

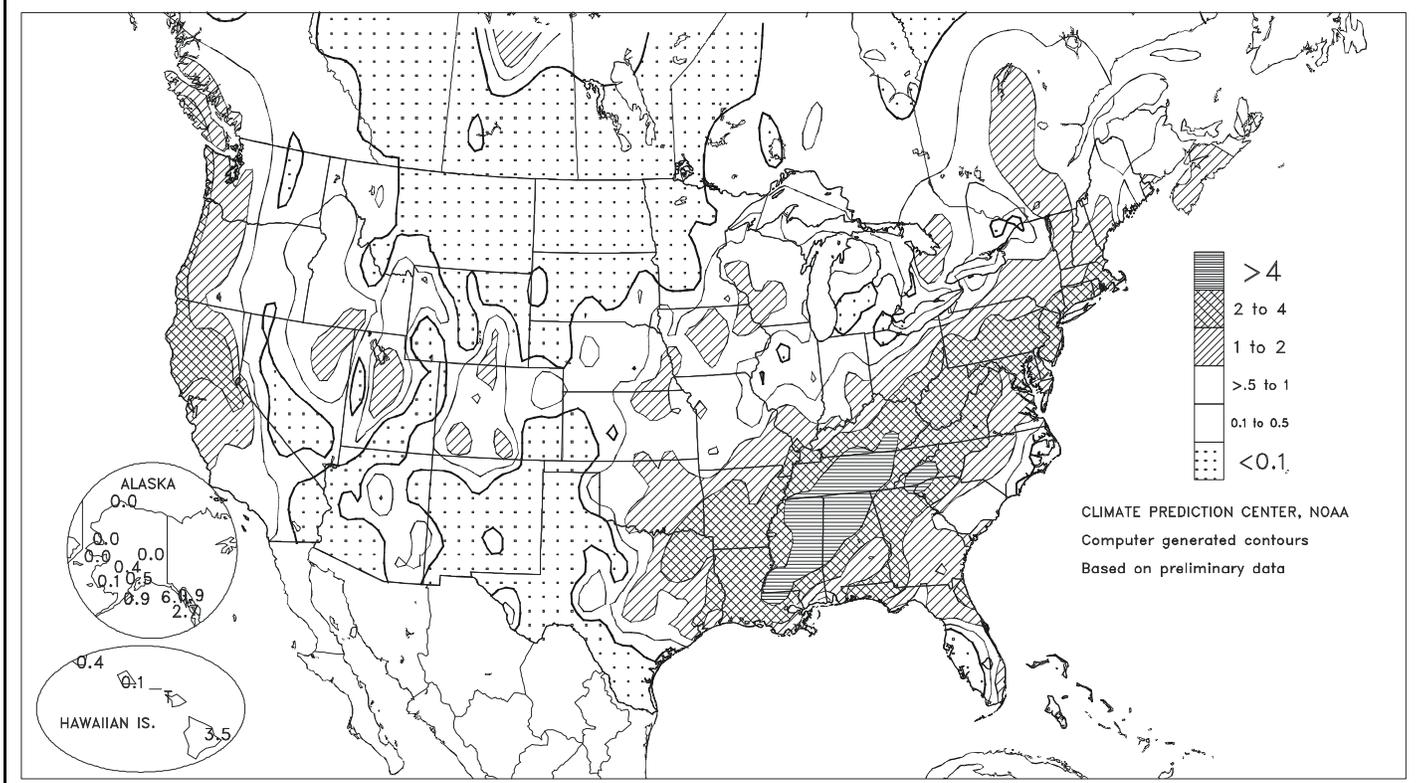
WEEKLY WEATHER AND CROP BULLETIN

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

Total Precipitation (Inches)

FEB 1 - 7, 2004



HIGHLIGHTS

February 1 - 7, 2004

Highlights provided by USDA/WAOB

A sprawling, mid-week storm system produced widespread snowfall across the **central Plains** and **Midwest**. Snow blanketed winter wheat, including previously bare fields on the **central High Plains**, as far south as **Kansas** and **northern Oklahoma**. Meanwhile, the **southwestern Corn Belt** experienced its third major snow storm in less than 2 weeks, boosting snow depths to record or near-record levels. Precipitation (mostly snow) also fell in other parts of the **Midwest**, improving moisture reserves in the **upper Mississippi Valley** and maintaining adequate to locally excessive soil moisture in winter wheat areas of the **eastern Corn Belt**. In contrast, mostly
(Continued on page 5)

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Weather Data for Mississippi and the Missouri Bootheel

Weather Data for the Week Ending February 7, 2004

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 Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL IN. SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
MS	INDIANOLA 1S	49	35	60	30	42	-	2.79	-	2.13	9.36	-	6.40	-	-	-	0	2	3	1
	INVERNESS 5E	50	35	64	30	43	-	2.78	-	2.54	8.71	-	6.30	-	48	41	0	2	3	1
	LYON	48	33	58	28	40	-	3.18	-	2.42	9.17	-	6.79	-	46	40	0	4	4	2
	MACON	52	36	63	29	44	-	5.18	-	4.86	11.71	-	8.12	-	50	44	0	2	3	1
	ONWARD	51	35	59	29	43	-	2.62	-	2.20	10.11	-	6.85	-	-	-	0	2	3	1
	PERTSHIRE	48	32	56	27	40	-	3.48	-	2.53	10.30	-	7.49	-	-	-	0	4	3	2
	SCOTT	48	34	59	30	41	-	2.52	-	1.68	9.97	-	6.80	-	-	-	0	3	3	2
	SIDON	50	36	65	30	43	-	3.30	-	3.04	10.21	-	7.47	-	50	41	0	2	3	1
	STARKVILLE	51	34	62	28	42	1	3.47	2.14	3.14	8.75	111	6.04	220	48	42	0	4	4	1
	TUNICA 1W	46	30	55	23	38	-	3.15	-	2.29	10.27	-	7.89	-	-	-	0	4	4	2
	VANCE	47	32	58	27	40	-	3.33	-	2.63	10.53	-	7.65	-	-	-	0	4	4	1
	VERONA	50	33	60	27	42	-	3.37	-	3.18	8.79	-	6.04	-	48	40	0	4	4	1
	STONEVILLE X	51	32	59	26	42	1	2.79	1.53	2.00	9.69	119	6.38	236	48	41	0	4	4	2
	MO	DELTA	37	25	43	17	31	-2	1.05	0.37	0.58	5.32	65	3.34	87	32	31	0	6	3
STEELE		42	30	50	24	35	-1	2.15	1.23	1.38	8.18	87	5.33	120	38	34	0	4	4	2
GLENNONVILLE		38	27	46	22	33	-2	1.32	0.70	0.70	5.85	76	3.19	88	34	33	0	7	3	2
PORTAGEVILLE LF		41	29	52	24	34	-1	2.13	1.39	1.15	7.45	88	5.02	126	38	33	0	5	3	2
CLARKTON		39	27	47	21	33	-2	1.52	0.90	0.83	6.34	83	3.58	98	36	34	0	7	3	2
CARDWELL		40	28	48	23	34	-2	2.08	1.18	1.37	7.94	88	4.88	114	39	36	0	5	4	2
CHARLESTON		39	27	51	20	33	1	1.86	1.05	0.95	7.00	85	4.24	111	36	33	0	6	3	2
PORTAGEVILLE DC		41	28	52	23	35	-1	2.23	1.49	1.18	7.61	90	5.49	138	40	36	0	5	3	2

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

X Based on 1971-2000 normals.

- Sufficient data not available.

Weather and Crop Summary: Daytime temperatures climbed above 60°F in some Delta locations prior to the midweek passage of a cold front. On average, weekly temperatures were near normal. The front provided some of the most intense rainfall of the winter to date, totaling 5 inches or more in some Delta locations. The rain pushed many streams and rivers to bank full or higher, and some flooding persisted in Mississippi at week's end. Most winter wheat in the Delta was aided by the rain, which mostly drained into ditches, but wheat may have sustained damage in some low-lying areas, where river and stream flooding occurred.

U.S. Crop Production Highlights

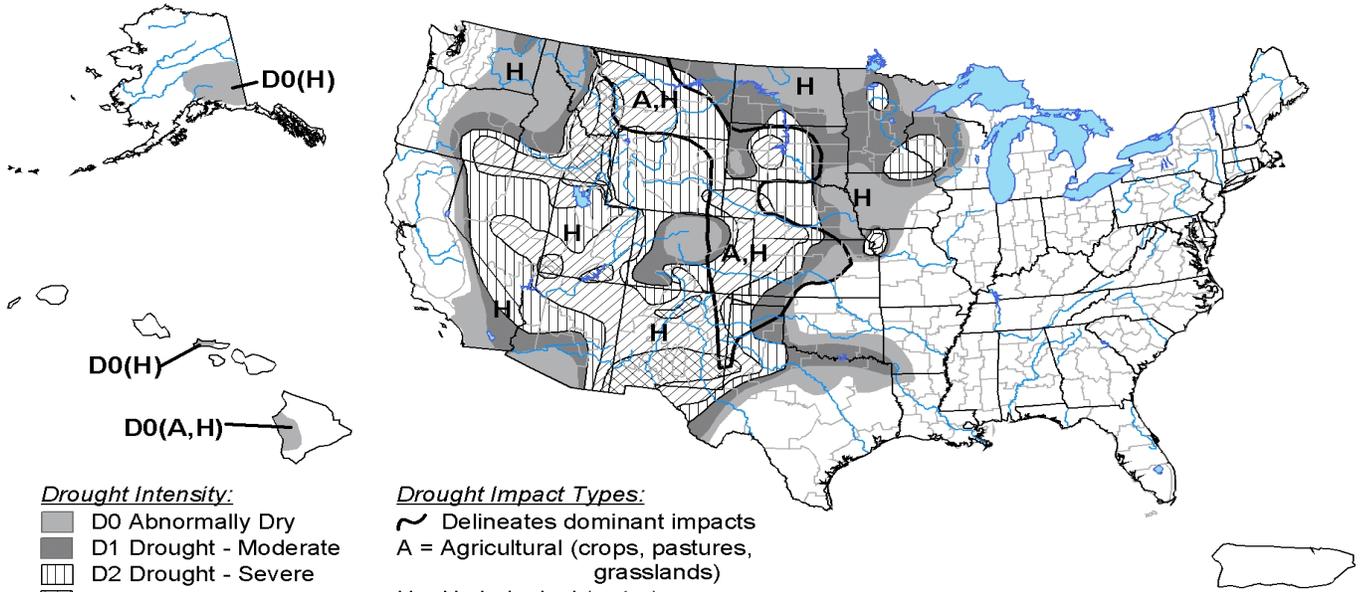
The following information was released by USDA's Agricultural Statistics Board on February 10, 2004. Forecasts refer to February 1.

The **all orange** forecast for the 2003-04 crop is 13.3 million tons, down 1 percent from the January forecast but 15 percent above last season's final utilization. Florida's all orange forecast is reduced to 246 million boxes (11.1 million tons), 2 percent below the January 1 forecast but 21 percent above the previous season. The early- and mid-season varieties forecast is lowered 4 million boxes to 128 million boxes (5.76 million tons), 3 percent lower than last month but 14 percent above last season. Results from the row count survey, combined with estimated utilization, indicated a reduction from the January forecast. The fruit size and droppage measurements, finalized in January, also

support the reduction. Harvest of Florida's Navel oranges, a component of the early- and mid-season varieties, has decreased due to crystallization observed in the fruit. Crystallization causes the fruit to dry out from the top, making it unusable for fresh shipments. The Valencia forecast, at 118 million boxes (5.31 million tons), is unchanged from January but is 30 percent above last season's final utilization. Fruit size continues to be above average but not as large as last season. Fruit droppage remains near the minimum of the previous 10 seasons. Arizona, California, and Texas orange production forecasts are carried forward from the January forecasts.

U.S. Drought Monitor

February 3, 2004
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)
- (No type = Both impacts)

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

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

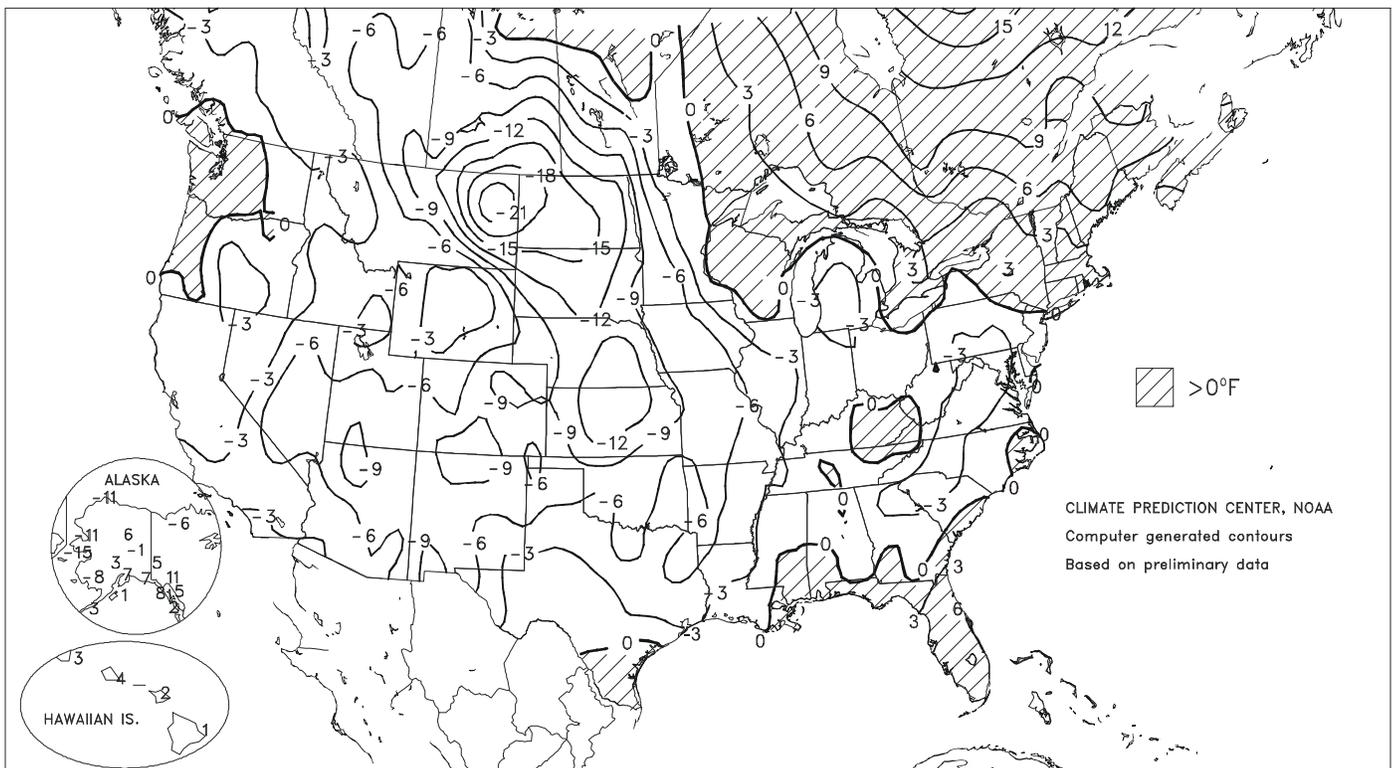


Released Thursday, February 5, 2004

Author: Mark Svoboda, NDMC

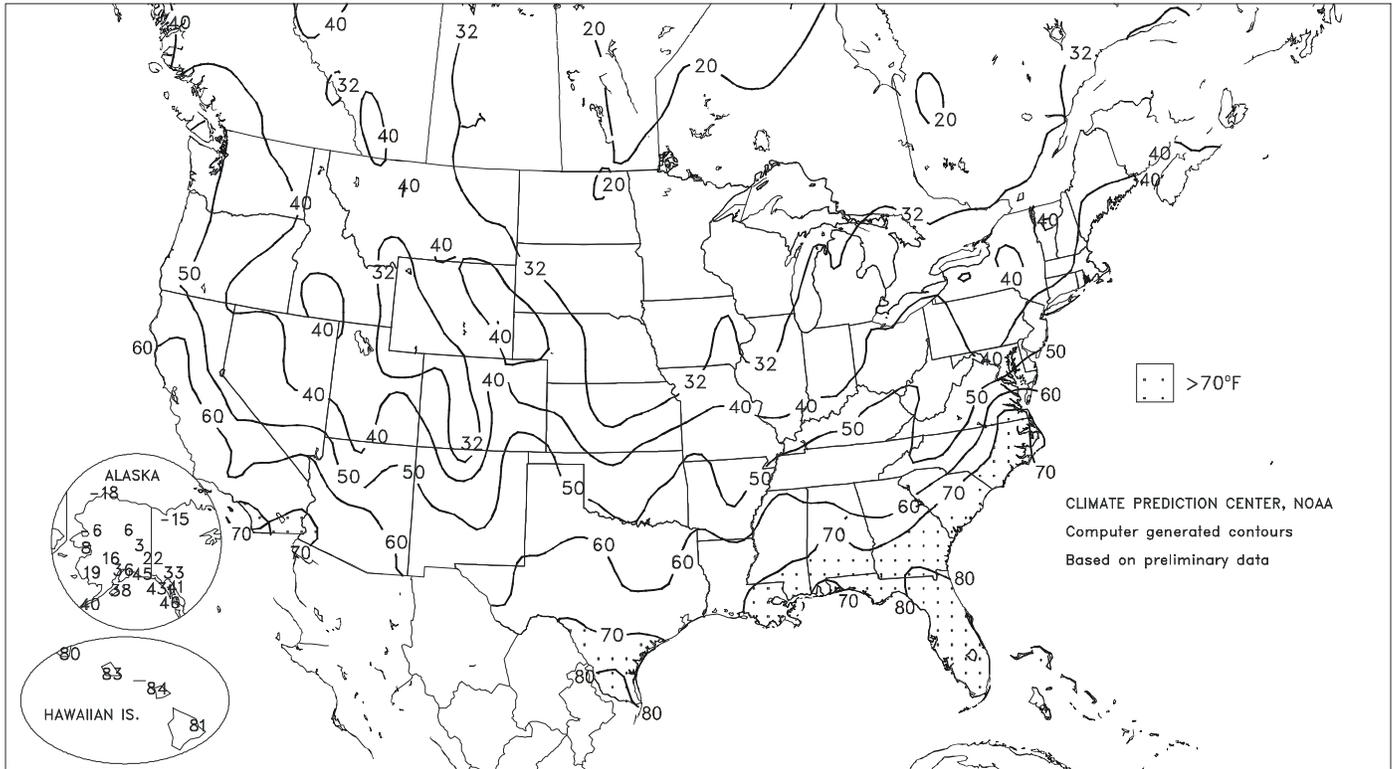
Departure of Average Temperature from Normal (°F)

FEB 1 - 7, 2004



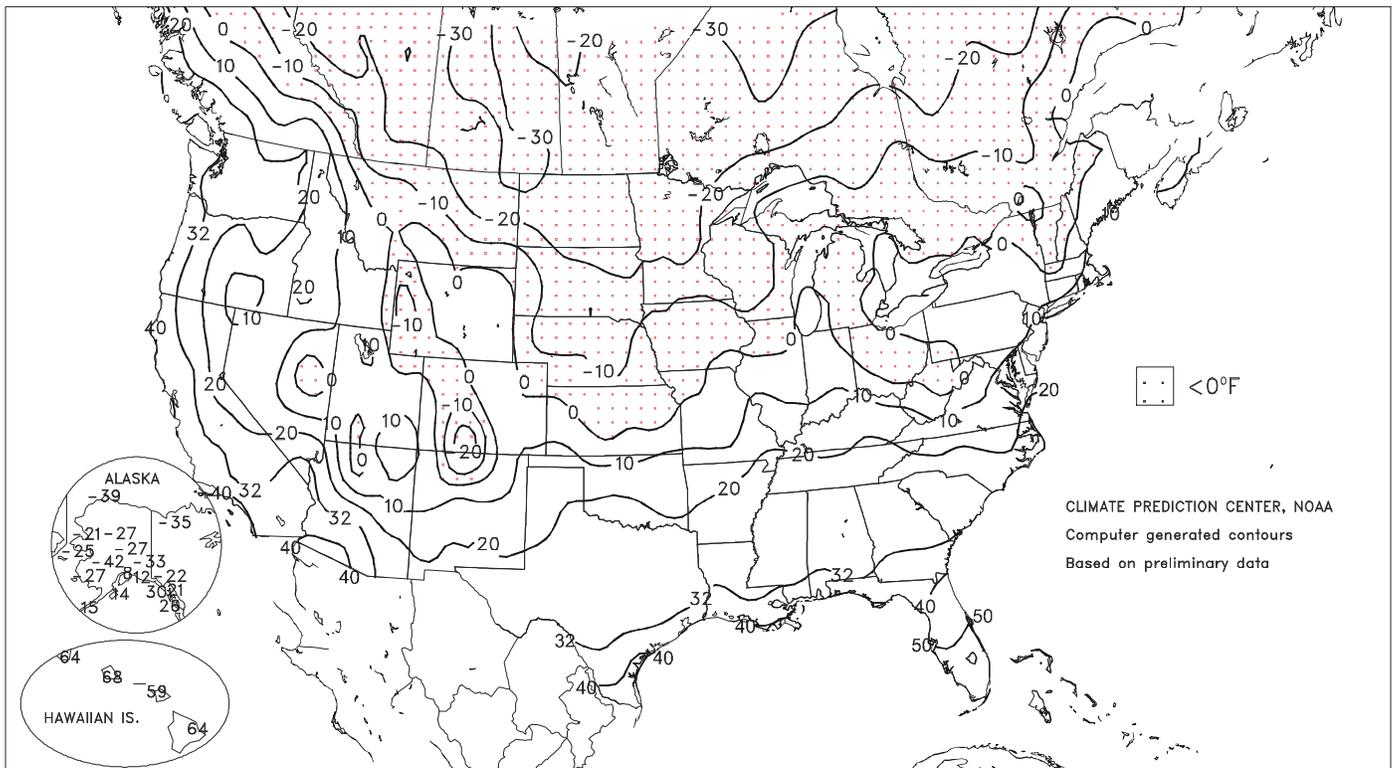
Extreme Maximum Temperature (°F)

FEB 1 - 7, 2004



Extreme Minimum Temperature (°F)

FEB 1 - 7, 2004



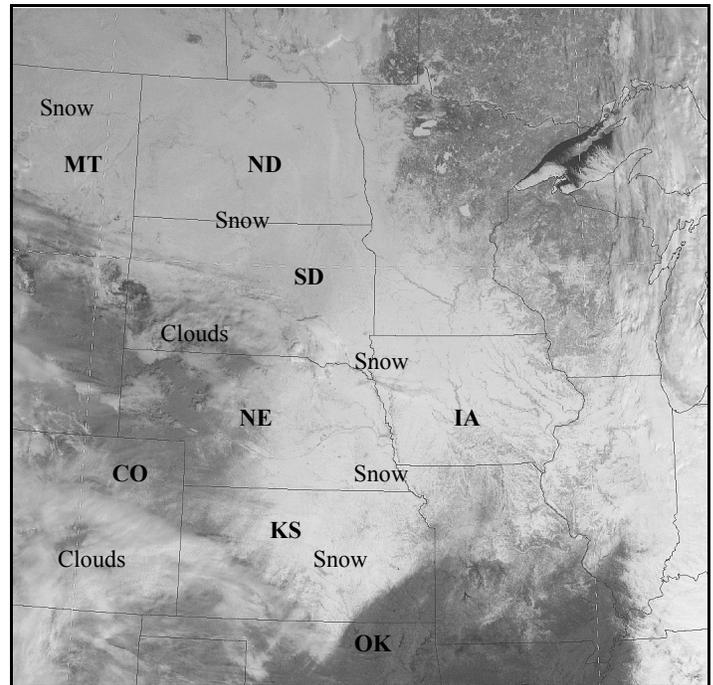
(Continued from front cover)

dry weather prevailed on the **southern High Plains**, where the most significant precipitation in the last 7 months was a heavy rainfall event on January 15-17. Farther east, heavy rain triggered late-week flooding in the **Appalachians** and adjacent foothills, especially where creeks and rivers were clogged with ice and soils were saturated or frozen. **East of the Appalachians**, snow and ice accumulations associated with back-to-back storm systems caused some travel and electrical disruptions. In the **South**, locally heavy showers recharged soil moisture and aided pastures and winter grains but caused local flooding. Weekly rainfall totaled 4 inches or more in many locations from **Mississippi northeastward into eastern Kentucky**. Farther west, early- to mid-week rain and snow provided some drought relief in the **Southwest** and **Intermountain West**, although water-supply concerns persisted. Meanwhile, **Northwestern** winter grains continued to benefit from recent soil moisture improvements. Colder-than-normal weather prevailed across much of the Nation, particularly from **eastern Montana and the Dakotas southward onto the central Plains**, where weekly temperatures ranged from 8 to 22°F below normal. Among the few areas experiencing warm weather was **Florida**, where readings averaged as much as 6°F above normal.

Early in the week, heavy rainfall lingered across **Florida**, where 2-day (January 31 - February 1) totals reached 2.47 inches in **Vero Beach** and 4.78 inches in **Fort Lauderdale**. Farther north, heavy snow blanketed the **east-central Plains** and **western Corn Belt** for the second time in 1 week. **Omaha, NE**, received 11.3 inches of snow on February 1-2, following a 13.5-inch total on January 25-26. While the first storm system crossed the **Midwest** and **Northeast**, a second storm reached the **West Coast**. On February 2, daily-record rainfall in **California** included 0.57 inch in **Bakersfield** and 0.56 inch in **Fresno**, followed the next day by daily-record snowfall in locations such as **Williamsport, PA** (7.9 inches), and **Albany, NY** (6.1 inches). Mixed precipitation totaled 1.10 inches, a daily record for February 3, in **Scranton, PA**.

By mid-week, heavy snow developed in conjunction with the second storm system in the **Southwest**, totaling 12.0 inches (a record for February 4) in **Flagstaff, AZ**. Incredibly, snow returned to the **east-central Plains** and **western Corn Belt** from February 4-6, totaling another 6.4 inches in **Omaha, NE**. Elsewhere in **Nebraska**, **Grand Island** received consecutive daily-record snowfall totals (5.0 and 7.5 inches on February 4-5). Other record totals for February 5 included 7.0 inches in **Des Moines, IA**, and 5.5 inches in **Topeka, KS**. Heavy snow fell as far south as the **Ozark Plateau**, where **Mountain Home, AR**, measured 5.0 inches. By late February 5, snow depths reached 21 inches in **Sioux Falls, SD**, and 26 inches in **Sioux City, IA**, and **Omaha**. It was **Sioux Falls'** greatest snow depth since March 21, 1969, and **Sioux City's** greatest depth since March 14, 1962. **Omaha** easily set a February snow depth record, surpassing its 1965 standard of 18 inches.

Meanwhile, heavy rain pounded the **South**. In **Tennessee**, **Nashville** netted 4.07 inches on February 5, its third-highest single-day rainfall in February behind 5.20 inches on February 13, 1880, and 4.73 inches on February 14, 1989. **Jackson, MS** (3.46 inches on February 5), recorded its sixth-highest February daily sum. **Pinson, AL**, received 7.15 inches in a 24-hour period on February 5-6, edging its all-time record of 7.10 inches set on March 20, 1970. Farther north, **London, KY**, set consecutive daily-record totals (2.59 and 1.40 inches on February 5-6). Mixed precipitation (snow, sleet, freezing rain, and rain) returned to areas **east of the Appalachians** on February 5-6. On the latter date, daily-record precipitation totals included 1.70 inches in **Asheville, NC**, **Blacksburg, VA**, and **Wilmington, DE**. In advance of the storm, warm weather prevailed in the **southern Atlantic States**, resulting in daily-record highs for February 6 in **Norfolk, VA** (75°F),



GOES-East Visible Satellite Image, February 3, 2004 at 16:15 GMT (10:15am CDT). During Feb. 4-5, an extensive upper-air storm system dropped welcomed snow on large areas of the central High Plains that had little or no snow cover. By February 5, previously bare central South Dakota, western Kansas, western Nebraska, and northeastern Colorado measured 2 to 4 inches of snow, with up to 6 inches in the latter two areas. Farther east, 1 to 2 feet of snow covered eastern Nebraska, northern Kansas, and western Iowa. The snow cover provided insulation and moisture for the central High Plains winter wheat crop.

and **Melbourne, FL** (85°F). Elsewhere in **Florida**, **Orlando** notched consecutive daily-record highs (84 and 85°F) on February 5-6.

Toward week's end, chilly weather prevailed in most areas from the **Plains eastward**. On February 7, **Hastings, NE** (-11°F), collected a daily-record low. Meanwhile, a new storm system arrived in the **West**, producing daily-record totals for February 7 in **Idaho** locations such as **Pocatello** (0.57 inch) and **Burley** (0.53 inch). **Pocatello's** precipitation translated into 10.0 inches of snow. Farther south, February 3-7 snowfall in **Salt Lake City, UT**, totaled 10.7 inches.

Although somewhat quieter weather prevailed in **Hawaii**, there were still some heavy-rain highlights. Most significantly, February 7-8 totals topped 4 inches at some **Oahu** locations, including the **Wilson Tunnel** (5.83 inches in 24 hours). Temperatures generally ranged from 1 to 4°F above normal across **Hawaii**, with much of the unusual warmth coming at night. For example, **Honolulu, Oahu**, recorded low temperatures of 70°F or higher on 5 days, compared with a normal low temperature of 65°F during the first week of February. Meanwhile, cold (as much as 15°F below normal), dry weather in **western Alaska** contrasted with mild, increasingly wet weather across the **southeastern part of the State**. On Sunday, February 8, daily-record rainfall totals in **southeastern Alaska** included 3.26 inches in **Yakutat** and 0.92 inch in **Juneau**.

National Weather Data for Selected Cities

Weather Data for the Week Ending February 7, 2004

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 Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL IN, SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F				
																90 AND ABOVE	32 AND BELOW	0.1 INCH OR MORE	5.0 INCH OR MORE	
AL	BIRMINGHAM	53	35	64	25	44	0	3.46	2.41	2.24	9.53	87	6.23	96	91	50	0	3	3	2
	HUNTSVILLE	49	32	56	26	41	-1	4.87	3.74	3.85	11.11	91	7.95	120	83	65	0	4	3	2
	MOBILE	61	44	72	34	53	2	0.75	-0.47	0.74	7.98	69	4.19	60	86	61	0	0	2	1
	MONTGOMERY	58	39	72	28	48	0	1.28	0.03	1.28	7.81	69	3.87	62	90	56	0	2	1	1
AK	ANCHORAGE	29	17	36	8	23	6	0.53	0.38	0.26	3.12	166	1.02	123	93	83	0	7	3	0
	BARROW	-22	-30	-18	-39	-26	-11	0.00	-0.03	0.00	0.17	63	0.09	60	77	73	0	7	0	0
	FAIRBANKS	0	-18	3	-27	-9	-1	0.00	-0.08	0.00	0.77	56	0.33	52	83	79	0	7	0	0
	JUNEAU	35	28	41	21	32	5	0.93	-0.06	0.37	12.74	114	6.82	118	95	86	0	5	5	0
	KODIAK	36	25	38	14	30	0	0.93	-0.67	0.41	18.02	104	7.79	80	92	79	0	5	6	0
	NOME	-2	-16	8	-25	-9	-14	0.00	-0.19	0.00	1.48	70	0.27	24	65	61	0	7	0	0
AZ	FLAGSTAFF	34	8	40	-4	21	-10	0.24	-0.33	0.20	1.92	42	1.00	36	90	38	0	7	2	0
	PHOENIX	63	42	69	39	53	-4	0.03	-0.11	0.03	1.04	55	0.85	88	58	33	0	0	1	0
	TUCSON	60	35	67	29	47	-7	0.16	-0.03	0.14	1.12	51	0.96	81	63	35	0	1	2	0
	YUMA	68	46	72	43	57	-4	0.00	-0.06	0.00	0.70	81	0.70	159	50	33	0	0	0	0
AR	FORT SMITH	42	28	49	19	35	-6	1.27	0.73	1.00	5.94	94	4.10	141	90	58	0	5	5	1
	LITTLE ROCK	45	30	51	24	38	-4	1.38	0.61	0.77	8.84	97	4.86	111	92	57	0	4	4	1
CA	BAKERSFIELD	60	41	67	37	51	0	0.60	0.32	0.57	2.48	112	1.18	81	81	64	0	0	3	1
	FRESNO	57	39	62	35	48	-1	0.45	-0.05	0.39	4.27	107	1.32	50	92	67	0	0	3	0
	LOS ANGELES	64	46	69	45	55	-3	0.55	-0.22	0.55	2.20	40	1.04	28	85	52	0	0	1	1
	REDDING	52	36	62	30	44	-4	2.56	1.12	1.61	17.39	138	5.57	70	95	72	0	2	4	2
	SACRAMENTO	56	40	60	35	48	-1	0.88	-0.05	0.50	7.29	101	3.03	64	98	61	0	0	3	1
	SAN DIEGO	63	49	69	46	56	-3	0.38	-0.12	0.37	1.33	33	0.72	26	86	61	0	0	2	0
	SAN FRANCISCO	56	46	58	42	51	0	1.16	0.10	0.71	10.62	126	4.19	76	92	83	0	0	4	1
	STOCKTON	56	39	61	32	48	-1	0.81	0.18	0.62	5.70	110	2.58	77	95	82	0	1	4	1
CO	ALAMOSA	24	-11	28	-26	7	-12	0.04	0.01	0.02	0.23	38	0.18	64	84	69	0	7	2	0
	CO SPRINGS	32	14	41	6	23	-7	0.13	0.10	0.08	0.79	108	0.73	235	91	47	0	7	2	0
	DENVER INTL	31	14	43	8	23	-6	0.17	0.17	0.09	0.52	96	0.40	174	91	53	0	7	3	0
	GRAND JUNCTION	32	14	36	6	23	-7	0.31	0.23	0.18	1.68	140	1.13	166	88	67	0	7	2	0
	PUEBLO	38	18	48	10	28	-4	0.03	0.00	0.03	0.59	79	0.54	150	85	50	0	7	1	0
CT	BRIDGEPORT	37	22	43	14	29	-1	2.18	1.45	1.52	7.27	92	3.99	89	82	65	0	7	3	2
	HARTFORD	36	17	41	7	26	-1	1.25	0.49	0.72	6.63	81	2.72	59	92	70	0	7	3	1
DC	WASHINGTON	40	26	46	15	33	-3	2.20	1.59	1.55	7.88	115	3.56	93	83	53	0	7	3	2
DE	WILMINGTON	38	23	46	10	30	-2	2.27	1.62	1.71	8.74	117	3.93	96	82	50	0	7	2	2
FL	DAYTONA BEACH	72	57	84	45	65	6	2.27	1.62	1.73	5.10	79	3.55	94	95	60	0	0	3	1
	JACKSONVILLE	67	48	83	38	57	3	0.89	0.08	0.56	3.74	52	2.54	56	95	67	0	0	3	1
	KEY WEST	79	68	81	62	73	3	0.23	-0.18	0.19	3.76	79	2.73	104	90	70	0	0	2	0
	MIAMI	81	65	83	56	73	5	0.87	0.37	0.80	4.64	102	3.39	142	94	56	0	0	2	1
	ORLANDO	76	57	85	49	66	5	0.44	-0.08	0.39	5.27	100	3.71	126	96	65	0	0	2	0
	PENSACOLA	60	44	69	36	52	-1	2.13	1.00	2.06	7.31	70	3.68	57	90	60	0	0	2	1
	TALLAHASSEE	62	44	76	38	53	0	0.43	-0.66	0.40	6.12	58	4.11	64	88	74	0	0	3	0
	TAMPA	75	57	83	49	66	4	0.08	-0.51	0.05	5.11	99	3.81	133	96	62	0	0	3	0
	WEST PALM	81	62	83	53	71	5	0.44	-0.31	0.33	6.73	88	2.47	55	97	65	0	0	4	0
GA	ATHENS	48	31	54	27	39	-5	1.71	0.65	1.06	6.54	69	4.24	74	84	58	0	5	3	2
	ATLANTA	48	32	55	30	41	-3	1.62	0.47	0.99	7.16	72	4.47	72	88	66	0	5	3	2
	AUGUSTA	56	32	72	24	44	-2	0.73	-0.29	0.39	5.19	60	3.17	57	79	54	0	5	3	0
	COLUMBUS	55	38	68	30	47	-1	2.17	1.12	1.76	7.96	78	5.03	86	87	49	0	1	3	1
	MACON	57	37	69	29	47	0	1.41	0.28	1.12	10.50	104	5.64	92	82	52	0	1	3	1
	SAVANNAH	62	42	72	31	52	2	0.51	-0.29	0.50	4.03	53	2.55	54	82	58	0	1	2	1
HI	HILO	80	65	81	64	72	1	3.48	1.33	0.99	25.74	115	15.69	132	91	86	0	0	7	3
	HONOLULU	82	71	83	68	76	3	0.06	-0.52	0.05	11.75	191	6.94	210	79	70	0	0	2	0
	KAHULUI	81	66	84	59	74	2	0.01	-0.67	0.01	10.63	142	7.91	179	86	76	0	0	1	0
	LIHUE	79	69	80	64	74	2	0.36	-0.49	0.16	10.11	99	7.09	130	86	80	0	0	5	0
ID	BOISE	37	28	42	26	33	-1	0.36	0.08	0.14	3.83	126	2.21	132	91	76	0	7	6	0
	LEWISTON	42	31	46	27	37	1	0.14	-0.10	0.08	3.79	156	2.00	145	91	78	0	4	3	0
	POCATELLO	29	19	33	12	24	-3	0.31	0.09	0.16	2.25	91	1.28	94	94	76	0	7	5	0
IL	CHICAGO/O'HARE	30	15	34	0	22	-2	0.20	-0.19	0.12	2.77	61	1.11	52	81	66	0	7	4	0
	MOLINE	27	14	30	-2	20	-3	0.50	0.18	0.27	4.37	107	1.59	84	82	68	0	7	5	0
	PEORIA	28	16	33	2	22	-3	0.33	0.00	0.21	2.82	67	1.18	64	86	64	0	7	5	0
	ROCKFORD	28	13	31	-3	20	-1	0.35	0.05	0.17	4.03	107	0.81	47	88	67	0	7	4	0
	SPRINGFIELD	30	17	35	7	23	-4	0.38	0.04	0.26	3.24	72	1.76	90	84	74	0	7	4	0
IN	EVANSVILLE	38	23	43	11	31	-2	0.58	-0.11	0.35	4.73	66	3.53	98	87	74	0	7	2	0
	FORT WAYNE	30	13	35	-5	21	-4	0.28	-0.16	0.20	5.33	101	2.71	109	95	72	0	7	2	0
	INDIANAPOLIS	33	19	37	10	26	-2	0.61	0.07	0.33	8.69	144	5.26	174	89	67	0	7	3	0
	SOUTH BEND	30	14	35	1	22	-3	0.25	-0.22	0.16	3.51	60	1.81	66	82	69	0	7	5	0
IA	BURLINGTON	25	13	32	1	19	-6	0.25	-0.04	0.24	5.44	147	1.12	70	89	65	0	7	2	0
	CEDAR RAPIDS	25	7	38	-5	16	-5	0.41	0.16	0.23	2.91	105	1.11	85	90	65	0	7	3	0
	DES MOINES	20	7	25	-2	13	-10	0.45	0.19	0.22	2.54	97	1.65	128	82	70	0	7	5	0
	DUBUQUE	26	9	28	-5	18	-2	0.45	0.15	0.26	2.51	77	0.84	53	82	68	0	7	3	0
	SIOUX CITY	17	4	25	-10	11	-11	0.41	0.33	0.19	1.47	111	1.24	185	84	78	0	7	3	0
	WATERLOO	23	6	30	-6	14	-5	0.28	0.06	0.14	1.28	59	0.74	70	80	68	0	7	3	0
KS	CONCORDIA	22	9	28	-5	16	-13	0.18	0.11	0.17	1.85	104	0.87	119	87	76	0	7	2	0
	DODGE CITY	29	13	35	4	21	-12	0.10	0.02	0.06	0.65	44	0.15	21	90	76	0	7	3	0
	GOODLAND	32	12	38	4	22	-8	0.21	0.15	0.10	0.83	93	0.27	55	86	78	0	7	4	0
	TOPEKA	27	13	32	-6	20	-10	0.68	0.48	0.51	3.90	152	1.54	134	87	74	0	7	3	1

Based on 1971-2000 normals

*** Not Available

Weather Data for the Week Ending February 7, 2004

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 Dec 1	PCT. NORMAL SINCE Dec 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	49	15	35	3	22	-11	0.35	0.23	0.28	3.08	133	2.19	228	96	81	0	7	3	0
	JACKSON	23	26	53	16	35	0	3.50	2.69	1.66	11.52	133	7.73	177	92	62	0	7	5	3
	LEXINGTON	42	25	52	14	33	0	1.48	0.78	0.71	8.69	108	4.80	119	88	71	0	7	4	2
	LOUISVILLE	41	26	45	15	34	-1	1.67	0.95	0.91	9.54	124	6.41	160	88	62	0	7	4	2
	PADUCAH	39	26	50	19	32	-3	1.51	0.58	0.87	6.78	77	4.58	104	92	59	0	6	4	2
LA	BATON ROUGE	61	41	73	32	51	0	4.85	3.46	3.90	11.27	88	8.61	114	96	55	0	1	3	2
	LAKE CHARLES	61	41	68	31	51	-1	2.65	1.66	1.69	14.99	135	11.51	177	95	57	0	1	4	2
	NEW ORLEANS	62	45	73	35	54	0	1.55	0.07	1.18	6.53	53	4.57	62	87	70	0	0	3	1
	SHREVEPORT	52	34	65	26	43	-6	1.64	0.57	0.70	9.64	94	6.03	106	90	51	0	3	4	2
ME	CARIBOU	26	8	34	2	17	7	0.38	-0.16	0.21	6.89	103	1.82	52	86	62	0	7	3	0
	PORTLAND	36	17	43	5	27	4	1.31	0.51	0.66	5.31	58	1.59	33	84	47	0	7	4	1
MD	BALTIMORE	37	21	42	8	29	-4	2.04	1.35	1.31	8.18	109	3.46	83	86	66	0	7	3	2
MA	BOSTON	39	24	44	15	31	1	1.45	0.61	0.91	7.52	89	2.46	52	81	46	0	7	4	1
	WORCESTER	34	18	37	9	26	2	1.43	0.65	0.92	7.42	86	2.86	59	90	52	0	7	4	1
MI	ALPENA	27	6	33	-8	17	0	0.24	-0.08	0.17	2.36	60	0.97	47	93	69	0	7	2	0
	GRAND RAPIDS	29	12	34	3	21	-2	0.12	-0.28	0.05	3.36	65	2.13	88	88	64	0	7	4	0
	HOUGHTON LAKE	26	1	31	-10	14	-4	0.27	-0.03	0.09	2.73	75	1.53	80	86	68	0	7	4	0
	LANSING	29	9	35	-2	19	-3	0.35	-0.01	0.13	2.69	65	1.26	64	87	69	0	7	4	0
	MUSKEGON	29	13	33	3	21	-3	0.22	-0.19	0.18	3.15	60	1.59	60	89	71	0	7	3	0
	TRAVERSE CITY	28	8	33	-5	18	-2	0.46	-0.10	0.27	3.42	55	1.83	52	93	60	0	7	5	0
MN	DULUTH	20	4	27	-13	12	1	0.08	-0.14	0.05	2.51	110	1.97	147	86	71	0	7	3	0
	INT'L FALLS	17	-7	27	-23	5	-2	0.02	-0.15	0.01	1.05	61	0.67	66	89	61	0	7	2	0
	MINNEAPOLIS	21	5	27	-11	13	-3	0.71	0.52	0.36	1.73	78	0.94	76	85	64	0	7	5	0
	ROCHESTER	21	3	26	-14	12	-3	0.00	-0.18	0.00	0.75	35	0.32	29	87	71	0	7	0	0
	ST. CLOUD	16	-3	25	-26	7	-5	0.23	0.09	0.17	0.93	58	0.65	72	95	72	0	7	3	0
MS	JACKSON	56	37	65	30	47	0	3.50	2.33	3.46	11.07	91	7.73	113	90	54	0	3	2	1
	MERIDIAN	57	38	70	29	47	-1	3.67	2.38	3.03	9.36	75	6.73	93	84	63	0	2	3	2
	TUPELO	50	32	60	24	41	-1	3.66	2.63	3.38	9.92	81	6.72	109	87	67	0	4	4	1
MO	COLUMBIA	29	16	37	3	23	-7	0.51	0.05	0.32	6.35	136	2.88	132	90	71	0	7	3	0
	KANSAS CITY	27	14	32	1	20	-10	0.69	0.45	0.41	3.26	108	1.30	94	91	74	0	7	3	0
	SAINT LOUIS	34	21	38	15	27	-5	0.78	0.30	0.64	7.10	130	4.75	181	82	72	0	7	4	1
	SPRINGFIELD	35	21	49	9	28	-6	0.33	-0.18	0.14	8.14	141	4.21	161	85	71	0	7	3	0
MT	BILLINGS	33	15	41	4	24	-3	0.03	-0.12	0.01	1.02	63	0.26	28	86	52	0	7	1	0
	BUTTE	28	6	32	-8	17	-3	0.04	-0.04	0.04	0.73	64	0.36	59	86	57	0	7	1	0
	GLASGOW	3	-14	25	-23	-6	-21	0.01	-0.05	0.01	1.56	200	1.03	251	85	78	0	7	1	0
	GREAT FALLS	30	7	41	-6	19	-5	0.03	-0.06	0.02	0.38	26	0.27	35	88	55	0	7	2	0
	HAVRE	9	-13	36	-28	-2	-20	0.02	-0.04	0.01	0.45	43	0.21	40	86	79	0	7	2	0
	KALISPELL	30	16	35	7	23	-1	0.14	-0.16	0.06	3.45	101	2.10	119	90	76	0	7	4	0
	MISSOULA	31	19	36	9	25	-1	0.06	-0.12	0.04	1.84	77	0.98	79	94	79	0	7	2	0
NE	GRAND ISLAND	19	2	26	-12	11	-14	0.15	0.07	0.10	0.92	72	0.75	121	87	80	0	7	3	0
	LINCOLN	21	7	26	-7	14	-11	0.27	0.19	0.14	1.60	99	1.08	144	88	75	0	7	4	0
	NORFOLK	18	6	25	-10	12	-11	0.00	-0.12	0.00	0.81	60	0.60	87	84	76	0	7	0	0
	NORTH PLATTE	28	4	39	-9	16	-10	0.01	-0.06	0.01	0.41	48	0.31	67	93	69	0	7	1	0
	OMAHA	20	8	27	-8	14	-11	1.00	0.86	0.37	3.09	169	2.25	247	84	74	0	7	4	0
	SCOTTSBLUFF	34	11	46	-4	23	-4	0.15	0.04	0.15	0.78	64	0.28	43	87	64	0	7	1	0
	VALENTINE	25	0	30	-21	12	-12	0.06	-0.01	0.06	0.53	76	0.30	81	88	74	0	7	1	0
NV	ELY	32	9	36	-6	21	-7	0.13	-0.01	0.11	1.33	96	0.14	16	83	69	0	7	2	0
	LAS VEGAS	55	37	60	33	46	-4	0.05	-0.09	0.05	1.02	90	0.06	8	57	40	0	0	1	0
	RENO	46	27	53	21	37	1	0.17	-0.08	0.10	2.35	107	1.13	86	75	62	0	7	2	0
	WINNEMUCCA	40	25	43	21	33	-1	0.50	0.36	0.39	2.81	158	1.02	105	87	68	0	7	2	0
NH	CONCORD	35	15	40	3	25	4	0.93	0.34	0.46	6.91	106	1.60	45	85	50	0	7	4	0
NJ	NEWARK	39	24	44	16	31	-1	2.40	1.65	1.58	9.36	113	4.23	89	82	63	0	7	3	2
NM	ALBUQUERQUE	43	22	47	16	32	-7	0.03	-0.05	0.02	0.24	23	0.13	23	74	33	0	7	2	0
NY	ALBANY	33	14	37	2	24	1	0.89	0.37	0.47	7.53	133	2.05	68	91	62	0	7	3	0
	BINGHAMTON	29	16	35	9	23	1	0.78	0.17	0.42	5.87	94	2.74	86	94	78	0	7	4	0
	BUFFALO	33	16	41	6	25	1	0.64	0.02	0.53	7.23	95	3.59	95	90	66	0	7	3	1
	ROCHESTER	33	16	43	4	24	0	0.29	-0.21	0.22	5.52	99	3.10	109	85	66	0	7	4	0
	SYRACUSE	32	18	40	12	25	2	0.71	0.17	0.43	5.67	91	2.57	82	90	68	0	7	5	0
NC	ASHEVILLE	43	27	48	19	35	-2	3.17	2.24	1.63	6.66	79	4.01	80	89	69	0	7	4	3
	CHARLOTTE	46	28	52	24	37	-6	1.87	1.02	1.23	5.19	65	2.79	58	92	53	0	6	5	1
	GREENSBORO	43	28	48	20	35	-4	1.40	0.65	0.83	4.94	67	2.29	53	91	56	0	7	4	1
	HATTERAS	54	40	66	31	47	1	0.16	-0.90	0.13	7.84	68	2.13	31	89	65	0	1	3	0
	RALEIGH	50	29	63	19	40	-1	1.57	0.72	0.95	6.32	80	2.80	57	90	55	0	4	2	2
	WILMINGTON	58	33	73	23	46	-1	0.12	-0.81	0.07	7.26	79	2.31	42	95	62	0	4	2	0
ND	BISMARCK	10	-18	20	-30	-4	-18	0.01	-0.10	0.01	1.08	108	0.60	107	80	73	0	7	1	0
	DICKINSON	12	-9	28	-19	2	-16	0.00	-0.11	0.00	0.35	43	0.14	29	90	74	0	7	0	0
	FARGO	9	-12	22	-27	-2	-12	0.00	-0.13	0.00	1.91	131	0.73	82	84	70	0	7	0	0
	GRAND FORKS	11	-16	39	-30	-3	-12	0.00	-0.14	0.00	1.38	101	0.71	87	89	68	0	7	0	0
	JAMESTOWN	9	-14	23	-29	-3	-15	0.00	-0.11	0.00	0.66	56	0.19	26	94	75	0	7	0	0
	WILLISTON	7	-23	29	-34	-8	-20	0.00	-0.08	0.00	1.47	124	1.25	202	82	75	0	7	0	0
OH	AKRON-CANTON	33	17	41	0	25	-1	0.99	0.47	0.36	6.98	117	4.07	135	86	69	0	7	5	0
	CINCINNATI	38	23	43	12	30	-1	1.17	0.54	0.54	7.98	117	5.72	161	85	74	0	7	5	1
	CLEVELAND	35	18	43	0	26	0	0.35	-0.20	0.13	7.07	115	3.04	100	96	65	0	7	5	0
	COLUMBUS	35	20	44	0	28	-1	1.83	1.30	1.00	9.69	162	6.91	226	81	66	0	7	5	1
	DAYTON	33	19	39	2	26	-2	0.98	0.43	0.51	8.04	129	5.60	178	92	68	0	7	4	1
	MANSFIELD	32	15	40	-3	24	-1	0.39	-0.14	0.14	7.44	116								

Weather Data for the Week Ending February 7, 2004

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 Dec 1	PCT. NORMAL SINCE Dec 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	30	16	37	-4	23	-2	0.21	-0.23	0.14	4.75	95	1.50	63	87	72	0	7	3	0
	YOUNGSTOWN	33	17	41	3	25	-1	0.69	0.21	0.25	6.97	121	4.29	152	90	71	0	7	5	0
	OKLAHOMA CITY	40	24	47	17	32	-7	0.64	0.40	0.43	3.21	94	2.10	138	92	60	0	7	3	0
	TULSA	39	26	48	16	32	-7	0.66	0.31	0.33	5.48	125	3.02	155	84	65	0	6	4	0
OR	ASTORIA	49	39	53	34	44	1	1.98	-0.10	0.71	24.75	112	14.88	127	98	80	0	0	7	1
	BURNS	33	12	37	3	23	-4	0.24	-0.01	0.15	3.26	119	1.70	119	92	84	0	7	4	0
	EUGENE	50	38	53	33	44	3	0.72	-0.96	0.38	18.42	105	7.79	83	96	85	0	0	6	0
	MEDFORD	50	36	51	30	43	1	0.30	-0.24	0.15	7.96	135	3.29	109	96	67	0	2	6	0
	PENDLETON	42	31	47	29	37	1	0.72	0.42	0.43	5.76	178	3.04	174	91	84	0	7	4	0
	PORTLAND	49	38	51	35	43	1	0.62	-0.47	0.23	12.94	109	5.48	89	93	71	0	0	6	0
	SALEM	48	36	50	33	42	0	0.93	-0.40	0.55	18.07	133	7.63	106	97	82	0	0	6	1
PA	ALLENTOWN	36	19	40	5	27	-1	2.30	1.61	1.71	9.52	126	4.55	109	84	63	0	7	3	2
	ERIE	34	16	44	8	25	-2	0.14	-0.39	0.08	6.97	103	4.00	131	89	77	0	7	3	0
	MIDDLETOWN	35	18	38	3	26	-3	1.93	1.25	1.55	6.94	103	3.54	101	93	59	0	7	4	1
	PHILADELPHIA	40	24	45	11	32	-1	2.42	1.75	1.91	9.58	128	4.12	98	83	62	0	7	3	2
	PITTSBURGH	36	20	47	-1	28	0	2.02	1.45	0.73	10.14	165	6.80	208	89	59	0	6	5	3
	WILKES-BARRE	34	19	41	14	26	-1	1.74	1.20	1.10	7.79	140	3.82	127	96	68	0	7	3	1
	WILLIAMSPORT	34	16	37	4	25	-1	1.48	0.82	0.77	8.47	131	4.05	115	90	64	0	7	4	2
RI	PROVIDENCE	40	22	45	12	31	2	1.98	1.09	1.27	9.93	106	3.50	67	81	51	0	7	3	2
SC	BEAUFORT	61	37	72	32	49	0	0.35	-0.48	0.21	4.15	52	2.35	48	90	49	0	1	2	0
	CHARLESTON	62	38	75	30	50	1	0.97	0.17	0.54	4.40	54	2.54	52	93	63	0	1	3	1
	COLUMBIA	55	32	73	25	44	-2	0.73	-0.25	0.40	3.94	44	1.81	32	80	52	0	5	4	0
	GREENVILLE	46	30	53	27	38	-4	1.05	0.09	0.83	5.09	55	2.42	45	90	58	0	5	2	1
SD	ABERDEEN	13	-11	27	-26	1	-14	0.07	-0.01	0.06	0.96	102	0.63	113	83	76	0	7	2	0
	HURON	15	-3	26	-16	6	-11	0.01	-0.07	0.01	0.54	57	0.35	63	86	72	0	7	1	0
	RAPID CITY	25	6	37	-1	15	-10	0.01	-0.06	0.01	0.49	58	0.24	55	92	70	0	7	1	0
	SIoux FALLS	15	1	23	-14	8	-9	0.57	0.49	0.29	2.16	195	1.09	185	83	75	0	7	5	0
TN	BRISTOL	48	28	53	17	38	3	2.04	1.24	1.08	9.36	121	4.98	115	89	52	0	6	5	2
	CHATTANOOGA	48	32	56	22	40	-1	3.51	2.34	2.67	11.49	101	7.11	108	84	57	0	4	3	2
	KNOXVILLE	47	31	54	23	39	0	1.38	0.44	0.69	7.53	75	4.12	75	86	58	0	5	3	2
	MEMPHIS	46	32	58	23	39	-3	3.02	2.03	2.35	9.25	85	6.17	118	83	58	0	4	4	1
	NASHVILLE	48	29	55	19	38	-1	5.21	4.38	4.07	12.00	128	8.81	184	89	59	0	5	4	2
TX	ABILENE	54	30	64	24	42	-4	0.00	-0.22	0.00	1.66	67	1.65	139	79	61	0	5	0	0
	AMARILLO	41	21	50	17	31	-7	0.00	-0.09	0.00	0.79	59	0.70	97	88	46	0	7	0	0
	AUSTIN	59	34	65	21	47	-5	0.83	0.42	0.77	5.49	116	4.98	217	81	58	0	4	3	1
	BEAUMONT	62	41	68	33	52	-1	1.44	0.45	0.62	11.14	93	7.95	119	97	52	0	0	3	1
	BROWNSVILLE	72	53	79	46	62	1	0.04	-0.31	0.02	2.23	79	1.88	110	92	65	0	0	3	0
	CORPUS CHRISTI	68	50	74	39	59	2	0.04	-0.37	0.02	2.61	69	2.04	100	88	59	0	0	2	0
	DEL RIO	65	41	73	30	53	0	0.01	-0.19	0.01	0.89	59	0.85	110	81	47	0	1	1	0
	EL PASO	52	31	59	24	41	-7	0.03	-0.05	0.03	0.41	32	0.40	75	64	29	0	4	1	0
	FORT WORTH	48	33	52	26	41	-5	0.92	0.49	0.49	4.93	101	3.97	170	89	51	0	3	3	0
	GALVESTON	60	48	65	41	54	-2	0.53	-0.24	0.21	11.02	132	5.31	109	92	60	0	0	3	0
	HOUSTON	59	42	62	32	51	-2	1.48	0.71	0.94	10.49	129	7.50	169	87	56	0	1	4	1
	LUBBOCK	50	25	56	20	38	-3	0.00	-0.15	0.00	1.90	144	1.90	292	87	45	0	6	0	0
	MIDLAND	54	32	61	24	43	-3	0.13	0.02	0.13	0.76	59	0.76	119	76	43	0	3	1	0
	SAN ANGELO	58	34	68	24	46	-1	0.14	-0.10	0.14	1.51	76	1.51	144	86	53	0	4	1	0
	SAN ANTONIO	62	40	69	30	51	-1	0.20	-0.19	0.18	2.63	66	2.52	123	87	45	0	1	3	0
	VICTORIA	65	41	71	33	53	-1	0.36	-0.15	0.17	5.48	101	3.38	115	94	64	0	0	3	0
	WACO	52	35	57	26	44	-4	1.63	1.14	1.06	6.19	120	5.70	238	92	64	0	3	3	1
	WICHITA FALLS	46	27	50	18	37	-6	0.49	0.21	0.28	1.97	64	1.86	133	90	60	0	6	2	0
UT	SALT LAKE CITY	34	22	36	14	28	-4	0.40	0.10	0.20	4.83	167	0.86	51	89	66	0	7	4	0
VT	BURLINGTON	30	12	35	1	21	3	0.55	0.11	0.38	5.91	121	1.02	38	86	58	0	7	3	0
VA	LYNCHBURG	41	25	48	15	33	-3	1.76	1.01	0.94	6.85	91	3.50	82	83	50	0	7	4	2
	NORFOLK	50	34	75	23	42	2	0.77	-0.06	0.40	8.60	110	2.36	50	89	60	0	2	3	0
	RICHMOND	43	26	50	16	34	-3	1.79	1.10	1.12	7.62	104	3.34	79	90	61	0	6	3	2
	ROANOKE	41	26	48	17	33	-4	2.04	1.30	1.16	6.62	97	3.67	92	84	57	0	7	4	2
WA	WASH/DULLES	38	20	42	5	29	-4	1.38	0.72	1.15	7.36	109	2.79	75	85	56	0	7	3	1
	OLYMPIA	47	34	52	28	41	2	0.77	-0.90	0.41	15.92	93	9.90	107	93	81	0	2	6	0
	QUILLAYUTE	47	37	50	30	42	0	2.71	-0.45	0.96	28.95	92	15.30	91	97	84	0	1	6	3
	SEATTLE-TACOMA	46	38	49	31	42	0	0.57	-0.55	0.24	10.81	91	6.93	111	90	67	0	1	5	0
	SPOKANE	33	21	36	14	27	-3	0.47	0.10	0.19	4.03	91	1.89	86	97	84	0	7	4	0
	YAKIMA	41	28	50	22	35	3	0.22	0.01	0.13	3.86	140	1.79	130	93	76	0	7	3	0
WV	BECKLEY	38	23	47	7	31	-1	1.55	0.86	0.65	6.61	94	4.28	109	78	64	0	7	5	1
	CHARLESTON	43	25	52	8	34	0	2.22	1.48	0.76	8.85	121	5.96	149	90	59	0	6	5	2
	ELKINS	41	15	46	-11	28	-2	2.57	1.83	1.39	8.11	107	5.36	129	96	51	0	6	5	2
	HUNTINGTON	43	27	52	13	35	1	2.41	1.72	0.95	8.58	118	5.92	152	89	62	0	6	5	2
WI	EAU CLAIRE	24	6	30	-18	15	0	0.77	0.57	0.41	2.55	112	1.42	115	92	59	0	7	5	0
	GREEN BAY	27	7	32	-13	17	0	0.27	0.03	0.17	3.19	112	1.51	104	91	62	0	7	3	0
	LA CROSSE	27	7	31	-17	17	-2	0.33	0.07	0.16	1.67	62	0.95	66	90	55	0	7	4	0
	MADISON	27	9	31	-9	18	-1	0.70	0.40	0.33	3.32	103	1.32	85	85	65	0	7	5	0
	MILWAUKEE	29	15	31	2	22	0	0.00	-0.41	0.00	3.46	77	1.43	63	90	69	0	7	0	0
WY	CASPER	31	15	39	6	23	-1	0.10	-0.03	0.07	0.52	39	0.13	18	79	57	0	7	2	0
	CHEYENNE	30	13	39	10	21	-6	0.06	-0.02	0.03	0.89	90	0.13	25	72	46	0	7	2	0
	LANDER	28	11	34	4	20	-2	0.13	0.04	0.09	1.05	86	0.23	38	79	61	0	7	2	0
	SHERIDAN	36	12	42	4	24	0	0.01	-0.13	0.01	0.91	57	0.04	4	83	60	0	7	1	0

January Weather and Crop Summary

Weather

Weather summary provided by USDA/WAOB

The coldest weather in many years gripped the Northeast, accompanied by occasional snowfall in the northern Mid-Atlantic States and relentless snow squalls downwind of the Great Lakes. While bitterly cold conditions were persistent in the Northeast, cold air made only two significant surges across the remainder of the United States. Across most of the Plains, the most impressive cold outbreak struck from January 4-6, followed by the Midwest's coldest spell toward month's end. On the Plains, significant precipitation was confined to a few relatively small geographic areas. Much-needed precipitation, mostly rain, spread onto the southern Plains from January 15-17, followed by a major snowstorm across the east-central Plains on January 25-26. Farther north, the last week of January featured heavy snow in northeastern Montana and parts of North Dakota. However, mostly dry conditions persisted on the High Plains from eastern Colorado and western Kansas northward into southern Montana, leaving a portion of the wheat crop regularly exposed to gusty winds and temperature fluctuations. In contrast, heavy rain soaked the Ohio Valley early in the month, causing some flooding in lowlands planted to winter wheat. Elsewhere in the eastern Corn Belt, soil moisture remained adequate to locally excessive. Farther west, however, unfavorably dry conditions persisted across the northwestern Corn Belt, although late-month snowfall provided beneficial moisture. Meanwhile, January precipitation was well below normal from the Delta to the southern Atlantic region, although the combination of cool weather and sporadic showers limited stress on pastures and winter grains. January rainfall was heavier in the western Gulf Coast region, while late-month downpours reduced irrigation demands in Florida's winter agricultural areas. In the West, mild, tranquil weather prevailed for most of the month, following some early-January storminess. However, cold air remained trapped in many snow-covered valleys across the Intermountain West, resulting in persistently cold, foggy weather and air-stagnation problems. Prospects for winter grains continued to improve in the Northwest, where widespread precipitation and a late-month warming trend melted snow and boosted soil moisture reserves.

January temperatures averaged as much as 5°F above normal on the central and southern High Plains and across the South-Central United States. In contrast, readings ranged from 3 to 7°F below normal in eastern Montana and North Dakota and were slightly below normal across the remainder of the northern Plains, northern Corn Belt, and southern Atlantic States. Even more impressively cold weather was noted in parts of the Intermountain West, where temperatures averaged at least 5°F below normal in some valley locations, and the Northeast, where readings ranging from 5 to 10°F below normal were widespread.

On the central High Plains, winter wheat's greatest exposure to cold weather occurred from January 4-6 and 26-29. On January 6, minimum temperatures of -1°F in Amarillo, TX, and -15°F in Kearney, NE, were the stations' lowest since early 1996. In

northwestern Kansas, Goodland reported a maximum snow depth of 1 inch (on January 26) and monthly snowfall totaling 1.7 inches. Elsewhere in western Kansas, Hill City's lowest temperatures during the cold snaps were -12°F on January 5 and -6°F on January 27. During the remainder of the month, Hill City's high temperatures reached or exceeded 60°F on 7 days, peaking at 67°F on January 23. Aside from temperature extremes, wheat's other problem on much of the High Plains remained a lack of moisture. In eastern Colorado, Denver's precipitation was below normal for the 7th consecutive month. Denver's precipitation from July 1, 2003 - January 31, 2004 totaled 2.52 inches, or 31 percent of normal. Farther south, Lubbock's precipitation during the same 7-month period totaled 3.68 inches (35 percent of normal), despite a 1.90-inch total from January 15-17.

The early-month chill set the stage for a major winter storm in the Northwest. In Portland, OR, temperatures remained below 32°F for 3 consecutive days (January 5-7), during which time precipitation totaled 0.84 inch. Although Portland's maximum snow depth was officially 4 inches, major ice accumulations were noted there and elsewhere in the Pacific Northwest. In the storm's wake, cold, stagnant air settled across the Intermountain West. Salt Lake City, UT, registered highs below the freezing mark (32°F) on 24 consecutive days from January 3-26, breaking its record of 18 days most recently accomplished from December 20, 1990 - January 6, 1991. At least a trace of precipitation fell every day during Salt Lake City's cold snap, part of a longer streak that spanned 35 consecutive days from December 25 - January 28. Nearly all of the precipitation (2.49 of 2.89 inches) fell from December 25-29, when snowfall totaled 21.9 inches. Salt Lake City's previous longest streak of days with precipitation totaling a trace of more was 24 consecutive days, from November 17 - December 10, 1983. Significant precipitation returned to the Northwest toward month's end, when a warmer weather regime led to heavy rainfall and river flooding. Melting snow contributed to the runoff. In western Oregon, 6.23 inches (48 percent) of Astoria's monthly precipitation (12.90 inches, or 134 percent of normal) fell during the last 7 days of January.

Southern portions of the Southwest saw an increase in storminess after midmonth, especially from January 20-25. In southern Arizona, Tucson received at least a trace of rain (totaling 0.72 inch) on all 6 of those days, its longest such January streak since January 5-14, 1993. However, key watershed areas farther north failed to net significant snowfall. Monthly precipitation in Flagstaff, AZ, totaled 0.76 inch (35 percent of normal), including 9.8 inches of snow (43 percent). Other low monthly totals in the Southwest included 0.47 inch (14 percent of normal) in downtown Los Angeles, CA, 0.10 inch (20 percent) in Albuquerque, NM, and 0.01 inch (2 percent) in Las Vegas, NV. Farther north, precipitation in northern California's key watershed areas was heaviest early in the month. According to the California Department of Water Resources, the water equivalent of the Sierra Nevada snowpack stood at 20 inches (113 percent of normal) on January 31, up from 14 inches (138 percent) at the end of 2003.

The year opened with sharply contrasting temperatures. On January 5, daily-record highs of 81°F in Savannah, GA, and Jacksonville, FL, contrasted with daily-record lows in Montana of -45°F in Polebridge and -43°F in West Yellowstone. On the same day, Meacham, OR (-31°F), posted an all-time-record low. Heavy rain developed in the Ohio Valley, along the boundary between warm and cold air, helping to boost monthly precipitation to 5.08 inches (201 percent of normal) in Columbus, OH, 4.65 inches (188 percent) in Indianapolis, IN, and 4.78 inches (177 percent) in Pittsburgh, PA. Pittsburgh netted 1.82 inches on January 4, marking its second-wettest January day on record behind 2.34 inches on January 8, 1884. A late-month return to frigid weather on the northern Plains resulted in daily-record lows for January 27 in locations such as Grand Forks, ND (-31°F), and Sisseton, SD (-21°F). The chill continued to intensify, producing three more record lows (-37, -39, and -43°F) in Grand Forks from January 28-30. Sisseton also noted another daily-record low, falling to -25°F on January 30. Grand Forks' January 30 low also set a monthly and all-time record (previously, -40°F on February 1, 1996) for the airport site. Cold air spread eastward at month's end, producing daily-record lows on January 31 in locations such as Lincoln, IL (-14°F), Cincinnati, OH (-12°F), Indianapolis, IN (-11°F), and Elkins, WV (-11°F).

Occasional snow accompanied the northern Plains' bitterly cold weather. In North Dakota, Williston received 7.8 inches in a 24-hour period on January 30-31, in addition to daily-record totals on January 24 (5.6 inches), 25 (2.8 inches), and 27 (4.3 inches). As a result, it was Williston's second-snowiest January (25.4 inches), behind only 28.3 inches in 1999. Williston did set a January snow depth record, noting 24 inches on the ground at month's end. The last 8 days of the month featured 24.6 inches of snow in Glasgow, MT, capping the city's snowiest January on record (32.9 inches; previously, 28.8 inches in 1916). More significantly, Glasgow set a record for its greatest seasonal snowfall (61.6 inches through January 31; previously, 60.9 inches in 1951-52).

Farther south, however, season-to-date snowfall totals through January were as low as 13.7 inches in Denver, CO, and 8.9 inches in Kansas City, MO. Season-to-date snowfall was somewhat higher in the upper Midwest, including Minnesota totals of 22.7 inches in Rochester and 36.2 inches in Minneapolis. Those totals represented a significant improvement from the 2002-03 Midwestern "snow drought," when snowfall through January was 9.7 inches in Rochester and 10.1 inches in Minneapolis.

Meanwhile, lake-enhanced snowfall was common downwind of the Great Lakes, despite the loss of some open water. Duluth, MN, received 26.1 inches on January 25-26, contributing to its second-snowiest January on record (42.3 inches) behind 46.8 inches in 1969. Farther east, January snowfall records were broken in locations such as Gaylord, MI (74.0 inches; previously, 64.0 inches in 1971), and Rochester, NY (61.3 inches; previously, 60.4 inches in 1978). Gaylord also experienced its snowiest month, breaking the November 1893 record of 68.0 inches. Rochester received measurable snow on 19 consecutive days from January 4-22, tying its record set from

January 11-29, 1985, and noted at least a trace of snow on 28 days in a row to end the month. Late-month snow squalls were especially intense downwind of Lake Ontario, where Parish (Oswego County), NY, received 86 inches from January 28-31. Although the surface of Lake Erie was mostly frozen by month's end, it was the second-snowiest January in Cleveland, OH (32.9 inches), and Erie, PA (59.9 inches). For both locations, January records (42.8 and 62.4 inches, respectively) were set in 1978.

In contrast, below-normal January precipitation was recorded east of the Appalachians. Since most of the precipitation fell in the frozen form, the monthly total of 2.13 inches (52 percent of normal) in New York City translated into 17.3 inches of snow (214 percent) and represented Central Park's highest January snowfall since 26.1 inches fell in 1996. With a monthly average temperature of 24.7°F (7.4°F below normal), it was also New York City's coldest January since 1977, when the average was 22.1°F. In addition, New York City reported below-normal average temperatures on 28 consecutive days from January 6 - February 2. Meanwhile, high temperatures in Washington, DC, failed to reach 32°F on 13 January days, compared with zero such days during the entire winter of 2001-02. Farther north, it was even colder and drier in parts of New England, where Boston, MA, experienced its coldest January since 1893 and coldest month since February 1934, accompanied by its sixth-lowest January precipitation on record. Meanwhile, Portland, ME (0.28 inch, or 7 percent of normal), had its driest January, staying well below its January 1955 and 1970 record-low totals of 0.76 inch.

Selected Eastern locations reporting their coldest January (°F) in at least a decade are listed below:

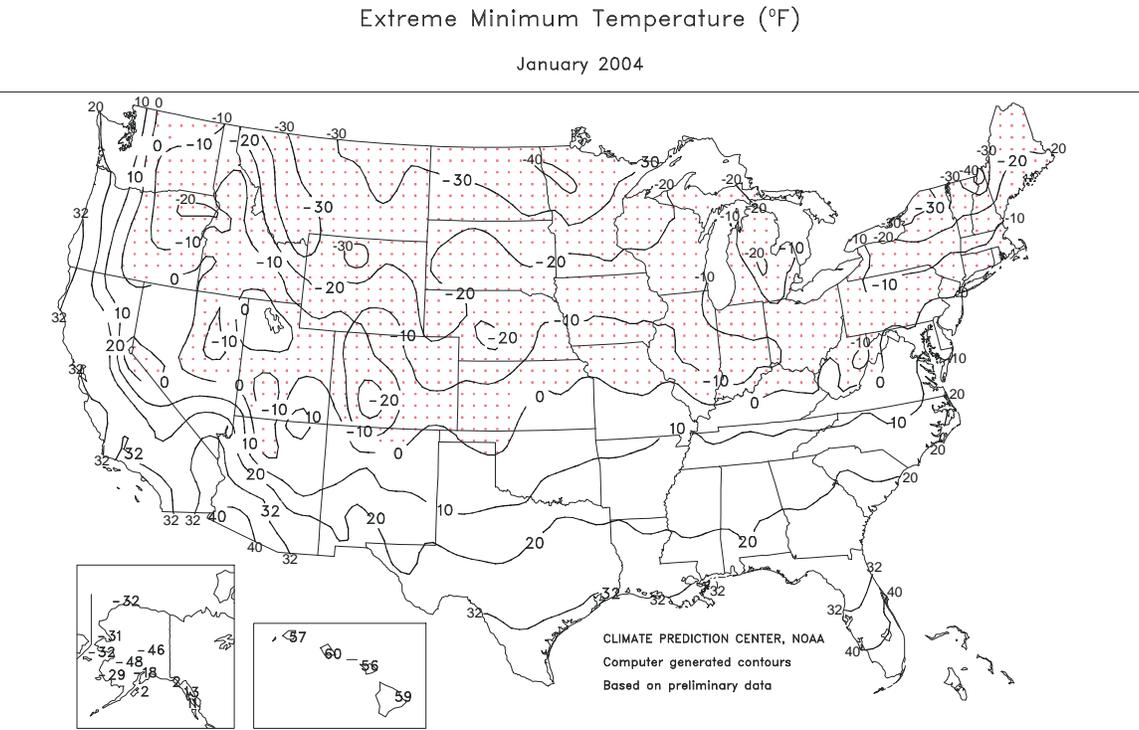
<u>Location</u>	<u>Avg.</u>	<u>Dep.</u>	<u>Coldest January Since...</u>
Boston, MA	20.7	-8.6	20.7 in 1893
Worcester, MA	15.2	-8.4	14.9 in 1970
Binghamton, NY	13.4	-8.3	12.0 in 1977
Hartford, CT	18.7	-7.0	18.7 in 1977
New York, NY	24.7	-7.4	22.1 in 1977
Providence, RI	21.3	-7.4	20.3 in 1981
Philadelphia, PA	26.1	-6.2	24.7 in 1982
Wilmington, DE	25.4	-6.1	24.8 in 1984
Atlantic City, NJ	26.8	-5.3	26.8 in 1985
Burlington, VT	8.8	-9.2	7.1 in 1994
Allentown, PA	22.0	-5.1	20.7 in 1994
Baltimore, MD	27.5	-4.8	27.1 in 1994
Washington, DC	30.5	-4.4	28.8 in 1994

Daily temperature records in the Northeast were numerous, but highlights included four consecutive daily-record lows atop Mt. Washington, NH. Mt. Washington's lows of -45°F on January 14 and 16 were the peak's lowest readings since January 8, 1968, when the low was -46°F. In addition, Boston (-7°F on January 16) notched its lowest reading since December 25, 1980, when the temperature was also -7°F. Boston also recorded 3 consecutive days (January 14-16) with lows below 0°F for the first time since December 19-21, 1942.

The majority of the Alaskan mainland reported cold, dry January weather, with temperatures as much as 6°F below normal.

Fairbanks' monthly average temperature of -15.9°F was 6.2°F below normal. Monthly precipitation totals were as low as 0.04 inch (6 percent of normal) in Bethel and 0.25 inch (24 percent) in King Salmon. Above-normal monthly precipitation was confined to southeastern Alaska, where Juneau netted 5.89 inches (122 percent of normal), including 34.2 inches of snow.

Hawaii experienced a very unsettled month, including a tornado near Mililani, Oahu, on January 25. Elsewhere on Oahu, Honolulu's 6.88-inch January total was 252 percent of normal and represented the city's highest monthly sum since January 1997. Much of Honolulu's rain, 4.14 inches, fell in 24 hours on January 2-3. The same 24-hour period was extremely wet on Maui, where Kahului netted nearly 60 percent of its monthly total (4.73 of 7.90 inches). On the Big Island, Hilo's 24-hour total of 4.96 inches on January 25-26 boosted its monthly rainfall to 12.21 inches (125 percent of normal). Nearly all of Hilo's rain, 11.34 inches, fell during the last 13 days of January.



Light to moderate rain fell in the Southeast and Mississippi Delta, and temperatures were mostly below normal. Freezes reached as far south as the Gulf Coast on several occasions.

On the Great Plains, conditions remained mostly dry through the month. Other than a midmonth spell of moderate to heavy rain in Texas and Oklahoma, only light, widely scattered precipitation fell in the region. Mild temperatures around the middle of the month melted snow cover in the northern and central parts of the region, causing some concern for winter wheat as bitterly cold weather visited the region late in the month.

Temperatures in the Rocky Mountains were below normal early in the month but increased toward midmonth. Temperatures stayed above normal in the northern parts of the region through month's end but dropped back below normal in the central and southern areas. Across the central and southern portions of the region, precipitation was light and scattered. However, the northern areas of the region received widespread light to moderate precipitation in the second half of the month.

In the Pacific Northwest, rain and snowfall were moderate to heavy along the coastal areas but lighter in the crop-producing areas farther inland. Average temperatures were below normal early in the month but rose to above normal in the second half of the month. Snow cover was adequate to protect winter wheat through the month.

The Great Basin was mostly dry through the month, with below-normal temperatures. In California, temperatures were near normal, with little rainfall except in the northwest.

Fieldwork

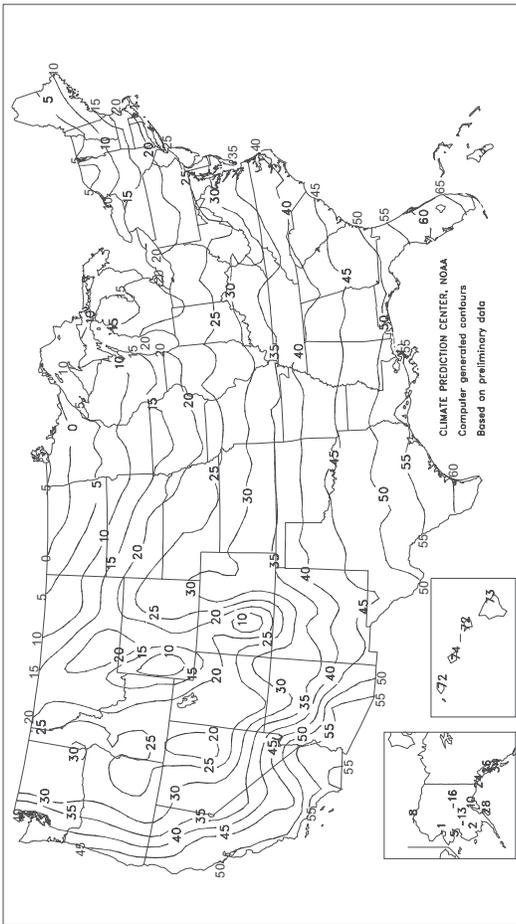
Fieldwork summary provided by USDA/NASS

Along the Atlantic Coast, temperatures were mostly below normal through the month, while precipitation was light to moderate. Late in the month, a series of arctic cold fronts brought snow and ice to the Northeast and Mid-Atlantic States. Sub-freezing temperatures reached into northern Florida but missed the citrus-growing regions of central and southern Florida.

Across the Corn Belt, temperatures were below normal through most of the month, though record-high temperatures visited the western areas of the region toward midmonth, melting much of the protective snow cover on winter wheat fields. However, this snow cover was quickly replenished with snowfall late in the month. Precipitation for the month was above normal in the Ohio Valley but below normal across the western and northern Corn Belt.

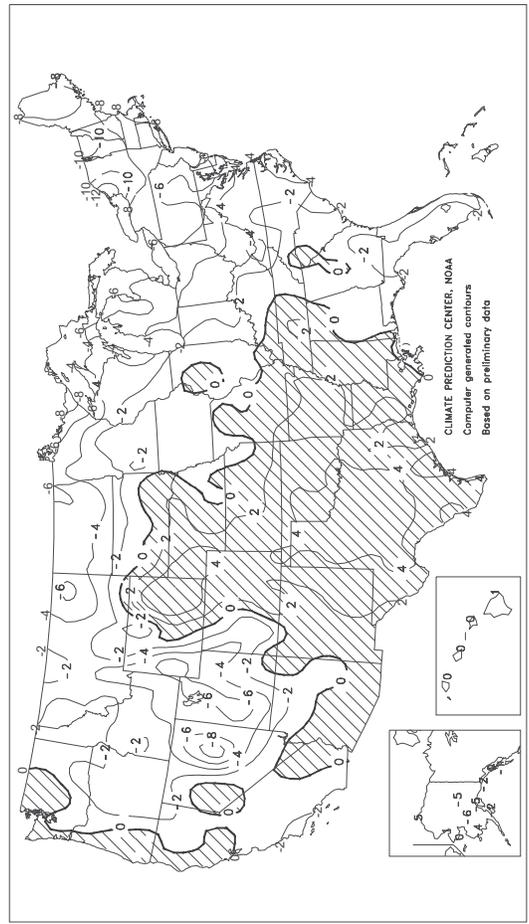
Average Temperature (°F)

January 2004



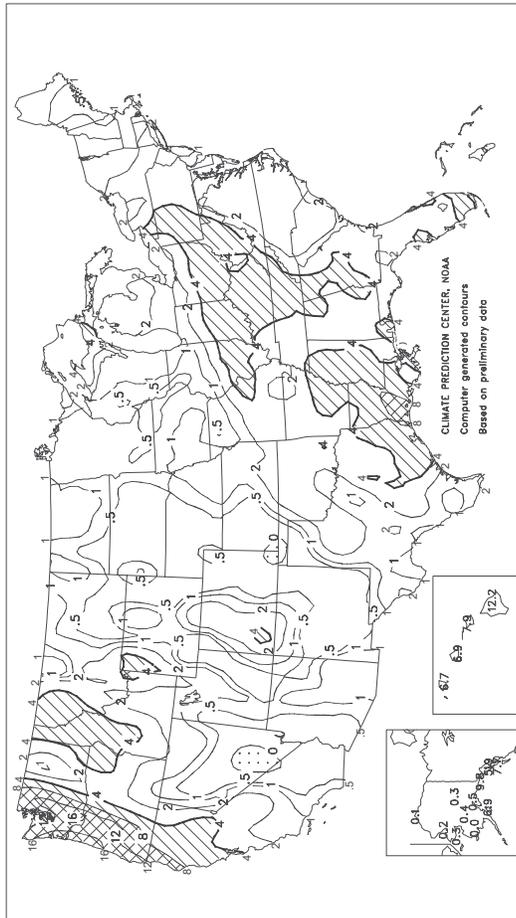
Departure of Average Temperature from Normal (°F)

January 2004



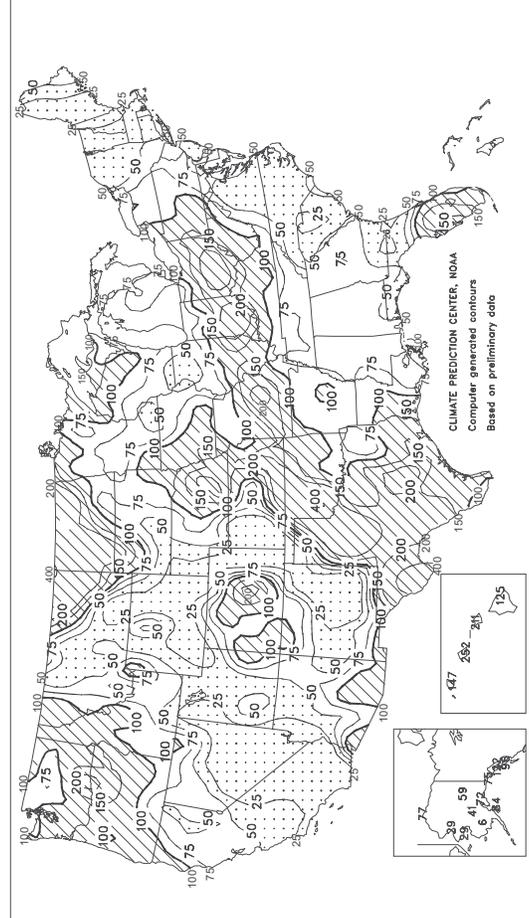
Total Precipitation (inches)

January 2004



Percent of Normal Precipitation

January 2004



TEMPERATURE AND PRECIPITATION SUMMARY

January 2004

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	0	2.77	-2.68	LEXINGTON	30	-2	3.32	-0.02	COLUMBUS	24	-4	5.08	2.55
HUNTSVILLE	40	0	3.08	-2.44	LONDON-CORBIN	34	0	4.90	0.89	DAYTON	23	-3	4.62	2.02
MOBILE	51	1	3.44	-2.31	LOUISVILLE	33	0	4.74	1.46	MANSFIELD	20	-4	3.78	1.15
MONTGOMERY	46	-1	2.59	-2.45	PADUCAH	34	1	3.07	-0.40	TOLEDO	20	-4	1.29	-0.64
AK ANCHORAGE	10	-6	0.49	-0.19	LA BATON ROUGE	52	2	3.76	-2.43	YOUNGSTOWN	19	-6	3.60	1.26
BARROW	-8	6	0.09	-0.03	LAKE CHARLES	53	2	8.86	3.34	OK OKLAHOMA CITY	40	3	1.46	0.18
COLD BAY	26	-2	3.19	0.11	NEW ORLEANS	54	1	3.02	-2.85	TULSA	39	3	2.36	0.76
FAIRBANKS	-16	-6	0.33	-0.23	SHREVEPORT	48	2	4.39	-0.21	OR ASTORIA	43	1	12.90	3.28
JUNEAU	26	0	5.89	1.08	ME BANGOR	10	-8	0.93	-2.41	BURNS	23	-1	1.46	0.28
KING SALMON	10	-5	0.25	-0.78	CARIBOU	3	-7	1.44	-1.53	EUGENE	41	1	7.07	-0.58
KODIAK	28	-2	6.86	-1.31	PORTLAND	15	-7	0.28	-3.81	MEDFORD	41	2	2.99	0.52
NOME	5	-1	0.27	-0.65	MD BALTIMORE	27	-5	1.42	-2.05	PENDLETON	28	-6	2.32	0.87
AZ FLAGSTAFF	29	-1	0.76	-1.42	MA BOSTON	20	-9	1.01	-2.91	PORTLAND	38	-2	4.86	-0.21
PHOENIX	58	4	0.82	-0.01	WORCESTER	15	-9	1.43	-2.64	SALEM	40	0	6.70	0.86
TUCSON	53	1	0.80	-0.19	MI ALPENA	12	-6	0.73	-1.03	PA ALLENTOWN	22	-5	2.25	-1.25
AR FORT SMITH	41	3	2.83	0.46	DETROIT	20	-4	1.43	-0.48	ERIE	22	-5	3.86	1.33
LITTLE ROCK	43	3	3.48	-0.13	FLINT	17	-4	1.39	-0.18	MIDDLETOWN	24	-5	1.61	-1.23
CA BAKERSFIELD	49	1	0.58	-0.60	GRAND RAPIDS	19	-3	2.01	-0.02	PHILADELPHIA	26	-6	1.70	-1.82
EUREKA	48	0	6.50	0.53	HOUGHTON LAKE	12	-6	1.26	-0.35	PITTSBURGH	22	-6	4.78	2.08
FRESNO	47	1	0.87	-1.29	LANSING	17	-5	0.91	-0.70	WILKES-BARRE	19	-7	2.08	-0.38
LOS ANGELES	57	0	0.49	-2.49	MUSKEGON	21	-3	1.37	-0.85	WILLIAMSPORT	21	-5	2.57	-0.28
REDDING	44	-2	3.01	-3.49	TRVERSE CITY	16	-5	1.37	-1.61	PR SAN JUAN	76	-1	1.96	-1.06
SACRAMENTO	47	1	2.15	-1.69	MN DULUTH	4	-4	1.89	0.77	RI PROVIDENCE	21	-8	1.52	-2.85
SAN DIEGO	57	-1	0.34	-1.94	INT'L FALLS	-4	-7	0.65	-0.19	SC CHARLESTON	46	-2	1.57	-2.51
SAN FRANCISCO	50	1	3.03	-1.42	MINNEAPOLIS	11	-2	0.23	-0.81	COLUMBIA	43	-2	1.08	-3.58
STOCKTON	46	0	1.77	-0.94	ROCHESTER	12	0	0.32	-0.62	FLORENCE	43	-2	1.00	-3.09
CO ALAMOSA	19	4	0.14	-0.11	ST. CLOUD	7	-2	0.42	-0.34	GREENVILLE	41	0	1.37	-3.04
CO SPRINGS	31	3	0.60	0.32	MS JACKSON	47	2	4.23	-1.44	MYRTLE BEACH	44	-2	2.24	-1.42
DENVER	32	4	0.23	0.00	MERIDIAN	46	0	3.06	-2.86	SD ABERDEEN	9	-2	0.56	0.08
GRAND JUNCTION	22	-4	0.82	0.22	TUPELO	42	2	3.06	-2.08	HURON	14	0	0.34	-0.14
PUEBLO	32	3	0.51	0.18	MO COLUMBIA	28	0	2.37	0.64	RAPID CITY	23	1	0.23	-0.14
CT BRIDGEPORT	22	-8	1.81	-1.92	JOPLIN	35	2	2.88	1.04	SIoux FALLS	15	1	0.52	0.01
HARTFORD	19	-7	1.47	-2.37	KANSAS CITY	27	0	0.61	-0.54	TN BRISTOL	33	-1	2.94	-0.58
DC WASHINGTON	30	-5	1.36	-1.85	SPRINGFIELD	33	1	3.88	1.77	CHATTANOOGA	40	1	3.60	-1.80
DE WILMINGTON	25	-6	1.66	-1.77	ST JOSEPH	26	0	0.83	-0.05	JACKSON	39	1	3.44	-0.89
FL DAYTONA BEACH	58	0	1.28	-1.85	ST LOUIS	31	1	3.97	1.83	KNOXVILLE	37	-1	2.74	-1.83
FT LAUDERDALE	67	0	2.52	-0.42	MT BILLINGS	24	0	0.25	-0.56	MEMPHIS	42	2	3.15	-1.09
FT MYERS	63	-2	3.42	1.19	BUTTE	18	0	0.32	-0.21	NASHVILLE	39	2	3.60	-0.37
JACKSONVILLE	52	-1	1.65	-2.04	GLASGOW	6	-5	1.02	0.67	TX ABILENE	48	4	1.65	0.68
KEY WEST	69	-1	2.50	0.28	GREAT FALLS	20	-2	0.24	-0.44	AMARILLO	39	3	0.70	0.07
MELBOURNE	60	-1	2.14	-0.34	HELENA	15	-5	0.26	-0.26	AUSTIN	52	2	4.15	2.26
MIAMI	67	-1	2.52	0.64	KALISPELL	21	0	1.96	0.49	BEAUMONT	54	2	6.51	0.82
ORLANDO	59	-2	3.27	0.84	MILES CITY	14	-3	0.18	-0.32	BROWNSVILLE	63	3	1.84	0.48
PENSACOLA	51	-1	1.55	-3.79	MISSOULA	21	-3	0.92	-0.14	COLLEGE STATION	53	3	4.53	1.21
ST PETERSBURG	60	-2	4.63	1.87	NE GRAND ISLAND	22	0	0.60	0.06	CORPUS CHRISTI	59	3	2.00	0.38
TALLAHASSEE	50	-2	3.68	-1.68	HASTINGS	23	-1	1.19	0.64	DALLAS/F WORTH	49	5	3.05	1.15
TAMPA	60	-1	3.73	1.46	LINCOLN	22	0	0.81	0.14	DEL RIO	54	3	0.84	0.27
WEST PALM BEACH	65	-1	2.03	-1.72	MCCOOK	27	1	0.08	-0.42	EL PASO	47	2	0.37	-0.08
GA ATHENS	42	0	2.53	-2.16	NORFOLK	20	0	0.60	0.03	GALVESTON	56	0	4.78	0.70
ATLANTA	43	0	2.85	-2.17	NORTH PLATTE	24	1	0.30	-0.09	HOUSTON	55	3	6.02	2.34
AUGUSTA	44	-1	2.44	-2.06	OMAHA/EPPLEY	21	-1	1.25	0.48	LUBBOCK	43	5	1.90	1.40
COLUMBUS	46	-1	2.86	-1.92	SCOTTSBLUFF	28	4	0.13	-0.41	MIDLAND	47	4	0.63	0.10
MACON	46	0	4.23	-0.77	VALENTINE	23	2	0.24	-0.06	SAN ANGELO	49	4	1.37	0.56
SAVANNAH	48	-1	2.04	-1.91	NV ELKO	19	-7	0.69	-0.45	SAN ANTONIO	55	5	2.32	0.66
HI HILO	73	2	12.21	2.47	ELY	21	-4	0.01	-0.73	VICTORIA	56	3	3.02	0.58
HONOLULU	74	1	6.88	4.15	LAS VEGAS	48	1	0.01	-0.58	WACO	50	4	4.07	2.17
KAHULUI	72	0	7.90	4.16	RENO	36	2	0.96	-0.10	WICHITA FALLS	45	5	1.37	0.25
LIHUE	72	0	6.73	2.14	WINNEMUCCA	29	-1	0.52	-0.31	UT SALT LAKE CITY	22	-7	0.46	-0.91
ID BOISE	28	-2	1.85	0.46	NH CONCORD	14	-6	0.67	-2.30	VT BURLINGTON	9	-9	0.47	-1.75
LEWISTON	34	0	1.86	0.72	NJ ATLANTIC CITY	27	-5	1.55	-2.05	VA LYNCHBURG	32	-3	1.74	-1.80
POCATELLO	20	-4	0.97	-0.17	NE WARK	24	-7	1.83	-2.15	NORFOLK	39	-1	1.59	-2.34
IL CHICAGO/O'HARE	20	-2	0.91	-0.84	NM ALBUQUERQUE	38	2	0.10	-0.39	RICHMOND	33	-3	1.55	-2.00
MOLINE	21	0	1.09	-0.49	NY ALBANY	15	-7	1.16	-1.32	ROANOKE	35	-1	1.63	-1.60
PEORIA	23	1	0.85	-0.65	BINGHAMTON	13	-9	1.96	-0.62	WASH/DULLES	28	-4	1.41	-1.64
ROCKFORD	19	0	0.46	-0.95	BUFFALO	18	-6	2.95	-0.21	WA OLYMPIA	39	1	9.13	1.59
SPRINGFIELD	25	0	1.38	-0.24	ROCHESTER	17	-7	2.81	0.47	QUILLAYUTE	42	1	12.59	-1.06
IN EVANSVILLE	31	0	2.95	0.04	SYRACUSE	15	-8	1.86	-0.74	SEATTLE-TACOMA	40	-1	6.36	1.23
FORT WAYNE	21	-3	2.43	0.38	NC ASHEVILLE	36	0	0.84	-3.22	SPOKANE	26	-1	1.42	-0.40
INDIANAPOLIS	25	-1	4.65	2.17	CHARLOTTE	40	-2	0.92	-3.08	YAKIMA	28	-1	1.57	0.40
SOUTH BEND	21	-2	1.56	-0.71	GREENSBORO	37	-1	0.89	-2.65	WV BECKLEY	27	-3	2.73	-0.50
IA BURLINGTON	22	-1	0.87	-0.44	HATTERAS	42	-4	1.97	-3.87	CHARLESTON	31	-2	3.74	0.49
CEDAR RAPIDS	18	0	0.70	-0.35	RALEIGH	38	-2	1.23	-2.79	ELKINS	25	-4	2.79	-0.64
DES MOINES	20	0	1.20	0.17	WILMINGTON	43	-3	2.19	-2.33	HUNTINGTON	31	-2	3.51	0.30
DUBUQUE	17	0	0.39	-0.89	ND BISMARCK	8	-2	0.59	0.14	WI EAU CLAIRE	10	-2	0.65	-0.39
SIoux CITY	19	0	0.83	0.24	DICKINSON	10	-4	0.14	-0.23	GREEN BAY	12	-4	1.24	0.03
WATERLOO	17	1	0.46	-0.38	FARGO	3	-4	0.73	-0.03	LA CROSSE	15	-1	0.62	-0.57
KS CONCORDIA	27	0	0.69	0.03	GRAND FORKS	-1	-6	0.71	0.03	MADISON	15	-2	0.62	-0.63
DODGE CITY	32	2	0.05	-0.57	JAMESTOWN	3	-6	0.19	-0.43	MILWAUKEE	19	-2	1.43	-0.42
GOODLAND	31	3	0.06	-0.37	MINOT	3	-7	1.25	0.60	WAUSAU	9	-4	0.93	-0.16
HILL CITY	29	3	0.08	-0.39	WILLISTON	4	-4	1.25	0.71	WY CASPER	28	6	0.03	-0.55
TOPEKA	28	1	0.86	-0.09	OH AKRON-CANTON	20	-5	3.08	0.59	CHEYENNE	31	5	0.07	-0.38
WICHITA	32	2	1.84	1.00	CINCINNATI	28	-2	4.55	1.63	LANDER	19	-1	0.10	-0.42
KY JACKSON	33	-1	4.23	0.67	CLEVELAND	22	-4	2.69	0.21	SHERIDAN	22	1	0.03	-0.74

National Agricultural Summary

February 2 - 8, 2004

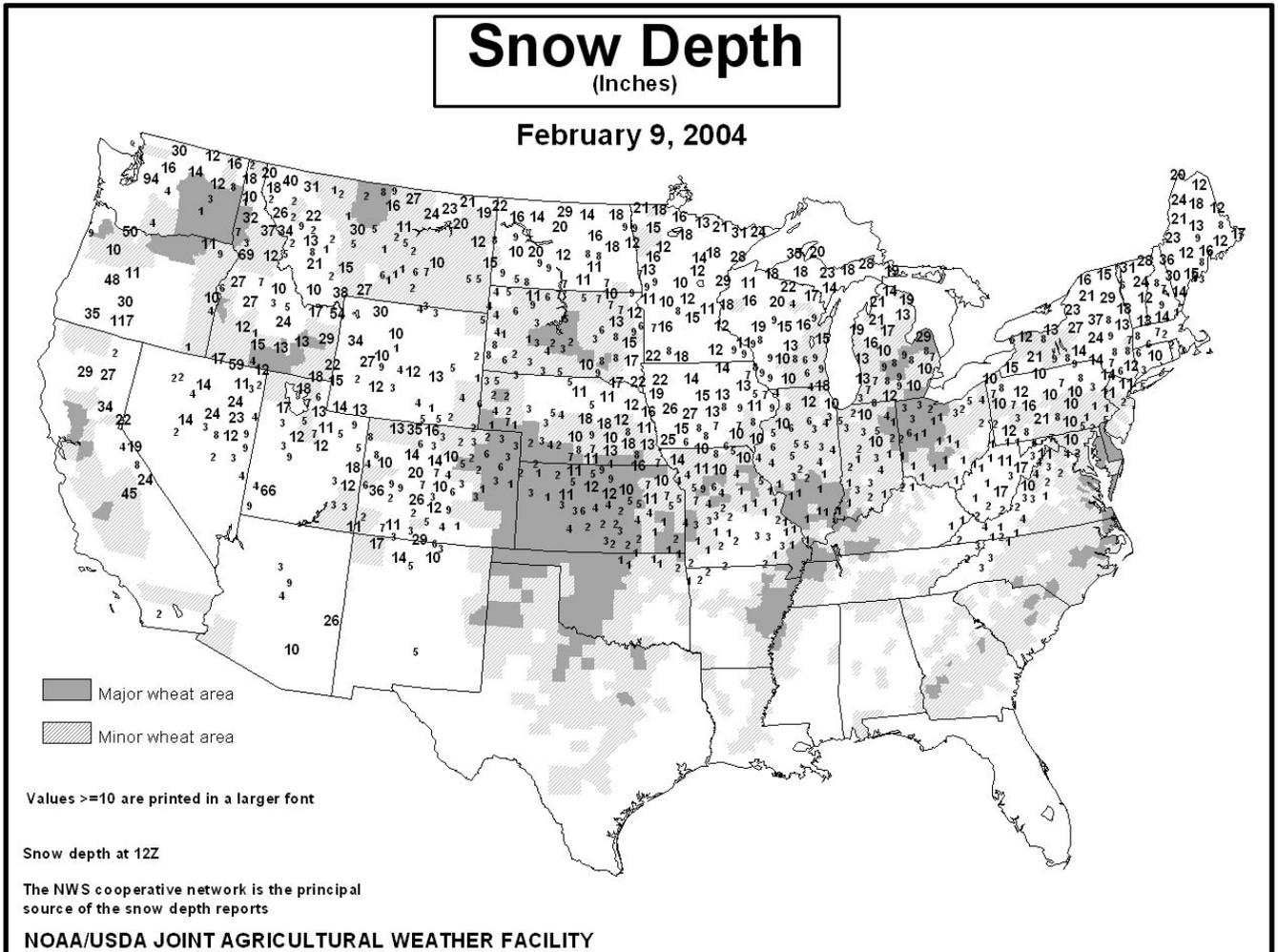
Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Temperatures were below normal across most of the Nation as another arctic blast hit the Nation's mid-section. Average temperatures for the week were 6 degrees Fahrenheit or more below normal across the northern and central Great Plains, western Corn Belt, and Southwest, with some areas of the northern Great Plains averaging over 20 degrees Fahrenheit below normal. Snowfall from this system was mostly limited to the Corn Belt and did little to replenish snow cover across the northern and central Great Plains. Warm weather in previous weeks had melted the snow cover across much of that region, leaving winter wheat exposed to bitterly cold weather. Elsewhere, heavy rainfall across the Mississippi Delta, Southeast, and Ohio Valley caused some local flooding, with some areas of Mississippi, Alabama, and Tennessee receiving over 6 inches of rain. Farther north, the precipitation turned to snow and ice across the middle and northern Atlantic Coast States.

Light, but widespread precipitation fell across much of the northern and central Rocky Mountains and the interior Pacific Northwest, while the Pacific Coast had moderate rainfall.

In Arizona, small grain planting was complete and emergence was nearly complete, while citrus and vegetable growers harvested a wide variety of crops. Rains slowed citrus harvest in some areas of California, but small grain planting neared completion and sugar beets were showing good progress. The Texas cotton harvest was complete, while small grain condition continued to decline due to dry weather, prompting some growers to replant. In Georgia, heavy rainfall improved conditions of small grains and vegetables, but the mud caused some problems for livestock operations. Rain slowed fieldwork in some areas of Florida, but temperatures remained above freezing across the entire State.



February 5 ENSO Update

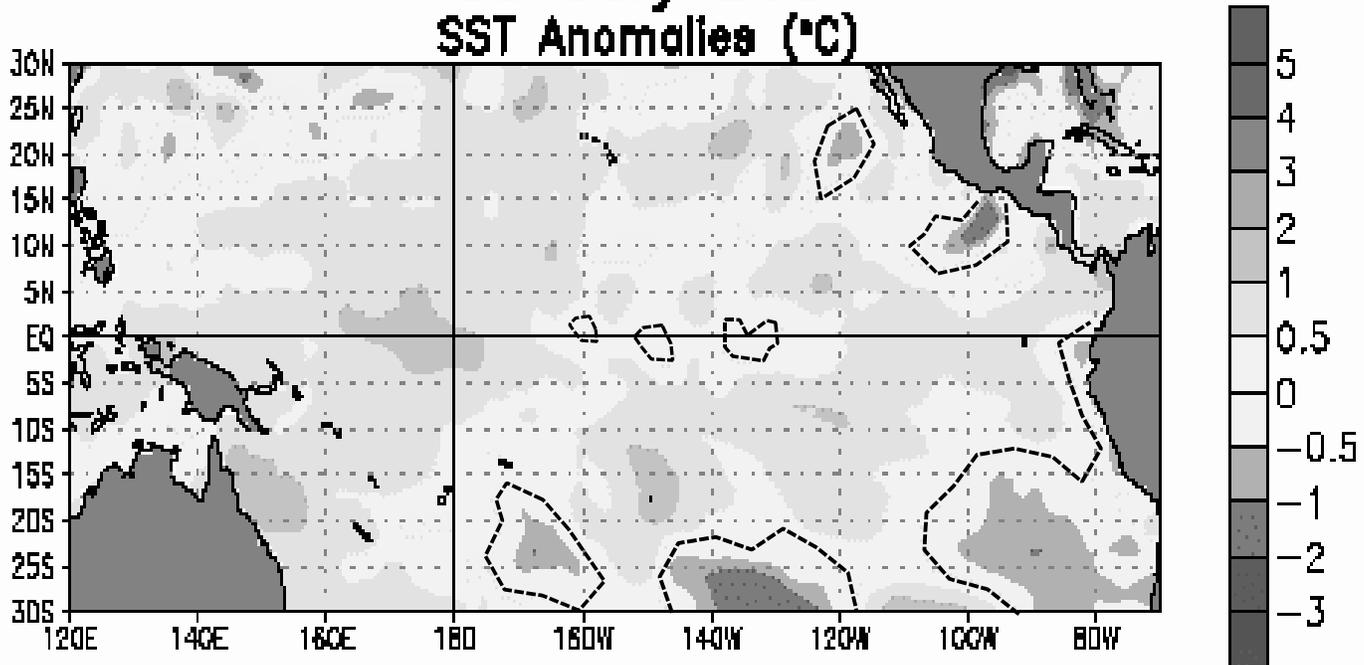
January 2004
SST Anomalies (°C)

Figure 1. Sea Surface Temperature (SST) anomalies (°C) for the equatorial Pacific Ocean for January, 2004. The SST departures are computed with respect to the 1971-2000 base period means. Negative values are denoted with a dashed line for easier viewing.

Sea surface temperatures remained warmer than average in the central and western equatorial Pacific and near average in the eastern equatorial Pacific during January (Fig. 1). Equatorial ocean surface temperatures greater than $+0.5^{\circ}\text{C}$ ($\sim 1^{\circ}\text{F}$) above average were found between Indonesia and 165°W , and departures greater than $+1^{\circ}\text{C}$ were found between 160°E and 175°W . Since early December 2003, SST anomalies have decreased in all of the Niño regions.

The monthly 850-hPa zonal wind indices, OLR index, 200-hPa zonal wind index, SOI and EQSOI have not shown any significant trends over the last few months that would support a transition to either El Niño or La Niña. However, many of these indices have exhibited considerable week-to-week variability since late November in response to tropical intraseasonal (Madden-Julian Oscillation) activity. Wetter-than-average conditions (enhanced convection), observed over the tropical Indian Ocean in late November, shifted eastward to the western Pacific by late December and into the central Pacific by early January. As the convective activity shifted eastward, the equatorial easterlies weakened over the western and central Pacific and westerlies developed near the date line (180°W). During the last half of January the equatorial easterlies intensified, becoming stronger than average over the central and western equatorial Pacific, as the convectively inactive phase of the MJO shifted eastward over the region. The recent period (the time that it takes for a particular phase of the oscillation to completely circle the earth) of the MJO is between 45 and 50 days. During late January there were indications that the convectively active phase of the MJO was over the Indian Ocean. At the current rate of propagation,

enhanced convection should shift into the western and central equatorial Pacific during February, accompanied by another period of weaker-than-average easterlies.

The weakening of the equatorial easterlies in late December 2003-early January 2004 initiated an eastward propagating oceanic Kelvin wave, which is evident in the recent evolution of upper ocean temperature anomalies. More recent observations from the TAO buoy array indicate that this Kelvin wave is propagating eastward at about 8-10 degrees of longitude per week. At that rate, the Kelvin wave is expected to reach the vicinity of the west coast of South America around the end of February. NOAA's Climate Prediction Center (CPC) will continue to monitor this situation to determine what, if any, impacts the Kelvin wave will have on surface and subsurface temperatures along the South American coast.

A majority of the statistical and coupled model forecasts indicate near neutral conditions in the tropical Pacific (Niño 3.4 SST anomalies between -0.5°C and $+0.5^{\circ}\text{C}$) through March 2004. Thereafter, the forecasts show an increasing spread and greater uncertainty.

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.

International Weather and Crop Summary

February 1 - 7, 2004

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

HIGHLIGHTS

EUROPE: Unseasonably warm weather melted protective snow cover across central and eastern Europe, leaving winter crops vulnerable to potential cold air outbreaks and reducing the winter hardiness of winter grains and oilseeds.

FSU-WESTERN: Unseasonably mild weather caused additional melting of protective snow cover in Ukraine and the Southern Region in Russia, leaving winter wheat vulnerable to potential weather extremes.

MIDDLE EAST: Across the eastern Mediterranean and western Iran, rain continued to boost moisture supplies for winter crops, while mostly dry weather prevailed across dormant winter grains in central Turkey.

NORTHWESTERN AFRICA: Dry weather prevailed across winter grain areas.

SOUTH AFRICA: Unseasonable warmth and dryness persisted across the corn belt, limiting available moisture to reproductive summer crops.

EASTERN ASIA: Conditions remained generally favorable for overwintering grains and oilseeds.

SOUTHEAST ASIA: Showers boosted moisture supplies for corn, rice, and oil palm throughout Indonesia.

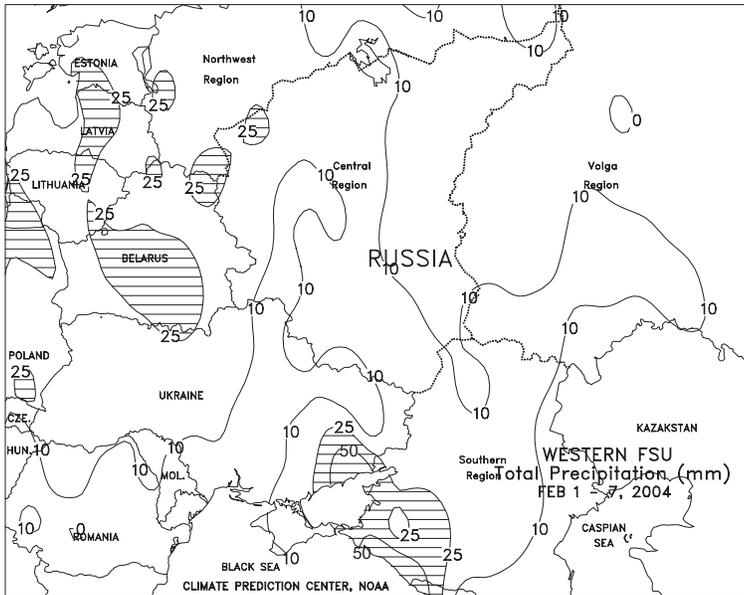
AUSTRALIA: The 2nd consecutive week of soaking rains in eastern Australia brought additional drought relief to dryland and irrigated summer crops.

SOUTH AMERICA: Timely showers boosted moisture reserves for immature summer crops in central Argentina and southern Brazil, following a brief dry spell.



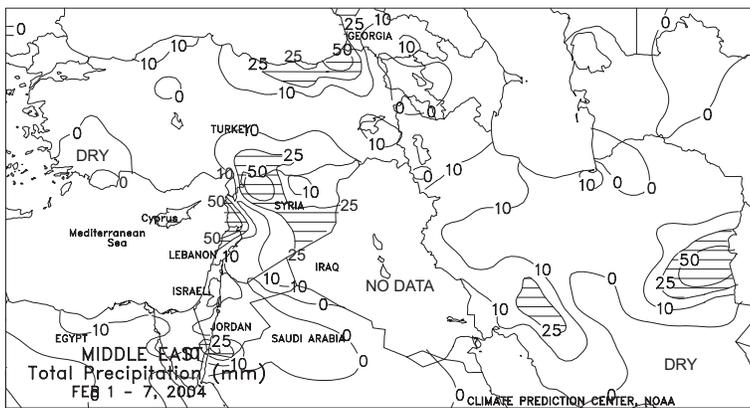
EUROPE

Unseasonably mild weather overspread most of the region, in contrast to the cold weather of the past few weeks. In general, temperatures averaged 5 to 8 degrees C above normal across the continent, with departures of 10 to 12 degrees C above normal reported in the Low Countries, Germany, the Czech Republic, and southwestern Poland. Across most of these areas, minimum temperatures remained above freezing for the week. The highest maximum temperatures ranged from 12 to 17 degrees C from Poland to England and exceeded 20 degrees C in the Balkans, southwestern France, Portugal, and southern Spain. Across central and eastern Europe, the unusual warmth melted all of the moderate lowland snow cover from the previous week, leaving winter grains vulnerable to potential cold air outbreaks and reducing the winter hardiness of winter grains and oilseeds. Along with the warm weather, widespread rain (10-50 mm) covered most of northern Europe (from England eastward to Poland and the Czech Republic), boosting soil moisture supplies. Lighter amounts (less than 10 mm) fell across Hungary, Serbia, Romania, and Bulgaria. Mostly dry weather prevailed across most of France, extreme southern Germany, Italy, the western Balkans, and the Iberian Peninsula. The dry, warm weather increased crop water use for vegetative winter crops in Portugal and southern Spain.



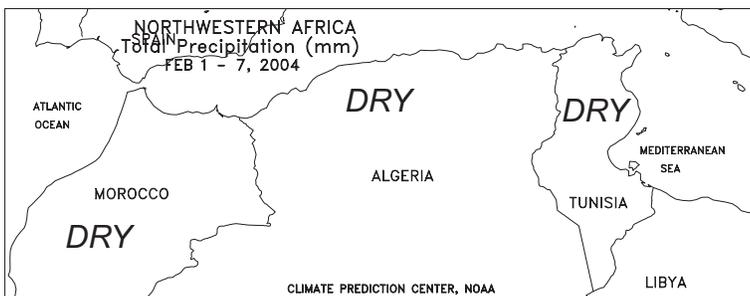
FSU-WESTERN

Unsettled weather was accompanied by a warming trend over most of the region. Weekly temperatures averaged 4 to 8 degrees C above normal in the Baltics, Belarus, western Ukraine, and Moldova. Elsewhere in Ukraine and most of Russia, weekly temperatures averaged 1 to 4 degrees C above normal. By week's end, maximum temperatures rose to as high as 15 degrees C in Moldova and western and southern Ukraine. The unseasonably mild weather led to rapid snow melt in the Baltics, western Belarus, Moldova, Ukraine, and the Southern Region in Russia. By week's end, winter grains in these areas were mostly snow-free. A deep snow cover remained over winter grain areas in the Central and Volga Regions in Russia, providing protection from a brief period of bitter cold (minimum temperatures ranging from -25 to -15 degrees C) observed in these areas on February 4. Widespread precipitation fell across the region. The greatest amounts of moisture (10-50 mm or more of liquid equivalent) fell across the Baltics, Belarus, western and eastern Ukraine, and the Southern Region in Russia, where snow changed to rain during the latter half of the week. Precipitation remained mostly snow (10 mm or less of liquid equivalent) in the Central and Volga Regions in Russia.



MIDDLE EAST

Across the main wheat areas of central Turkey, mostly dry weather (less than 5 mm) prevailed, but moisture supplies remained favorable for upcoming spring growth of currently dormant winter grains. In this region, temperatures averaged 1 to 3 degrees C above normal, leaving winter grains unprotected by snow cover, but minimum temperatures only dropped to -7 to -4 degrees C, well above the threshold for potential winterkill. Light to moderate rain (5-50 mm) fell across the southeastern wheat area of Turkey, most of Syria, and the eastern Mediterranean (Lebanon, Israel, and Jordan), increasing moisture supplies for vegetative winter grains. In western Iran, light rain (3-15 mm) continued to increase moisture supplies for mostly dormant winter grains. Based on rainfall reports from surrounding countries, possibly light to moderate rain fell across northern Iraq. Temperatures averaged 1 to 4 degrees C above normal across the eastern Mediterranean and western Iran.

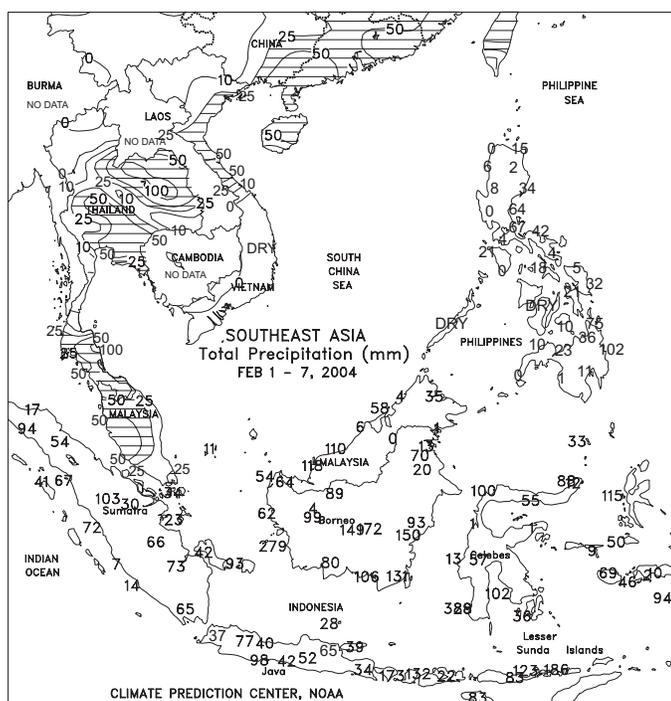
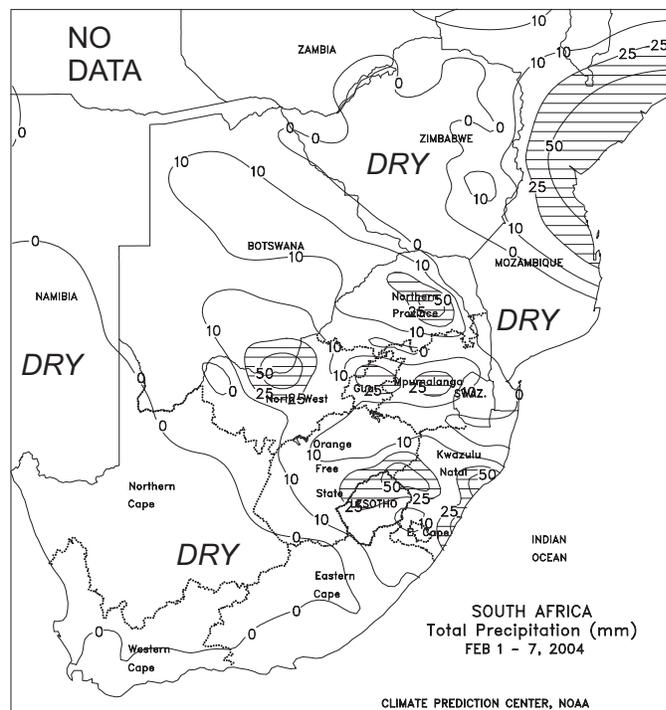


NORTHWESTERN AFRICA

Dry, sunny weather covered the major winter grain areas of Morocco, Algeria, and Tunisia. Soil moisture for vegetative winter grains remained adequate across Algeria and Tunisia. Across Morocco, rain is needed to maintain adequate soil moisture for winter grains, especially in southern Morocco where prolonged dryness had depleted soil moisture. Temperatures averaged 2 to 4 degrees C above normal, increasing crop water use. Maximum temperatures ranged from 20 to 25 degrees C.

SOUTH AFRICA

Scattered, unfavorably light showers (2-25 mm) overspread the corn belt, with just a few locations receiving amounts in excess of 25 mm. Near- to above-normal temperatures (highs mostly in the low to middle 30s degrees C) maintained high crop moisture demands in western and central growing areas, including important white corn areas in North West and Free State. Crops typically advance through reproduction from mid-January to mid-February, making the current problems especially untimely. Soaking rains are needed in most major corn areas to prevent significant declines in yield potential of rainfed crops. Elsewhere, showers (10-25 mm or more) boosted irrigation reserves in KwaZulu-Natal, but mostly dry, seasonably warm weather prevailed in the Cape Provinces, maintaining crop irrigation demands.



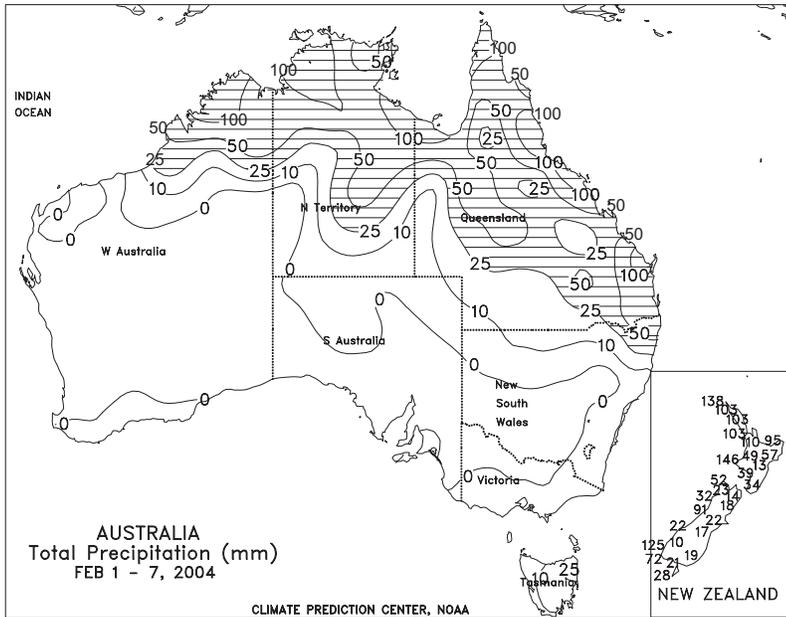
SOUTHEAST ASIA

Seasonal showers (25-100 mm) in Indonesia boosted moisture supplies for rice and corn in Java and oil palm in Sumatra. Rainfall was lighter for oil palm in Malaysia, creating a weekly moisture shortage. However, long-term moisture supplies, measured in 3- and 12-month increments, have been adequate. Unseasonably heavy showers in eastern and central Thailand boosted irrigation supplies for rice. In Vietnam, below-normal temperatures (1-3 degrees C) continued to slow winter-spring rice development.



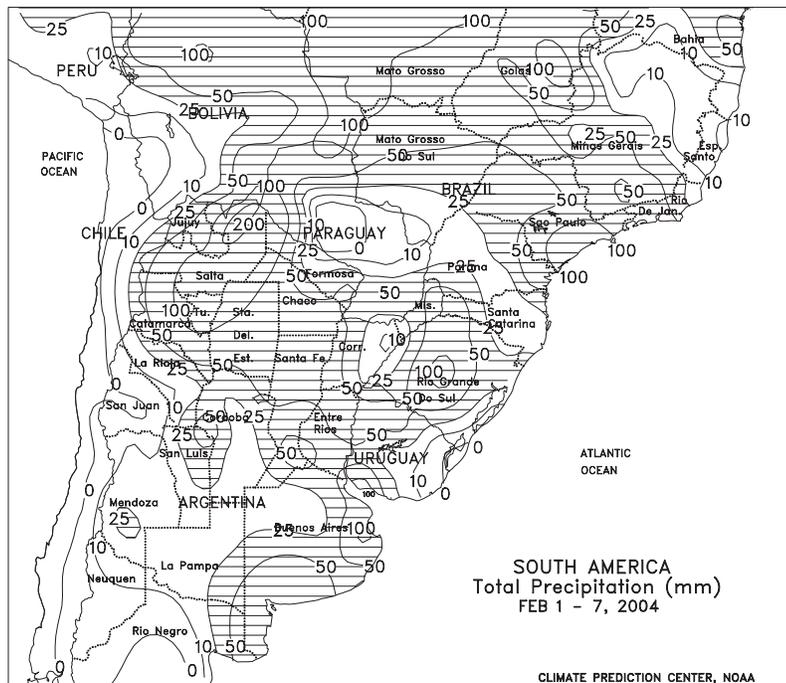
EASTERN ASIA

In central China, mostly dry, seasonably cold weather covered the main winter wheat and rapeseed areas. The region lacked a comprehensive protective snow cover, but low temperatures stayed above -15 degrees C in major production areas of the North China Plain. Rain (10-50 mm or more) in southern China boosted moisture reserves for sugarcane and early double-crop rice. Planting usually begins in March. Elsewhere, moderate rain and snow showers (10-25 mm or more) returned to central and northern Japan.



AUSTRALIA

In eastern Australia, widespread rain (10-70 mm, locally more) continued for the 2nd consecutive week, bringing additional drought relief to Queensland and northern New South Wales. The soaking rains were very beneficial for cotton and sorghum, boosting soil moisture for summer crops in or nearing reproduction throughout the region. Lake levels in the region have also responded to the past several weeks of rain. Most reservoirs in Queensland and northern New South Wales have recorded increases in lake levels, helping to stabilize irrigation supplies for summer crops. Unseasonably cool weather (temperatures averaging 1 to 3 degrees C below normal) prevailed in major summer crop-producing areas, slowing crop development but reducing evaporative losses.



SOUTH AMERICA

In Argentina, moderate to locally heavy showers (10 - 50 mm or more) increased moisture reserves for summer grains, oilseeds, and cotton in varying stages of development. The moisture was particularly welcomed in primary corn and soybean areas of central Argentina (notably northern Cordoba, Santa Fe, and Entre Rios), which have received spotty rainfall in recent weeks, although amounts were not large enough to overcome significant local long-term moisture deficits. Frequent rainfall will be needed through the end of March in these areas, which can ill afford a protracted period of untimely heat and dryness. In northern Argentina, soaking rain (50-100 mm or more) covered nearly all major cotton and soybean areas, ending a brief drying trend in that portion of the country. Temperatures averaged near to below normal throughout Argentina's main agricultural areas, lowering evapotranspiration rates. In Brazil, scattered showers (10-25 mm or more) boosted moisture reserves for reproductive to filling soybeans and corn in southern growing areas (Rio Grande do Sul to Parana and southern Mato Grosso do Sul), although summer warmth (highs in the low to middle 30s degrees C) maintained crop moisture demands. The moisture was also welcomed for secondary corn planting. Farther north, seasonably heavy showers (25-100 mm or more) continued in primary soybean, grain, citrus, and coffee areas from Sao Paulo and Mato Grosso do Sul northward through Mato Grosso and Goias, with near to slightly above-normal temperatures supporting crop development.

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