-0.01
AK ANCHORAGE	31	12	0.87	0.13	LA BATON ROUGE	53	0	7.26	2.16	YOUNGSTOWN	23	-5	2.31	0.28
BARROW	-16	0	0.12	0.00	LAKE CHARLES	53	-1	4.67	1.39	OK OKLAHOMA CITY	38	-4	0.87	-0.69
COLD BAY	37	9	4.43	1.84	NEW ORLEANS	56	0	4.56	-0.91	TULSA	38	-4	1.76	-0.19
FAIRBANKS	11	15	0.80	0.44	SHREVEPORT	47	-4	7.66	3.45	OR ASTORIA	44	0	4.75	-3.12
JUNEAU	32	3	1.44	-2.58	ME BANGOR	15	-6	2.65	0.11	BURNS	31	1	0.14	-0.97
KING SALMON	36	20	1.37	0.65	CARIBOU	7	-6	3.78	1.72	EUGENE	43	0	2.79	-3.56
KODIAK	38	8	7.49	1.77	PORTLAND	20	-5	3.34	0.20	MEDFORD	43	-1	1.74	-0.36
NOME	12	6	0.95	0.20	MD BALTIMORE	30	-5	6.70	3.68	PENDLETON	39	0	1.07	-0.15
AZ FLAGSTAFF	33	1	2.75	0.19	MA BOSTON	26	-5	4.21	0.91	PORTLAND	44	1	2.37	-1.81
PHOENIX	59	1	3.15	2.38	WORCESTER	21	-5	4.43	1.33	SALEM	44	1	2.78	-2.31
TUCSON	55	0	1.02	0.14	MI ALPENA	13	-6	0.31	-1.04	PA ALLENTOWN	26	-4	3.10	0.35
AR FORT SMITH	40	-4	3.35	0.76	DETROIT	23	-4	0.66	-1.22	ERIE	22	-6	2.92	0.64
LITTLE ROCK	41	-4	5.40	2.07	FLINT	20	-4	0.60	-0.75	MIDDLETOWN	26	-5	4.25	1.32
CA BAKERSFIELD	52	-1	1.51	0.30	GRAND RAPIDS	20	-5	0.61	-0.92	PHILADELPHIA	30	-5	5.04	2.30
EUREKA	46	-3	3.84	-1.67	HOUGHTON LAKE	13	-7	0.15	-1.10	PITTSBURGH	26	-5	2.86	0.49
FRESNO	51	0	1.25	-0.87	LANSING	20	-4	0.32	-1.13	WILKES-BARRE	24	-5	1.50	-0.58
LOS ANGELES	58	0	4.78	1.67	MUSKEGON	23	-2	0.16	-1.42	WILLIAMSPORT	25	-4	3.10	0.49
REDDING	50	1	2.27	-3.22	TRVERSE CITY	16	-6	0.35	-1.44	PR SAN JUAN	78	1	2.22	-0.08
SACRAMENTO	50	-1	1.33	-2.21	MN DULUTH	9	-6	0.23	-0.60	RI PROVIDENCE	26	-5	3.75	0.30
SAN DIEGO	59	0	4.88	2.84	INT'L FALLS	4	-7	0.19	-0.45	SC CHARLESTON	51	0	2.46	-0.62
SAN FRANCISCO	52	0	2.45	-1.56	MINNEAPOLIS	16	-4	0.54	-0.25	COLUMBIA	47	-1	3.54	-0.30
STOCKTON	49	-2	1.01	-1.45	ROCHESTER	15	-3	0.65	-0.10	FLORENCE	46	-2	2.60	-0.42
CO ALAMOSA	26	4	0.28	0.07	ST. CLOUD	11	-5	0.59	0.00	GREENVILLE	44	0	4.02	-0.22
CO SPRINGS	27	-5	0.59	0.24	MS JACKSON	48	-1	9.16	4.66	MYRTLE BEACH	47	-2	2.71	-0.79
DENVER	28	-3	0.47	0.24	MERIDIAN	49	-1	6.79	1.44	SD ABERDEEN	13	-6	0.45	-0.03
GRAND JUNCTION	35	1	1.03	0.53	TUPELO	44	-1	7.67	2.99	HURON	17	-4	1.02	0.45
PUEBLO	31	-4	0.81	0.55	MO COLUMBIA	30	-4	1.40	-0.80	RAPID CITY	22	-5	0.22	-0.24
CT BRIDGEPORT	27	-5	3.75	0.83	JOPLIN	36	-3	2.53	0.28	SIoux FALLS	19	-2	0.64	0.13
HARTFORD	24	-5	3.39	0.43	KANSAS CITY	30	-3	0.74	-0.57	TN BRISTOL	37	-1	6.32	2.92
DC WASHINGTON	34	-4	5.45	2.82	SPRINGFIELD	34	-3	3.73	1.45	CHATTANOOGA	42	-1	8.56	3.71
DE WILMINGTON	30	-4	5.25	2.44	ST JOSEPH	29	-3	0.47	-0.66	JACKSON	38	-5	8.40	4.15
FL DAYTONA BEACH	61	1	5.17	2.43	ST LOUIS	31	-4	2.00	-0.28	KNOXVILLE	41	-1	8.69	4.68
FT LAUDERDALE	72	4	0.54	-2.16	MT BILLINGS	25	-5	0.81	0.24	MEMPHIS	42	-3	8.24	3.93
FT MYERS	68	2	0.87	-1.23	BUTTE	17	-5	0.90	0.43	NASHVILLE	38	-3	8.47	4.78
JACKSONVILLE	56	0	4.67	1.52	GLASGOW	15	-4	0.24	-0.02	TX ABILENE	46	-3	0.94	-0.19
KEY WEST	72	1	1.36	-0.15	GREAT FALLS	24	-2	0.61	0.10	AMARILLO	38	-3	0.24	-0.31
MELBOURNE	64	2	1.68	-0.81	HELENA	25	-1	0.29	-0.09	AUSTIN	50	-5	3.87	1.88
MIAMI	73	4	0.83	-1.24	KALISPELL	28	1	0.21	-0.94	BEAUMONT	54	-2	5.83	2.48
ORLANDO	64	1	1.58	-0.77	MILES CITY	22	-3	0.34	0.00	BROWNSVILLE	62	-1	0.55	-0.63
PENSACOLA	54	-1	5.69	1.01	MISSOULA	30	1	1.15	0.38	COLLEGE STATION	51	-4	7.32	4.94
ST PETERSBURG	64	1	3.29	0.42	NE GRAND ISLAND	26	-2	1.01	0.33	CORPUS CHRISTI	57	-3	1.34	-0.50
TALLAHASSEE	55	0	6.83	2.20	HASTINGS	26	-4	1.32	0.65	DALLAS/FT WORTH	46	-3	3.07	0.70
TAMPA	63	0	2.90	0.23	LINCOLN	25	-3	1.62	0.96	DEL RIO	54	-2	0.44	-0.52
WEST PALM BEACH	71	4	0.63	-1.92	MCCOOK	28	-4	0.22	-0.42	EL PASO	50	-1	1.37	0.98
GA ATHENS	46	0	4.54	0.15	NORFOLK	25	-1	0.72	-0.04	GALVESTON	55	-3	1.63	-0.98
ATLANTA	46	-1	3.53	-1.15	NORTH PLATTE	26	-3	0.49	-0.02	HOUSTON	54	-1	4.08	1.10
AUGUSTA	48	0	3.72	-0.39	OMAHA/EPPLEY	24	-4	1.32	0.52	LUBBOCK	43	0	0.06	-0.65
COLUMBUS	51	1	5.70	1.22	SCOTTSBLUFF	26	-4	0.59	0.01	MIDLAND	46	-3	0.72	0.14
MACON	49	0	5.17	0.62	VALENTINE	22	-5	0.27	-0.21	SAN ANGELO	48	-2	1.57	0.39
SAVANNAH	51	-2	3.40	0.48	NV ELKO	31	0	0.55	-0.33	SAN ANTONIO	53	-2	2.15	0.40
HI HILO	72	1	5.44	-3.42	ELY	28	-2	0.47	-0.28	VICTORIA	55	-2	1.65	-0.39
HONOLULU	74	1	1.09	-1.26	LAS VEGAS	52	0	2.13	1.44	WACO	48	-3	2.56	0.13
KAHULUI	72	0	5.34	2.98	RENO	38	0	0.23	-0.83	WICHITA FALLS	42	-4	0.83	-0.74
LIHUE	71	-1	4.42	1.16	WINNEMUCCA	33	-3	0.39	-0.23	UT SALT LAKE CITY	35	0	1.06	-0.27
ID BOISE	37	0	0.87	-0.27	NH CONCORD	19	-4	3.38	1.02	VT BURLINGTON	16	-4	0.99	-0.68
LEWISTON	38	0	0.68	-0.27	NJ ATLANTIC CITY	29	-5	5.39	2.54	VA LYNCHBURG	35	-3	5.74	2.64
POCATELLO	29	-1	1.03	0.02	NEWARK	29	-5	3.90	0.94	NORFOLK	41	-1	5.25	1.91
IL CHICAGO/O'HARE	24	-3	0.19	-1.44	NM ALBUQUERQUE	41	0	1.02	0.58	RICHMOND	37	-3	4.21	1.23
MOLINE	23	-4	0.77	-1.04	NY ALBANY	21	-4	2.15	-0.02	ROANOKE	36	-3	5.79	2.71
PEORIA	24	-4	0.77	-0.90	BINGHAMTON	19	-5	2.44	-0.02	WASH/DULLES	30	-5	5.13	2.36
ROCKFORD	22	-3	0.16	-1.18	BUFFALO	21	-5	2.69	0.27	WA OLYMPIA	40	0	2.17	-4.00
SPRINGFIELD	26	-5	1.15	-0.65	ROCHESTER	21	-4	1.95	-0.09	QUILLAYUTE	42	0	4.12	-8.23
IN EVANSVILLE	32	-4	4.92	1.82	SYRACUSE	22	-2	2.58	0.46	SEATTLE-TACOMA	42	-1	1.80	-2.38
FORT WAYNE	22	-5	1.39	-0.55	NC ASHEVILLE	39	0	4.47	0.64	SPOKANE	33	0	0.52	-0.99
INDIANAPOLIS	25	-6	3.45	1.04	CHARLOTTE	42	-3	3.61	0.06	YAKIMA	38	3	0.28	-0.52
SOUTH BEND	23	-4	0.91	-1.07	GREENSBORO	40	-1	4.91	1.81	WV BECKLEY	31	-3	5.35	2.39
IA BURLINGTON	24	-4	1.16	-0.38	HATTERAS	46	-1	3.26	-0.68	CHARLESTON	34	-3	7.46	4.27
CEDAR RAPIDS	20	-5	0.47	-0.63	RALEIGH	41	-2	4.64	1.17	ELKINS	29	-3	4.43	1.23
DES MOINES	22	-5	1.69	0.50	WILMINGTON	47	-2	4.03	0.37	HUNTINGTON	33	-4	5.77	2.68
DUBUQUE	19	-4	0.28	-1.14	ND BISMARCK	12	-6	0.22	-0.29	WI EAU CLAIRE	13	-6	0.64	-0.16
SIoux CITY	22	-3	0.94	0.32	DICKINSON	15	-6	0.05	-0.38	GREEN BAY	14	-6	0.56	-0.45
WATERLOO	19	-4	0.54	-0.51	FARGO	8	-6	0.18	-0.41	LA CROSSE	18	-5	0.56	-0.43
KS CONCORDIA	30	-2	0.94	0.21	GRAND FORKS	5	-8	0.19	-0.39	MADISON	19	-4	0.50	-0.78
DODGE CITY	31	-5	1.30	0.64	JAMESTOWN	8	-8	0.02	-0.50	MILWAUKEE	22	-3	0.43	-1.22
GOODLAND	29	-3	0.65	0.21	MINOT	8	-9	0.03	-0.50	WAUSAU	12	-7	1.00	0.10
HILL CITY	28	-4	0.24	-0.36	WILLISTON	7	-10	0.37	-0.02	WY CASPER	22	-5	0.50	-0.14
TOPEKA	31	-2	1.37	0.19	OH AKRON-CANTON	23	-5	1.90	-0.38	CHEYENNE	25	-4	0.29	-0.15
WICHITA	33	-3	1.94	0.92	CINCINNATI	28	-6	3.60	0.85	LANDER	18	-8	1.10	0.56
KY JACKSON	34	-4	7.86	4.18	CLEVELAND	24	-4	2.74	0.45	SHERIDAN	22	-5	0.50	-0.07

## Winter Weather Review

Review provided by USDA/WAOB and CPC/NOAA

Texas to the southern Appalachians.

**Highlights:** Given the presence of warm-phase conditions in the central and eastern equatorial Pacific (El Niño), one of the big surprises was the persistently cold weather across the eastern one-third of the Nation, for reasons unrelated to El Niño. The other surprise was the nearly total lack of significant storminess in January. December and February exhibited weather patterns more typical of El Niño, with frequent storminess in a broad swath across the South and East and drier-than-normal weather farther north in portions of the Plains and much of the Midwest. The stormy weather pattern during December and February was enough to overcome a very dry January, producing surplus winter precipitation from the Rio Grande Valley northeastward into lower New England. The West received only sporadic and disappointingly light precipitation, except for above-normal seasonal precipitation along the Pacific Northwest coast and in eastern Washington.

The Eastern chill held winter temperatures generally 2 to 6°F below normal. Southern Florida escaped a late-January brush with cold weather, with minimal damage to citrus and winter ground crops. Farther west, temperatures from the Plains to the Mississippi River averaged a few degrees either side of normal, despite a cold February. Some locations across the northern High Plains and upper Midwest were as much as 4°F above normal. The winter was warmer than normal from the Rockies westward, with temperatures ranging from slightly above normal in the Southwest to as much as 6°F above normal in the Northwest.

**December:** An El Niño-driven weather pattern featured heavy precipitation in the West Coast States and across the South, but mild, mostly dry weather from the northern half of the Plains to the upper Great Lakes region. Although precipitation aided winter grains and boosted high-elevation snowpacks across northern California and the Northwest, mostly dry weather persisted in drought-affected areas from the Southwest to the central Rockies. Meanwhile, mild weather on the Plains benefited the dormant winter wheat crop. Rain and snow boosted soil moisture reserves on the southern Plains, but dry weather depleted soil moisture and left wheat exposed to potential weather extremes on the northern and central High Plains. In the Corn Belt, mild, dry weather favored off-season fieldwork across the upper Midwest, while rain and snow replenished soil moisture from the Ohio Valley to the lower Great Lakes region. Persistent rains across the South caused fieldwork delays, triggered lowland flooding, and left some winter grains in standing water. Meanwhile, rain and snow eradicated lingering long-term drought in the Atlantic Coast States.

Below-normal temperatures were confined to the South and East, where readings averaged as much as 5°F below normal. In contrast, warmer-than-normal weather prevailed from the Northwest to the upper Midwest, boosting temperatures as much as 10°F above normal. Little or no moisture accompanied the mild weather across the northern Plains and upper Midwest, but at least 8 to 12 inches of precipitation soaked many locations in northern California, the Pacific Northwest, the central part of Florida's peninsula, and areas from eastern

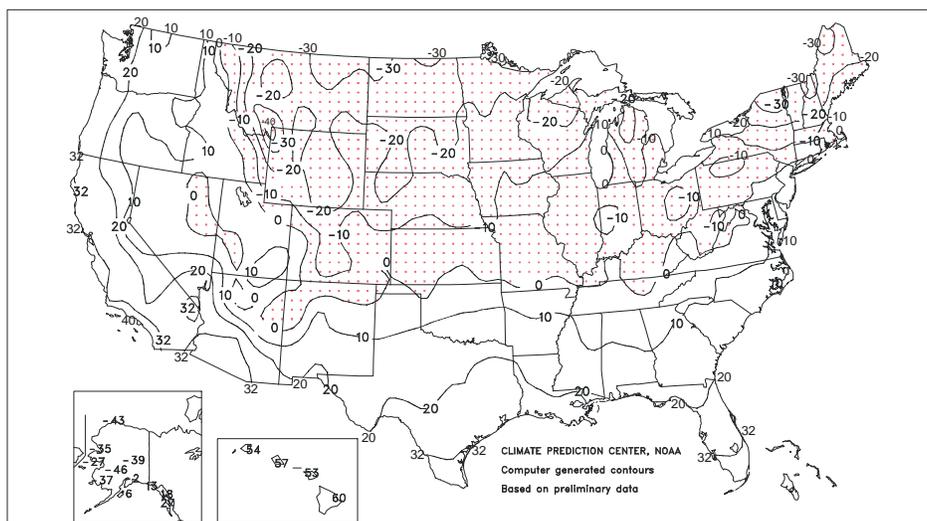
**January:** The influence of El Niño on mainland U.S. weather patterns temporarily waned during January, despite the continuation of warm-episode conditions in the central equatorial Pacific Ocean. In fact, the Nation experienced its second-driest January on record, according to preliminary data from the National Climatic Data Center. Unusually wet weather was confined to parts of the Northwest, but drought remained a major concern elsewhere from the Rockies westward. East of the Sierra Nevada and Cascades, dismal runoff prospects for the remainder of 2003, low reservoir levels, and drought-damaged rangelands were among the most serious effects of long-term Western precipitation deficits. Unfavorably dry weather also persisted on the drought-affected northern and central High Plains. Just enough snow fell on the northern Plains in advance of a mid- to late-month cold outbreak to help protect winter wheat from temperatures as low as -30°F. In contrast, mild weather prevailed for the entire month on the central Plains, benefiting overwintering wheat despite dry soils and minimal snow. Dry weather and developing drought in the Corn Belt had little effect on Midwestern agriculture but hampered upper Mississippi Valley river traffic due to low water levels and curtailed snow-dependent recreational activities. Meanwhile in the South, dry weather permitted an acceleration of fieldwork, following an excessively wet spell in late 2002. By month's end, however, irrigation requirements for winter grains increased in the southern Atlantic region as far north as southern Georgia. Farther north, heavy, early-month precipitation in the Northeast was followed by cold weather and several mostly light snowfalls.

January temperatures ranged from 4 to 12°F above normal across most of the West and High Plains and averaged as much as 4°F above normal in the upper Midwest. In contrast, monthly readings ranged from 4 to 10°F below normal in Florida and were as much as 6°F below normal elsewhere in the South. Cool January weather helped to acclimate Florida's citrus trees in advance of the January 24-25 freezes and added beneficial chill hours for fruit trees elsewhere in the Southeast. Monthly temperatures were mostly 2 to 8°F below normal across the eastern one-third of the Nation, including the eastern Corn Belt and the Northeast.

**February:** *The monthly summary begins on page 8.*

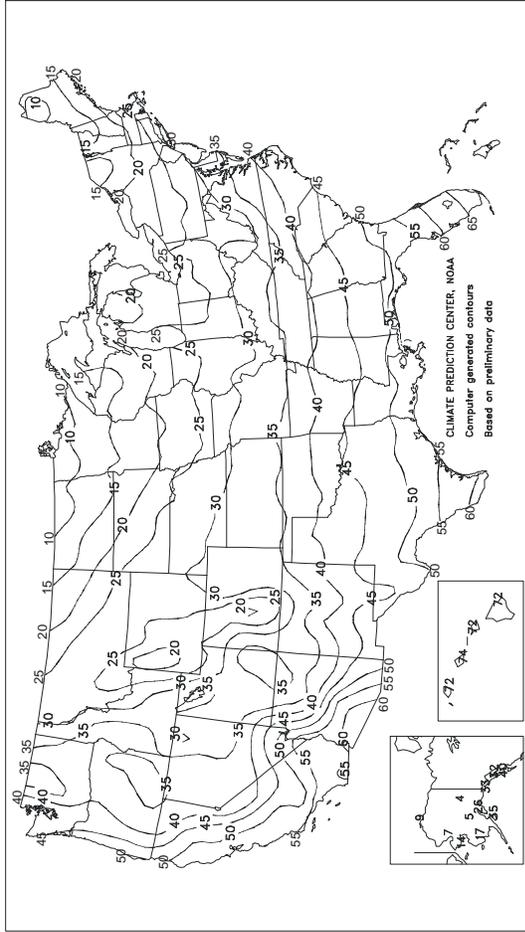
Extreme Minimum Temperature (°F)

DEC 2002 - FEB 2003



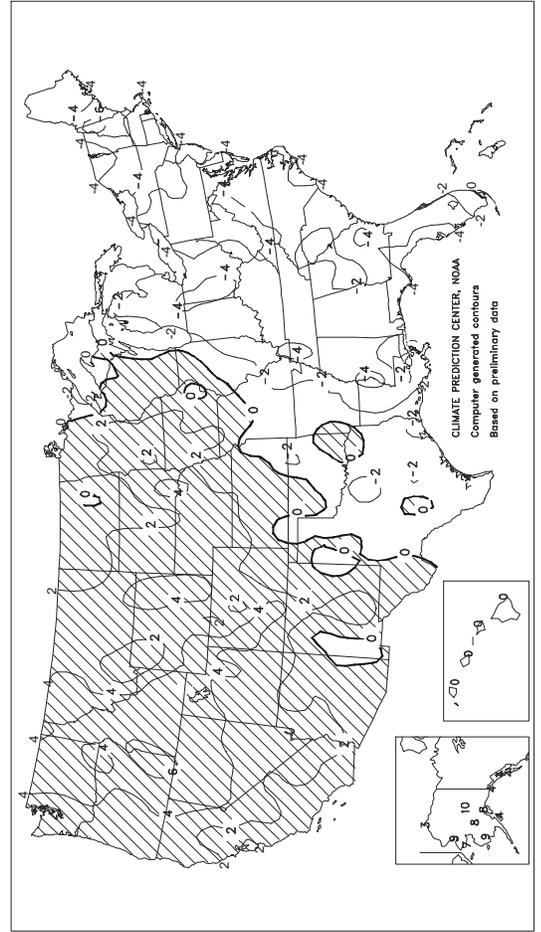
Average Temperature (°F)

DEC 2002 - FEB 2003



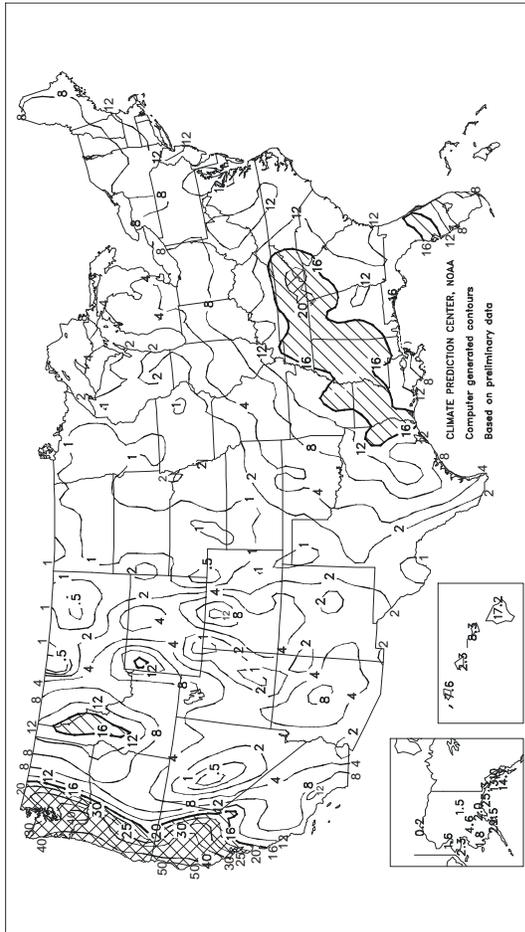
Departure of Average Temperature from Normal (°F)

DEC 2002 - FEB 2003



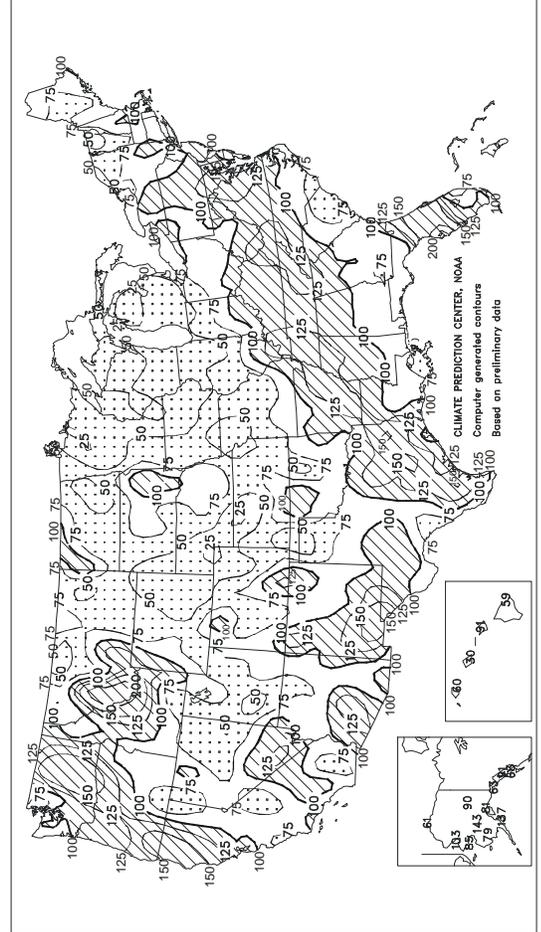
Total Precipitation (inches)

DEC 2002 - FEB 2003



Percent Of Normal Precipitation

DEC 2002 - FEB 2003



# TEMPERATURE AND PRECIPITATION SUMMARY

## Winter 2002-03

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	43	-2	15.25	1.12	LEXINGTON	31	-4	9.87	-0.77	COLUMBUS	28	-3	7.39	-0.27
HUNTSVILLE	40	-2	15.42	-0.64	LONDON-CORBIN	33	-4	11.40	-0.64	DAYTON	25	-4	6.50	-1.47
MOBILE	50	-2	15.09	-0.42	LOUISVILLE	33	-3	11.87	1.65	MANSFIELD	23	-4	6.02	-2.04
MONTGOMERY	46	-3	9.96	-5.50	PADUCAH	34	-2	14.82	3.04	TOLEDO	25	-2	5.84	-0.61
AK ANCHORAGE	26	9	2.00	-0.47	LA BATON ROUGE	51	-1	14.93	-1.62	YOUNGSTOWN	24	-4	6.83	-0.50
BARROW	-9	4	0.22	-0.13	LAKE CHARLES	52	-1	16.04	2.64	OK OKLAHOMA CITY	38	-1	2.71	-2.02
COLD BAY	33	4	12.01	2.01	NEW ORLEANS	53	-1	9.57	-6.84	TULSA	39	0	4.67	-1.31
FAIRBANKS	4	11	1.48	-0.18	SHREVEPORT	47	-2	16.45	3.09	OR ASTORIA	46	3	30.28	2.39
JUNEAU	32	4	12.98	-1.26	ME BANGOR	17	-4	7.53	-1.68	BURNS	31	5	3.32	-0.27
KING SALMON	28	12	2.41	-0.73	CARIBOU	10	-3	7.02	-1.20	EUGENE	44	3	21.51	-0.78
KODIAK	35	5	29.49	7.96	PORTLAND	21	-4	8.99	-2.48	MEDFORD	43	3	11.42	3.95
NOME	14	7	2.27	-0.41	MD BALTIMORE	31	-4	14.26	4.42	PENDLETON	40	5	6.21	2.06
AZ FLAGSTAFF	33	2	3.58	-2.99	MA BOSTON	28	-4	11.20	0.25	PORTLAND	44	3	18.36	3.40
PHOENIX	59	4	3.90	1.38	WORCESTER	22	-4	11.30	0.33	SALEM	44	3	21.36	3.97
TUCSON	55	2	1.74	-1.16	MI ALPENA	19	-1	1.02	-3.92	PA ALLENTOWN	26	-4	9.46	-0.18
AR FORT SMITH	40	-1	8.93	0.58	DETROIT	24	-3	2.24	-4.06	ERIE	24	-5	9.87	1.33
LITTLE ROCK	41	-2	13.88	2.23	FLINT	23	-1	1.95	-3.15	MIDDLETOWN	28	-3	11.14	2.13
CA BAKERSFIELD	51	2	3.06	-0.09	GRAND RAPIDS	22	-3	3.48	-2.78	PHILADELPHIA	31	-4	11.02	1.45
EUREKA	49	1	32.66	14.83	HOUGHTON LAKE	18	-3	0.76	-3.85	PITTSBURGH	26	-4	7.59	-0.34
FRESNO	50	3	4.09	-1.53	LANSING	22	-2	1.35	-3.88	WILKES-BARRE	25	-4	6.50	-0.59
LOS ANGELES	59	2	7.63	-0.25	MUSKEGON	26	0	1.37	-5.07	WILLIAMSPORT	25	-3	8.37	-0.03
REDDING	49	2	23.76	7.10	TRAVERSE CITY	22	-1	0.96	-6.47	PR SAN JUAN	78	1	11.42	1.53
SACRAMENTO	50	2	8.96	-0.87	MN DULUTH	13	1	1.24	-1.65	RI PROVIDENCE	28	-3	10.95	-1.01
SAN DIEGO	59	1	6.87	1.24	INT'L FALLS	9	2	0.45	-1.73	SC CHARLESTON	48	-2	7.71	-2.69
SAN FRANCISCO	53	3	14.66	3.31	MINNEAPOLIS	19	2	0.98	-1.85	COLUMBIA	44	-2	9.12	-2.76
STOCKTON	49	2	6.71	-0.28	ROCHESTER	18	2	1.52	-1.19	FLORENCE	43	-4	5.47	-5.11
CO ALAMOSA	24	6	0.53	-0.26	ST. CLOUD	16	3	0.98	-1.06	GREENVILLE	42	-1	12.42	-0.09
CO SPRINGS	32	3	0.67	-0.38	MS JACKSON	45	-2	16.72	1.21	MYRTLE BEACH	45	-3	6.77	-3.84
DENVER	33	3	0.55	-0.22	MERIDIAN	46	-2	16.29	-0.29	SD ABERDEEN	17	2	0.99	-0.35
GRAND JUNCTION	34	5	1.32	-0.30	TUPELO	41	-2	16.36	0.42	HURON	21	3	1.64	0.20
PUEBLO	33	2	1.11	0.13	MO COLUMBIA	30	-1	4.36	-2.04	RAPID CITY	27	2	0.57	-0.66
CT BRIDGEPORT	29	-3	9.74	-0.38	JOPLIN	36	0	4.93	-2.12	SIoux FALLS	21	3	1.11	-0.43
HARTFORD	25	-3	9.33	-1.07	KANSAS CITY	31	1	1.24	-2.86	TN BRISTOL	35	-1	13.17	2.86
DC WASHINGTON	34	-4	12.30	3.41	SPRINGFIELD	33	-2	6.93	-0.63	CHATTANOOGA	40	-2	17.15	2.09
DE WILMINGTON	31	-3	11.24	1.60	ST JOSEPH	30	0	0.65	-2.80	JACKSON	37	-4	17.50	3.56
FL DAYTONA BEACH	56	-4	15.29	6.71	ST LOUIS	32	-1	4.96	-2.32	KNOXVILLE	38	-2	17.23	4.16
FT LAUDERDALE	68	0	7.69	-0.60	MT BILLINGS	29	2	1.46	-0.59	MEMPHIS	41	-2	18.78	4.55
FT MYERS	63	-3	6.28	0.37	BUTTE	22	3	1.70	0.17	NASHVILLE	37	-3	15.85	3.65
JACKSONVILLE	52	-3	10.15	0.67	GLASGOW	19	4	0.45	-0.53	TX ABILENE	46	0	2.47	-0.90
KEY WEST	69	-2	5.86	-0.01	GREAT FALLS	29	5	1.10	-0.76	AMARILLO	38	0	1.34	-0.45
MELBOURNE	59	-3	12.72	5.44	HELENA	28	5	0.74	-0.62	AUSTIN	49	-3	10.08	3.76
MIAMI	69	0	4.65	-1.48	KALISPELL	29	5	2.31	-1.96	BEAUMONT	53	-1	15.63	1.34
ORLANDO	59	-3	13.76	6.67	MILES CITY	25	4	0.81	-0.48	BROWNSVILLE	61	0	2.50	-1.15
PENSACOLA	51	-3	10.80	-3.19	MISSOULA	29	4	3.28	0.30	COLLEGE STATION	51	-1	15.98	7.05
ST PETERSBURG	59	-4	20.11	11.88	NE GRAND ISLAND	28	3	1.66	-0.22	CORPUS CHRISTI	56	-2	5.55	0.34
TALLAHASSEE	50	-3	13.80	-0.29	HASTINGS	29	2	1.78	-0.17	DALLAS/FT WORTH	46	-1	7.44	0.60
TAMPA	59	-3	17.15	9.91	LINCOLN	27	1	2.04	-0.15	DEL RIO	52	-1	1.08	-1.20
WEST PALM BEACH	65	-2	4.52	-4.92	MCCOOK	31	2	0.26	-1.41	EL PASO	47	0	3.02	1.41
GA ATHENS	43	-1	11.72	-1.07	NORFOLK	27	4	1.17	-0.81	GALVESTON	55	-2	6.53	-3.69
ATLANTA	43	-2	10.77	-2.75	NORTH PLATTE	28	2	0.84	-0.46	HOUSTON	53	-1	11.81	1.46
AUGUSTA	44	-3	9.99	-1.76	OMAHA/EPPLEYP	26	1	1.67	-0.82	LUBBOCK	42	2	1.67	-0.21
COLUMBUS	47	-2	12.34	-1.32	SCOTTSBLUFF	30	3	0.71	-0.97	MIDLAND	45	0	2.05	0.29
MACON	46	-1	12.02	-1.46	VALENTINE	26	2	0.62	-0.49	SAN ANGELO	47	0	3.26	0.33
SAVANNAH	48	-3	7.95	-1.73	NV ELKO	33	5	2.05	-0.90	SAN ANTONIO	52	0	5.67	0.30
HI HILO	72	0	17.18	-11.9	ELY	50	3	0.85	-1.14	VICTORIA	54	-1	6.31	-0.64
HONOLULU	74	0	2.35	-5.58	LAS VEGAS	31	2	2.20	0.52	WACO	48	0	10.78	3.69
KAHULUI	72	0	8.31	-0.87	RENO	39	4	2.59	-0.41	WICHITA FALLS	42	-1	2.79	-1.58
LIHUE	72	0	7.59	-5.04	WINNEMUCCA	36	4	2.28	0.02	UT SALT LAKE CITY	36	5	2.23	-1.70
ID BOISE	38	6	4.52	0.61	NH CONCORD	19	-4	9.47	1.18	VT BURLINGTON	18	-3	3.25	-2.86
LEWISTON	39	4	4.37	1.23	NJ ATLANTIC CITY	31	-3	12.73	3.13	VA LYNCHBURG	34	-3	11.32	1.45
POCATELLO	32	6	1.85	-1.40	NEWARK	31	-3	10.56	0.05	NORFOLK	40	-2	11.74	1.44
IL CHICAGO/O'HARE	25	0	2.47	-3.34	NM ALBUQUERQUE	40	2	1.38	-0.04	RICHMOND	36	-3	9.82	0.17
MOLINE	26	1	1.59	-3.70	NY ALBANY	21	-4	9.58	2.25	ROANOKE	35	-3	11.14	1.97
PEORIA	27	1	3.81	-1.76	BINGHAMTON	20	-4	7.46	-0.61	WASH/DULLES	31	-3	11.43	2.54
ROCKFORD	23	0	1.28	-3.53	BUFFALO	23	-4	9.33	-0.05	WA OLYMPIA	42	3	19.17	-2.43
SPRINGFIELD	27	-2	3.60	-2.36	ROCHESTER	22	-4	7.77	0.66	QUILLAYUTE	44	3	31.92	-8.58
IN EVANSVILLE	32	-2	11.71	2.16	SYRACUSE	23	-2	6.87	-0.96	SEATTLE-TACOMA	44	2	15.73	0.80
FORT WAYNE	23	-4	4.30	-2.46	NC ASHEVILLE	37	-1	12.05	0.77	SPOKANE	34	5	7.18	1.60
INDIANAPOLIS	27	-3	7.73	-0.19	CHARLOTTE	40	-4	10.54	-0.19	YAKIMA	37	6	5.97	2.62
SOUTH BEND	24	-2	3.93	-3.41	GREENSBORO	38	-2	11.70	2.00	WV BECKLEY	29	-4	9.89	0.61
IA BURLINGTON	26	0	2.45	-2.50	HATTERAS	46	-2	7.87	-6.47	CHARLESTON	33	-3	12.21	2.45
CEDAR RAPIDS	23	1	1.17	-2.46	RALEIGH	39	-3	11.57	1.04	ELKINS	28	-3	9.03	-1.04
DES MOINES	25	1	2.16	-1.39	WILMINGTON	44	-4	8.25	-3.71	HUNTINGTON	33	-3	10.29	0.62
DUBUQUE	22	1	1.40	-2.99	ND BISMARCK	17	3	0.81	-0.59	WI EAU CLAIRE	17	1	1.61	-1.26
SIoux CITY	24	2	1.31	-0.56	DICKINSON	19	1	0.50	-0.64	GREEN BAY	19	0	1.88	-1.75
WATERLOO	23	3	1.17	-1.83	FARGO	13	2	1.29	-0.63	LA CROSSE	21	1	1.45	-1.96
KS CONCORDIA	32	2	1.33	-0.92	GRAND FORKS	11	1	0.72	-1.09	MADISON	21	0	1.52	-2.67
DODGE CITY	33	0	1.99	-0.06	JAMESTOWN	12	-1	0.39	-1.19	MILWAUKEE	24	0	1.54	-4.18
GOODLAND	32	2	0.85	-0.42	MINOT	15	1	1.17	-0.64	WAUSAU	16	-1	1.90	-1.42
HILL CITY	31	1	0.25	-1.29	WILLISTON	12	0	1.58	0.08	WY CASPER	28	4	0.81	-1.03
TOPEKA	32	1	1.93	-1.62	OH AKRON-CANTON	24	-4	6.62	-1.13	CHEYENNE	31	4	0.41	-0.94
WICHITA	34	1	3.28	0.07	CINCINNATI	29	-4	10.15	1.20	LANDER	23	1	1.59	-0.08
KY JACKSON	33	-4	14.27	2.76	CLEVELAND	26	-2	8.43	0.52	SHERIDAN	27	4	1.35	-0.67

# National Agricultural Summary

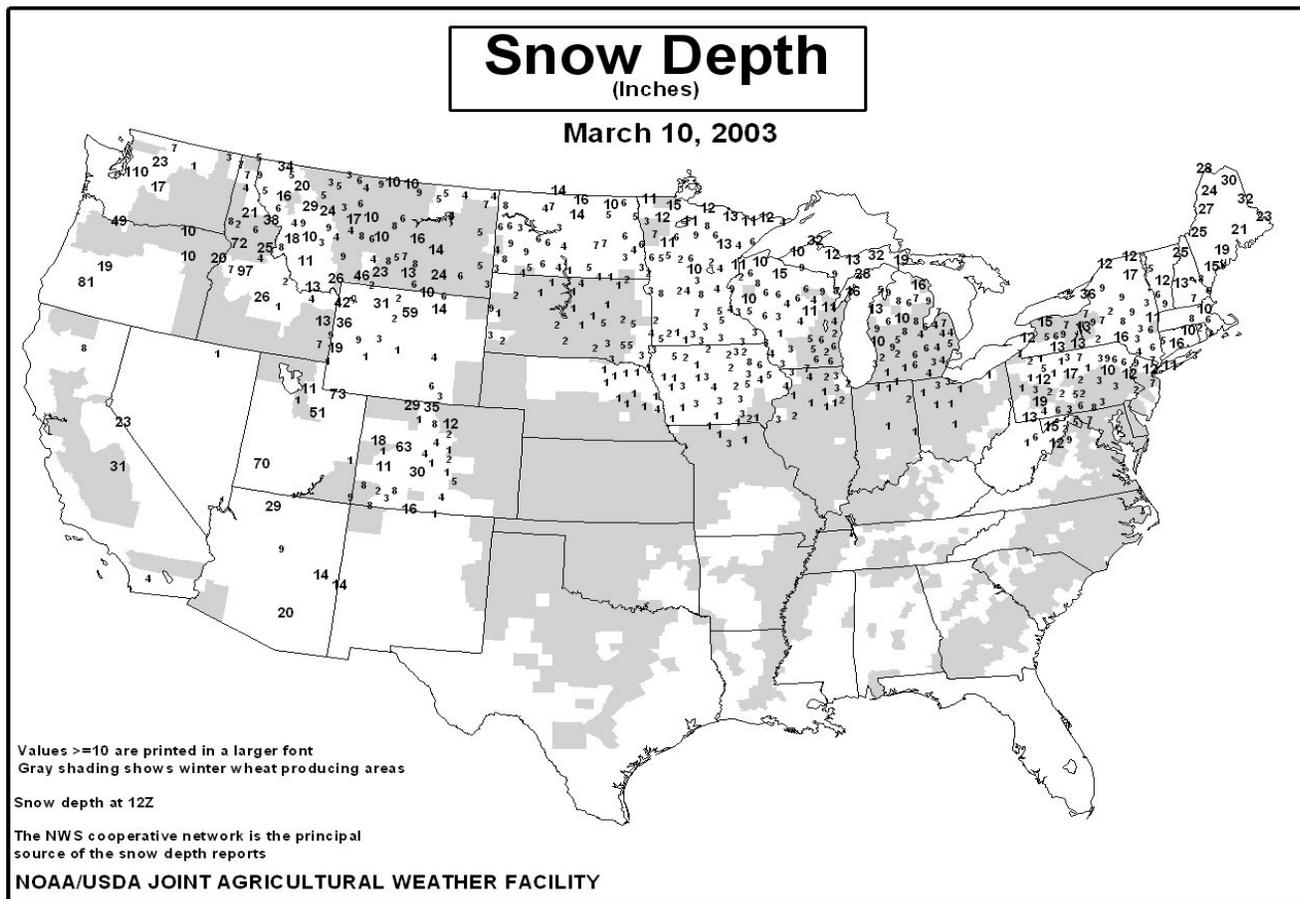
March 3 - 9, 2003

Weekly National Agricultural Summary provided by USDA/NASS

## HIGHLIGHTS

Precipitation fell in the Pacific Northwest and northern Rocky Mountain regions. Below-normal temperatures continued, and snowpack increased in the northern Rockies, Great Plains, and Great Lakes regions. Record to near-record lows were recorded in the northern tier of states from Montana to Michigan. Light snows covered much of the Corn Belt. Drier weather returned to the Southwest. Wet weather continued in the Southeast. There was a general warm-up in the Southwest and Southeast. Frequent showers brought ample moisture to Florida except parts of the southern peninsula. Rains replenished topsoil and subsoil moisture supplies over most of the panhandle and the peninsula with supplies rated mostly adequate to surplus. Wet soils delayed corn, soybean, tobacco, watermelon, and other vegetable planting. Warmer weather and adequate moisture spurred growth of small grains. Sugarcane harvest continued in the Everglades with recent rains only slightly delaying fieldwork. Strawberry harvest continued at a normal pace. Cabbage harvest increased to meet the mid-March holiday demand. Spring weather covered Florida's citrus belt. Trees were in very good to excellent condition. Most growers irrigated to maintain optimum tree condition during the bloom cycle. Early and midseason

orange harvest was virtually complete. Grapefruit movement continued to be active. Timely rains in California's southern San Joaquin Valley provided good moisture and growth for dryland grain and hay crops. Cutting and windrowing of alfalfa hay increased in southern areas as plant growth accelerated. Orchards continued to bloom across the State, as growers applied blossom sprays to control disease and insect pests as necessary. Vines broke dormancy and displayed open leaf buds in many early variety vineyards. Navel oranges, mandarins, lemons, and grapefruit were picked and packed. Weather conditions for almond pollination remained less than ideal. Rainfall kept rangeland and pastures in good condition in many parts of the State. Winter's sting wore off in Texas as warmer weather was experienced. Producers in the wettest areas will need at least one week of dry weather before planting can begin. In west Texas and the plains, lack of soil moisture had some producers irrigating though many were waiting due to rising fuel prices. Corn planting was delayed in most places due to excessive moisture. Some cotton producers in the High Plains pre-watered fields due to a lack of winter moisture. Rio Grande Valley producers harvested sugarcane, citrus, greens, and cabbage. Cattle



# International Weather and Crop Summary

March 2 - 8, 2003

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

## HIGHLIGHTS

**EUROPE:** Across western Europe, unseasonably warmer weather caused winter crops to begin breaking dormancy, while crops remained dormant in the east.

**FSU-WESTERN:** The 4th consecutive week of unseasonably cold weather prevailed across the region, maintaining a moderate to deep snow cover over winter grain areas.

**MIDDLE EAST:** Across the Middle East, rain increased moisture supplies for winter grains, while seasonably warmer weather caused winter grains to lose winter hardiness across central Turkey and western Iran.

**NORTHWESTERN AFRICA:** Across Morocco, Algeria, and Tunisia, warm weather spurred winter grain development.

**SOUTH AFRICA:** Mostly dry weather in the corn belt reduced moisture supplies for filling summer crops.

**SOUTHEAST ASIA:** Showers slowed rice maturation in Java, Indonesia, while warm, dry weather continued to reduce irrigation supplies for reproductive rice in northern Vietnam.

**EASTERN ASIA:** Precipitation favored vegetative to semi-dormant winter wheat.

**AUSTRALIA:** Mostly dry weather dominated major summer crop- and winter grain-producing areas, reinforcing the severe drought gripping the southern and eastern fringe of the country.

**SOUTH AMERICA:** Abundant rain covered major crop areas in northern Argentina and southern Brazil, but heat and dryness gripped Argentina's southern crop areas.



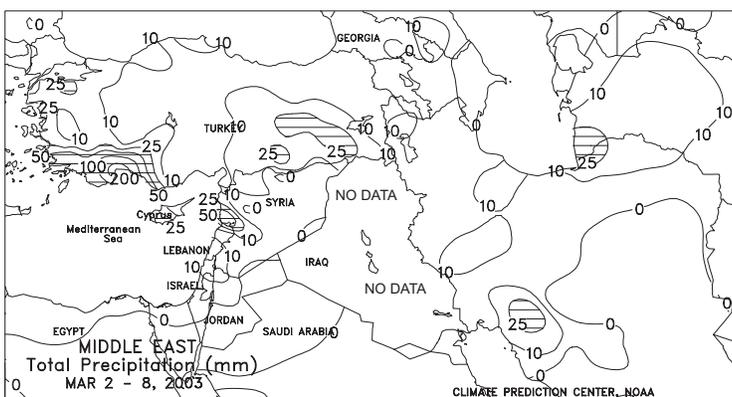
## EUROPE

Across western Europe, unseasonably warmer weather (1-3 degrees C above normal) caused winter grains and oilseeds to begin breaking dormancy across most of England, France, the Low Countries, and northern Italy. Maximum temperatures reached 15 to 20 degrees C across northern Italy and southern France and 12 to 15 degrees C across northern France, England, and extreme western Germany. Warm, dry weather also caused winter crops to lose winter hardiness in Germany. In England and the Low Countries, moderate rain (10-25 mm or more) boosted topsoil moisture for greening winter grains and oilseeds. In France, rainfall was generally light (less than 5 mm), with adequate subsoil moisture, but topsoils were becoming slightly dry for greening winter crops. In eastern Europe, mostly dry, cool weather kept winter crops dormant. Temperatures averaged 1 to 3 degrees C below normal, with maximum temperatures only reaching 5 to 8 degrees C by week's end. In southeastern Europe, slightly warmer weather (averaging near to slightly below normal) caused winter crops to lose winter hardiness and melted snow cover. Only central and southern Greece (10-55 mm) received significant rain in the region, boosting irrigation supplies. Italy's Po Valley received light to moderate rain (5-20 mm), but more rain was needed to eliminate short-term dryness. Further south in central and southern Italy, beneficial rain (10-30 mm) boosted topsoil moisture for durum wheat planting. Across the Iberian Peninsula, moderate rain fell in northern Spain (10-25 mm), while dry, warm weather prevailed in central and southern Spain. Across this region, temperatures averaged 1 to 3 degrees C above normal, with maximum temperatures exceeding 20 degrees C.



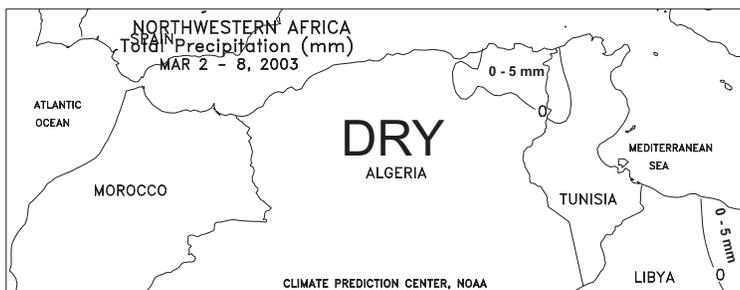
**FSU-WESTERN**

A ridge of high pressure continued to persist over the region for the 4th consecutive week, keeping most areas unseasonably cold and dry. However, the axis of bitterly cold air shifted to the north and east, with the lowest temperatures ranging from -25 to -17 degrees C at most locations in the Central and Volga Regions in Russia. Weekly temperatures averaged 3 to 9 degrees C below normal in these areas, maintaining a deep protective snow cover. Temperatures moderated in Ukraine, the Southern Region in Russia, Belarus, and the Baltics, although weekly temperatures continued to average 1 to 5 degrees C below normal. Maximum temperatures rose to around 10 degrees C in winter grain areas adjacent to the Black Sea coast, prompting the seasonal melting of snow cover. Typically, snow cover retreats northward over Ukraine and southern Russia in March. Light if any precipitation was observed across the region. The greatest amounts of precipitation (3-22 mm) fell mainly in the form of snow that spread southward from southern Lithuania and western Belarus into western Ukraine.



**MIDDLE EAST**

Light to moderate rain (5-25 mm) fell across the main wheat areas of Turkey, maintaining adequate moisture supplies for winter crops. The heaviest rain (25-100 mm or more) fell across coastal southwestern Turkey. Rain (18-40 mm) continued to boost irrigation supplies in the Tigris and Euphrates watersheds of southeastern Turkey. In central Turkey, cold weather was replaced by milder weather (maximum temperatures reaching 10-14 degrees C) during the week, melting snow cover. With the seasonably warmer weather, winter grains were greening across the lower elevations of western Turkey and losing winter hardiness across central Turkey and western Iran. In western Iran, light to moderate rain (5-20 mm) increased moisture supplies for dormant wheat. Light to moderate rain (10-25 mm) fell across the eastern Mediterranean from Syria to northern Israel and Jordan, maintaining adequate moisture supplies for vegetative winter grains. Based on weather reports from neighboring countries, light rain probably fell across northern Iraq. Temperatures averaged near normal across Turkey and 1 to 3 degrees C above normal across the eastern Mediterranean and western Iran.

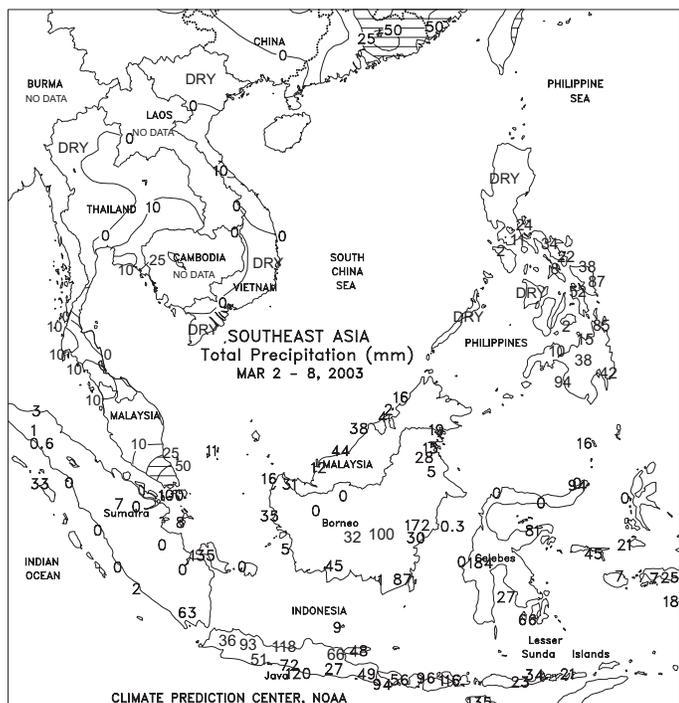
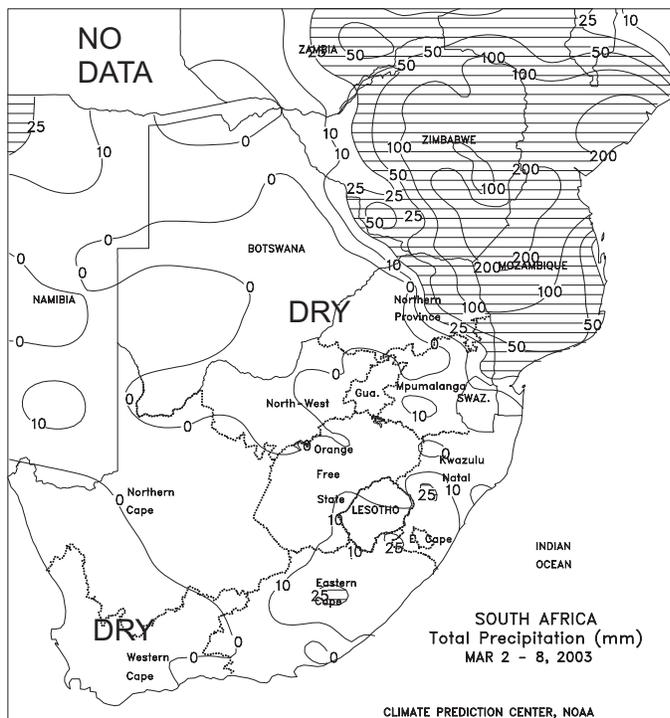


**NORTHWESTERN AFRICA**

Warm, dry weather covered all of Morocco, Tunisia, and Algeria, spurring winter grain development. Nevertheless, consistent season-to-date rainfall has provided adequate soil moisture for vegetative to early reproductive winter grains in Algeria and Tunisia. In the southern wheat areas of Morocco, however, dry weather returned after last week's timely rainfall where more rain was still needed to increase limited moisture supplies. Less than 50 percent of normal rainfall has fallen in southern Morocco during the past 4 weeks. Temperatures averaged 2 to 4 degrees C above normal, with maximum temperatures reaching 20 to 25 degrees C. Minimum temperatures remained above freezing.

**SOUTH AFRICA**

In the corn belt, light showers (generally less than 5 mm) moistened topsoils but were too light to prevent net evaporative losses. Although soil moisture remained mostly adequate for filling summer crops in the western corn belt, the relatively dry weather was unfavorable for filling corn in the central and eastern maize triangle. Given the late planting, extended periods of dry weather, and low subsoil moisture reserves in these latter areas, additional rainfall is needed during the next few weeks to avert further reductions in yield potential. Temperatures in the corn belt averaged about 1 to 2 degrees C above normal, with maximum temperatures in the lower 30s degrees C.

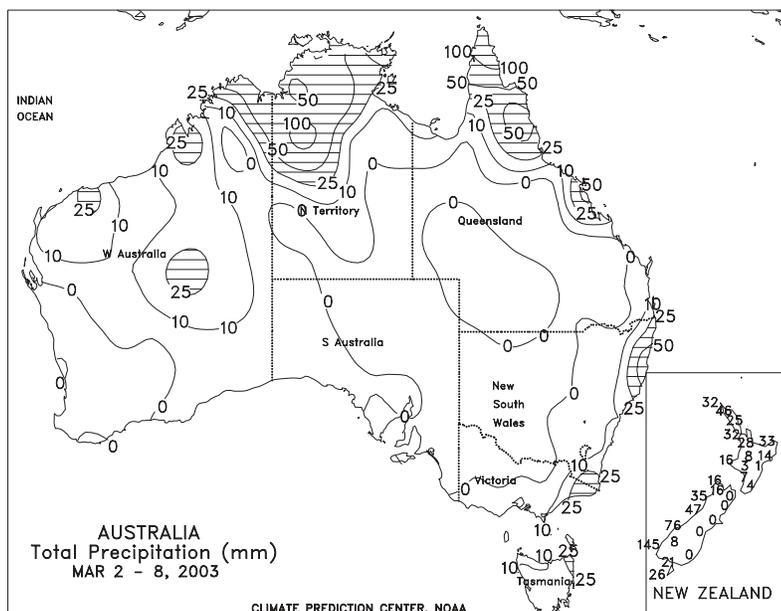


**SOUTHEAST ASIA**

Moderate to heavy showers (25-100 mm) slowed maturation of main-season rice in Java, Indonesia. Warm, dry weather in the Philippines favored second-season rice harvesting. In Vietnam, warm, dry weather continued to increase evaporative losses for reproductive winter-spring rice in the north, while favoring maturing rice in the south. Showers (10-25 mm) in southeastern Thailand continued to boost irrigation supplies for reproductive second-season rice. Mostly dry weather reduced moisture supplies for oil palm in peninsular Malaysia and Sumatra.

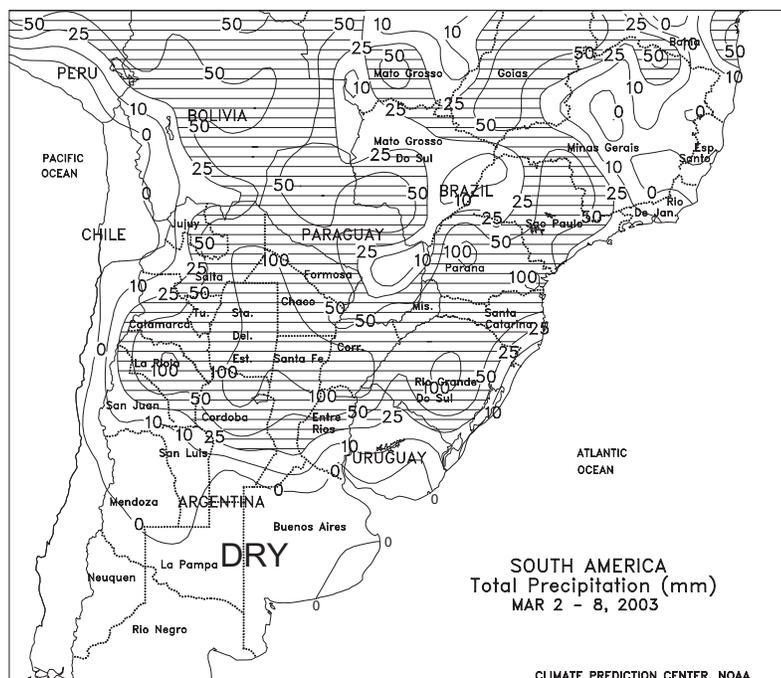
**EASTERN ASIA**

On the North China Plain, light to moderate precipitation (less than 10 mm in northern areas; 10 mm or more in the south) benefited semi-dormant to vegetative winter wheat. Temperatures averaging 1 to 2 degrees C below normal (below 5 degrees C on average except in the southernmost wheat areas) lowered early growth potential in most winter wheat areas, but the lowest temperatures remained above the threshold for potential crop damage. Farther south, moderate to heavy rain (10-50 mm or more) in the middle and lower Yangtze Valley increased irrigation reserves but hampered seasonal fieldwork, including planting of rice and other summer crops. Elsewhere, widespread precipitation (10-50 mm or more) continued to improve long-term moisture reserves in South Korea and Japan. Lighter precipitation (2-15 mm) fell in North Korea and neighboring locations in southern Manchuria (Liaoning and southern Jilin).



**AUSTRALIA**

Mostly dry weather dominated major summer crop and winter grain-producing areas, reinforcing the severe drought gripping the southern and eastern fringe of the country. In Queensland and northern New South Wales, dry (generally less than 5 mm) weather benefited drought-damaged sorghum approaching maturation in many areas. Nevertheless, rainfall would be welcome in these areas to recharge drought-depleted soil moisture and irrigation supplies. Similarly, unfavorably dry (less than 5 mm) weather continued in southern New South Wales, northern Victoria, South Australia, and Western Australia. Given the extreme drought in these areas, persistent, soaking rains were still needed in these areas to condition topsoils and recharge subsoil moisture supplies for winter grain planting, which typically begins in May. Temperatures across the continent averaged about 1 to 3 degrees C below normal, helping to keep evaporative losses below normal levels.



**SOUTH AMERICA**

Shower activity increased over major growing areas of northern Argentina (central Cordoba and Santa Fe northward through Formosa), with locally heavy precipitation (50-100 mm or more) boosting moisture reserves for immature cotton and soybeans. Temperatures averaged 1 to 2 degrees C above normal with highs generally confined to the middle 30s degrees C except for the far northern growing areas. In the far north (Chaco and Formosa), the rain ended a heat wave (highs from 35 to 42 degrees C) that taxed irrigation reserves and may have briefly stressed immature summer crops. In contrast, mostly dry, occasionally hot weather (temperatures averaging 4-6 degrees C above normal, with highs in the upper 30s and lower 40s degrees C) enveloped La Pampa and Buenos Aires, hastening maturation of corn and other summer crops. However, the hottest weather was generally south and west of the main soybean areas, reducing the potential for significant stress. According to independent sources from within Argentina, corn, soybean, and sunseed were about 19, 3, and 34 percent harvested, respectively, as of March 8. In Brazil, widespread rain (25-50 mm or more) covered most major crop areas, maintaining adequate to abundant moisture reserves for immature summer crops, including newly planted (winter) corn. However, some summer crop harvesting may have been delayed. Temperatures averaging 1 to 3 degrees C above normal hastened crop development, but the hottest weather (highs exceeding 35 degrees C) was generally confined to northwestern growing areas (Mato Grosso and Mato Grosso do Sul).

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