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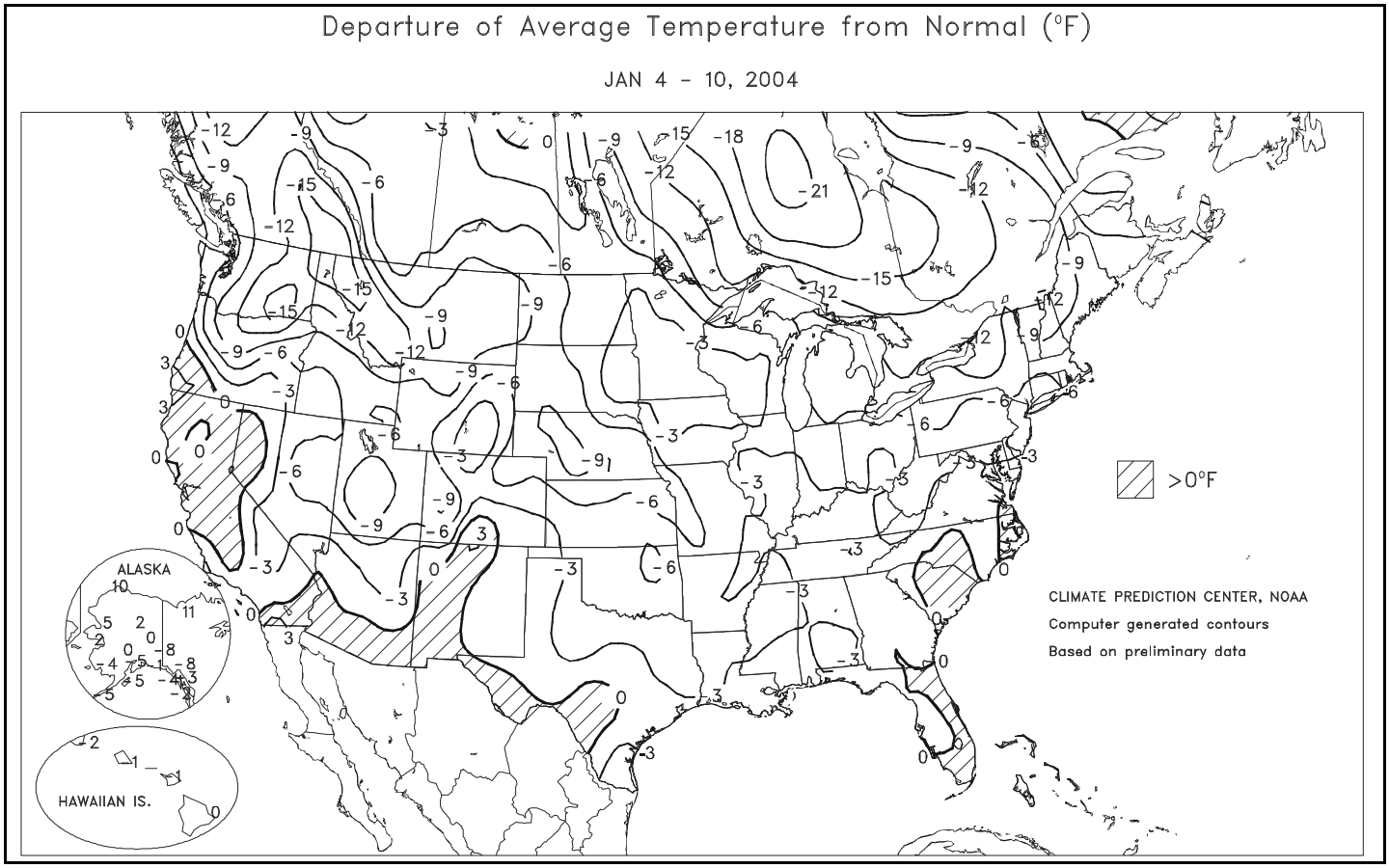
WEEKLY WEATHER AND CROP BULLETIN

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

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



HIGHLIGHTS

January 4 - 10, 2004

Highlights provided by USDA/WAOB

Cold weather invaded much of the United States, but the harshest conditions were observed in the **Pacific Northwest**, where snow and ice accumulations caused major travel and electrical disruptions as far south as **western Oregon**. Farther inland, a blanket of snow continued to protect **Northwestern** winter grains from bitterly cold weather (weekly temperatures more than 20°F below normal in some locations). Meanwhile, cold, dry air overspread the drought-affected **Intermountain West**, following highly beneficial snowfall in late December and early January. Farther east, snow covered wheat areas across the **northern half of the Plains** during the cold

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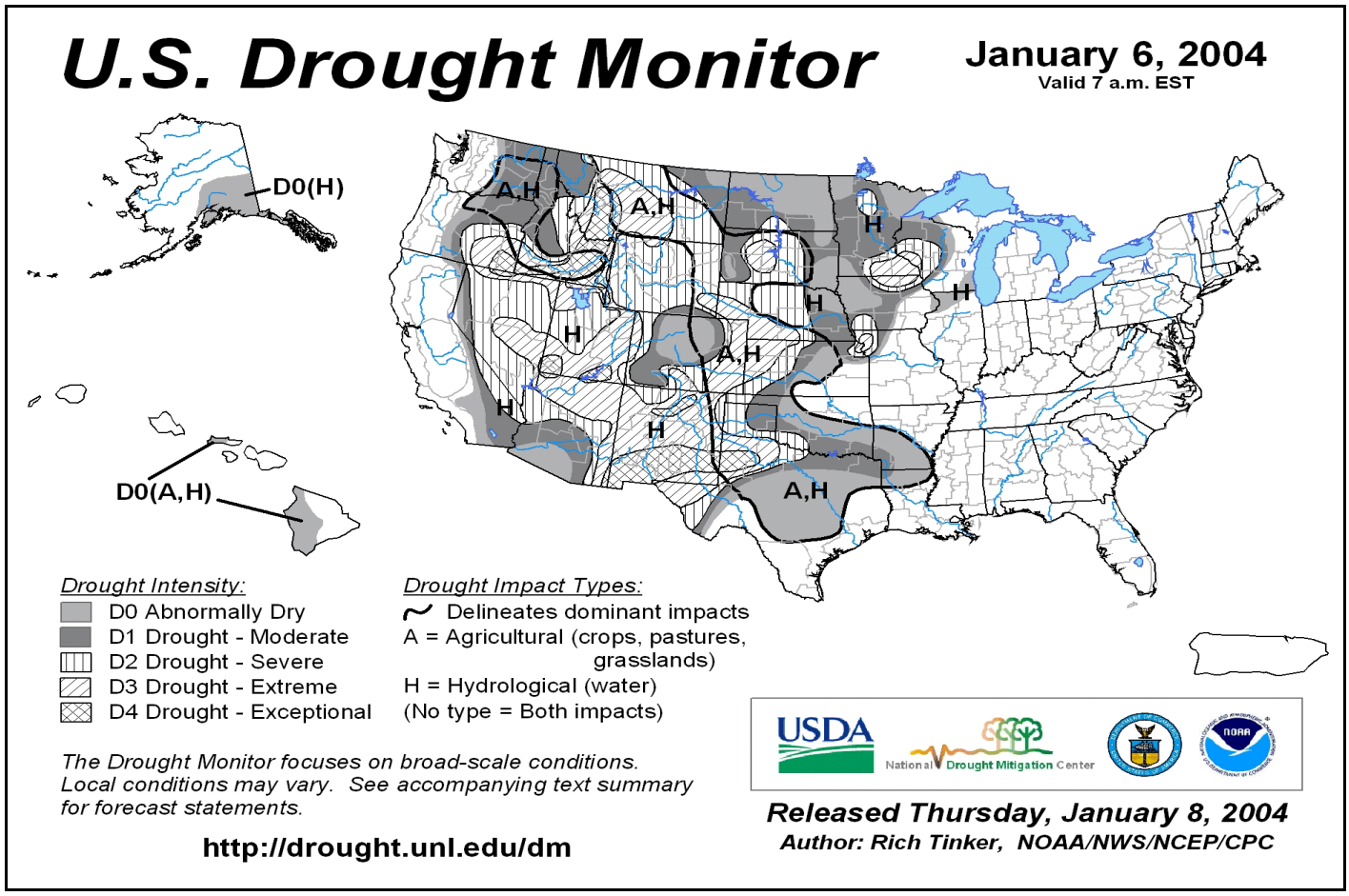
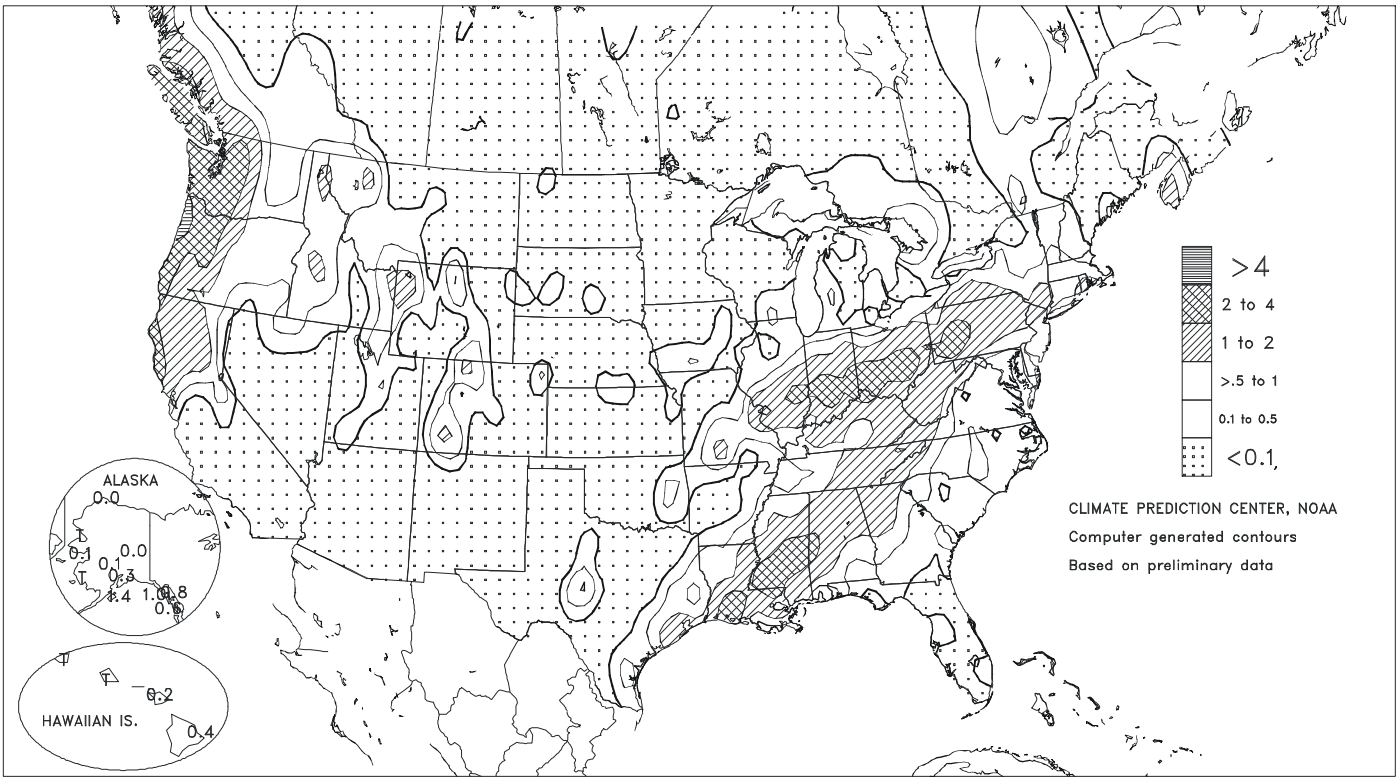
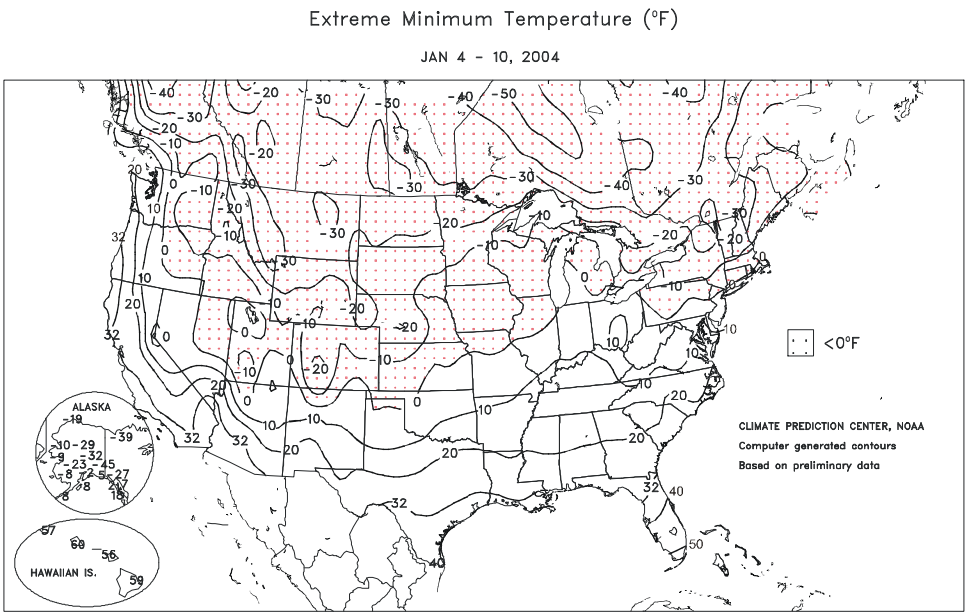


Total Precipitation (Inches)

JAN 4 - 10, 2004





outbreak (temperatures 4 to 12°F below normal), helping to insulate the poorly established crop. However, only a shallow snow cover existed in most areas from **South Dakota southward into northeastern Colorado and northern Kansas**. On the **southern Plains**, extremely dry conditions and a brief cold blast (temperatures below 0°F as far south as **northernmost Texas**) maintained stress on pastures and winter wheat. In contrast, soil moisture remained adequate to locally excessive in winter wheat areas across the **southern and eastern Corn Belt**, especially in the **Ohio Valley**, where additional rain and snow fell. However, dry conditions were a persistent concern in the **northern and western Corn Belt**, although agricultural impacts were not significant this time of year. Scattered showers swept across the **South** early in the week and again toward week's end, maintaining generally favorable conditions for winter grains and cool-season pastures despite a gradual drying trend in recent months. Weekly rainfall was heaviest, topping 1 inch, from the **central Gulf Coast into the Appalachians**. Snow fell late in the week as far south as piedmont sections of the **Carolinas**, followed by a surge of Arctic air across the **Mid-Atlantic and Northeastern States** that resulted in the coldest weather at some locations in nearly a decade.

The week began with snow falling in a narrow band across the **Plains** and **Midwest**. On January 4, daily snowfall records were established in locations such as **Hastings, NE** (4.8 inches), and **South Bend, IN** (3.0 inches). Farther south, January 4 rainfall records in the **Ohio and middle Mississippi Valleys** included 2.44 inches in **Indianapolis, IN**, 2.20 inches in **St. Louis, MO**, and 1.82 inches in **Pittsburgh, PA.** For **Pittsburgh**, it was the second-wettest January day on record, behind 2.34 inches on January 8, 1884.

Meanwhile, record warmth in the **Southeast** contrasted with a severe blast of cold air across the **Plains** and **Northwest**. **Jackson, MS**, collected consecutive daily-record highs on January 3-4, measuring 78°F both days, while **Norfolk, VA** (76, 78, and 76°F from January 3-5), posted three records in a row. On January 5, however, daily-record highs of 81°F in **Jacksonville, FL**, and **Savannah, GA**, contrasted with daily-record lows of -45°F in **Polebridge, MT**, and -36°F near **Gunnison, CO.** Elsewhere on January 5, **Meacham, OR** (-31°F), noted an all-time-record low temperature, while **West Yellowstone, MT**, recorded a low of -43°F and a high of -12°F. With a January 5 high temperature of -15°F, **Helena, MT**, endured its lowest maximum reading since February 2, 1996. A day later, minimum temperatures of -1°F in **Amarillo, TX**, and -15°F in **Kearney, NE**, were the stations' lowest since early 1996.

The cold weather 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 also noted there and elsewhere in **western Oregon**. Farther east, the weekly average temperature in **Pendleton, OR**, was 10.4°F (more than 22°F below normal), accompanied by 5.7 inches of snow. **Pendleton's** cold blast, which included consecutive daily-record lows (-9 and -11°F on January 4-5), followed a late-year snow storm that dropped 9.8 inches from December 27-29. Farther south, according to the **California** Department of Water Resources, the average water content of the **Sierra Nevada** snow pack improved to 18 inches (145 percent of normal) by January 11, up from 3 inches at the end of November 2003.

Cold air overspread the **East** by midweek, arriving more forcefully at week's end. Downwind of **Lake Michigan**, **Grand Rapids, MI**, received weekly snowfall totaling 18.7 inches, including a daily-record sum of 7.6 inches on January 6. Meanwhile in **New York**, 24-hour snowfall totals on January 6-7 reached 30.0 inches in **Redfield** and 30.5 inches in **Jamestown**. Later in the week, light snow preceded the Arctic blast across the **Mid-Atlantic region**, where January 9 snowfall totaled 3.0 inches in **Raleigh-Durham, NC**, and 2.0 inches in **Norfolk, VA.** Farther north, January 9 highs of 9°F in **Boston, MA**, and -2°F in **Syracuse, NY**, were the lowest since January 16, 1994, and January 17, 1982, respectively. On January 10, **Northeastern** daily-record lows included -28°F in **Camden, NY**, and -27°F in **St. Johnsbury, VT.** Elsewhere, it was the coldest morning since January 1994 in locations such as **Binghamton, NY** (-14°F), and **Boston** (-3°F), and the coldest since January 1996 in **Buffalo, NY** (-7°F) and **Washington, DC** (8°F). Meanwhile, daily-record warmth returned to parts of the **West**, where daily-record highs on January 9 included 73°F in **Bakersfield, CA**, and 63°F in **Medford, OR.**

Locally heavy showers lingers across the **Big Island of Hawaii** early in the week, followed by a statewide return to cool, generally dry weather. On January 4-5, 24-hour **Big Island** totals included 1.64 inches at **Kapapala Ranch** and 1.50 inches in **Pahoa**. Meanwhile on **Oahu**, **Honolulu** (60°F) posted a daily-record low for January 5. Farther north, **Alaskan** weekly weather was fairly uneventful, featuring mild (up to 10°F above normal), dry weather in northern areas and cool weather (as much as 5°F below normal) and light precipitation in southern portions of the State. January 1-10 precipitation totaled 0.43 inch (165 percent of normal) in **Anchorage**, but only 0.03 inch (8 percent) in **King Salmon** and a trace in **Bethel**.

Weather Data for Mississippi and the Missouri Bootheel

Weather Data for the Week Ending January 10, 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			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
MS	INDIANOLA 1S	47	32	72	21	39	-	0.69	-	0.52	3.74	-	0.78	-	50	46	0	4	3	1
	INVERNESS 5E	47	33	74	21	40	-	0.57	-	0.42	3.14	-	0.73	-	50	43	0	4	3	0
	LYON	44	31	71	19	37	-	0.64	-	0.39	3.03	-	0.65	-	48	43	0	3	4	0
	MACON	49	35	77	21	42	-	1.56	-	0.83	5.15	-	1.56	-	51	45	0	3	4	2
	ONWARD	48	33	75	22	41	-	1.19	-	0.92	4.45	-	1.19	-	51	46	0	3	3	1
	PERTHSHIRE	44	31	70	19	37	-	0.71	-	0.43	3.52	-	0.71	-	48	43	0	3	3	0
	SCOTT	46	32	72	22	39	-	0.62	-	0.32	3.85	-	0.68	-	48	44	0	4	3	0
	SIDON	48	33	75	21	41	-	0.85	-	0.59	3.74	-	1.00	-	52	42	0	3	3	1
	STARKVILLE	48	33	76	17	40	-1	0.96	-0.30	0.47	3.67	53	0.96	53	49	43	0	3	4	0
	TUNICA 1W	42	28	69	16	35	-	0.63	-	0.41	3.03	-	0.65	-	47	42	0	5	3	0
	VANCE	43	29	71	17	36	-	0.52	-	0.26	3.50	-	0.62	-	49	45	0	5	3	0
	VERONA	46	32	76	17	39	-	0.61	-	0.28	3.43	-	0.68	-	48	41	0	4	4	0
	STONEVILLE [x]	50	34	72	20	42	0	0.73	-0.53	0.43	4.06	56	0.75	42	52	45	0	4	2	0
MO	DELTA	38	23	64	10	30	-1	0.40	-0.18	0.40	2.79	52	0.81	85	38	35	0	6	1	0
	STEELE	41	28	67	17	35	1	0.80	-0.06	0.75	3.84	63	0.99	87	43	38	0	5	2	1
	GLENNONVILLE	40	26	67	13	33	0	0.32	-0.38	0.29	3.33	65	0.67	61	42	38	0	6	3	0
	PORTAGEVILLE LF	41	27	68	16	34	1	0.71	-0.12	0.67	3.48	62	1.05	92	44	38	0	5	2	1
	CLARKTON	39	25	66	13	33	0	0.34	-0.36	0.30	3.54	69	0.78	71	44	40	0	6	2	0
	CARDWELL	41	27	67	16	34	1	0.73	-0.07	0.66	3.88	65	0.82	72	45	40	0	6	3	1
	CHARLESTON	40	25	67	12	33	2	0.47	-0.24	0.43	3.85	69	1.09	98	43	38	0	6	2	0
	PORTAGEVILLE DC	41	27	67	16	34	1	0.89	0.06	0.54	3.19	57	1.07	94	44	38	0	5	3	1

Compiled by USDA/OCE/WAOB's Stoneville Field Office.
[x] Based on 1971-2000 normals.
- Sufficient data not available.

Weather and Crop Summary: A tremendous drop in temperatures occurred early in the reporting period. Temperatures near 70°F were replaced by highs lower than 50°F and lows near or below 20°F, the lowest readings of the winter. Rainfall early and late in the week boosted moisture levels for pastures and winter wheat.

Highlights of Northeastern Cold Snap, January 9-10, 2004

Arctic air spread southward across the northern Atlantic region on January 9. With a January 9 high temperature of -2°F, Syracuse, NY, reported its lowest maximum temperature since January 17, 1982, when its high reached -4°F. By the next morning, some of the coldest air in nearly a decade was in place across the Northeast.

Prior to the late-week cold outbreak in the Northeast, very cold conditions briefly affected many other parts of the country, including the Southwest in late December and parts of the Plains and Northwest in early January. For example, Meacham, OR—with a broken period of record going back more than a half-century—the minimum temperature of -31°F on January 5 shattered its former all-time-record low of -23°F, set on January 11, 1963. Farther south, El Paso, TX (13°F on December 29), experienced its coldest weather since January 8, 1997, when its low dipped to 10°F. A few days later on the Plains, Amarillo, TX (-1°F on January 6), had its coldest morning since February 4, 1996, while Kearney, NE (-15°F on January 6), weathered its lowest reading since January 7, 1996.

A list of selected Northeastern stations follows, comparing January 10 minimum temperatures to the most recent observance of colder weather.

Minimum Temperatures, January 10, 2004
Lowest Temperature (°F) Since...

Location	Low	Lowest Reading Since...	Location	Low	Lowest Reading Since...
Boston, MA	-3	-4 on January 16, 1994	Buffalo, NY	-7	-10 on January 6, 1996
Rochester, NY	-12	-17 on January 16, 1994	Wilmington, DE	+4	0 on February 5, 1996
Binghamton, NY	-14	-15 on January 19, 1994	Philadelphia, PA	+4	+3 on February 5, 1996
Washington, DC	+8	+5 on January 5, 1996	Allentown, PA	0	-8 on February 6, 1996

2003 Crop Production Highlights

Highlights, released on January 12, 2004, were provided by USDA/NASS.

Corn: Grain production is estimated at 10.1 billion bushels, down 2 percent (%) from the November forecast but up 12% from the 9.01 billion bushels produced in 2002. The average grain yield is estimated at 142.2 bushels per acre, 1.0 bushel below the November forecast but up 12.2 bushels from 2002. Both production and yield estimates are the largest on record. The previous record for both was set in 1994 when production was estimated at slightly below the 10.1 billion bushels being estimated for 2003 and yield was 138.6 bushels per acre.

Planted area totaled 78.7 million acres, down fractionally from last year. Corn planted area is either down or unchanged in all but 12 States. Area harvested for grain, at 71.1 million acres, is up 3% from the 2002 drought-reduced crop. Farmers harvested 6.53 million acres for silage, a 13% decrease from last year. The number of acres abandoned this year also decreased to 1.07 million acres, down significantly from the 2.25 million acres abandoned in 2002.

Soybeans: Production in 2003 totaled 2.42 billion bushels, down 1% from the November forecast and 12% below the 2002 level. This is the lowest production level since 1996. The average yield per acre is estimated at 33.4 bushels, 0.4 bushel below the November forecast and 4.6 bushels below the 2002 final yield. This is the lowest yield since 1993. Planted area at 73.4 million acres, is down 1% from 2002. Harvested area totaled 72.3 million acres, down slightly from last year and the previous forecast.

Wheat: All wheat production totaled 2.34 billion bushels in 2003, unchanged from the Small Grains 2003 Summary, but 44% above 2002. Grain area is 52.8 million acres, up 15% from last year. The U.S. yield is 44.2 bushels per acre, up 8.9 bushels from a year ago.

The 2003 winter wheat production is estimated at 1.71 billion bushels. This is unchanged from the Small Grains 2003 Summary but 49% above last year's drought-reduced crop. The U.S. yield is 46.7 bushels per acre, 8.2 bushels above last year's final yield, and the third-highest yield on record. Acreage for grain is estimated at 36.5 million acres, 23% above 2002. Planted area is 44.9 million acres, up 7% from the previous year.

Hard Red Winter (HRW) yields rebounded from last year's drought-stressed levels, except in Texas, where conditions were dry again this year. Excellent spring weather during the grain filling stage of development led to very good yields, with record-high levels noted in Oklahoma, Iowa, and North Dakota. Overall, HRW production totals 1.06 billion bushels, up 74% from last year.

Soft Red Winter (SRW) producing States' yields were better than a year ago, except in the central and northern Atlantic Coast States, where excessive moisture led to disease problems. The largest gains were noted in the Corn Belt, where ample spring rains fell. Overall, SRW production is up 14% from 2002 and totals 379 million bushels.

White Winter production, at 265 million bushels, is up 32% from last year. Yields improved significantly from last year in Oregon and Washington, and slightly in Idaho. Increased acreage planted to Hard White Winter varieties in Colorado, Kansas, and Nebraska also contributed to the increase in White Winter production.

Other Spring Wheat production in 2003 is estimated at 533 million bushels, unchanged from the Small Grains 2003 Summary, but up 35% from 2002. Harvested area is 13.4 million acres, slightly lower than last year. The U.S. yield is 39.7 bushels per acre, 10.4 bushels better than last year's drought-reduced crop.

Durum wheat production for 2003 totaled 96.6 million bushels, unchanged from the Small Grains 2003 Summary, but 22% above last year. Grain area harvested totaled 2.87 million acres, 6% above a year ago. The U.S. yield is estimated at 33.7 bushels per acre, 4.3 bushels per acre above 2002.

Cotton: Upland cotton production is estimated at 17.8 million bales, up fractionally from the December 1 forecast and 8% more than last year's production. The U.S. yield for upland cotton is a record-high 719 pounds per acre, up 4 pounds from the December 1 forecast and 68 pounds more than 2002. Harvested area, at 11.9 million acres, decreased less than 1% from last month and is 2% below last year. Upland planted area is estimated at 13.3 million acres, down 1% from the August estimate and 3% below last season.

American-Pima production is estimated at 429,000 bales, down 3,000 bales from the December forecast and down 37% from last year's output. The U.S. Pima yield is estimated at 1,157 pounds per harvested acre, down 74 pounds from last month and 185 pounds less than last year's record-high yield. Producers planted 179,100 acres of Pima cotton in 2003, down 27% from 2002.

Sorghum: Grain production is estimated at 411 million bushels, up 3% from the November forecast and 11% above 2002. Area harvested for grain is estimated at 7.80 million acres, up 7% from 2002. Average grain yield, at 52.7 bushels per acre, is up 1.80 bushels from the previous forecast and 2.0 bushels above the 2002 average yield.

Oats: Production is estimated at 145 million bushels, 4% below the August 1 forecast but 22% above last year's 119 million bushels. The estimated yield is 65.0 bushels per acre, nearly the same as the August 1 forecast and up 8.3 bushels from a year ago. Harvested area is 2.22 million acres, 5% below the August 1 forecast but 6% above last year.

Barley: Production is estimated at 276 million bushels, down 2% from the last forecast but up 22% from last year's estimate. Average yield per acre, at 58.9 bushels, is up 1.4 bushels from the last forecast and 4.0 bushels above 2002. The area harvested for grain is estimated at 4.69 million acres, 14% above a year ago.

Rice: Production of rice in 2003 totaled 199 million cwt, down 6% from 2002. Area for harvest, at 3.00 million acres, is down 7% from 2002. The average yield for all U.S. rice is estimated at 6,645 pounds per acre, 11 pounds below the November 1 forecast. This all rice yield is the highest on record. The previous record of 6,578 pounds per acre was set last year.

Peanuts: Production of peanuts in 2003 totaled 4.14 billion pounds, up 25% from last year's crop and up 1% from the November 1 forecast. Planted area for the U.S., at 1.34 million acres, was down 1% from 2002. Harvested area totaled 1.31 million acres, up 1% from 2002. The U.S. yield per harvested acre averaged a record-high 3,159 pounds, up 598 pounds from 2002.

Sunflowers: Production totaled 2.67 billion pounds, 7% above the 2002 production but down 22% from 2001. The estimated yield per acre, at 1,213 pounds, increased 71 pounds from 2002. Planted area, at 2.34 million acres, is 9% below last year. Harvested acres increased 1% from last year to 2.20 million acres.

Sugarbeets: Production is estimated at 30.6 million tons, slightly below the November 1 forecast but 10% above last year's production. Growers in the 12 sugarbeet-producing States harvested 1.35 million acres, slightly above the November estimate but 1% below last year's 1.36 million acres. Yield is estimated at 22.7 tons per acre, 0.1 ton below the November forecast but 2.3 tons above the 2002 yield.

Sugarcane: Production of sugarcane for sugar and seed is estimated at 34.4 million tons, 4% below the December forecast and 3% below last year's 35.6 million tons. Area harvested and to be harvested for sugar and seed is estimated at 996,800 acres for the 2003 crop year, unchanged from December but down 3% from last year. Yield is at estimated 34.5 tons per acre, 1.5 tons below last month and 0.2 ton below 2002.

National Weather Data for Selected Cities

Weather Data for the Week Ending January 11, 2004

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

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	48	31	74	15	40	-2	1.21	-0.01	0.84	4.51	73	1.21	71	89	54	0	5	3	1
	HUNTSVILLE	45	31	72	15	38	-2	1.01	-0.26	0.69	4.17	56	1.01	56	82	65	0	5	3	1
	MOBILE	57	39	77	28	48	-2	0.48	-0.75	0.33	4.29	67	0.50	29	79	55	0	2	3	0
	MONTGOMERY	51	34	75	23	43	-3	0.73	-0.33	0.41	4.67	72	0.73	49	92	62	0	4	4	0
AK	ANCHORAGE	18	4	32	-2	11	-5	0.26	0.11	0.20	2.36	184	0.26	113	79	69	0	7	2	0
	BARROW	1	-8	29	-19	-4	9	0.00	0.00	0.00	0.14	117	0.06	600	81	73	0	7	0	0
	FAIRBANKS	-1	-18	12	-32	-9	1	0.00	-0.14	0.00	0.44	47	0.00	0	78	70	0	7	0	0
	JUNEAU	29	17	38	7	23	-3	0.76	-0.38	0.44	6.68	95	0.76	46	88	64	0	7	4	0
	KODIAK	32	17	38	8	25	-5	1.44	-0.46	0.62	11.67	113	1.44	53	81	65	0	7	5	2
	NOME	16	-1	27	-9	8	2	0.09	-0.10	0.07	1.31	102	0.10	36	74	57	0	7	3	0
AZ	FLAGSTAFF	40	11	47	-3	26	-3	0.00	-0.44	0.00	1.19	49	0.27	44	89	40	0	7	0	0
	PHOENIX	69	43	79	36	56	3	0.00	-0.19	0.00	0.19	16	0.00	0	44	27	0	0	0	0
	TUCSON	69	39	77	29	54	3	0.00	-0.24	0.00	0.16	12	0.00	0	55	32	0	1	0	0
	YUMA	68	47	75	41	57	0	0.00	-0.08	0.00	0.00	0	0.00	0	31	22	0	0	0	0
AR	FORT SMITH	43	25	71	14	34	-3	0.16	-0.36	0.16	2.01	48	0.17	22	87	45	0	6	1	0
	LITTLE ROCK	44	30	70	19	37	-3	0.16	-0.65	0.12	4.21	72	0.23	20	86	50	0	4	2	0
CA	BAKERSFIELD	61	41	73	34	51	4	0.03	-0.21	0.03	1.70	156	0.40	121	77	54	0	0	1	0
	FRESNO	59	38	70	30	49	4	0.05	-0.39	0.05	3.07	157	0.12	20	90	72	0	2	1	0
	LOS ANGELES	67	46	75	42	57	0	0.00	-0.58	0.00	1.63	63	0.47	58	72	34	0	0	0	0
	REDDING	49	37	56	28	43	-2	1.39	0.00	0.42	13.50	204	1.68	86	95	88	0	2	4	0
	SACRAMENTO	55	40	61	28	48	3	0.38	-0.38	0.27	5.81	166	1.55	146	99	66	0	2	4	0
	SAN DIEGO	65	47	68	43	56	-1	0.00	-0.47	0.00	0.74	38	0.13	20	75	46	0	0	0	0
	SAN FRANCISCO	56	46	61	35	51	2	0.25	-0.65	0.15	9.10	220	2.67	214	88	70	0	0	3	0
	STOCKTON	56	38	68	26	47	2	0.19	-0.36	0.14	4.64	180	1.52	200	96	85	0	2	3	0
CO	ALAMOSA	36	2	45	-7	19	5	0.00	-0.06	0.00	0.05	12	0.00	0	82	43	0	7	0	0
	CO SPRINGS	40	11	57	-8	25	-3	0.01	-0.06	0.01	0.25	47	0.19	173	81	37	0	7	1	0
	DENVER INTL	40	10	63	-11	25	-3	0.01	-0.06	0.01	0.14	34	0.02	20	76	38	0	7	1	0
	GRAND JUNCTION	23	7	27	-5	15	-10	0.00	-0.14	0.00	1.17	163	0.62	310	91	80	0	7	0	0
	PUEBLO	49	9	64	-4	29	0	0.00	-0.08	0.00	0.05	10	0.00	0	69	36	0	7	0	0
CT	BRIDGEPORT	30	18	50	-2	24	-6	0.71	-0.14	0.36	4.05	87	0.77	64	70	51	0	5	2	0
	HARTFORD	27	14	48	-4	21	-5	0.72	-0.14	0.38	4.84	100	0.93	76	77	56	0	6	2	0
DC	WASHINGTON	41	25	72	8	33	-2	0.32	-0.42	0.31	4.80	117	0.48	45	72	42	0	5	2	0
DE	WILMINGTON	35	21	56	4	28	-4	0.37	-0.43	0.35	5.24	116	0.43	38	74	42	0	5	2	0
FL	DAYTONA BEACH	69	48	80	40	58	-1	0.05	-0.64	0.03	1.61	44	0.06	6	99	59	0	0	3	0
	JACKSONVILLE	64	41	81	26	53	0	0.20	-0.57	0.14	1.40	38	0.20	19	93	53	0	2	2	0
	KEY WEST	77	66	80	56	72	2	0.09	-0.43	0.06	1.22	42	0.19	25	91	72	0	0	2	0
	MIAMI	76	61	80	51	69	1	0.03	-0.36	0.03	1.28	47	0.03	5	92	67	0	0	1	0
	ORLANDO	73	49	82	40	61	0	0.04	-0.48	0.03	1.60	52	0.04	5	97	57	0	0	2	0
	PENSACOLA	58	40	76	29	49	-3	0.36	-0.79	0.16	4.02	72	0.39	24	81	52	0	2	3	0
	TALLAHASSEE	61	41	79	24	51	-1	0.26	-0.94	0.18	2.28	39	0.27	16	84	54	0	2	3	0
	TAMPA	72	51	81	38	62	1	0.39	-0.08	0.38	1.69	57	0.39	58	89	53	0	0	2	0
	WEST PALM	76	59	82	47	67	1	0.00	-0.77	0.00	4.27	102	0.01	1	93	64	0	0	0	0
GA	ATHENS	50	31	72	19	40	-2	0.75	-0.25	0.48	3.05	60	0.75	53	85	57	0	5	4	0
	ATLANTA	47	32	71	18	40	-2	0.92	-0.12	0.67	3.62	69	0.93	64	79	60	0	4	3	1
	AUGUSTA	56	32	78	17	44	0	0.31	-0.65	0.17	2.33	52	0.31	23	88	53	0	4	3	0
	COLUMBUS	52	34	73	23	43	-3	0.67	-0.39	0.43	3.61	61	0.68	45	86	51	0	4	3	0
	MACON	57	34	81	20	45	0	0.46	-0.61	0.21	5.34	98	0.48	32	85	45	0	4	3	0
	SAVANNAH	61	40	81	25	51	2	0.53	-0.34	0.42	2.01	50	0.53	43	91	51	0	3	2	0
HI	HILO	79	64	82	59	71	0	0.44	-1.64	0.33	10.92	81	0.87	30	82	72	0	0	3	0
	HONOLULU	79	64	82	60	72	-1	0.01	-0.62	0.01	10.15	271	5.34	593	84	69	0	0	1	0
	KAHULUI	80	62	82	56	71	-1	0.21	-0.64	0.21	7.97	186	5.25	438	88	77	0	0	1	0
	LIHUE	78	61	81	57	70	-2	0.01	-1.07	0.01	4.53	72	1.51	97	88	77	0	0	1	0
ID	BOISE	32	18	42	1	25	-4	0.38	0.08	0.24	2.36	130	0.74	172	89	77	0	7	4	0
	LEWISTON	28	14	47	-5	21	-12	0.09	-0.15	0.04	2.09	151	0.30	91	85	75	0	5	4	0
	POCATELLO	27	10	35	-3	18	-6	0.06	-0.19	0.04	1.07	74	0.10	29	91	77	0	7	2	0
IL	CHICAGO/O'HARE	26	12	33	-3	19	-3	0.00	-0.39	0.00	1.66	55	0.00	0	79	66	0	7	0	0
	MOLINE	25	9	30	-7	17	-4	0.18	-0.19	0.18	3.10	113	0.32	59	83	65	0	7	1	0
	PEORIA	28	13	35	-2	20	-3	0.32	-0.02	0.32	1.99	69	0.35	70	80	55	0	7	1	0
	ROCKFORD	23	11	27	-5	17	-2	0.13	-0.18	0.13	3.35	133	0.13	29	80	64	0	7	1	0
	SPRINGFIELD	31	15	40	2	23	-2	0.59	0.20	0.58	2.34	75	0.86	151	80	63	0	7	2	1
IN	EVANSVILLE	37	22	63	11	30	-1	0.05	-0.58	0.04	2.81	63	1.61	177	81	59	0	6	2	0
	FORT WAYNE	26	13	37	1	20	-4	1.03	0.56	1.00	3.95	114	1.33	193	83	67	0	7	2	1
	INDIANAPOLIS	30	17	40	5	23	-4	2.21	1.66	2.21	6.59	172	3.16	395	81	59	0	6	1	1
	SOUTH BEND	26	12	35	-2	19	-5	0.23	-0.29	0.23	1.97	51	0.27	36	78	63	0	7	1	0
IA	BURLINGTON	26	12	34	-5	19	-4	0.00	-0.30	0.00	4.33	170	0.01	2	89	61	0	7	0	0
	CEDAR RAPIDS	23	7	28	-9	15	-3	0.01	-0.21	0.01	1.81	101	0.01	3	88	65	0	7	1	0
	DES MOINES	23	6	31	-6	15	-5	0.02	-0.20	0.02	0.91	55	0.02	6	87	67	0	7	1	0
	DUBUQUE	22	5	37	-10	14	-3	0.01	-0.27	0.01	1.69	81	0.02	5	82	71	0	7	1	0
	SIOUX CITY	20	4	27	-5	12	-6	0.00	-0.14	0.00	0.23	27	0.00	0	81	73	0	7	0	0
	WATERLOO	22	7	27	-3	14	-2	0.00	-0.17	0.00	0.54	40	0.00	0	79	65	0	7	0	0
KS	CONCORDIA	31	11	54	-5	21	-5	0.03	-0.14	0.03	0.81	74	0.03	13	78	62	0	7	1	0
	DODGE CITY	42	11	61	-5	26	-4	0.00	-0.15	0.00	0.50	51	0.00	0	82	34	0	7	0	0
	GOODLAND	37	9	67	-9	23	-4	0.01	-0.10	0.01	0.57	102	0.01	6	74	57	0	7	1	0
	TOPEKA	31	13	45	3	22	-5	0.08	-0.14	0.08	2.44	141	0.08	26	75	56	0	7	1	0

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending January 11, 2004

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	WICHITA	36	14	53	1	25	-5	0.00	-0.22	0.00	0.89	53	0.00	0	82	59	0	7	0	0
KY	JACKSON	39	24	68	10	32	-2	0.97	0.17	0.73	6.30	116	2.51	216	90	57	0	6	5	1
	LEXINGTON	37	20	68	7	29	-3	1.07	0.28	0.64	6.18	120	2.29	201	87	67	0	6	4	1
	LOUISVILLE	40	25	69	14	32	-1	1.16	0.42	1.05	5.24	110	2.11	199	81	55	0	6	4	1
	PADUCAH	39	24	67	12	31	-2	0.68	-0.04	0.64	3.55	65	1.35	129	89	53	0	6	2	1
LA	BATON ROUGE	58	39	77	28	49	-1	1.31	-0.01	0.74	3.97	56	1.31	70	90	49	0	2	4	1
	LAKE CHARLES	58	42	76	31	50	-1	1.63	0.39	1.05	5.11	80	1.63	93	94	64	0	1	4	2
	NEW ORLEANS	59	45	79	35	52	0	1.00	-0.17	0.54	2.96	44	1.00	61	82	62	0	0	4	1
	SHREVEPORT	50	33	72	22	42	-4	0.46	-0.54	0.38	4.07	68	0.46	32	81	49	0	3	2	0
ME	CARIBOU	9	-5	36	-18	2	-8	0.03	-0.67	0.03	5.26	125	0.19	19	78	58	0	7	1	0
	PORTLAND	22	9	39	-9	15	-7	0.00	-0.94	0.00	3.85	69	0.13	10	78	41	0	7	0	0
MD	BALTIMORE	38	23	63	6	31	-1	0.34	-0.46	0.34	5.23	116	0.51	45	71	53	0	5	1	0
MA	BOSTON	27	15	50	-3	21	-9	0.46	-0.40	0.29	5.75	116	0.69	56	68	45	0	6	2	0
	WORCESTER	22	10	47	-8	16	-8	0.55	-0.38	0.29	5.33	104	0.77	58	81	56	0	7	2	0
MI	ALPENA	18	5	26	-11	12	-7	0.00	-0.41	0.00	1.67	69	0.28	47	87	61	0	7	0	0
	GRAND RAPIDS	23	11	31	5	17	-6	0.04	-0.40	0.03	1.39	42	0.16	25	84	67	0	7	2	0
	HOUGHTON LAKE	19	5	25	-5	12	-7	0.02	-0.34	0.02	1.74	77	0.54	106	81	65	0	7	1	0
	LANSING	23	7	32	-7	15	-7	0.12	-0.21	0.08	1.70	64	0.27	55	83	67	0	7	3	0
	MUSKEGON	25	12	31	8	19	-5	0.16	-0.34	0.10	1.81	54	0.25	35	84	70	0	7	4	0
	TRAVERSE CITY	19	8	26	-1	13	-9	0.03	-0.63	0.01	2.11	59	0.52	56	87	64	0	7	3	0
MN	DULUTH	11	-4	25	-15	3	-5	0.00	-0.21	0.00	0.54	44	0.00	0	81	64	0	7	0	0
	INT'L FALLS	4	-15	22	-29	-5	-7	0.03	-0.13	0.03	0.50	54	0.12	55	84	67	0	7	1	0
	MINNEAPOLIS	17	6	28	-6	11	-2	0.00	-0.22	0.00	0.79	60	0.00	0	73	60	0	7	0	0
	ROCHESTER	19	6	26	-5	12	0	0.00	-0.19	0.00	0.44	34	0.01	4	81	61	0	7	0	0
	ST. CLOUD	14	2	28	-10	8	-1	0.00	-0.15	0.00	0.28	31	0.00	0	82	60	0	7	0	0
MS	JACKSON	53	35	78	22	44	-1	1.79	0.53	0.85	5.13	72	1.79	99	89	52	0	3	4	2
	MERIDIAN	52	35	78	21	44	-2	1.45	0.15	0.71	4.08	57	1.45	79	90	61	0	3	4	2
	TUPELO	46	30	76	15	38	-2	0.64	-0.59	0.42	3.90	49	0.70	39	87	60	0	4	3	0
MO	COLUMBIA	31	15	42	2	23	-5	0.30	-0.06	0.30	3.89	130	0.42	81	86	61	0	7	1	0
	KANSAS CITY	29	13	39	0	21	-6	0.15	-0.11	0.15	2.11	105	0.15	41	85	64	0	7	1	0
	SAINT LOUIS	34	20	43	6	27	-3	2.21	1.74	2.21	4.70	133	2.35	351	83	59	0	7	1	1
	SPRINGFIELD	34	17	42	3	26	-6	0.76	0.32	0.76	5.13	135	1.20	190	89	66	0	7	1	1
MT	BILLINGS	24	10	46	-14	17	-7	0.03	-0.15	0.03	0.80	87	0.04	16	70	55	0	6	1	0
	BUTTE	22	-11	42	-36	6	-11	0.00	-0.11	0.00	0.38	55	0.01	6	89	63	0	7	0	0
	GLASGOW	8	-10	35	-32	-1	-11	0.01	-0.07	0.01	0.56	114	0.03	25	80	76	0	7	1	0
	GREAT FALLS	24	6	43	-26	15	-7	0.01	-0.16	0.01	0.21	23	0.10	42	75	60	0	6	1	0
	HAVRE	14	-8	42	-33	3	-11	0.00	-0.11	0.00	0.28	42	0.04	25	82	74	0	7	0	0
	KALISPELL	13	-5	31	-29	4	-17	0.49	0.16	0.32	1.99	94	0.64	136	85	78	0	7	7	0
	MISSOULA	13	-2	28	-23	6	-17	0.04	-0.21	0.04	1.10	73	0.24	69	85	77	0	7	1	0
NE	GRAND ISLAND	22	2	42	-13	12	-10	0.03	-0.08	0.03	0.24	29	0.07	44	82	71	0	7	1	0
	LINCOLN	24	4	40	-9	14	-8	0.03	-0.14	0.03	0.55	50	0.03	13	82	65	0	7	1	0
	NORFOLK	23	4	39	-7	13	-7	0.00	-0.11	0.00	0.21	26	0.00	0	81	69	0	7	0	0
	NORTH PLATTE	28	-4	53	-23	12	-11	0.00	-0.08	0.00	0.10	19	0.00	0	97	70	0	7	0	0
	OMAHA	23	7	32	-4	15	-6	0.12	-0.05	0.12	0.96	83	0.12	52	82	66	0	7	1	0
	SCOTTSBLUFF	30	0	54	-29	15	-9	0.11	0.00	0.11	0.61	85	0.11	69	80	69	0	7	1	0
	VALENTINE	26	2	53	-16	14	-7	0.05	-0.01	0.05	0.28	68	0.05	63	84	68	0	7	1	0
NV	ELY	34	3	47	-14	19	-6	0.01	-0.14	0.01	1.20	169	0.01	5	81	70	0	7	1	0
	LAS VEGAS	54	35	64	30	45	-1	0.00	-0.11	0.00	0.96	171	0.00	0	66	41	0	3	0	0
	RENO	46	25	57	12	35	2	0.00	-0.21	0.00	1.59	136	0.37	128	77	63	0	7	0	0
	WINNEMUCCA	35	19	40	6	27	-2	0.24	0.05	0.24	2.14	196	0.35	125	88	72	0	7	1	0
NH	CONCORD	21	8	44	-9	15	-6	0.25	-0.41	0.23	5.78	148	0.47	50	72	48	0	7	2	0
NJ	NEWARK	34	20	54	2	27	-5	0.71	-0.19	0.41	5.87	122	0.74	59	67	51	0	5	2	0
NM	ALBUQUERQUE	47	24	55	17	35	0	0.00	-0.11	0.00	0.11	17	0.00	0	53	25	0	7	0	0
NY	ALBANY	22	8	46	-11	15	-8	0.23	-0.32	0.17	5.91	171	0.43	54	78	50	0	7	3	0
	BINGHAMTON	21	6	45	-14	14	-8	0.59	0.04	0.47	4.05	106	0.92	116	88	69	0	7	2	0
	BUFFALO	24	11	43	-7	18	-7	0.22	-0.51	0.16	4.21	87	0.57	54	81	56	0	7	4	0
	ROCHESTER	24	10	46	-12	17	-8	0.57	0.05	0.24	3.28	94	0.86	115	87	66	0	7	7	0
	SYRACUSE	20	7	47	-16	13	-10	0.30	-0.28	0.18	3.88	98	0.78	94	87	61	0	7	4	0
NC	ASHEVILLE	43	26	70	13	35	-1	0.22	-0.64	0.21	2.87	62	0.22	18	82	62	0	6	2	0
	CHARLOTTE	49	32	72	17	41	0	0.33	-0.55	0.25	2.73	62	0.33	27	82	45	0	5	2	0
	GREENSBORO	47	29	73	17	38	0	0.27	-0.50	0.14	2.92	70	0.27	25	79	43	0	5	2	0
	HATTERAS	52	42	68	27	47	1	0.51	-0.83	0.31	6.22	96	0.51	27	77	56	0	2	2	0
	RALEIGH	48	32	73	16	40	0	0.47	-0.40	0.27	3.99	94	0.47	39	78	52	0	5	2	0
	WILMINGTON	55	37	78	21	46	0	0.33	-0.67	0.27	5.29	102	0.34	24	96	49	0	4	2	0
ND	BISMARCK	14	-2	32	-18	6	-4	0.01	-0.07	0.01	0.49	88	0.01	8	78	69	0	7	1	0
	DICKINSON	15	-5	38	-23	5	-9	0.05	-0.01	0.05	0.26	62	0.05	63	86	66	0	7	1	0
	FARGO	12	-1	28	-19	5	-2	0.00	-0.17	0.00	1.18	148	0.00	0	80	65	0	7	0	0
	GRAND FORKS	8	-8	25	-27	0	-5	0.00	-0.14	0.00	0.67	89	0.00	0	88	69	0	7	0	0
	JAMESTOWN	11	-3	31	-20	4	-5	0.00	-0.12	0.00	0.47	77	0.00	0	89	69	0	7	0	0
	WILLISTON	9	-11	33	-28	-1	-9	0.05	-0.06	0.05	0.42	58	0.20	125	82	75	0	7	1	0
OH	AKRON-CANTON	28	15	42	5	21	-5	1.37	0.81	1.27	4.80	127	1.89	233	84	66	0	6	3	1
	CINCINNATI	34	20	50	9	27	-3	2.33	1.67	2.25	5.64	133	3.38	352	83	65	0	6	4	1
	CLEVELAND	28	17	41	9	22	-4	1.00	0.45	0.72	5.24	133	1.21	153	82	62	0	7	5	1
	COLUMBUS	31	20	46	11	25	-4	2.24	1.69	2.14	6.94	186	4.16	520	77	64	0	6	3	1
	DAYTON	29	17	43	7	23	-4	2.52	1.93	2.50	5.95	151	3.51	413	85	60	0	6	3	1
	MANSFIELD	27	15	39	8	21	-4	1.35	0.75	1.33	5.40	131	2.13	248	91	63	0	7	2	1

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending January 11, 2004

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	27	13	40	3	20	-4	0.07	-0.36	0.07	3.50	107	0.25	40	80	64	0	7	1	0
	YOUNGSTOWN	26	13	40	1	20	-5	1.17	0.65	1.06	4.61	124	1.93	254	85	67	0	6	4	1
OK	OKLAHOMA CITY	42	20	54	7	31	-5	0.00	-0.33	0.00	1.11	47	0.00	0	78	42	0	7	0	0
	TULSA	39	19	47	7	29	-7	0.09	-0.28	0.09	2.57	87	0.11	21	80	59	0	7	1	0
OR	ASTORIA	43	34	53	25	39	-3	2.07	-0.08	0.80	12.83	95	2.96	96	92	81	0	3	7	1
	BURNS	30	12	37	-10	21	-3	0.57	0.30	0.35	2.44	144	0.88	226	97	87	0	7	4	0
	EUGENE	40	30	46	20	35	-4	1.21	-0.48	0.55	13.53	126	2.90	120	96	93	0	4	7	1
	MEDFORD	49	37	63	32	43	5	0.32	-0.23	0.10	6.08	165	1.41	178	88	63	0	1	5	0
	PENDLETON	17	3	34	-11	10	-23	0.42	0.12	0.13	3.34	175	0.62	144	87	82	0	7	6	0
	PORTLAND	33	26	41	18	30	-9	0.66	-0.47	0.28	8.61	117	1.15	71	84	77	0	5	5	0
	SALEM	34	27	42	19	31	-9	1.82	0.54	0.57	12.76	154	2.32	127	96	88	0	6	7	2
PA	ALLENTOWN	32	18	52	0	25	-3	0.85	0.07	0.59	5.89	131	0.92	83	71	50	0	5	2	1
	ERIE	26	14	41	0	20	-8	0.31	-0.29	0.14	3.64	79	0.67	77	88	70	0	7	5	0
	MIDDLETOWN	33	20	50	2	27	-2	0.88	0.27	0.61	4.43	108	1.03	118	69	31	0	5	2	1
	PHILADELPHIA	35	22	54	4	28	-5	0.41	-0.39	0.34	5.89	133	0.43	38	69	51	0	5	2	0
	PITTSBURGH	31	17	50	3	24	-4	2.01	1.41	1.87	6.50	175	3.16	372	85	58	0	6	2	1
	WILKES-BARRE	28	14	52	-7	21	-6	1.08	0.56	0.76	5.28	160	1.31	177	83	54	0	6	2	1
	WILLIAMSPORT	30	16	46	0	23	-3	1.02	0.43	0.86	6.01	159	1.59	189	71	54	0	6	2	1
RI	PROVIDENCE	30	18	52	-1	24	-5	0.73	-0.25	0.45	7.39	134	0.96	69	66	47	0	5	2	0
SC	BEAUFORT	59	39	80	25	49	0	0.34	-0.56	0.25	2.14	50	0.34	30	90	47	0	3	2	0
	CHARLESTON	59	38	79	23	48	0	0.38	-0.54	0.31	2.24	49	0.38	29	86	47	0	3	2	0
	COLUMBIA	54	35	76	22	45	1	0.20	-0.82	0.16	2.33	48	0.20	14	79	51	0	3	3	0
	GREENVILLE	49	32	72	19	41	0	0.36	-0.62	0.29	3.03	58	0.36	26	89	52	0	5	2	0
SD	ABERDEEN	15	0	27	-17	7	-4	0.03	-0.08	0.02	0.36	67	0.03	19	79	71	0	7	2	0
	HURON	20	5	32	-9	13	-1	0.00	-0.09	0.00	0.19	37	0.00	0	84	64	0	7	0	0
	RAPID CITY	24	3	47	-16	14	-8	0.04	-0.04	0.02	0.29	56	0.04	33	84	61	0	7	2	0
	SIOUX FALLS	20	3	29	-7	11	-3	0.00	-0.11	0.00	1.07	162	0.00	0	80	65	0	7	0	0
TN	BRISTOL	41	24	71	12	33	-1	1.64	0.87	1.40	6.20	138	1.82	167	88	51	0	5	4	1
	CHATTANOOGA	45	31	70	17	38	-1	1.04	-0.14	0.83	5.43	84	1.05	63	76	62	0	5	3	1
	KNOXVILLE	43	28	72	13	36	-1	1.04	0.00	1.04	4.45	75	1.04	70	85	57	0	5	1	1
	MEMPHIS	44	30	71	17	37	-3	0.43	-0.52	0.34	3.55	50	0.47	34	83	49	0	4	2	0
	NASHVILLE	42	28	75	14	35	-2	0.44	-0.47	0.18	4.14	71	0.95	73	82	48	0	6	4	0
TX	ABILENE	53	27	66	15	40	-3	0.00	-0.23	0.00	0.01	1	0.00	0	70	46	0	6	0	0
	AMARILLO	48	17	63	-1	33	-2	0.00	-0.15	0.00	0.09	11	0.00	0	69	31	0	7	0	0
	AUSTIN	58	36	78	26	47	-3	0.06	-0.40	0.06	0.58	19	0.07	10	67	45	0	2	1	0
	BEAUMONT	59	42	74	35	50	-2	0.75	-0.58	0.67	3.94	55	0.75	40	93	57	0	0	2	1
	BROWNSVILLE	63	49	80	40	56	-3	0.19	-0.05	0.08	0.55	38	0.20	59	96	79	0	0	5	0
	CORPUS CHRISTI	60	47	78	40	53	-3	0.11	-0.24	0.07	0.68	30	0.11	22	78	61	0	0	2	0
	DEL RIO	62	41	76	34	52	1	0.00	-0.09	0.00	0.05	6	0.01	7	58	42	0	0	0	0
	EL PASO	58	32	63	26	45	1	0.00	-0.11	0.00	0.01	1	0.00	0	49	23	0	4	0	0
	FORT WORTH	51	29	69	20	40	-4	0.01	-0.46	0.01	0.97	30	0.01	1	78	44	0	4	1	0
	GALVESTON	59	47	72	40	53	-3	1.09	0.19	0.93	6.80	142	1.09	86	91	64	0	0	4	1
	HOUSTON	57	41	76	34	49	-3	0.73	-0.10	0.62	3.74	77	0.75	64	79	61	0	0	4	1
	LUBBOCK	53	21	64	8	37	0	0.00	-0.09	0.00	0.00	0	0.00	0	58	36	0	7	0	0
	MIDLAND	53	27	68	18	40	-3	0.00	-0.11	0.00	0.00	0	0.00	0	58	35	0	6	0	0
	SAN ANGELO	55	29	72	19	42	-2	0.00	-0.17	0.00	0.00	0	0.00	0	65	44	0	5	0	0
	SAN ANTONIO	61	40	77	31	51	1	0.01	-0.36	0.01	0.16	6	0.05	9	75	39	0	1	1	0
	VICTORIA	58	43	75	35	51	-2	0.83	0.28	0.69	2.95	90	0.85	108	84	66	0	0	3	1
	WACO	55	33	73	24	44	-2	0.03	-0.41	0.02	0.54	16	0.05	8	77	57	0	3	2	0
	WICHITA FALLS	50	23	65	7	37	-3	0.00	-0.26	0.00	0.12	6	0.01	3	70	42	0	6	0	0
UT	SALT LAKE CITY	26	15	30	11	21	-8	0.03	-0.27	0.03	4.24	259	0.27	66	88	71	0	7	1	0
VT	BURLINGTON	17	4	46	-13	10	-9	0.04	-0.44	0.04	5.11	176	0.22	32	70	49	0	7	1	0
VA	LYNCHBURG	41	25	67	6	33	-1	0.46	-0.32	0.34	4.07	94	0.72	65	76	55	0	5	3	0
	NORFOLK	50	36	78	22	43	3	0.52	-0.34	0.32	6.76	159	0.52	43	68	43	0	4	3	0
	RICHMOND	44	30	73	12	37	1	0.45	-0.37	0.38	4.86	114	0.58	50	73	51	0	5	2	0
	ROANOKE	43	28	73	16	36	0	0.46	-0.22	0.25	3.70	97	0.75	78	77	60	0	5	2	0
	WASH/DULLES	39	22	73	7	31	-1	0.33	-0.36	0.30	5.09	126	0.52	53	75	55	0	5	2	0
WA	OLYMPIA	36	25	42	10	31	-7	2.01	0.35	1.36	8.27	81	2.25	95	96	86	0	4	4	1
	QUILLAYUTE	44	35	56	20	39	-1	2.65	-0.38	0.79	16.58	88	2.93	68	85	74	0	3	5	3
	SEATTLE-TACOMA	39	30	55	20	34	-6	1.01	-0.12	0.38	5.22	72	1.34	83	81	62	0	4	5	0
	SPOKANE	20	5	38	-22	12	-14	0.35	-0.06	0.16	2.78	98	0.64	108	96	74	0	7	5	0
	YAKIMA	22	7	37	-14	15	-13	0.66	0.38	0.31	3.42	193	1.35	346	87	76	0	7	3	0
WV	BECKLEY	35	19	64	3	27	-4	1.04	0.32	0.82	4.21	102	1.88	184	85	66	0	6	4	1
	CHARLESTON	40	24	70	8	32	-1	1.17	0.47	0.90	5.23	121	2.34	234	89	50	0	6	5	1
	ELKINS	36	17	67	-3	27	-2	0.64	-0.12	0.45	3.84	85	1.09	102	85	50	0	6	5	0
	HUNTINGTON	38	24	69	11	31	-2	0.91	0.19	0.54	4.68	107	2.02	198	87	53	0	5	4	1
WI	EAU CLAIRE	18	3	31	-5	10	-2	0.00	-0.21	0.00	1.24	94	0.11	38	82	54	0	7	0	0
	GREEN BAY	19	6	27	-4	13	-3	0.02	-0.23	0.01	2.19	124	0.51	146	84	61	0	7	2	0
	LA CROSSE	22	8	31	-3	15	-1	0.00	-0.23	0.00	0.74	48	0.02	6	75	46	0	7	0	0
	MADISON	20	6	27	-4	13	-4	0.26	0.01	0.23	2.30	114	0.30	83	81	67	0	7	2	0
	MILWAUKEE	24	10	30	-4	17	-4	0.00	-0.39	0.00	2.14	77	0.11	20	85	70	0	7	0	0
WY	CASPER	32	11	49	-13	22	0	0.00	-0.11	0.00	0.39	50	0.00	0	69	44	0	6	0	0
	CHEYENNE	34	12	55	-11	23	-3	0.02	-0.06	0.02	0.78	134	0.02	17	67	46	0	7	1	0
	LANDER	21	2	37	-18	11	-9	0.04	-0.07	0.04	0.87	113	0.05	31	79	68	0	7	1	0
	SHERIDAN	23	1	41	-20	12	-9	0.03	-0.14	0.02	0.90	101	0.03	14	78	62	0	7	2	0

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

NOTE: These data are preliminary and subject to change. In the past, precipitation totals from a number of stations have been incomplete.

December Weather and Crop Summary

Weather

Weather summary provided by USDA/WAOB

Storm systems repeatedly battered the Northeast during the first 3 weeks of December, resulting in frequent bouts of heavy rain, snow, and high winds. Precipitation highlights were scarce, however, elsewhere east of the Rockies. Winter wheat areas in the lower Midwest retained plenty of moisture from previously heavy rainfall, while Southern winter grains and cool-season pastures received enough rain to promote generally normal development. Farther west, the Plains' winter wheat situation remained far from ideal. Although the Plains escaped December with relatively minor temperature fluctuations, subsoil moisture supplies were very limited. Occasional snowfall provided a boost in topsoil moisture on the northern and central Plains, but exceptional dryness persisted on the southern High Plains, where high winds on December 15 triggered a major dust storm. Farther west, wet weather along the Pacific Coast gradually pushed inland, especially toward month's end. Wetness in the West Coast States, initially confined to northern and central California and the Pacific Northwest, reached southern California's burn areas (from the October wildfires) by December 25, triggering several major mudslides. Farther inland, late-month storminess was more welcomed across the Intermountain West, where reservoir storage remained significantly below normal due to long-term drought.

Below-normal monthly temperatures were confined to the Southeast (as much as 6ºF below normal), where an early- to mid-December cold snap helped to condition Florida's citrus trees. The cold spell culminated on December 21, featuring scattered temperatures near the freezing mark as far south as the northern Everglades. However, winter agricultural interests in central and southern Florida incurred little, if any, damage. Mild weather overspread the East toward the end of December, while most of the remainder of the Nation experienced a continuation of above-normal temperatures. An exception was the Southwest, where colder air at month's end brought the lowest temperatures in several years. On December 28 and 29, some winter crop producers in southern California and the Southwest had to take protective measures due to temperatures ranging from the upper 20s to near the freezing mark (32ºF). Mild weather continued through year's end, however, across the upper Midwest, where monthly temperatures averaged up to 10ºF above normal.

December snowfall was substantial in the Northeast and parts of the northern Plains, Northwest, and Intermountain West. Most of the Northeast's snow fell during the first 3 weeks of December, boosting monthly totals to 53.6 inches (312 percent of normal) in Burlington, VT; 48.5 inches (186 percent) in Syracuse, NY; 33.9 inches (253 percent) in Concord, NH; and 32.7 inches (232 percent) in Bangor, ME. The only snowier month in Burlington's history was December 1970, when 56.7 inches fell. Nearly 90 percent of Burlington's snow fell in three 2-day periods: 18.2 inches on December 6-7, 18.8 inches on December 14-15, and 10.2 inches on December 17-18. Nearby Mt. Mansfield, VT, set December records for precipitation (13.52 inches, or 212 percent of normal) and snowfall (91.0 inches). However, compared with December normals, totals were even more impressive in the northern Mid-Atlantic region, where December snowfall included 19.8 inches (762 percent of normal) in New York's Central Park and 11.4 inches (518 percent) at Virginia's Dulles Airport. With 21.3 inches of snow, Pittsburgh, PA, experienced its snowiest December since 26.0 inches fell in 1944.

From December 5-7, snowfall and winds were particularly impressive in the Northeast, where a full-fledged blizzard raged. Boston, MA, received 16.9 inches of snow and clocked a December 6 peak wind gust to 48 m.p.h. Just offshore, wind gusts reached 82 m.p.h. on Mount Desert Rock, ME, and 72 m.p.h. on the Isles of Shoals, NH, while inland, storm-total snowfall included 52 inches at Pinkham Notch, NH, and 41 inches in Rangely, ME. In Providence, RI, the storm-total snowfall of 17.0 inches surpassed its December single-storm record of 12.0 inches, set on December 5-6, 1981. Coincidentally, the Northeastern coastal storm shared the Atlantic Ocean with Tropical Storm Odette, the first named storm to form in the Caribbean Sea in December. Days later, Tropical Storm Peter formed over the eastern Atlantic Ocean, marking the first observance of two Atlantic Basin tropical storms in December since 1887.

While the East warmed at month's end, the northern Plains and the West received the majority of their snowfall. In Idaho, Pocatello received 13.0 inches on December 26, breaking its single-day December snowfall record of 12.0 inches, set in 1919. Salt Lake City, UT, measured 21.9 inches from December 25-29, boosting its monthly total to 31.2 inches (256 percent of normal). Salt Lake City's late flurry capped its fifth-snowiest, second-wettest (3.97 inches) December on record. Elsewhere across the interior West, monthly snowfall reached 20.8 inches (274 percent of normal) in Elko, NV, and 13.3 inches (256 percent) in Pendleton, OR. On December 28-29, Pendleton's 9.5-inch snowfall represented its third-highest 24-hour total on record, behind 16.1 inches in February 1994 and 11.1 inches in January 1950. Heavy precipitation even reached the northern

Plains, where Glasgow, MT, noted its snowiest December on record (18.8 inches), breaking its 1929 standard of 16.5 inches. Most of Glasgow's snow was observed from December 26-28, when 14.4 inches fell. By the morning of December 30, snow was reported as far south as the Las Vegas Valley, where McCarran Airport received 1.3 inches. It was Las Vegas' heaviest snowfall since February 19, 1990, when 1.4 inches fell.

Closer to the Pacific Coast, late-month precipitation fell in the form of heavy rain. During a 2-day period ending December 25, rainfall totaled 4 to 8 inches, with locally higher totals, at some mountain stations in southern California, including Lytle Creek (8.58 inches), Manzanita Flats (8.27 inches), and Mt. Baldy (6.14 inches). Some of the rain fell in previously burned areas of the San Bernardino Mountains, triggering deadly mudslides in Waterman Canyon. Cold air trailed the late-month storminess into the Southwest. Phoenix, AZ, reported low temperatures of 32°F on December 28 and 29, marking its first freeze since January 3, 2000, and first consecutive readings at or below the freezing mark since February 15-16, 1990. Elsewhere in Arizona, Tucson (20°F on December 28 and 19°F on December 29) registered its lowest reading since December 24, 1974, and experienced consecutive days with temperatures 20°F or lower for the first time since January 7-8, 1971. In western Texas, El Paso (13°F on December 29) had its coldest day since January 8, 1997, when the low was 10°F. The Western chill followed the culmination of Florida's 3-week cool spell. On December 21, Gainesville, FL (22°F), notched a daily-record low, while minima elsewhere in the State included 21°F in Brooksville and 33°F in Ruskin. Immokalee, FL, in the northern Everglades, reported a December 21 low of 32°F.

In contrast, only a trace of rain (0.67 inch below normal) fell in Lubbock, TX, increasing the city's streak without measurable precipitation to 46 days (November 16 - December 31). The southern High Plains were also affected by a major dust storm on December 15, when wind gusts from 50 to 65 m.p.h. were common. A peak gust to 62 m.p.h. was clocked in Lubbock, while the nearby town of Morton, TX, reported a gust to 67 m.p.h. Elsewhere in Texas, San Angelo noted its driest December on record (a trace, or 0.94 inch below normal), tying 7 other years. Other low December totals on the Plains included 0.11 inch (7 percent of normal) in Wichita Falls, TX, and 0.07 inch (10 percent) in Hastings, NE. In fact the central and southern Plains' only significant snow storms of the month crossed similar areas on December 9-10 and 12-13. In Oklahoma, Tulsa netted 3.7 inches of snow with the first storm and 1.5 inches with the second. Meanwhile in Missouri, the storms produced 6.5 inches of Kansas City's 7.1-inch December total, the city's highest monthly snowfall since December 2000. Farther north, however, December snowfall in Chicago, IL, totaled just 1.5 inches. Parts of the Midwest did receive significant rainfall on December 9, when the 1.86-inch total in Ottumwa, IA, represented its second-highest daily total on record in December behind 1.90 inches on December 7, 1980. Elsewhere in Iowa, Burlington's December 9-10 precipitation totaled 3.42 inches.

In Hawaii, a long spell of generally quiet weather from December 8-26 was sandwiched between wet weather during the first week of December and again at month's end. The early-December wetness was a continuation of late-November downpours. During the 14 days ending on the morning of December 9, Hawaiian rainfall included 35.06 inches at Oahu's Wilson Tunnel and 28.51 inches in West Wailuaiki, Maui. Some of the heaviest rain fell on December 7, when Oahu totals included 10.69 inches at Schofield East and 8.22 inches in Mililani. Rain intensified again on December 30-31, when the 24-hour total of 1.73 inches in Honolulu, Oahu, boosted its monthly sum to 4.81 inches (169 percent of normal).

Alaskan monthly temperatures averaged within 5°F of normal, but stormy weather prevailed nearly statewide. In Anchorage, December precipitation totaled 2.10 inches (200 percent of normal), including 37.6 inches of snow. The majority of Anchorage's snow, 28.8 inches, fell in an 8-day period from December 17-24, boosting its December 23 depth to 34 inches. Cool (as much as 5°F below normal), somewhat drier conditions prevailed across interior Alaska, where monthly precipitation included 0.77 inch (55 percent of normal) in King Salmon, 0.46 inch (32 percent) in McGrath, and 0.44 inch (59 percent) in Fairbanks.

Fieldwork

Fieldwork summary provided by USDA/NASS

In the Corn Belt, temperatures were generally above normal for the month. Precipitation was light to moderate across the southern part of the region. Some snow cover accumulated in the first half of the month in the northern and western parts of the region but melted rapidly during the last week. Corn harvest was still not complete in some areas, due to muddy fields.

The Great Plains remained dry most of the month and mild temperatures prevailed. Snow cover accumulated across the northern and central Great Plains during the first half of the month but melted rapidly after midmonth, leaving winter wheat vulnerable to potential extreme cold. In the southern part of the region, dry, windy conditions depleted topsoil moisture, stressing small grains and pastures.

Precipitation was near normal in most of the Rocky Mountain region, while temperatures were mostly above normal. Snow cover was spotty across the northern and central parts of the region early in the month, but became more uniform by midmonth. However, in the last half of the month, extremely mild temperatures melted much of this snow cover, leaving the winter wheat crop exposed.

In the Southeast and Mississippi Delta, temperatures were below average for most of the month, with light to moderate rainfall. Freezing temperatures reached as far south as the Gulf Coast. Though cotton harvest was complete in the Delta, most States in the Southeast still had some fields unharvested. Despite dry, cold conditions in Florida, citrus and vegetable crops were in good condition.

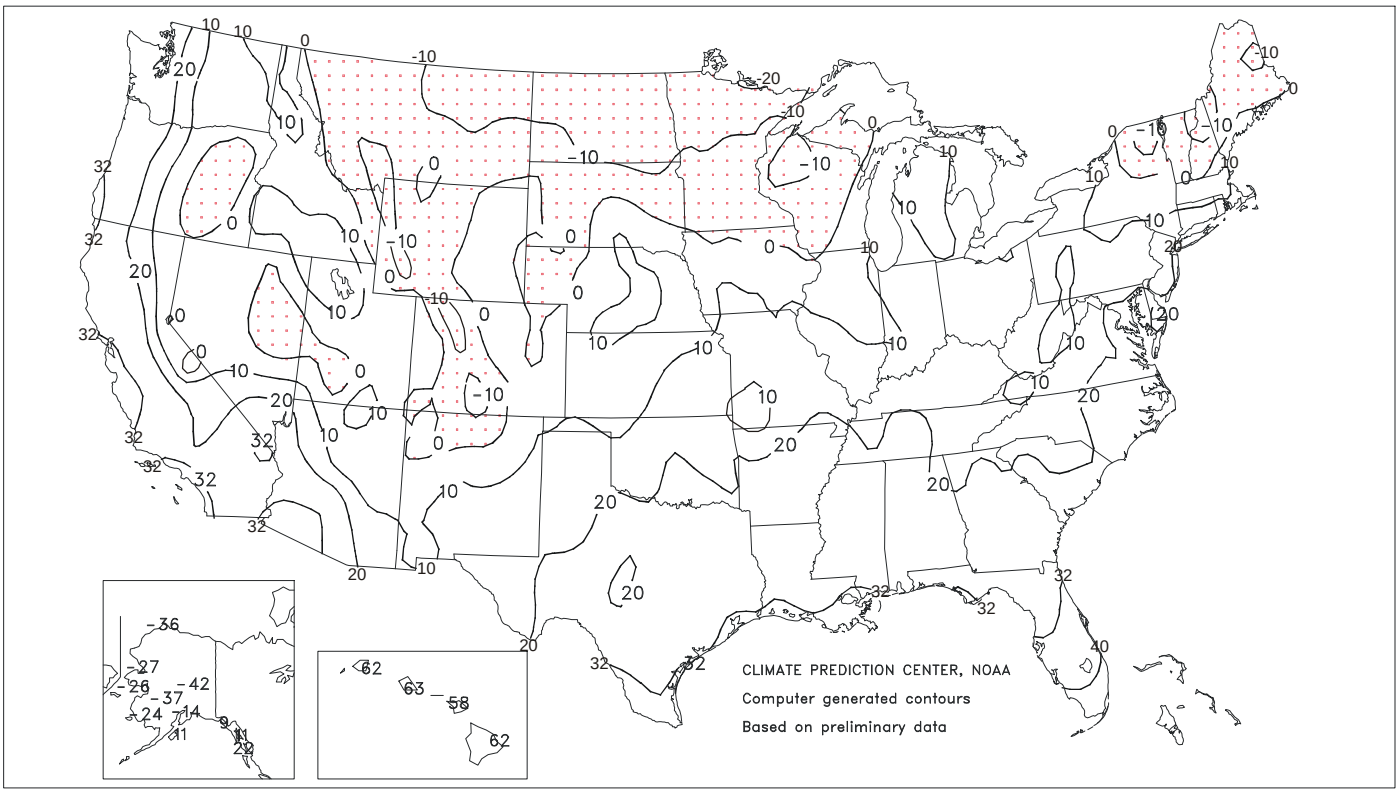
Along the upper and middle Atlantic Coast, temperatures were below normal most of the month but turned mild during the final week. Precipitation was light to moderate with heavy snowfall in the Northeast. The precipitation, combined with pre-existing soil moisture, caused some flooding and fieldwork delays.

The Pacific Northwest had above-normal temperatures throughout the month. Precipitation was heavy in the coastal areas but light and scattered across the crop-producing areas farther inland.

Following warm, dry weather in California during the first week of December, temperatures remained near normal through the end of the month. Precipitation was moderate, with heavy rainfall at times in the northern part of the State. Cotton harvest was completed after midmonth and plowdown activities were well underway. Citrus and vegetable crop harvests were active and pasture conditions improved with adequate rainfall.

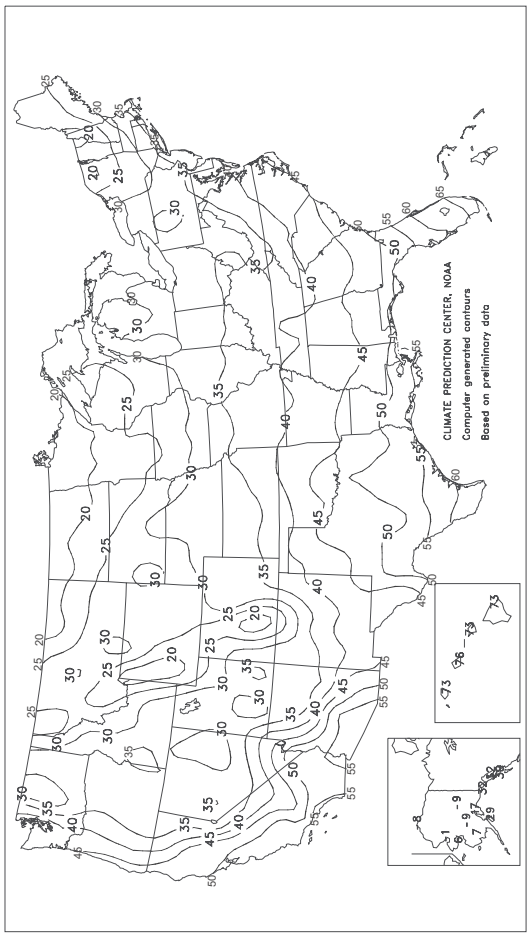
Extreme Minimum Temperature (°F)

December 2003



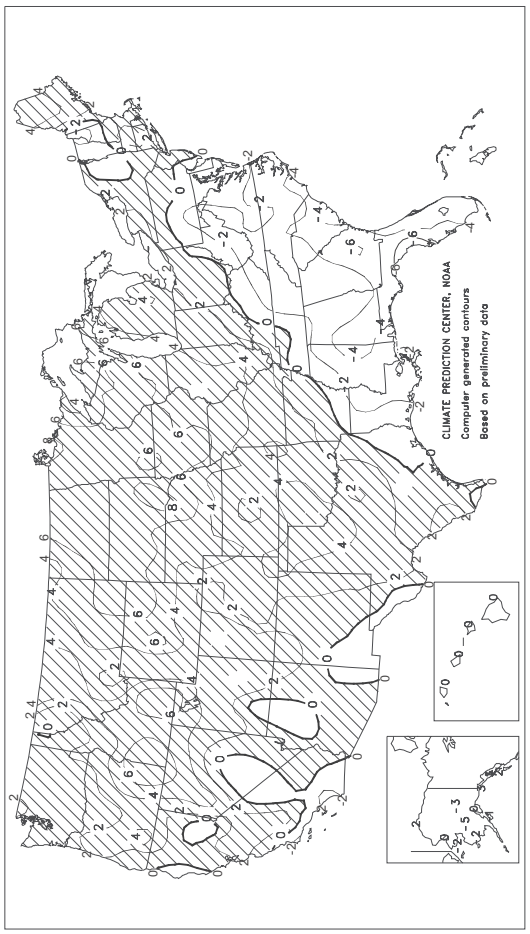
Average Temperature (°F)

December 2003



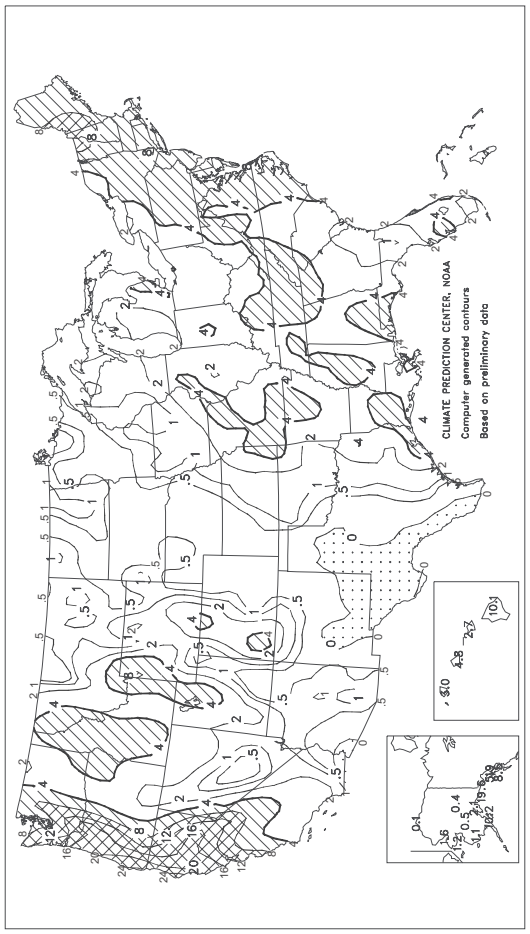
Departure of Average Temperature from Normal (°F)

December 2003



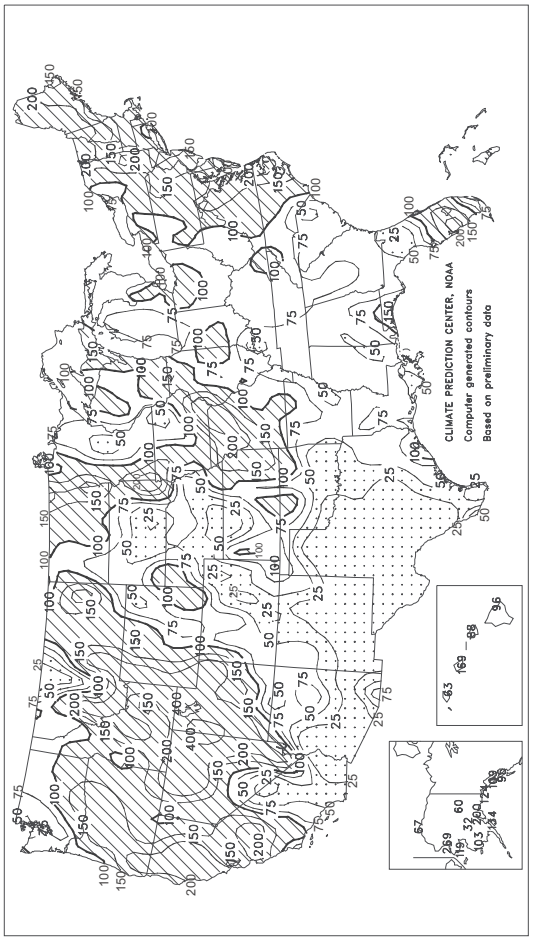
Total Precipitation (Inches)

December 2003



Percent Of Normal Precipitation

December 2003



TEMPERATURE AND PRECIPITATION SUMMARY
December 2003

STATES AND STATIONS		TEMP, °F AVERAGE	TEMP, °F DEPARTURE	PRECIP. TOTAL	PRECIP. DEPARTURE
AL	BIRMINGHAM	44	-2	3.30	-1.17
	HUNTSVILLE	41	-2	3.16	-2.43
	MOBILE	50	-2	3.79	-0.87
	MONTGOMERY	45	-4	3.94	-1.03
AK	ANCHORAGE	17	0	2.10	1.05
	BARROW	-8	3	0.08	-0.04
	COLD BAY	30	-1	5.66	1.33
	FAIRBANKS	-9	-3	0.44	-0.30
	JUNEAU	32	3	5.92	0.51
	KING SALMON	12	-5	0.84	-0.55
	KODIAK	29	-2	10.23	2.59
	NOME	6	-2	1.21	0.20
AZ	FLAGSTAFF	30	0	0.92	-0.91
	PHOENIX	57	3	0.19	-0.73
	TUCSON	53	1	0.16	-0.87
AR	FORT SMITH	44	3	1.84	-1.55
	LITTLE ROCK	44	1	3.98	-0.73
CA	BAKERSFIELD	52	5	1.30	0.54
	EUREKA	48	0	10.77	4.42
	FRESNO	50	5	2.95	1.61
	LOS ANGELES	57	-1	1.16	-0.63
	REDDING	46	1	11.82	7.15
	SACRAMENTO	49	3	4.26	1.81
	SAN DIEGO	57	-1	0.61	-0.70
	SAN FRANCISCO	52	3	6.43	3.54
	STOCKTON	49	4	3.12	1.30
CO	ALAMOSA	19	2	0.05	-0.28
	CO SPRINGS	33	4	0.06	-0.36
	DENVER	33	4	0.12	-0.19
	GRAND JUNCTION	31	3	0.55	0.03
	PUEBLO	34	4	0.05	-0.34
CT	BRIDGEPORT	35	0	3.28	-0.19
	HARTFORD	33	2	3.91	0.31
DC	WASHINGTON	39	-1	4.32	1.27
DE	WILMINGTON	36	0	4.81	1.41
FL	DAYTONA BEACH	58	-3	1.55	-1.16
	FT LAUDERDALE	67	-2	0.84	-1.81
	FT MYERS	62	-4	4.69	3.11
	JACKSONVILLE	51	-4	1.20	-1.44
	KEY WEST	68	-4	1.03	-1.11
	MELBOURNE	61	-2	2.73	0.42
	MIAMI	67	-3	1.25	-0.93
	ORLANDO	60	-3	1.56	-0.75
	PENSACOLA	51	-3	3.63	-0.34
	ST PETERSBURG	60	-4	1.20	-1.40
	TALLAHASSEE	48	-6	2.01	-2.09
	TAMPA	60	-3	1.30	-1.00
	WEST PALM BEACH	65	-3	4.26	1.12
GA	ATHENS	42	-3	2.30	-1.41
	ATLANTA	43	-2	2.69	-1.13
	AUGUSTA	42	-5	2.02	-1.12
	COLUMBUS	46	-3	2.93	-1.47
	MACON	45	-3	4.86	0.93
	SAVANNAH	48	-3	1.48	-1.33
HI	HILO	73	1	10.05	-0.45
	HONOLULU	76	1	4.81	1.96
	KAHULUI	73	0	2.72	-0.36
	LIHUE	73	0	3.02	-1.76
ID	BOISE	37	6	1.62	0.24
	LEWISTON	37	3	1.79	0.74
	POCATELLO	31	6	0.97	-0.13
IL	CHICAGO/O'HARE	32	5	1.66	-0.77
	MOLINE	32	6	2.78	0.58
	PEORIA	33	5	1.64	-0.76
	ROCKFORD	30	6	3.22	1.16
	SPRINGFIELD	35	5	1.48	-1.06
IN	EVANSVILLE	38	2	1.20	-2.34
	FORT WAYNE	31	2	2.62	-0.15
	INDIANAPOLIS	34	2	3.43	0.40
	SOUTH BEND	32	3	1.70	-1.39
IA	BURLINGTON	32	4	4.32	2.22
	CEDAR RAPIDS	28	4	1.80	0.32
	DES MOINES	31	6	0.89	-0.44
	DUBUQUE	28	6	1.67	-0.02
	SIOUX CITY	28	6	0.23	-0.43
	WATERLOO	27	5	0.54	-0.57
KS	CONCORDIA	33	3	0.78	-0.08
	DODGE CITY	35	2	0.50	-0.27
	GOODLAND	33	3	0.56	0.16
	HILL CITY	33	2	0.01	-0.46
	TOPEKA	36	5	2.36	0.94
	WICHITA	37	3	0.89	-0.46
KY	JACKSON	37	-1	3.79	-0.48

STATES AND STATIONS		TEMP, °F AVERAGE	TEMP, °F DEPARTURE	PRECIP. TOTAL	PRECIP. DEPARTURE
	LEXINGTON	35	-1	3.89	-0.14
	LONDON-CORBIN	36	-2	3.23	-1.08
	LOUISVILLE	39	1	3.13	-0.56
	PADUCAH	39	2	2.20	-2.18
LA	BATON ROUGE	51	-1	2.66	-2.60
	LAKE CHARLES	53	0	3.48	-1.12
	NEW ORLEANS	54	-1	1.96	-3.11
	SHREVEPORT	48	0	3.61	-0.94
ME	BANGOR	27	3	4.01	0.68
	CARIBOU	22	6	5.07	1.88
	PORTLAND	29	1	3.72	-0.52
MD	BALTIMORE	36	-1	4.72	1.37
MA	BOSTON	36	1	5.06	1.33
	WORCESTER	31	2	4.56	0.76
MI	ALPENA	27	3	1.39	-0.44
	DETROIT	33	3	2.69	0.18
	FLINT	32	5	2.34	0.16
	GRAND RAPIDS	31	3	1.23	-1.47
	HOUGHTON LAKE	28	4	1.20	-0.55
	LANSING	30	3	1.43	-0.74
	MUSKEGON	33	4	1.56	-1.08
	TRAVERSE CITY	30	4	1.59	-1.07
MN	DULUTH	20	6	0.54	-0.40
	INT'L FALLS	17	9	0.38	-0.32
	MINNEAPOLIS	25	6	0.79	-0.21
	ROCHESTER	24	7	0.43	-0.59
	ST. CLOUD	22	8	0.28	-0.41
MS	JACKSON	46	-2	3.34	-2.00
	MERIDIAN	44	-5	2.63	-2.68
	TUPELO	42	-1	3.20	-2.92
MO	COLUMBIA	36	4	3.47	1.00
	JOPLIN	41	4	4.19	1.23
	KANSAS CITY	36	5	1.96	0.32
	SPRINGFIELD	38	2	3.93	0.76
	ST JOSEPH	35	4	2.76	1.32
	ST LOUIS	39	5	2.35	-0.51
MT	BILLINGS	31	5	0.76	0.09
	BUTTE	20	2	0.37	-0.16
	GLASGOW	20	4	0.53	0.16
	GREAT FALLS	30	6	0.11	-0.56
	HELENA	28	7	0.35	-0.11
	KALISPELL	22	-1	1.35	-0.30
	MILES CITY	27	6	0.48	0.03
	MISSOULA	26	3	0.86	-0.29
NE	GRAND ISLAND	31	5	0.17	-0.49
	HASTINGS	32	5	0.07	-0.66
	LINCOLN	31	5	0.52	-0.34
	MCCOOK	32	3	0.02	-0.51
	NORFOLK	30	6	0.21	-0.44
	NORTH PLATTE	30	4	0.10	-0.30
	OMAHA/EPPLEY	30	4	0.84	-0.08
	SCOTTSBLUFF	29	3	0.50	-0.06
	VALENTINE	29	5	0.23	-0.10
NV	ELKO	30	4	1.97	1.04
	ELY	28	2	1.19	0.69
	LAS VEGAS	48	1	0.96	0.56
	RENO	38	4	1.22	0.34
	WINNEMUCCA	34	4	1.79	0.98
NH	CONCORD	28	2	5.31	2.35
NJ	ATLANTIC CITY	37	0	5.57	2.42
	NEWARK	37	1	5.13	1.56
NM	ALBUQUERQUE	37	1	0.11	-0.38
NY	ALBANY	29	1	5.48	2.81
	BINGHAMTON	28	1	3.13	0.10
	BUFFALO	33	3	3.64	-0.16
	ROCHESTER	32	3	2.42	-0.31
	SYRACUSE	30	1	3.10	-0.02
NC	ASHEVILLE	37	-2	2.65	-0.74
	CHARLOTTE	40	-4	2.40	-0.78
	GREENSBORO	39	-2	2.65	-0.41
	HATTERAS	48	-2	5.71	1.15
	RALEIGH	41	-2	3.52	0.48
	WILMINGTON	45	-4	4.95	1.17
ND	BISMARCK	24	9	0.48	0.04
	DICKINSON	24	6	0.21	-0.13
	FARGO	20	7	1.18	0.61
	GRAND FORKS	18	7	0.67	0.12
	JAMESTOWN	20	6	0.47	0.03
	MINOT	21	6	0.18	-0.45
	WILLISTON	17	4	0.22	-0.35
OH	AKRON-CANTON	31	0	2.91	-0.07
	CINCINNATI	35	0	2.26	-1.02
	CLEVELAND	34	3	4.03	0.89

STATES AND STATIONS		TEMP, °F AVERAGE	TEMP, °F DEPARTURE	PRECIP. TOTAL	PRECIP. DEPARTURE
	COLUMBUS	34	1	2.78	-0.15
	DAYTON	33	2	2.44	-0.64
	MANSFIELD	31	1	3.27	0.01
	TOLEDO	32	3	3.25	0.61
	YOUNGSTOWN	32	2	2.68	-0.28
OK	OKLAHOMA CITY	43	3	1.11	-0.78
	TULSA	43	3	2.46	0.03
OR	ASTORIA	44	1	9.87	-0.53
	BURNS	30	5	1.56	0.26
	EUGENE	43	3	10.63	2.34
	MEDFORD	43	5	4.67	1.77
	PENDLETON	35	1	2.72	1.24
	PORTLAND	43	3	7.46	1.75
	SALEM	42	2	10.44	3.98
PA	ALLENTOWN	33	1	4.97	1.58
	ERIE	34	1	2.97	-0.76
	MIDDLETOWN	34	0	3.40	0.16
	PHILADELPHIA	37	0	5.46	2.15
	PITTSBURGH	33	0	3.34	0.48
	WILKES-BARRE	31	0	3.97	1.42
	WILLIAMSPORT	32	1	4.42	1.48
PR	SAN JUAN	78	0	5.25	0.68
RI	PROVIDENCE	36	2	6.43	2.29
SC	CHARLESTON	47	-4	1.86	-1.38
	COLUMBIA	42	-5	2.13	-1.25
	FLORENCE	43	-4	0.79	-2.68
	GREENVILLE	41	-3	2.67	-1.19
	MYRTLE BEACH	44	-5	2.71	-0.74
SD	ABERDEEN	23	7	0.33	-0.05
	HURON	26	7	0.19	-0.20
	RAPID CITY	31	6	0.25	-0.15
	SIOUX FALLS	26	8	1.07	0.55
TN	BRISTOL	36	-1	4.38	0.99
	CHATTANOOGA	40	-2	4.38	-0.43
	JACKSON	41	-1	3.37	-1.99
	KNOXVILLE	38	-3	3.41	-1.08
	MEMPHIS	44	1	3.08	-2.60
	NASHVILLE	40	0	3.19	-1.35
TX	ABILENE	49	4	0.01	-1.26
	AMARILLO	41	4	0.09	-0.52
	AUSTIN	51	-1	0.51	-1.93
	BEAUMONT	53	-1	3.19	-2.06
	BROWNSVILLE	62	1	0.35	-0.76
	COLLEGE STATION	53	1	1.23	-2.00
	CORPUS CHRISTI	59	1	0.57	-1.18
	DALLAS/FT WORTH	50	3	0.96	-1.61
	DEL RIO	54	2	0.04	-0.71
	EL PASO	45	0	0.01	-0.76
	GALVESTON	57	-1	5.71	2.18
	HOUSTON	54	0	2.99	-0.70
	LUBBOCK	44	4	0.00	-0.67
	MIDLAND	47	2	0.00	-0.65
	SAN ANGELO	49	3	0.00	-0.94
	SAN ANTONIO	54	2	0.11	-1.85
	VICTORIA	55	0	2.10	-0.37
	WACO	51	3	0.49	-2.27
	WICHITA FALLS	47	4	0.11	-1.57
UT	SALT LAKE CITY	34	4	3.97	2.74
VT	BURLINGTON	25	0	4.89	2.67
VA	LYNCHBURG	36	-2	3.35	0.12
	NORFOLK	44	0	6.24	3.21
	RICHMOND	40	0	4.28	1.16
	ROANOKE	38	-1	2.95	0.09
	WASH/DULLES	36	0	4.57	1.50
WA	OLYMPIA	39	1	6.02	-1.87
	QUILLAYUTE	41	0	13.65	-0.85
	SEATTLE-TACOMA	42	1	3.88	-1.74
	SPOKANE	30	3	2.14	-0.11
	YAKIMA	30	1	2.07	0.69
WV	BECKLEY	33	-2	2.33	-0.76
	CHARLESTON	36	-2	2.89	-0.43
	ELKINS	30	-3	2.75	-0.69
	HUNTINGTON	37	0	2.66	-0.71
WI	EAU CLAIRE	25	7	1.13	0.10
	GREEN BAY	28	7	1.68	0.27
	LA CROSSE	28	6	0.72	-0.51
	MADISON	28	5	2.00	0.34
	MILWAUKEE	31	5	2.03	-0.19
	WAUSAU	24	5	1.18	-0.15
WY	CASPER	29	5	0.39	-0.23
	CHEYENNE	30	3	0.76	0.30
	LANDER	25	4	0.82	0.21
	SHERIDAN	27	5	0.87	0.19

Based on 1971-2000 normals.

***** Not Available**.

National Agricultural Summary

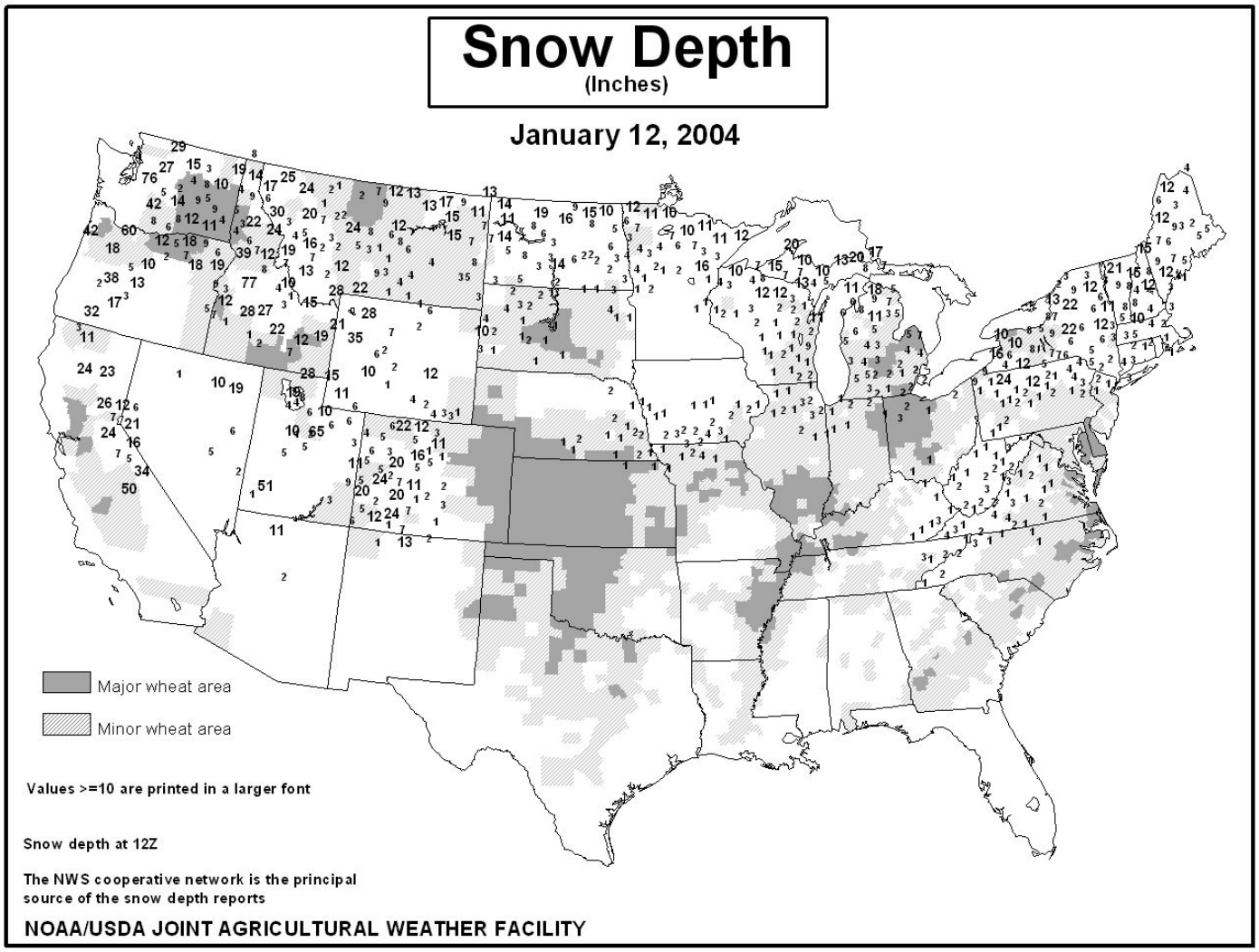
January 5 - 11, 2004

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Temperatures were below normal across most of the Nation, with the only exceptions being in some areas along the Atlantic and Pacific Coasts and the Southwest. Across much of the Pacific Northwest and northern Rocky Mountains, average temperatures for the week were 9 degrees Fahrenheit or more below normal. Minimum temperatures were below zero across the northern and central Rockies, northern and central Great Plains, northern Corn Belt, and Northeast. In the Great Plains and Corn Belt, this cold weather threatened the winter wheat crop left exposed by the lack of snow cover. However, heavy snowfall in the interior Pacific Northwest and Rockies replenished snow cover in those areas. Moderate precipitation fell across the southern Corn Belt, Mississippi Delta, and Appalachians. Rain and snowfall was light to very light along most of the Atlantic Coast and northern Corn Belt. Only scattered, light precipitation fell across the Great Plains, while the Southwest remained almost completely dry.

In Florida, harvesting of sugarcane, vegetables, and citrus was active, while near-freezing temperatures concerned some strawberry growers. Cold weather slowed the growth of small grains in Georgia, and conditions of small grains and pastures declined due to lack of precipitation. The Texas cotton harvest was winding down, with sorghum and peanut harvest completed. Condition of small grains deteriorated due to moisture stress. In Arizona, vegetable and citrus harvest was active. Winter wheat planting was nearly complete in California, while wet conditions slowed citrus harvest.



January 8 ENSO Update

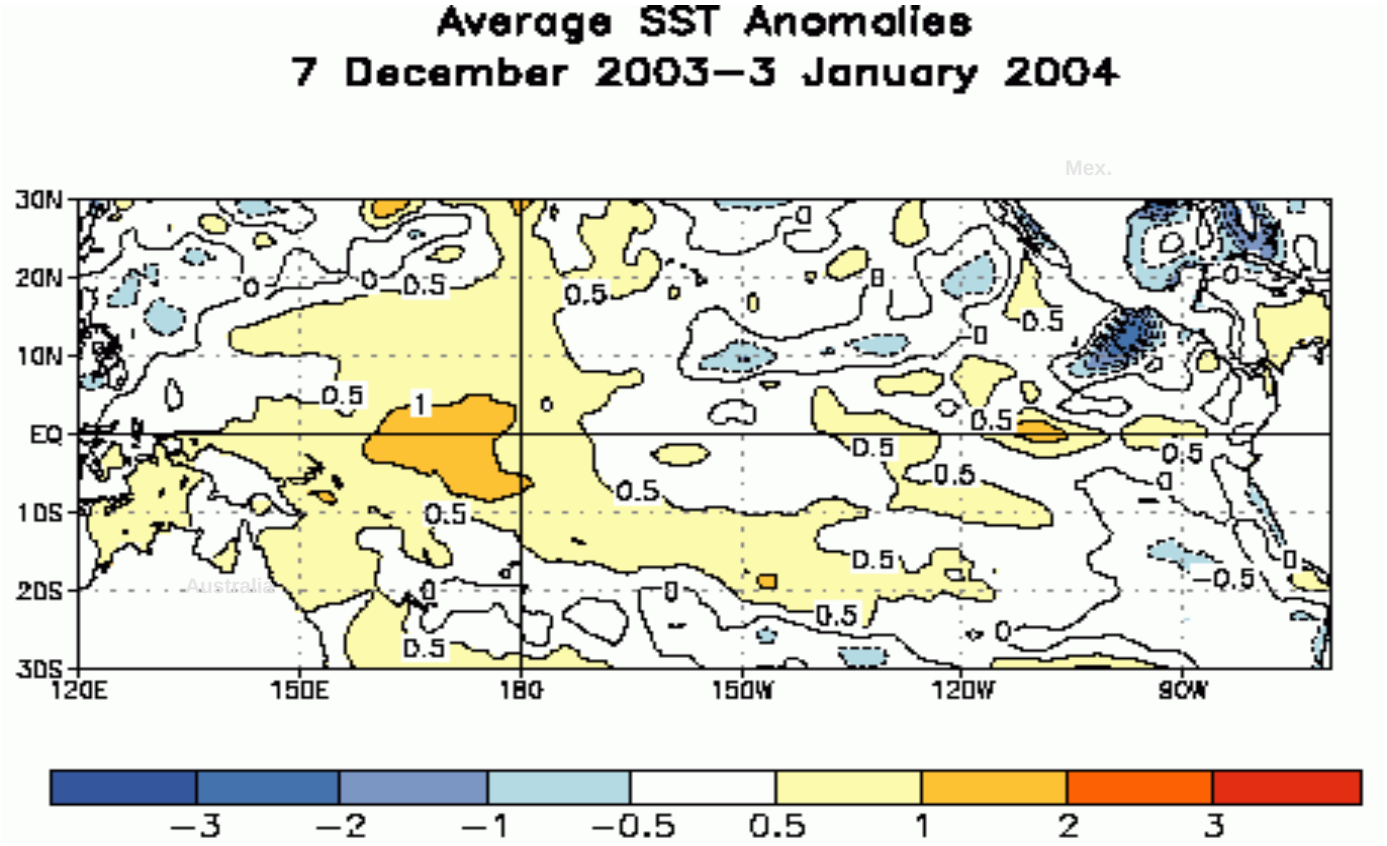


Figure 1. Sea Surface Temperature (SST) anomalies (˚C) for the equatorial Pacific Ocean for December, 2003. The SST analysis is obtained from the NCEP/Ocean Data Assimilation system that incorporates NOAA/PMEL TAO buoy data, NOAA/AVHRR satellite data, and ships of opportunity. Departures are computed with respect to the 1971-2000 base period means.

Sea surface temperatures remained warmer than average across most of the equatorial Pacific Ocean during December (Fig. 1), although departures from average decreased in all of the Niño index regions during the month. Equatorial ocean surface temperatures greater than +0.5˚C (~1˚F) above average were found between Indonesia and 170˚W and in most of the eastern equatorial Pacific between 140˚W and the South American coast. Departures greater than +1˚C were found between 160˚E and 180˚W.

In spite of the slightly warmer-than-average oceanic temperatures, the monthly 850-hPa zonal wind indices, OLR index, 200-hPa zonal wind index, SOI, and EQSOI do not indicate warm episode conditions. Over the past few months, these atmospheric indices have not shown significant trends that would support either additional large-scale increases or any substantial decreases of SST anomalies in equatorial Pacific. However, many of these indices exhibited considerable week-to-week variability during late November and December in response to tropical intraseasonal (Madden-Julian Oscillation) activity. Wetter-than-average conditions, observed over the Indian Ocean in late November, shifted eastward to the western Pacific by late December. At the same time, the equatorial easterlies weakened over the western Pacific and westerlies developed near the dateline (180˚W). NOAA's Climate Prediction Center will continue to monitor these features to determine what, if any, impacts this activity will have on surface and subsurface temperatures in the region between the dateline and 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˚C) through March 2004. Thereafter, the forecasts show increasing spread and greater uncertainty, during a time of the year when the skill level of all of the techniques is relatively low.

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

January 4 - 10, 2004

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

HIGHLIGHTS

EUROPE: Across eastern and central Europe, a widespread moderate to deep snow cover protected dormant winter crops from bitterly cold weather, while late-week wetter, milder weather moved into western Europe.

FSU-WESTERN: Widespread snow accompanied much colder weather over the region, providing a fresh protective snow cover for winter grains.

MIDDLE EAST: Widespread snow cover protected dormant winter grains from bitter cold in central Turkey, while widespread precipitation boosted moisture supplies for winter grains across the remainder of the Middle East.

NORTHWESTERN AFRICA: Mostly dry weather prevailed across Morocco, Algeria, and Tunisia, where adequate soil moisture exists for vegetative winter grains.

SOUTH AFRICA: Showers and cooler weather brought some much-needed, albeit local relief to emerging corn and other summer crops.

SOUTHEAST ASIA: Showers increased moisture supplies for rice and corn in Indonesia and the northern Philippines.

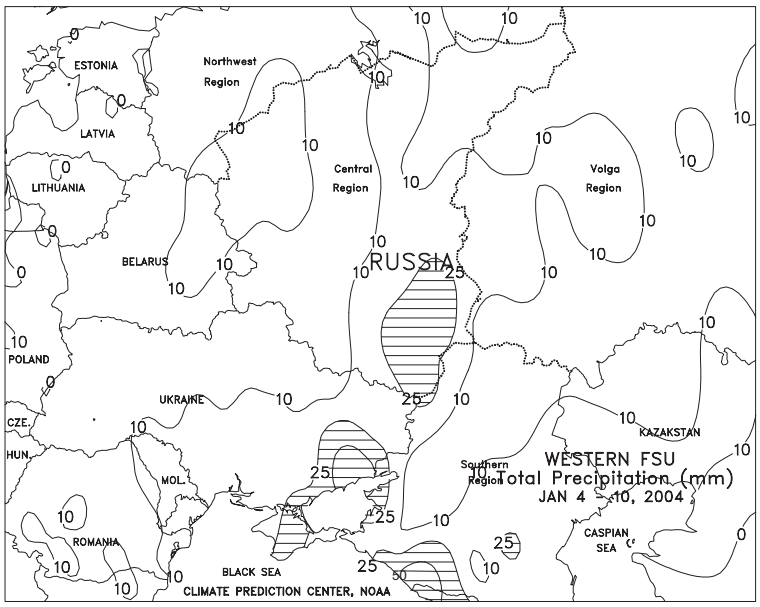
EASTERN ASIA: Mild weather continued to favor overwintering grains and oilseeds in central and southern China.

AUSTRALIA: Showers in eastern Australia maintained moisture supplies for summer crops, but hot weather opposed the beneficial rainfall, increasing evaporation rates and stress on crops.

SOUTH AMERICA: Widespread rain maintained generally favorable conditions for summer crops in Argentina and Brazil.

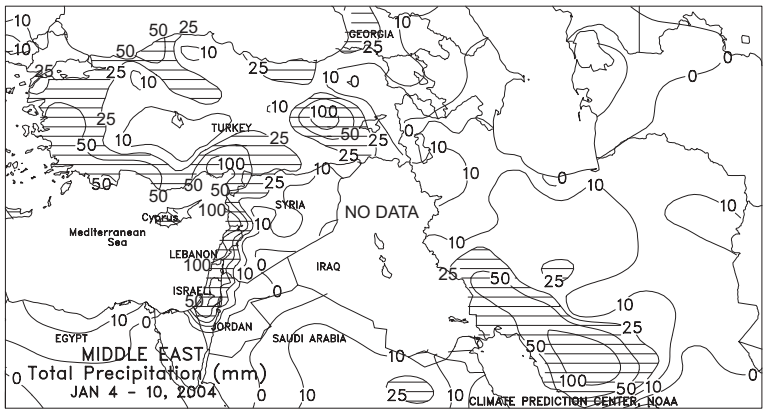
EUROPE

Across eastern and central Europe, bitterly cold weather prevailed early in the week. Cold episodes occurred several times during the week in different areas, but a widespread moderate to deep snow cover protected dormant winter grains and oilseeds from these episodes. Across Poland, the Czech Republic, Slovakia, portions of Romania and Bulgaria, minimum temperatures were –20 to –16 degrees C. Early-week cold weather (minimum temperatures –15 to –10 degrees C) also prevailed in portions of Germany and eastern France, but these areas were also protected by snow cover at the time. Late in the week, wetter, milder weather moved across western Europe, producing widespread rain (10-30 mm or more) with snow in the higher elevations across England, France, Germany, and the Low Countries, increasing moisture supplies for future spring growth. Late-week maximum temperatures ranged from 10 to 15 degrees C across France and England. This influx of milder weather also pushed most of the bitter cold out of eastern Europe by week's end. Through most of Europe, winter grains and oilseeds remained dormant, including northern Italy and southeastern Europe. Winter grains were dormant to semi-dormant across England, western France, and north-central Spain. Winter grains remained vegetative across southern Spain and central and southern Italy. Temperatures averaged 4 to 8 degrees C below normal across eastern Europe, near normal in Germany, France, and northern Italy, and 2 to 4 degrees C above normal across England, extreme western France, and the Iberian Peninsula.



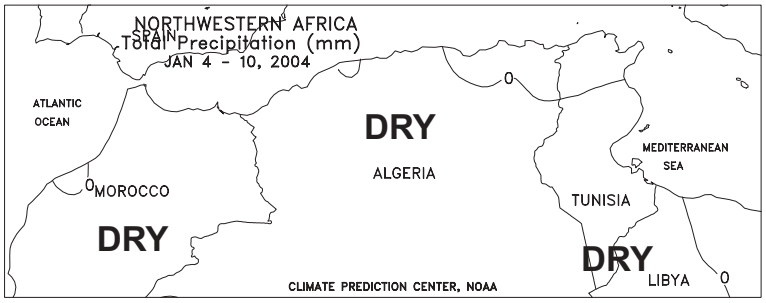
FSU-WESTERN

The coldest weather so far this winter overspread winter grain areas, dropping temperatures to well below normal levels in some areas. Weekly temperatures averaged 4 to 8 degrees C below normal in the western half of Ukraine, Belarus, the Baltics, most of the Central Region in Russia, and the northern portion of the Russian Volga Region. Snow preceded the colder weather in most areas. Occasional snow showers (2-15 mm of liquid equivalent) increased snow depths in Belarus, western Ukraine, and the western portion of the Central Region in Russia. Farther east, a major winter storm spread moderate to heavy snow (10-25 mm or more of liquid equivalent) from Moldova, northeastward through central and eastern Ukraine, into the western portion of the Volga Region in Russia. During the latter half of the week, rain gradually changed to snow in the Russian Southern Region, providing a shallow to patchy snow cover. The lowest temperatures during the week (-30 to -25 degrees C) were observed from northern Belarus eastward across northern Russia. A moderate to deep snow cover in these areas protected winter grains from potential winterkill. Farther south, the lowest temperatures in winter wheat areas of Ukraine ranged from -15 to -10 degrees C in areas with adequate snow cover. Elsewhere, the lowest temperatures in the Southern Region in Russia ranged from -10 to -5 degrees C, remaining well above the threshold for potential winterkill.



MIDDLE EAST

Across Turkey, widespread precipitation (15-70 mm or more of water equivalent) continued to boost moisture supplies for future spring growth. Mild, wet weather prevailed early in the week, and then colder air generated widespread snow (2-15 cm) across northern and central Turkey by midweek. The snow cover protected dormant winter grains across the central Plateau from late-week bitterly cold weather (minimum temperatures -22 to -16 degrees C). Because the moisture was widespread, most crop areas may have been sufficiently protected from the potential threat of winterkill. In northwestern Iran, light to moderate rain (7-25 mm) with snow in the higher elevations continued to increase moisture supplies for future spring growth as winter grains remained dormant. In southwestern Iran (provinces near or bordering southern Iraq and the Persian Gulf), seasonably heavy rain (30-70 mm, with isolated amounts greater than 125 mm) greatly boosted moisture supplies for winter grains (rainfed and irrigated) but caused local flooding especially in the higher elevations. Across the coastal eastern Mediterranean, widespread moderate to heavy rain (40-100 mm) boosted irrigation supplies for vegetative winter crops. Lighter amounts (8-40 mm) favored rainfed winter grains in northern Syria. Temperatures averaged 2 to 5 degrees C below normal across western and central Turkey, near normal across the eastern Mediterranean, and 5 to 7 degrees C above normal in western Iran.

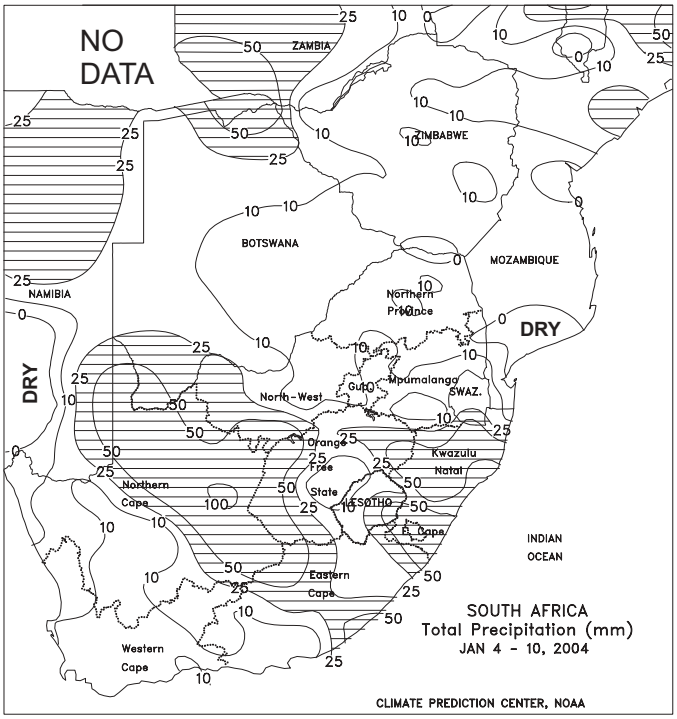


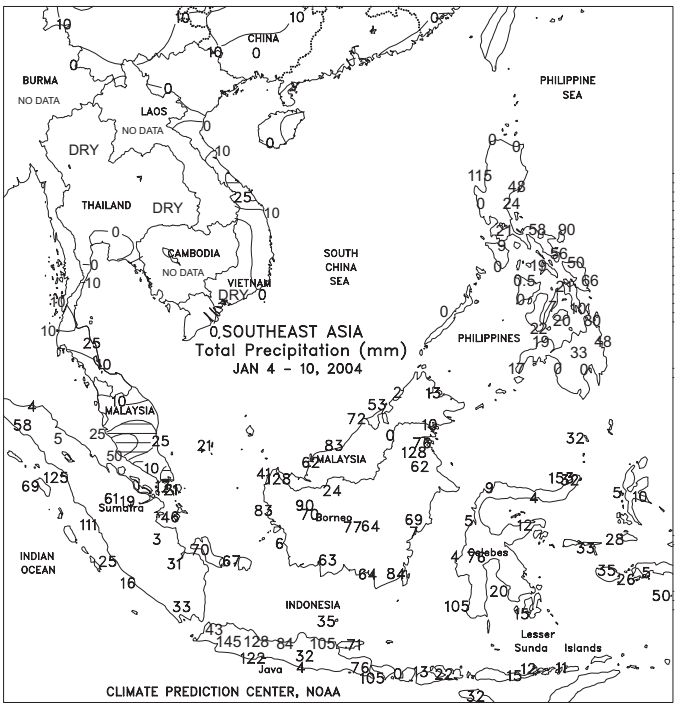
NORTHWESTERN AFRICA

Dry weather prevailed across the major winter grain areas of Morocco, Algeria, and Tunisia, where adequate soil moisture exists for vegetative winter grains. Abundant November and early-December rainfall boosted subsoil moisture levels considerably. Across Morocco and western Algeria, however, dry weather during the past 4 weeks has reduced soil moisture reserves. Seasonably cool weather (maximum temperatures ranging from 16-22 degrees C) lowered crop water use in these areas. Temperatures averaged slightly above normal across Morocco and slightly below normal across Tunisia.

SOUTH AFRICA

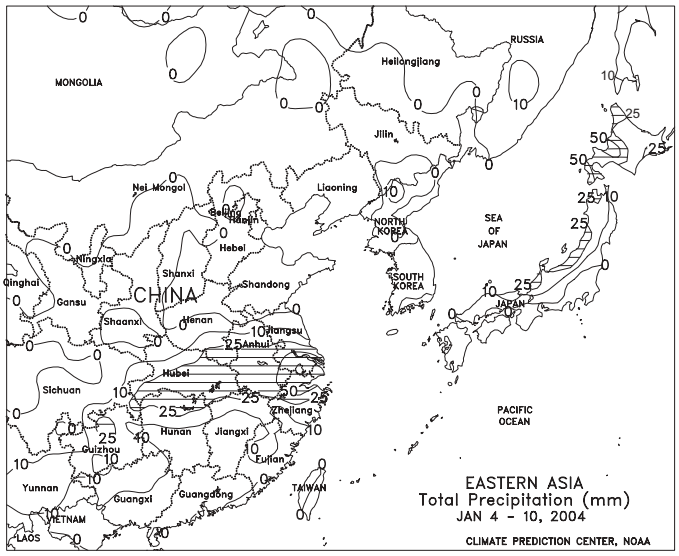
Showers (10-25 mm or more) boosted moisture reserves for corn and other summer crops in many major production areas. The heaviest rainfall (25-50 mm or more) was recorded on the western edges of the corn belt and in summer crop areas from eastern Free State southward through KwaZulu-Natal and Eastern Cape. The locally heavy rain was especially welcomed for development of sugarcane, considering this season's pattern of sporadic rainfall from Swaziland to central KwaZulu-Natal. However, mostly dry weather prevailed in northern and eastern sections of the corn belt (eastern North West through Mpumalanga), limiting moisture for summer crop development, including germination and establishment of late-planted crops. Temperatures across the region averaged near to slightly above normal (highs ranging from the upper 20s to lower 30s degrees C from the eastern to western corn belt), placing generally seasonable moisture requirements on summer crops. Corn typically advances through reproduction from mid-January through mid-February, although later planted crops would likely not reach moisture-sensitive stages of development until early or mid-March. Soaking rain is needed in most corn areas to overcome the effects of long-term dryness.





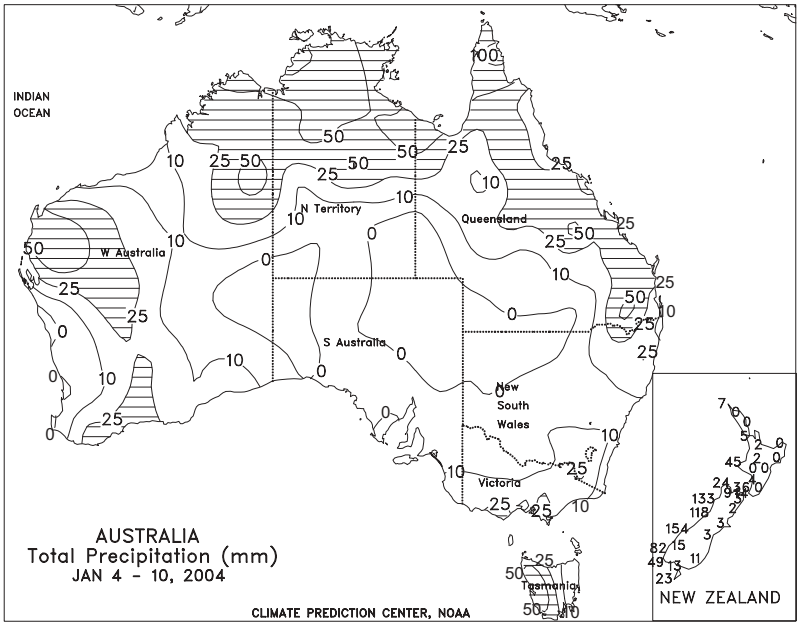
SOUTHEAST ASIA

Heavy showers (50-100 mm) fell in central and eastern Java, Indonesia, boosting moisture supplies for corn nearing reproduction and vegetative rice. Moderate showers (25-50 mm) increased irrigation supplies for filling corn and vegetative rice in the northern Philippines. Warm (3-5 degrees C above normal), dry weather prevailed throughout Vietnam as main-season rice harvesting winds down and winter-spring rice transplanting is underway.



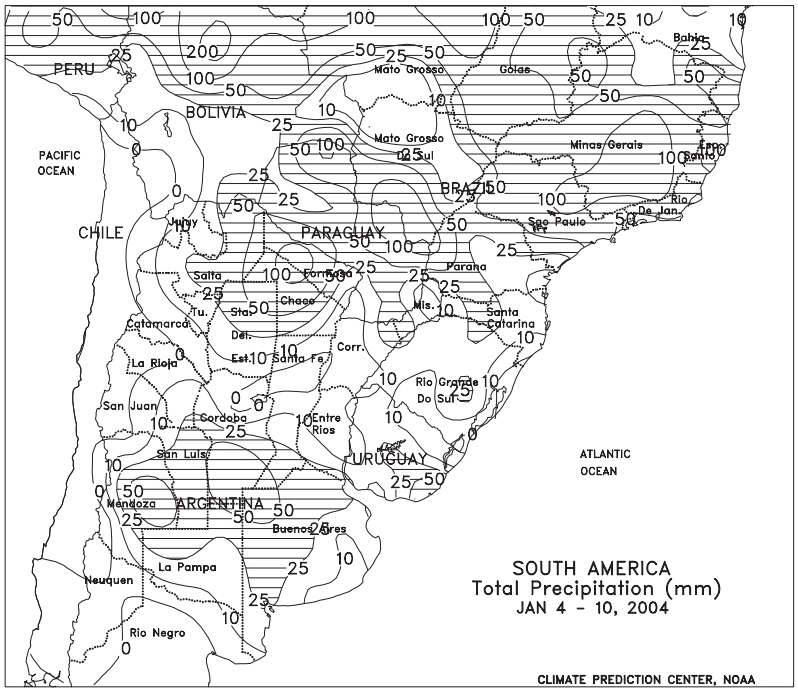
EASTERN ASIA

Unseasonably mild weather (temperatures averaging 2-4 degrees C above normal) continued throughout central and southern China, maintaining generally favorable overwintering conditions for wheat and rapeseed. On the North China Plain, temperatures were generally low enough (averaging 5 degrees C or lower) to keep winter wheat in a dormant to semidormant state, with bitter cold staying north of the main growing areas. Dry weather continued, however, and the region continued to lack a protective layer of snow. Farther south, unseasonable wetness (10-25 mm or more) boosted moisture reserves for winter rapeseed establishment. Mild, seasonably drier weather favored fieldwork in sugarcane areas along the southern coast. Elsewhere, dry weather continued to dominate the Korean Peninsula, while scattered rain and snow showers (5-25 mm or more) continued in central and northern Japan.



AUSTRALIA

Widespread rain (10-43 mm) and unseasonably cool (temperatures 2-3 degrees C below normal) weather in southern portions of Western Australia slowed winter wheat harvesting. Nevertheless, most of the crop has been harvested, with reports indicating that harvesting will be completed in about 2 weeks. Hence, the cool, wet weather will have minimal impact on overall winter wheat production in Western Australia. In South Australia and northern Victoria, the 2nd consecutive week of mostly dry (less than 7 mm) weather allowed the winter wheat harvest to continue unimpeded, while in southern Victoria, widespread showers (10-30 mm) and unseasonably cool (temperatures 3-4 degrees C below normal) weather caused some disruptions in winter wheat harvesting. Similar to Western Australia, harvesting is nearly complete, with remaining harvesting likely to be finished during the next couple of weeks. In eastern Australia, showers (5-30 mm or more) in northern New South Wales and Queensland maintained local moisture supplies for dryland and irrigated summer crops. Hot weather (temperatures 3-4 degrees C above normal, maximum temperatures in the upper 30s to lower 40s degrees C) opposed the beneficial rainfall, however, increasing evaporation rates and stress on crops.



SOUTH AMERICA

Beneficial rain (25-50 mm or more) boosted moisture reserves in many primary summer grain and oilseed areas of central Argentina, including those areas that recently had been trending dry (southern Cordoba, La Pampa, and northwestern Buenos Aires). The moisture was especially welcomed for germination and establishment of late-planted crops and those growing with limited subsoil moisture reserves. Elsewhere, warm (highs in the middle 30s degrees C), mostly dry weather covered crop areas from northern Cordoba to Entre Rios and Corrientes, increasing moisture demands on vegetative to reproductive summer crops. Variable showers (3-50 mm or more) covered the northern cotton belt. According to reports from within Argentina, corn and soybean planting and winter wheat harvesting were nearing completion. In Brazil, mostly dry weather dominated Rio Grande do Sul, but elsewhere, widespread showers (25-50 mm or more) maintained generally favorable moisture levels for development of soybeans, coffee, and citrus.

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