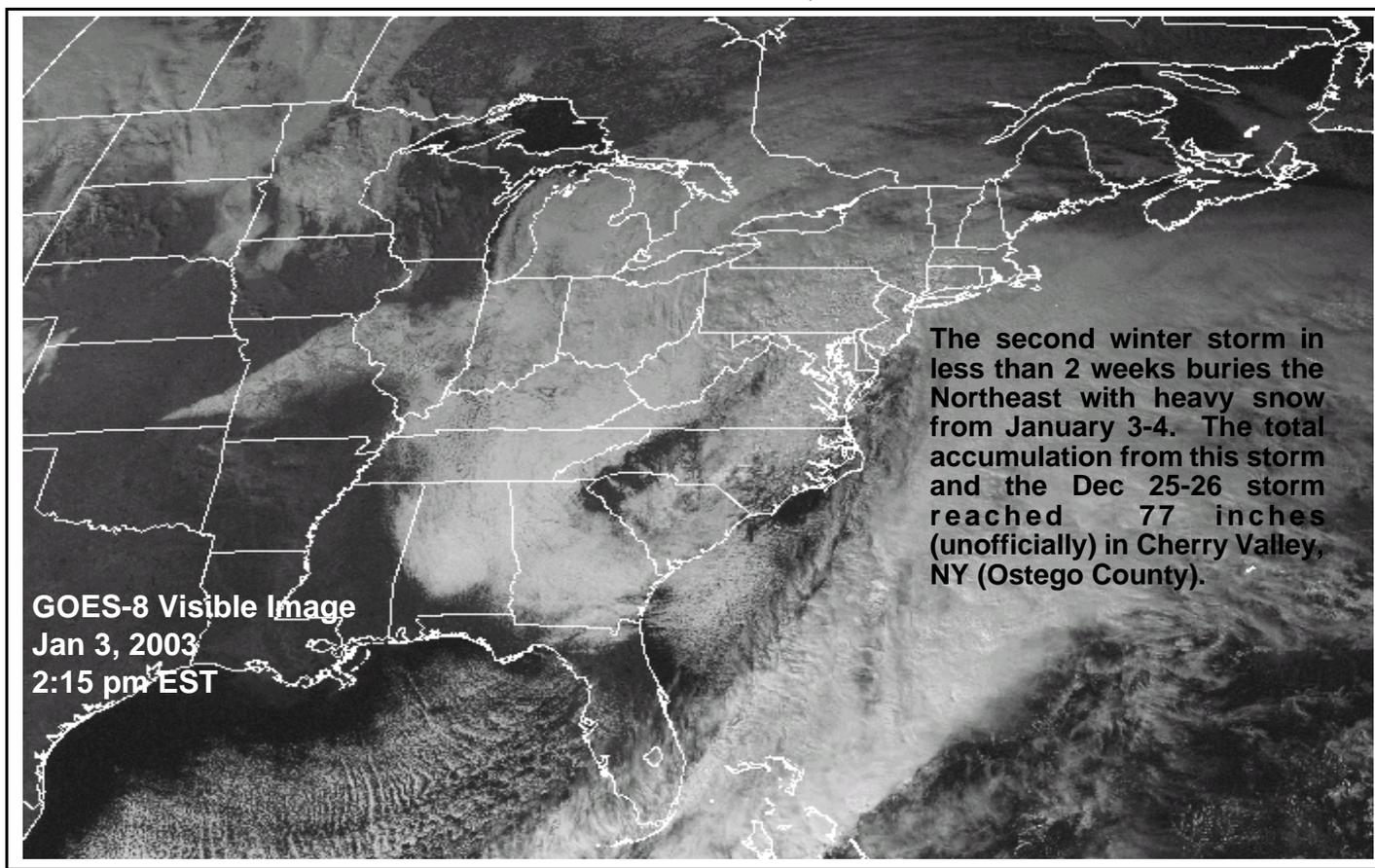


WEEKLY WEATHER AND CROP BULLETIN

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



The second winter storm in less than 2 weeks buries the Northeast with heavy snow from January 3-4. The total accumulation from this storm and the Dec 25-26 storm reached 77 inches (unofficially) in Cherry Valley, NY (Ostego County).

GOES-8 Visible Image
Jan 3, 2003
2:15 pm EST

HIGHLIGHTS

December 29, 2002 - January 4, 2003

Highlights provided by USDA/WAOB

At least 4 inches of precipitation soaked parts of **northern California** and the **Pacific Northwest** for the fourth consecutive week, accompanied by gusty winds. However, only light precipitation fell in areas from the **Southwest to the central Rockies**, where the effects of long-term drought persisted. Meanwhile, mild, dry weather prevailed on the **Plains**, where weekly temperatures averaged 4 to 16°F above normal. Although the mild conditions favored overwintering wheat, drought-related concerns on the **northern and central High Plains** included soil moisture shortages, no protective snow cover, and wheat's exposure to potential weather extremes. In the

(Continued on page 3)

Contents

Weather Data for Mississippi and the Missouri Bootheel & 2002 Precipitation Records	2
Temperature Departure Map	3
Extreme Maximum & Minimum Temperature Maps	4
December 31 Drought Monitor & Total Precipitation Map	5
National Weather Data for Selected Cities	6
December Weather and Crop Summary	9
December Minimum Temperature Map	11
December Precipitation & Temperature Maps	12
December Weather Data for Selected Cities	13
National Agricultural Summary & Snow Cover Map	14
December State Agricultural Summaries	15
International Weather and Crop Summary & December Temperature/Precipitation Table	20
Subscription Information	26

Weather Data for Mississippi and the Missouri Bootheel

Weather Data for the Week Ending January 4, 2003

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

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							4-INCH SOIL TEMP. °F		NUMBER OF DAYS			
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN. SINCE 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 BATESVILLE X	54	41	64	29	47	7	0.07	-1.12	0.07	8.99	137	0.00	0	-	-	0	2	1	0
MS BELZONI X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MS CLARKSDALE X	54	38	64	29	46	5	1.10	-0.02	0.90	8.92	149	0.90	141	-	-	0	2	2	1
MS CLEVELAND X	55	39	65	30	47	4	1.08	-0.01	0.90	7.86	138	0.94	147	-	-	0	3	4	1
MS GREENVILLE X	55	39	67	29	47	4	0.36	-0.83	0.36	3.56	60	0.00	0	-	-	0	2	1	0
MS GREENWOOD X	56	39	67	26	47	2	2.14	0.88	2.11	7.56	123	0.01	1	-	-	0	2	3	1
MS INDIANOLA 1S	55	38	65	30	46	-	0.96	-	0.95	6.38	-	0.01	-	50	46	0	2	2	1
MS INVERNESS 5E	56	40	67	31	48	-	1.34	-	1.33	7.27	-	0.01	-	51	46	0	2	2	1
MS LYON	54	39	64	29	46	-	0.50	-	0.43	8.58	-	0.05	-	51	44	0	2	3	0
MS MACON	56	38	68	26	47	-	0.99	-	0.92	6.17	-	.007	-	52	46	0	3	2	1
MS MOORHEAD X	55	40	66	31	47	4	0.37	-0.92	0.37	1.54	23	0.00	0	-	-	0	2	1	0
MS ONWARD	56	39	68	30	48	-	0.69	-	0.65	7.00	-	0.04	-	53	48	0	2	3	1
MS PERTHSHIRE	55	37	65	28	46	-	0.59	-	0.56	11.72	-	-	-	51	42	0	2	3	1
MS ROLLING FORK X	54	39	68	28	47	4	0.87	-0.46	0.47	4.09	64	0.40	53	-	-	0	2	3	0
MS SCOTT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MS SIDON	55	40	66	30	48	-	1.10	-	0.84	5.38	-	1.02	-	52	45	0	2	7	1
MS STARKVILLE	57	38	69	25	47	-	1.20	-	0.99	5.44	-	-	-	52	44	0	3	3	1
MS TUNICA X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MS TUNICA 1W	53	37	63	29	45	-	0.57	-	0.19	7.16	-	0.23	-	47	43	0	2	5	0
MS VANCE	53	38	63	30	45	-	1.52	-	1.50	9.95	-	0.02	-	47	45	0	2	2	1
MS VERONA	55	39	67	24	47	-	0.84	-	0.73	6.48	-	0.10	-	51	44	0	2	4	1
MS VICKSBURG X	57	40	70	29	48	1	0.79	-0.60	0.48	6.66	102	0.31	39	-	-	0	1	3	0
MS YAZOO CITY X	61	40	69	27	51	6	0.51	-0.96	0.51	5.65	80	0.00	0	-	-	0	2	1	1
MS STONEVILLE X	55	40	67	30	48	6	0.85	-0.41	0.45	6.46	105	0.45	62	53	45	0	3	2	0
MO DELTA	47	35	58	28	40	7	2.39	1.37	1.74	5.79	105	0.10	22	43	37	0	4	4	2
MO STEELE	50	37	61	31	43	8	1.61	0.77	0.80	7.82	138	0.34	94	46	40	0	2	4	1
MO GLENNONVILLE	48	37	60	30	42	7	2.75	1.74	1.50	6.41	131	0.17	39	45	39	0	3	5	2
MO PORTAGEVILLE LF	50	37	61	30	43	9	1.46	0.66	0.73	5.91	110	0.25	71	48	40	0	3	4	1
MO CLARKTON	49	35	60	27	41	6	2.25	1.24	1.03	6.22	127	0.20	45	45	39	0	4	4	2
MO CARDWELL	50	36	61	29	43	8	1.90	0.96	1.04	6.87	127	0.27	61	47	41	0	2	4	2
MO CHARLESTON	48	36	60	28	41	7	2.05	1.19	1.07	6.18	124	0.29	100	45	39	0	3	4	2
MO PORTAGEVILLE DC	50	37	60	30	43	9	1.45	0.65	0.70	6.12	114	0.22	63	-	-	0	3	4	2

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

X Based on 1971-2000 normals.

- Sufficient data not available.

Weather and Crop Summary: Precipitation kept fields saturated. Evaporation rates varied due to a mix between breezy conditions and cool weather.

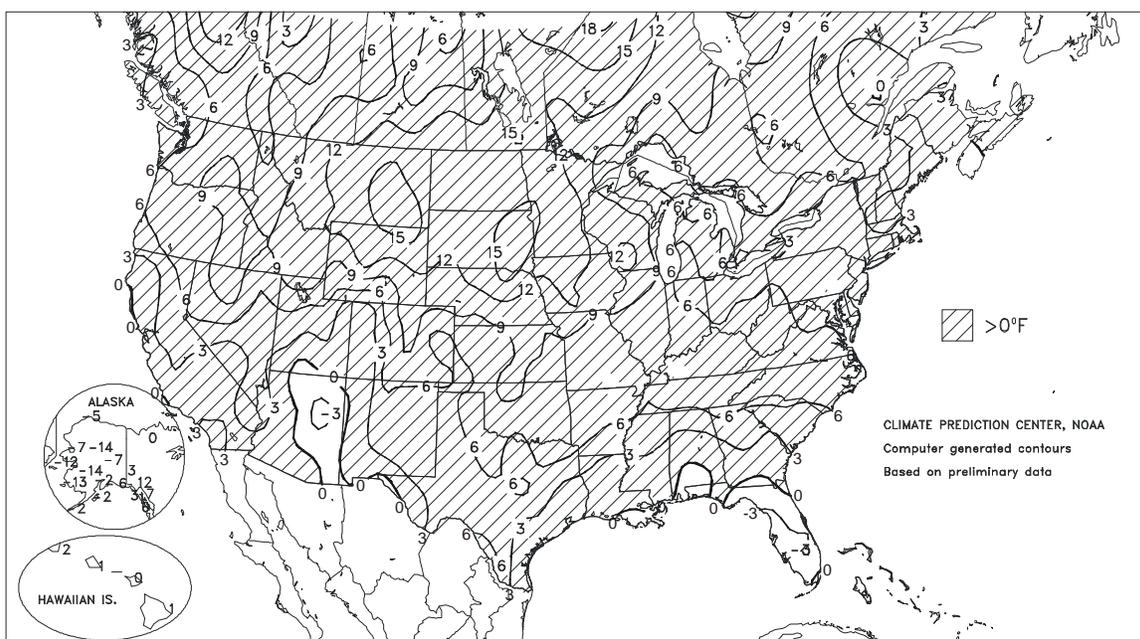
2002 Precipitation Records for Selected Locations

Location	Driest Year (Inches) on Record		
	Total	Normal	Previous Record/Year
Yuma, AZ	0.03	3.01	0.25 in 1956
Palm Springs, CA	0.76	5.23	0.76 in 1999
Phoenix, AZ	2.82	8.29	2.82 in 1956
Pueblo, CO	3.94	12.39	5.78 in 1934
Winslow, AZ	4.31	8.03	4.45 in 1899
Laramie, WY	5.78	11.37	5.80 in 1933
Alliance, NE	6.70	15.93	8.67 in 1964
Denver, CO	7.48	15.81	7.51 in 1954
Chadron, NE	7.78	16.63	10.64 in 1956
Winner, SD	11.82	23.72	13.09 in 1976

Location	Wettest Year (Inches) on Record		
	Total	Normal	Previous Record/Year
Lake Charles, LA	85.17	57.19	79.88 in 1919

Departure of Average Temperature from Normal (°F)

DEC 29, 2002 - JAN 4, 2003

*(Continued from front cover)*

Corn Belt, mild, mostly dry conditions in the **upper Midwest** contrasted with wet weather in the **Ohio Valley**. Snow blanketed the **eastern Corn Belt** toward week's end. On January 3-4, heavy snow returned to the **Northeast**, the region's second major winter storm in less than 2 weeks. Meanwhile, more rain fell across the **South**, further delaying fieldwork and threatening the quality of winter grains. Although dry weather returned to the **South** late in the week, cool conditions slowed evaporation rates from wet fields and flooded lowlands.

According to the California Department of Water Resources, the high-elevation **Sierra Nevada** snow pack contained an average of 16 inches of liquid (140 percent of the year-end normal) by New Year's Eve, up from 4 inches (about 80 percent of normal) on December 1. Meanwhile, monthly rainfall totaled 23.31 inches (367 percent of normal) in **Eureka, CA**, breaking their December 1996 record of 21.26 inches. Farther inland, a daily-record total of 0.86 inch on December 30 in **Boise, ID**, accounted for nearly one-eighth of their annual precipitation. Nevertheless, **Boise** still experienced their third-driest year on record (6.96 inches, or 57 percent of normal), behind 6.64 inches in 1966 and 6.69 inches in 1868. Elsewhere across the **western half of the Nation**, however, 2002 was the driest year on record in locations such as **Yuma, AZ** (0.03 inch, or 1 percent of normal), **Pueblo, CO** (3.94 inches, or 32 percent), and **Chadron, NE** (7.78 inches, or 47 percent). Farther east, light freezing rain (0.01 inch) on January 4 barely ended a record-setting 53-day dry spell in **Des Moines, IA**. **Des Moines'** streak without measurable precipitation, which stretched from November 12 to January 3, surpassed their former record of 45 days, set from October 2 - November 15, 1952.

Meanwhile, another soaking rainfall across the **South** produced several daily-record totals and contributed to a few December-record amounts. In **Florida**, it was the wettest New Year's Eve on record in **Orlando** (3.29 inches) and **Tampa** (2.68 inches). With a monthly total of 11.39 inches (493 percent of normal), **Orlando** noted their second-wettest December on record behind 12.63 inches in 1997. Nearby **Melbourne, FL**, measured their highest December sum (10.28 inches, or 445 percent of normal), eclipsing the 1940 record of 7.89 inches. Farther north, it was the wettest December 31 on record in **Evansville, IN** (1.34 inches), and the wettest New Year's Day on record in locations such as **Washington, DC** (1.52 inches), and **Newark, NJ** (1.73 inches).

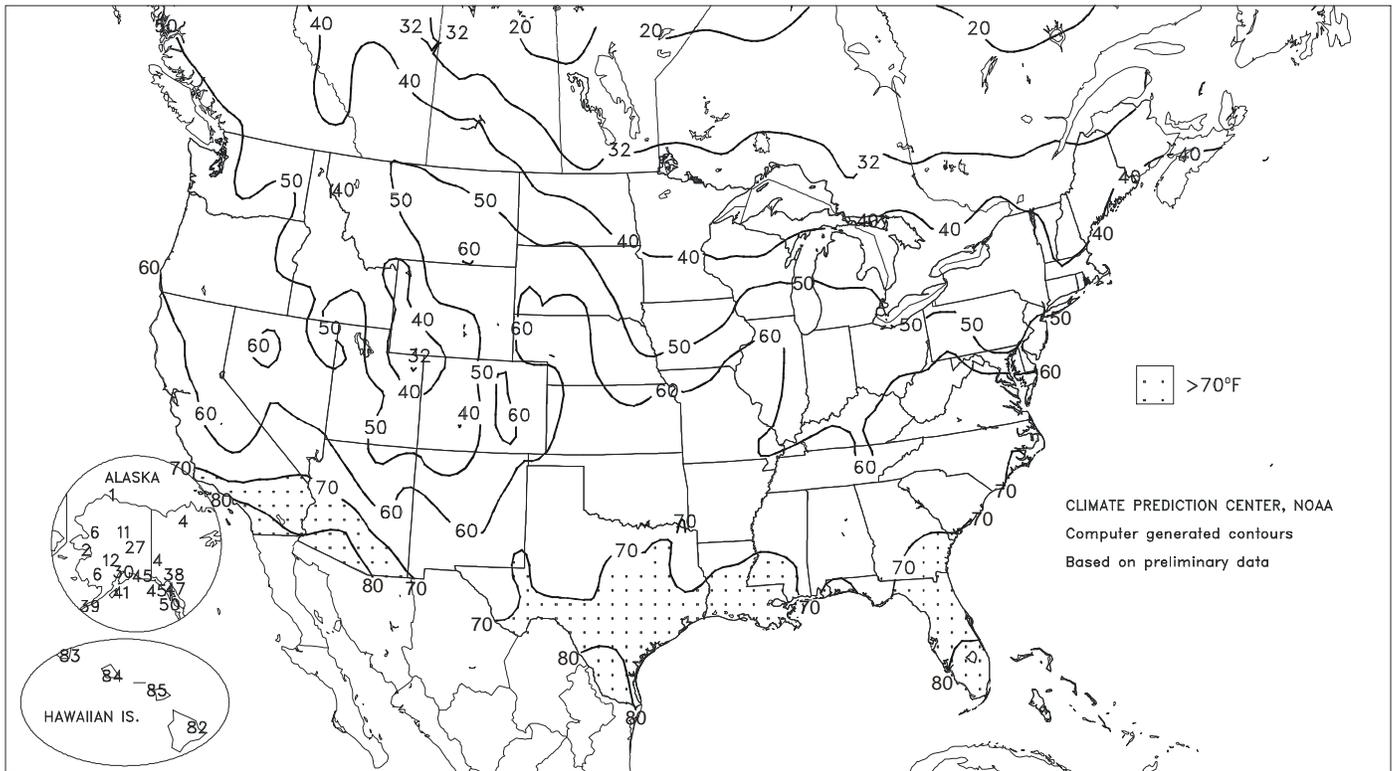
Prior to the rainfall, cold air briefly settled into **Florida**, resulting in daily-record lows on December 29 in **Vero Beach** (34°F) and **Melbourne** (36°F). A day later, daily-record highs in the **Midwest** included 63°F in **Peoria, IL**, and 62°F in **Burlington, IA**. During the second half of the week, warmth intensified across the **western half of the Nation**, resulting in more than five dozen daily-record highs. On January 3, daily records included 61°F in **Sheridan, WY**, and 64°F in **Hill City, KS**. A day later in **California**, record highs peaked at 87°F in **Simi Valley** and **Chatsworth**.

On January 3-4, snow spread across the **Northeast** in conjunction with a developing coastal storm. The system followed a track similar to the December 25-26 storm, blanketing many of the same areas with heavy snow. **Albany, NY**, received 20.8 inches on January 3-4, their tenth-greatest storm-total snowfall on record. The storm followed **Albany's** ninth-greatest snowfall on record, a 21.0-inch total on December 25-26. The only other winter that **Albany** recorded two 20-inch snowfalls was 1887-88. The highest unofficial combined total for the two storms was 77 inches, in **Cherry Valley (Otsego County), NY**, where 38 inches was reported from January 2-4. Elsewhere in **New York**, **Binghamton** netted 17.3 inches on January 3, their greatest single-day January snowfall since 18.4 inches was measured on January 13, 1964. The following day, 17.4 inches blanketed **Burlington, VT**, their second-highest single-day total on record during any month behind 23.1 inches on January 14, 1934.

Warm, mostly dry weather prevailed in Hawaii, where weekly temperatures averaged as much as 2°F above normal. However, strong westerly winds developed across parts of the State by January 4, when **Lihue, Kauai**, noted a daily-record gust to 45 mph. Meanwhile, mild, stormy weather prevailed in **southeastern Alaska**, but temperatures averaged as much as 14°F below normal across the **Alaskan mainland**. In **southern Alaska, Yakutat** (45°F) posted a daily-record high on January 4, but **Valdez** measured 50.7 inches of snow on December 30-31 and another 32.9 inches during the first 5 days of January. The snow more than quadrupled the season-to-date total (108.9 inches) in **Valdez**, where only 25.3 inches had fallen prior to December 30. Meanwhile, the coldest air of the season overspread **interior Alaska**, where the New Year's Day low temperature in **McGrath** was -38°F.

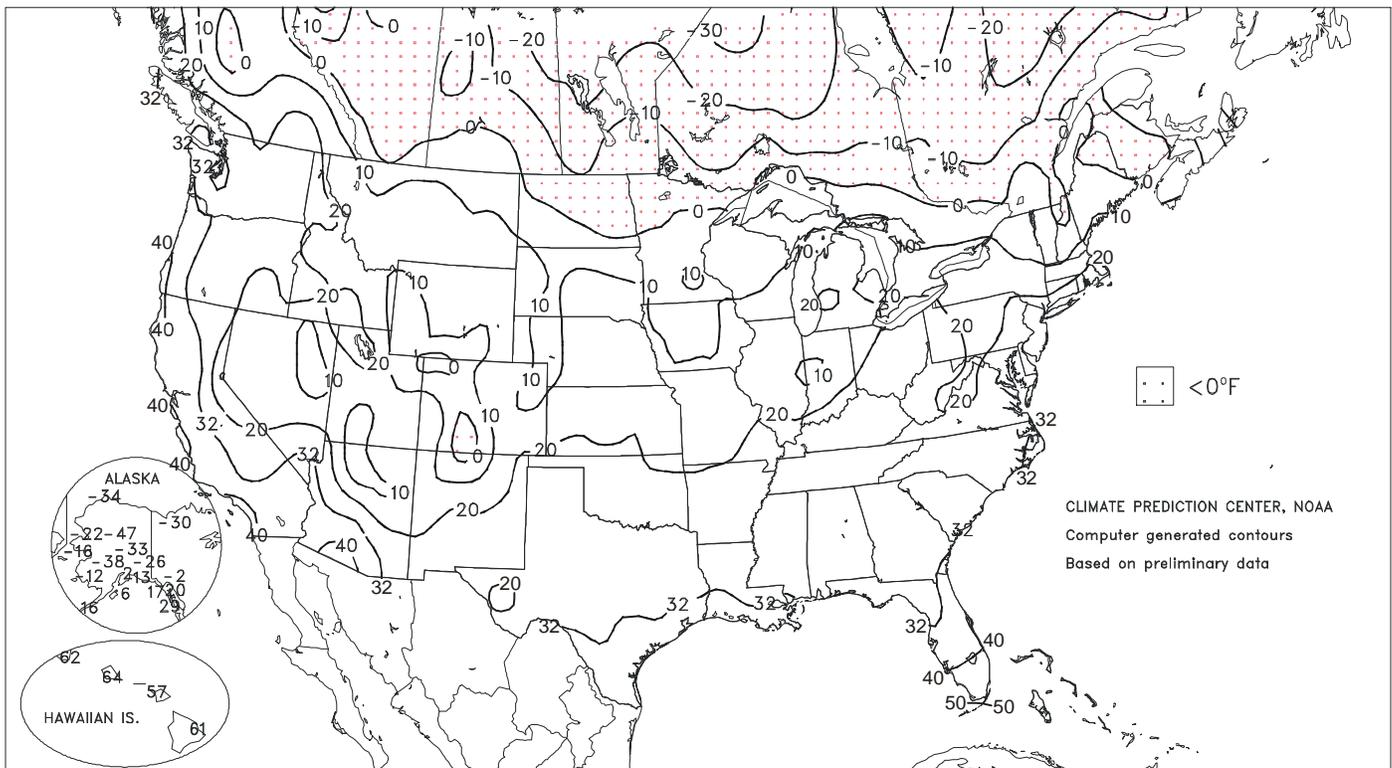
Extreme Maximum Temperature (°F)

DEC 29, 2002 - JAN 4, 2003



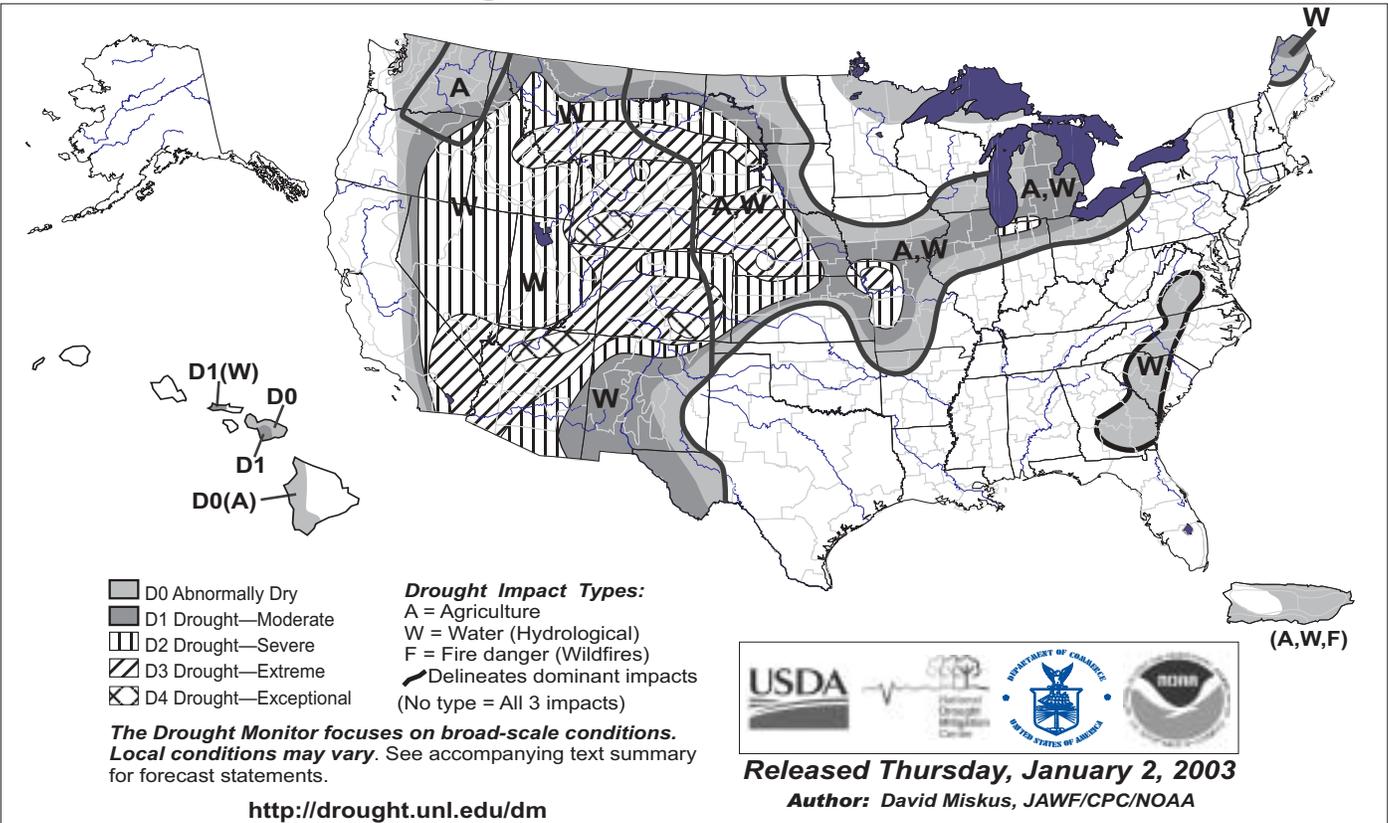
Extreme Minimum Temperature (°F)

DEC 29, 2002 - JAN 4, 2003



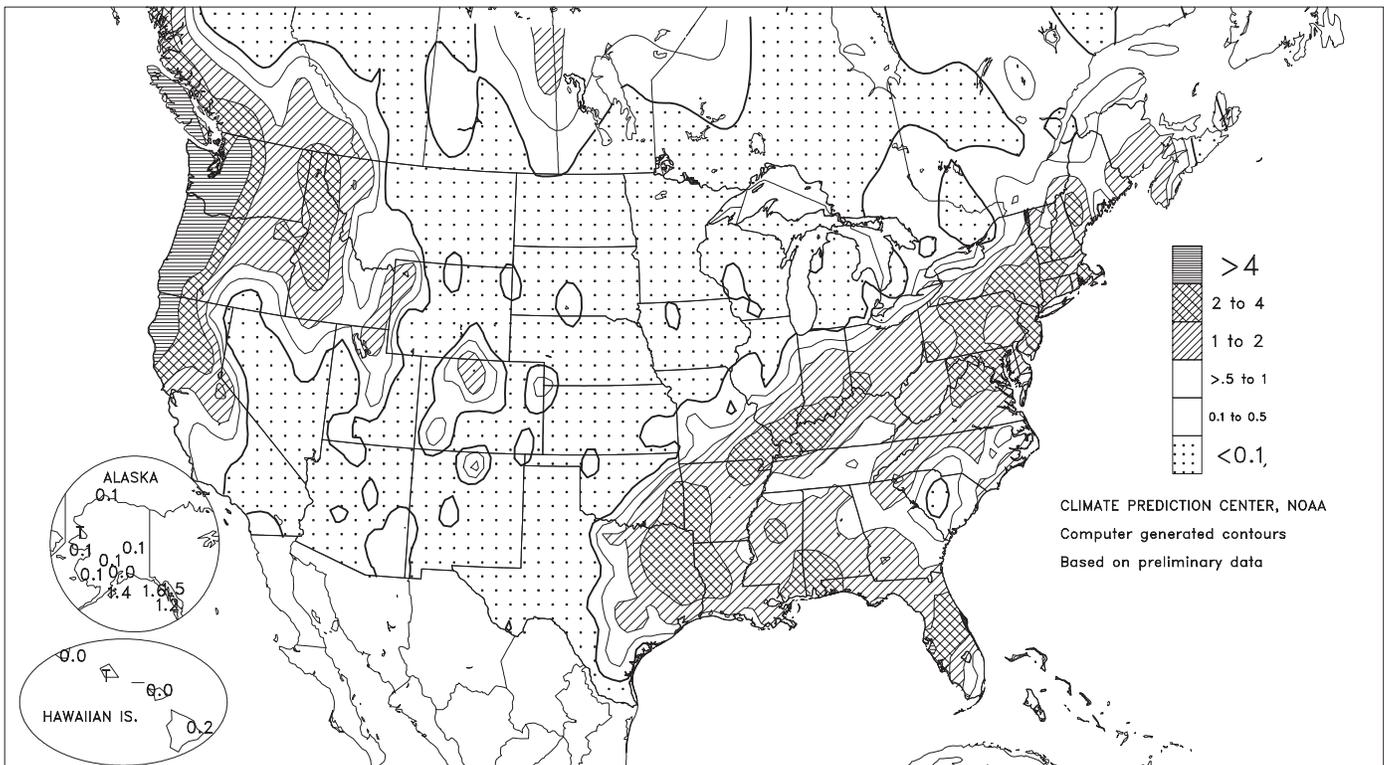
U.S. Drought Monitor

December 31, 2002
Valid 7 a.m. EST



Total Precipitation (Inches)

DEC 29, 2002 - JAN 4, 2003



National Weather Data for Selected Cities

Weather Data for the Week Ending January 4, 2003

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

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION								RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE 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	0.1 INCH OR MORE		50 INCH OR MORE	
																		90 AND ABOVE	32 AND BELOW	0.1 INCH OR MORE	50 INCH OR MORE
AL	BIRMINGHAM	54	38	64	24	46	3	0.85	-0.28	0.65	7.43	145	0.20	30	94	60	0	3	3	1	
	HUNTSVILLE	53	37	64	25	45	5	0.62	-0.63	0.42	6.34	100	0.20	28	90	74	0	3	3	0	
	MOBILE	62	39	69	26	51	1	4.12	3.01	4.10	8.99	169	0.02	3	93	64	0	2	2	1	
	MONTGOMERY	58	37	67	26	48	1	1.11	0.08	0.84	5.44	98	0.27	46	99	67	0	3	2	1	
AK	ANCHORAGE	20	9	30	2	14	-2	0.00	-0.18	0.00	0.85	74	0.00	0	88	75	0	7	0	0	
	BARROW	-11	-23	1	-34	-17	-4	0.06	0.06	0.04	0.08	67	0.06	600	81	76	0	7	3	0	
	FAIRBANKS	-7	-25	27	-33	-16	-7	0.09	-0.05	0.08	0.50	61	0.09	113	76	71	0	7	2	0	
	JUNEAU	38	29	47	20	33	6	1.53	0.34	0.94	7.06	116	1.20	179	96	84	0	5	5	1	
	KODIAK	34	21	41	6	28	-2	1.44	-0.43	0.81	7.45	86	1.41	132	81	71	0	6	5	1	
	NOME	-1	-12	2	-16	-6	-12	0.07	-0.12	0.07	1.04	93	0.07	64	72	66	0	7	1	0	
AZ	FLAGSTAFF	44	16	56	7	30	1	0.08	-0.34	0.08	0.69	33	0.00	0	82	30	0	7	1	0	
	PHOENIX	70	44	80	39	57	4	0.00	-0.21	0.00	0.16	15	0.00	0	55	33	0	0	0	0	
	TUCSON	67	36	77	33	52	1	0.03	-0.22	0.03	0.64	55	0.00	0	69	35	0	0	1	0	
	YUMA	71	45	80	38	58	1	0.00	-0.11	0.00	0.04	8	0.00	0	45	34	0	0	0	0	
AR	FORT SMITH	57	34	69	27	46	8	1.47	0.92	1.19	5.49	148	0.27	87	92	52	0	5	4	1	
	LITTLE ROCK	55	35	65	25	45	5	1.51	0.67	0.98	8.24	159	0.07	15	97	60	0	4	4	1	
CA	BAKERSFIELD	59	39	66	36	49	3	0.03	-0.18	0.02	1.40	157	0.00	0	93	79	0	0	2	0	
	FRESNO	56	39	58	35	48	4	0.25	-0.14	0.11	2.46	157	0.02	9	94	82	0	0	5	0	
	LOS ANGELES	69	49	79	44	59	2	0.02	-0.50	0.02	1.81	86	0.00	0	73	51	0	0	1	0	
	REDDING	53	43	61	39	48	3	2.16	0.88	1.35	14.83	274	0.08	11	93	83	0	0	5	2	
	SACRAMENTO	57	42	60	36	49	4	0.72	0.04	0.35	6.29	221	0.00	0	97	66	0	0	3	0	
	SAN DIEGO	69	49	82	47	59	2	0.24	-0.17	0.24	1.98	128	0.00	0	78	55	0	0	1	0	
	SAN FRANCISCO	55	46	59	42	51	3	0.79	-0.02	0.55	10.75	320	0.00	0	93	83	0	0	3	1	
	STOCKTON	57	40	62	34	48	4	0.81	0.32	0.38	5.04	239	0.01	3	99	93	0	0	4	0	
CO	ALAMOSA	43	4	50	0	24	10	0.00	-0.06	0.00	0.24	67	0.00	0	82	55	0	7	0	0	
	CO SPRINGS	49	23	59	18	36	8	0.00	-0.08	0.00	0.08	17	0.00	0	74	30	0	7	0	0	
	DENVER INTL	53	26	61	19	39	11	0.03	-0.04	0.03	0.08	22	0.03	60	63	31	0	6	1	0	
	GRAND JUNCTION	38	19	44	18	29	3	0.05	-0.08	0.05	0.17	28	0.00	0	90	73	0	7	1	0	
	PUEBLO	55	21	68	13	38	9	0.00	-0.08	0.00	0.29	66	0.00	0	74	41	0	7	0	0	
CT	BRIDGEPORT	39	31	45	26	35	4	1.63	0.81	1.05	5.70	145	1.51	321	84	71	0	5	6	1	
	HARTFORD	35	26	41	19	31	4	1.90	1.07	1.10	5.54	136	1.76	367	91	71	0	6	6	1	
DC	WASHINGTON	48	34	61	29	41	5	1.98	1.25	1.52	6.43	185	1.98	471	93	68	0	3	3	1	
DE	WILMINGTON	45	34	52	28	40	8	1.19	0.41	0.87	5.39	140	1.19	264	92	62	0	2	3	1	
FL	DAYTONA BEACH	69	45	77	37	57	-2	2.07	1.41	1.80	9.88	320	0.27	71	97	48	0	0	2	1	
	JACKSONVILLE	66	41	75	33	54	1	1.10	0.40	1.09	5.41	177	0.01	2	94	51	0	0	2	1	
	KEY WEST	74	64	80	50	69	-2	0.38	-0.13	0.30	4.45	182	0.38	127	90	67	0	0	3	0	
	MIAMI	76	60	84	49	68	0	0.36	-0.04	0.19	3.75	156	0.36	164	93	68	0	0	2	0	
	ORLANDO	70	46	80	36	58	-3	4.06	3.56	3.50	11.95	460	0.56	193	93	53	0	0	2	2	
	PENSACOLA	62	40	70	28	51	-1	1.17	0.12	1.17	4.90	107	0.00	0	87	57	0	1	1	1	
	TALLAHASSEE	63	40	69	26	51	-1	0.21	-0.90	0.16	6.67	140	0.05	8	89	56	0	3	2	0	
	TAMPA	68	50	77	40	59	-3	2.72	2.25	2.68	14.17	551	0.04	15	96	62	0	0	2	1	
	WEST PALM	75	56	83	43	65	-2	0.26	-0.41	0.13	2.85	81	0.26	67	89	64	0	0	3	0	
GA	ATHENS	58	38	66	29	48	6	0.70	-0.24	0.57	5.57	131	0.13	24	87	62	0	2	3	1	
	ATLANTA	56	39	63	28	47	4	0.55	-0.40	0.26	5.52	126	0.29	52	83	60	0	2	3	0	
	AUGUSTA	61	34	69	24	47	2	0.39	-0.51	0.29	4.36	119	0.10	19	96	58	0	3	3	0	
	COLUMBUS	59	39	65	29	49	2	0.66	-0.36	0.64	4.54	91	0.02	3	94	50	0	2	2	1	
	MACON	60	37	66	27	49	3	0.99	-0.01	0.85	5.53	123	0.14	24	90	52	0	4	3	1	
	SAVANNAH	63	40	71	30	52	3	0.32	-0.49	0.32	3.88	118	0.00	0	95	60	0	2	1	0	
HI	HILO	81	64	82	61	72	0	0.18	-1.80	0.12	10.48	90	0.00	0	80	67	0	0	2	0	
	HONOLULU	82	68	84	64	75	1	0.02	-0.63	0.02	0.04	1	0.00	0	80	70	0	0	1	0	
	KAHULUI	83	62	85	57	72	0	0.00	-0.81	0.00	0.55	15	0.00	0	83	76	0	0	0	0	
	LIHUE	81	67	83	62	74	2	0.00	-1.09	0.00	1.08	20	0.00	0	87	78	0	0	0	0	
ID	BOISE	46	34	51	29	40	11	1.28	0.99	0.85	2.03	131	0.00	0	89	66	0	3	3	1	
	LEWISTON	47	35	53	28	41	8	0.28	0.06	0.10	0.93	79	0.25	192	87	72	0	3	5	0	
	POCATELLO	41	28	51	21	34	10	0.10	-0.15	0.08	0.44	35	0.01	7	84	73	0	6	3	0	
IL	CHICAGO/O'HARE	39	25	60	15	32	9	0.04	-0.38	0.02	1.96	73	0.03	13	84	67	0	6	3	0	
	MOLINE	41	23	61	19	32	10	0.06	-0.34	0.06	0.75	31	0.06	27	80	57	0	6	1	0	
	PEORIA	41	27	64	19	34	11	0.07	-0.31	0.05	2.28	87	0.07	33	93	71	0	6	2	0	
	ROCKFORD	38	22	58	16	30	10	0.09	-0.24	0.09	0.87	39	0.09	47	82	65	0	7	1	0	
	SPRINGFIELD	41	25	63	13	33	7	0.09	-0.35	0.08	1.79	64	0.09	38	83	66	0	6	2	0	
IN	EVANSVILLE	46	33	58	21	40	8	2.23	1.59	1.33	6.31	162	0.66	183	93	82	0	3	4	2	
	FORT WAYNE	36	23	54	14	30	5	0.50	-0.01	0.32	1.79	59	0.18	64	93	76	0	7	3	0	
	INDIANAPOLIS	41	27	57	14	34	7	1.32	0.75	0.63	3.40	101	0.38	119	99	83	0	5	5	1	
	SOUTH BEND	36	23	55	16	30	5	0.18	-0.38	0.14	1.98	58	0.18	58	87	74	0	6	2	0	
IA	BURLINGTON	41	24	62	16	33	9	0.05	-0.28	0.03	0.84	37	0.05	26	88	57	0	6	2	0	
	CEDAR RAPIDS	39	20	54	10	29	10	0.02	-0.20	0.02	0.29	18	0.02	15	87	54	0	7	1	0	
	DES MOINES	42	22	53	11	32	11	0.01	-0.21	0.01	0.01	1	0.01	8	81	59	0	7	1	0	
	DUBUQUE	36	22	53	15	29	11	0.07	-0.21	0.07	0.80	43	0.07	44	84	64	0	7	1	0	
	SIOUX CITY	41	18	46	9	30	11	0.06	-0.07	0.05	0.19	26	0.06	75	82	59	0	7	2	0	
	WATERLOO	38	17	48	7	28	11	0.00	-0.17	0.00	0.32	27	0.00	0	85	61	0	7	0	0	
KS	CONCORDIA	48	25	58	17	37	10	0.00	-0.17	0.00	0.11	12	0.00	0	74	55	0	7	0	0	
	DODGE CITY	50	25	61	21	38	8	0.01	-0.16	0.01	0.62	72	0.01	11	82	43	0	7	1	0	
	GOODLAND	48	23	58	14	35	7	0.17	0.07	0.09	0.17	37	0.17	283	70	48	0	7	2	0	
	TOPEKA	51	23	63	15	37	9	0.00	-0.23	0.00	0.05	3	0.00	0	74	50	0	6	0	0	

Based on 1971-2000 normals

*** Not Available

Weather Data for the Week Ending January 4, 2003

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE 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	50	28	62	20	39	9	0.00	-0.25	0.00	1.22	82	0.00	0	86	56	0	6	0	0
KY JACKSON	50	36	64	25	43	8	0.95	0.12	0.68	5.14	108	0.85	181	88	62	0	2	4	1
KY LEXINGTON	47	34	58	22	40	7	1.03	0.20	0.52	4.52	100	0.44	94	87	76	0	3	5	1
KY LOUISVILLE	48	36	59	25	42	8	2.73	1.99	1.22	7.34	178	0.73	170	93	72	0	2	4	3
KY PADUCAH	48	35	62	23	41	8	2.50	1.74	1.44	7.45	155	0.38	88	97	71	0	4	4	2
LA BATON ROUGE	63	40	74	29	52	2	1.17	-0.09	1.17	7.15	119	0.00	0	93	55	0	2	1	1
LA LAKE CHARLES	64	41	73	33	53	2	0.50	-0.66	0.37	9.50	180	0.02	3	95	57	0	0	5	0
LA NEW ORLEANS	64	43	73	33	53	0	1.75	0.66	1.75	4.82	85	0.00	0	87	62	0	0	1	1
LA SHREVEPORT	61	38	70	29	49	3	2.10	1.11	1.66	8.36	163	0.00	0	89	55	0	1	2	1
ME CARIBOU	23	3	33	-4	13	2	0.39	-0.33	0.31	3.01	84	0.08	20	90	68	0	7	3	0
ME PORTLAND	31	20	39	13	26	3	0.41	-0.53	0.16	4.81	101	0.30	56	85	57	0	7	4	0
MD BALTIMORE	45	32	57	25	38	5	2.09	1.31	1.68	7.05	186	2.09	464	96	74	0	4	3	1
MA BOSTON	39	28	44	23	33	2	1.49	0.65	0.60	6.76	160	1.46	298	94	67	0	6	5	1
MA WORCESTER	32	22	40	18	27	2	1.47	0.57	0.77	5.90	137	1.39	267	96	71	0	7	6	1
MI ALPENA	33	22	44	18	28	8	0.00	-0.41	0.00	0.52	25	0.00	0	88	66	0	7	0	0
MI GRAND RAPIDS	36	24	53	21	30	6	0.09	-0.37	0.09	1.97	67	0.00	0	87	66	0	7	1	0
MI HOUGHTON LAKE	32	20	45	15	26	6	0.07	-0.29	0.07	0.41	21	0.00	0	88	78	0	7	1	0
MI LANSING	36	23	52	18	29	6	0.12	-0.24	0.09	0.88	37	0.09	45	89	76	0	7	2	0
MI MUSKEGON	36	25	51	21	31	6	0.00	-0.52	0.00	0.85	29	0.00	0	86	69	0	7	0	0
MI TRAVERSE CITY	34	24	45	19	29	6	0.00	-0.64	0.00	0.26	9	0.00	0	87	65	0	7	0	0
MN DULUTH	27	11	35	4	19	10	0.00	-0.17	0.00	0.81	78	0.00	0	86	70	0	7	0	0
MN INT'L FALLS	25	6	35	-5	15	12	0.00	-0.14	0.00	0.26	33	0.00	0	87	64	0	7	0	0
MN MINNEAPOLIS	32	18	42	12	25	11	0.00	-0.20	0.00	0.21	19	0.00	0	83	65	0	7	0	0
MN ROCHESTER	32	18	41	10	25	12	0.00	-0.17	0.00	0.56	50	0.00	0	85	69	0	7	0	0
MS ST. CLOUD	30	14	37	6	22	13	0.00	-0.14	0.00	0.22	29	0.00	0	91	61	0	7	0	0
MS JACKSON	57	37	71	25	47	2	1.57	0.34	1.53	6.34	105	0.04	6	93	66	0	3	3	1
MS MERIDIAN	57	37	70	24	47	1	1.82	0.58	1.80	7.93	132	0.01	1	96	71	0	3	3	1
MS TUPELO	55	37	67	22	46	5	1.09	-0.20	1.01	7.20	105	0.08	11	96	75	0	3	3	1
MO COLUMBIA	43	26	67	11	35	7	0.49	0.11	0.27	2.58	96	0.49	233	88	63	0	5	3	0
MO KANSAS CITY	50	26	61	17	38	10	0.00	-0.28	0.00	0.03	2	0.00	0	78	47	0	6	0	0
MO SAINT LOUIS	45	30	69	20	37	7	0.75	0.27	0.43	2.62	84	0.60	222	86	65	0	5	4	0
MO SPRINGFIELD	47	29	66	15	38	6	0.28	-0.18	0.19	2.98	87	0.09	35	80	63	0	5	3	0
MT BILLINGS	48	30	56	23	39	15	0.00	-0.17	0.00	0.25	33	0.00	0	58	29	0	5	0	0
MT BUTTE	38	16	43	3	27	10	0.01	-0.10	0.01	0.15	25	0.00	0	83	53	0	7	1	0
MT GLASGOW	36	18	45	9	27	16	0.01	-0.07	0.01	0.06	14	0.01	20	85	73	0	7	1	0
MT GREAT FALLS	45	27	51	20	36	14	0.00	-0.17	0.00	0.37	49	0.00	0	72	40	0	6	0	0
MT HAVRE	39	17	52	7	28	13	0.04	-0.07	0.02	0.10	18	0.02	33	84	67	0	7	3	0
MT KALISPELL	36	19	43	7	28	7	0.50	0.17	0.19	1.35	73	0.11	58	94	84	0	7	5	0
MT MISSOULA	38	27	44	24	33	11	0.10	-0.15	0.06	0.70	54	0.07	50	90	79	0	7	4	0
NE GRAND ISLAND	46	22	56	17	34	11	0.00	-0.11	0.00	0.02	3	0.00	0	77	50	0	7	0	0
NE LINCOLN	46	21	53	12	34	11	0.01	-0.15	0.01	0.02	2	0.01	11	79	48	0	7	1	0
NE NORFOLK	44	23	51	12	34	13	0.03	-0.08	0.02	0.08	11	0.03	50	78	56	0	7	2	0
NE NORTH PLATTE	49	16	63	10	32	9	0.00	-0.08	0.00	0.00	0	0.00	0	92	39	0	7	0	0
NE OMAHA	43	21	49	13	32	10	0.01	-0.14	0.01	0.01	1	0.01	11	82	53	0	7	1	0
NE SCOTTSBLUFF	51	20	60	13	35	11	0.00	-0.11	0.00	0.00	0	0.00	0	70	37	0	7	0	0
NE VALENTINE	51	20	61	10	35	14	0.00	-0.06	0.00	0.04	11	0.00	0	79	55	0	7	0	0
NV ELY	44	16	58	4	30	5	0.03	-0.11	0.02	0.14	24	0.00	0	84	59	0	7	2	0
NV LAS VEGAS	60	39	65	36	49	3	0.00	-0.10	0.00	0.07	15	0.00	0	47	36	0	0	0	0
NV RENO	50	29	63	23	40	8	0.37	0.18	0.31	2.20	222	0.00	0	85	64	0	6	3	0
NH WINNEMUCCA	48	28	62	21	38	9	0.10	-0.09	0.08	0.39	42	0.00	0	84	65	0	7	2	0
NH CONCORD	31	17	37	10	24	3	0.17	-0.48	0.08	3.64	109	0.07	19	96	66	0	7	3	0
NJ NEWARK	43	32	53	28	37	5	2.68	1.83	1.81	6.38	157	2.68	547	87	69	0	5	4	2
NM ALBUQUERQUE	50	27	58	23	38	3	0.00	-0.11	0.00	0.36	65	0.00	0	64	31	0	7	0	0
NY ALBANY	34	22	42	14	28	4	1.26	0.71	0.69	5.15	173	1.18	381	91	72	0	6	6	1
NY BINGHAMTON	34	25	46	19	29	6	2.19	1.62	1.09	4.74	141	2.00	625	93	76	0	6	7	2
NY BUFFALO	35	25	49	18	30	4	0.80	0.04	0.24	4.89	116	0.53	123	94	76	0	7	6	0
NY ROCHESTER	34	24	48	19	29	3	0.73	0.20	0.37	4.42	146	0.65	217	92	80	0	6	6	0
NY SYRACUSE	36	25	49	19	30	6	1.07	0.49	0.42	3.62	105	0.78	236	88	71	0	6	7	0
NC ASHEVILLE	54	31	62	25	42	6	0.71	-0.10	0.25	6.86	178	0.46	98	96	64	0	5	4	0
NC CHARLOTTE	57	36	66	28	47	5	0.51	-0.32	0.22	5.45	149	0.49	102	90	53	0	2	4	0
NC GREENSBORO	56	37	66	28	47	9	1.40	0.66	0.70	5.53	158	1.10	256	87	54	0	3	4	1
NC HATTERAS	59	47	67	39	53	6	1.10	-0.16	1.06	3.44	65	1.10	151	90	67	0	0	2	1
NC RALEIGH	57	37	67	26	47	7	0.76	-0.04	0.42	5.74	164	0.70	149	91	64	0	2	4	0
NC WILMINGTON	63	41	70	29	52	6	0.90	-0.04	0.83	3.43	79	0.90	167	10	60	0	2	2	1
ND BISMARCK	34	12	46	0	23	12	0.03	-0.05	0.03	0.35	71	0.03	60	86	78	0	7	1	0
ND DICKINSON	34	17	42	5	25	10	0.01	-0.05	0.01	0.36	97	0.01	33	92	69	0	7	1	0
ND FARGO	29	14	38	-9	21	13	0.00	-0.15	0.00	0.83	126	0.00	0	88	75	0	7	0	0
ND GRAND FORKS	26	11	35	-8	19	13	0.00	-0.13	0.00	0.32	51	0.00	0	91	77	0	7	0	0
ND JAMESTOWN	27	9	38	-5	18	8	0.07	-0.04	0.06	0.31	62	0.07	117	98	81	0	7	2	0
ND WILLISTON	31	8	40	-5	20	11	0.09	-0.02	0.05	0.66	105	0.04	67	97	83	0	7	3	0
OH AKRON-CANTON	36	26	51	22	31	4	1.36	0.78	0.49	3.51	106	0.60	182	98	92	0	6	6	0
OH CINCINNATI	43	30	55	20	37	6	2.17	1.48	0.76	5.80	158	0.90	231	93	81	0	5	4	3
OH CLEVELAND	37	28	51	24	33	6	1.11	0.54	0.37	4.09	118	0.38	119	99	84	0	7	6	0
OH COLUMBUS	40	31	53	24	35	5	1.22	0.65	0.54	3.42	105	0.65	203	93	79	0	5	6	1
OH DAYTON	38	27	53	20	33	6	1.45	0.84	0.57	3.69	108	0.48	137	92	75	0	5	4	1
OH MANSFIELD	35	26	51	21	31	5	1.00	0.39	0.42	3.02	84	0.28	80	99	76	0	7	4	0

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Weather Data for the Week Ending January 4, 2003

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS					
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE 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	38	25	55	17	32	7	0.42	-0.04	0.22	2.77	96	0.10	38	88	73	0	7	4	0
	YOUNGSTOWN	36	27	52	23	31	5	1.06	0.52	0.28	3.44	105	0.53	171	98	90	0	7	6	0
	OKLAHOMA CITY	55	31	61	22	43	6	0.00	-0.37	0.00	1.84	88	0.00	0	87	47	0	5	0	0
	TULSA	56	33	65	24	44	8	0.19	-0.20	0.12	2.87	108	0.12	55	87	57	0	4	2	0
OR	ASTORIA	53	43	57	34	48	6	4.19	2.03	1.11	15.72	135	2.95	240	94	84	0	0	7	4
	BURNS	40	25	46	11	33	9	0.73	0.45	0.61	1.98	136	0.01	6	91	81	0	7	4	1
	EUGENE	53	43	57	36	48	9	4.26	2.58	1.95	13.52	146	1.47	153	94	76	0	0	7	4
	MEDFORD	49	39	58	35	44	6	1.22	0.67	0.69	7.42	231	0.22	71	98	78	0	0	7	1
	PENDLETON	52	38	61	32	45	12	1.16	0.86	0.44	2.92	177	0.69	406	85	64	0	2	6	0
	PORTLAND	50	41	59	34	46	7	3.45	2.30	1.43	9.55	150	1.55	235	93	86	0	0	7	3
	SALEM	53	43	58	34	48	9	3.60	2.30	1.58	12.79	178	1.59	215	89	78	0	0	7	3
PA	ALLENTOWN	38	27	42	21	33	5	1.07	0.31	0.65	6.01	157	1.06	241	91	77	0	5	4	1
	ERIE	37	26	51	22	32	3	1.14	0.48	0.44	4.34	106	0.36	97	95	85	0	6	6	0
	MIDDLETOWN	38	29	42	21	33	3	1.90	1.29	1.35	6.48	181	1.88	537	98	79	0	5	4	1
	PHILADELPHIA	44	33	50	28	39	5	1.34	0.56	1.11	5.39	144	1.34	305	88	69	0	2	3	1
	PITTSBURGH	41	29	56	24	35	6	1.68	1.10	1.22	4.02	126	1.45	439	98	81	0	5	5	1
	WILKES-BARRE	38	28	49	23	33	5	1.33	0.83	0.76	4.78	168	1.31	452	91	71	0	5	4	2
	WILLIAMSPORT	37	28	43	19	33	6	1.66	1.08	1.02	4.97	152	1.61	488	10	81	0	5	6	2
RI	PROVIDENCE	42	29	53	26	35	5	1.88	0.93	0.75	6.96	148	1.81	329	86	64	0	6	5	2
SC	BEAUFORT	62	42	69	33	52	3	0.26	-0.59	0.21	-9.99	-999	0.05	10	95	55	0	0	2	0
	CHARLESTON	63	41	71	31	52	4	1.14	0.28	0.98	4.39	117	0.16	32	93	56	0	1	3	1
	COLUMBIA	60	38	69	29	49	4	0.06	-0.88	0.02	4.20	107	0.04	7	88	56	0	2	4	0
	GREENVILLE	58	37	67	29	47	6	0.74	-0.21	0.29	6.93	157	0.46	84	95	57	0	3	3	0
SD	ABERDEEN	35	21	42	6	28	16	0.02	-0.08	0.02	0.32	73	0.02	33	90	76	0	7	1	0
	HURON	40	25	47	12	32	17	0.04	-0.04	0.04	0.42	95	0.04	80	92	62	0	6	1	0
	RAPID CITY	51	19	61	11	35	12	0.00	-0.08	0.00	0.04	9	0.00	0	77	33	0	7	0	0
	SIoux FALLS	37	18	45	10	27	13	0.07	-0.01	0.07	0.22	39	0.07	140	88	62	0	7	1	0
TN	BRISTOL	53	33	64	25	43	9	0.69	-0.05	0.41	5.06	132	0.68	158	96	59	0	5	4	0
	CHATTANOOGA	56	37	62	26	47	7	0.53	-0.58	0.28	7.19	132	0.45	69	89	59	0	3	3	0
	KNOXVILLE	54	37	60	30	45	7	0.78	-0.24	0.37	6.03	119	0.68	117	92	60	0	3	4	0
	MEMPHIS	55	40	65	29	47	7	0.98	-0.02	0.61	9.74	156	0.08	14	83	65	0	2	4	1
	NASHVILLE	52	36	61	22	44	7	0.80	-0.12	0.39	6.22	123	0.41	79	92	70	0	3	3	0
TX	ABILENE	63	37	69	31	50	7	0.01	-0.25	0.01	1.33	94	0.00	0	73	46	0	2	1	0
	AMARILLO	53	28	64	20	40	5	0.00	-0.17	0.00	1.10	157	0.00	0	80	38	0	5	0	0
	AUSTIN	67	34	76	27	51	1	0.61	0.11	0.59	4.52	166	0.00	0	77	49	0	4	2	1
	BEAUMONT	65	43	74	35	54	2	0.59	-0.70	0.53	8.21	137	0.00	0	95	55	0	0	2	1
	BROWNSVILLE	74	49	79	37	62	3	0.07	-0.15	0.01	1.26	102	0.02	15	90	60	0	0	3	0
	CORPUS CHRISTI	70	46	75	37	58	2	0.49	0.12	0.49	3.19	164	0.00	0	86	62	0	0	1	0
	DEL RIO	69	41	77	30	55	4	0.00	-0.11	0.00	0.31	38	0.00	0	75	47	0	1	0	0
	EL PASO	56	29	63	25	43	-1	0.00	-0.13	0.00	1.65	196	0.00	0	73	32	0	5	0	0
	FORT WORTH	63	37	69	30	50	6	1.10	0.57	1.09	4.13	144	0.00	0	87	44	0	2	2	1
	GALVESTON	65	49	71	42	57	1	0.39	-0.46	0.38	3.64	91	0.00	0	93	59	0	0	2	0
	HOUSTON	66	43	73	35	54	2	0.70	-0.12	0.67	5.65	136	0.00	0	94	58	0	0	3	1
	LUBBOCK	59	27	67	22	43	5	0.00	-0.11	0.00	1.57	215	0.00	0	82	34	0	6	0	0
	MIDLAND	60	31	65	26	46	3	0.00	-0.12	0.00	1.05	148	0.00	0	72	41	0	4	0	0
	SAN ANGELO	63	35	68	28	49	4	0.00	-0.17	0.00	1.37	133	0.00	0	75	38	0	3	0	0
	SAN ANTONIO	69	40	75	33	54	4	0.16	-0.23	0.13	2.53	116	0.00	0	86	44	0	0	2	0
	VICTORIA	70	42	78	35	56	3	0.19	-0.36	0.18	2.62	94	0.00	0	89	50	0	0	2	0
	WACO	65	38	71	29	51	5	0.33	-0.17	0.33	7.63	251	0.00	0	91	59	0	1	1	0
	WICHITA FALLS	61	32	69	25	47	7	0.01	-0.30	0.01	1.88	102	0.00	0	79	51	0	4	1	0
UT	SALT LAKE CITY	45	29	50	25	37	8	0.23	-0.05	0.23	0.48	35	0.00	0	91	55	0	6	1	0
VT	BURLINGTON	31	18	43	10	25	5	0.98	0.52	0.67	1.96	79	0.68	252	90	65	0	7	3	1
VA	LYNCHBURG	53	32	64	21	43	8	1.02	0.26	0.67	5.07	138	1.02	232	90	63	0	5	3	1
	NORFOLK	55	39	66	31	47	6	0.36	-0.44	0.34	4.52	129	0.36	77	96	66	0	3	2	0
	RICHMOND	54	35	67	26	45	8	1.23	0.44	0.91	4.55	127	1.10	239	98	70	0	3	3	1
	ROANOKE	53	34	66	25	43	7	1.07	0.42	0.62	4.94	152	1.05	276	88	66	0	4	4	1
WA	WASH/DULLES	46	31	58	23	39	7	2.12	1.45	1.73	5.73	166	2.12	544	91	60	0	4	3	1
	OLYMPIA	51	39	56	30	45	8	3.07	1.43	1.13	9.90	112	2.51	267	96	83	0	1	7	3
	QUILLAYUTE	50	40	55	29	45	5	6.81	3.77	2.49	20.25	125	5.52	319	95	88	0	2	7	4
	SEATTLE-TACOMA	49	41	56	35	45	5	2.76	1.63	0.94	8.30	132	2.32	357	92	75	0	0	7	3
	SPOKANE	39	29	46	21	34	8	1.68	1.25	0.43	4.14	166	0.87	363	96	83	0	4	7	0
	YAKIMA	45	32	52	29	38	10	1.11	0.83	0.39	4.00	260	0.51	319	95	80	0	4	7	0
WV	BECKLEY	48	30	63	19	39	8	0.94	0.24	0.43	3.95	113	0.91	228	78	67	0	4	4	0
	CHARLESTON	50	34	69	27	42	8	0.80	0.11	0.34	3.74	101	0.80	205	95	64	0	3	3	0
	ELKINS	46	28	65	20	37	7	1.09	0.35	0.48	3.54	91	1.08	251	97	66	0	5	4	0
	HUNTINGTON	49	34	67	28	42	9	0.88	0.16	0.67	3.89	103	0.79	193	96	67	0	3	5	1
WI	EAU CLAIRE	32	15	41	4	23	10	0.02	-0.17	0.02	0.67	59	0.02	18	90	52	0	7	1	0
	GREEN BAY	33	19	47	11	26	9	0.00	-0.25	0.00	0.73	47	0.00	0	88	62	0	7	0	0
	LA CROSSE	35	18	48	8	27	10	0.01	-0.20	0.01	0.37	27	0.01	8	89	51	0	7	1	0
	MADISON	36	19	53	10	28	10	0.02	-0.25	0.02	0.69	38	0.02	13	79	62	0	7	1	0
	MILWAUKEE	38	24	56	15	31	9	0.02	-0.38	0.02	0.77	32	0.02	9	81	67	0	6	1	0
WY	CASPER	43	23	49	14	33	11	0.00	-0.11	0.00	0.19	28	0.00	0	71	48	0	7	0	0
	CHEYENNE	47	28	55	22	37	11	0.00	-0.08	0.00	0.11	22	0.00	0	52	35	0	6	0	0
	LANDER	42	20	52	13	31	11	0.00	-0.11	0.00	0.18	27	0.00	0	69	57	0	7	0	0
	SHERIDAN	51	20	61	16	36	15	0.00	-0.17	0.00	0.18	23	0.00	0	72	47	0	7	0	0

December Weather and Crop Summary

Weather

Weather summary provided by USDA/WAOB

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

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

Persistent storminess in the West was largely confined to a relatively small area from northern California and the Pacific Northwest to the northern Rockies. Toward month's end, enough moisture spilled into the Intermountain West to provide limited drought relief. According to the California Department of Water Resources, the high-elevation Sierra Nevada snow pack contained an average of 16 inches of liquid (140 percent of the year-end normal) by New Year's Eve, up from 4 inches (about 80 percent of normal) on December 1. Meanwhile, monthly rainfall totaled 23.31 inches (367 percent of normal) in Eureka, CA, breaking

their December 1996 record of 21.26 inches. Farther inland, a daily-record total of 0.86 inch on December 30 in Boise, ID, accounted for nearly one-eighth of their annual precipitation. Nevertheless, Boise still experienced their third-driest year on record (6.96 inches, or 57 percent of normal), behind 6.64 inches in 1966 and 6.69 inches in 1868. Elsewhere across the western half of the Nation, however, 2002 was the driest year on record in locations such as Yuma, AZ (0.03 inch, or 1 percent of normal), Pueblo, CO (3.94 inches, or 32 percent), and Chadron, NE (7.78 inches, or 47 percent). Farther east, the year ended with 50 consecutive dry days (November 12 - December 31) in Des Moines, IA, easily surpassing their previous longest streak without measurable precipitation (45 days from October 2 - November 15, 1952). Another record-setting dry spell (41 days) ended with 0.03 inch in Kansas City, MO, on December 26, although streaks in nearby locations such as St. Joseph, MO, and Olathe, KS, reached 47 days (November 15 - December 31) by year's end.

Monthly precipitation totaled a trace or less in several locations across the northern and central Plains and upper Midwest, tying or breaking records for December dryness. Kansas City's monthly sum, 0.03 inch (2 percent of normal), tied their December 1979 record, and their 2002 total of 24.77 inches (65 percent of normal) was their lowest annual amount since only 24.22 inches fell in 1988. Other records for December dryness included a trace in Worland, WY (tied a trace in 1969), and 0.02 inch in Ottumwa, IA (previously, 0.07 inch in 1976). Goodland, KS, received no precipitation, breaking their December record of a trace (in 1906, 1949, 1980, and 1981) and becoming their first completely dry month since January 1986. For the first time on record, Des Moines, IA, failed to receive measurable monthly precipitation. Des Moines' previous December record was 0.09 inch in 1903, while their lowest monthly totals were 0.03 inch in October 1952 and November 1969. *(An updated list of December records will appear in next week's Bulletin.)*

In contrast, record wetness affected parts of the South. In central Florida, at least 1 inch of rain soaked locations such as Tampa, St. Petersburg, and Sarasota-Bradenton on December 9, 12, 13, 24, and 31. New Year's Eve rainfall in Florida included 6.53 inches in Ruskin and 3.29 inches in Orlando. With a monthly total of 11.39 inches, Orlando noted their second-wettest December on record behind 12.63 inches in 1997. Elsewhere in Florida, December totals were the highest on record in St. Petersburg (17.40

inches, surpassing their 1997 standard of 14.62 inches) and Melbourne (10.28 inches, eclipsing their 1940 record of 7.89 inches). Farther west, Lake Charles, LA, netted 9.47 inches (206 percent of normal) during December, capping their wettest year (85.17 inches, or 149 percent) on record. Lake Charles' previous wettest year was 1919, when 79.88 inches fell. Meanwhile, with an annual total of 74.81 inches (144 percent of normal), Memphis, TN, fell short of their wettest year on record behind 76.85 inches in 1957 and 76.19 inches in 1996. The wet end to the year allowed Atlanta, GA, to avoid their driest 4 consecutive calendar years on record. Atlanta received 22.91 inches (152 percent of normal) from September-December, boosting their 1999-2002 precipitation to 160.61 inches (80 percent). Atlanta's record of 157.39 inches set from 1893-96 remained intact, but the former second-place standard (162.64 inches from 1924-27) fell to third.

Two December storms followed similar paths across the South and East, depositing heavy snow from the southern High Plains into the Northeast. In southern Missouri, Springfield measured 7.6 inches of snow on December 3-4 and 12.9 inches on December 23-24. Springfield's monthly snowfall of 20.5 inches bested their December 2000 record of 18.1 inches. The early-December storm also produced 1- to 2-inch ice accumulations in the southern Mid-Atlantic region, including the North Carolina cities of Raleigh-Durham and Charlotte. Farther north, Washington, DC (6.1 inches on December 5), had their greatest daily snow since 9.3 inches fell on January 25, 2000. Three weeks later, a holiday storm resulted in a variety of snowfall and snow depth records. Oklahoma City, OK, had their greatest December 25 snow depth (2 inches) since 1924. Indianapolis, IN, had 7 inches on the ground Christmas morning, breaking their 1909 record. Farther east, daily-snowfall records for December 25 included 19.2 inches in Albany, NY, 12.5 inches in Portland, ME, and 10.5 inches in Worcester, MA. Storm-total snowfall reached 22.2 inches in Concord, NH, and 21.0 inches in Albany, with amounts topping 30 inches in several New York locations. Albany ended the month with 33.2 inches of snow, their highest December total since 43.8 inches fell in 1970. Season-to-date snowfall of 58.0 inches in Rochester, NY, was their highest on record and stood in contrast to the 7.2 inches observed during the second half of 2001.

In early December, some of the coldest air in several years arrived in the East. In Blacksburg, VA, the low of -1°F on December 7 represented their first sub-zero reading since February 1996. Many other sites from the lower Great Lakes States into the Mid-Atlantic region reported their

lowest temperatures in nearly 2 years. For example, Lansing, MI (-18°F on December 3) last experienced a low of -18°F or lower on December 28, 2000. Cool weather was scarce, however, across the western half of the Nation. By late December, warmth spread as far east as the Midwest, where Sioux City, IA (60°F on December 28), collected a daily-record high.

The month's most significant severe thunderstorm outbreak brought tornadoes to a five-State area from December 17-19, according to information provided by the Storm Prediction Center. On the first 2 days of the severe weather event, tornado fatalities in Missouri (two) and Arkansas (one) represented the Nation's worst December outbreak since 12 people perished in Alabama on December 16, 2000. The Nation's preliminary monthly sum of 69 tornadoes equaled the December 1998-2001 total and, if the number stands, will represent the highest December count since 1982 (96 tornadoes).

Colder-than-normal weather overspread much of Alaska toward month's end, following a 14-week run of above-normal temperatures. Despite the late-month chill, December temperatures averaged 7 to 11°F above normal across most of interior, western, and northern Alaska. In Fairbanks, AK, the low of -11°F on December 20 represented their latest first reading of -10°F or lower, breaking their 1979 record by 13 days. Late-month precipitation developed across parts of southern Alaska, ending a period remarkable for its lack of snow. Juneau, AK, had their first measurable snow of the season (0.7 inch) on December 14, more than 3 weeks later than their previous record (0.5 inch on November 20, 1980). However, Juneau ended December with 17.7 inches, just 3 inches below normal. Elsewhere, 50.7 inches of snow blanketed Valdez, AK, on December 30-31, boosting their monthly total to 76.0 inches and season-to-date sum to 83.3 inches.

Relatively quiet weather prevailed in Hawaii, although some heavy showers were observed prior to midmonth, particularly on the Big Island. On December 10-11, 24-hour rainfall on the Big Island reached 6.00 inches in Pahoa, 5.40 inches in Piihonua, and 5.09 inches in Mountain View. Elsewhere on the Big Island, more than half (6.22 inches) of Hilo's 10.48-inch monthly total fell in 24 hours on December 9-10. In contrast, December rainfall totaled 1.08 inches (23 percent of normal) in Lihue, Kauai, and 0.55 inch (18 percent) in Kahului, Maui. Honolulu, Oahu, netted just 0.04 inch, breaking their December 1976 record of 0.06 inch.

Fieldwork

Fieldwork summary provided by USDA/NASS

Stormy weather developed in the Pacific Northwest, delivering frequent rain to low-lying coastal areas and significant snowfall to coastal mountain ranges. Precipitation was much lighter in the mountains and valleys of the interior Pacific Northwest, but amounts were above normal in many areas and well above normal in some areas. The wet weather eliminated drought conditions along the coast and significantly reduced moisture shortages in the foothills of the coastal ranges. In the interior valleys, topsoil and subsoil moisture supplies improved, but long-term moisture deficits remained moderate to severe.

The storms bypassed the northern and central Great Plains, leaving little moisture for parched soils and virtually no snow to protect winter wheat fields from potentially damaging low temperatures. However, strong root development and abnormally warm weather reduced the threat of heaving and winter kill, despite the lack of a protective layer of snow.

Storms repeatedly redeveloped over the southern Great Plains and spread a variety of severe weather northward and eastward across the Mississippi Delta, Ohio Valley, South-

east, and Atlantic Coast States. One early-month storm produced a mixture of wintry precipitation that limited fieldwork and delayed cotton harvesting in the southern Great Plains and lower Mississippi Valley. Above-normal temperatures and precipitation produced vigorous winter wheat growth and supplied adequate forage for livestock in Texas.

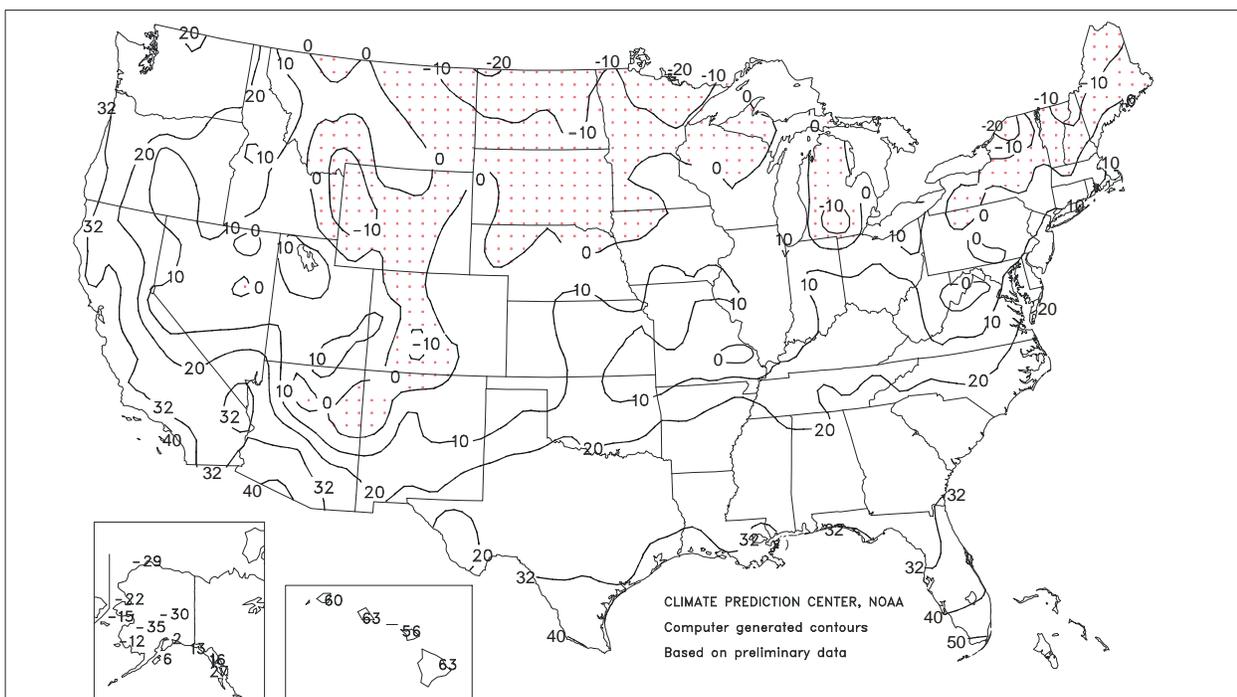
The Southeast received frequent, widespread precipitation, but heavy rainfall was scattered and harvest and fieldwork delays were usually brief. In Florida, rain interrupted vegetable planting and picking and reduced the quality of some crops. Heavy rain also saturated citrus groves, forcing producers with bedded trees to pump excessive water from their groves.

Wet weather also frequently interrupted field and orchard work in California's central and northern valleys, but the moisture and above-normal temperatures contributed to vigorous crop growth. In addition, heavy snow boosted irrigation reserves in the Sierra Nevada.

Above-normal temperatures and below-normal precipitation prevailed in the Corn Belt. Soil moisture supplies were adequate, however, and afternoon temperatures were high enough to support vegetative growth and root development of winter wheat in the eastern Corn Belt early in the month. However, above-ground growth was mostly undetectable.

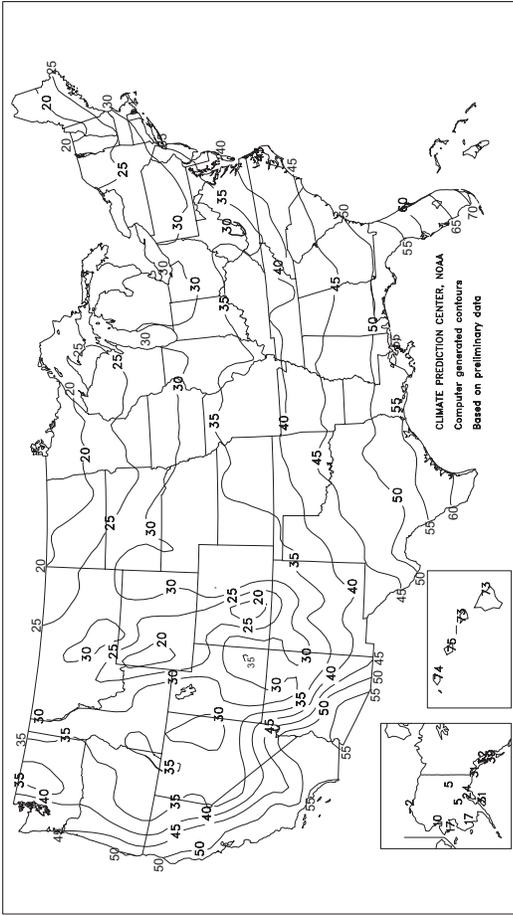
Extreme Minimum Temperature (°F)

December 2002



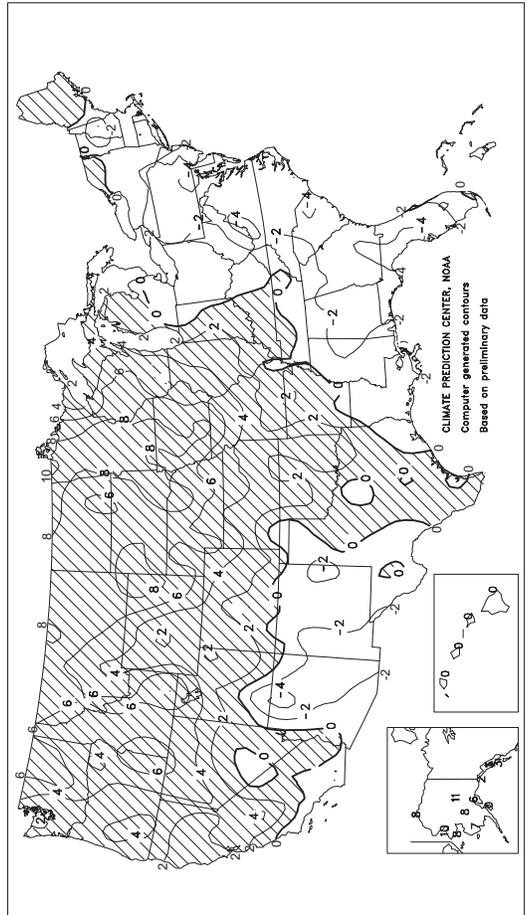
Average Temperature (°F)

December 2002



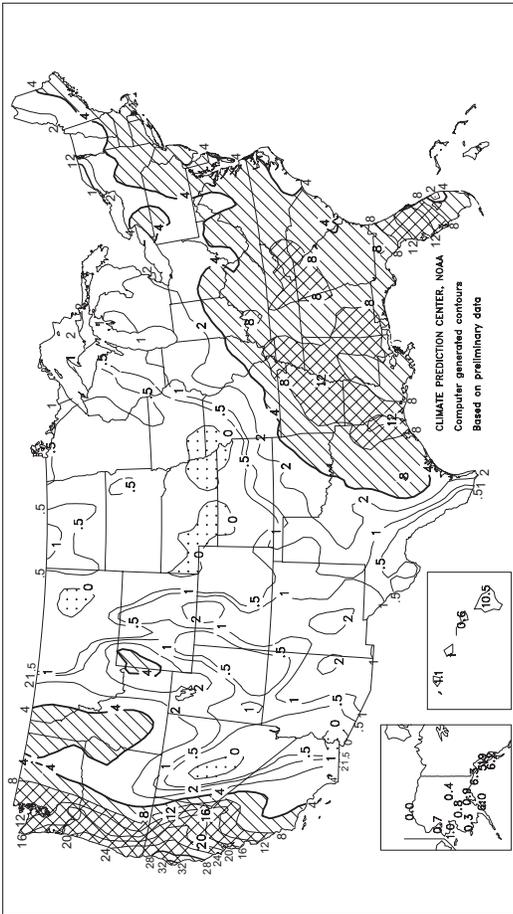
Departure of Average Temperature from Normal (°F)

December 2002



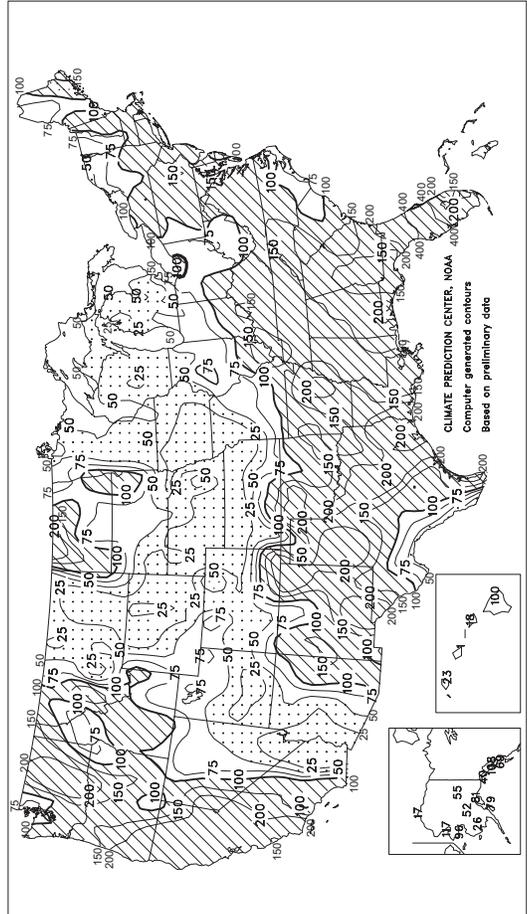
Total Precipitation (Inches)

December 2002



Percent Of Normal Precipitation

December 2002



TEMPERATURE AND PRECIPITATION SUMMARY

December 2002

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	44	-2	7.34	2.87	LEXINGTON	35	-1	4.15	0.12	COLUMBUS	32	-1	2.77	-0.16
HUNTSVILLE	42	-1	6.17	0.58	LONDON-CORBIN	37	-1	2.94	-1.37	DAYTON	31	0	3.19	0.11
MOBILE	51	-1	8.98	4.32	LOUISVILLE	38	0	6.69	3.00	MANSFIELD	29	-1	2.47	-0.79
MONTGOMERY	47	-2	5.20	0.23	PADUCAH	38	1	7.13	2.75	TOLEDO	29	0	1.69	-0.95
AK ANCHORAGE	24	7	0.82	-0.23	LA BATON ROUGE	52	0	7.16	1.90	YOUNGSTOWN	29	-1	2.92	-0.04
BARROW	-2	9	0.05	-0.07	LAKE CHARLES	54	1	9.68	5.08	OK OKLAHOMA CITY	41	1	1.38	-0.51
COLD BAY	31	0	5.98	1.65	NEW ORLEANS	54	-1	4.84	-0.23	TULSA	43	3	2.78	0.35
FAIRBANKS	5	11	0.16	-0.58	SHREVEPORT	48	0	8.38	3.83	OR ASTORIA	46	3	12.89	2.49
JUNEAU	32	3	5.92	0.51	ME BANGOR	24	0	3.28	-0.05	BURNS	30	5	2.12	0.82
KING SALMON	21	4	0.57	-0.82	CARIBOU	17	1	2.50	-0.69	EUGENE	44	4	12.27	3.98
KODIAK	31	0	6.17	-1.47	PORTLAND	27	-1	3.03	-1.21	MEDFORD	42	4	7.34	4.44
NOME	17	9	0.98	-0.03	MD BALTIMORE	34	-3	4.98	1.63	PENDLETON	39	5	2.11	0.63
AZ FLAGSTAFF	28	-2	0.70	-1.13	MA BOSTON	33	-2	4.28	0.55	PORTLAND	43	3	8.03	2.32
PHOENIX	55	1	0.18	-0.74	Worcester	28	-1	4.25	0.45	SALEM	43	3	11.39	4.93
TUCSON	51	-1	0.74	-0.29	MI ALPENA	26	2	0.54	-1.29	PA ALLENTOWN	29	-3	3.91	0.52
AR FORT SMITH	43	2	5.25	1.86	DETROIT	29	-1	1.17	-1.34	ERIE	30	-3	2.41	-1.32
CA BAKERSFIELD	51	4	1.41	0.65	FLINT	28	1	1.10	-1.08	MIDDLETOWN	31	-3	4.62	1.38
EUREKA	49	1	18.26	11.91	GRAND RAPIDS	28	0	0.86	-1.84	PHILADELPHIA	35	-2	3.91	0.60
FRESNO	50	5	2.29	0.95	HOUGHTON LAKE	25	1	0.43	-1.32	PITTSBURGH	31	-2	2.58	-0.28
LOS ANGELES	56	-2	1.85	0.06	LANSING	27	0	0.83	-1.34	WILKES-BARRE	29	-2	3.52	0.97
REDDING	46	1	14.70	10.03	MUSKEGON	31	2	0.85	-1.79	WILLIAMSPORT	28	-3	3.28	0.34
SACRAMENTO	50	4	6.11	3.66	TRAVERSE CITY	28	2	0.42	-2.24	PR SAN JUAN	78	0	4.85	0.28
SAN DIEGO	57	-1	2.00	0.69	MN DULUTH	20	6	0.19	-0.75	RI PROVIDENCE	33	-1	4.95	0.81
SAN FRANCISCO	53	4	10.84	7.95	INT'L FALLS	17	9	0.26	-0.44	SC CHARLESTON	48	-3	5.22	1.98
STOCKTON	48	3	4.96	3.14	MINNEAPOLIS	26	7	0.24	-0.76	COLUMBIA	44	-3	4.27	0.89
CO ALAMOSA	19	2	0.24	-0.09	ROCHESTER	24	7	0.49	-0.53	FLORENCE	44	-3	2.29	-1.18
CO SPRINGS	32	3	0.08	-0.34	ST. CLOUD	23	9	0.11	-0.58	GREENVILLE	42	-2	6.47	2.61
DENVER	34	5	0.05	-0.26	MS JACKSON	47	-1	6.30	0.96	MYRTLE BEACH	46	-3	0.18	-3.27
GRAND JUNCTION	32	4	0.17	-0.35	MERIDIAN	47	-2	8.24	2.93	SD ABERDEEN	23	7	0.29	-0.09
PUEBLO	32	2	0.30	-0.09	TUPELO	44	1	7.14	1.02	HURON	27	8	0.28	-0.11
CT BRIDGEPORT	34	-1	4.21	0.74	MO COLUMBIA	35	3	2.09	-0.38	RAPID CITY	32	7	0.05	-0.35
HARTFORD	30	-1	3.34	-0.26	JOPLIN	39	2	2.11	-0.85	SIoux FALLS	27	9	0.15	-0.37
DC WASHINGTON	37	-3	4.45	1.40	KANSAS CITY	37	6	0.03	-1.61	TN BRISTOL	38	1	3.94	0.55
DE WILMINGTON	34	-2	4.20	0.80	SPRINGFIELD	36	0	1.96	-1.21	CHATTANOOGA	42	0	6.77	1.96
FL DAYTONA BEACH	58	-3	9.74	7.03	ST JOSEPH	35	4	0.00	-1.44	JACKSON	41	-1	7.52	2.16
FT LAUDERDALE	69	0	5.19	2.54	ST LOUIS	37	3	2.03	-0.83	KNOXVILLE	41	0	5.22	0.73
FT MYERS	64	-2	3.02	1.44	MT BILLINGS	31	5	0.26	-0.41	MEMPHIS	44	1	8.64	2.96
JACKSONVILLE	53	-2	5.45	2.81	BUTTE	23	5	0.16	-0.37	NASHVILLE	40	0	4.52	-0.02
KEY WEST	71	-1	4.08	1.94	GLASGOW	24	8	0.02	-0.35	TX ABILENE	46	1	1.34	0.07
MELBOURNE	60	-3	10.59	8.28	GREAT FALLS	31	7	0.30	-0.37	AMARILLO	36	-1	0.58	-0.03
MIAMI	71	1	3.41	1.23	HELENA	28	7	0.05	-0.41	AUSTIN	51	-1	4.96	2.52
ORLANDO	60	-3	11.65	9.34	KALISPELL	30	7	1.26	-0.39	BEAUMONT	54	0	8.21	2.96
PENSACOLA	52	-2	4.49	0.52	MILES CITY	28	7	0.03	-0.42	BROWNSVILLE	63	2	1.36	0.25
ST PETERSBURG	60	-4	16.69	14.09	MISSOULA	29	6	0.65	-0.50	COLLEGE STATION	53	1	7.58	4.35
TALLAHASSEE	50	-4	5.19	1.09	NE GRAND ISLAND	33	7	0.01	-0.65	CORPUS CHRISTI	58	0	3.19	1.44
TAMPA	60	-3	14.10	11.80	HASTINGS	34	7	0.01	-0.72	DALLAS/FT WORTH	48	1	4.15	1.58
WEST PALM BEACH	67	-1	2.63	-0.51	LINCOLN	32	6	0.01	-0.85	DEL RIO	52	0	0.31	-0.44
GA ATHENS	44	-1	5.44	1.73	MCCOOK	33	4	0.00	-0.53	EL PASO	44	-1	1.66	0.89
ATLANTA	44	-1	5.24	1.42	NORFOLK	32	8	0.04	-0.61	GALVESTON	57	-1	3.24	-0.29
AUGUSTA	44	-3	4.26	1.12	NORTH PLATTE	30	4	0.00	-0.40	HOUSTON	55	1	5.70	2.01
COLUMBUS	47	-2	4.53	0.13	OMAHA/EPPLEY	32	6	0.00	-0.92	LUBBOCK	42	2	1.57	0.90
MACON	46	-2	5.44	1.51	SCOTTSBLUFF	32	6	0.00	-0.56	MIDLAND	44	-1	1.05	0.40
SAVANNAH	49	-2	3.88	1.07	VALENTINE	30	6	0.04	-0.29	SAN ANGELO	47	1	1.07	0.13
HI HILO	73	1	10.45	-0.05	NV ELKO	32	6	0.47	-0.46	SAN ANTONIO	54	2	2.54	0.58
HONOLULU	75	0	0.04	-2.81	ELY	27	1	0.15	-0.35	VICTORIA	56	1	1.42	-1.05
KAHULUI	73	0	0.57	-2.51	LAS VEGAS	48	1	0.07	-0.33	WACO	50	2	6.94	4.18
LIHUE	74	1	1.13	-3.65	RENO	38	4	1.23	0.35	WICHITA FALLS	44	1	1.83	0.15
ID BOISE	37	6	2.10	0.72	WINNEMUCCA	35	5	0.40	-0.41	UT SALT LAKE CITY	36	6	0.52	-0.71
LEWISTON	38	4	0.69	-0.36	NH CONCORD	25	-1	2.29	-0.67	VT BURLINGTON	25	0	1.23	-0.99
POCATELLO	31	6	0.39	-0.71	NJ ATLANTIC CITY	35	-2	3.67	0.52	VA LYNCHBURG	36	-2	4.02	0.79
IL CHICAGO/O'HARE	30	3	1.34	-1.09	NEWARK	35	-1	3.71	0.14	NORFOLK	42	-2	4.17	1.14
MOLINE	31	5	0.69	-1.51	NM ALBUQUERQUE	37	1	0.36	-0.13	RICHMOND	38	-2	3.56	0.44
PEORIA	32	4	2.11	-0.29	NY ALBANY	27	-1	2.13	-0.54	ROANOKE	38	-1	2.85	-0.01
ROCKFORD	29	5	0.68	-1.38	BINGHAMTON	25	-2	2.62	-0.41	WASH/DULLES	33	-3	2.50	-0.57
SPRINGFIELD	33	3	1.46	-1.08	BUFFALO	28	-2	4.89	1.09	WA OLYMPIA	41	3	7.53	-0.36
IN EVANSVILLE	36	0	5.64	2.10	ROCHESTER	28	-1	3.74	1.01	QUILLAYUTE	43	2	14.94	0.44
FORT WAYNE	29	0	1.29	-1.48	SYRACUSE	29	0	2.87	-0.25	SEATTLE-TACOMA	43	2	6.07	0.45
INDIANAPOLIS	33	1	2.48	-0.55	NC ASHEVILLE	38	-1	6.42	3.03	SPOKANE	34	7	3.40	1.15
SOUTH BEND	29	0	1.41	-1.68	CHARLOTTE	41	-3	4.14	0.96	YAKIMA	36	7	3.61	2.23
IA BURLINGTON	33	5	0.79	-1.31	GREENSBORO	40	-1	5.06	2.00	WV BECKLEY	32	-3	3.06	-0.03
CEDAR RAPIDS	29	5	0.27	-1.21	HATTERAS	48	-2	2.34	-2.22	CHARLESTON	37	-1	2.96	-0.36
DES MOINES	31	6	0.01	-1.32	RALEIGH	40	-3	5.08	2.04	ELKINS	31	-2	2.48	-0.96
DUBUQUE	28	6	0.71	-0.98	WILMINGTON	46	-3	2.38	-1.40	HUNTINGTON	37	0	3.14	-0.23
SIoux CITY	29	7	0.11	-0.55	ND BISMARCK	23	8	0.22	-0.22	WI EAU CLAIRE	24	6	0.55	-0.48
WATERLOO	29	7	0.12	-0.99	DICKINSON	25	7	0.35	0.01	GREEN BAY	26	5	0.67	-0.74
KS CONCORDIA	36	6	0.11	-0.75	FARGO	20	7	0.39	-0.18	LA CROSSE	28	6	0.30	-0.93
DODGE CITY	35	2	0.11	-0.66	GRAND FORKS	19	8	0.23	-0.32	MADISON	27	4	0.61	-1.05
GOODLAND	35	5	0.00	-0.40	JAMESTOWN	19	5	0.24	-0.20	MILWAUKEE	30	4	0.57	-1.65
HILL CITY	34	3	0.00	-0.47	MINOT	22	7	0.40	-0.23	WAUSAU	24	5	0.24	-1.09
TOPEKA	36	5	0.05	-1.37	WILLISTON	20	7	0.57	0.00	WY CASPER	29	5	0.19	-0.43
WICHITA	36	2	1.18	-0.17	OH AKRON-CANTON	29	-2	3.02	0.04	CHEYENNE	32	5	0.01	-0.45
KY JACKSON	37	-1	4.33	0.06	CINCINNATI	34	-1	4.72	1.44	LANDER	22	1	0.21	-0.40
					CLEVELAND	31	0	3.70	0.56	SHERIDAN	29	7	0.19	-0.49

Based on 1971-2000 normals.

*** Not Available.

National Agricultural Summary

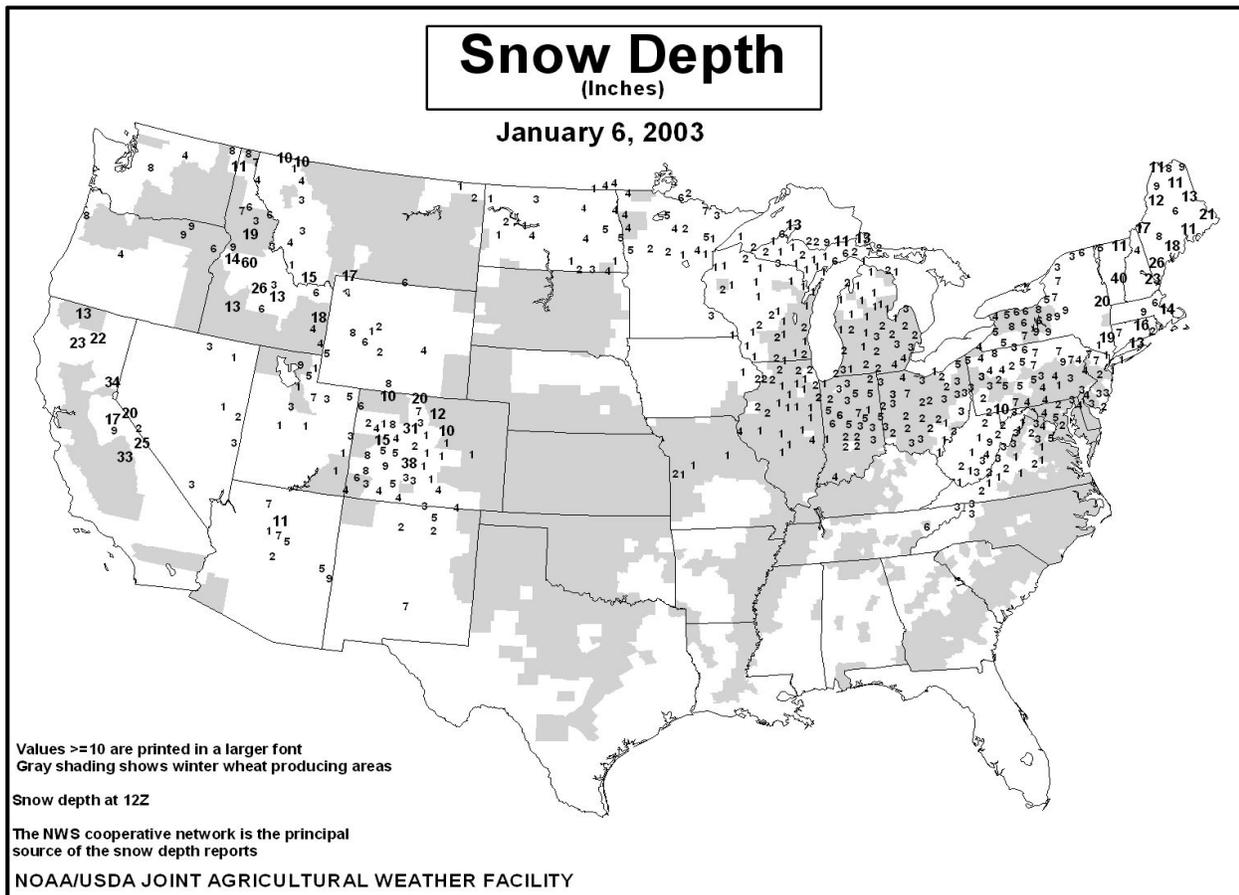
December 30, 2002 - January 5, 2003

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Stormy weather persisted in the Pacific Northwest, delivering heavy rain to low-lying coastal areas and significant snowfall to coastal mountain ranges. Significant amounts of precipitation also spilled over to inland mountains and valleys, improving topsoil moisture supplies, reducing long-term moisture deficits, and boosting irrigation reserves. However, the storms produced virtually no precipitation for the Great Plains, leaving winter wheat fields on the High Plains exposed to potentially damaging temperature extremes. However, temperatures remained far above normal over the Pacific Northwest and northern Great Plains, further reducing the threat of heaving and winter kill, despite the lack of a protective snow cover. In California,

precipitation interrupted field and orchard work in the central and northern valleys, but the delays were mostly brief. The precipitation and above-normal temperatures contributed to vigorous crop growth. A strong storm that formed in the southern Great Plains produced heavy rain, damaging winds, and flooding as it moved across the interior Mississippi Delta and up the Ohio River Valley. Parts of the Gulf Coast and scattered areas of the interior Southeast and Atlantic Coastal Plain also received heavy rainfall and associated severe weather. The storms further hampered sugarcane harvest in Louisiana and saturated Florida's already wet citrus groves. Abnormally warm, dry weather prevailed in the Corn Belt and adjacent areas of the Great Plains and Great Lakes.



December State Agricultural Summaries

These summaries, issued weekly through the summer growing season, provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Weather and Crop Bulletins published each Monday by NASS State Statistical Offices in cooperation with the National Weather Service. The crop weather reports are also available on the Internet through the NASS Home Page on the World Wide Web at <http://www.usda.gov/nass/> or from JAWF at <http://www.usda.gov/oce/waob/jawf>.

ALABAMA: Farmers across the state are seeding fall forages, fescue pastures, and small grains. Most cotton farmers believed they would have a bumper crop earlier in the season but, late season rains began to fall and seemed as though they were not going to stop. State received so much rain that moisture caused irreparable damage to some crops still in fields. Cotton dropped from its bolls, seeds began to sprout. Routine farm activities during the period included general care of livestock, poultry, catfish.

ARIZONA: Temperatures for most of the State were above average for the week. Cotton harvest was virtually complete, with 99% harvested statewide. Alfalfa conditions were mostly good. Sheep continued to graze on alfalfa fields for winter pasture. With increase precipitation for the month, 8 of 17 reporting stations ended the year above 50% of normal precipitation levels.

ARKANSAS: Temperatures were near normal and rainfall was above normal in December. The average temperature for December 44.5°, 1.1° above normal. Temperatures averaged above normal on 15 days, below normal on 15 days, at normal on 1 day. There were no daily record temperatures broken or tied during December. Measurable precipitation fell on 12 days, and it was the 8th wettest December on record since 1879. With very little harvesting going on in December, the weather had little effect on field crops. However, it did eliminate the idea of any further wheat planting. However, the moisture was considered helpful to wheat that had already been planted. The ice storm across the northern counties was more difficult on livestock, especially dairy cattle. However, livestock in general were reported in good conditions.

CALIFORNIA: Wet conditions limited field work but contributed to vigorous crop growth. Sweet potato fields underwent pre-plant fumigation. New grain fields were planted by aircraft. Sugar beets planted and irrigated. Planting of winter forage, oats, wheat continued, including some fields seeded by aircraft. Cotton harvesting was completed as the month drew to a close. Most harvested fields had been shredded and disced in compliance with pink bollworm plow-down requirements. Dry bean harvesting wound down early in the month. Alfalfa hay was cut as green chop for dairy feed. Fruit crops heavy winds, rain during the latter half of December delayed field work, particularly in Northern areas. Vineyard, orchard removal and ground preparation for future plantings continued. Trees, vines were piled for burning or chipping. Stone fruit orchards were treated for dormant season pest control. Some table grape harvesting took place in early December. Strawberries were harvested in the San Joaquin Valley for sale at local roadside stands. Olives were harvested for oil production. Early December rains and cool nights helped to enhance the fruit size, exterior color, and maturity of the Navel orange crop. Harvesting of Navel oranges, grapefruit, mandarins, pummelos, and lemons continued through most of December, but was hindered late in the month by rain and wet conditions. Nut crops strong winds, rain in mid and late December resulted in the loss of some trees in northern areas. Walnut orchards were treated for weed control. Almond stockpile hulling was completed. Pistachios from the fall harvest were sorted and packed. Pecans were harvested in the San Joaquin Valley. Vegetable crops fields were prepared for the spring crop. Late in the month, wet soil conditions hindered field operations in most districts. Broccoli planting continued. Garlic, onion planting wound down by mid-December. Cold weather slowed the development of some garlic, onion plantings. In early December warm weather accelerated lettuce harvesting in the desert region.

Freezer broccoli and cauliflower were harvested in Merced County. Lettuce and cantaloupe harvesting was completed in the San Joaquin Valley. Year-round carrot harvesting continued in Kern County. The following vegetables were also harvested: cabbage, cilantro, eggplant, garlic, mustard greens, kale, green onions, parsley, radicchio, radishes, spinach. Livestock pasture conditions were mixed at the beginning of December due to a lack of moisture. Later in the month, heavy rainfall greatly improved the condition of winter pastures. Supplemental feeding of cattle continued in areas that were very dry before the rains. In other areas, supplemental feeding declined substantially. Stocker cattle were moved onto foothill pastures in the central and northern parts of the State. Fall calving was virtually complete by the end of December. Fall lambing was winding down. Sheep grazed on foothill pastures and a few alfalfa fields in central areas. Lambs grazed on alfalfa pastures in the southern desert area. Beekeepers performed cold season hive maintenance. Some hives were moved to protected locations for overwintering. Late in the month, out-of-state beehives were trucked into central areas in preparation for the February and March almond pollination.

COLORADO: December temperatures were slightly above normal while precipitation stayed well below normal. Snowfall was limited primarily to the mountain areas with very limited moisture in the lower elevations, across the Eastern Plains. Mountain snow pack is at 86% of normal, which is slightly higher than last year, but reservoirs are at record low levels. Water officials are holding meetings concerning water allocations for spring and summer, 2003. Winter wheat continues dormant in mostly fair to good condition, but vulnerable to blowout and freezing temperatures without snow cover. Major activities continue to center around feed and care of livestock, preparation for the upcoming lambing and calving activities.

DELAWARE: Field activity was limited by rainy weather in December. Consequently, wet field, prevented the completion of harvest in some soybean fields. Also, some small grain fields were not planted due to the wet conditions. Hay supplies are adequate to somewhat limited at this time. However, it may be necessary to purchase feed by the end of winter since pasture conditions are poor. Winter activities include equipment maintenance and attending educational programs.

FLORIDA: Cool temperatures prevailed over most localities during December. Freezes arrived in many localities, except for the southern Peninsula, beginning with some Panhandle and northern Peninsula areas during the first week. Most temperatures averaged from one to seven degrees below normal in the major cities. Cool temperatures aided the development of strawberries and placed most citrus trees in a quasi-dormant condition. In early December, permanent pasture was in seasonal decline in the northern and central areas due to the cooler weather. Planting of small grains for winter forage was active but behind schedule due to wet weather during November and the increased cost of seed. In the southwest the pasture condition was poor to good. Statewide, the condition of cattle was mostly good. Storms crossing over the Panhandle and Peninsula nearly every week of December brought abundant moisture to many Panhandle and northern and central Peninsula localities. Some pastures in southern areas were in poor condition due to standing water from the heavier rains. Some southern Peninsula areas, especially those along the southeastern coast, remained dry. A few citrus caretakers irrigated groves during early December before the rains came. After the heavy showers began

some caretakers deep plowed grove middles to drain water away from tree roots. The rainfall delayed cotton and soybean harvesting, interrupted vegetable planting and picking. The rainfall in the Panhandle left most of the oldest cotton in poor condition with growers picking most to satisfy insurance requirements. Stronger storms lowered the quality of some vegetables growing in the central and southern Peninsula. Heavy rains leached fertilizer from some small grain acreage in the Panhandle and northern Peninsula which slowed growth and development of the crops. Clearer conditions over the southern Peninsula allowed sugarcane planting and harvesting to proceed at a normal pace although some activity was slowed slightly by mid month showers. Citrus harvesting remained active throughout the month with juice plants and fresh fruit packing houses extremely busy at the end of the month. Grove caretakers in colder pockets fueled and placed heaters in groves during early December. Other citrus field activities included mowing, chopping and discing of cover crops, pushing out and burning of dead trees, hedging and topping of live trees, and applying sprays and making resets as needed. At month's end, pastures were in poor to good condition, with most in good condition. In the Panhandle and northern and central areas, freezing temperatures and frost limited grass growth during the month but growth of most cool season forages was normal. Hay feeding remained active throughout the month. Cottonseed for cattle feed was limited due to the poor cotton harvest. Winter forage planting continued between the storms. Stock ponds filled from the heavy rains and some pastures had standing water. Statewide, cattle were in poor to fair condition with most in good condition at the end of the month.

GEORGIA: Constant December rains slowed most farming activities for the State. According to David Stooksbury, State Climatologists, the long-term drought that has impacted State since 1998 is all but over. State ended the year with more than 90% of normal yearly rainfall. Some areas experienced damage due to high winds and extreme cold weather. Wet soil conditions delayed small grain, wheat planting and cotton harvesting. Onion planting was behind schedule due to weather. Ryegrass, small grains, wheat were damaged from cold weather in some areas. Rains had replenished ponds, streams, added to soil moisture levels. Cotton harvesting approached competition. Rye, wheat, oat planting progressed nicely. Mild temperatures toward the end of the month improved grazing conditions. In other activities, growers continued winter grazing, routine care of livestock, poultry continued.

HAWAII: Lack of trade winds produced dry, sunny weather throughout the State. Light rainfall was still limited to windward and mountain areas. East area banana harvest remained active. Papaya orchards were in fair to good condition, but cool, dry conditions have hindered fruit development. Vegetables remained in generally fair to good condition with heavy irrigation.

IDAHO: Topsoil 12% very short, 29% short, 50% adequate, 9% surplus. Winter Wheat 6% poor, 30% fair, 62% good, 2% excellent. Hay, roughage supply 3% short, 69% adequate, 28% surplus. Surface water irrigators extremely anxious in eastern areas after a dry December. Mild temperatures, moisture in North areas helped winter wheat emerge.

ILLINOIS: Mild temperatures earlier last month allowed farmers to finish anhydrous applications, fall tillage across most of the State. Along with December equipment maintenance, repairs many farmers made time to study the new farm programs. Late December snow cover has left many pastures and feedlots a muddy mess. Average topsoil moisture levels across the state are four percent very short, 28% short, 61% adequate, 7% surplus. Temperatures have not been cold enough to put a great deal of stress on cattle or winter wheat. Winter wheat is reportedly short in some areas but well germinated and no problems with winter kill were reported last month. Other farm

activities included conservation work on waterways, preparing beef cattle for sales and spreading manure on pastures.

INDIANA: Temperatures were about normal during most of December with the statewide averaging 0.6° above normal. Statewide precipitation averaged 0.16 in. below normal with most of the rain, snow coming toward the end of the month. Drier conditions existed in the northern regions, conditions were wetter in the southern areas. Field activities were halted recently by showers, snow, wet soil conditions. Some fieldwork was accomplished early in the month, mostly chopping corn stalks, spreading fertilizer, tillage of soils. Farmers are working on taxes and getting records together for the new farm program. Winter wheat is in mostly good condition, dry conditions slowed growth early in the northern areas. Pastures were in mostly good condition during the month, are now snow covered in most areas. Livestock remain in mostly good condition. Feedlots are wet, muddy. Good quality hay is in short supply, most areas. Hay prices remain high. Major activities: Hauling grain to market, cleaning up and repairing equipment, attending FSA offices, purchasing supplies, soil testing, hauling manure, stripping tobacco, spreading lime and taking care of livestock.

IOWA: Mild, dry were two recurring themes for the weather during the month of December. Lack of precipitation has reduced soil moisture availability to 58% of the State being short to very short on soil moisture. At the end of December, the average depth of snow cover across State was visibly zero inches, compared to 5.00 in. at the same time last year. Movement of grain for the State was 25% none, 46% light, 27% moderate, and 2% heavy. Hog, pig losses in December were below last year's State averages at 32% below average, 65% average, 3% above average. Cattle, calf losses were also below last year's State averages at 42% below average, 57% average, 1% above average.

KANSAS: No weather data available.

KENTUCKY: Temperatures averaged 37° across the State which was near normal. Cooler temperatures the first two weeks of December were offset by very mild weather during the latter half of the month especially during the third week when temperatures surged into the low to mid 60's. Baring the very mild week, December 2002 felt more like colder winter's of the past with morning low temperatures falling below freezing 15 to 20 times and into the teens several times. The high temperatures failed to warm above 32° on 3 to 5 days statewide. It was also a wet month with field operations stalled most of the month. December's above normal rainfall continued the wet spell that started in September. December precipitation resulted in the 15th Wettest September thru December in the past 108 years. December 2002 was the 27th wettest and 51st coolest December in the past century. In addition, unlike past Decembers several snow and freezing precipitation events occurred. Snowfall totals were generally 4 to 6 in. for the Northern half of the State and 1.00 to 3.00 in. for the Southern half with some locally heavier snowfall totals of up to 8.00 in. West. Precipitation (liq. equ.) for the period totaled 5.02 in. statewide which was 0.74 in. above normal. By station, rainfall totals ranged from a low of 3.62 in. at Cumberland Gap to a high of 7.62 in. at Louisville. Wet cool weather limited fieldwork and caused livestock stress due to muddy conditions and fluctuating temperatures. Hay supplies remain adequate in all areas but shortages are expected by winter's end. Winter wheat condition generally good to fair. Tobacco producers had favorable humidity to strip their crop in preparation for the reopening of auctions after the holidays. Burley tobacco auctions recessed for the Christmas holidays on December 19 and contract centers did likewise following sales on Friday, December 20. Both are scheduled to resume on Monday, January 6, 2003. KY Gross Burley sales volume through 12/20 was 166.5 million lbs. for an average price of \$198.42 per cwt. Gross Belt-wide auction and contract sales for the season through 12/19 were 217.7 million

pounds and averaged \$197.91 per cwt. Resales amounted to 2.51 million pounds for the season. The Burley Cooperatives received 31.7% of gross belt auction sales for the season to date. This compares with 6.8% after 19 sales days last year.

LOUISIANA: Sugarcane producers continued harvesting as weather and field conditions permitted. Louisiana has received over 5.00 in. of rain in the last 4 weeks, which has caused field conditions to remain extremely muddy. Many producers are now racing to get the remainder of their crop out of the fields before a hard freeze hits the state. Citrus producers were spraying to control diseases. Strawberries were being harvested. Livestock producers were fertilizing winter pastures, feeding hay. Crawfish producers were putting out traps. Early reports have indicated that this will be a very good year for crawfish producers. Other activities included repairing, cleaning equipment.

MARYLAND: Snow, rainy conditions in December limited field activity for the month. Wet conditions reduced pasturing ability in some areas, causing shortages in hay supply. Livestock appear to be in good condition. Snow also prevented the harvest completion of some soybean, corn fields. Small grains that were planted on time are in mostly fair to good condition. Late planted small grains, however, are not fairing as well. Winter activities include repairing equipment, livestock feeding, spreading manure and lime, record keeping.

MICHIGAN: Dairy farmers have benefitted from the mild weather conditions for most of December. Farm activities included hauling manure, chisel plowing, chopping corn stalks, storing and repairing equipment, and completing the harvesting of corn. All livestock were doing well and in good health. Feed supplies were mostly adequate, though there were a few reports of hay shortages. Snowfall has been minimal for most of the month.

MINNESOTA: Most of State ended December with less than an inch of snow cover. Depths over 4.00 in. were confined to northern halves of the Northwest, North Central, Northeast Districts. The lack of precipitation in November and December, plus the freezing of muddy ground, generally allowed the harvest to be completed even in areas which had experienced the most severe harvest delays during October. Scattered fields of corn remain to be harvested, mainly in the East Central District. Temperatures were above average in November and December, so widespread damage to alfalfa stands is not certain yet, but is likely if the open winter continues with normal low temperatures. Soil-blowing is a concern also if the state does not get more snow. Livestock are wintering well, with above normal temperatures reducing stress and allowing good feed conversion. Grazing in stubble fields has been possible throughout the period. Forage supplies are adequate in most areas, but since a lot of locally-produced hay was rained on, there is a shortage of good quality hay. Farmers are busy applying for loans and planning farm program participation.

MISSISSIPPI: Soil moisture 14% adequate, 86% surplus. Wheat emerged 98%. Hay supply 2% short, 74% adequate, 24% surplus. Feed Grain 2% short, 94% adequate, 4% surplus. Saturated ground conditions continue to be a concern. Winter grazing has suffered, producers are still trying to clean up their fields from harvesting activities.

MISSOURI: Precipitation during December averaged about 1.93 in., slightly above normal, but amounts in the northern third of the State, the west-central district were sharply below normal while the southern districts were sharply above normal. Most of the snow cover of late December is gone but the mostly moderate temperatures have permitted the wheat crop to stay in generally fair to good condition. Stock pond water levels improved in the southern

counties but more run-off is needed in many areas. Farmers remain busy with care of livestock, planning for the new crop season.

MONTANA: During the month of December weather conditions in Montana have been warm, extremely dry with a few exceptions in localized areas. Soil moisture 37% very short, 44% short, 19% adequate compared to last year which was rated 38% very short, 53% short, 9% adequate. Subsoil moisture 40% very short, 46% short, 14% adequate contrasted to last year during which subsoil moisture 49% very short, 45% short, 6% adequate. Winter wheat 1% very poor, 25% poor, 55% fair, 18% good, 1% excellent. This is lower than last month's rating of 2% very poor, 2% poor, 35% fair, 58% good, 3% excellent. This year's winter wheat crop is still rated better than last year's crop which was rated 8% very poor, 41% poor, 49% fair, 2% good. Wind damage to the winter wheat crop is currently minimal and is rated at the following levels: 34% none, 28% light, 35% moderate, 3% heavy. Freeze and drought damage for the crop is rated 26% none, 52% light, 19% moderate, and 3% heavy. Snow cover for winter wheat 97% very poor, 2% poor, 1% fair, 0% good, and 0% excellent due to the lack of moisture throughout the State. Livestock grazing 89% open, 8% difficult, 3% closed, compared to last year when 72% open, 16% difficult, 11% closed. Currently, 84% of the cattle are received supplemental feed and 86% of sheep.

NEBRASKA: Temperatures averaged above normals for the month with highest readings 10 to 15° above normals during the second week. Precipitation for the month was minimal. At the end of December, wheat 11% very poor, 11% poor, 40% fair, 35% good, 3% excellent. Hay, forage supplies were mostly adequate to short. Some fieldwork with fertilizer applications occurred during the month. Cattle were grazing stalk fields.

NEVADA: December was warmer and drier than normal for most parts of the State. North-central, northeastern regions received less than half of normal precipitation. Several storms did, however, pass over the northwest bringing high winds and much needed precipitation. Reno recorded 2.20 in. of rainfall compared with a norm of 1.32 in. Storms also contributed heavy snowfall to the Sierra Nevada. Snow pack in the Sierra now exceeds 150% of normal. Cattle, calf sales continued, as did the marketing of cull cattle continued. Hay marketing, shipping was active with high demand. Shipment of onions from storage continued. Potato processing remained active. Fall seeded grains, garlic were in generally good condition. Winter livestock feeding was underway, but open weather over most of the State reduced needs. Main farm, ranch activities: Equipment maintenance, livestock care, fence repairs, crop and livestock marketing, industry meetings.

NEW ENGLAND: Farmers active digging out from multiple snow storms which hit during December. Accumulations of over one foot of snow at some locations helping to replenish tight water supplies. Farmers sold crops from storage, tobacco was taken down and bundled for buyer inspection, tended livestock and attended meetings.

NEW JERSEY: Drought emergency remains in effect, although precipitation was at or near normal for the month of December. Reservoir levels throughout the State have returned to normal, although ground water levels in the south coastal, southwestern areas of the State remain below normal. Snowfall on December 5th ranged from 5.00 in. to 9.00 in. across State. December 25th snowfall was 8.00 to 12.00 in. northwest area, 4.00 to 8.00 in. northern central portion of the State, less than 4.00 in. central, southwest areas. Average temperatures were below normal for the month, with a low of 13° and a high of 58° for the month of December.

NEW MEXICO: December started out with two winter storms that brought precipitation to most of the State. Areas in the south received as much as 1.60 in. of moisture. Statewide average 2° below normal, with anomalies as great as -8° in the northeast. The second week of December was dry, with no major storms affecting the state. Temperatures varied, with extremes ranging from 2° at Red River on the 9th to 72° at Roswell on the 15th. The third week was more eventful, bringing rain, snow to the far north, southwest. Cool temperatures dominated the northern and central counties, but the eastern plains experienced warmer than normal readings, despite some chilly nights. A winter storm brought holiday snow during the last week of December. Southern New Mexico received the greatest precipitation, with water equivalents of 0.74 in. at Las Cruces, 0.70 in. at Ruidoso. Temperatures for the week averaged between 5 and 6° below normal. Overall, most areas of the State reported above normal accumulations of precipitation for the month of December. Despite the wet weather, the chile, cotton, sorghum harvests were completed, pecan harvest is near completion. Winter wheat crop is emerging and seed beds for other crops are being prepared. Supplemental feeding of livestock continues.

NEW YORK: Near record amounts of snow fell on December 25 across State. Several other snow events occurred during the early and mid-month periods. Many areas were already approaching normal snowfall amounts for the entire season. Outside activities limited due to coldness and excessive snow. Major activities: Tending livestock, snow removal, finishing up grain corn harvest, grading and packing apples and onions, attending grower meetings, machinery repair and maintenance, making plans for 2003 growing season.

NORTH CAROLINA: Many farmers were glad to see 2002 come to an end as growing conditions have not been favorable for most late season crops. The adequate moisture in the early fall was too late to offset the impact of the summer drought on crop yields. Excessive moisture during the last two months delayed harvest, further deteriorated crop quality and yields. Soggy field conditions continued to impede cover crop plantings in the State. Excessive moisture has caused some small grains to yellow or drown in low spots. Wheat 27% poor or very poor. Statewide, soil moisture 2% very short, 1% short, 34% adequate, 63% surplus. Activities for the week included: Harvesting cotton and soybeans and planting cover crops. Other activities included stripping burley tobacco, equipment repair, record preparations, and feeding livestock.

NORTH DAKOTA: Below normal snowfall during the month of December left many fields bare and susceptible to wind erosion. Average snow cover for the State was 3.2 in. as of January 5th. Snow cover protection for alfalfa 48% poor, 47% adequate, 5% excellent. Hay and forage 4% very short, 21% short, 71% adequate, 4% surplus. Cattle, cow conditions 3% poor, 25% fair, 63% good, 9% excellent while sheep conditions were rated 2% very poor, 3% poor, 25% fair, 58% good, 12% excellent. Roads for traveling 93% open, 6% difficult, 1% closed. Road conditions 6% drifted, 18% icy, 1% muddy, 75% dry. Some producers are reporting insect problems in stored grain due to mild temperatures.

OHIO: December 2002 was 0.9 degrees colder than normal in State, with temperatures averaging 30.8 across the State. Precipitation 2.83 in., 0.09 in. below normal. Livestock remains in good condition. Some producers reported plenty of hay on hand, while others began purchasing hay from the mid-west. Dairy producers reported dwindling silage stocks due to hay shortages.

OKLAHOMA: Days suitable for fieldwork 2. Subsoil 1% very short, 13% short, 77% adequate, 9% surplus. Topsoil 4% short, 78% adequate, 18% surplus. Winter wheat 1% very poor, 3% poor, 24% fair, 50% good, 22% excellent; rye 1% very poor, 2% poor, 24% fair, 41% good, 32% excellent; oats 0% very poor, 2% poor, 41% fair,

52% good, 15% excellent; wheat grazed 48% this year, 33% last year, 35% avg.; rye grazed 60% this year, 27% last year, 16% avg. Oats Grazed 35% this year, 27% last year, 25% avg; livestock 0% very poor, 3% poor, 32% fair, 61% good, 4% excellent; pasture & range 4% very poor, 13% poor, 38% fair, 43% good, 2% excellent. Livestock were rated in mostly good condition. Most producers are feeding hay but not to extent as they have been in past years. Prospect for hay supplies in most of the State are adequate for the remainder of the season. In the South Central and Southeast districts cattle are showing signs of stress related to the weather, short pasture.

OREGON: Activities: Winter care of livestock ongoing across State. Supplemental feed continued. Shipments of wheat, barley, oats, corn, potatoes, dry onions continued. Nurseries are digging bare root plant materials, preparing for shipping season. Some cranberry producers continued harvest through mid December. Christmas tree harvest went very smooth, due in part, to lack of precipitation. Low precipitation levels continue to be a concern statewide. According to Natural Resources Conservation Service (NRCS), as of December 9, all river basin sites less than 50% of average snow water equivalent. Values ranged from 4% for Malheur to 44% for Owyhee. Strong storms hit towards end of month, bringing high winds & rain along coast, as well as snow in Cascades.

PENNSYLVANIA: During the first half of December State experienced below average temperatures, while temperatures observed in the second half were more mild. Overall, the average high temperature was approximately 36.7°, 3° below normal. The average low temperature was 22.7°, again about 3° below normal. Even with two snowfalls and rain, the western part of the state's precipitation levels were below normal. The middle part of the state's precipitation levels were at or slightly above normal. Eastern Pennsylvania's precipitation levels were 50 to 75% above normal. Major activities included fall plowing, soybean and corn harvesting, caring for livestock, hauling and spreading manure, cutting firewood, maintaining machinery and winterizing barns.

SOUTH CAROLINA: During the first week of December, an ice storm covered over half of the state spreading from the mountains down to North Charleston. Upstate and the northern midlands took the brunt of the storm. Cold, wintery temperatures were prevalent throughout the rest of the week. Winter temperatures continued during the second week along with some scattered showers throughout the State. Clear skies and cool temperatures began the third week with a cold front passing through midweek. Scattered showers were prevalent toward the end of the week. Sunny, windy conditions marked the start of winter. Mild conditions began the last week with high temperatures in 60 degree range. Heavy showers on Tuesday swelled several rivers to near or above flood stage level. Christmas Day consisted of clear skies and heavy winds. Cool temperatures hung around the rest of the week with Sunday bringing warmer temperatures. Some farmers were busy unwinding in the deer stands and duck blinds after a disappointing crop year. Farmers were also busy tending to livestock, winter grazing pastures. Some early plowing and land preparation is occurring in dryer areas around the State. Small grains are in good condition with some planting delayed due to showers.

SOUTH DAKOTA: Feed supplies 25% very short, 31% short, 42% adequate, 2% surplus. Stock water supplies 29% very short, 30% short, 40% adequate, 1% surplus. Winter rye 1% very poor, 9% poor, 44% fair, 33% good, 13% excellent. Winter wheat 8% very poor, 14% poor, 42% fair, 31% good, 5% excellent. Cattle 1% very poor, 3% poor, 25% fair, 56% good, 15% excellent. Sheep 2% poor, 26% fair, 65% good, 7% excellent. Road conditions--county 100% open. Road conditions--township 100% open. Average snow depth 1 inch. Alfalfa snow cover 90% poor, 9% adequate, 1% excellent. Winter wheat snow cover 98% poor, 2% adequate. Winter rye snow

cover 84% poor, 15% adequate, 1% excellent. Calf deaths 39% below average, 60% average, 1% above average. Sheep and lamb deaths 32% below average, 68% average. December has brought above normal temperatures and trace amounts of snowfall. The small amount of snow has led to the low ratings on snow cover for crops, concern for potential damage. Major farm activities included caring for livestock, repairing machinery, selling grain, planning for the coming year.

TENNESSEE: Weather was relatively typical for the Volunteer State during the entire month of December. Temperatures, precipitation remained near normal levels and farming activities were mostly on schedule. Main field activities for the month were feeding hay, winter wheat planting, and tending livestock. There were no widespread reports of flooding nor winter storm damage to farms.

TEXAS: Conditions across the State were constantly changing, ranged from extremely cold to extremely warm. Moisture levels were adequate for most of the month as weekly storms brought precipitation to many parts of the State. In early month, snowfall and freezing rain covered many parts of the Plains. Other areas of the State received adequate amounts of rainfall from passing Pacific storms. Warm and open weather was also common and was enjoyed for several days during the month. Harvest of remaining cotton, peanuts, sorghum, pecans was still ongoing and progressed as weather conditions allowed. Most cotton had already been harvested but many modules were still visible in fields and gin lots by month's end. Virtually all wheat and oats had been planted by mid-month. Small grains were progressing well as moisture had been adequate in most areas. Range, pastures were mostly in fair to good condition but most had become dormant with colder temperatures. Forages, hay supplies were adequate and livestock were mostly in good conditions. Some sickness in livestock was attributed to the wide swings in temperatures. Supplemental feeding was active in many locations.

UTAH: Water problems are still the major concern for farmers and ranchers throughout the State. Farmers are worried about getting enough snow pack in the mountains over the winter months. The summer drought severely damaged winter rangeland. Fall precipitation helped replenish topsoil and subsoil moisture levels. In northern area, winter wheat is reported to be in excellent condition due to adequate fall moisture. November and December temperatures have been above normal throughout the state.

VIRGINIA: Pasture 4% very poor, 18% poor, 42% fair, 31% good, 5% excellent. Livestock 3% poor, 21% fair, 68% good, 8% excellent. Small Grain and Winter Grazing Crops 1% very poor, 11% poor, 30% fair, 45% good, 13% excellent. State experienced large amounts of rainfall, much cooler temperatures during the month of December. Many counties reported extreme moisture in the form of rain, snow, making field conditions very muddy. During the first week of December, most of State was hit by a snow, ice storm, prompting the start of winter feeding on several farms. Some of the crops were left standing in the fields as the precipitation hindered, even stopped harvesting activities. Several farmers are still waiting to harvest the rest of their crops if they can get in their fields. Some producers have abandoned their corn, cotton, and soybeans. Small grain acreage is down due to the inability of farmers to plant in the wet fields. However, the small grains that were seeded before December appear to be doing well. Colder weather has slowed their development. Pasture and winter grazing crop conditions are not bad, but the saturated soils coupled with snow cover has increased the amount of stored feed fed to livestock. However, livestock are still in good shape. Hay supplies are getting tight early this season

as many farmers are trying to locate hay for the rest of the winter. Most counties are reporting full ponds, running springs due to the rainfall keeping hopes high for adequate irrigation in the spring. Other farm activities included feeding livestock, looking for hay, repairing equipment, applying fertilizer to small grains, applying lime, sampling soils, attending winter meetings, getting and renewing certifications, preparing for the farm bill sign up, working on records, deer hunting. Temperatures for the month of December were cooler than normal. A snow, ice storm came through Virginia during the first week in December dumping anywhere from 3.00 to 6.00 in. of snow. Rainfall was plentiful during the month making up for the drought conditions the State was facing.

WASHINGTON: State experienced a return to near normal conditions during the second half of December with a significant accumulation of rain and snowfall. Most major rivers and streams were at record low levels which prevented any major flooding. A windstorm on December 27 resulted in some damage to farm structures. Winter wheat condition improved during the month with precipitation, but more is needed to advance beyond fair. Some wheat in the southeastern part of the State emerged due to the warm temperatures, leaving it vulnerable to winter damage. Rangeland has yet to significantly recover, however the CRP grazing option during November and December was beneficial. Livestock are doing well in what is starting out as a mild winter. Christmas tree growers reported sales to be about the same as last year in both number of trees sold and price received. Swelling buds on native Indian peach and red and blue elderberries validates that another growing season is on the way.

WEST VIRGINIA: Topsoil moisture 1% short, 54% adequate, 45% surplus; Winter wheat was reported in fair to good condition. Cattle, calves 2% poor, 22% fair, 72% good, 4% excellent. Sheep, Lambs, 1% poor, 12% fair, 85% good, 2% excellent. December was characterized by seasonal temperatures and wet conditions. Farm activities included harvesting of corn and soybeans, livestock marketing, and winter preparations. Measurable snowfall has occurred across the State. Hay, roughage supplies were 6% very short, 14 % short, 78% adequate and 2% surplus. Feed grain supplies were reported as 1% very short, 6% short, and 93% adequate. Some concerns in some areas as feeding was begun slightly early. With the continued moisture, mud has become a concern voiced in several areas.

WISCONSIN: The month of December in State was warmer than normal by 4 to 6°. Temperatures ranged from low single digits to mid-50's as El Nino kept temperatures above normals. Precipitation for December was below normal statewide. State experienced very light snowfalls for the month with most areas of the State having no snow to trace amounts for the holidays.

WYOMING: Winter wheat 17% poor, 48% fair, 35% good; wind damage 40% none, 45% light, 15% moderate; freeze damage 90% none, 10% light. Topsoil 26% very short, 59% short, 15% adequate. Subsoil 37% very short, 55% short, 8% adequate. Avg snow cover depth 1.63 in. Cattle 3% poor, 40% fair, 57% good. Sheep 3% poor, 41% fair, 56% good. Hay, roughage supplies 18% very short, 43% short, 39% adequate. Stockwater 24% very short, 43% short, 33% adequate. Monthly temperatures 5° below normal in Wheatland to 10° above normal in Gillette. Most areas received some precipitation for the month, totals were below normal. Heaviest moisture fell in Afton at 1.18 in., Jackson 0.50 in., Saratoga 0.46 in., Rock Springs 0.32 in. Yearly totals fell further behind normal ranging from 2.00 to almost 7.00 in. behind across stations.

International Weather and Crop Summary

December 29, 2002 - January 4, 2003

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

HIGHLIGHTS

EUROPE: Stormy weather brought heavy rain and local flooding to portions of northern Portugal, England, and central and southern Germany, while bitterly cold weather in Poland stressed winter crops.

FSU-WESTERN: A warming trend improved overwintering conditions for winter wheat in Ukraine and southern Russia, while bitter cold persisted across northern Russia.

MIDDLE EAST: Across most of Turkey and the Middle East, widespread rain boosted moisture supplies for winter grains.

NORTHWESTERN AFRICA: Rain was needed for germinating to vegetative winter grains in western Algeria.

SOUTH AFRICA: Warm, dry weather spurred growth of vegetative summer crops.

EASTERN ASIA: Cold, dry weather covered primary winter wheat areas, but the threat from winterkill was low.

SOUTHEAST ASIA: Showers boosted moisture supplies for rice throughout the region.

AUSTRALIA: Beneficial rain in the southeast brought limited relief from long-term drought.

SOUTH AMERICA: Heavy showers covered much of northern Argentina, although portions of southern Brazil received a brief respite from excessive rainfall.

December 2002

MONTHLY DATA FROM SELECTED FOREIGN CITIES CLIMATE PREDICTION CENTER-NCEP-NWS-NOAA

*** DATA NOT AVAILABLE

COUNTRY	CITY	TEMPERATURE (C)					PRECIPITATION (MM)		
		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DPART F/NRM	TOTAL	DPART F/NRM
NORWAY	OSLO	-7	-10	0	-25	-9	-4.3	32	-31
SWEDEN	GOTEBORG	-1	-4	4	-21	-3	-3.6	4	-79
FINLAN	HELSINKI	-6	-10	1	-25	-8	-5.0	10	-47
UKINGD	ABERDEEN	7	4	11	-4	6	1.6	110	34
	MANCHESTER	7	4	12	-3	6	0.7	108	28
	CARDIFF	9	6	13	0	7	0.4	116	-4
	LONDON	9	6	14	0	7	1.3	111	56
IRELAN	DUBLIN	8	5	13	-2	6	0.3	85	9
ICELAN	REYKJAVIK	6	3	11	-2	5	4.6	76	-6
DENMAR	COPENHAGEN	1	-1	8	-10	0	-1.9	22	-24
LUXEMB	LUXEMBOURG	5	2	10	-9	3	1.5	83	-3
SWITZE	ZURICH	5	3	13	-4	4	2.4	81	1
	GENEVA	7	4	11	0	6	3.0	82	-5
FRANCE	PARIS/ORLY	9	5	15	-2	7	1.9	74	16
	STRASBOURG	6	3	14	-6	4	1.7	37	-10
	BOURGES	10	6	16	-1	8	3.1	87	22
	BORDEAUX	13	8	20	3	10	3.3	93	-13
	TOULOUSE	12	6	16	1	9	2.4	73	23
	MARSEILLE	13	6	17	2	10	1.8	34	-17
SPAIN	VALLADOLID	11	5	16	0	8	2.9	77	24
	MADRID	12	5	17	0	8	1.6	65	18
	SEVILLE	17	11	21	5	14	1.5	69	-31
PORTUG	LISBON	16	11	19	6	14	1.8	131	31
GERMAN	HAMBURG	1	-2	9	-11	-1	-3.1	22	-56
	BERLIN	0	-3	7	-12	-2	-3.9	16	-39
	DUSSELDORF	6	2	13	-11	4	-0.5	76	0
	LEIPZIG	1	-3	8	-12	-1	-2.8	57	16
	DRESDEN	0	-3	8	-11	-2	-3.3	53	10
	STUTTGART	5	0	13	-9	3	1.1	42	-13
	NURNBERG	4	0	12	-11	2	0.4	53	1
	AUGSBURG	4	0	12	-9	2	0.9	73	20
AUSTRI	VIENNA	1	-2	14	-11	-1	-1.5	48	8
	INNSBRUCK	5	0	9	-7	3	2.7	44	-11
CZECHR	PRAGUE	0	-4	11	-13	-2	-2.0	46	20
POLAND	WARSAW	-4	-9	3	-20	-6	-6.1	3	-33
	LODZ	-3	-7	4	-20	-5	-4.7	10	-35
	KATOWICE	-2	-8	6	-20	-5	-4.6	26	-22
HUNGAR	BUDAPEST	1	-3	11	-14	-1	-1.8	28	-9
YUGOSL	BELGRADE	4	0	14	-9	2	-1.1	44	-8
ROMANI	BUCHAREST	-1	-8	8	-26	-5	-4.9	70	32
BULGAR	SOFIA	2	-2	10	-12	0	-0.7	33	-8
ITALY	MILAN	7	3	15	-2	5	2.1	30	-24
	VERONA	8	4	17	-3	6	2.9	63	11
	VENICE	9	4	15	-4	6	2.2	53	5
	GENOA	12	8	19	2	10	0.1	85	1
	ROME	14	8	17	3	11	1.5	126	43
	NAPLES	14	7	16	-1	11	0.5	123	15
GREECE	THESSALONIKA	9	5	19	-4	7	0.5	129	81
	LARISSA	10	5	18	-5	7	0.8	134	87
	ATHENS	13	9	19	3	11	-0.6	169	111
TURKEY	ISTANBUL	9	5	18	-2	7	-1.2	74	-18
	ANKARA	2	-7	14	-19	-2	-3.4	19	-27
CYPRUS	LARNACA	17	10	23	3	14	0.2	127	55
ESTONI	TALLINN	-6	-9	3	-18	-7	-5.2	15	-46
RUSSIA	ST.PETERSBURG	-8	-12	2	-26	-10	-5.9	32	-16
LITHUA	KAUNAS	-6	-10	2	-22	-8	-6.4	21	-27
BELARU	MINSK	-6	-11	12	-19	-9	-5.3	14	-37
RUSSIA	KAZAN	-17	-23	1	-37	-20	-11.4	21	-17
	MOSCOW	-11	-15	-1	-25	-13	-7.3	37	-12
	YEKATERINBURG	-16	-21	-4	-32	-19	-8.1	17	-8
	OMSK	-18	-24	-7	-36	-21	-7.4	22	-8
KAZAKH	KUSTANAY	-17	-23	-6	-37	-20	-7.7	21	-4
RUSSIA	BARNAUL	-15	-22	-2	-33	-18	-5.8	31	2
	KHABAROVSK	-17	-24	-5	-35	-21	-3.5	4	-13
	VLADIVOSTOK	-8	-12	7	-20	-10	-1.0	5	-9
UKRAIN	KIEV	-6	-11	4	-17	-8	-6.5	10	-31
	LVOV	-4	-10	4	-20	-7	-5.4	34	-15
	KIROVOGRAD	-6	-12	2	-19	-9	-6.6	8	-25
	ODESSA	-2	-7	7	-14	-4	-5.4	3	-35
	YALTA	6	0	15	-7	3	-3.0	55	-20

Based on Preliminary Reports

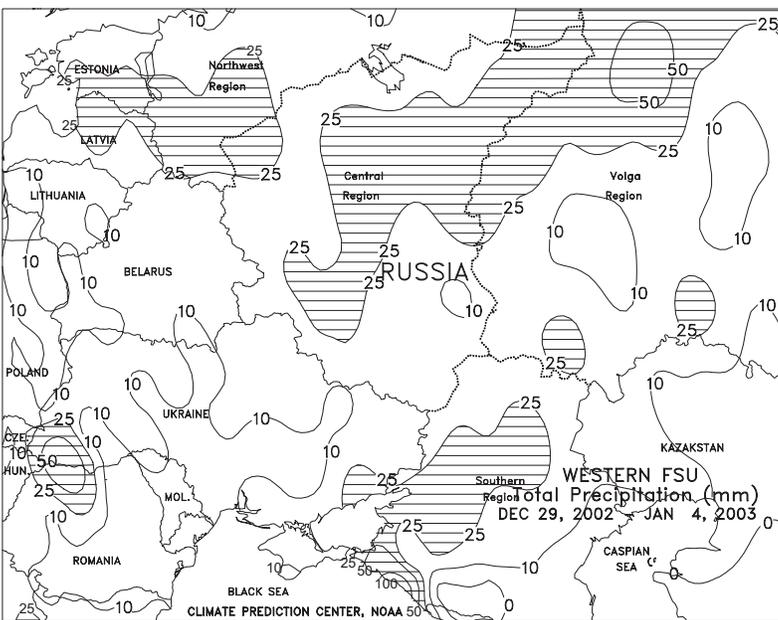
December 2002

COUNTRY	CITY	TEMPERATURE (C)					PRECIPITATION (MM)		COUNTRY	CITY	TEMPERATURE (C)					PRECIPITATION (MM)			
		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG DPART F/NRM	TOTAL	DPART F/NRM			AVG MAX	AVG MIN	HI MAX	LO MIN	AVG DPART F/NRM	TOTAL	DPART F/NRM		
RUSSIA	SARATOV	-12	-18	2	-28	-15	-7.9	33	-1	TANZAN	DAR ES SALAAM	32	24	34	22	28	0.5	115	12
UKRAIN	KHARKOV	-7	-12	4	-20	-9	-6.1	7	-31	GABON	LIBREVILLE	30	24	31	22	27	0.3	201	-134
RUSSIA	VOLGOGRAD	-9	-16	4	-25	-13	-7.8	41	3	TOGO	LOME	***	***	39	22	***	***	***	***
	ASTRAKHAN	-6	-13	4	-23	-9	-7.3	7	-7	BURKIN	OUAGADOUGOU	***	***	38	15	***	***	***	***
	KRASNODAR	-1	-8	14	-20	-5	-6.0	16	-53	MOZAMB	MAPUTO	29	23	33	20	26	0.4	45	-48
	ORENBURG	-16	-23	-4	-37	-19	-10.3	16	-18	ZAMBIA	LUSAKA	26	19	33	16	23	-0.2	175	25
KAZAKH	TSELINOGRAD	-14	-21	-4	-36	-18	-5.7	29	8	ZIMBAB	KADOMA	29	18	34	15	23	-0.6	122	-54
	KARAGANDA	-12	-20	-2	-34	-16	-5.0	38	15	S AFRI	PRETORIA	28	18	34	15	23	0.9	97	-15
GEORGI	TBILISI	3	-4	9	-11	-1	-4.3	48	19		JOHANNESBURG	25	14	30	12	19	0.3	175	59
UZBEKI	TASHKENT	4	-4	17	-14	0	-3.8	138	86		BETHAL	25	14	32	10	19	0.2	134	-2
TURKME	ASHKHABAD	3	-4	19	-12	0	-5.1	35	13		DURBAN	27	21	36	15	24	0.9	121	6
SYRIA	DAMASCUS	12	4	20	-3	8	0.9	38	-6		CAPE TOWN	27	16	36	12	21	1.6	15	-5
ISRAEL	JERUSALEM	14	8	22	3	11	1.3	183	57	CANADA	TORONTO	2	-6	9	-17	-2	0.7	33	-27
PAKIST	KARACHI	28	16	32	9	22	1.8	4	0		MONTREAL	-1	-8	6	-21	-5	1.7	35	-43
INDIA	AMRITSAR	21	6	25	3	14	0.7	10	-3		WINNIPEG	-4	-13	6	-24	-9	5.8	15	-2
	NEW DELHI	24	9	28	5	16	0.6	33	25		REGINA	-3	-13	8	-32	-8	5.3	21	5
	AHMEDABAD	31	13	35	8	22	0.8	1	-2		SASKATOON	-4	-14	5	-31	-9	5.4	6	-10
	INDORE	29	13	32	8	21	2.0	1	-4		LETHBRIDGE	4	-9	13	-20	-2	3.7	24	6
	CALCUTTA	27	14	30	10	21	0.2	0	-12		CALGARY	4	-9	12	-20	-3	4.3	11	-1
	VERAVAL	32	18	35	15	25	1.2	0	***		EDMONTON	0	-10	7	-19	-5	4.7	5	-14
	BOMBAY	33	19	36	17	26	0.6	0	***		VANCOUVER	8	3	14	-1	5	1.7	141	-33
	POONA	31	12	34	9	21	1.3	0	-7	MEXICO	GUADALAJARA	21	10	27	2	15	-0.2	0	-17
	BEGAMPET	31	14	33	13	23	1.0	0	-5		TLAXCALA	***	6	27	3	***	***	0	-5
	VISHAKHAPATNAM	29	20	30	19	25	0.2	0	-8		ORIZABA	20	13	28	8	16	0.6	35	-9
	MADRAS	30	21	31	18	25	0.1	44	-138	BERMUD	ST GEORGES	22	17	26	14	20	0.1	164	55
	MANGALORE	33	21	35	19	27	-0.3	0	-15	BAHAMA	NASSAU	27	19	32	13	23	1.1	3	-54
HONGKO	HONG KONG INT	21	16	30	6	19	0.4	100	74	CUBA	HAVANA	27	18	30	9	22	0.0	10	-41
N KORE	PYONGYANG	1	-6	11	-16	-3	-0.1	17	0	JAMAIC	KINGSTON	32	25	35	23	28	1.4	21	-15
S KORE	SEOUL	5	-1	16	-9	2	1.3	18	-6	P RICO	SAN JUAN	29	22	31	14	26	0.3	123	7
JAPAN	SAPPORO	0	-5	10	-10	-3	-1.8	82	-23	GUADEL	RAIZET	30	22	32	18	26	0.8	52	-86
	NAGOYA	11	4	18	-2	7	0.4	91	53	MARTIN	LAMENTIN	29	23	30	19	26	1.2	52	-118
	TOKYO	10	4	19	0	7	-1.1	98	58	BARBAD	BRIDGETOWN	30	25	30	21	27	1.1	16	-88
	YOKOHAMA	10	5	19	1	7	-1.2	95	47	TRINID	PORT OF SPAIN	***	***	32	21	***	***	***	***
	KYOTO	11	4	19	0	8	0.0	62	15	COLOMB	BOGOTA	20	9	22	3	15	1.5	49	2
	OSAKA	11	6	18	1	9	0.2	67	29	VENEZU	CARACAS	32	24	34	21	28	2.4	1	-43
THAILA	PHITSANULOK	32	21	34	16	26	1.7	106	100	F GUIA	CAYENNE	30	24	31	22	27	0.9	431	96
	BANGKOK	33	25	35	22	29	3.0	54	49	BRAZIL	FORTALEZA	31	26	32	25	29	0.1	1	-35
MALAYS	KUALA LUMPUR	33	24	34	23	29	2.3	300	54		RECIFE	30	27	32	24	28	-0.5	4	-36
VIETNA	HANOI	22	17	31	8	20	0.4	60	48		CAMPO GRANDE	35	25	37	22	30	4.1	181	-29
CHINA	HARBIN	-10	-19	6	-27	-15	-0.7	3	-3		FRANCA	28	20	31	17	24	1.4	308	62
	HAMI	-6	-16	6	-29	-11	-3.9	15	14		RIO DE JANEIRO	29	24	37	20	26	0.3	169	32
	LANCHOW	2	-8	10	-14	-3	0.6	0	0		LONDRINA	32	21	37	18	26	2.8	105	-142
	BEIJING	1	-6	9	-13	-3	-1.9	8	5		SANTA MARIA	30	19	35	15	24	0.1	233	116
	TIENTSIN	1	-5	7	-12	-2	-1.4	5	1		TORRES	26	20	30	16	23	-1.8	152	60
	LHASA	9	-6	15	-9	2	2.2	0	***	PERU	LIMA	23	18	25	17	21	-0.3	0	0
	KUNMING	16	6	22	2	11	2.3	7	-8	BOLIVI	LA PAZ	16	3	19	-1	10	0.2	89	-62
	CHENGCHOW	4	-1	14	-10	1	-0.5	27	17	CHILE	SANTIAGO	27	11	33	8	19	-0.4	3	0
	YECHANG	9	4	15	-3	7	-1.0	36	18	ARGENT	IGUAZU	31	21	35	17	26	0.5	257	72
	HANKOW	8	4	16	-4	6	-0.9	89	64		FORMOSA	32	23	39	17	27	0.8	264	106
	CHUNGKING	12	8	19	3	10	0.4	32	9		CERES	29	19	37	14	24	-0.3	285	135
	CHIHKIANG	9	5	19	-4	7	-1.1	81	51		CORDOBA	27	17	36	10	22	-0.7	197	33
	WU HU	8	3	16	-4	6	0.3	118	83		RIO CUARTO	26	17	35	13	22	-0.7	155	0
	SHANGHAI	10	6	17	-2	8	0.2	116	77		ROSARIO	28	18	34	14	23	-0.6	205	96
	NANCHANG	10	6	18	-2	8	-0.7	151	109		BUENOS AIRES	27	16	34	10	22	-0.6	125	39
	TAIPEI	21	17	29	12	19	1.3	83	13		SANTA ROSA	28	15	36	8	22	-0.8	127	26
	CANTON	20	13	28	3	16	0.8	48	17		TRES ARROYOS	27	14	33	7	21	1.0	40	-52
	NANNING	18	12	30	3	15	-0.6	61	37	MARSHA	MAJURO	29	27	30	24	28	0.5	447	165
CANARY	LAS PALMAS	23	18	27	14	20	1.6	104	75	NEW CA	NOUMEA	29	22	33	19	26	0.7	71	-8
MOROCC	CASABLANCA	20	12	29	7	16	2.3	24	-54	FIJI	NAUSORI	29	24	31	19	26	0.8	201	-59
	MARRAKECH	20	10	28	5	15	2.1	12	-9	SAMOA	PAGO PAGO	32	27	34	25	29	1.6	201	-139
ALGERI	ALGER	19	9	24	4	14	2.4	102	12	TAHITI	PAPEETE	31	25	32	24	28	1.1	375	38
	BATNA	14	3	19	-1	9	1.9	32	2	PNEWGU	PORT MORESBY	32	26	34	23	29	1.3	22	-100
TUNISI	TUNIS	18	11	24	7	14	1.4	63	0	NZEALA	AUCKLAND	21	15	25	12	18	***	87	***
NIGER	NIAMEY	***	***	38	16	***	***	***	***		WELLINGTON	19	13	22	8	16	***	85	***
MALI	TIMBUKTU	***	***	38	12	***	***	***	***	AUSTRA	DARWIN	34	26	35	22	30	0.8	115	-161
	BAMAKO	***	***	37	13	***	***	***	***		BRISBANE	28	20	35	15	24	-0.2	149	32
MAURIT	NOUAKCHOTT	***	***	37	12	***	***	***	***		PERTH	31	17	43	5	24	2.1	2	-5
SENEGA	DAKAR	***	***	40	20	***	***	***	***		CEDUNA	28	14	41	5	21	0.2	11	-6
CHAGOS	DIEGO GARCIA	***	***	32	24	***	***	***	***		ADELAIDE	27	15	39	8	21	1.0	24	0
LIBYA	TRIPOLI	19	9	24	4	14	0.6	4	-37		MELBOURNE	24	13	37	6	18	0.5	13	-33
	BENGHAZI	18	12	22	10	15	1.0	48	-24		WAGGA	32	15	41	6	23	1.7	22	-28
EGYPT	CAIRO	21	13	27	8	17	1.2	13	7		CANBERRA	28	12	37	3	20	1.1	25	-22
	ASWAN	24	12	32	6	18	0.5	0	0	INDONE</									



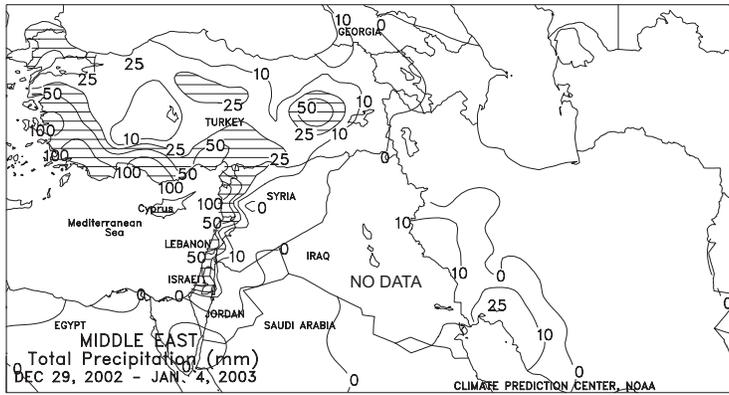
EUROPE

Widespread, unseasonably wet weather (25-75 mm) covered England, the Low Countries, northern and western France, Germany, the Czech Republic, and the northwestern Iberian peninsula, greatly boosting moisture supplies for vegetative winter grains and oilseeds. Excessive rainfall (75-125 mm) locally flooded some fields, especially in portions of northern Portugal, England, and central and southern Germany. In southern Germany, the persistent wet weather since autumn may reduce yield potentials if seasonably drier weather does not return in the months ahead. Across northeastern and southeastern Europe, light to moderate snow and rain (less than 20 mm of water equivalent) maintained moisture supplies for dormant winter crops. Across all of Italy, moderate rain (12-30 mm) increased moisture supplies for winter crops, while scattered light rain (1-19 mm) prevailed across southern Spain. Mild weather prevailed across most of the continent (temperatures averaging 3-7 degrees C above normal), except in Poland and northern Germany (temperatures 1-3 degrees C below normal). On January 1, bitterly cold weather (-22 to -15 degrees C) was reported across Poland. Although a thin snow cover provided some protection, local damage was possible in areas where snow cover was patchy. By week's end, colder weather pushed southward into central and northwestern Europe. Winter crops remained dormant across the northeastern half of the continent and into the lower Danube River Basin. However, mild weather provided later-than-normal growth for winter crops across northern France and the Po River Valley in Italy.



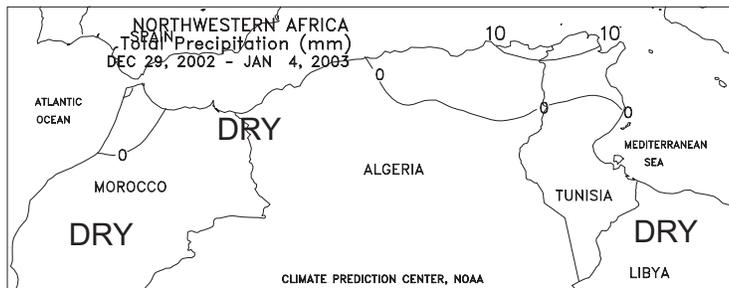
FSU-WESTERN

A warming trend spread eastward across Ukraine and southern Russia, improving overwintering conditions for winter wheat, but melting most protective snow cover. Late-week, rain (5-25 mm) was accompanied by mild weather, with maximum temperatures ranging from 2 to 6 degrees C. Farther north, unseasonable cold persisted from the Baltics and Belarus eastward across northern Russia, as outbreaks of bitterly cold air continued to overspread these areas. The lowest minimum temperatures ranged from -25 to -15 degrees C in Belarus, Lithuania, Latvia, and Estonia, and -40 to -20 degrees C in northern Russia (Northwest, Central, and Volga Regions). Periods of moderate to heavy snow (10-25 mm or more of liquid equivalent) provided a deep protective snow cover in these areas. Weekly temperatures averaged from near to slightly above normal in Ukraine and southern Russia, to as much as 16 degrees C below normal in extreme northern Russia.



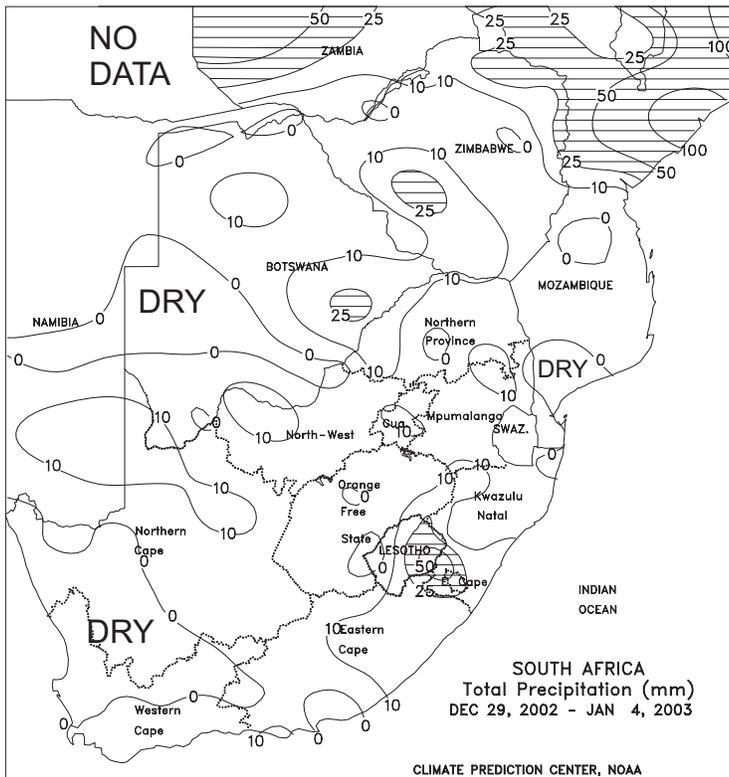
MIDDLE EAST

Across the main winter grain areas of western and central Turkey, widespread rain boosted moisture supplies for vegetative winter grains. The heaviest amounts (50-150 mm) were concentrated in extreme western and southern Turkey, greatly boosting irrigation supplies, but causing local flooding. In the central interior, rainfall ranged from 10 to 30 mm, with isolated amounts greater than 40 mm. Mild weather (2-4 degrees C above normal) prevailed across the western half of Turkey. In the central Anatolian plateau, the warm weather melted protective snow cover, but winter grains remained dormant. Along the Mediterranean coast region of the Middle East, widespread rain (20-100 mm) extended from northern Israel to Syria, boosting irrigation supplies. Rain (5-30 mm) also benefited rainfed winter grains in northern Syria. Dry, seasonably cold weather prevailed across northern Iran, keeping winter grains dormant. Temperatures averaged 1 to 2 degrees C above normal across the Middle East and northern Iran.



NORTHWESTERN AFRICA

Mostly dry, warm weather covered the region, with only light rain reported across coastal eastern Algeria and northern Tunisia. Overall, moisture supplies remained adequate for developing winter grains across the region. The exception was in western Algeria, where persistent dryness since mid-November has reduced soil moisture reserves. Temperatures averaged 1 to 4 degrees C above normal, increasing crop water use for germinating to vegetative winter grains.



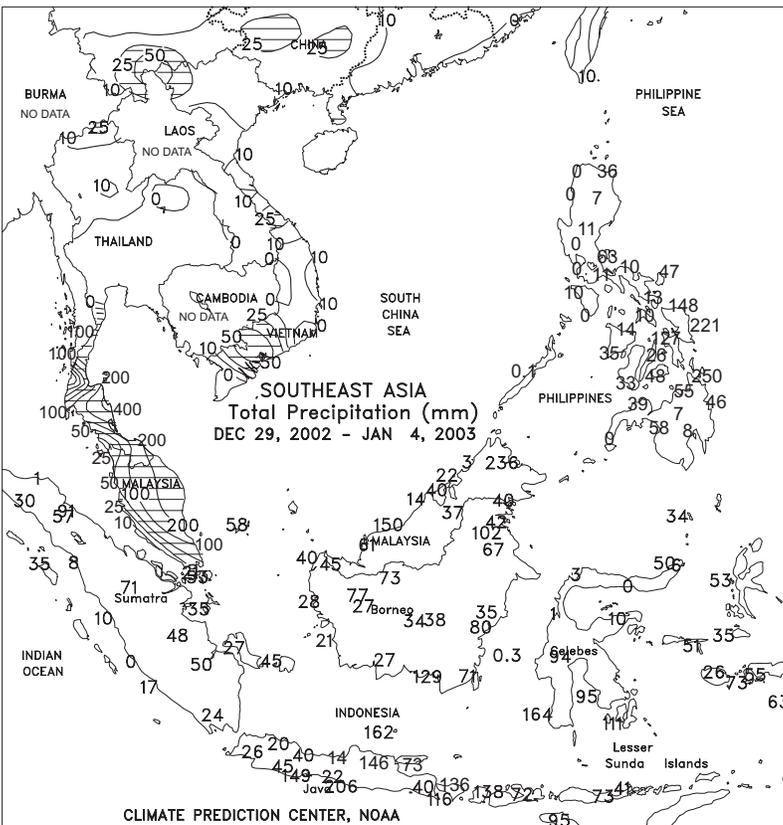
SOUTH AFRICA

Warm, mostly dry weather dominated the region, boosting growth rates of corn and other summer crops. The exceptions were crop areas of KwaZulu-Natal and Eastern Cape, where moderate rainfall (10-25 mm or more) benefited sugarcane and non-commercial summer crops. Highs generally ranged from 30 degrees C in eastern sections of the corn belt (Mpumalanga) to the middle 30s farther west (Free State and North-West). Following weeks of mild, showery weather, conditions were generally favorable for corn and other summer crops, which ranged from the emerging to reproductive stages. However, most crops historically enter moisture and temperature-sensitive phases of development from mid-January to mid-February. A return to seasonable conditions will be critical for maintaining current yield prospects. In Western Cape, hot (highs in the upper 30s and lower 40s degrees C), dry weather maintained high irrigation requirements for fruits and vegetables.



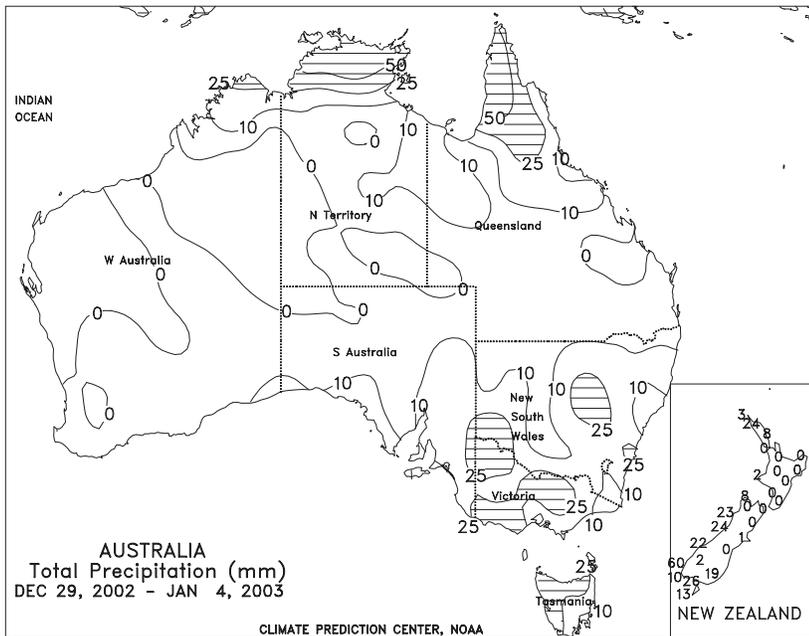
EASTERN ASIA

Mostly dry, colder-than-normal weather (temperatures averaging 3-6 degrees C below normal) continued to dominate primary winter wheat areas in and around the North China Plain. However, snow cover continued to somewhat protect crops from the coldest weather (temperatures of -15 degrees C or lower) from Shandong westward to Shanxi. Farther south, light to moderate showers (10-25 mm or more) lingered over Guangxi, but drier weather aided fieldwork in other major sugarcane areas. Elsewhere, cold (temperatures averaging 1-4 degrees C below normal, with lows from -25 to -15 degrees C), dry weather continued on the Korean Peninsula, but existing snow cover helped to protect winter grains. Cold weather also covered Japan, but moderate to heavy (25-50 mm or more) mixed precipitation increased moisture reserves.



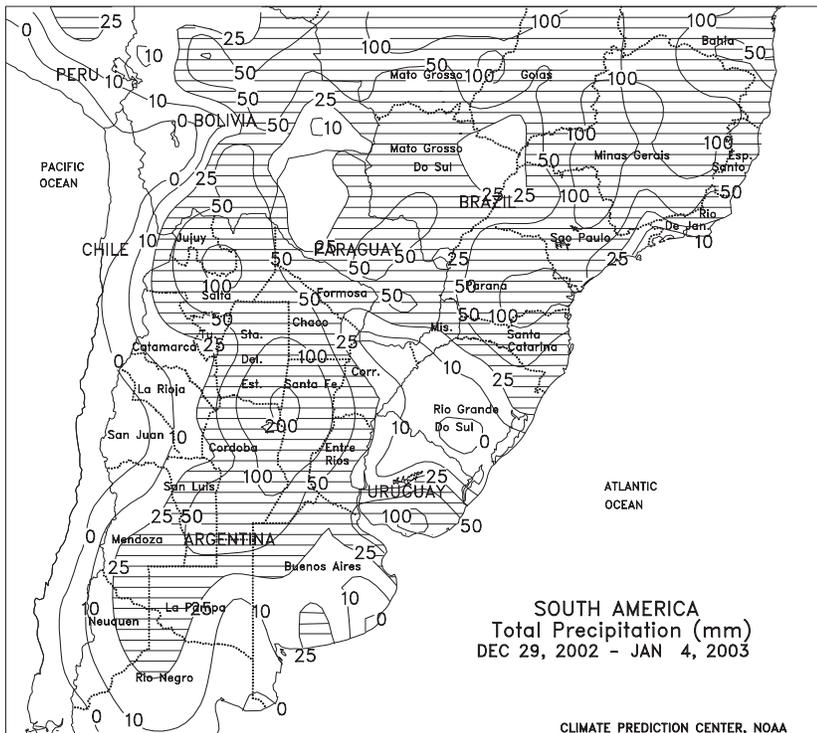
SOUTHEAST ASIA

Showers (25-100 mm) continued to increase moisture levels for vegetative main-season rice in Java, Indonesia. Heavy showers (50-200 mm) caused flooding in the west-central Philippines, while moderate showers (10-40 mm) provided additional moisture to irrigated second-season rice. In Vietnam, showers (10-60 mm) boosted moisture supplies for vegetative winter-spring rice. Heavy showers (50-200 mm) in peninsular Malaysia and Sumatra boosted moisture supplies for oil palm. Seasonably dry weather prevailed in Thailand.



AUSTRALIA

Beneficial rain (10-25 mm, locally reaching 50 mm) swept across the southeast (South Australia, Victoria, and New South Wales), boosting moisture reserves for pastures and grazing. In northern New South Wales, the rainfall benefited sorghum and cotton, while increasing local reservoir levels. However, seasonable warmth (highs from the low to upper 30s degrees C) maintained high evaporative losses, and much more rainfall will be needed to fully overcome the impacts of the current long-term drought. Dry weather persisted in Queensland, maintaining high irrigation requirements. Seasonably hot (highs in the upper 30s degrees C), dry weather returned to Western Australia. In New Zealand, mostly dry weather continued in the main pasture and small grain areas.



SOUTH AMERICA

In Argentina, heavy rain (50-100 mm or more) covered a broad area of the north, locally flooding while maintaining abundant to excessive moisture supplies for most summer crops. The highest amounts (100 or greater) were recorded in the heart of the soybean and summer grain belts (southern Cordoba northward through Santa Fe), likely causing ponding and additional planting delays and possibly necessitating replanting. Drier weather (rainfall of 10-25 mm in most areas) in southern Buenos Aires and southeastern La Pampa likely caused minor disruptions in winter wheat harvesting. According to Argentina's Agricultural Secretariat, winter wheat was 89 percent harvested as of January 4. In addition, corn, soybeans, and sunflowers were 95, 95, and 99 percent planted, respectively, as of January 4. Near- to below-normal temperatures further slowed early crop development. In southern Brazil, mostly dry, warmer-than-normal weather in Rio Grande do Sul aided development of soybeans and other summer crops and allowed a resumption of late winter wheat harvesting. Moderate to heavy showers (25-100 mm or more) continued elsewhere, however, maintaining ample moisture reserves in most major summer crop areas. Temperatures averaged near to above normal throughout Brazil's main agricultural districts, spurring summer crop development, although highs continued to reach the upper 30s degrees C in crop areas of Mato Grosso do Sul.

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