

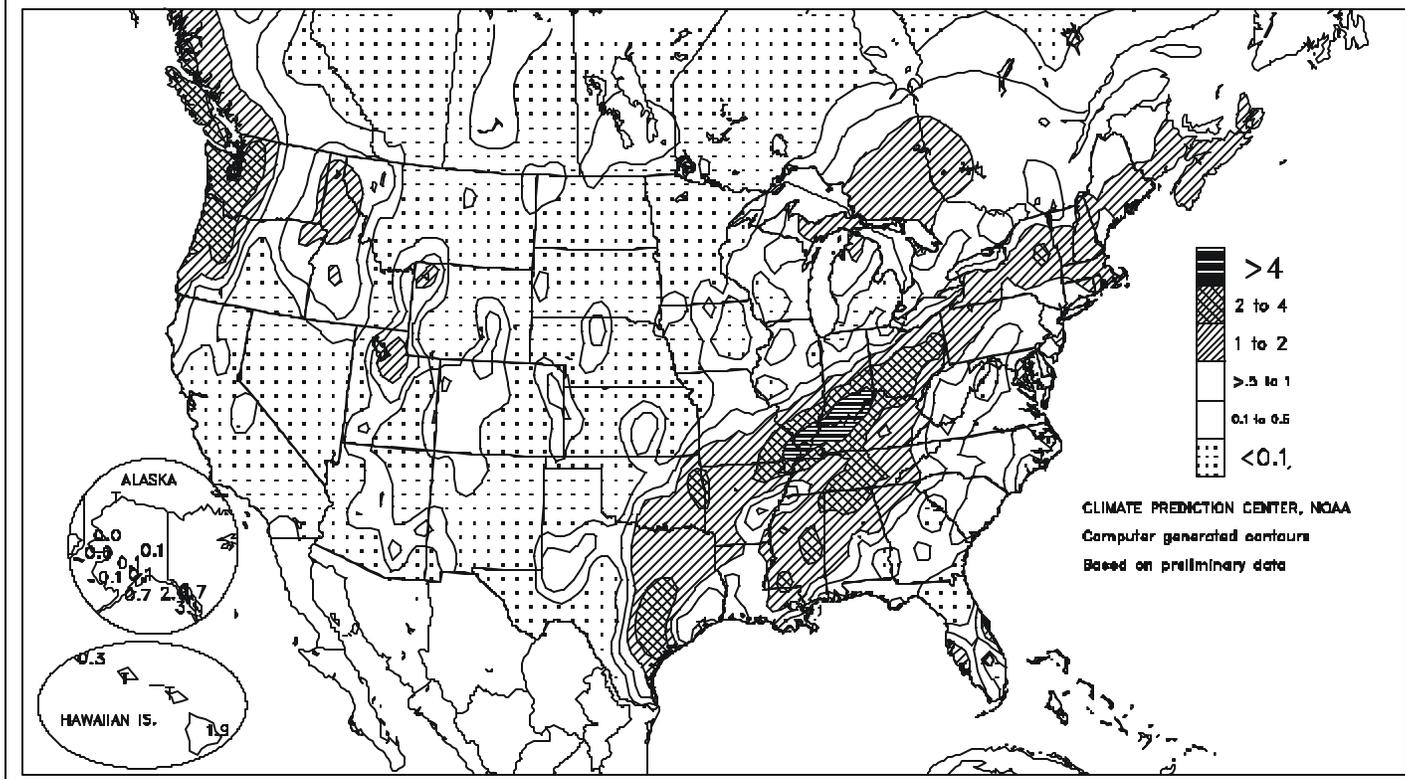
# WEEKLY WEATHER AND CROP BULLETIN

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

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

## Total Precipitation (Inches)

JAN 2 - 8, 2000



## HIGHLIGHTS

January 2 - 8, 2000

**W**idespread precipitation returned to the **South** and **East** for the first time since mid-December, boosting topsoil moisture and easing areas of long-term drought. Precipitation also returned to the **Pacific Northwest**, where 2 weeks of mostly dry weather followed an 8-week wet spell. Heavy rainfall (in excess of 4 inches) soaked parts of the **lower Ohio Valley**, leaving standing water in some fields. In contrast, only light rain and snow fell across the **northern Plains** and **western Corn Belt**, raising additional concerns due to lack of soil moisture. Meanwhile, beneficial snow blanketed much of **Kansas**, dampening topsoils and insulating winter wheat from a

*(Continued on page 2)*

## Contents

Temperature Departure, Extreme Maximum & Minimum Temperature Maps .....	2
Weather Data for the Delta & U.S. Crop Production Highlights .....	3
National Weather Data for Selected Cities .....	4
National Agricultural Summary & Snow Cover Map .....	7
<b>December Weather and Crop Summary .....</b>	<b>8</b>
<b>December Precipitation &amp; Temperature Maps ...</b>	<b>10</b>
<b>December Weather Data for Selected Cities .....</b>	<b>11</b>
International Weather and Crop Summary .....	12
Subscription Information & <b>Dec. 1999 Extreme Minimum Temperature Map .</b>	<b>16</b>

(Continued from front cover)

short-lived cold snap. A general 1- to 3-inch snow cover provided some protection for the **northern Plains'** winter wheat from the brief chill. Despite the cold outbreak, temperatures averaged above normal (departures between +5°F and +10°F) on the **northern Plains** for an 11th consecutive week. On Wednesday, low temperatures ranged between 20 and 30°F across **interior southern Texas**, but remained above freezing in the **lower Rio Grande Valley**. Rain developed across parts of **Texas** toward week's end, providing limited relief from long-term drought, but boosting topsoil moisture and improving prospects for pastures and winter grains. Farther west, mostly dry weather in **California** and the **Southwest** continued to stress dryland crops and increase irrigation requirements.

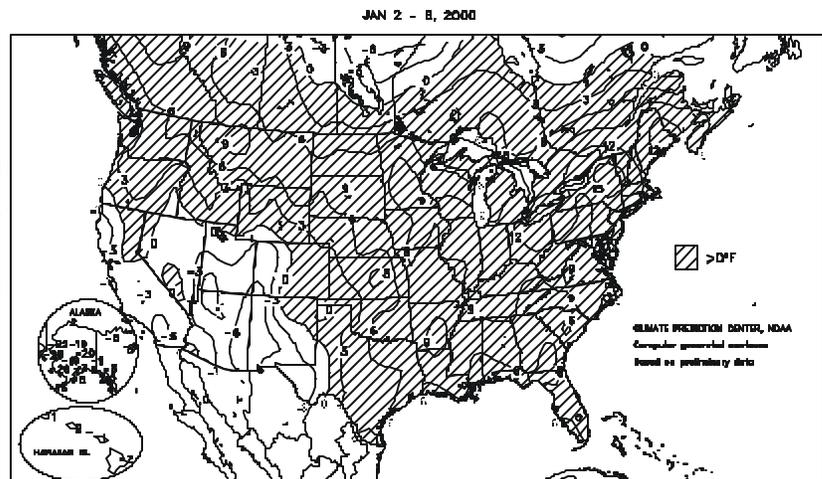
From January 2-4, nearly 100 daily-record highs were set or tied across the **Midwest, South, and East** during a storm system's approach. On Sunday, highs soared to 87°F in **Corpus Christi, TX**, 76°F in **Montgomery, AL**, and 70°F in **Morgantown, WV**. A day later, **Monroe, LA** and **Columbus, GA** noted 78°F, **Salisbury, MD** rose to 70°F, and **Concord, NH** hit 60°F. **Newark, NJ** and **Providence, RI** set January 4 records of 68°F and 61°F, respectively. These 3 days of unseasonable warmth contributed to well-above normal weekly temperatures across the **eastern half of the Nation**, with the greatest departures (+12°F to +17°F) in the **Northeast**. Meanwhile, very heavy rain developed in the **lower Ohio Valley**. On January 3, **Paducah, KY** netted 3.97 inches, a record single-day rainfall for January. Near-record totals were reported in **Louisville, KY** (3.41 inches) and **Evansville, IN** (3.05 inches). Storm-total precipitation reached 6.09 inches in **Paducah**, 4.62 inches in **Louisville**, and 3.74 inches in **Evansville**. Locally severe weather, including nine tornadoes, accompanied the storm's passage on January 2-3, especially from **southern Missouri** and the **lower Ohio Valley** southward to the **central Gulf Coast**. Farther west, a narrow band from **southwestern to central Kansas** received between 6 and 15 inches of snow.

Cold air spread south- and eastward in the storm's wake. On Wednesday in **Texas**, **Austin-Bergstrom** (14°F) and **College Station** (19°F) posted daily-record lows. Elsewhere in **Texas**, **Corpus Christi's** minimum of 30°F represented their lowest reading since December 29, 1997. A day earlier, temperatures had fallen below 0°F as far south as a few locations in **eastern Colorado**, **western Kansas**, and **Nebraska**. Although no daily records were established, lows included -27°F in **Williston, ND** and -14°F in **Valentine, NE**. In **Rapid City, SD**, however, the temperature remained above 0°F during the week (the lowest was 3°F on Tuesday), capping their longest stretch without sub-zero readings. The streak reached 369 days through week's end (the last sub-zero reading was -7°F on January 4, 1999), breaking their record of 362 days set from December 8, 1982 - December 4, 1983. Similarly, January 2-8 temperatures remained above 0°F in **Cheyenne, WY**, following their first year on record that readings stayed above zero throughout the year. The record snowless 1999-2000 winter continued along **coastal New England**, where **Boston, MA** (**Logan Airport**) has yet to observe a snowflake (former record December 22, 1998), and **Portland, ME** and **Concord, NH** have reported only a trace of snow (old record December 24, 1912 for both).

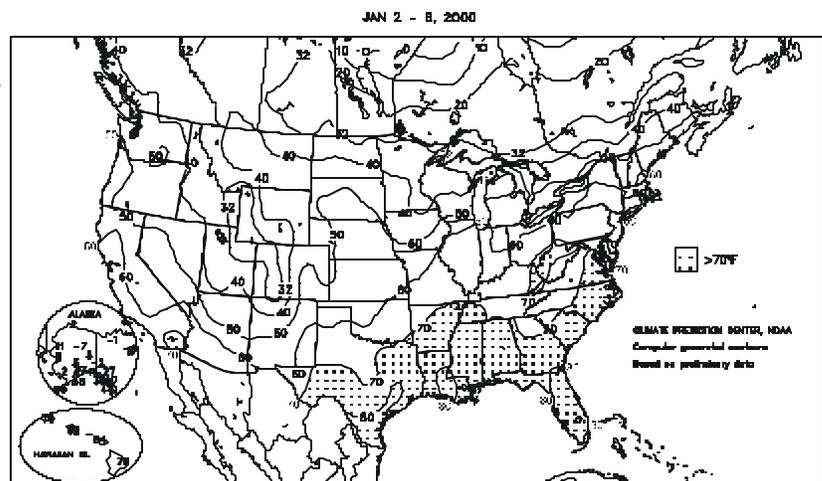
On Friday in **Texas**, **Austin-Bergstrom** (2.46 inches), **College Station** (1.60 inches), and **San Antonio** (1.21 inches) registered daily-record rainfalls. The total in **San Antonio** followed their driest year (16.63 inches, or 54 percent of normal) since only 14.31 inches fell in 1956. On the **southernmost Plains**, significant rain spread as far north as **Midland, TX**, where 0.61 inches was reported. **Midland**, which normally receives 14.95 inches of precipitation annually, just concluded their 6th-driest year on record (7.60 inches), which followed their 2nd-driest year (5.14 inches in 1998). In **southern California**, a brief shot of cold air dropped Saturday morning readings to record levels at **Ramona** (24°F), **Thermal** (24°F), and **Wild Animal Park** (25°F). Persistent northerly flow kept weekly temperatures below-normal across the **Southwest**.

In **Alaska**, winter continued to make its presence felt, especially in the central interior as lows exceeded -50°F early in the week (-58°F at **Yukon Flats** and **Tanana**, -54°F at **McGrath**, -53°F at **Northway**). Although temperatures moderated by the week's end (for example, **Fairbank's** high on Sunday was -43°F; by Saturday it was 3°F), weekly temperatures still averaged between 15°F and 26°F below normal, and more frigid Arctic air was poised to envelop the area by Sunday.

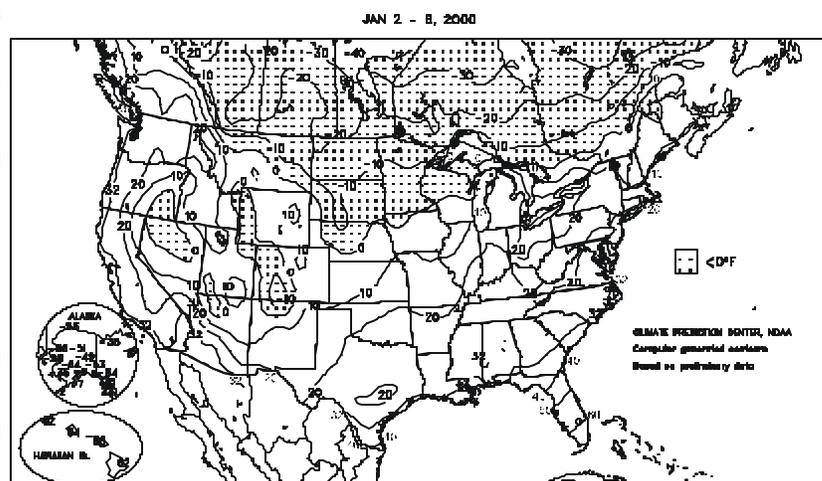
Departure of Average Temperature from Normal (°F)



Extreme Maximum Temperature (°F)



Extreme Minimum Temperature (°F)



**Weather Data for Selected Locations in the Delta**

**Weather Data for the Week Ending January 8, 2000**

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

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	90 AND ABOVE	32 AND BELOW	PRECIP		
																		0.1 INCH OR MORE	5.0 INCH OR MORE	
MS BATESVILLE <sup>x</sup>	57	37	76	24	47	9	0.44	-0.64	0.44	--	--	0.44	35	--	--	0	4	1	0	
BELZONI <sup>x</sup>	59	39	73	27	49	8	0.65	-0.68	0.65	--	--	0.65	43	--	--	0	3	1	1	
CLARKSDALE <sup>x</sup>	59	36	74	23	48	10	0.57	-0.48	0.57	--	--	0.57	48	--	--	0	3	1	1	
CLEVELAND <sup>x</sup>	60	36	74	24	48	6	0.92	0.05	0.74	--	--	0.92	92	--	--	0	4	2	1	
GREENVILLE <sup>x</sup>	60	38	74	27	49	8	2.03	0.91	0.91	--	--	2.03	159	--	--	0	3	3	2	
GREENWOOD <sup>x</sup>	60	37	75	23	49	7	1.35	0.22	0.86	--	--	1.35	104	--	--	0	4	4	1	
INDIANOLA 1S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
INVERNESS 5E	58	39	73	29	49	--	0.89	--	0.48	3.61	--	0.89	--	55	49	0	3	3	0	
LYON	59	37	75	23	48	--	0.85	--	0.43	4.13	--	0.85	--	--	--	0	4	2	0	
MOORHEAD <sup>x</sup>	58	40	74	29	49	8	0.95	-0.19	0.95	--	--	0.95	73	--	--	0	2	1	1	
ONWARD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
ROLLING FORK <sup>x</sup>	61	38	76	23	50	8	0.71	-0.52	0.61	--	--	0.71	51	--	--	0	3	3	1	
SIDON	61	40	75	29	51	--	1.22	--	0.82	3.57	--	1.22	--	55	50	0	3	2	1	
TUNICA <sup>x</sup>	56	38	73	24	47	10	0.03	-1.06	0.03	--	--	0.03	2	--	--	0	4	1	0	
VICKSBURG <sup>x</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
YAZOO CITY <sup>x</sup>	62	38	75	27	50	7	0.81	-0.51	0.81	--	--	0.81	54	--	--	0	4	1	1	
STONEVILLE <sup>*</sup>	59	37	74	27	48	9	0.44	-0.87	0.31	3.88	54	0.44	29	56	45	0	4	3	0	

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

\* Based on 1964-93 normals.

<sup>x</sup> Based on 1961-90 normals.

**Delta Weather and Crop Summary:** Early in the week, severe thunderstorms pushed through Mississippi, producing strong winds and isolated tornadoes. One severe thunderstorm caused an estimated \$25,000 worth of timber damage in Jasper County, Mississippi. In addition, as a result of the storms in Jasper County, damage to local barns and farming equipment was estimated at \$20,000. Overall, weekly temperatures averaged well above normal for most of the Mississippi Delta.

**U.S. Crop Production Highlights**

The following information was released by the USDA's Agricultural Statistics Board on January 11, 2000. Forecasts refer to January 1.

**All orange** production forecast of the 1999-2000 U.S. all orange crop is 12.5 million tons, up 2 percent from December and up 26 percent from last season. Florida's all orange forecast is 219 million boxes (9.86 million tons), 2 percent more than the December 1 forecast and 18 percent higher than the 186 million boxes (8.36 million tons) utilized last season. Early and mid-season varieties in Florida are forecast at 127 million boxes (5.72 million tons), up 2 percent from December and 13 percent higher than last season. Florida's Valencia forecast of 92.0 million boxes (4.14 million tons) is 2 percent above the December 1 forecast and 25 percent higher than last season's final utilization. California's all orange forecast continues at 67.0 million boxes (2.51 million tons), 76 percent

higher than last season's freeze-damaged crop. Texas orange production is forecast at 1.60 million boxes (68,000 tons), unchanged from December and up 12 percent from last season. Arizona's all orange forecast is increased to 1.05 million boxes (40,000 tons), down 9 percent from last season's final utilization.

**All cotton** production is forecast at 17.0 million 480-pound bales, up less than 1 percent from last month, and up 22 percent from 1998. Yield is expected to average 608 pounds per harvested acre, down 17 pounds from last year. Texas production was decreased 56,000 bales from December's forecast, while California's production was increased 45,000 bales.

National Weather Data for Selected Cities

Weather Data for the Week Ending January 8, 2000

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

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL IN, SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP.	
																90 AND ABOVE	32 AND BELOW	0.1 INCH OR MORE	50 INCH OR MORE
AL BIRMINGHAM	61	40	72	28	51	9	1.03	-0.16	0.90	3.96	61	1.03	76	87	44	0	3	2	1
AL HUNTSVILLE	57	38	71	26	48	9	1.11	-0.13	1.07	4.51	62	1.11	78	95	57	0	3	2	1
AL MOBILE	68	43	77	31	56	6	0.37	-0.72	0.37	3.80	58	0.37	30	95	48	0	2	1	0
AL MONTGOMERY	65	41	76	28	53	7	0.64	-0.43	0.64	4.02	63	0.64	52	94	63	0	3	1	1
AK ANCHORAGE	18	8	27	-6	13	-2	0.08	-0.11	0.08	1.63	122	0.08	36	87	70	0	7	1	0
AK BARROW	-4	-17	2	-26	-10	2	0.03	0.00	0.01	0.16	84	0.03	100	87	70	0	7	3	0
AK FAIRBANKS	-22	-37	5	-49	-30	-20	0.05	-0.08	0.05	0.40	40	0.05	33	-99	-99	0	7	1	0
AK JUNEAU	32	26	40	15	29	5	0.72	-0.33	0.24	11.02	195	0.72	60	92	72	0	5	4	0
AK KODIAK	29	15	36	7	22	-8	0.71	-1.01	0.36	7.72	88	0.71	36	84	54	0	7	4	0
AK NOME	-7	-19	8	-28	-13	-21	0.00	-0.19	0.00	0.21	20	0.00	0	80	65	0	7	0	0
AZ FLAGSTAFF	37	7	45	0	22	-6	0.01	-0.47	0.01	0.13	4	0.13	23	83	33	0	7	1	0
AZ PHOENIX	62	39	65	36	51	-2	0.01	-0.16	0.01	0.01	1	0.01	5	59	19	0	0	1	0
AZ TUCSON	59	30	65	28	45	-6	0.10	-0.12	0.10	0.10	8	0.10	40	59	18	0	6	1	0
AZ YUMA	65	47	68	41	56	0	0.00	-0.07	0.00	0.00	0	0.00	0	34	15	0	0	0	0
AR FORT SMITH	55	34	68	23	44	7	1.36	0.90	0.83	6.37	178	1.36	252	91	41	0	4	3	1
AR LITTLE ROCK	58	40	75	24	49	10	0.19	-0.66	0.17	5.43	93	0.19	19	89	48	0	2	2	0
CA BAKERSFIELD	54	31	57	26	43	-4	0.00	-0.17	0.00	0.13	16	0.00	0	83	44	0	5	0	0
CA EUREKA	47	42	52	34	44	-4	0.75	-0.66	0.39	3.97	52	0.95	59	95	87	0	0	3	0
CA FRESNO	53	31	56	29	42	-2	0.00	-0.42	0.00	0.03	2	0.00	0	99	56	0	6	0	0
CA LOS ANGELES	64	45	70	41	55	-2	0.00	-0.49	0.00	0.40	18	0.00	0	62	23	0	0	0	0
CA REDDING	54	31	63	28	42	-2	0.05	-1.36	0.04	0.72	10	0.09	6	93	49	0	4	2	0
CA SACRAMENTO	54	34	61	28	44	0	0.01	-0.80	0.01	0.04	1	0.01	1	94	44	0	2	1	0
CA SAN DIEGO	64	46	68	43	55	-2	0.04	-0.37	0.04	0.48	24	0.16	34	77	33	0	0	1	0
CA SAN FRANCISCO	57	43	65	38	50	2	0.01	-0.95	0.01	0.49	12	0.01	1	91	55	0	0	1	0
CO ALAMOSA	32	-2	37	-9	15	1	0.00	-0.07	0.00	0.03	6	0.00	0	78	24	0	7	0	0
CO CO SPRINGS	38	17	49	9	28	0	0.05	-0.03	0.00	0.26	47	0.06	67	77	31	0	7	1	0
CO DENVER	41	20	48	14	30	1	0.07	-0.04	0.06	0.36	47	0.07	54	67	27	0	7	1	0
CO GRAND JUNCTION	30	10	36	5	20	-4	0.10	-0.04	0.10	0.40	52	0.14	88	88	58	0	7	1	0
CO PUEBLO	47	15	56	0	31	2	0.01	-0.07	0.01	0.14	27	0.09	100	82	23	0	7	1	0
CT BRIDGEPORT	48	32	56	23	40	10	0.87	0.11	0.83	3.25	74	0.87	100	89	59	0	5	2	1
CT HARTFORD	48	28	62	15	38	13	0.34	-0.47	0.30	2.62	54	0.34	37	90	53	0	5	3	0
DC WASHINGTON	57	38	71	30	48	13	1.22	0.58	1.22	3.71	96	1.22	167	83	46	0	3	1	1
DE WILMINGTON	54	34	68	25	44	13	0.78	0.06	0.78	2.63	61	0.78	94	91	48	0	4	1	1
FL DAYTONA BEACH	75	55	82	51	65	7	0.18	-0.41	0.17	1.74	53	0.18	26	96	61	0	0	2	0
FL JACKSONVILLE	72	47	82	40	59	7	0.48	-0.21	0.30	1.37	39	0.48	61	99	62	0	0	2	0
FL KEY WEST	78	70	81	65	74	4	0.56	0.10	0.37	1.21	47	0.56	106	96	73	0	0	2	0
FL MIAMI	80	68	81	64	74	7	0.24	-0.20	0.24	2.92	125	0.24	48	91	64	0	0	1	0
FL ORLANDO	77	58	82	54	67	7	0.01	-0.47	0.01	2.66	99	0.01	2	98	48	0	0	1	0
FL PENSACOLA	66	46	74	33	56	5	0.04	-0.98	0.02	3.97	73	0.06	5	90	46	0	0	3	0
FL TALLAHASSEE	68	42	77	32	55	4	0.02	-1.05	0.01	2.62	42	0.07	6	93	51	0	1	2	0
FL TAMPA	76	60	80	53	68	8	0.06	-0.35	0.02	1.08	41	0.06	13	96	60	0	0	2	0
FL WEST PALM	79	66	79	59	72	7	0.00	-0.61	0.00	1.45	46	0.00	0	91	63	0	0	0	0
GA ATHENS	58	40	66	30	49	7	0.24	-0.79	0.24	2.49	47	0.25	21	86	50	0	2	1	0
GA ATLANTA	59	40	70	30	50	9	0.48	-0.58	0.47	2.69	49	0.48	40	89	48	0	1	2	0
GA AUGUSTA	66	38	77	25	52	8	0.12	-0.76	0.11	1.09	25	0.12	12	90	43	0	4	2	0
GA COLUMBUS	63	42	71	34	53	7	0.11	-0.95	0.11	1.83	30	0.11	9	84	40	0	0	1	0
GA MACON	65	39	76	26	52	6	0.23	-0.79	0.21	2.03	37	0.23	20	91	42	0	3	3	0
GA SAVANNAH	68	44	79	36	56	7	0.15	-0.65	0.11	2.10	54	0.16	18	95	53	0	0	2	0
HI HILO	76	63	79	62	70	-2	1.93	-0.40	0.73	16.34	111	1.93	72	98	77	0	0	6	2
HI HONOLULU	81	69	82	64	75	2	0.01	-0.87	0.01	2.66	55	0.01	1	86	60	0	0	1	0
HI KAHULUI	81	64	84	58	73	1	0.01	-0.93	0.01	2.56	59	0.01	1	89	56	0	0	1	0
HI LIHUE	77	68	79	62	73	1	0.27	-1.13	0.18	4.19	62	0.28	18	92	66	0	0	4	0
ID BOISE	36	25	40	20	30	2	0.30	-0.03	0.24	1.25	72	0.35	92	96	69	0	7	2	0
ID LEWISTON	44	32	50	26	38	5	0.10	-0.20	0.09	1.24	80	0.10	29	86	58	0	4	2	0
ID POCATELLO	30	18	35	6	24	1	0.12	-0.13	0.08	0.47	34	0.20	71	90	71	0	7	3	0
IL CHICAGO/O'HARE	39	26	60	13	32	10	0.28	-0.13	0.25	3.05	104	0.28	60	91	63	0	6	2	0
IL MOLINE	39	21	61	4	30	10	0.13	-0.28	0.11	2.40	89	0.13	28	91	67	0	6	2	0
IL PEORIA	40	24	64	10	32	10	0.11	-0.29	0.10	2.66	92	0.11	24	91	61	0	6	2	0
IL ROCKFORD	36	20	59	5	28	9	0.14	-0.20	0.08	2.09	86	0.15	38	95	72	0	6	3	0
IL SPRINGFIELD	43	27	64	13	35	10	0.25	-0.16	0.24	2.45	77	0.25	53	87	61	0	5	2	0
IN EVANSVILLE	49	32	69	24	41	10	2.29	1.64	2.09	7.42	168	2.29	309	90	61	0	5	2	1
IN FORT WAYNE	43	27	58	20	35	11	0.01	-0.47	0.01	1.96	57	0.01	2	93	67	0	5	1	0
IN INDIANAPOLIS	47	29	61	22	38	12	0.77	0.19	0.63	3.38	84	0.77	115	93	64	0	5	2	1
IN SOUTH BEND	40	28	61	18	34	10	0.15	-0.43	0.08	2.81	71	0.15	22	89	68	0	5	4	0
IA BURLINGTON	39	22	60	6	31	9	0.00	-0.33	0.00	2.52	107	0.00	0	90	65	0	5	0	0
IA CEDAR RAPIDS	35	17	52	0	26	8	0.01	-0.25	0.00	0.76	40	0.01	3	93	70	0	6	1	0
IA DES MOINES	39	21	50	9	30	10	0.11	-0.13	0.00	0.46	29	0.11	41	87	59	0	7	1	0
IA DUBUQUE	34	16	52	1	25	9	0.04	-0.28	0.04	0.90	39	0.04	11	94	72	0	7	1	0
IA SIOUX CITY	35	13	48	3	24	6	0.09	-0.05	0.09	0.44	47	0.09	56	96	67	0	7	1	0
IA WATERLOO	34	16	44	4	25	10	0.04	-0.16	0.03	0.62	41	0.04	17	90	69	0	7	2	0
KS CONCORDIA	41	19	52	8	30	4	0.00	-0.14	0.00	0.43	43	0.00	0	89	47	0	7	0	0
KS DODGE CITY	44	19	51	9	32	3	0.12	0.01	0.12	0.43	55	0.12	92	86	42	0	7	1	0
KS GOODLAND	40	15	48	9	28	0	0.02	-0.07	0.02	0.41	79	0.10	91	81	45	0	7	1	0
KS TOPEKA	45	22	57	13	33	6	0.03	-0.21	0.03	1.79	105	0.03	11	90	47	0	7	1	0

Based on 1961-90 normals

\*\*\* Not Available

Weather Data for the Week Ending January 8, 2000

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	43	24	54	13	34	5	0.39	0.19	0.39	4.45	311	0.39	170	90	54	0	7	1	0
	JACKSON	52	34	70	22	43	10	0.70	-0.19	0.62	3.32	61	0.76	75	87	50	0	4	2	1
	LEXINGTON	51	32	66	21	41	10	1.39	0.68	1.06	4.09	85	1.39	172	88	50	0	5	4	1
	LOUISVILLE	52	35	70	24	43	11	3.93	3.25	2.28	9.57	217	3.93	504	85	52	0	5	2	2
	PADUCAH	53	34	70	22	44	11	2.75	1.95	1.99	6.79	121	2.75	299	92	57	0	5	3	2
LA	BATON ROUGE	68	45	81	27	56	6	0.17	-0.95	0.02	5.44	80	0.17	13	93	43	0	2	2	0
	LAKE CHARLES	66	46	78	29	56	5	0.09	-1.00	0.08	4.57	73	0.09	7	95	54	0	1	2	0
	NEW ORLEANS	68	48	78	33	58	6	0.08	-1.06	0.08	3.94	56	0.08	6	91	50	0	0	1	0
	SHREVEPORT	60	43	77	23	51	6	1.25	0.37	1.14	5.07	99	1.25	124	85	41	0	2	3	1
ME	CARIBOU	32	10	41	-5	21	11	0.58	-0.03	0.28	3.36	86	0.58	83	98	63	0	7	5	0
	PORTLAND	41	23	59	11	32	10	0.59	-0.27	0.48	2.59	47	0.59	60	94	53	0	6	4	0
MD	BALTIMORE	56	33	70	22	45	13	1.22	0.51	1.22	4.18	99	1.22	151	93	48	0	4	1	1
MA	BOSTON	50	31	64	18	41	12	1.05	0.22	0.87	2.57	52	1.05	111	85	48	0	4	4	1
	WORCESTER	45	29	58	14	37	14	0.96	0.10	0.92	3.51	70	0.96	98	95	61	0	4	3	1
MI	ALPENA	34	19	45	14	27	8	0.49	0.08	0.37	2.05	82	0.49	104	91	69	0	7	2	0
	GRAND RAPIDS	38	24	57	16	31	8	0.08	-0.41	0.04	2.39	70	0.08	14	93	71	0	6	3	0
	HOUGHTON LAKE	33	19	46	15	27	9	0.51	0.13	0.24	2.14	90	0.51	116	94	75	0	7	3	0
	LANSING	39	25	56	17	32	10	0.22	-0.17	0.11	2.06	74	0.22	49	96	74	0	6	4	0
	MUSKEGON	38	26	53	19	32	8	0.48	-0.13	0.33	2.84	76	0.48	69	91	72	0	6	4	0
	TRAVERSE CITY	33	21	46	6	27	6	0.42	-0.08	0.28	2.26	83	0.42	74	88	62	0	7	2	0
MN	DULUTH	23	2	35	-10	12	5	0.07	-0.23	0.01	0.30	19	0.07	20	94	67	0	7	2	0
	INT'L FALLS	20	-4	32	-19	8	7	0.05	-0.17	0.02	0.23	21	0.05	21	88	70	0	7	4	0
	MINNEAPOLIS	30	13	38	0	22	10	0.25	0.03	0.17	0.58	44	0.25	100	91	64	0	6	4	0
	ROCHESTER	29	11	35	0	20	8	0.00	-0.19	0.00	0.52	42	0.03	14	94	75	0	7	0	0
	ST. CLOUD	29	10	42	-4	19	11	0.00	-0.17	0.00	0.22	21	0.00	0	90	60	0	7	0	0
MS	JACKSON	63	38	76	24	51	7	0.54	-0.72	0.47	3.30	45	0.54	38	95	44	0	4	4	0
	MERIDIAN	63	37	73	23	50	5	0.65	-0.57	0.63	4.23	57	0.65	46	95	44	0	4	2	1
	TUPELO	58	36	72	22	47	7	0.66	-0.54	0.37	3.70	49	0.67	49	92	51	0	4	2	0
MO	COLUMBIA	45	25	63	13	35	7	0.37	0.00	0.19	3.74	129	0.37	86	90	53	0	7	2	0
	KANSAS CITY	44	23	58	12	34	8	0.16	-0.12	0.16	2.34	123	0.16	50	90	49	0	7	1	0
	SAINT LOUIS	47	29	68	15	38	8	0.67	0.20	0.51	2.51	70	0.67	124	89	56	0	4	2	1
	SPRINGFIELD	48	26	63	17	37	6	0.86	0.39	0.63	7.85	212	0.86	159	93	45	0	4	3	1
MT	BILLINGS	38	21	47	8	29	7	0.05	-0.17	0.01	0.25	24	0.05	20	66	37	0	7	2	0
	BUTTE	32	16	38	5	24	8	0.04	-0.10	0.03	0.58	97	0.04	25	81	51	0	7	2	0
	GLASGOW	27	7	38	-13	17	7	0.12	0.04	0.12	0.33	70	0.13	144	88	63	0	7	1	0
	GREAT FALLS	40	25	47	4	33	12	0.00	-0.19	0.00	0.03	3	0.00	0	66	39	0	4	0	0
	KALISPELL	36	26	40	19	31	11	0.16	-0.22	0.11	1.50	69	0.41	93	89	67	0	6	3	0
	MILES CITY	35	15	48	-3	25	10	0.00	-0.14	0.00	0.26	33	0.02	13	87	50	0	7	0	0
	MISSOULA	34	23	39	20	28	6	0.02	-0.28	0.01	0.50	33	0.02	6	94	60	0	7	2	0
NE	GRAND ISLAND	41	15	52	1	28	6	0.01	-0.10	0.01	0.28	33	0.01	8	89	49	0	7	1	0
	LINCOLN	39	18	53	7	29	8	0.01	-0.13	0.01	0.58	56	0.01	6	94	53	0	7	1	0
	NORFOLK	38	15	53	3	26	7	0.00	-0.13	0.00	0.20	22	0.00	0	90	54	0	7	0	0
	NORTH PLATTE	43	7	51	-4	25	4	0.02	-0.06	0.02	0.07	13	0.02	22	92	38	0	7	1	0
	OMAHA	38	19	52	6	29	8	0.01	-0.18	0.01	0.58	47	0.01	5	92	52	0	7	1	0
	SCOTTSBLUFF	42	12	48	-1	27	3	0.08	-0.03	0.07	0.21	30	0.08	62	86	44	0	7	2	0
	VALENTINE	40	6	51	-15	23	4	0.05	-0.01	0.04	0.16	36	0.05	71	93	42	0	7	2	0
NV	ELY	38	8	46	-1	23	-1	0.00	-0.17	0.00	0.05	6	0.00	0	84	34	0	7	0	0
	LAS VEGAS	54	35	59	29	44	0	0.00	-0.11	0.00	0.00	0	0.00	0	43	23	0	2	0	0
	RENO	47	21	60	12	34	2	0.00	-0.25	0.00	0.07	6	0.00	0	80	31	0	7	0	0
	WINNEMUCCA	42	13	51	-2	27	-1	0.08	-0.11	0.04	0.16	15	0.08	38	86	40	0	7	2	0
NH	CONCORD	43	23	58	8	33	14	0.59	-0.01	0.46	1.94	50	0.59	86	85	48	0	6	3	0
NJ	NEWARK	53	36	68	25	44	13	0.71	-0.07	0.71	3.66	84	0.71	79	88	55	0	3	1	1
NM	ALBUQUERQUE	42	21	48	15	31	-2	0.00	-0.11	0.00	0.19	30	0.16	123	69	29	0	7	0	0
NY	ALBANY	45	26	60	15	36	15	0.75	0.18	0.65	2.17	61	0.75	115	85	49	0	5	3	1
	BINGHAMTON	43	25	58	13	34	12	0.45	-0.13	0.33	2.10	57	0.45	67	91	63	0	5	5	0
	BUFFALO	46	27	59	21	36	11	0.92	0.24	0.39	3.12	70	0.92	118	88	58	0	5	5	0
	ROCHESTER	47	26	61	19	36	11	0.79	0.29	0.59	2.85	86	0.79	136	90	58	0	6	5	1
	SYRACUSE	48	26	64	18	37	14	0.61	0.03	0.39	1.96	51	0.61	91	87	51	0	6	3	0
NC	ASHEVILLE	54	33	67	19	44	8	0.29	-0.43	0.20	2.27	52	0.29	35	94	47	0	4	2	0
	CHARLOTTE	59	38	70	26	48	8	0.42	-0.41	0.39	2.16	49	0.42	45	87	46	0	3	2	0
	GREENSBORO	57	36	70	23	47	10	0.53	-0.19	0.53	2.58	62	0.53	64	86	49	0	4	1	1
	HATTERAS	62	51	71	44	57	12	0.17	-1.03	0.08	4.74	80	0.17	12	98	69	0	0	3	0
	RALEIGH	61	36	73	25	49	10	0.50	-0.27	0.34	2.82	68	0.50	57	95	44	0	4	4	0
	WILMINGTON	66	41	76	34	54	9	0.34	-0.54	0.22	1.75	38	0.34	34	93	53	0	0	3	0
ND	BISMARCK	28	2	44	-15	15	6	0.20	0.09	0.08	0.45	70	0.22	169	88	68	0	7	3	0
	DICKINSON	30	9	42	-13	20	7	0.02	-0.06	0.00	0.24	50	0.03	33	88	66	0	7	1	0
	FARGO	23	3	39	-7	13	7	0.00	-0.17	0.00	0.45	54	0.00	0	88	69	0	7	0	0
	GRAND FORKS	21	-1	36	-15	10	5	0.00	-0.14	0.00	0.35	43	0.00	0	89	70	0	6	0	0
	JAMESTOWN	24	2	40	-11	13	5	0.06	-0.08	0.03	0.12	19	0.07	44	90	70	0	7	1	0
	WILLISTON	26	0	37	-23	13	4	0.08	-0.06	0.08	0.43	58	0.13	81	89	69	0	7	1	0
OH	AKRON-CANTON	45	30	63	20	38	12	1.00	0.46	0.65	2.87	81	1.00	164	91	66	0	5	5	1
	CINCINNATI	47	30	62	18	39	10	2.16	1.54	1.57	5.76	149	2.16	304	93	65	0	5	2	2
	CLEVELAND	47	31	62	23	39	13	0.73	0.21	0.43	3.43	93	0.73	124	89	62	0	5	4	0
	COLUMBUS	47	32	64	21	40	13	1.78	1.25	1.38	4.46	129	1.78	292	91	63	0	5	5	1
	DAYTON	46	31	60	21	38	11	1.16	0.63	0.76	3.72	105	1.16	190	90	62	0	5	4	1
	MANSFIELD	45	29	60	19	37	12	0.27	-0.24	0.15	2.97	81								

Weather Data for the Week Ending January 8, 2000

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	44	27	58	17	36	13	0.19	-0.28	0.18	2.01	58	0.19	35	92	60	0	5	2	0
OK YOUNGSTOWN	45	31	61	22	38	13	1.48	0.94	1.02	3.85	109	1.48	243	92	60	0	5	5	1
OK OKLAHOMA CITY	53	31	63	22	42	6	0.28	0.03	0.16	3.99	236	0.28	97	86	41	0	5	2	0
OK TULSA	52	30	66	22	41	6	0.32	-0.05	0.24	5.43	210	0.32	76	87	41	0	4	3	0
OR ASTORIA	50	39	54	32	45	3	2.85	0.46	0.89	16.15	122	3.29	121	98	75	0	1	7	2
OR BURNS	36	13	41	-2	25	2	0.13	-0.12	0.09	0.70	49	0.13	46	95	64	0	7	5	0
OR EUGENE	48	37	53	29	43	3	0.97	-0.95	0.37	4.99	46	1.34	61	96	77	0	2	6	0
OR MEDFORD	45	33	50	24	39	2	0.18	-0.49	0.06	1.28	31	0.39	51	99	70	0	3	5	0
OR PENDLETON	46	33	51	28	39	6	0.56	0.20	0.43	1.58	77	0.57	139	85	60	0	4	4	0
OR PORTLAND	47	38	51	30	43	4	1.17	-0.14	0.43	5.18	68	1.56	103	98	77	0	1	7	0
OR SALEM	48	37	52	29	43	4	1.29	-0.15	0.71	7.01	83	1.63	98	99	75	0	2	6	1
PA ALLENTOWN	50	28	65	17	39	12	0.28	-0.46	0.26	2.73	63	0.28	33	91	56	0	5	2	0
PA ERIE	47	31	61	22	39	12	0.55	-0.02	0.43	4.39	103	0.55	83	88	59	0	5	4	0
PA MIDDLETOWN	52	31	68	22	41	12	0.13	-0.53	0.11	2.70	68	0.13	17	86	50	0	5	2	0
PA PHILADELPHIA	54	35	67	26	45	14	0.79	0.04	0.79	3.78	89	0.79	92	87	51	0	4	1	1
PA PITTSBURGH	48	31	66	20	40	13	1.06	0.45	0.62	3.31	91	1.07	153	92	48	0	5	4	1
PA WILKES-BARRE	48	29	62	17	38	13	0.39	-0.11	0.37	1.63	53	0.39	68	89	43	0	5	2	0
PA WILLIAMSPORT	48	28	61	20	38	12	0.48	-0.11	0.30	2.84	77	0.48	72	86	54	0	5	3	0
RI PROVIDENCE	51	30	62	19	41	12	1.46	0.54	1.32	3.85	71	1.46	139	88	52	0	5	3	1
SC BEAUFORT	66	44	76	37	55	6	0.51	-0.33	0.46	2.98	72	0.51	53	95	59	0	0	2	0
SC CHARLESTON	68	43	76	37	56	8	0.37	-0.40	0.20	2.91	72	0.37	42	96	55	0	0	2	0
SC COLUMBIA	63	37	75	25	51	7	0.30	-0.68	0.30	1.72	37	0.30	27	92	47	0	3	1	0
SD GREENVILLE	57	39	66	29	48	8	0.34	-0.60	0.33	2.96	57	0.34	32	87	49	0	2	2	0
SD ABERDEEN	31	4	48	-10	18	8	0.02	-0.06	0.02	0.17	34	0.02	22	87	59	0	7	1	0
SD HURON	35	8	50	-5	22	9	0.02	-0.06	0.02	0.12	21	0.02	22	92	56	0	7	1	0
SD RAPID CITY	41	13	52	2	27	5	0.01	-0.07	0.01	0.18	32	0.01	11	79	36	0	7	1	0
SD SIOUX FALLS	33	9	48	-2	21	7	0.02	-0.11	0.01	0.19	22	0.02	13	91	61	0	7	2	0
TN BRISTOL	55	27	70	17	41	7	0.13	-0.61	0.13	1.58	37	0.13	15	90	42	0	4	1	0
TN CHATTANOOGA	59	37	73	25	48	10	0.97	-0.16	0.68	2.81	43	0.98	75	92	47	0	4	3	1
TN KNOXVILLE	56	32	73	22	44	8	0.84	-0.14	0.75	2.54	45	0.84	75	97	52	0	4	2	1
TN MEMPHIS	58	38	75	24	48	8	0.14	-0.80	0.09	4.87	71	0.14	13	84	44	0	4	2	0
TX NASHVILLE	56	36	71	24	46	10	1.69	0.82	1.69	4.19	75	1.69	169	98	63	0	5	1	1
TX ABILENE	58	35	71	23	47	4	0.07	-0.15	0.07	0.42	33	0.07	28	70	22	0	3	1	0
TX AMARILLO	51	20	59	10	36	1	0.03	-0.08	0.00	0.96	171	0.03	23	78	24	0	7	1	0
TX AUSTIN	64	38	76	14	51	2	1.90	1.54	1.34	2.59	113	1.90	452	89	41	0	3	3	1
TX BEAUMONT	65	50	78	32	58	7	0.40	-0.73	0.39	4.43	73	0.40	31	86	51	0	1	2	0
TX BROWNSVILLE	74	55	82	40	65	6	0.09	-0.26	0.01	0.41	25	0.09	23	88	50	0	0	2	0
TX CORPUS CHRISTI	73	50	87	30	62	7	0.15	-0.19	0.05	0.40	24	0.15	38	86	47	0	1	1	0
TX DEL RIO	64	39	76	30	52	2	0.01	-0.10	0.01	0.02	3	0.01	8	75	24	0	2	1	0
TX EL PASO	52	29	59	22	40	-2	0.00	-0.11	0.00	0.63	91	0.00	0	64	26	0	4	0	0
TX FORT WORTH	61	42	73	28	51	8	0.81	0.41	0.66	3.36	146	0.81	176	82	39	0	1	3	1
TX GALVESTON	66	56	72	40	61	8	0.99	0.20	0.98	6.81	154	1.00	110	89	67	0	0	2	1
TX HOUSTON	66	48	81	24	57	7	0.40	-0.37	0.39	2.60	60	0.40	45	84	39	0	2	2	0
TX LUBBOCK	54	24	64	14	39	1	0.00	-0.08	0.00	1.05	169	0.00	0	70	23	0	7	0	0
TX MIDLAND	54	28	70	19	41	-1	0.61	0.53	0.61	0.61	94	0.61	678	61	21	0	6	1	1
TX SAN ANGELO	60	37	73	26	48	5	0.01	-0.16	0.01	0.10	10	0.01	5	65	21	0	3	1	0
TX SAN ANTONIO	65	43	74	23	54	5	0.38	0.02	0.28	0.90	47	0.38	93	87	37	0	2	2	0
TX VICTORIA	69	49	81	26	59	6	1.75	1.27	1.08	2.77	107	1.75	318	86	46	0	1	2	2
TX WACO	60	41	73	24	51	6	1.38	1.02	1.32	4.19	185	1.38	337	87	43	0	2	2	1
TX WICHITA FALLS	56	33	69	24	45	5	0.46	0.23	0.20	1.18	76	0.46	170	84	35	0	4	4	0
UT SALT LAKE CITY	32	21	36	13	27	0	0.62	0.35	0.31	2.48	145	0.64	206	90	61	0	7	5	0
VT BURLINGTON	42	22	55	12	32	14	0.46	0.01	0.25	1.58	54	0.46	88	84	48	0	7	2	0
VA LYNCHBURG	55	32	67	18	44	9	0.45	-0.21	0.45	2.81	70	0.45	59	93	53	0	4	1	0
VA NORFOLK	60	42	76	30	51	11	0.77	-0.07	0.68	2.48	59	0.77	80	96	49	0	1	3	1
VA RICHMOND	60	36	73	25	48	12	0.75	0.01	0.75	2.47	60	0.75	88	90	44	0	4	1	1
VA ROANOKE	56	32	69	21	44	9	0.11	-0.48	0.11	2.57	70	0.11	16	87	47	0	4	1	0
VA WASH/DULLES	55	32	69	20	44	13	0.30	-0.33	0.30	2.97	75	0.30	41	89	48	0	4	1	0
WA OLYMPIA	45	36	49	27	40	3	1.80	-0.10	0.63	12.11	118	2.16	100	97	75	0	1	6	1
WA QUILLAYUTE	45	36	48	32	41	1	3.02	-0.35	1.13	25.11	130	3.48	90	10	79	0	2	7	2
WA SEATTLE-TACOMA	46	37	50	33	42	3	1.32	0.02	0.40	6.66	90	1.60	107	95	73	0	0	5	0
WA SPOKANE	35	26	38	23	31	5	0.85	0.36	0.37	3.12	105	0.86	154	96	80	0	7	4	0
WA YAKIMA	44	23	53	17	33	5	0.14	-0.16	0.08	0.41	23	0.14	40	93	50	0	7	2	0
WV BECKLEY	50	30	67	18	40	10	0.47	-0.22	0.44	2.29	57	0.48	62	85	45	0	5	3	0
WV CHARLESTON	55	31	73	20	43	10	0.56	-0.12	0.43	3.11	75	0.56	72	96	42	0	5	3	0
WV ELKINS	50	24	68	13	37	9	0.38	-0.35	0.37	3.66	85	0.38	46	93	44	0	6	2	0
WV HUNTINGTON	53	31	72	19	42	9	1.32	0.65	0.88	4.05	98	1.32	171	90	46	0	5	3	1
WI EAU CLAIRE	29	10	38	-5	20	9	0.70	0.45	0.37	1.11	80	0.74	264	91	65	0	7	4	0
WI GREEN BAY	29	14	37	-6	22	7	0.16	-0.13	0.09	0.99	53	0.16	48	91	67	0	7	3	0
WI LA CROSSE	33	16	46	5	25	10	0.00	-0.23	0.00	0.65	42	0.00	0	86	61	0	6	0	0
WI MADISON	34	20	52	5	27	11	0.11	-0.18	0.04	0.98	45	0.12	36	88	62	0	7	3	0
WI MILWAUKEE	36	22	56	7	29	10	0.29	-0.12	0.20	1.55	55	0.29	60	93	65	0	6	3	0
WY CASPER	34	16	40	10	25	3	0.03	-0.11	0.02	0.13	16	0.03	19	76	38	0	7	2	0
WY CHEYENNE	36	17	44	8	26	0	0.03	-0.05	0.03	0.22	42	0.03	30	67	34	0	7	1	0
WY LANDER	35	13	41	8	24	5	0.00	-0.11	0.00	0.15	21	0.00	0	69	25	0	7	0	0
WY SHERIDAN	36	15	46	8	26	6	0.01	-0.16	0.00	0.64	72	0.01	5	84	48	0	7	1	0

Based on 1961-90 normals

\*\*\* Not Available

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

# National Agricultural Summary

January 3 - 9, 2000

## HIGHLIGHTS

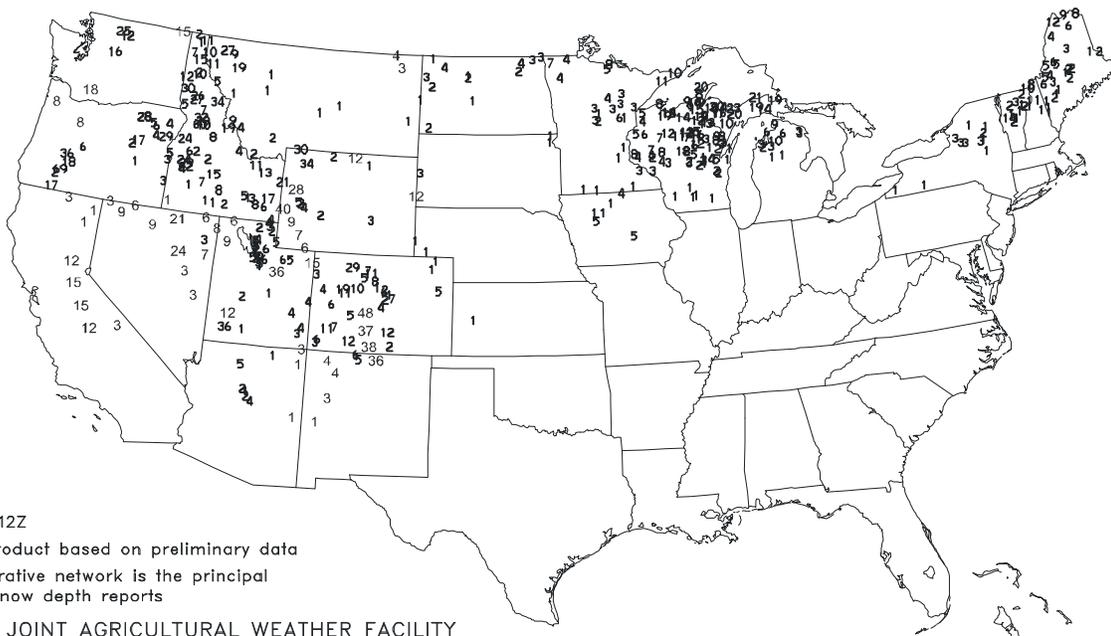
A cold front extending from Texas to the Northeast, produced a narrow band of much-needed rainfall for parts of southern and eastern Texas and the Ohio River Valley. The system also delivered moderate precipitation in parts of the lower Mississippi Valley, Tennessee Valley, and Northeast. Most areas east and west of the band of heavy rain, including the Corn Belt, central and southern Great Plains, Southeast, and Atlantic Coastal Plains, received light showers. Rain also continued along the coast in the Pacific Northwest and scattered parts of the northern Rocky Mountains, but the northern Great Plains, the Texas High Plains, and most of California remained dry. In Texas, wheat and oat conditions continued to suffer due to dry

soils except where irrigation was possible. In the Texas High Plains, some seedling death resulted from the dry conditions, and some plants died due to cold weather. In some fields, grains planted in the fall have not yet emerged. Insect populations remained active in parts of the State due to continued above-normal temperatures. In California, dryland small grain growers continued to delay planting due to dry soils. Emerging wheat and other small grains were irrigated and sprayed for weeds. Imperial Valley wheat fields showed good emergence and growth. Florida citrus growers continued to irrigate groves to maintain tree conditions. Most areas need long soaking rains to recharge soil moisture supplies.

*(Commodity-specific information will resume during the first week of April 2000.)*

### Snow Depth (Inches)

Jan 10, 2000



Snow Depth at 12Z

Experimental product based on preliminary data

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

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Supplemental values from the U.S. Air Force Snow Depth Analysis, 00Z Jan. 10

## December Weather and Crop Summary

### Weather

The continuation of warm, dry weather further reduced soil moisture and increased irrigation requirements across the South, especially in California, the Southwest, the southern half of Texas, and the Southeast. In addition, the South's warmth and dryness stressed dryland crops, including pastures, vegetative winter grains, and cold-season vegetables. Although winter wheat remained dormant farther north, unfavorably dry conditions persisted in the western Corn Belt and on the Plains as far south as western Kansas. In contrast, beneficial precipitation, including locally heavy snow, fell across the southeastern Plains and in Texas' northern panhandle. Widespread, early- to mid-month precipitation boosted soil moisture from the middle Mississippi and lower Ohio Valleys southward to the central Gulf Coast. Storminess abated after mid-month in the Pacific Northwest, ending a 2-month spell of very wet weather. The remainder of the West received little precipitation, raising concerns about possibly inadequate spring runoff due to meager snow packs.

Near- to above-normal monthly temperatures prevailed nationwide, except at a few locations in the Southwest. December readings averaged 7 to 15°F above normal on the northern Plains, where the month ended with a 10th consecutive week of warmer-than-normal weather. Temperatures averaged as much as 6°F above normal from the Corn Belt to New England. Generally mild conditions in the Midwest and East were briefly interrupted after mid-month by a cold snap that dropped temperatures below 0°F as far south as northern portions of Missouri and Illinois. Across the South, meanwhile, occasional cool outbreaks aided pest control but burned back pastures and winter grains. Temperatures remained above freezing in southernmost Texas and central and southern Florida.

Following November's record-setting warmth (warmest November this century), December featured a continuation of above-normal temperatures in most areas. The most persistent warmth blanketed the northern High Plains, where Miles City, MT noted an average temperature of 33.2°F (14.1°F above normal), their highest in December since 1957. With an average temperature of 29.1°F (13.9°F above normal), Glasgow, MT eclipsed their December record of 28.7°F that had stood since 1954. Nationally, more than 100 daily-record highs were set during each of the last 2 weeks of December, starting along the West Coast at mid-month, then spreading into the Plains and upper Midwest. In California, December-record highs were established at the Oakland airport (75°F on the 19th and 20th) and in Shelter Cove (84°F

on the 20th). Minot, ND collected six consecutive daily-record highs (47, 48, 44, 50, 51, and 52°F) from December 24-29.

While record warmth overtook the West, sharply colder air briefly overspread the Midwest, South, and East. In Wisconsin, temperatures climbed above 20°F on December 25 for the first time in 5 days. As cold air invaded Minnesota on December 20, wind chills dropped to -50°F in Rochester and -41°F in Austin. In northeastern Minnesota, actual air temperatures fell to -30°F on December 21. Cold air streaming across the relatively warm Great Lakes generated locally heavy snowfall in favored areas, boosting December snowfall to 29.7 inches (including 11.2 inches on December 23) in Erie, PA, 19.1 inches in Rochester, NY, and 18.4 inches in Grand Rapids, MI.

Farther south, a pair of early-month storm systems dropped snow as far south as northern Texas and produced locally heavy rainfall. In Texas, snowfall totaled 8.6 inches in Amarillo and 8.0 inches in Lubbock. In Kansas, all of Wichita's monthly snow (7.5 inches) fell by December 5. Although the storms produced only light accumulations east of the Plains, locations such as Milwaukee, WI (a trace of snow on the 5th) and Chicago, IL (0.1 inch on the 5th) marked their latest date of their first snowfall. In both cities, the previous record had been established on November 27, 1994. In North Dakota, Bismarck first received measurable snowfall (0.9 inch) on December 13, shattering their former record of December 8, 1920. Coastal New England, however, remained largely snow-free through year's end. Portland, ME and Concord, NH set records for the latest date of their first measurable snowfall. Both cities' previous records had been set on December 24, 1912. Without any snow through December, Boston, MA tallied records for the latest first snowflake (formerly December 22, 1998) and longest period without measurable snowfall (formerly 274 days in 1998, followed by 261 days in 1901). Boston's last measurable snow fell on March 15, 1999.

The early-month storms also accounted for most of the month's precipitation, which totaled more than 4 inches from the southeastern Plains to the lower Ohio Valley, southward to the central Gulf Coast. In Kansas, Wichita received 4.06 inches (338 percent of normal)--their second-wettest December on record behind 4.71 inches in 1984--capping their second-wettest year on record (45.46 inches, or 155 percent). Springfield, MO netted 6.99 inches (221 percent of normal) during the month--their wettest December since 7.48 inches fell in 1987--although only 0.11 inch fell after December 11. Nearby Joplin, MO received 7.67 inches (307 percent of normal), 7.43 inches of which fell by the 11th. In the Adirondacks and northern New England, the month's most significant snow storm ended on December 11, having produced 16 inches in Stowe, VT and 12 inches in Lake Placid, NY. Wet weather also diminished across the Pacific Northwest after mid-month, although totals were still slightly above normal in locations such as Astoria, OR (12.86 inches, or 122 percent of normal) and Olympia, WA (9.95 inches, or 123 percent). Elsewhere in western Washington, 21.63 inches (140 percent of normal) drenched Quillayute, while Stampede Pass, in the Cascades, recorded 20.69 inches (157 percent).

Across the South, scattered showers failed to make much of a dent in large annual precipitation deficits. In Louisiana, Lake Charles, LA ended 1999 with a 17.48-inch deficit, despite 4.48 inches (89 percent of normal) during December. Drought continued to intensify in the Southeast, where Columbus, GA (1.72 inches, or 35 percent of normal) closed their driest year on record (27.79 inches, or 54 percent). Meanwhile in California, southern Texas, and the Southwest, a very dry autumn stretched into a dry December, although scattered precipitation arrived along the West Coast on New Year's Eve. In San Diego, 0.29 inch of rain on December 31 prevented their driest second half of a year on record. Instead, San Diego's July-December total, 0.38 inch (10 percent of normal), was their driest since 1980. In Arizona, New Year's Eve was Flagstaff's last day of a 99-day streak (September 24 - December 31) without measurable precipitation. Phoenix, AZ received no rain (2.31 inches below normal) during the last 3 months of 1999, breaking their record of a trace, set in 1917. In Texas, only 0.01 inch dampened Del Rio during the month, their lowest December total since 1977.

Bitterly cold weather gripped western Alaska throughout the month, but cold weather in the eastern interior was briefly interrupted by record warmth. Monthly temperatures averaged as much as 20°F below normal in western areas but up to 8°F above normal across the southeast. Average temperatures were the lowest on record for December in Nome (-9.4°F, or 15.9°F below normal) and Cold Bay (21.2°F, or 9.8°F below normal). Only December 1954 was colder in King Salmon, where the average temperature of 1.6°F was 13.6°F below normal. Daily-record low of -36°F were noted in King Salmon on December 13 and 31. McGrath noted consecutive daily-record lows (-53 and -59°F) on December 30-31. Fairbanks' average temperature of -49°F on New Year's Eve represented their coldest day since January 1975, and occurred just 9 days after their highest December reading (45°F) since 1934. During the brief warm spell, Northway's high of 46°F on December 22 represented their highest reading on record between October 20 and February 22. Meanwhile, very wet conditions affected southeastern areas. Juneau's monthly precipitation totaled 10.30 inches, their second-wettest December on record, bolstered by a December calendar-day record rainfall (2.67 inch) on the 27th. In Valdez, December 18-26 precipitation totaled 14.09 inches, including 57.1 inches of snow.

In Hawaii, widespread showers provided some long-term drought relief from Oahu to leeward areas of the Big Island. On Maui, Kahului received 2.55 inches (80 percent of normal) during December, boosting their annual sum to 10.09 inches (48 percent). During an 84-hour period from December 9-12, rainfall in windward portions of the Big Island reached 19.03 inches in Piihonua and 17.29 inches in Glenwood. Piihonua's monthly total reached 32.13 inches, or 184 percent of normal.

and northern and eastern Oklahoma early in the month improving wheat conditions, while also reducing insect populations. In Texas and western Oklahoma, insect populations remained active until the warm, dry weather pattern was replaced by precipitation and cooler weather near mid-month. In other areas of the Great Plains and California, dry soils hampered wheat development early in the month. Shortly after mid-month, a blast of cold air descended on the Corn Belt, bringing a light and patchy layer of protective snow cover, that melted when warmer temperatures returned near Christmas. As the month ended, the wheat crop lacked snow cover across much of the Corn Belt and Great Plains, but freeze damage was minimal due to mild temperatures. The late-month warm, dry weather increased insect activity in the central and southern Great Plains. In Texas, seeding and re-seeding of wheat and oats continued where rain or snowfall supplied some moisture.

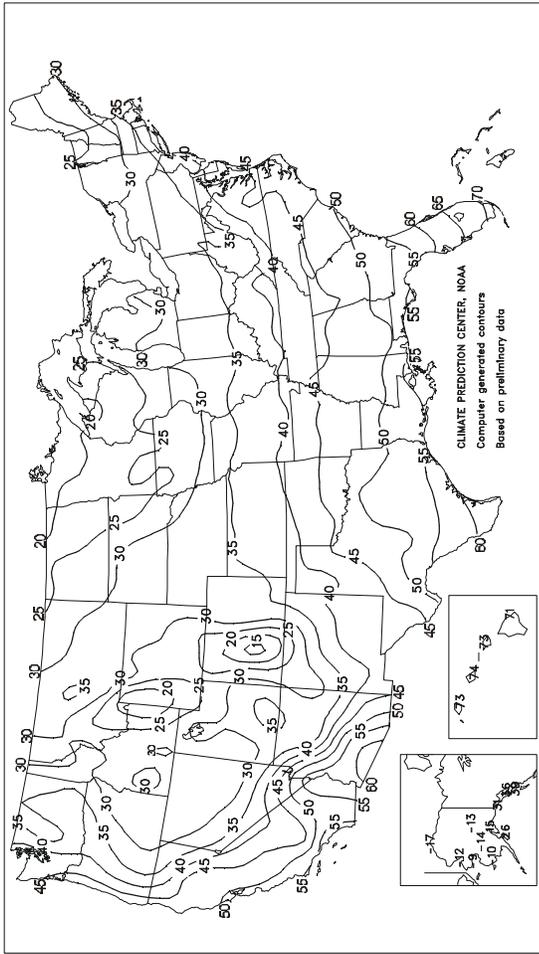
In Florida, activities included harvesting fruits and vegetables, as well as cutting and grinding old crop and planting new crop sugarcane. Vegetable harvest in Florida was active for the holiday market, although rain briefly delayed some activity during the holiday weekend and allowed citrus caretakers to temporarily discontinue irrigation. In California, field activities progressed normally, however rain was badly needed in most areas. Seeding of irrigated small grains, alfalfa, and forage crops continued, but growers postponed planting of dryland small grains. Many seeded wheat fields required irrigation to germinate and emerge, but warm weather stimulated growth where moisture was available. Orchards, vineyards, and vegetable growers continued with normal winter activities. Other activities included harvesting sugar beets, cotton, and grain sorghum. In the Pacific Northwest, a persistent rainy pattern limited field activities along the coast from northern California to the Canada border.

### Fieldwork

Rain and snow boosted soil moisture supplies in eastern Kansas

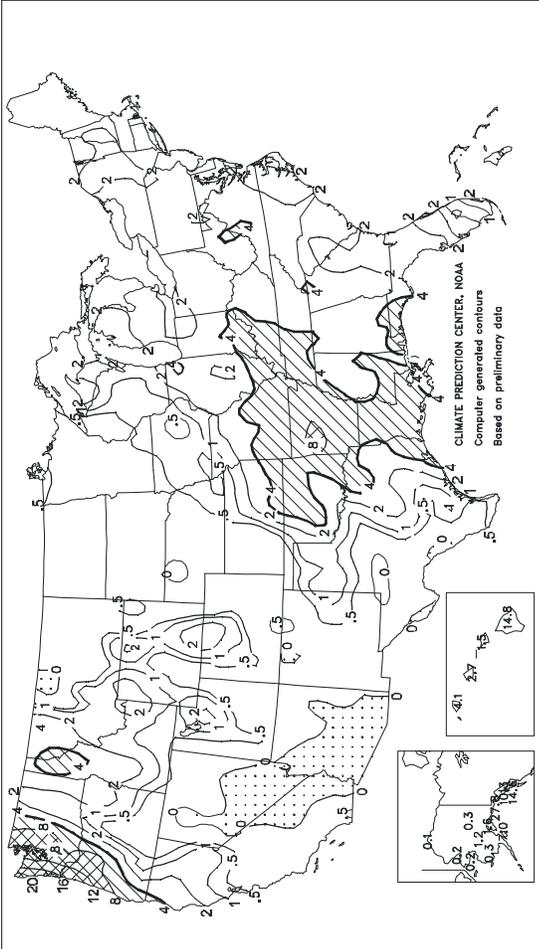
Average Temperature (°F)

DEC 1999



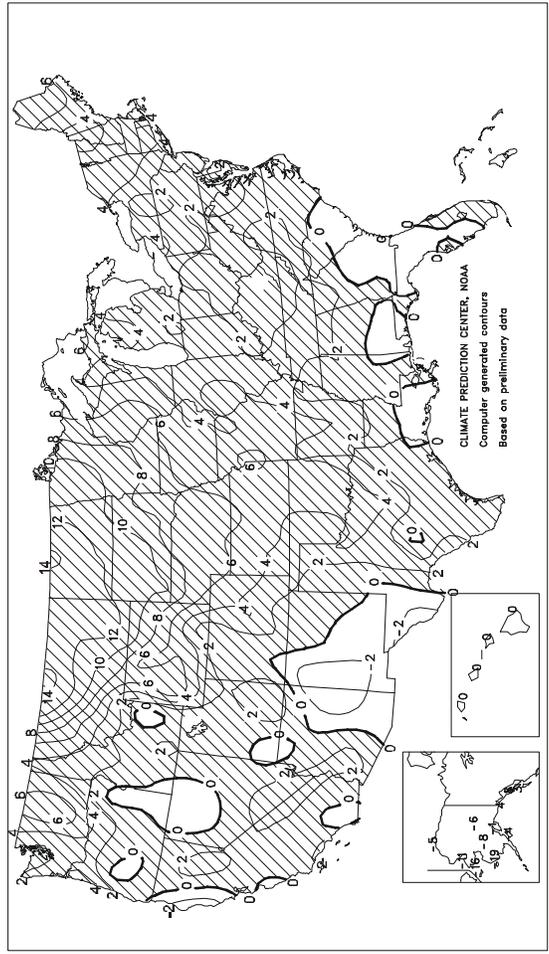
Total Precipitation (inches)

DEC 1999



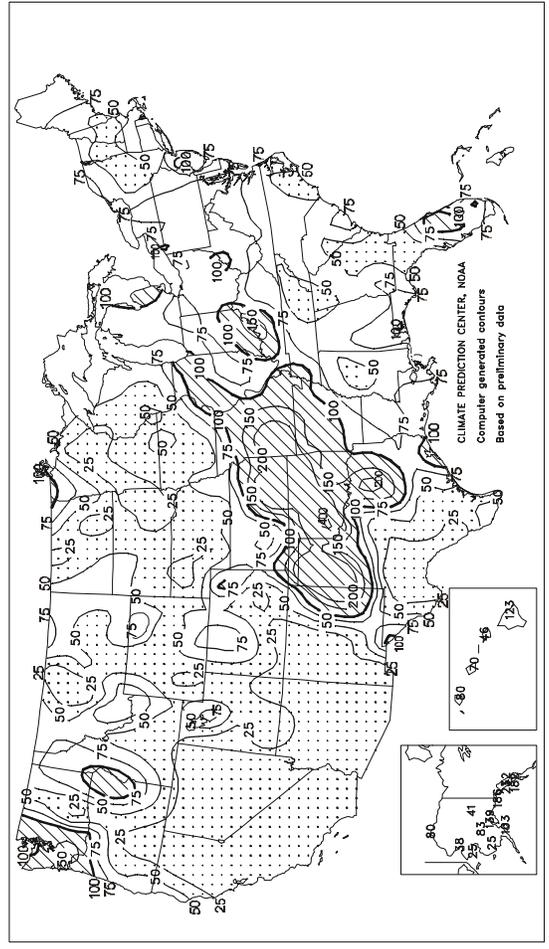
Departure of Average Temperature from Normal (°F)

DEC 1999



Percent Of Normal Precipitation

DEC 1999



## TEMPERATURE AND PRECIPITATION SUMMARY December 1999

STATES AND STATIONS	TEMP, °F		PRECIP.		STATES AND STATIONS	TEMP, °F		PRECIP.		STATES AND STATIONS	TEMP, °F		PRECIP.	
	AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE
AL BIRMINGHAM	47	2	2.93	-2.19	LEXINGTON	37	1	2.70	-1.28	COLUMBUS	35	3	2.68	-0.18
AL HUNTSVILLE	44	1	3.40	-2.47	LONDON-CORBIN	40	2	2.29	-1.88	DAYTON	33	1	2.56	-0.37
AL MOBILE	52	-1	3.43	-1.88	LOUISVILLE	39	2	5.64	2.00	MANSFIELD	31	1	2.70	-0.37
AL MONTGOMERY	49	0	3.38	-1.82	PADUCAH	40	3	4.04	-0.64	TOLEDO	31	3	1.82	-1.11
AK ANCHORAGE	15	-1	1.55	0.43	LA BATON ROUGE	52	-1	5.27	-0.26	YOUNGSTOWN	32	3	2.37	-0.56
AK BARRROW	-17	-6	0.13	-0.03	LAKE CHARLES	53	0	4.48	-0.57	OK OKLAHOMA CITY	43	4	3.71	2.31
AK COLD BAY	22	-9	2.19	-1.48	NEW ORLEANS	55	0	3.86	-1.89	TULSA	43	4	5.11	2.95
AK FAIRBANKS	-13	-6	0.35	-0.50	SHREVEPORT	50	2	3.82	-0.28	OR ASTORIA	48	6	12.86	2.31
AK JUNEAU	36	9	10.30	5.86	ME BANGOR	29	6	3.37	-0.58	BURNS	27	2	0.57	-0.58
AK KING SALMON	2	-14	1.68	0.31	CARIBOU	22	7	2.80	-0.42	EUGENE	41	0	3.65	-4.96
AK KODIAK	26	-5	7.01	0.20	PORTLAND	32	6	2.00	-2.55	MEDFORD	39	1	0.89	-2.43
AK NOME	-9	-16	0.21	-0.62	MD BALTIMORE	39	2	2.96	-0.45	PENDLETON	38	4	1.01	-0.62
AZ FLAGSTAFF	29	-1	0.00	-2.40	MA BOSTON	37	3	1.52	-2.49	PORTLAND	44	4	3.62	-2.51
AZ PHOENIX	55	1	0.00	-1.00	WORCESTER	33	6	2.55	-1.50	SALEM	43	3	5.38	-1.42
AZ TUCSON	51	-1	0.00	-1.07	MI ALPENA	26	2	1.56	-0.47	PA ALLENTOWN	35	3	2.45	-1.04
AR FORT SMITH	45	5	5.01	1.98	DETROIT	32	4	2.24	-0.58	ERIE	35	4	3.84	0.25
AR LITTLE ROCK	46	3	5.24	0.41	FLINT	30	3	1.98	-0.13	MIDDLETOWN	37	3	2.57	-0.67
CA BAKERSFIELD	48	1	0.13	-0.50	GRAND RAPIDS	30	3	2.31	-0.54	PHILADELPHIA	40	4	2.99	-0.39
CA EUREKA	47	-1	3.02	-3.02	HOUGHTON LAKE	26	3	1.63	-0.32	PITTSBURGH	34	3	2.24	-0.68
CA FRESNO	47	2	0.03	-1.39	LANSING	29	3	1.84	-0.49	WILKES-BARRE	33	3	1.24	-1.27
CA LOS ANGELES	59	2	0.40	-1.26	MUSKEGON	32	3	2.36	-0.67	WILLIAMSPORT	33	2	2.36	-0.67
CA REDDING	47	2	0.63	-4.88	TRAVERSE CITY	29	4	1.84	-0.31	PR SAN JUAN	77	-1	6.14	1.60
CA SACRAMENTO	47	2	0.03	-2.48	MN DULUTH	20	7	0.23	-1.01	RI PROVIDENCE	37	4	2.39	-1.99
CA SAN DIEGO	58	1	0.32	-1.25	INT'L FALLS	18	11	0.18	-0.66	SC CHARLESTON	50	-1	2.54	-0.61
CA SAN FRANCISCO	51	2	0.47	-2.62	MINNEAPOLIS	26	8	0.33	-0.75	COLUMBIA	46	-1	1.42	-2.17
CA STOCKTON	46	1	0.30	-1.81	ROCHESTER	24	7	0.49	-0.54	FLORENCE	46	-1	1.40	-1.74
CO ALAMOSA	20	2	0.03	-0.41	ST. CLOUD	22	8	0.22	-0.61	GREENVILLE	46	3	2.62	-1.52
CO CO SPRINGS	34	4	0.20	-0.26	MS JACKSON	48	0	2.76	-3.15	MYRTLE BEACH	48	***	1.97	*****
CO DENVER	34	3	0.28	-0.36	MERIDIAN	47	-1	3.58	-2.49	SD ABERDEEN	25	10	0.15	-0.26
CO GRAND JUNCTION	31	2	0.26	-0.35	TUPELO	46	2	3.03	-3.13	HURON	27	9	0.10	-0.37
CO PUEBLO	34	3	0.05	-0.37	MO COLUMBIA	36	4	3.37	0.90	RAPID CITY	34	10	0.17	-0.30
CT BRIDGEPORT	38	4	2.38	-1.12	JOPLIN	41	5	7.67	5.17	SIoux FALLS	25	7	0.17	-0.53
CT HARTFORD	35	6	2.27	-1.64	KANSAS CITY	36	6	2.18	0.60	TN BRISTOL	39	1	1.45	-1.94
DC WASHINGTON	42	3	2.49	-0.63	SPRINGFIELD	39	4	6.99	3.83	CHATTANOOGA	45	4	1.83	-3.34
DE WILMINGTON	39	3	1.85	-1.63	ST JOSEPH	34	5	0.89	-0.49	JACKSON	43	2	5.01	-0.37
FL DAYTONA BEACH	60	0	1.56	-1.03	ST LOUIS	38	4	1.84	-1.19	KNOXVILLE	42	2	1.70	-2.84
FL FT LAUDERDALE	70	1	1.61	-0.50	MT BILLINGS	36	10	0.20	-0.59	MEMPHIS	46	2	4.73	-1.01
FL FT MYERS	65	0	1.50	-0.03	BUTTE	22	4	0.54	0.10	NASHVILLE	44	4	2.50	-2.11
FL JACKSONVILLE	54	-1	0.89	-1.83	GLASGOW	29	14	0.20	-0.18	TX ABILENE	48	2	0.35	-0.68
FL KEY WEST	72	1	0.65	-1.37	GREAT FALLS	36	12	0.03	-0.82	AMARILLO	38	1	0.93	0.50
FL MELBOURNE	64	1	2.41	0.33	HELENA	28	7	0.04	-0.55	AUSTIN	52	0	0.89	-1.19
FL MIAMI	70	1	2.68	0.85	KALISPELL	30	7	1.09	-0.64	BEAUMONT	54	0	4.03	-0.78
FL ORLANDO	61	-1	2.65	0.50	MILES CITY	33	14	0.24	-0.40	BROWNSVILLE	62	0	0.32	-0.93
FL PENSACOLA	53	-1	3.91	-0.38	MISSOULA	30	7	0.48	-0.68	COLLEGE STATION	52	1	1.54	-1.29
FL ST PETERSBURG	65	2	1.11	-1.30	NE GRAND ISLAND	33	8	0.27	-0.44	CORPUS CHRISTI	59	1	0.25	-1.01
FL TALLAHASSEE	52	-1	2.55	-2.48	HASTINGS	33	8	0.24	-0.59	DALLAS/FT WORTH	51	4	2.55	0.71
FL TAMPA	63	1	1.02	-1.13	LINCOLN	32	6	0.57	-0.31	DEL RIO	54	2	0.01	-0.60
FL WEST PALM BEACH	68	1	1.45	-1.04	MCCOOK	34	6	0.24	-0.28	EL PASO	44	0	0.63	0.06
GA ATHENS	46	1	2.24	-1.85	NORFOLK	30	7	0.20	-0.54	GALVESTON	58	2	5.81	2.31
GA ATLANTA	47	3	2.21	-2.12	NORTH PLATTE	31	7	0.05	-0.42	HOUSTON	54	1	2.20	-1.25
GA AUGUSTA	46	-1	0.97	-2.43	OMAHA/EPPLEY	31	6	0.57	-0.45	LUBBOCK	41	0	1.05	0.52
GA COLUMBUS	49	0	1.72	-3.25	SCOTTSBLUFF	33	7	0.13	-0.43	MIDLAND	45	0	0.00	-0.56
GA MACON	48	-1	1.80	-2.51	VALENTINE	31	9	0.11	-0.26	SAN ANGELO	49	3	0.09	-0.70
GA SAVANNAH	51	-1	1.94	-1.02	NV ELKO	26	0	0.07	-1.03	SAN ANTONIO	54	2	0.52	-0.99
HI HILO	71	-1	14.80	2.76	ELY	27	1	0.05	-0.65	VICTORIA	56	0	1.02	-1.02
HI HONOLULU	74	0	2.65	-1.15	LAS VEGAS	49	3	0.00	-0.38	WACO	51	3	2.81	0.95
HI KAHULUI	73	0	2.55	-0.72	RENO	35	2	0.07	-0.92	WICHITA FALLS	47	4	0.72	-0.57
HI LIHUE	73	0	4.09	-1.06	WINNEMUCCA	29	-1	0.08	-0.80	UT SALT LAKE CITY	31	1	1.84	0.44
ID BOISE	32	2	0.90	-0.46	NH CONCORD	29	5	1.35	-1.81	VT BURLINGTON	29	6	1.12	-1.30
ID LEWISTON	37	2	1.14	-0.06	NJ ATLANTIC CITY	40	4	2.75	-0.57	VA LYNCHBURG	40	2	2.36	-0.87
ID POCATELLO	27	2	0.27	-0.84	NEWARK	39	3	2.95	-0.50	NORFOLK	46	2	1.71	-1.52
IL CHICAGO/O'HARE	30	3	2.77	0.30	NM ALBUQUERQUE	36	1	0.03	-0.47	RICHMOND	42	2	1.72	-1.54
IL MOLINE	29	4	2.27	0.04	NY ALBANY	31	5	1.42	-1.51	ROANOKE	42	4	2.46	-0.51
IL PEORIA	32	5	2.55	0.11	BINGHAMTON	29	3	1.65	-1.35	WASH/DULLES	38	3	2.67	-0.55
IL ROCKFORD	27	3	1.94	-0.11	BUFFALO	32	3	2.20	-1.47	WA OLYMPIA	41	3	9.95	1.83
IL SPRINGFIELD	34	4	2.20	-0.53	ROCHESTER	32	3	2.06	-0.67	QUILLAYUTE	43	3	21.63	6.17
IN EVANSVILLE	37	2	5.13	1.46	SYRACUSE	31	3	1.35	-1.85	SEATTLE-TACOMA	42	2	5.06	-0.85
IN FORT WAYNE	31	2	1.95	-0.94	NC ASHEVILLE	42	2	1.98	-1.54	SPOKANE	32	4	2.26	-0.16
IN INDIANAPOLIS	35	4	2.61	-0.73	CHARLOTTE	44	1	1.74	-1.74	YAKIMA	35	5	0.28	-1.13
IN SOUTH BEND	32	3	2.66	-0.64	GREENSBORO	43	3	2.05	-1.31	WV BECKLEY	36	2	1.81	-1.42
IA BURLINGTON	31	4	2.52	0.54	HATTERAS	50	1	4.57	0.03	CHARLESTON	38	1	2.55	-0.84
IA CEDAR RAPIDS	26	3	0.75	-0.84	RALEIGH	44	1	2.32	-0.92	ELKINS	33	1	3.28	-0.20
IA DES MOINES	30	6	0.35	-0.97	WILMINGTON	50	1	1.41	-2.22	HUNTINGTON	38	1	2.73	-0.73
IA DUBUQUE	26	4	0.86	-1.10	ND BISMARCK	26	12	0.23	-0.28	WI EAU CLAIRE	23	6	0.37	-0.63
IA SIOUX CITY	29	7	0.35	-0.43	DICKINSON	29	12	0.21	-0.18	GREEN BAY	24	4	0.83	-0.70
IA WATERLOO	26	6	0.58	-0.72	FARGO	23	11	0.45	-0.20	LA CROSSE	27	7	0.65	-0.62
KS CONCORDIA	35	5	0.43	-0.41	GRAND FORKS	21	11	0.35	-0.29	MADISON	26	4	0.86	-0.98
KS DODGE CITY	37	4	0.31	-0.34	JAMESTOWN	23	10	0.05	-0.43	MILWAUKEE	29	5	1.26	-1.07
KS GOODLAND	35	6	0.31	-0.10	MINOT	28	14	0.12	-0.60	WAUSAU	24	6	0.71	-0.72
KS HILL CITY	35	4	0.37	-0.10	WILLISTON	26	13	0.30	-0.28	WY CASPER	30	6	0.10	-0.56
KS TOPEKA	36	5	1.76	0.33	OH AKRON-CANTON	32	1	1.87	-1.08	CHEYENNE	32	4	0.19	-0.23
KS WICHITA	38	5	4.06	2.86	CINCINNATI	35	2	3.60	0.45	LANDER	29	8	0.15	-0.43
KY JACKSON	41	3	2.56	-1.82	CLEVELAND	34	3	2.70	-0.39	SHERIDAN	32	9	0.63	-0.07

Based on 1961-90 normals.

(Note: 24 new stations added for December 1999 table)

\*\*\* Not Available.

# International Weather and Crop Summary

January 2 - 8, 2000

## HIGHLIGHTS

**FSU-WESTERN:** The 5th consecutive week of unseasonably mild weather provided favorable overwintering conditions for dormant winter grains.

**NORTHWESTERN AFRICA:** Dryness prevailed across most winter grain areas, increasing stress on Moroccan grains.

**EUROPE:** Mainly dry weather prevailed across major winter grain-producing areas.

**AUSTRALIA:** Below-normal temperatures slowed summer crop development across the east, although sunnier skies prevailed in most areas.

**SOUTH AFRICA:** Mild, showery weather continued across the corn belt, favoring summer crop development.

**SOUTHEAST ASIA:** Moisture supplies remained adequate for main-season rice across Java, Indonesia. Seasonably warm weather returned to Thailand, and lighter monsoonal showers continued to ease wetness in the eastern Philippines.

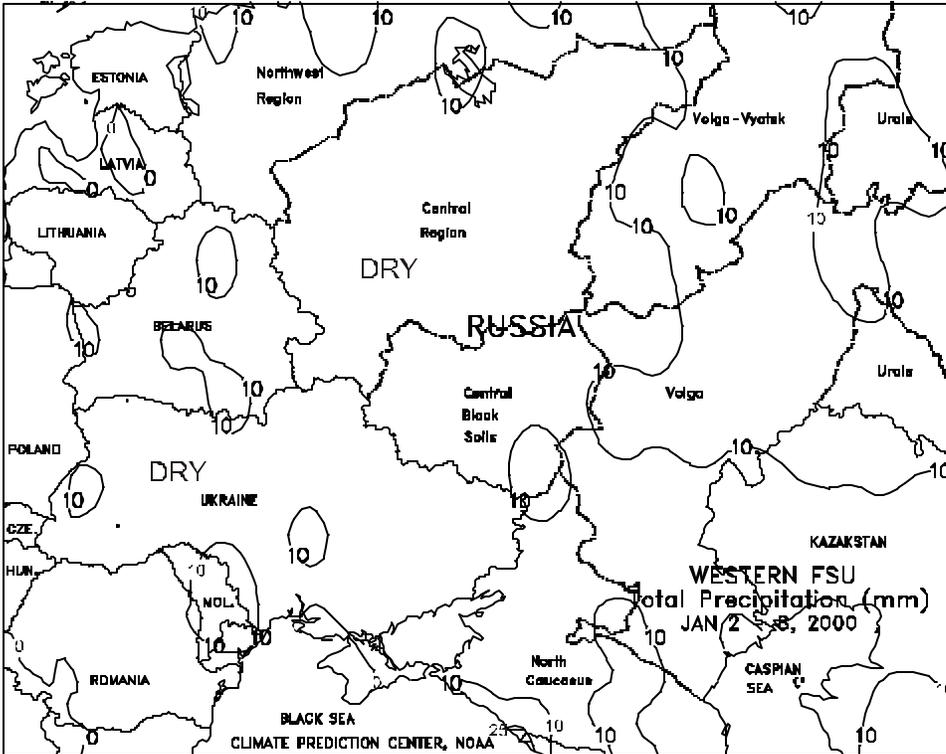
**EASTERN ASIA:** Light precipitation increased moisture supplies for winter crops across the North China Plain and Yangtze Valley.

**SOUTH AMERICA:** Hot, dry weather stressed summer crops in extreme southern Brazil, southern Paraguay, and portions of Argentina. In western Argentina and the rest of southern Brazil, showers favored summer crops.



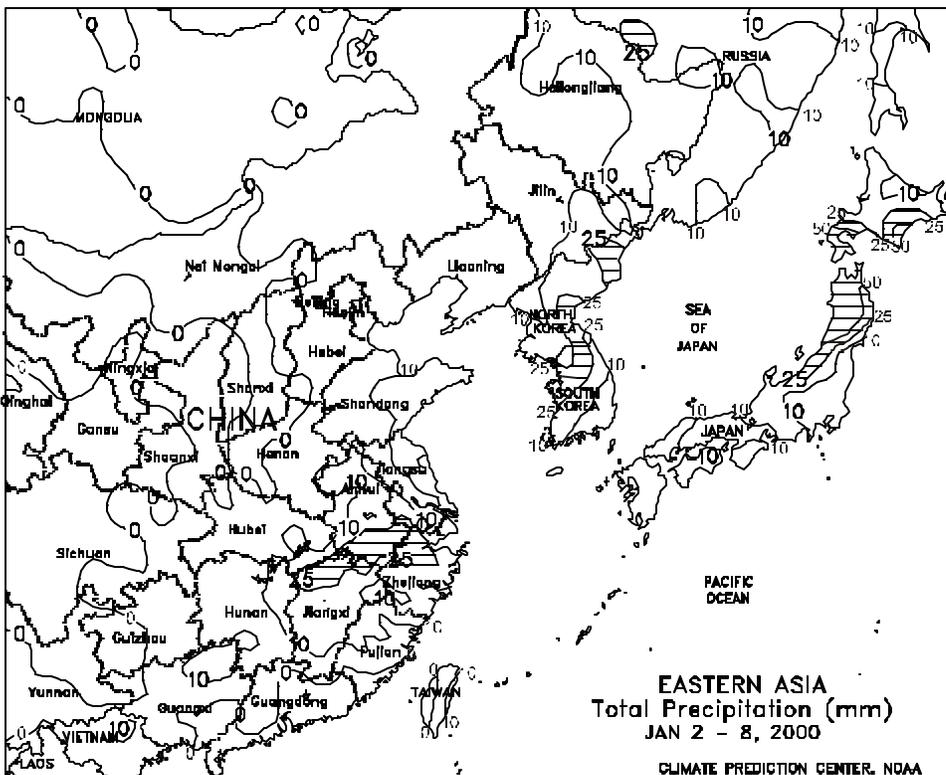
## EUROPE

In northwestern Europe, scattered, mainly light showers (4-23 mm) fell in England, northern France, the Benelux countries, and northwestern Germany. Although this precipitation was light, soil moisture remained adequate to excessive across this region because of above-normal December precipitation. Across the remainder of Europe, dry weather prevailed in major winter grain-producing areas. In the southern Iberian peninsula, dry, unseasonably cold weather (temperatures 1-4 degrees C below normal) slowed winter grain emergence and establishment. Similarly, dry, unseasonably cold weather (temperatures 2-5 degrees C below normal) prevailed across the Balkans, Romania, Bulgaria, and Greece. Nevertheless, the coldest minimum temperatures (generally -10 to -15 degrees C) in this region remained well above the threshold for winterkill. Elsewhere across Europe, near- to above-normal temperatures (2-5 degrees C above normal, except 4-7 degrees C above normal in Scandinavia) provided favorable overwintering conditions for dormant to semi-dormant winter grains.



**FSU-WESTERN**

The 5th consecutive week of unusually mild weather maintained favorable overwintering conditions for winter grains. Weekly temperatures averaged 2 to 5 degrees C above normal in most of Russia, the western two-thirds of Ukraine, Belarus, and the Baltics. Furthermore, widespread, light precipitation (3-13 mm) in most areas fell mainly as snow in the north and a mixture of rain and snow in eastern Ukraine and the North Caucasus region in Russia. As a result, snow cover in winter wheat areas of eastern Ukraine and southern Russia was thin or patchy, leaving crops vulnerable to a brief episode of bitterly cold weather on January 5. Lowest temperatures (minimum temperatures below -15 degrees C) were observed as far south as extreme eastern Ukraine and the northern tip of the North Caucasus region in Russia. While temperatures fell low enough to threaten winter grains, the short duration of the bitterly cold weather along with a thin snow cover minimized the potential for winterkill. The brief cold snap was quickly followed by an easterly surge of milder air from Europe, raising temperatures to above normal and improving overwintering conditions for winter grains.

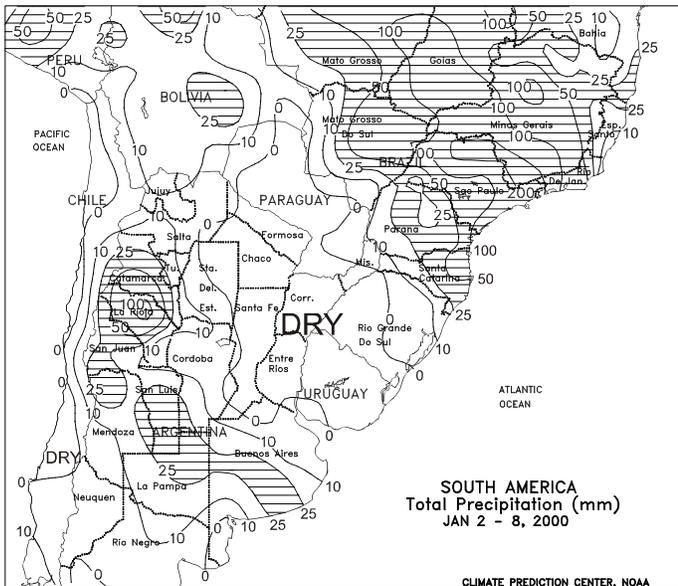
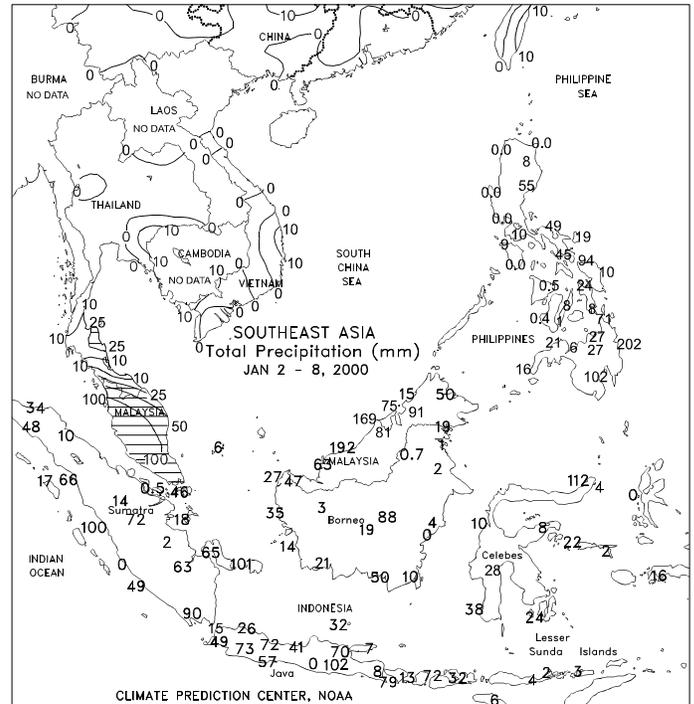


**EASTERN ASIA**

Light precipitation (3-15 mm of liquid equivalent) increased moisture supplies for dormant winter wheat in the North China Plain. Some of this precipitation fell as light snow across Hebei and Beijing. Heavier rainfall (10-40 mm) was reported across the lower Yangtze Valley, benefiting winter rapeseed. Warm weather prevailed across southern China, where cool weather during the past few weeks had burned back winter crops and possibly damaged sugarcane. Temperatures averaged 4 to 6 degrees C above normal across southern China and near normal across the North China Plain.

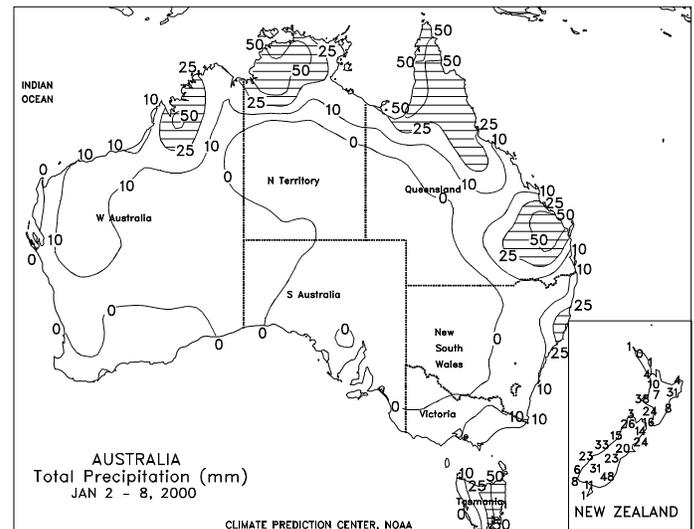
**SOUTHEAST ASIA**

Light to moderate showers (10-50 mm or more) across Java, Indonesia kept moisture supplies adequate for main-season rice development. Unseasonably heavy showers (50-160 mm) across western peninsular Malaysia boosted moisture supplies for oil palm, but caused local flooding and slowed fieldwork. Seasonably dry weather continued to aid rice fieldwork across Indochina, while warmer weather returned to Thailand, aiding second-crop rice transplanting. Drier weather (50-150 mm) continued across the eastern Philippines, easing wetness.



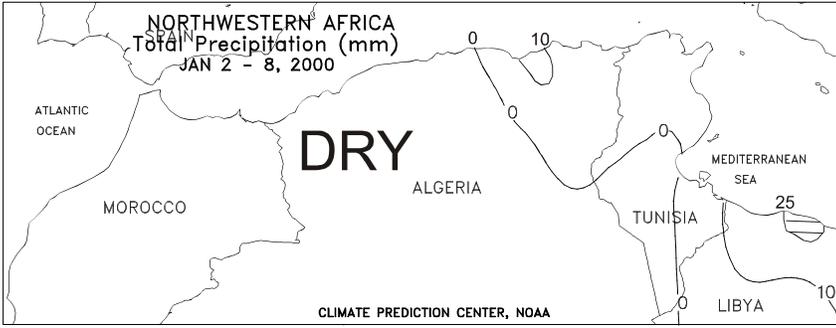
**SOUTH AMERICA**

Hot, dry weather continued to stress summer crops across extreme southern Brazil, southern Paraguay, and portions of Argentina. In southern Brazil, the stressful weather prevailed across all of Rio Grande do Sul, extreme western Parana, western Santa Catarina, and extreme southwestern Mato Grosso do Sul. These areas comprise approximately 30 percent of the total Brazilian soybean area and have received less than 25 percent of normal rainfall during the past 3 weeks. The highest temperatures ranged from 35 to 38 degrees C. Portions of southeastern Paraguay also experienced below-normal rainfall during this period. Elsewhere in southern Brazil, widespread showers (25-125 mm, with isolated amounts greater than 150 mm) favored corn, soybeans, cotton, and coffee. The moisture was especially beneficial in northern Parana. In Argentina, dry, hot weather returned to northeastern Argentina, after needed rainfall from the previous week. This stressful weather extended into the main summer crop areas of central Argentina. Southern Santa Fe and northern Buenos Aires have received 30 to 40 percent of normal rainfall during the past 3 weeks. Rainfall is needed in these areas to replenish soil moisture and maintain average yield potentials. In western Argentina (southern Cordoba and northern La Pampa), showers (10-30 mm) maintained favorable soil moisture. In southern Buenos Aires, moderate showers (10-35 mm) caused only minor wheat harvesting delays. Temperatures averaged 1 to 2 degrees C above normal across central Argentina and southern Brazil. According to reports as of December 31, Argentine soybeans were 90 percent planted, compared with 95 percent on this date last year, and corn was 93 percent planted, compared with 93 percent last year. Cotton was 78 percent planted. Wheat was 81 percent harvested nationwide, compared with 93 percent last year.



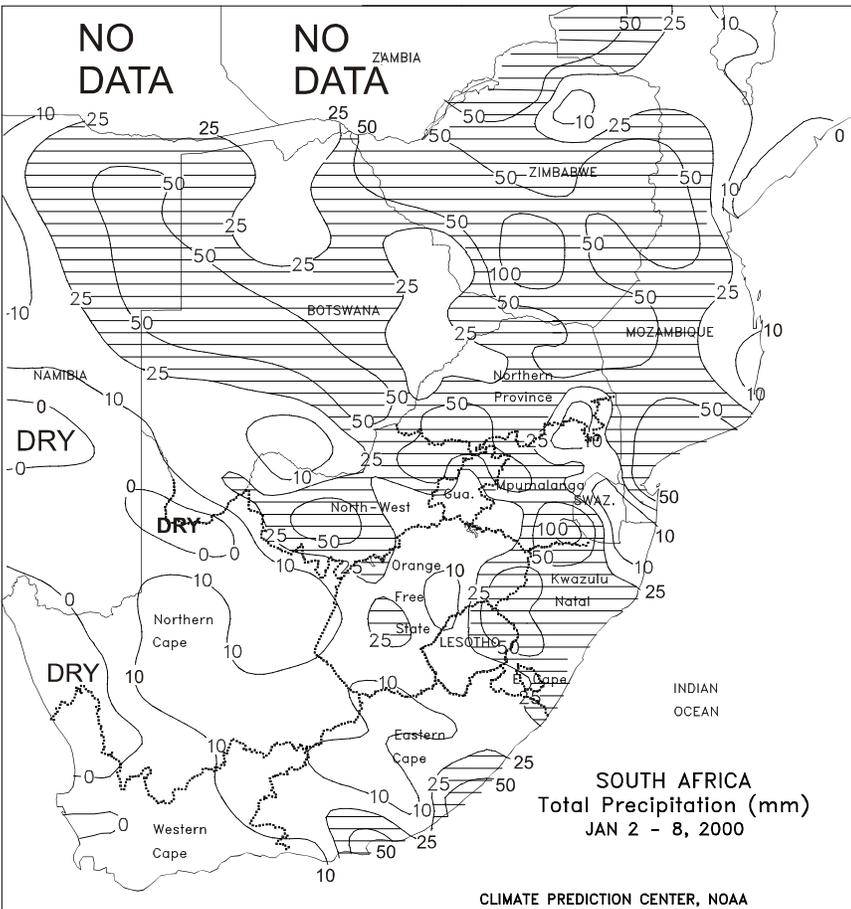
**AUSTRALIA**

Much-needed, drier weather covered most eastern crop areas, including New South Wales, following weeks of untimely wetness. The exception was in crop areas of southeastern Queensland, where locally heavy rain (25-50 mm or more) continued. Temperatures averaging 1 to 4 degrees C below normal slowed summer crop growth and hampered dry down of standing winter grains. In fact, highs barely hit the lower 30's degrees C in the main agricultural districts, despite the sunnier skies. Seasonably warm weather is needed for normal development of cotton and sorghum. Warm, dry weather in Western Australia aided final winter grain harvests. In New Zealand, light to moderate showers (5-25 mm or more) covered the main pasture and grain areas.



**NORTHWESTERN AFRICA**

A shift in weather systems farther east across the central Mediterranean Sea kept most winter grain areas dry. Light rain (1-8 mm) was confined to northernmost growing areas in Tunisia and northeastern Algeria. Abundant moisture in recent weeks has favored winter grain emergence and establishment in Tunisia and Algeria. In contrast, persistent dryness in Morocco has likely diminished soil moisture reserves, creating unfavorable conditions for crop development.



**SOUTH AFRICA**

Mild, showery weather continued across the corn belt, benefiting summer crops in or nearing critical reproductive phases of development. For the second week, temperatures averaged near to below normal, with highs generally ranging from 26 to 31 degrees C. Rainfall totaled 10 to 25 mm or more in the major corn areas, although a few dry pockets persisted in central Free State. Summer crops typically advance through reproduction from mid-January to mid-February, so a continuation of seasonable conditions over the next few weeks will be important for sustaining current yield prospects. Elsewhere, moderate showers (25 mm or more) continued over most sugarcane areas of Kwazulu-Natal and extended southwestward along the Eastern Cape coast. Seasonably warm, dry weather returned to Western Cape, maintaining high irrigation demands in orchards and vineyards.

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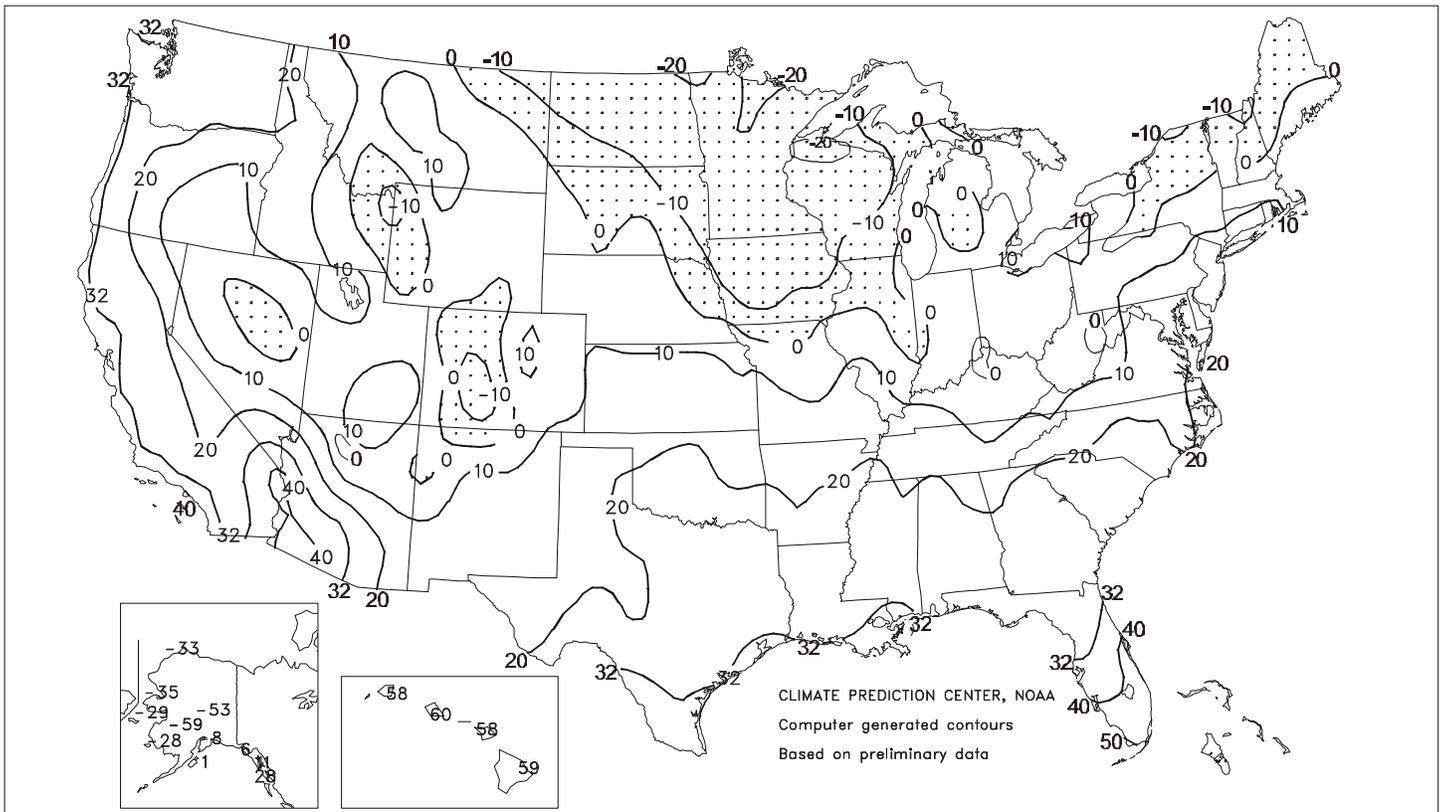
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DEC 1999



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