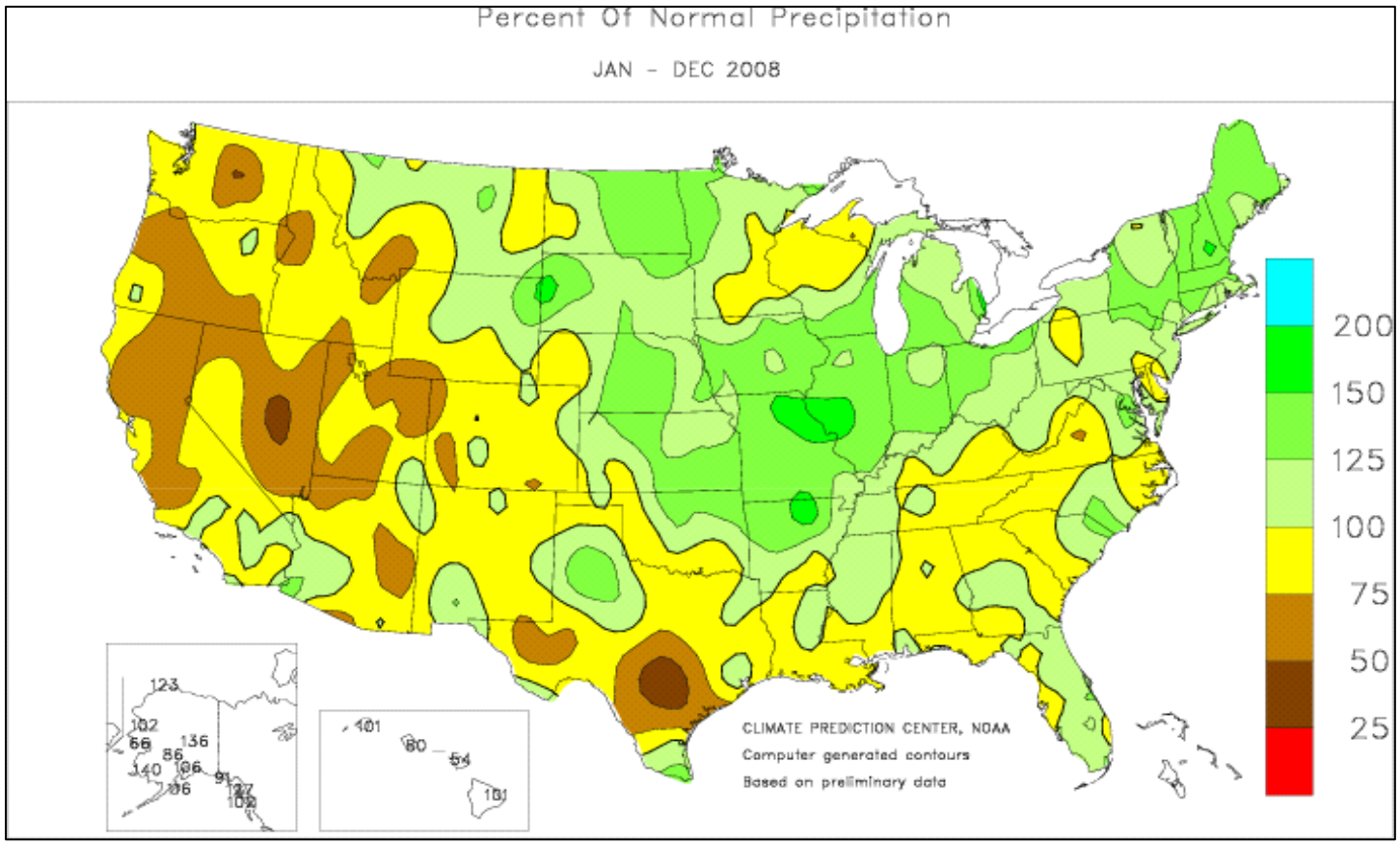
Volume 96, No. 04 http://www.usda.gov/oce/waob/jawf/wwcb.html January 27, 2009

WEEKLY WEATHER AND CROP BULLETIN

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

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



HIGHLIGHTS
January 18-24, 2009

Highlights provided by USDA/WAOB

Beneficial precipitation improved high-elevation snow packs and aided pastures and winter grains from **California to the central Rockies**. Although the water equivalent of the **Sierra Nevada** snow pack climbed from 8 to 10 inches during the week ending January 25, the percent of average for the date only rose from 58 to 64 percent. Meanwhile, mild, mostly dry weather prevailed on the **Plains**,

(Continued on page 5)

Contents

Florida Freeze Summary, January 21-23

Freeze summary prepared by USDA/WAOB

Freezes struck parts of Florida's peninsula on three consecutive nights from January 20-21 to 22-23, but for most locations the lowest temperatures were observed on the night of January 21-22. Although a complete assessment will not be available for weeks, early indications are that Florida's citrus and sugarcane crops escaped with only minor harm. Perhaps most vulnerable to the freeze were the state's winter vegetables, along with horticultural, floricultural, and nursery crops.

The first night of the cold snap, January 20-21, presented a special set of problems, since winds initially gusting to 30 m.p.h. or higher hindered freeze-protection efforts. However, overnight winds also kept lower levels of the atmosphere well-mixed, preventing significant radiational cooling over sandy soils and low-lying areas. As a result, low temperatures observed on the morning of January 21 were much more uniform than those recorded the following day, when winds were calm or nearly so.

Windy nights like January 20-21 are difficult for producers for several reasons. First, traditional freeze-protection methods employing wind and water are often ineffective on windy nights. Efforts to mix the lower levels of the atmosphere are worthless, since the air is already churned by the wind. And water sprayed by sprinklers can be blown, resulting in uneven ice formation on crops such as strawberries and oranges. In addition, windy conditions in sandy fields can damage tender vegetables such as tomatoes, which can be scarred by blowing sand regardless of temperature.

Calm nights like January 21-22 are ideal for freeze-protection efforts, but result in optimal radiational cooling and lower temperatures at field level. Cold air trapped in the lowest few feet of the atmosphere (below warmer air aloft) can prove especially damaging to crops such as vegetables, strawberries, and specialty crops, which are near the ground and several feet lower than citrus fruits hanging from trees. Typically, strawberries and citrus are protected with ice (sprinklers), while sugarcane fields are flooded with water. Neither method can be used for vegetables such as beans and sweet corn, which can only be protected with air-mixing techniques (e.g. wind machines and helicopters).

Calm, cool conditions lingered across Florida's peninsula on the night of January 22-23, although minimum temperatures were mostly several degrees higher those observed the previous night. In nearly all instances, the lowest temperatures during the January 21-23 cold outbreak were noted on the morning of Thursday, January 22. The upper map on the following page show those minimum temperatures, which were measured at a height of 2 meters above the ground. Most stations experienced slightly lower temperatures at the immediate field level. Durations of temperatures at or below 28°F—a hard freeze—are shown in the lower map on page 3. Such durations are often used as a guide for freeze-induced losses in citrus and sugarcane, while crops such as strawberries, vegetables, and specialty crops are often susceptible to damage at temperatures just slightly below 32°F.

Agriculturally specific details on Florida's recent cold outbreak can be found at the following USDA/NASS Web site:

http://www.nass.usda.gov/Statistics_by_State/Florida/Publications/Crop_Progress_&_Condition/index.asp

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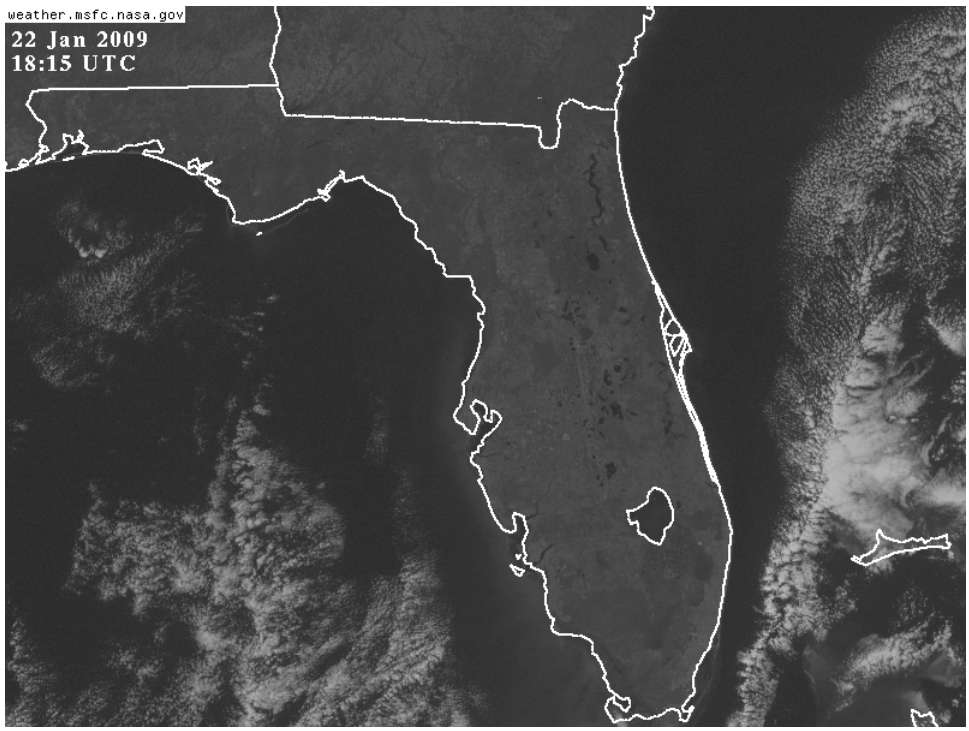
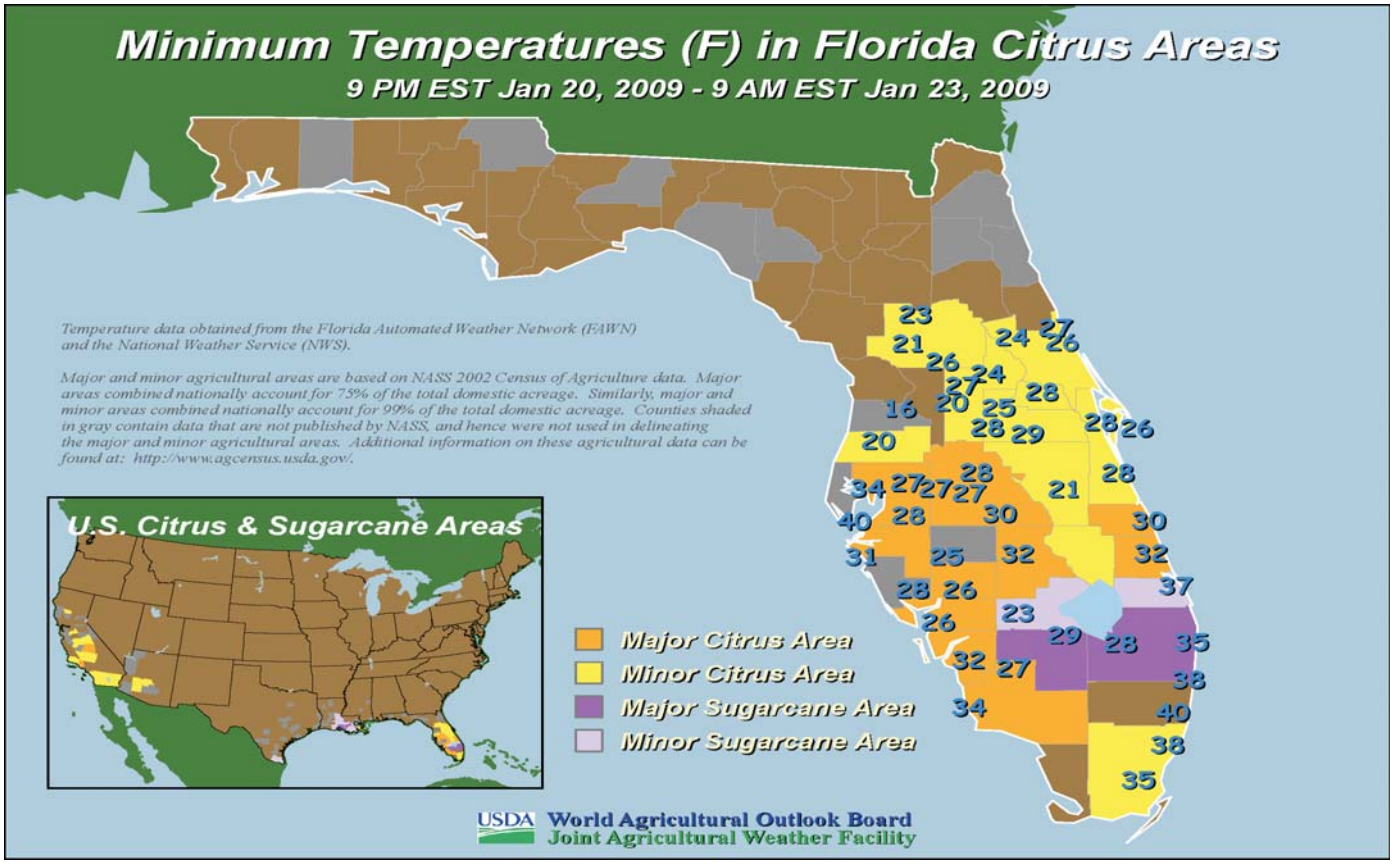
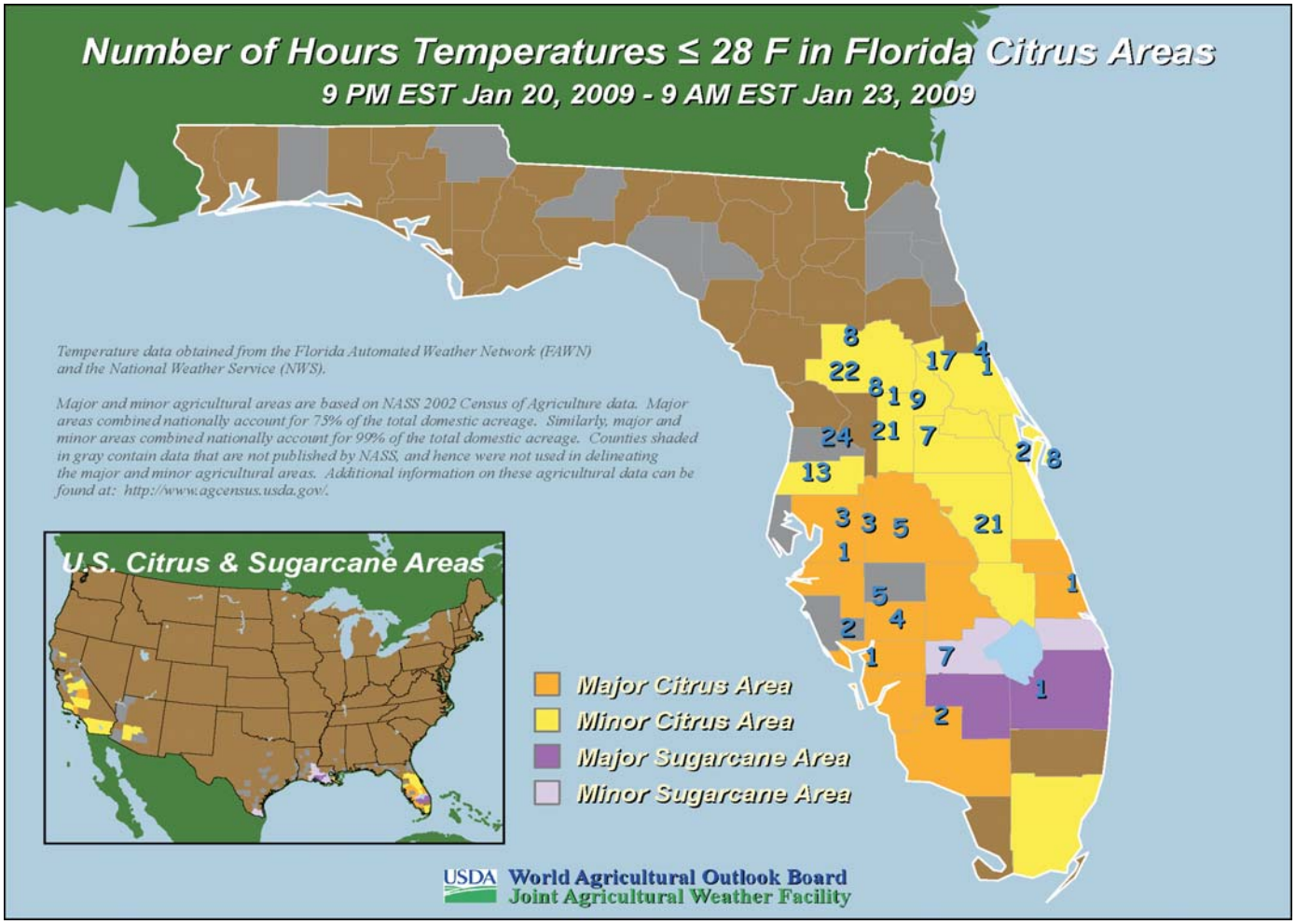
In the NOAA satellite image below, captured on January 22 at 1:15 pm EST, Arctic high pressure has settled directly over Florida's peninsula, leaving the Sunshine State under cloudless skies and nearly calm conditions. Earlier in the day, low temperatures had ranged mostly from 20 to 32 degrees F across central and interior southern Florida, threatening citrus and winter crops. Only southeastern Florida completely escaped the freeze.




Minimum Temperatures (F) in Florida Citrus Areas
9 PM EST Jan 20, 2009 - 9 AM EST Jan 23, 2009
Temperature data obtained from the Florida Automated Weather Network (FAWN) and the National Weather Service (NWS).
Major and minor agricultural areas are based on NASS 2002 Census of Agriculture data. Major areas combined nationally account for 75% of the total domestic acreage. Similarly, major and minor areas combined nationally account for 99% of the total domestic acreage. Counties shaded in gray contain data that are not published by NASS, and hence were not used in delineating the major and minor agricultural areas. Additional information on these agricultural data can be found at: http://www.agcensus.usda.gov/.
U.S. Citrus & Sugarcane Areas
Major Citrus Area
Minor Citrus Area
Major Sugarcane Area
Minor Sugarcane Area
USDA World Agricultural Outlook Board
Joint Agricultural Weather Facility


Number of Hours Temperatures ≤ 28 F in Florida Citrus Areas
9 PM EST Jan 20, 2009 - 9 AM EST Jan 23, 2009
Temperature data obtained from the Florida Automated Weather Network (FAWN) and the National Weather Service (NWS).
Major and minor agricultural areas are based on NASS 2002 Census of Agriculture data. Major areas combined nationally account for 75% of the total domestic acreage. Similarly, major and minor areas combined nationally account for 99% of the total domestic acreage. Counties shaded in gray contain data that are not published by NASS, and hence were not used in delineating the major and minor agricultural areas. Additional information on these agricultural data can be found at: http://www.agcensus.usda.gov/.
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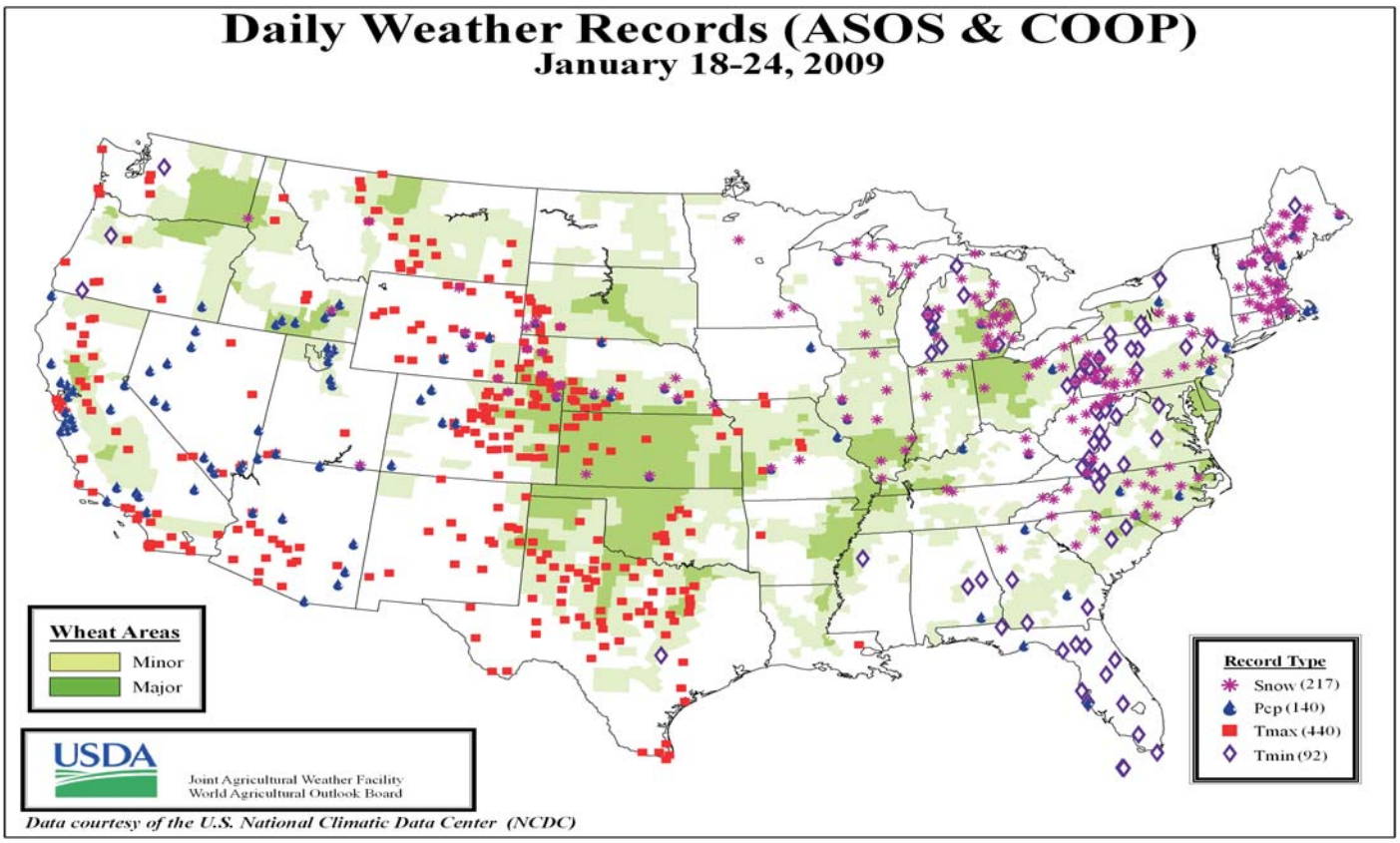
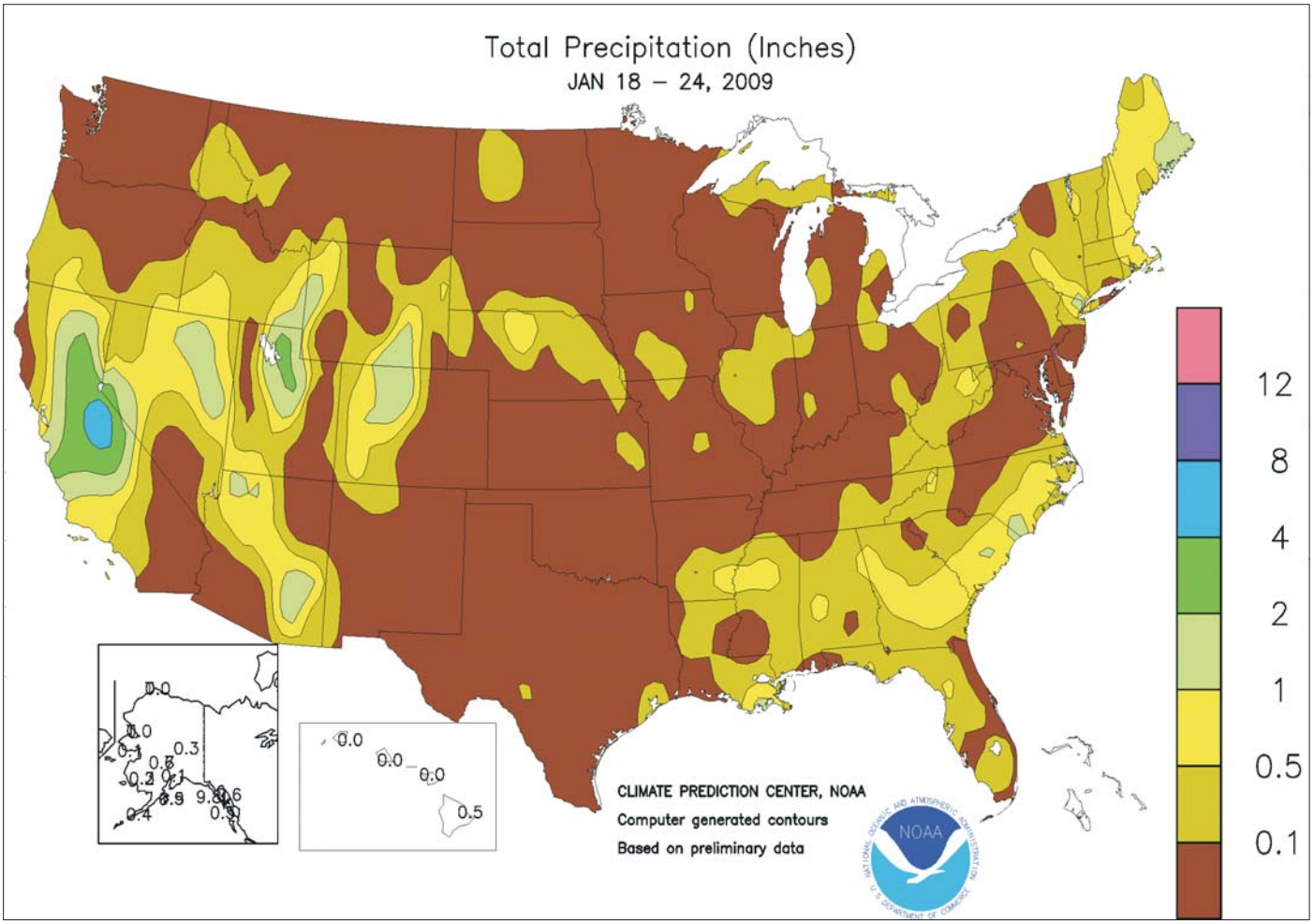
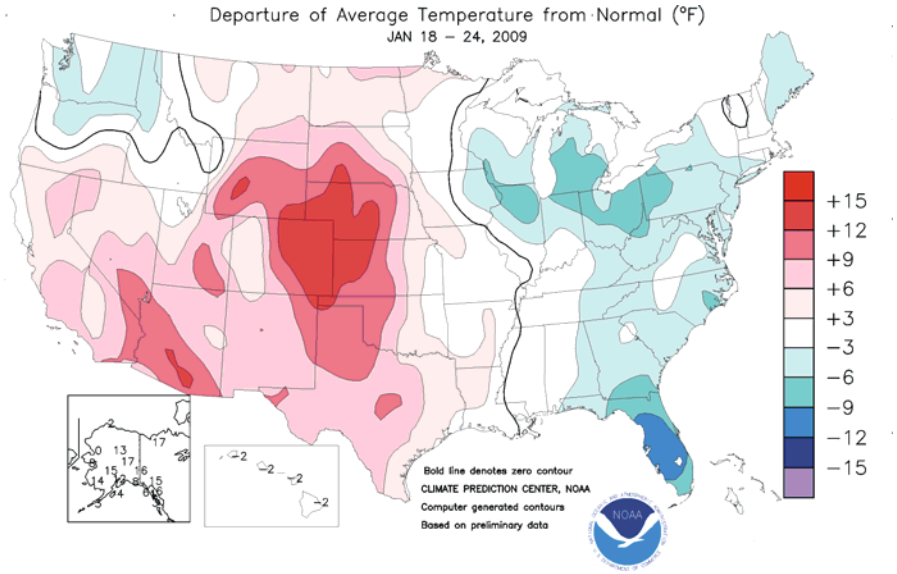

Daily Weather Records (ASOS & COOP)
January 18-24, 2009
Wheat Areas
Minor
Major
Record Type
Snow (217)
Pcp (140)
Tmax (440)
Tmin (92)
USDA
Joint Agricultural Weather Facility
World Agricultural Outlook Board
Data courtesy of the U.S. National Climatic Data Center (NCDC)


Total Precipitation (Inches)
JAN 18 – 24, 2009
12
8
4
2
1
0.5
0.1
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data
NOAA

(Continued from front cover)



except for some late-week snow in **Nebraska** and environs. Warm, windy, dry conditions further stressed fall-sown grains on the **southern Plains**, where little rain or snow has fallen since mid-October. Farther east, much of the **Midwest** gained a temporary reprieve from a sustained period of cold, snowy weather. By week's end, however, cold air settled back across the **Corn Belt**. Elsewhere, light rain showers dotted the **Southeast**, but a more significant event was the late-week cold blast that threatened crops across **Florida's peninsula**. The cold outbreak lasted from January 21-23 but peaked on the middle date, with citrus, sugarcane, strawberries, and winter vegetables among the crops being monitored for signs of freeze injury. Weekly temperatures averaged more than 10°F below normal in parts of **Florida** but generally ranged from 10 to 15°F above normal across the **central and southern High Plains**.

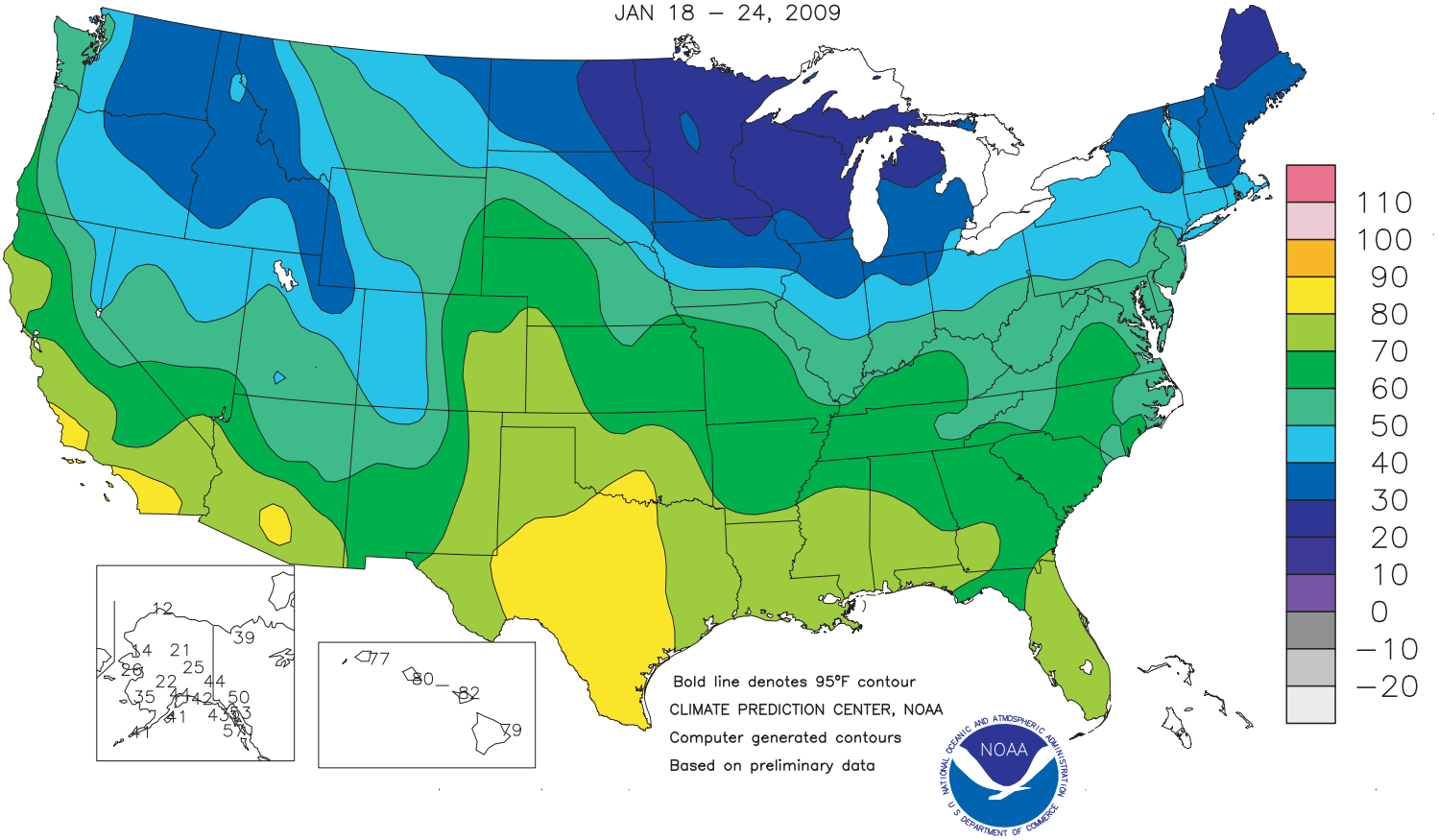
Early in the week, snow followed bitterly cold weather into the **Northeast**. On January 18, **Caribou, ME** (-30°F), notched a daily-record low, while **Portland, ME** (11.5 inches), and **Concord, NH** (10.3 inches), received record snowfall totals for the date. Snow squalls lingered downwind of the **Great Lakes**, where daily-record totals in **Michigan** included 6.2 inches (on January 18) in **Alpena** and 9.5 inches (on January 19) in **Marquette**. Snow also affected parts of the **Southeast**, including **North Carolina**, where **Raleigh-Durham** (3.5 inches) measured a record-setting sum for January 20. During the second half of the week, very cold air spread across **Florida**, where **Key West** (48 and 47°F) tallied consecutive daily-record lows on January 22-23. On January 22, several **Florida** locations, including **Tampa** (34°F) and **Lakeland** (27°F), experienced their lowest temperatures since January 3, 2008. During the January 2008 cold snap, lows dipped to 29°F in **Tampa** and 26°F in **Lakeland**. In some **Florida** locations, freezes occurred on three consecutive nights. Windy weather prevailed on the first night, January 20-21, while conditions were calm or nearly so on the nights of January 21-22 and 22-23. For most locations across **central and interior southern Florida**, the morning of January 22 featured the outbreak's lowest temperatures, which were highly variable but generally ranged from 20 to 32°F.

Farther west, record-setting warmth prevailed from much of the week across the **western half of the nation**. January 18 featured daily-record highs in **California** locations such as **El Cajon** (87°F), **San Diego** (81°F), and **Bakersfield** (75°F). **Tucson, AZ**, reached 80°F for the first time this year on January 19, compared to the climatological average of February 12. The following day, warmth spread to the **High Plains**, where records for January 20 included 70°F in **Imperial, NE**, and 64°F in **Rapid City, SD.** The following day in **Colorado**, highs reached record-setting levels for January 21 in **Pueblo** (75°F, following a low of 14°F) and **Denver** (71°F). Across **Texas**, warmth peaked on January 22, when highs soared to 85°F in both **Wichita Falls** and **San Angelo**. Toward week's end, however, stormy weather arrived in parts of the **West**. In **Utah's Wasatch Range**, January 23-25 snowfall totals reached 34 inches at **Alta** and 28 inches at **Snowbird**. Elsewhere, daily-record precipitation amounts included 0.82 inch (on January 22) in **Salinas, CA**, and 0.48 inch (on January 23) in **Winnemucca, NV. Cheyenne, WY**, received a daily-record snowfall of 3.7 inches on January 24, just 3 days after posted a daily-record high of 60°F.

Cool, mostly dry weather prevailed in **Hawaii**, where several daily-record lows were established. In fact, **Kahului, Maui** (54 and 53°F), posted consecutive daily-record lows on January 19-20. On the **Big Island**, **Hilo** (58°F) also notched a record low for January 18. Farther north, mild weather prevailed for the second consecutive week across **interior Alaska**, where weekly temperatures averaged at least 15°F above normal in some locations. On January 18, the monthly record high of 35°F (previously achieved on January 21, 1991) was tied in **Northway**. Meanwhile, very wet weather persisted in parts of **southeastern Alaska**, especially early in the week. January 18 was the wettest January day on record in **Yakutat**, where 7.44 inches fell (previously, 5.09 inches on January 11, 1997). By January 25, **Yakutat's** month-to-date precipitation reached 20.09 inches (186 percent of normal).

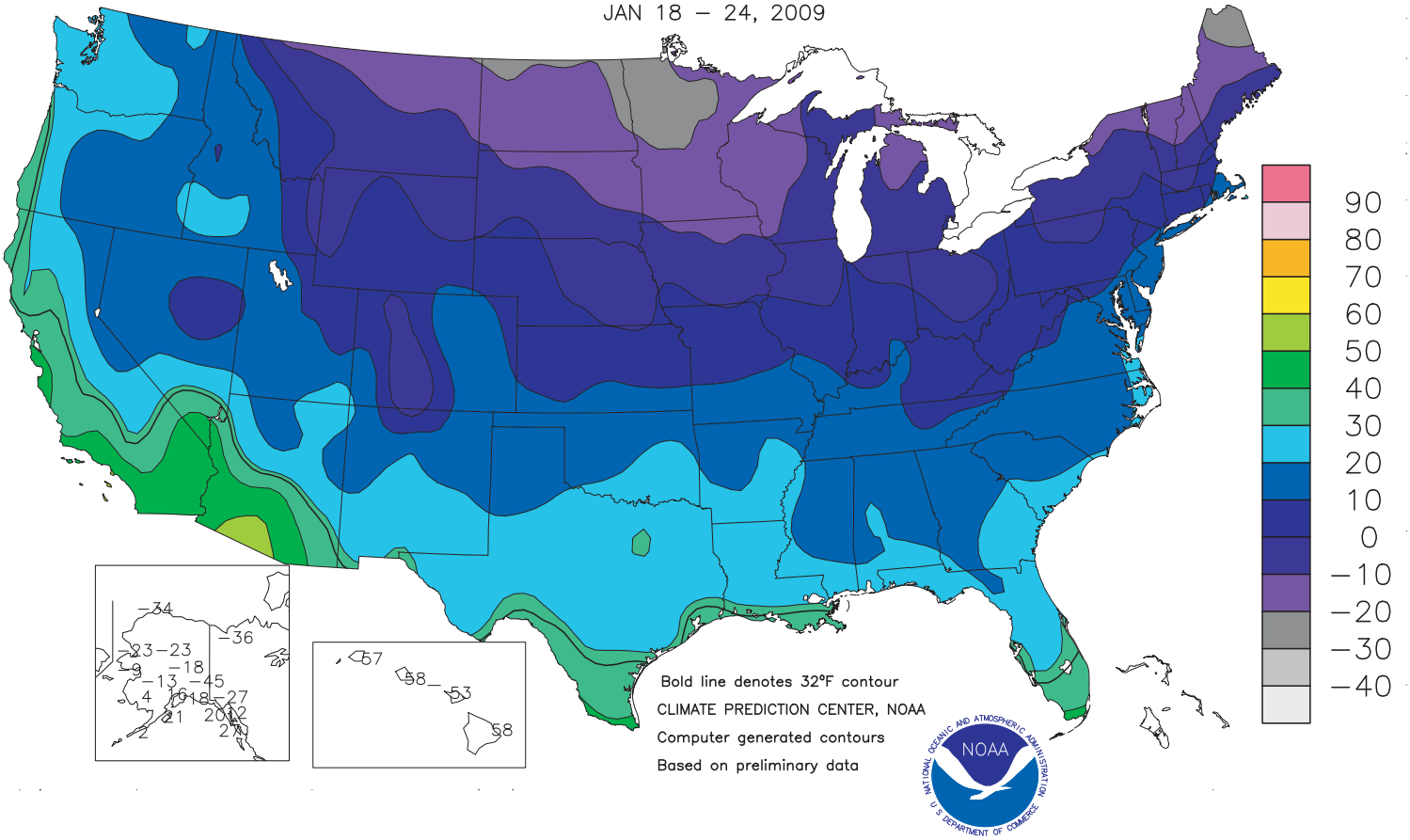
Extreme Maximum Temperature (°F)

JAN 18 – 24, 2009



Extreme Minimum Temperature (°F)

JAN 18 – 24, 2009



National Weather Data for Selected Cities

Weather Data for the Week Ending January 24, 2009

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

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. °F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC01	PCT. NORMAL SINCE DEC01	TOTAL, IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	53	30	69	16	41	-1	0.51	-0.75	0.35	12.41	148	6.01	154	82	38	0	4	2	0
	HUNTSVILLE	49	27	61	16	38	-1	0.02	-1.22	0.02	16.19	170	4.17	105	82	62	0	5	1	0
	MOBILE	60	35	72	20	48	-2	0.22	-1.13	0.17	7.68	88	3.30	82	79	54	0	3	2	0
	MONTGOMERY	56	30	72	18	43	-3	0.35	-0.80	0.20	7.02	83	2.63	76	84	40	0	4	2	0
AK	ANCHORAGE	31	24	44	16	28	12	0.11	-0.02	0.06	1.73	115	0.74	161	76	61	0	6	3	0
	BARROW	-2	-20	12	-34	-11	3	0.01	0.01	0.01	0.37	285	0.22	2200	89	71	0	7	1	0
	FAIRBANKS	17	-4	25	-18	6	16	0.25	0.14	0.12	1.02	89	0.52	130	83	66	0	7	3	0
	JUNEAU	36	26	53	12	31	6	0.62	-0.42	0.40	9.81	110	5.89	170	82	58	0	4	3	0
	KODIAK	38	29	41	21	34	4	1.54	-0.30	0.89	15.18	112	7.45	126	93	87	0	4	5	1
	NOME	21	7	26	-9	14	8	0.10	-0.09	0.09	1.80	110	0.80	129	89	81	0	7	2	0
AZ	FLAGSTAFF	46	25	51	15	36	6	0.37	-0.12	0.18	5.38	164	0.64	44	89	51	0	5	3	0
	PHOENIX	77	55	80	48	66	12	0.11	-0.06	0.11	1.12	74	0.15	25	58	36	0	0	1	0
	PRESCOTT	61	34	65	24	47	10	0.18	-0.17	0.16	2.47	106	0.19	18	80	32	0	3	3	0
	TUCSON	75	53	80	40	64	12	0.25	0.05	0.16	1.74	100	0.66	93	62	41	0	0	3	0
AR	FORT SMITH	53	27	66	19	40	2	0.00	-0.52	0.00	3.17	63	0.08	5	75	37	0	7	0	0
	LITTLE ROCK	54	29	65	20	42	2	0.00	-0.80	0.00	4.82	66	1.12	44	78	32	0	6	0	0
CA	BAKERSFIELD	72	47	93	40	60	12	0.11	-0.16	0.07	0.86	55	0.23	29	73	65	1	0	2	0
	FRESNO	64	45	70	36	54	8	0.85	0.35	0.40	2.11	75	1.02	70	85	74	0	0	3	0
	LOS ANGELES	74	58	84	55	66	9	0.52	-0.18	0.25	3.03	80	0.52	26	51	42	0	0	3	0
	REDDING	64	37	73	28	51	5	0.70	-0.81	0.46	4.25	46	0.92	20	87	72	0	3	2	0
	SACRAMENTO	62	42	69	33	52	6	1.34	0.43	1.09	2.94	58	1.41	55	92	55	0	0	3	1
	SAN DIEGO	73	57	81	50	65	7	0.04	-0.48	0.04	3.45	121	0.07	5	68	45	0	0	1	0
	SAN FRANCISCO	60	48	67	43	54	4	0.64	-0.40	0.44	3.06	52	0.69	23	88	74	0	0	3	0
	STOCKTON	62	41	70	31	51	5	1.75	1.12	0.85	3.24	89	2.05	112	93	77	0	2	4	2
CO	ALAMOSA	42	3	51	-7	22	7	0.00	-0.04	0.00	0.56	112	0.08	47	85	57	0	7	0	0
	CO SPRINGS	59	28	70	13	44	16	0.00	-0.04	0.00	0.21	34	0.06	30	51	18	0	4	0	0
	DENVER INTL	60	30	71	17	45	17	0.00	-0.03	0.00	0.27	54	0.03	16	56	24	0	4	0	0
	GRAND JUNCTION	40	22	44	15	31	5	0.21	0.09	0.18	1.17	123	0.31	72	82	68	0	7	2	0
	PUEBLO	64	22	75	14	43	14	0.00	-0.06	0.00	0.31	49	0.02	8	43	23	0	6	0	0
CT	BRIDGEPORT	33	17	43	12	25	-5	0.18	-0.66	0.13	7.62	124	1.78	67	80	63	0	7	2	0
	HARTFORD	35	14	42	9	24	-2	0.34	-0.53	0.29	8.47	134	1.82	67	76	60	0	7	2	0
DC	WASHINGTON	40	22	51	18	31	-3	0.00	-0.71	0.00	4.99	93	2.02	87	71	36	0	7	0	0
DE	WILMINGTON	37	19	48	15	28	-3	0.02	-0.74	0.01	6.42	109	2.02	81	80	43	0	7	2	0
FL	DAYTONA BEACH	65	35	74	26	50	-8	0.08	-0.63	0.08	1.24	25	0.31	14	90	26	0	3	1	0
	JACKSONVILLE	62	31	71	21	46	-7	0.12	-0.73	0.12	1.62	31	1.03	41	88	34	0	5	1	0
	KEY WEST	69	55	76	47	62	-8	0.08	-0.41	0.08	1.35	36	0.46	29	85	61	0	0	1	0
	MIAMI	71	51	77	42	61	-7	0.00	-0.41	0.00	0.35	10	0.08	6	81	46	0	0	0	0
	ORLANDO	66	38	73	29	52	-9	0.29	-0.26	0.29	1.25	31	0.59	35	82	33	0	3	1	0
	PENSACOLA	60	38	71	24	49	-3	0.15	-1.09	0.14	4.47	58	1.19	32	83	52	0	3	2	0
	TALLAHASSEE	60	30	70	18	45	-7	0.41	-0.82	0.36	2.50	32	1.00	26	91	54	0	5	4	0
	TAMPA	64	41	71	34	53	-8	0.13	-0.37	0.13	1.66	43	0.43	28	82	42	0	0	1	0
	WEST PALM BEACH	70	45	77	35	58	-8	0.00	-0.90	0.00	1.87	33	0.11	4	76	43	0	0	0	0
GA	ATHENS	52	28	67	16	40	-2	0.17	-0.90	0.10	6.24	90	2.57	79	71	50	0	5	2	0
	ATLANTA	51	30	67	18	40	-2	0.41	-0.77	0.26	7.15	98	2.76	80	80	52	0	4	2	0
	AUGUSTA	55	28	69	19	42	-3	0.38	-0.66	0.24	5.41	86	1.36	43	81	51	0	6	2	0
	COLUMBUS	54	30	68	19	42	-5	0.38	-0.69	0.28	6.69	86	2.29	68	87	37	0	5	2	0
	MACON	55	29	69	19	42	-3	0.36	-0.79	0.22	6.51	88	1.18	34	81	41	0	5	2	0
	SAVANNAH	57	34	68	22	45	-4	0.53	-0.38	0.33	1.40	25	0.84	30	86	52	0	4	3	0
HI	HILO	77	61	79	58	69	-2	0.51	-1.77	0.40	39.44	228	9.05	133	75	65	0	0	3	0
	HONOLULU	78	64	80	58	71	-2	0.00	-0.59	0.00	11.28	236	3.70	192	79	63	0	0	0	0
	KAHULUI	79	60	82	53	70	-2	0.00	-0.85	0.00	7.35	128	2.17	81	77	64	0	0	0	0
	LIHUE	75	64	77	57	69	-3	0.00	-1.02	0.00	20.25	249	0.78	23	76	67	0	0	0	0
ID	BOISE	33	27	38	24	30	0	0.17	-0.13	0.07	2.38	102	0.63	66	86	80	0	6	3	0
	LEWISTON	32	28	35	26	30	-4	0.12	-0.13	0.12	3.03	166	1.43	186	84	77	0	7	1	0
	POCATELLO	38	18	42	10	28	3	0.52	0.27	0.27	2.18	115	0.69	87	92	83	0	7	3	0
IL	CHICAGO/O'HARE	25	10	34	-1	17	-5	0.00	-0.36	0.00	6.84	188	1.05	87	80	64	0	7	0	0
	MOLINE	26	6	45	-4	16	-5	0.12	-0.21	0.09	5.19	156	0.62	55	82	68	0	7	2	0
	PEORIA	26	9	42	-1	18	-4	0.06	-0.24	0.03	4.45	129	0.42	40	85	63	0	7	2	0
	ROCKFORD	22	6	31	-5	14	-5	0.02	-0.28	0.02	4.83	159	0.82	84	82	68	0	7	1	0
	SPRINGFIELD	33	13	52	5	23	-2	0.05	-0.28	0.05	4.12	111	0.20	17	84	56	0	7	1	0
IN	EVANSVILLE	39	19	59	7	29	-2	0.08	-0.56	0.08	5.55	100	0.74	37	81	61	0	7	1	0
	FORT WAYNE	27	7	39	-1	17	-6	0.01	-0.43	0.01	5.01	119	0.67	46	83	61	0	7	1	0
	INDIANAPOLIS	33	14	48	8	24	-2	0.01	-0.54	0.01	6.09	127	0.51	29	83	53	0	7	1	0
	SOUTH BEND	26	7	34	-7	16	-7	0.04	-0.44	0.02	5.29	113	1.50	93	81	66	0	7	3	0
IA	BURLINGTON	30	9	49	-1	20	-3	0.00	-0.28	0.00	4.07	134	0.09	10	85	60	0	7	0	0
	CEDAR RAPIDS	20	3	36	-10	12	-6	0.02	-0.20	0.02	2.27	104	0.30	43	91	73	0	7	1	0
	DES MOINES	29	12	47	-3	20	0	0.00	-0.22	0.00	2.45	121	0.46	66	73	62	0	7	0	0
	DUBUQUE	20	3	31	-8	11	-6	0.00	-0.28	0.00	4.10	160	1.08	123	84	73	0	7	0	0
	SIOUX CITY	33	10	44	-4	22	3	0.04	-0.08	0.03	1.78	163	0.32	74	84	69	0	7	2	0
	WATERLOO	21	3	29	-10	12	-4	0.01	-0.16	0.01	2.59	157	0.58	107	85	74	0	7	1	0
KS	CONCORDIA	47	21	59	4	34	8	0.00	-0.13	0.00	0.55	41	0.01	2	73	48	0	7	0	0
	DODGE CITY	57	23	70	6	40	10	0.00	-0.11	0.00	0.16	13	0.01	2	61	22	0	7	0	0
	GOODLAND	57	22	73	4	39	11	0.00	-0.08	0.00	0.27	38	0.08	25	58	26	0	6	0	0
	TOPEKA	44	19	65	5	31	4	0.03	-0.16	0.03	1.63	78	0.14	21	71	50	0	7	1	0

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending January 24, 2009

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC01	PCT. NORMAL SINCE DEC01	TOTAL, IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	WICHITA	50	24	62	11	37	7	0.00	-0.15	0.00	1.27	64	0.03	5	67	43	0	6	0	0
KY	JACKSON	39	21	62	8	30	-4	0.19	-0.58	0.11	9.94	147	3.10	124	83	54	0	6	3	0
	LEXINGTON	37	19	60	7	28	-4	0.03	-0.69	0.03	7.83	122	1.80	75	79	58	0	7	1	0
	LOUISVILLE	40	21	61	13	31	-2	0.06	-0.66	0.06	6.34	105	1.16	50	80	49	0	7	1	0
	PADUCAH	43	22	59	13	32	-1	0.00	-0.76	0.00	6.41	95	0.60	26	76	39	0	6	0	0
LA	BATON ROUGE	65	39	75	27	52	2	0.09	-1.34	0.05	9.61	101	3.25	76	84	40	0	2	2	0
	LAKE CHARLES	66	40	72	28	53	2	0.00	-1.28	0.00	3.38	39	0.39	10	91	44	0	1	0	0
	NEW ORLEANS	65	40	77	29	52	0	0.34	-1.03	0.32	8.45	94	6.24	158	77	53	0	2	2	0
	SHREVEPORT	63	37	75	25	50	4	0.02	-1.01	0.02	4.96	64	1.82	57	81	39	0	3	1	0
ME	CARIBOU	16	-7	26	-30	5	-4	0.97	0.32	0.54	7.49	140	1.88	87	90	67	0	7	5	1
	PORTLAND	28	10	34	-1	19	-2	0.72	-0.19	0.60	6.06	85	1.44	49	85	61	0	7	2	1
MD	BALTIMORE	40	18	55	13	29	-3	0.01	-0.76	0.01	5.24	90	2.05	82	69	38	0	7	1	0
MA	BOSTON	33	19	40	14	26	-3	0.55	-0.33	0.43	9.37	145	2.27	83	77	58	0	7	2	0
	WORCESTER	29	12	38	5	21	-2	0.53	-0.39	0.43	7.71	115	2.25	77	83	58	0	7	2	0
MI	ALPENA	21	7	29	-8	14	-3	0.20	-0.18	0.19	4.54	146	0.69	54	86	67	0	7	2	0
	GRAND RAPIDS	24	8	33	-2	16	-6	0.00	-0.44	0.00	7.29	177	1.02	72	85	63	0	7	0	0
	HOUGHTON LAKE	21	-1	28	-15	10	-7	0.07	-0.28	0.04	5.21	181	0.61	54	91	79	0	7	4	0
	LANSING	23	7	33	-3	15	-6	0.01	-0.34	0.01	4.54	139	0.74	68	84	71	0	7	1	0
	MUSKEGON	26	10	34	-4	18	-5	0.06	-0.43	0.06	7.74	183	0.75	47	82	67	0	7	1	0
	TRAVERSE CITY	22	10	30	-1	16	-5	0.01	-0.67	0.01	7.10	149	0.71	34	91	69	0	7	1	0
MN	DULUTH	17	0	22	-16	9	1	0.01	-0.26	0.01	2.20	131	0.26	35	83	72	0	7	1	0
	INT'L FALLS	17	-6	24	-19	6	4	0.03	-0.16	0.02	2.27	182	0.85	155	86	70	0	7	2	0
	MINNEAPOLIS	21	4	28	-12	13	0	0.05	-0.17	0.05	1.61	95	0.45	64	83	71	0	7	1	0
	ROCHESTER	19	2	27	-13	10	-2	0.04	-0.18	0.04	2.06	124	0.54	84	83	77	0	7	1	0
	ST. CLOUD	20	-2	29	-22	9	1	0.00	-0.17	0.00	2.05	171	0.47	92	90	64	0	7	0	0
MS	JACKSON	60	32	74	19	46	1	0.25	-1.04	0.16	12.09	129	3.18	79	87	42	0	4	2	0
	MERIDIAN	57	30	73	17	43	-3	0.30	-1.05	0.26	11.43	121	3.26	79	91	54	0	4	2	0
	TUPELO	51	28	67	16	40	0	0.43	-0.68	0.26	14.31	145	2.83	76	82	51	0	5	3	0
MO	COLUMBIA	39	18	60	5	29	1	0.00	-0.37	0.00	2.69	74	0.12	10	77	44	0	7	0	0
	KANSAS CITY	42	18	64	3	30	3	0.01	-0.24	0.01	1.91	78	0.04	5	73	41	0	7	1	0
	SAINT LOUIS	39	21	58	10	30	0	0.00	-0.47	0.00	4.58	105	0.03	2	71	53	0	6	0	0
	SPRINGFIELD	44	21	65	13	33	2	0.00	-0.46	0.00	2.78	60	0.19	13	74	50	0	7	0	0
MT	BILLINGS	43	22	62	0	33	9	0.06	-0.11	0.03	1.60	129	0.37	65	66	38	0	4	2	0
	BUTTE	35	5	44	1	21	3	0.00	-0.11	0.00	1.24	139	0.12	33	89	49	0	7	0	0
	CUT BANK	37	14	58	-8	26	7	0.00	-0.08	0.00	0.09	15	0.00	0	67	37	0	6	0	0
	GLASGOW	20	1	40	-19	11	1	0.00	-0.06	0.00	1.63	267	0.33	138	86	75	0	7	0	0
	GREAT FALLS	38	17	57	-5	28	6	0.02	-0.12	0.01	2.00	171	0.50	100	62	35	0	6	2	0
	HAVRE	22	4	39	-14	13	-1	0.00	-0.08	0.00	0.90	107	0.41	124	78	73	0	7	0	0
	MISSOULA	25	18	29	15	21	-3	0.10	-0.12	0.10	2.01	105	0.59	78	87	81	0	7	1	0
NE	GRAND ISLAND	45	17	59	-6	31	9	0.06	-0.05	0.05	0.81	79	0.12	33	82	56	0	7	2	0
	LINCOLN	41	15	60	-8	29	7	0.01	-0.13	0.01	0.87	65	0.07	15	78	59	0	7	1	0
	NORFOLK	38	18	52	0	28	8	0.08	-0.03	0.08	3.90	386	2.61	725	81	64	0	7	1	0
	NORTH PLATTE	51	17	63	6	34	11	0.03	-0.05	0.03	0.39	58	0.15	56	82	32	0	7	1	0
	OMAHA	36	16	51	0	26	4	0.01	-0.16	0.01	0.95	66	0.16	30	85	66	0	7	1	0
	SCOTTSBLUFF	54	20	68	8	37	12	0.20	0.09	0.13	0.52	57	0.32	89	63	35	0	7	2	0
	VALENTINE	47	17	63	-4	32	11	0.19	0.13	0.19	0.46	88	0.22	116	77	47	0	6	1	0
NV	ELY	47	21	51	8	34	9	0.82	0.65	0.64	1.48	147	1.17	229	87	62	0	6	3	1
	LAS VEGAS	67	48	70	42	58	11	0.04	-0.09	0.03	1.19	155	0.04	11	57	37	0	0	2	0
	RENO	49	29	53	20	39	5	0.40	0.17	0.22	0.94	60	0.44	64	85	72	0	4	3	0
	WINNEMUCCA	48	22	51	12	35	5	0.94	0.77	0.48	2.15	154	1.03	175	95	78	0	5	3	0
NH	CONCORD	29	4	37	-6	16	-4	0.68	0.02	0.58	8.56	170	3.92	188	89	60	0	7	2	1
NJ	NEWARK	37	19	48	16	28	-3	0.24	-0.67	0.15	8.94	139	3.06	107	65	48	0	7	2	0
NM	ALBUQUERQUE	59	32	62	25	46	10	0.00	-0.09	0.00	0.65	79	0.00	0	59	27	0	4	0	0
NY	ALBANY	30	14	42	0	22	0	0.16	-0.39	0.16	5.99	136	1.42	82	80	59	0	7	1	0
	BINGHAMTON	26	9	41	1	18	-3	0.08	-0.49	0.07	5.00	104	1.37	77	85	66	0	7	2	0
	BUFFALO	26	13	42	-3	20	-4	0.16	-0.53	0.13	7.71	127	0.92	41	87	68	0	7	3	0
	ROCHESTER	30	11	45	2	20	-4	0.03	-0.49	0.01	4.85	111	1.24	75	75	61	0	7	3	0
	SYRACUSE	28	14	44	7	21	-1	0.15	-0.43	0.14	5.14	104	1.25	68	85	66	0	7	2	0
NC	ASHEVILLE	44	21	64	12	32	-4	0.01	-0.92	0.01	6.99	113	2.24	80	81	52	0	6	1	0
	CHARLOTTE	48	26	62	15	37	-5	0.00	-0.91	0.00	5.54	92	2.31	82	77	36	0	6	0	0
	GREENSBORO	47	25	61	16	36	-2	0.00	-0.80	0.00	5.20	94	1.90	77	72	30	0	6	0	0
	HATTERAS	50	37	55	28	44	-2	0.16	-0.99	0.16	5.57	65	0.73	18	89	61	0	2	1	0
	RALEIGH	47	27	60	13	37	-3	0.22	-0.72	0.20	5.10	87	2.04	72	78	52	0	5	2	0
	WILMINGTON	51	30	61	19	40	-6	0.51	-0.53	0.35	4.54	65	1.50	47	91	53	0	5	3	0
ND	BISMARCK	26	5	36	-14	16	6	0.00	-0.08	0.00	2.06	290	0.65	241	86	69	0	7	0	0
	DICKINSON	25	9	36	-17	17	3	0.00	-0.07	0.00	0.94	174	0.15	75	86	67	0	7	0	0
	FARGO	20	1	28	-20	10	4	0.02	-0.15	0.02	2.30	209	0.50	94	84	71	0	7	1	0
	GRAND FORKS	20	-1	28	-23	10	5	0.00	-0.14	0.00	1.27	128	0.29	66	90	70	0	7	0	0
	JAMESTOWN	20	4	29	-17	12	4	0.00	-0.14	0.00	1.28	151	0.21	51	88	72	0	7	0	0
	WILLISTON	23	3	40	-18	13	5	0.00	-0.11	0.00	3.47	373	0.97	269	82	72	0	7	0	0
OH	AKRON-CANTON	28	7	43	-5	17	-8	0.12	-0.43	0.06	5.10	108	1.66	94	77	70	0	7	3	0
	CINCINNATI	36	17	56	4	26	-3	0.02	-0.61	0.02	5.58	104	1.09	53	80	59	0	7	1	0
	CLEVELAND	28	11	43	0	20	-5	0.54	-0.01	0.21	6.03	123	2.20	126	85	70	0	7	4	0
	COLUMBUS	31	12	49	0	21	-7	0.11	-0.44	0.11	6.40	137	1.52	87	77	65	0	7	1	0
	DAYTON	31	11	46	0	21	-5	0.03	-0.53	0.02	5.96	121	0.78	43	82	63	0	7	2	0
	MANSFIELD	26	7	41	-5	17	-7	0.05	-0.53	0.05	6.04	118	1.18	63	85	65	0	7	1	0

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

Weather Data for the Week Ending January 24, 2009

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC01	PCT. NORMAL SINCE DEC01	TOTAL, IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	26	5	39	-7	16	-8	0.02	-0.39	0.01	5.13	129	0.88	65	81	67	0	7	2	0
	YOUNGSTOWN	28	10	44	1	19	-6	0.12	-0.39	0.07	5.71	124	2.08	126	77	63	0	7	5	0
OK	OKLAHOMA CITY	56	26	76	16	41	5	0.00	-0.25	0.00	0.71	25	0.00	0	61	26	0	6	0	0
	TULSA	52	28	71	19	40	4	0.00	-0.33	0.00	1.77	50	0.00	0	65	40	0	6	0	0
OR	ASTORIA	52	35	61	30	43	1	0.10	-2.08	0.10	20.14	117	10.19	150	78	64	0	3	1	0
	BURNS	33	23	39	17	28	3	0.04	-0.21	0.03	2.04	96	0.41	50	95	90	0	7	2	0
	EUGENE	44	26	47	21	35	-5	0.02	-1.72	0.02	6.57	48	1.72	32	96	88	0	6	1	0
	MEDFORD	54	31	61	21	43	4	0.49	-0.06	0.46	4.32	93	1.39	80	94	62	0	4	2	0
	PENDLETON	28	26	30	24	27	-7	0.18	-0.15	0.18	3.75	152	1.17	118	93	88	0	7	1	0
	PORTLAND	45	33	50	26	39	-1	0.00	-1.13	0.00	7.07	76	4.37	122	74	59	0	4	0	0
	SALEM	46	28	51	23	37	-3	0.01	-1.30	0.01	9.29	88	3.27	80	83	69	0	5	1	0
PA	ALLENTOWN	34	10	48	3	22	-5	0.13	-0.67	0.09	8.01	136	1.17	47	77	58	0	7	2	0
	ERIE	30	12	45	-3	21	-6	0.12	-0.41	0.06	8.96	162	1.60	88	76	69	0	7	3	0
	MIDDLETOWN	35	14	51	8	25	-3	0.19	-0.44	0.15	8.04	155	1.19	61	86	50	0	7	2	0
	PHILADELPHIA	38	21	53	18	29	-3	0.05	-0.74	0.04	7.38	127	1.81	72	72	48	0	7	2	0
	PITTSBURGH	31	13	50	4	22	-5	0.13	-0.48	0.12	6.66	140	1.88	99	82	60	0	7	2	0
	WILKES-BARRE	31	12	46	3	21	-5	0.07	-0.48	0.07	6.38	150	1.29	76	78	51	0	7	1	0
	WILLIAMSPORT	33	10	47	1	22	-3	0.07	-0.58	0.07	5.56	114	1.58	81	75	55	0	7	1	0
RI	PROVIDENCE	34	16	40	11	25	-4	0.74	-0.25	0.70	9.90	137	2.64	85	73	61	0	7	2	1
SC	BEAUFORT	55	34	67	23	45	-3	0.53	-0.41	0.46	0.89	15	0.82	28	90	46	0	4	4	0
	CHARLESTON	54	33	65	21	43	-5	0.61	-0.32	0.45	1.55	25	1.20	41	88	51	0	4	4	0
	COLUMBIA	52	29	65	17	40	-4	0.24	-0.83	0.17	4.40	66	1.00	30	81	52	0	6	3	0
	GREENVILLE	50	30	65	20	40	-1	0.00	-0.99	0.00	6.82	98	2.80	90	67	38	0	4	0	0
SD	ABERDEEN	23	3	33	-21	13	2	0.00	-0.09	0.00	1.91	265	0.83	244	85	74	0	7	0	0
	HURON	27	9	36	-13	18	4	0.00	-0.11	0.00	1.07	149	0.19	58	84	68	0	7	0	0
	RAPID CITY	45	19	64	-6	32	10	0.06	0.00	0.06	0.78	122	0.25	104	65	37	0	6	1	0
	SIOUX FALLS	29	10	42	-7	19	5	0.00	-0.11	0.00	0.98	114	0.28	82	80	68	0	7	0	0
TN	BRISTOL	40	19	57	12	30	-4	0.14	-0.66	0.11	9.02	154	4.61	188	91	51	0	7	3	0
	CHATTANOOGA	47	25	59	16	36	-3	0.04	-1.20	0.02	14.70	171	4.95	131	82	59	0	6	2	0
	KNOXVILLE	43	22	59	11	33	-4	0.15	-0.88	0.12	14.44	186	5.43	166	88	49	0	6	3	0
	MEMPHIS	51	31	65	21	41	1	0.00	-0.92	0.00	10.74	124	2.11	71	71	42	0	4	0	0
	NASHVILLE	45	25	61	14	35	-2	0.03	-0.85	0.03	8.86	120	2.12	75	77	47	0	5	1	0
TX	ABILENE	68	35	82	24	52	9	0.00	-0.19	0.00	0.15	8	0.08	12	41	23	0	2	0	0
	AMARILLO	63	29	73	13	46	10	0.00	-0.12	0.00	0.05	5	0.00	0	47	18	0	4	0	0
	AUSTIN	73	34	81	20	53	3	0.00	-0.39	0.00	0.81	21	0.41	30	68	28	0	4	0	0
	BEAUMONT	67	42	74	33	55	3	0.00	-1.29	0.00	3.23	34	0.69	17	90	40	0	0	0	0
	BROWNSVILLE	78	49	84	41	64	5	0.00	-0.31	0.00	0.66	33	0.11	13	88	45	0	0	0	0
	CORPUS CHRISTI	76	42	83	33	59	3	0.00	-0.33	0.00	0.47	17	0.04	4	76	44	0	0	0	0
	DEL RIO	74	41	81	33	58	7	0.00	-0.11	0.00	0.44	41	0.03	9	60	30	0	0	0	0
	EL PASO	68	41	70	35	54	9	0.00	-0.08	0.00	0.28	26	0.01	3	52	22	0	0	0	0
	FORT WORTH	65	37	80	31	51	7	0.00	-0.37	0.00	0.49	12	0.22	16	54	24	0	3	0	0
	GALVESTON	68	49	75	42	59	3	0.12	-0.82	0.12	2.04	32	0.22	8	88	45	0	0	1	0
	HOUSTON	70	43	78	31	56	4	0.00	-0.83	0.00	2.08	33	0.40	15	80	41	0	1	0	0
	LUBBOCK	68	28	79	20	48	10	0.00	-0.09	0.00	0.03	3	0.02	7	47	21	0	6	0	0
	MIDLAND	70	34	81	26	52	9	0.00	-0.11	0.00	0.20	20	0.07	19	46	22	0	3	0	0
	SAN ANGELO	72	35	85	29	53	8	0.00	-0.17	0.00	0.06	4	0.01	2	50	22	0	3	0	0
	SAN ANTONIO	74	41	79	32	58	8	0.00	-0.36	0.00	0.46	15	0.21	18	64	20	0	1	0	0
	VICTORIA	78	41	87	26	59	6	0.00	-0.54	0.00	0.50	12	0.07	4	74	29	0	1	0	0
	WACO	71	36	84	27	54	8	0.00	-0.39	0.00	1.12	27	0.44	33	69	27	0	3	0	0
	WICHITA FALLS	65	32	85	21	48	8	0.00	-0.22	0.00	1.05	43	0.00	0	53	25	0	3	0	0
UT	SALT LAKE CITY	39	24	48	17	32	3	0.48	0.18	0.24	2.59	119	1.31	139	90	72	0	5	3	0
VT	BURLINGTON	28	7	39	-11	17	-1	0.18	-0.32	0.09	3.76	100	0.83	54	82	62	0	7	2	0
VA	LYNCHBURG	45	20	62	12	32	-2	0.00	-0.80	0.00	5.76	101	2.24	90	68	33	0	7	0	0
	NORFOLK	45	27	60	22	36	-4	0.25	-0.66	0.25	5.17	89	1.34	48	78	47	0	7	1	0
	RICHMOND	46	22	61	15	34	-2	0.00	-0.79	0.00	4.87	86	0.82	32	65	40	0	7	0	0
	ROANOKE	46	25	64	18	36	0	0.00	-0.74	0.00	4.38	86	2.13	96	54	35	0	6	0	0
	WASH/DULLES	41	16	57	9	29	-3	0.01	-0.68	0.01	4.66	89	2.03	94	69	39	0	7	1	0
WA	OLYMPIA	41	28	48	23	35	-3	0.03	-1.68	0.03	13.08	99	8.36	158	94	87	0	7	1	0
	QUILLAYUTE	53	27	62	24	40	-1	0.00	-3.07	0.00	21.53	89	10.35	108	91	77	0	7	0	0
	SEATTLE-TACOMA	42	30	51	29	36	-5	0.02	-1.14	0.02	9.40	102	5.30	147	95	90	0	6	1	0
	SPOKANE	25	19	34	17	22	-6	0.01	-0.38	0.01	5.12	145	1.07	84	96	88	0	7	1	0
	YAKIMA	31	27	33	25	29	-1	0.02	-0.23	0.02	1.81	82	0.98	118	86	80	0	7	1	0
WV	BECKLEY	34	17	55	7	25	-5	0.13	-0.59	0.09	7.12	133	2.69	119	83	63	0	7	2	0
	CHARLESTON	38	20	60	14	29	-4	0.11	-0.63	0.06	8.28	148	3.20	142	84	54	0	7	2	0
	ELKINS	34	12	54	1	23	-5	0.12	-0.65	0.09	8.38	143	3.40	141	90	57	0	7	2	0
	HUNTINGTON	38	20	60	8	29	-3	0.05	-0.66	0.04	6.74	120	2.33	103	84	54	0	6	2	0
WI	EAU CLAIRE	17	-3	24	-15	7	-5	0.01	-0.23	0.01	1.70	98	0.07	10	93	67	0	7	1	0
	GREEN BAY	19	4	29	-7	11	-4	0.00	-0.28	0.00	4.79	214	1.07	129	85	66	0	7	0	0
	LA CROSSE	20	-2	30	-15	9	-7	0.02	-0.26	0.02	2.93	145	0.61	77	93	65	0	7	1	0
	MADISON	21	4	30	-4	12	-5	0.05	-0.23	0.04	3.82	153	0.53	64	84	68	0	7	2	0
	MILWAUKEE	23	11	29	1	17	-3	0.00	-0.41	0.00	5.10	147	0.92	74	74	61	0	7	0	0
WY	CASPER	44	22	57	2	33	11	0.40	0.29	0.31	1.24	127	0.86	239	62	41	0	6	2	0
	CHEYENNE	51	28	61	7	40	14	0.17	0.09	0.12	0.51	70	0.20	74	45	33	0	3	2	0
	LANDER	46	19	60	10	33	13	0.01	-0.10	0.01	0.73	75	0.19	53	67	30	0	7	1	0
	SHERIDAN	42	17	61	-7	29	8	0.11	-0.06	0.05	1.67	138	1.01	191	70	50	0	6	3	0

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

Selected December and Annual Precipitation Records

Compiled by USDA/WAOB from information provided by the NWS

Record-High Annual Precipitation
2008 Annual Precipitation Total (Inches)

Location	Total	Normal	Previous Record
Ozone, AR	81.25	52.76	80.79 in 1957
Deer, AR	78.21	54.49	76.61 in 1990
Lead Hill, AR	73.69	44.28	66.14 in 1945
Hartford, CT	65.43	46.16	64.55 in 1972
St. Louis, MO	57.96	38.75	54.97 in 1982
Wichita, KS	53.82	30.38	50.48 in 1951
Chicago, IL	50.86	36.27	49.35 in 1983
Grand Rapids, MI	48.80	37.13	47.53 in 1986

Record-High Monthly Snowfall
December 2008 Snowfall Total (Inches)

Location	Total	Normal	Previous Record
Spokane, WA	61.5	13.7	56.9 in January 1950
Madison, WI	40.4	12.1	37.0 in February 1994
Wausau, WI	37.6	13.5	36.2 in March 1956
Fargo, ND	33.5	7.9	31.5 in January 1989
Bismarck, ND	33.3	8.2	31.1 in March 1975
Williston, ND	32.0	8.2	30.9 in March 1975

Record-High December Snowfall
December 2008 Snowfall Total (Inches)

Location	Total	Normal	Previous Record
Spokane, WA	61.5	13.7	42.7 in 1996
Alpena, MI	48.1	19.6	46.3 in 1970
Appleton, WI	47.2	10.8	28.1 in 1968
Rochester, NY	46.2	21.9	46.1 in 1981
Houghton Lake, MI	45.8	15.9	30.4 in 1968
Green Bay, WI	45.6	12.6	36.4 in 1887
Madison, WI	40.4	12.1	35.0 in 2000
Wausau, WI	37.6	13.5	31.7 in 1990
Oshkosh, WI	33.7	10.9	26.0 in 1896
Fargo, ND	33.5	7.9	not available
Bismarck, ND	33.3	8.2	21.7 in 1916
La Crosse, WI	32.7	9.6	30.4 in 1990
Pendleton, OR	32.5	5.2	26.6 in 1983
Williston, ND	32.0	8.2	21.2 in 1933
Great Falls, MT	30.5	8.4	25.0 in 1945
Grand Forks, ND	30.1	7.2	27.6 in 1918
Glasgow, MT	24.8	6.3	18.8 in 2003
Sisseton, SD	19.4	5.8	19.0 in 1972
Portland, OR	18.9	n/a	15.7 in 1968

2008 U.S. Weather Review

Annual "Weather Review" provided by Douglas Le Comte, NOAA/CPC; annual national rankings provided by NCDC

The year featured record snows from the Upper Midwest to New England, return of drought to California, major spring flooding in the Midwest, drought development in the southern Plains, and a very active severe storm and hurricane season. Timely rains and moderate temperatures kept most of the Corn Belt out of drought during the summer growing season. Severe wintry conditions closed out the year for many parts of the nation.

Winter (December 2007 - February 2008)

Numerous low-pressure systems crossed the country this winter, and frequent cold air excursions kept most of the precipitation in the form of snow. From the Upper Midwest to New England, snow covered the ground from early December through March and, in some cases, well into April, and many locations from the Upper Midwest to northern New England reported the greatest snowfall totals on record.

On the West Coast, Pacific storms slammed into California during January 4-6, dumping several feet of snow on the Sierra, flooding the valleys, and bringing high winds to many areas. Snow totals reached as high as 71 inches in the mountains. This storm and others storms boosted snow pack in the mountains, providing some measure of drought relief.

In a year with numerous tornado outbreaks, the deadliest erupted from a powerful storm that raked the South on February 5-6. The 2008 Super Tuesday tornado outbreak killed 57 people in four states, including 31 in Tennessee. This was the deadliest U.S. outbreak since May 31, 1985. The low pressure system that caused the tornadoes also caused straight-line wind damage, large hail, major flooding, freezing rain and heavy snow.

Abnormal cold affected the nation from Alaska to Florida this winter. Extraordinary chill covered the eastern Interior of Alaska during the first 12 days of February. Tok Junction recorded -70°F on the 6th, the first minus-70-degree reading in Alaska in more than 7 years.

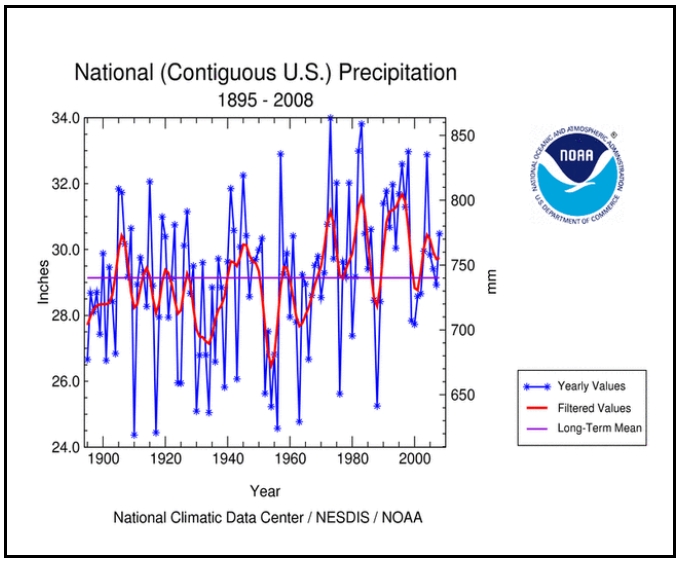
Over the Lower 48 states this winter, one cold wave sent readings to -26°F in Rhinelander, Wisconsin on January 19. Readings dipped to -30°F in Iowa on January 24, the lowest reading for the state since 2000. On February 10-11, temperatures plummeted to -40°F in International Falls, MN. Snow cover provided some protective insulation for winter wheat during the spells of bitter cold.

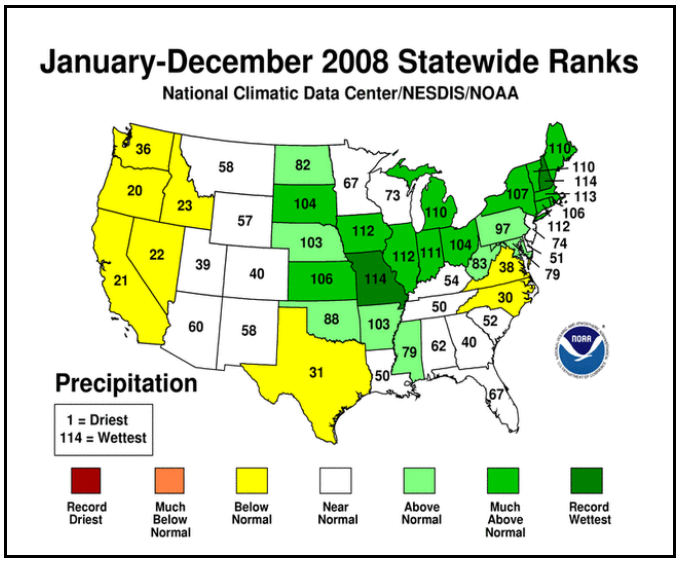
On the southern High Plains, wheat continued to experience the effects of poor crop establishment from the autumn dryness. Winter precipitation less than one-half of normal across extreme eastern Colorado and central and southern Texas did little to help winter crop prospects, and drought stretched from southern Oklahoma southward to the Rio Grande by the end of February.

Dry weather also aggravated drought conditions in western North Dakota and central and eastern Montana, the area reporting less than one-half normal precipitation.

In contrast, winter precipitation totaled above normal over a vast area of the nation from California through the Rockies, and on into the Midwest and Northeast, many areas measuring more than twice normal rain and snow.

Winter temperatures averaged 2 to 6°F below normal from the West Coast into the Upper Midwest, while the Southeast and





Eastern Seaboard experienced readings around 2°F above normal.

In the Southeast, heavy rains relieved drought from southern Alabama into South Carolina, but rainfall around 75 percent of normal farther north failed to end the long-term drought extending from northern Alabama into southwestern Virginia.

Spring (March - May)

The wet winter eased California's drought, but abnormally dry weather took over during March through May. With cumulative precipitation less than 25 percent of normal, the meteorological spring ranked as the driest such period in more than 100 years of record-keeping and, by early June, drought had returned to much of the state.

Elsewhere, persistent rain and snow set the stage for the record flooding that affected the Midwest from March to June. Major flooding first took place in March, when monthly precipitation exceeded 200 percent of normal from Ohio to Missouri and on to Texas. The White River in Arkansas reached its highest level since 1981 when it rose to 12 feet above flood stage in Batesville on March 20.

In April, the wet conditions due to rain and late snows extending from the eastern Plains to the Mississippi Valley significantly delayed summer crop planting and emergence.

May continued the stormy pattern, featuring a total of 460 tornadoes. The outbreak of May 10-11 led to 24 fatalities, including 16 in Missouri and 6 in Oklahoma. Another severe weather episode ripped across the Midwest and Plains during May 22-27. An EF5 twister swept through Parkersburg, Iowa on the 25th, destroying much of the town.

In Texas, drought intensified over south-central parts of the state, as San Antonio measured its driest September-May since 1872, with only 6.57 inches of rain. In contrast, the series of low pressure areas crossing the Midwest brought about the fifth wettest spring in 114 years. An area extending from southeastern Missouri to southwestern Indiana saw its wettest spring on record. Farther north, spring precipitation less than 50 percent of normal resulted in worsening drought in North Dakota.

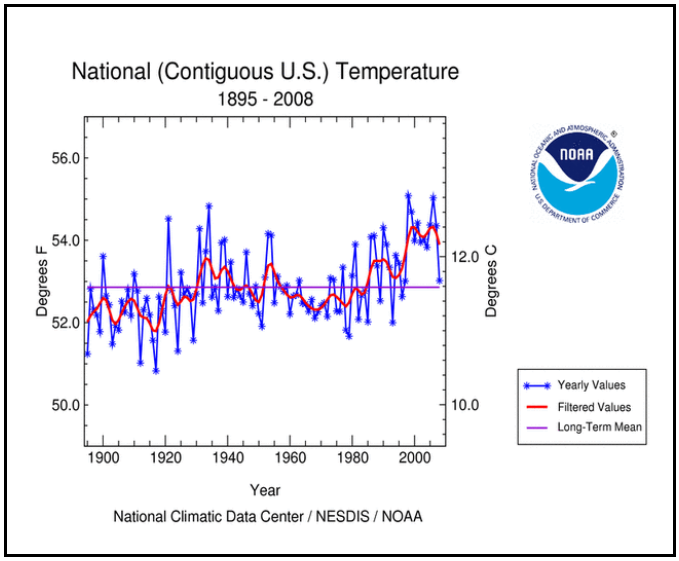
Summer (June - August)

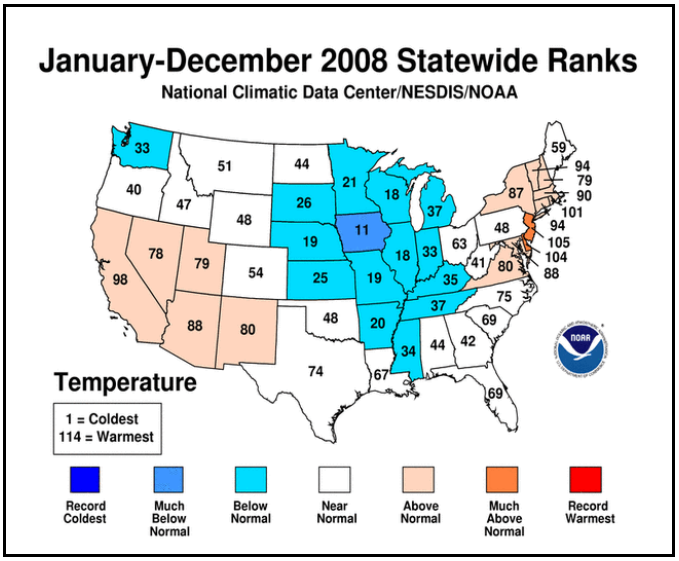
The wet spring set the stage for historic flooding in June. The trigger was a storm that dumped over 4 inches of rain from Iowa to Wisconsin on June 7-8, and 6 to 10 inches of rain in central Indiana on June 6-7. Several Mississippi River tributaries rose to record levels on June 7, and floods affected parts of the Mississippi River basin from June 7-21. On June 13, the Cedar River inundated Cedar Rapids, IA, as the river exceeded the previous record crest by 11.12 feet and topped the flood stage by 19.12 feet.

This was also a very active tropical cyclone season. A total of 16 named storms formed in the Atlantic, including eight hurricanes. For the first time, six consecutive tropical cyclones (Dolly, Edouard, Fay, Gustav, Hanna, and Ike) made landfall on the U.S. mainland. Tropical Storm Fay became the only storm on record to make landfall four times in a single state, when it crisscrossed Florida in August. Fay, which first made landfall on Florida's west coast on August 18, dumped up to 2 feet of water on the state. On the positive side, Fay brought much-needed moisture to the Southeast drought region, eliminating drought in most of Alabama and across southern Georgia, while shrinking drought to the north.

The record dry spring contributed to high fire danger in California. Dry lightning strikes during June 21-22 ignited some 800 fires over northern California.

Below-normal rainfall in July and August led to drought over parts of Minnesota, while August dryness contributed to drought





in parts of Wisconsin. Despite a dry August, the bulk of the Corn Belt escaped drought once more this year. Lack of sustained high temperatures benefited crop prospects, with June-August temperatures averaging near normal in the Ohio Valley and slightly below normal over the rest of the Midwest.

Following heavy, flooding rains in February, a dry spring and summer brought drought to many parts of Hawaii. By the end of August, drought intensity reached severe to extreme levels over eastern Oahu, western Maui, and western parts of the Big Island.

In Alaska, south-central areas experienced abnormally cool weather this summer. Anchorage reported its coolest May-August since 1982.

Autumn (September- November)

Hurricane Gustav weakened to category-two strength before making landfall along the central coast of Louisiana on September 1. The storm led to the state's largest evacuation in history, as 1.9 million people fled the storm. The storm dropped as much as 11 inches of rain in the Baton Rouge area, and Gustav's winds toppled thousands of trees.

Category two Hurricane Ike struck Galveston during the night of September 12. The Bolivar Peninsula just north of Galveston sustained the most damage, as the storm surge inundated the Peninsula. Galveston also suffered major damage, as the estimated storm surge reached 14 feet. The storm drove inland and damaged buildings in Houston, and then tracked northwestward and northward. Ike maintained a strong punch as its remains later tracked through the Midwest, bringing winds of 50 to 60 mph and drenching rains to several states.

Santa Ana winds fanned the flames of fires in the Los Angeles area in October, but the most damaging event took place in November when canyon winds reaching 70 mph spread the flames of three fires in the Los Angeles area that scorched over 700 homes.

December

The end of 2008 featured extreme wintry weather as a series of storms brought heavy snow, bitter cold, high winds, freezing rain, tornadoes, and flooding rains to many parts of the nation.

One low pressure system affected a vast area from Texas to New England on December 9-12, bringing snow to the Deep South, 16 tornadoes to Mississippi, flooding in several southeastern states, and a historic ice storm to New York into New England. One-half to 1 inch of ice on December 11-12 left more than one 1.25 million utility customers without electricity, some for more than a week. Two snowstorms in quick succession built up impressive snow packs across the Northeast in the days following the ice storm.

A major cold air mass plunged southward from Canada on December 12, triggering a blizzard that paralyzed transportation in the northern Plains. By December 15, temperatures had plummeted to -30°F in Montana and -19°F in Denver.

An intense upper level low brought snow deep into southern California and Nevada on December 17, blanketing Las Vegas with 3.6 inches of snow, a record for the month.

Record cold and snow struck the Pacific Northwest during December 13-22. Portland, Oregon experienced its heaviest December snowstorm since 1968 as up to a foot of snow fell on December 20-22. Heavy snow from this storm and others gave Spokane, Washington, a new December snowfall record (61.5 inches) plus a record for any month of the year. December snowfall records were also established in North Dakota and Wisconsin and locations as disparate as Montana and New York.

Hawaii experienced two significant periods of heavy rainfall in December, one on December 10-13 and another on December 26, the latter bringing Hilo on the Big Island its wettest December day on record (10.12 inches).

Melting snow and heavy rains led to Midwestern flooding late in the month, while continued dry weather allowed drought to worsen over Texas. The year's rainfall totaled as little as one-half of normal in south-central Texas, resulting in exceptional drought over the San Antonio and Austin areas. This was the driest year for San Antonio and Austin since the mini-Dust Bowl years of the mid-1950s. Negligible rainfall across most of Texas this month led to expansion of drought and dryness and increased concerns for crops, pastures, and wildfire danger.

In contrast, 2008 was the wettest year on record for several locations in the heartland (St. Louis, MO, Wichita, KS, Chicago, IL) as well as the Northeast (Hartford, CT).

With much of the nation seeing abundant rain and snow in December, concluding an unusually wet year for many states, U.S. drought coverage dropped to its lowest levels in more than 3 years.

TEMPERATURE AND PRECIPITATION SUMMARY
Annual 2008

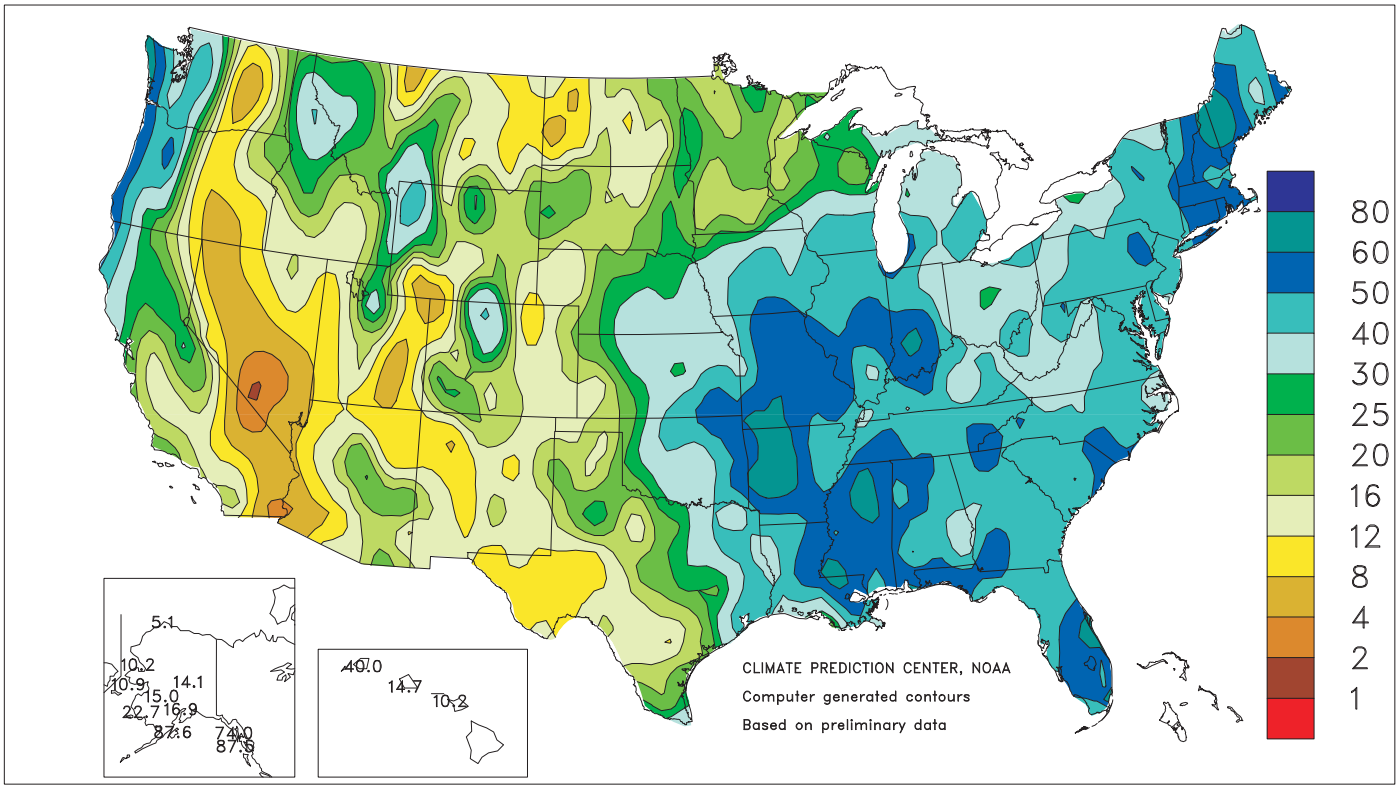
STATES AND STATIONS	TEMP, °F		PRECIP.	
	AVERAGE	DEPARTURE	TOTAL	DEPARTURE
AL BIRMINGHAM	63	1	55.09	1.11
HUNTSVILLE	62	1	48.36	-9.15
MOBILE	67	0	69.18	2.89
MONTGOMERY	65	0	51.81	-2.96
AK ANCHORAGE	35	-1	16.94	0.88
BARROW	14	4	5.09	0.94
COLD BAY	37	-1	30.08	-10.20
FAIRBANKS	26	-1	14.05	3.72
JUNEAU	40	-2	73.98	15.65
KING SALMON	32	-3	18.02	-1.39
KODIAK	39	-1	87.58	12.23
NOME	24	-3	10.93	-5.63
AZ FLAGSTAFF	47	1	19.48	-3.43
PHOENIX	75	2	9.57	1.28
TUCSON	70	1	8.73	-3.44
AR FORT SMITH	61	0	61.04	17.17
LITTLE ROCK	62	0	58.19	7.26
CA BAKERSFIELD	66	1	3.25	-3.23
EUREKA	50	-3	30.17	-7.93
FRESNO	65	2	8.46	-2.77
LOS ANGELES	64	1	11.02	-2.13
REDDING	63	1	21.72	-11.80
SACRAMENTO	61	0	13.32	-4.61
SAN DIEGO	64	0	11.11	0.34
SAN FRANCISCO	58	1	15.23	-4.87
STOCKTON	62	0	9.34	-4.50
CO ALAMOSA	40	-1	5.48	-1.77
CO SPRINGS	49	1	13.06	-4.33
DENVER	50	1	10.22	-3.40
GRAND JUNCTION	52	0	7.25	-1.73
PUEBLO	52	0	10.41	-1.98
CT BRIDGEPORT	53	1	47.74	3.59
HARTFORD	51	1	65.44	19.28
DC WASHINGTON	59	1	46.48	7.13
DE WILMINGTON	55	1	40.45	-2.36
FL DAYTONA BEACH	72	1	42.67	-6.62
FT LAUDERDALE	78	2	51.27	-12.93
FT MYERS	75	0	60.10	5.91
JACKSONVILLE	68	0	57.18	4.84
KEY WEST	78	0	39.37	0.43
MELBOURNE	73	1	64.62	16.33
MIAMI	78	1	60.26	1.73
ORLANDO	73	0	53.80	5.45
PENSACOLA	69	1	56.72	-7.56
ST PETERSBURG	74	0	45.47	-4.11
TALLAHASSEE	67	-1	60.52	-2.68
TAMPA	74	1	43.76	-1.00
WEST PALM BEACH	75	0	59.21	-2.18
GA ATHENS	62	0	36.39	-11.43
ATLANTA	62	0	41.43	-8.76
AUGUSTA	64	1	43.76	-0.83
COLUMBUS	65	0	50.77	2.20
MACON	64	0	48.26	3.27
SAVANNAH	67	1	47.53	-2.05
HI HILO	74	0	127.40	1.13
HONOLULU	78	1	14.67	-3.61
KAHULUI	75	-1	10.20	-8.60
LIHUE	76	0	40.02	0.46
ID BOISE	52	0	9.26	-2.94
LEWISTON	53	1	8.76	-3.96
POCATELLO	46	-1	9.67	-2.92
IL CHICAGO/O'HARE	49	0	50.89	14.61
MOLINE	49	-1	48.59	10.55
PEORIA	51	0	46.56	10.54
ROCKFORD	48	0	44.22	7.61
SPRINGFIELD	52	-1	53.75	18.19
IN EVANSVILLE	56	0	53.96	9.69
FORT WAYNE	50	0	38.98	2.43
INDIANAPOLIS	53	0	49.07	8.13
SOUTH BEND	49	-1	46.49	6.79
IA BURLINGTON	51	-1	45.76	7.82
CEDAR RAPIDS	46	-3	47.99	14.58
DES MOINES	49	-1	49.41	14.69
DUBUQUE	45	-2	46.09	10.58
SIOUX CITY	46	-2	31.69	5.70
WATERLOO	45	-2	45.97	12.83
KS CONCORDIA	52	-2	33.43	5.00
DODGE CITY	55	0	18.38	-3.97
GOODLAND	51	0	20.42	0.66
HILL CITY	53	0	31.50	8.61
TOPEKA	54	0	38.22	2.58
WICHITA	56	0	53.81	23.43
KY JACKSON	56	0	40.50	-8.89
LEXINGTON	55	0	47.47	1.57
LONDON-CORBIN	56	0	35.19	-12.22
LOUISVILLE	58	1	46.79	2.26
PADUCAH	57	0	53.76	4.52
LA BATON ROUGE	69	2	57.11	-5.96
LAKE CHARLES	69	1	45.41	-11.77
NEW ORLEANS	70	1	54.03	-10.13
SHREVEPORT	65	-1	49.08	-2.22
ME BANGOR	44	-1	49.19	9.62
CARIBOU	39	0	52.75	15.32
PORTLAND	47	1	61.23	15.40
MD BALTIMORE	56	1	44.97	3.03
MA BOSTON	52	0	54.46	11.93
WORCESTER	48	1	63.03	13.98
MI ALPENA	43	0	31.94	3.54
DETROIT	49	-1	33.98	1.08
FLINT	47	0	35.79	4.18
GRAND RAPIDS	48	0	48.86	11.74
HOUGHTON LAKE	43	0	35.09	6.65
LANSING	47	0	35.93	4.40
MUSKEGON	47	0	45.98	13.11
TRAVERSE CITY	45	0	31.96	-1.51
MN DULUTH	38	-1	31.02	0.02
INT'L FALLS	35	-2	27.67	3.73
MINNEAPOLIS	45	0	22.39	-7.02
ROCHESTER	44	1	30.78	-0.63
ST. CLOUD	41	-1	27.37	0.24
MS JACKSON	65	1	59.60	3.66
MERIDIAN	64	-1	54.36	-4.29
TUPELO	62	1	59.20	3.34
MO COLUMBIA	53	-1	56.81	16.53
JOPLIN	57	-1	63.31	17.24
KANSAS CITY	53	-1	44.73	6.74
SPRINGFIELD	55	-1	60.23	15.26
ST JOSEPH	51	-3	38.92	3.68
ST LOUIS	55	-1	57.96	19.21
MT BILLINGS	48	1	13.94	-0.82
BUTTE	38	-2	10.67	-2.11
GLASGOW	42	-1	15.15	3.92
GREAT FALLS	44	0	17.34	2.45
HELENA	46	2	9.28	-2.04
KALISPELL	43	0	14.51	-2.70
MILES CITY	46	0	11.37	-2.12
MISSOULA	46	1	13.65	-0.17
NE GRAND ISLAND	49	-1	37.11	11.22
HASTINGS	49	-2	34.13	6.19
LINCOLN	50	-1	34.90	6.53
MCCOOK	51	0	23.44	1.82
NORFOLK	47	-2	28.80	2.14
NORTH PLATTE	48	-1	26.63	6.97
OMAHA/EPPLEY	49	-2	36.33	6.11
SCOTTSBLUFF	47	-1	14.31	-2.02
VALENTINE	47	0	20.76	1.24
NV ELKO	46	0	8.12	-1.47
ELY	45	0	5.56	-4.41
LAS VEGAS	70	2	2.64	-1.85
RENO	55	4	6.09	-1.39
WINNEMUCCA	49	0	5.77	-2.56
NH CONCORD	46	0	58.00	20.40
NJ ATLANTIC CITY	55	1	46.58	5.99
NEWARK	55	0	48.83	2.57
NM ALBUQUERQUE	57	0	8.37	-1.09
NY ALBANY	49	1	47.90	9.84
BINGHAMTON	46	0	39.56	0.91
BUFFALO	48	0	47.31	6.77
ROCHESTER	49	1	33.20	-0.76
SYRACUSE	48	1	41.91	1.87
NC ASHEVILLE	55	0	35.64	-11.40
CHARLOTTE	60	-1	42.22	-1.30
GREENSBORO	59	1	38.78	-4.35
HATTERAS	63	1	63.48	5.73
RALEIGH	61	1	50.47	7.42
WILMINGTON	64	0	60.85	3.78
ND BISMARCK	42	0	18.81	1.97
DICKINSON	42	-1	11.24	-5.11
FARGO	40	-2	30.83	9.64
GRAND FORKS	38	-2	24.35	4.75
JAMESTOWN	39	-3	21.48	2.99
MINOT	40	-2	19.75	1.31
WILLISTON	41	0	14.26	0.10
OH AKRON-CANTON	49	-1	41.99	3.52
CINCINNATI	53	-1	45.72	3.11
CLEVELAND	50	0	44.60	5.90
COLUMBUS	53	0	45.49	6.99
DAYTON	51	-1	45.25	5.67
MANSFIELD	49	0	45.07	1.84
TOLEDO	49	-1	41.71	8.50
YOUNGSTOWN	49	0	45.48	7.46
OK OKLAHOMA CITY	61	1	36.03	0.18
TULSA	60	-1	56.10	13.68
OR ASTORIA	50	-1	62.84	-4.29
BURNS	43	-1	8.19	-2.38
EUGENE	51	-1	29.20	-21.71
MEDFORD	55	1	13.81	-4.56
PENDLETON	51	-1	11.78	-0.98
PORTLAND	54	0	26.50	-10.57
SALEM	52	-1	29.20	-10.80
PA ALLENTOWN	51	0	51.55	6.38
ERIE	50	0	49.47	6.70
MIDDLETOWN	53	0	46.27	5.77
PHILADELPHIA	56	1	40.13	-1.91
PITTSBURGH	51	0	39.76	1.91
WILKES-BARRE	49	-1	43.25	5.70
WILLIAMSPORT	51	1	45.20	3.61
PR SAN JUAN	80	0	54.66	3.90
RI PROVIDENCE	52	1	57.12	10.66
SC CHARLESTON	66	1	47.33	-4.20
COLUMBIA	64	0	44.28	-3.99
FLORENCE	63	-1	50.58	5.82
GREENVILLE	62	2	38.04	-12.18
MYRTLE BEACH	64	0	50.79	5.08
SD ABERDEEN	42	-2	24.72	4.50
HURON	44	-1	25.46	4.57
RAPID CITY	45	-2	20.92	4.29
SIOUX FALLS	45	0	25.51	0.82
TN BRISTOL	55	0	35.22	-6.10
CHATTANOOGA	61	1	47.33	-7.19
JACKSON	59	-1	55.31	0.53
KNOXVILLE	59	1	47.78	-0.44
MEMPHIS	62	0	64.19	9.54
NASHVILLE	59	0	48.19	0.08
TX ABILENE	65	1	24.46	0.69
AMARILLO	58	1	22.44	2.72
AUSTIN	68	-1	16.36	-17.29
BEAUMONT	69	0	48.17	-11.72
BROWNSVILLE	75	2	38.48	10.93
COLLEGE STATION	69	0	30.96	-8.71
CORPUS CHRISTI	72	0	28.02	-4.23
DALLAS/FT WORTH	69	3	27.12	-7.61
DEL RIO	71	1	17.23	-1.00
EL PASO	65	0	9.88	0.45
GALVESTON	71	0	35.80	-8.04
HOUSTON	70	1	53.26	5.42
LUBBOCK	61	1	28.01	9.33
MIDLAND	64	1	10.38	-4.42
SAN ANGELO	66	2	19.02	-1.88
SAN ANTONIO	71	2	13.77	-19.15
VICTORIA	71	1	21.73	-18.37
WACO	67	0	33.56	0.22
WICHITA FALLS	65	2	27.80	-1.01
UT SALT LAKE CITY	52	0	11.76	-4.74
VT BURLINGTON	46	1	40.59	4.54
VA LYNCHBURG	56	1	31.65	-11.66
NORFOLK	61	1	44.81	-0.93
RICHMOND	60	2	49.53	5.63
ROANOKE	57	1	33.31	-9.17
WASH/DULLES	56	2	44.07	2.26
WA OLYMPIA	49	-1	39.81	-10.98
QUILLAYUTE	48	-1	85.35	-16.37
SEATTLE-TACOMA	51	-1	30.69	-6.37
SPOKANE	47	0	16.36	-0.31
YAKIMA	49	0	5.04	-3.22
WV BECKLEY	51	-1	42.54	0.92
CHARLESTON	55	0	45.28	1.24
ELKINS	50	0	43.83	-2.26
HUNTINGTON	55	0	40.95	-1.36
WI EAU CLAIRE	42	-2	29.31	-2.81
GREEN BAY	44	0	33.33	4.14
LA CROSSE	45	-2	36.79	4.43
MADISON	45	-1	44.07	11.12
MILWAUKEE	47	-1	44.59	9.78
WAUSAU	42	-2	27.50	-5.86
WY CASPER	44	-1	11.91	-1.12
CHEYENNE	46	1	15.27	-0.18
LANDER	44	-1	14.13	0.71
SHERIDAN	44	-1	15.59	0.87

Based on 1971-2000 normals

***** Not Available**

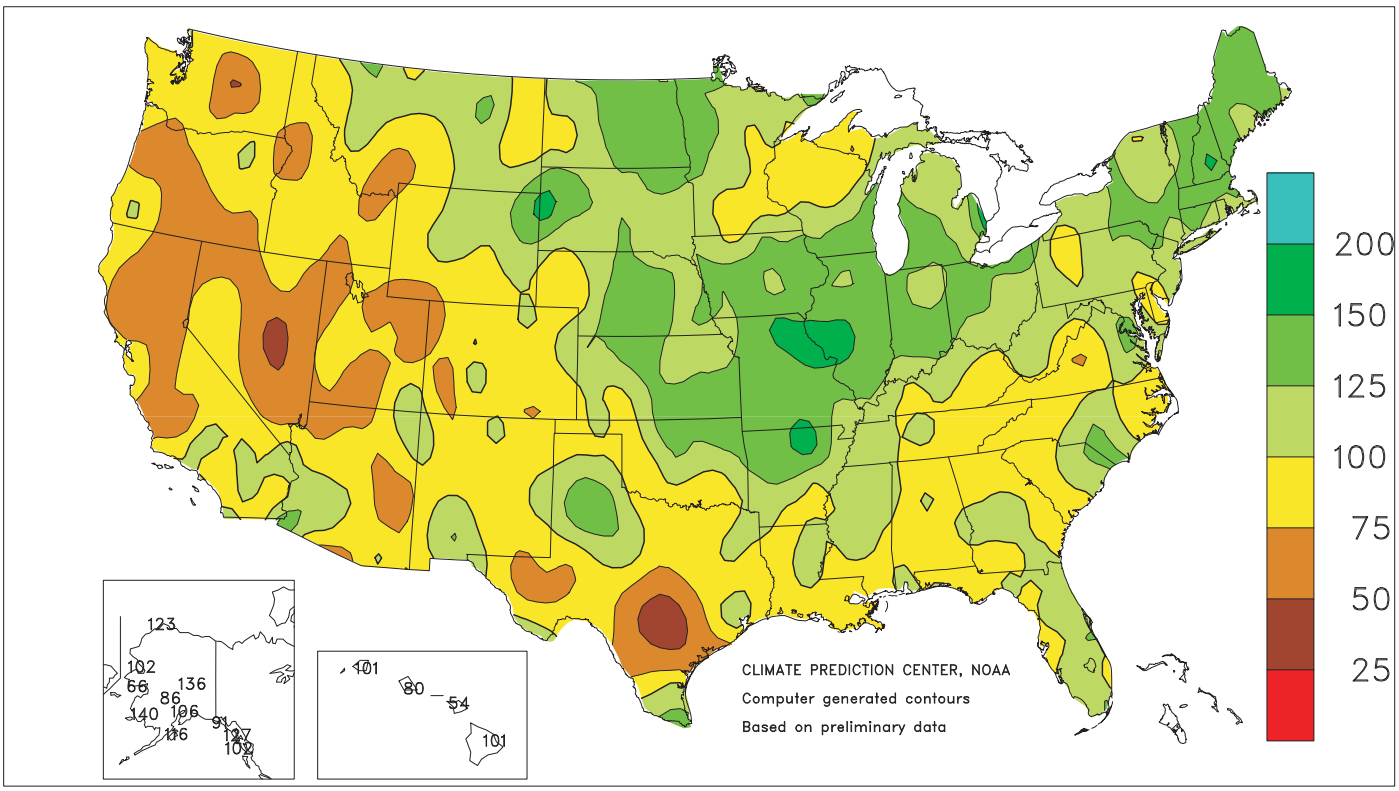
Total Precipitation (Inches)

JAN - DEC 2008



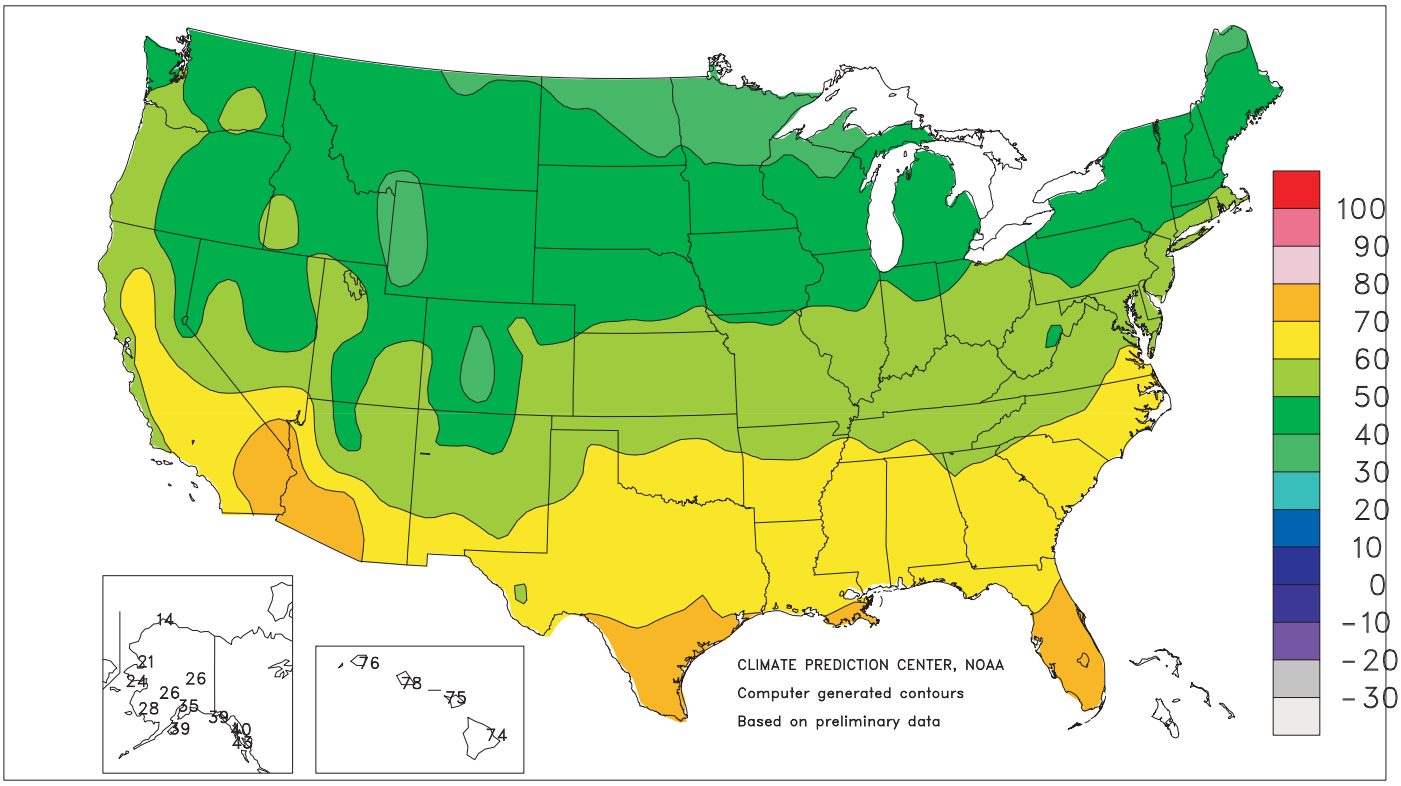
Percent Of Normal Precipitation

JAN - DEC 2008



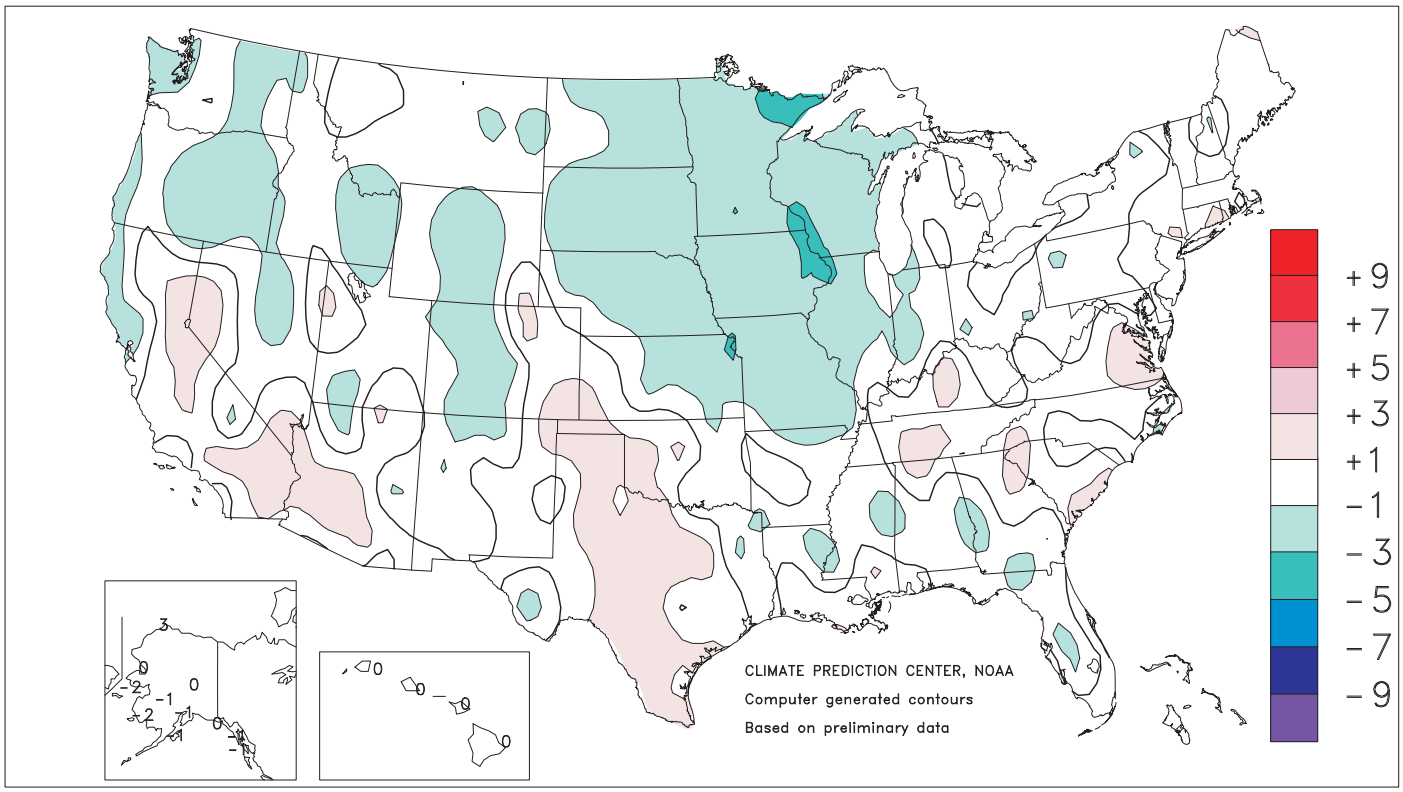
Average Temperature (°F)

JAN - DEC 2008



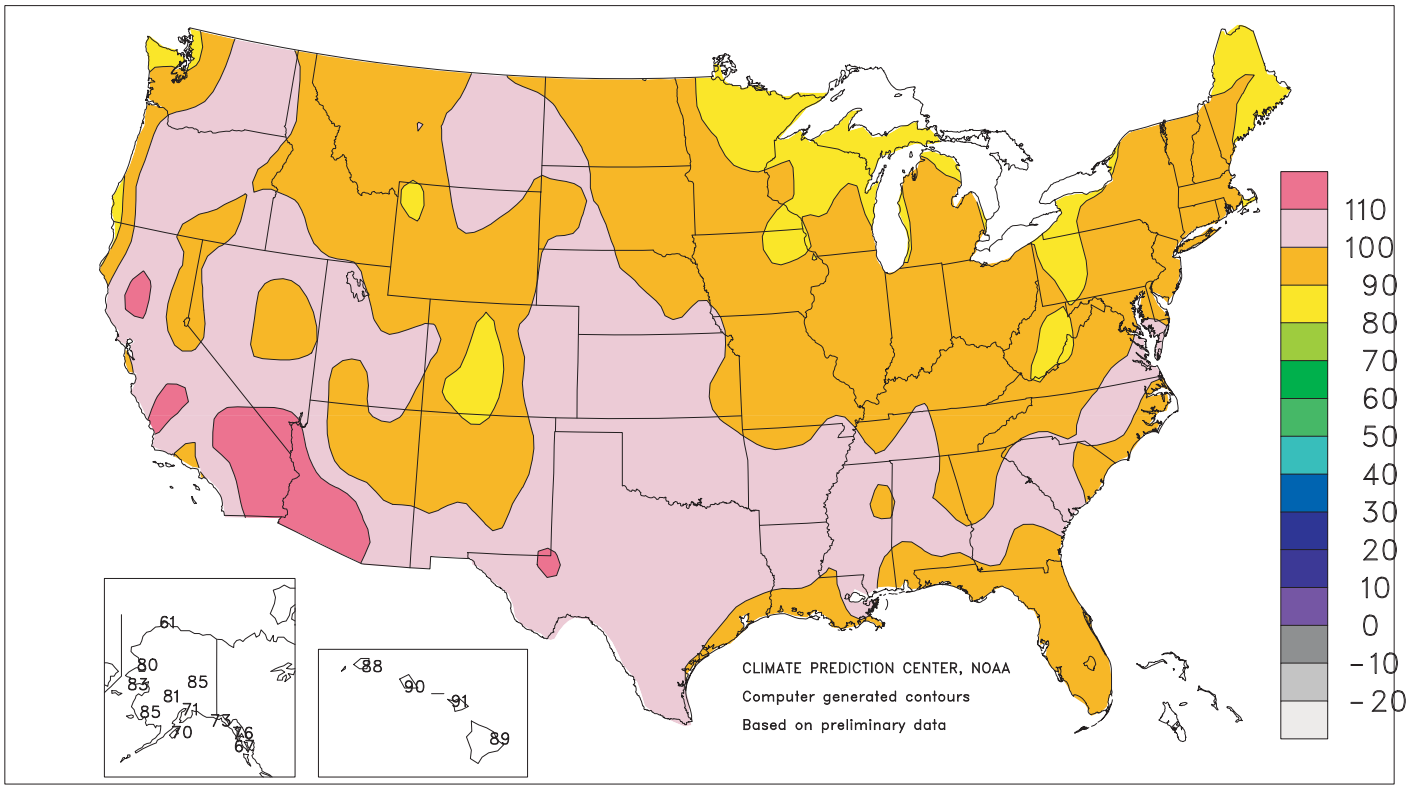
Departure of Average Temperature from Normal (°F)

JAN - DEC 2008



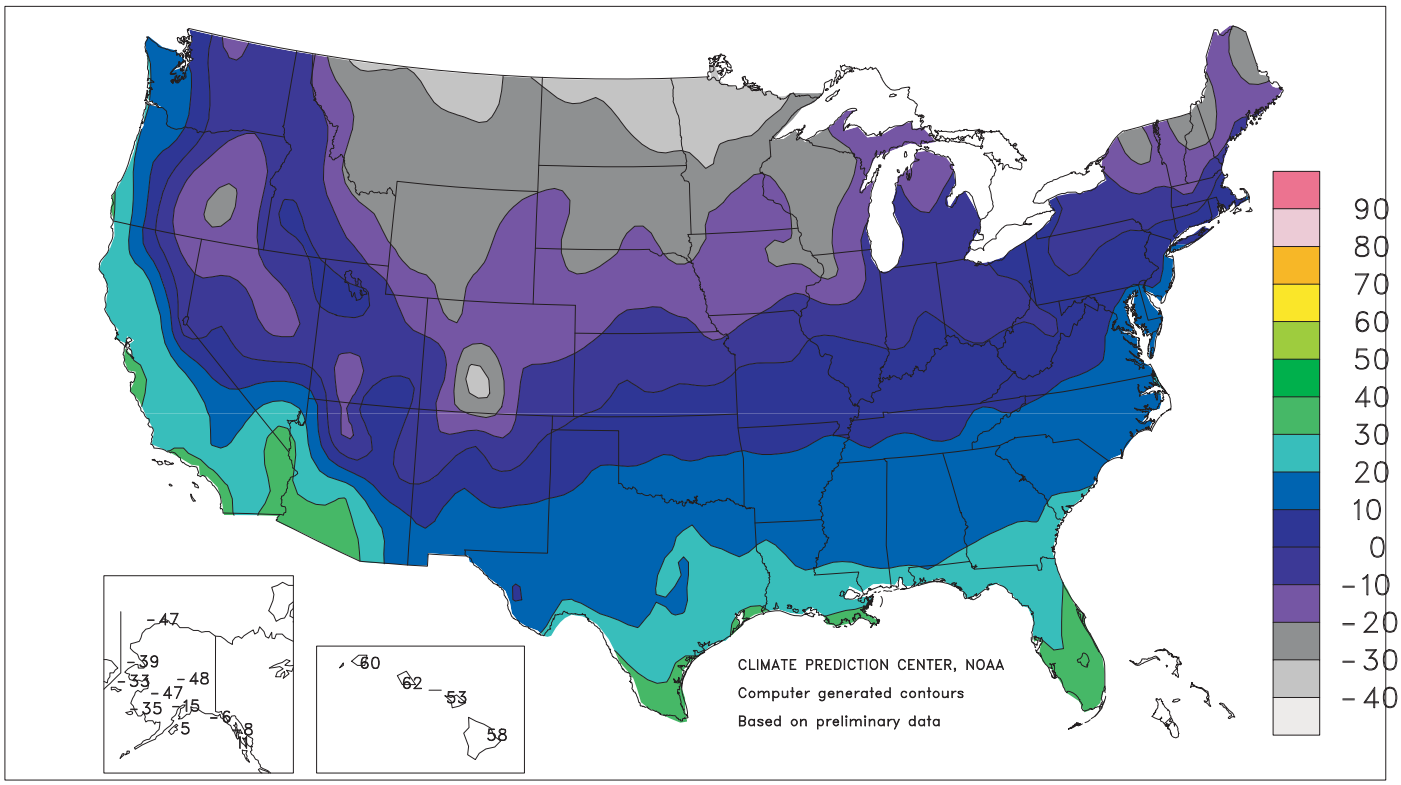
Extreme Maximum Temperature (°F)

JAN - DEC 2008



Extreme Minimum Temperature (°F)

JAN - DEC 2008



2008 U.S. Fieldwork Highlights

Fieldwork highlights provided by USDA/NASS

April: Wet conditions persisted or intensified in most areas from the eastern Plains to the Mississippi Valley, accompanied by near- to below-normal temperatures. In contrast, warm, mostly dry weather prevailed in parts of the Deep South and from the lower Great Lakes region into the Northeast. By month's end, corn growers had planted only 10 percent of the Nation's intended acreage, 25 points behind the normal pace. Small grain and rice planting and emergence significantly lagged the 5-year average in most States. By April 27, cotton planting was ahead of the normal pace in Arizona, California, Louisiana, and Texas, but behind in Arkansas, Mississippi, and the Southeastern States.

May: Midwestern downpours continued to delay corn and soybean planting, while cool conditions existed across the northern half of the Plains. Rainfall eased drought in the High Plains region, but drought continued to adversely affect winter wheat from eastern Colorado and western Kansas southward. By month's end, only 74 percent of the corn crop had emerged, 15 points behind the 5-year average. Small grain planting was nearly complete by June 1, but emergence delays were evident in every State, ranging from slightly behind in North Dakota to 39 points behind in Illinois. By May 25, cotton planting was nearly complete and rice emergence was ahead of the normal pace.

June: The Midwest experienced excessive rainfall, with monthly totals exceeding 400 percent of normal in parts of southern Wisconsin. Rainfall amounts up to 12 inches or more fell in much of the Midwest, triggering flooding along the Mississippi River and its tributaries. Excessive moisture also fell in eastern Kansas, Oklahoma, and Texas, with the northeastern corner of Oklahoma and southeastern Kansas receiving 8 to 12 inches of rain. Despite flooding in the eastern Corn Belt, 61 percent of corn acreage was rated good to excellent on June 29. By month's end, 36 percent of the winter wheat crop had been harvested and half of the remaining crop was rated in good to excellent condition. Spring wheat growing areas remained cooler than average during the month, causing crop development to lag behind the average pace. Soybean blooming was evident in the Delta and parts of the Corn Belt by June 22, but was behind the normal pace, largely due to earlier planting delays. Peanut pegging gained momentum and by month's end reached 27 percent, 2 points ahead of the 5-year average.

July: Abundant rainfall and near-normal temperatures provided nearly ideal conditions for Midwestern corn and soybeans, much of which entered the reproductive stage of development during July. During the 5-week period from June 29 to August 3, seventy-four percent of the Nation's soybeans began to bloom, while 80 percent of the corn began to silk. Twenty-two percent of the sorghum crop was mature at the end of the month, ahead of the normal pace. Small grain harvests were behind the 5-year average with 34 percent of the oats, 8 percent of the barley, 86 percent of the winter wheat, and 6 percent of the spring wheat harvested by the end of the month. Peanut development remained near normal the entire month, as near-normal temperatures were reported throughout the growing region. Cotton crop development trailed the normal pace throughout July.

August: An August dry spell adversely affected Midwestern soybeans and late-developing corn. Rainfall totals were less than 25 percent of normal at several Midwestern locations. Corn and soybean condition ratings declined during the month. In contrast, abundant August rainfall in the South was beneficial for drought-stressed pastures and immature summer crops. The rain, however, became excessive, with monthly totals as high as 1 to 2 feet in some areas from the lower Mississippi Valley to Florida. In addition, Florida was hit by slow-moving Tropical Storm Fay. Farther north and west, harvests of wheat, oats, and barley were nearing completion by month's end. Rice harvest in Louisiana was significantly delayed, trailing the average by 30 percentage points on August 31. Cotton development in the top producing States was delayed.

September: Hurricanes Gustav and Ike struck the Gulf Coast fewer than 2 weeks apart, causing extensive storm-surge flooding and resulting in rain and wind damage to a variety of crops. The remnants of both Gustav and Ike crossed the Midwest, contributing to record-setting wetness in the central Corn Belt during the first half of September. In the Ohio and upper Mississippi Valleys, dry weather slowed progress of crop development. Farther west, winter wheat planting gained momentum on the Plains. Rain and low temperatures delayed wheat planting from west-central Texas into eastern Kansas. Elsewhere, very warm, mostly dry weather promoted fieldwork in the West, while dry weather in much of the Southeast contrasted with wet

conditions along the Atlantic Coast. By the end of the month, rice harvest, at 52 percent, was 18 points behind the normal pace. Peanut harvesting began by mid-month, keeping pace with the 5-year average of 14 percent by September 28.

October: Heavy precipitation soaked much of the Nation's mid-section, hampering fieldwork, but providing abundant moisture for emerging winter wheat. The Midwestern corn harvest was significantly delayed mainly due to late maturation. In the eastern Corn Belt, favorable dryness allowed for crop dry down and harvesting, but threatened winter wheat establishment. Elsewhere, fieldwork advanced across the South and East with few delays. Cotton harvesting remained more than 1 week behind schedule throughout the month. In Louisiana, harvesting of rice and sorghum was complete by November 2, and cotton and soybean harvests were nearly complete. At month's end, much-needed precipitation spread into California and the Northwest.

November: A mid-month pattern change brought repeated surges of cold air into the Midwest, South, and East, following a mild start to November. As a result, hard freezes as far south as northern Florida slowed the growth of winter grains in the Southeast. In contrast, temperatures averaged as much as 5 to 10°F above normal from the Great Basin to the northern High Plains. Despite drier-than-normal November weather in many winter wheat-producing areas, conditions remained mostly favorable as the crop began to slip into dormancy. Harvesting of cotton and sorghum advanced on the Plains, while the much-delayed corn harvest neared completion by month's end across the northern and western Corn Belt.

U.S. Monthly Crop Production Highlights

The following information was released by USDA's Agricultural Statistics Board on January 12, 2009. Forecasts refer to January 1.

The **all orange** forecast for the 2008-09 season is 9.12 million tons, down slightly from the December 1 forecast and 10 percent lower than the 2007-08 final utilization. Florida's all orange forecast, at 162 million boxes (7.29 million tons), decreased 2 percent from the previous forecast and is down 5 percent from last season's final utilization. Early, midseason, and navel varieties in Florida are forecast at 84.0 million boxes (3.78 million tons), down 3 percent from December but up slightly from last season. Florida's Valencia forecast, at 78.0 million boxes (3.51 million tons), is unchanged from the previous forecast but down 10 percent from the 2007-08 crop. Fruit size is below average for the early, midseason, and navel crop and fruit drop continued to increase at a faster-than-average rate. Current fruit size and drop remained below average for the Valencia crop.

The all orange forecast in California, at 46.5 million boxes (1.74 million tons), is 6 percent higher than October's forecast but 28 percent below last season. The navel forecast is 34.5 million boxes (1.29 million tons), up 8 percent from the October forecast but down 29 percent from 2007-08's final utilization. California's Valencia orange forecast is 12.0 million boxes (450,000 tons), unchanged from the previous forecast but 25 percent below last season. Navel harvest was slightly behind schedule, with picking slowed due to fog, rain, and cold weather. Fruit quality was reported as good.

The Texas all orange forecast is 1.65 million boxes (71,000 tons), up 10 percent from October but 5 percent lower than last season. The early and midseason forecast is 1.45 million boxes (62,000 tons), up 12 percent from October but 3 percent less than the 2007-08 season. Texas Valencia oranges are forecast at 200,000 boxes (9,000 tons), unchanged from the October forecast but 15 percent below last season. The Arizona all orange forecast is 250,000 boxes (10,000 tons), unchanged from October but down 34 percent from the previous season. Navel utilization in Arizona is forecast at 150,000 boxes (6,000 tons), unchanged from the previous forecast but 35 percent lower than last season. Valencia oranges in Arizona are forecast at 100,000 boxes (4,000 tons), unchanged from October but 33 percent below last year's final utilization.

2008 U.S. Crop Production Highlights

Highlights, released on January 12, 2009, were provided by USDA/NASS.

Corn: Corn for grain production is estimated at 12.1 billion bushels, up 1 percent from the November forecast but 7 percent lower than last year's record high. The average grain yield is estimated at 153.9 bushels per acre, up 0.1 bushel from the November forecast and 3.2 bushels above 2007. Yield is the second highest on record, behind 2004, and production is the second largest, behind last year. Regionally, estimated yields are equal to or higher than last year across the western and central Corn Belt and northern half of the Great Plains, where heavy spring and early-summer precipitation and timely rainfall during late summer provided adequate soil moisture supplies. Yields are lower than last year across parts of the Ohio Valley, southern half of the Great Plains, and the Carolinas, where drought conditions stressed the crop. Yields arealso lower in the Delta, where excessive moisture and high winds from Hurricanes Gustav and Ike reduced yield potential.

Corn planted area, at 86.0 million acres, is down 8 percent from last year. Planted acreage decreased in most States as a result of favorable prices for other crops, high fertilizer prices, and a return to normal crop rotation patterns. Area harvested for grain, at 78.6 million acres, is down 9 percent from 2007. The 2008 corn objective yield data indicate a record-high number of ears per acre for the combined 10 objective yield States (Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin). Record-high ear counts were recorded in all objective yield States, except Kansas and Nebraska.

Sorghum: Grain production in 2008 is estimated at 472 million bushels, up 2 percent from the November forecast but 5 percent below 2007. Planted area is estimated at 8.28 million acres, up 7 percent from last year. Area harvested for grain, at 7.27 million acres, is up 7 percent from 2007. Average grain yield, at 65.0 bushels per acre, is up 2.0 bushels from the previous forecast but down 8.2 bushels from last year. Texas led the Nation in area planted for all purposes and silage production, while Kansas led the Nation in grain production.

Oats: The 2008 production is estimated at a record-low 88.6 million bushels, down 2 percent from last year. The estimated yield is 63.5 bushels per acre, up 3.4 bushels from the previous year. Area planted to oats is estimated at a record-low 3.22 million acres, down 15 percent from 2007. Harvested area, at 1.40 million acres, is 7 percent below last year. This is the smallest acreage harvested for grain on record, continuing a steady downward trend. The largest decline occurred in North Dakota, where area harvested for grain decreased 130,000 acres from last year.

Barley: Production is estimated at 239 million bushels, unchanged from the Small Grains 2008 Summary but 14 percent above 2007. Average yield per acre, at 63.6 bushels, is up 3.6 bushels from last year. The area harvested for grain is estimated at 3.77 million acres, 8 percent above a year ago. Harvested area increased from last year in the top two producing States, up 150,000 acres in North Dakota and up 30,000 acres in Idaho. These increases in harvested acres, coupled with increased or unchanged yields in the top producing States, resulted in the increased production.

All Wheat: Production totals 2.50 billion bushels in 2008, unchanged from the Small Grains 2008 Summary but up 22 percent from 2007. Grain area is 55.7 million acres, up 9 percent from last year. The yield is 44.9 bushels per acre, up 4.7 bushels from last year. The levels of production and changes from last year by type are winter wheat, 1.87 billion bushels, up 25 percent; other spring wheat, 547 million bushels, up 14 percent; and Durum wheat, 84.9 million bushels, up 18 percent.

Winter Wheat: The 2008 winter wheat production is estimated at 1.87 billion bushels, unchanged from the Small Grains 2008 Summary but up 25 percent from last year. The yield is 47.2 bushels per acre, up 5.5 bushels from last year's final yield. Planted acreage is up fractionally from the Small Grains 2008 Summary. This change to the acreage estimate is based on updated administrative data received after the Small Grains 2008 Summary. Area harvested for grain is estimated at 39.6 million acres, up 10 percent from the previous year. Hard Red Winter harvested acreage is up about 1 percent from the previous year while Soft Red Winter harvested acreage is up about 43 percent.

Hard Red Winter (HRW) planted acreage is down from last year due to dry conditions at planting time in the Great Plains States. Although fewer acres of wheat were planted in Kansas and Oklahoma, producers saw good harvest conditions compared with last year's flood- and freeze-damaged crops, which resulted in an increase in harvested acres in these States in 2008. Oklahoma's production is up 70 percent from 2007 and Kansas' production is up 25 percent. Colorado and Texas experienced drought situations that reduced production 38 percent and 30 percent, respectively. Overall, HRW production totals 1.0 billion bushels, up 8 percent from last year's 956 million bushels.

Favorable conditions along with high wheat prices during the fall resulted in more acreage planted to wheat across all of the Soft Red Winter (SRW) growing region. This is the third straight year of larger planted area in the southern SRW growing areas, with harvested area also increasing sharply. Production of SRW wheat is up from last year, when yields were reduced by an early-April freeze. Good growing conditions resulted in record yields in many States. Overall, SRW production is 614 million bushels, up 74 percent from last year when 352 million bushels were produced.

White Winter production is 219 million bushels, up 14 percent from last year. Harvested acreage in the Pacific Northwest States (Idaho, Oregon, and Washington) is above last year's level. In Washington, yields are down from last year due to a lack of rain and unseasonably high temperatures during the growing season. Although the Idaho and Oregon crops faced dry weather in May and June, conditions improved and yields were up 2 bushels and 5 bushels from a year ago, respectively.

Other Spring Wheat: Production for 2008 is estimated at 547 million bushels, unchanged from the Small Grains 2008 Summary

but up 14 percent from last year. Harvested area is 13.5 million acres, up 4 percent from 2007. The yield is 40.5 bushels per acre, up 3.4 bushels from last year. Yields are above last year's level in all States except Colorado, Oregon, Utah, and Washington.

Durum Wheat: Production for 2008 totaled 84.9 million bushels, unchanged from the Small Grains 2008 Summary but up 18 percent from 2007. Grain area harvested is 2.58 million acres, up 22 percent from the previous year. The yield is estimated at 32.8 bushels per acre, down 1.3 bushels from 2007. In the northern Great Plains, warm, dry conditions during the months of June and July accelerated crop development and decreased the yield from last year. Yields are below last year's level in all States except California.

Rice: Production in 2008 is estimated at 204 million cwt, up slightly from the previous forecast and up 3 percent from 2007. Planted area is estimated at 3.00 million acres, up 8 percent from 2007. Area for harvest, at 2.98 million acres, is up 2 percent from the previous forecast and up 8 percent from the previous crop year. The average yield for all rice is estimated at 6,846 pounds per acre, down 113 pounds from the previous forecast and 373 pounds below the 2007 record-high yield of 7,219 pounds per acre. Planted and harvested acreage were up from 2007 in all rice producing States except California. Arkansas, the largest rice producing State, planted 1.40 million acres in 2008, up 5 percent from the previous year.

Peanuts: Production is estimated at 5.15 billion pounds, up 3 percent from the previous forecast and 40 percent more than was produced in 2007. The 2008 crop is the largest U.S. crop on record. Planted area is estimated at 1.53 million acres, up 25 percent from 2007. Higher prices received in 2007, coupled with attractive contract prices in 2008, were the main reasons for the increase in acreage. Area for harvest is estimated at 1.51 million acres, up 26 percent from 2007. Yields are estimated at a record-high 3,416 pounds per acre, up 74 pounds from the previous forecast and up 343 pounds from 2007. The 2008 average yield is 257 pounds above the previous record of 3,159 pounds per acre set in 2003. Timely rainfall, crop rotation, and minimal insect and disease pressure led to the record-high yields.

Sunflower: The 2008 sunflower production totaled 3.42 billion pounds, up 19 percent from 2007. The average yield per acre increased 3 pounds from last year to 1,429 pounds. Planted area, at 2.52 million acres, is 22 percent above last year. Area harvested increased 19 percent from last year to 2.40 million acres. Production in North Dakota, the leading sunflower-producing State, is estimated at 1.51 billion pounds, up less than 1 percent from 2007. The yield in North Dakota, at 1,399 pounds per acre, is down 24 pounds from 2007.

Soybeans: Production in 2008 totaled 2.96 billion bushels, up 1 percent from the November forecast and up 11 percent from 2007. Production is the fourth largest on record. The average yield per acre is estimated at 39.6 bushels, 0.3 bushel above the previous forecast but 2.1 bushels below last year's yield. Planted area for the Nation, at a record 75.7 million acres, is up 17 percent from 2007. Soybean growers harvested a record 74.6 million acres, up 16 percent from last year and up slightly from November. Yields are down from last year across most of the Great Plains and the northern Corn Belt, as well as in Louisiana, Mississippi, New Jersey, and Pennsylvania. The biggest declines from last year occurred in Louisiana, Ohio, and Texas, as yields in all three States were down 10 bushels or more from 2007. Yields were down in Louisiana and parts of Texas due to the torrential rains and flooding caused by Hurricanes Gustav and Ike. In Ohio, yields were lower due to the combination of wet weather early in the year and very dry weather for the remainder of the growing season. Yields are much higher than last year in Tennessee, Kentucky, and across most of the Southeast, as timely rains during the season were a significant improvement from last year, when drought conditions affected much of the region. Record-high yields were set in Florida and South Carolina, and the record-high yield was tied in New York.

Cotton: Upland cotton production is estimated at 12.6 million 480-pound bales, down 4 percent from the December 1 forecast and down 31 percent from last year. The yield for upland cotton is estimated at 799 pounds per acre, down 34 pounds from last month and down 65 pounds from last year's record high. Harvested area, at 7.56 million acres, is down slightly from last month and down 26 percent from last year. Upland planted area, estimated at 9.30 million acres, is down 12 percent from last year. Producers in Alabama and South Carolina reported record-high yields, surpassing the records set in 1985 and 2004, respectively.

American-Pima producers planted 174,000 acres, down 40 percent from last year. Harvested area, at 169,400 acres, is down 41 percent from last year. Production is estimated at 446,600 bales, up 1 percent from December but down 48 percent from last year's record high. The yield is estimated at 1,265 pounds per acre, up 11 pounds from December but down 154 pounds from last year. Producers were finished planting by the end of June. The crop developed normally throughout the summer and fall. Harvest got underway by late September and was complete by mid-December. American-Pima acreage in Arizona for both planted and harvested is the lowest on record.

Sugarbeets: Production for 2008 is estimated at 26.8 million tons, 5 percent below the November forecast and 16 percent below the 2007 estimate. Estimated yield, at 26.7 tons per acre, is 1.2 tons higher than last year but 0.1 ton below November. Growers harvested 1.00 million acres, 19 percent below last year. Area planted, at 1.09 million acres, is 14 percent below the 2007 estimate. Growers in Colorado and Michigan saw record-high yields in 2008.

Sugarcane: Production of sugarcane for sugar and seed in 2008 was 30.7 million tons, 29.2 million tons for sugar and 1.50 million tons for seed. Production of cane for sugar and seed is up 3 percent from the December forecast and up 2 percent from the 2007 production. Sugarcane growers harvested 869,500 acres for sugar and seed during the 2008 crop year, 1 percent less than last year. This is the lowest area harvested for sugar and seed since 1990. Yield is estimated at 35.3 tons per acre, up 0.9 ton from December and up 1.2 tons from last year. Yields are above last year in Florida, Hawaii, and Texas but lower in Louisiana.

National Agricultural Summary

January 19-25, 2009

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Precipitation during the week was focused mostly in northern and central California and portions of Nevada, Utah, and Colorado. In these areas, light to moderate precipitation fell. The Southeast and the Northeast experienced light precipitation. Temperatures remained above normal west of the Mississippi, with the exception of the Pacific Northwest, where temperatures averaged normal to slightly below normal. Temperatures in much of the Great Plains and Southwest averaged 9 to 12 degrees above normal. In contrast, temperatures east of the Mississippi ranged from near normal to 9 degrees below normal.

Field work continued in California small grain and rice fields, as growers prepared for spring planting. Warm temperatures aided wheat development. Citrus was maturing faster than expected due to warm conditions. Budding was evident in nectarine and apricot trees in the San Joaquin Valley while the orange crop showed signs of drought stress. Many vegetable and herb varieties were harvested throughout the week. Nut pruning continued and weed control and dormant sprays were ongoing. Almond and pistachios were showing signs of drought.

In Arizona, temperatures were above normal across the State. Small grain plantings continued with three-fourths or more complete Statewide. Alfalfa harvest remained active, along with harvest of citrus, vegetables, and herbs.

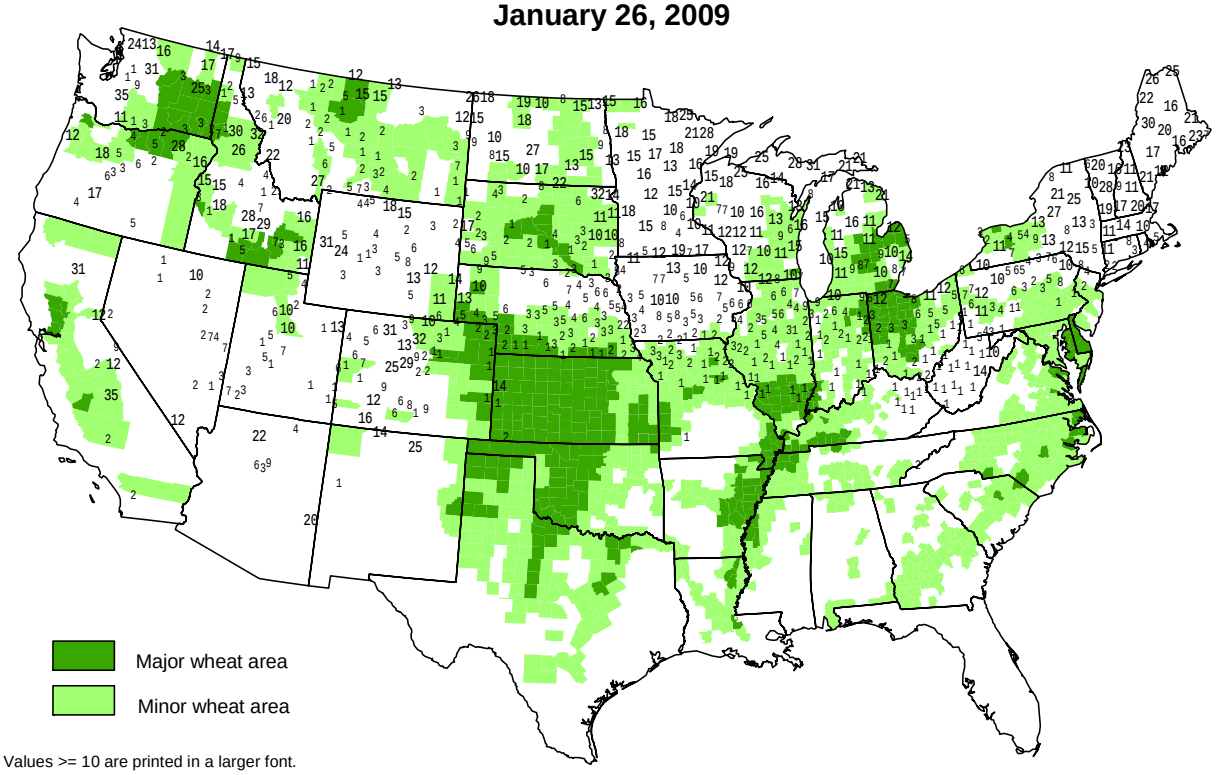
Dry conditions continue to stress the winter wheat crop in Texas. Cotton field preparations were underway in the Southern Low Plains and Trans-Pecos regions. Corn producers in the Blacklands were spreading fertilizer, while pecans in the Trans-Pecos were being pruned. Fall planted onions in the Trans-Pecos were dormant while onion growth was progressing well in the Lower Valley. Spinach, onions and cabbage crops were being irrigated in South Texas.

Cold weather in Georgia slowed development of winter wheat. Freezing temperatures during the week damaged blueberry plants and blossoms.

Many areas of Florida reported frosts, freeze, and windy conditions throughout the week. Producers with covered nursery crops reported little damage. Vegetable producer's prepared for frost and freeze by covering crops rapidly harvesting the crop. Heavy frost and ice were experienced in several of the citrus areas.

Snow Depth (inches)

January 26, 2009



Values >= 10 are printed in a larger font.

Snow depth reports obtained from the NWS Cooperative Observer Network.

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

International Weather and Crop Summary

January 18 – 24, 2009

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

HIGHLIGHTS

FSU-WESTERN: Above-normal temperatures provided favorable overwintering conditions for dormant winter grains.

EUROPE: Wet weather returned to central and western Europe, boosting moisture reserves for dormant to semi-dormant winter crops.

MIDDLE EAST: Above-normal temperatures melted much of the region's protective snow cover, while late-week rain returned to southern and western Turkey.

NORTHWEST AFRICA: Showers persisted across the entire region, maintaining abundant topsoil moisture for vegetative winter grains.

AUSTRALIA: Widespread, soaking rains benefited reproductive summer crops, boosting moisture supplies following three weeks of relatively dry weather.

SOUTHEAST ASIA: Monsoon showers maintained abundant to locally excessive soil moisture for rice in Indonesia.

SOUTH ASIA: Drier weather returned to northern growing areas following last week's unseasonable, albeit beneficial rainfall.

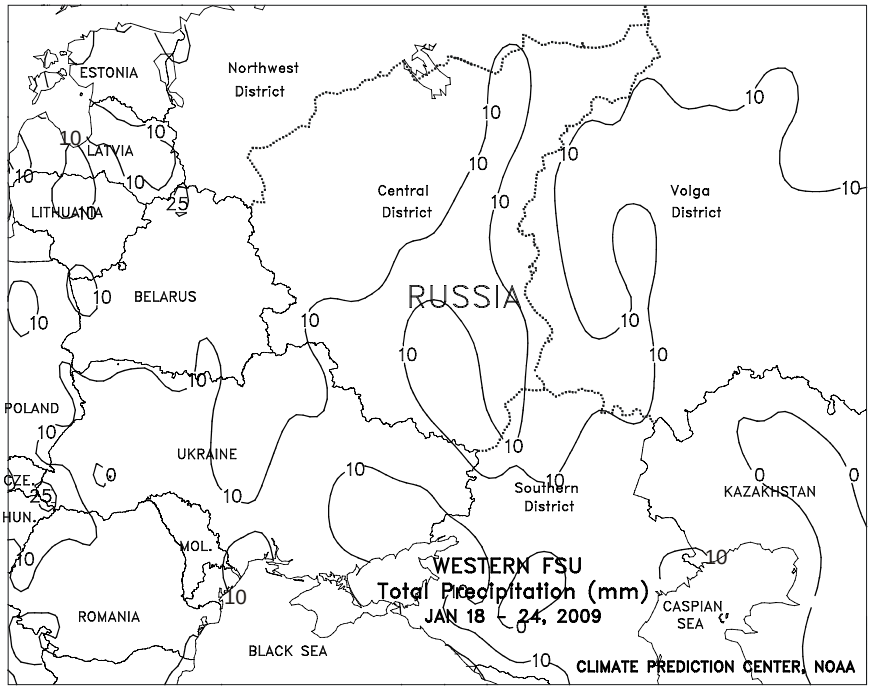
ARGENTINA: Unseasonable warmth and dryness stressed summer grains and oilseeds throughout central Argentina.

BRAZIL: Beneficial rain continued throughout southern Brazil, improving corn and soybean prospects.

SOUTH AFRICA: Warm, showery weather continued across the corn belt, maintaining mostly favorable conditions for vegetative to reproductive summer crops.

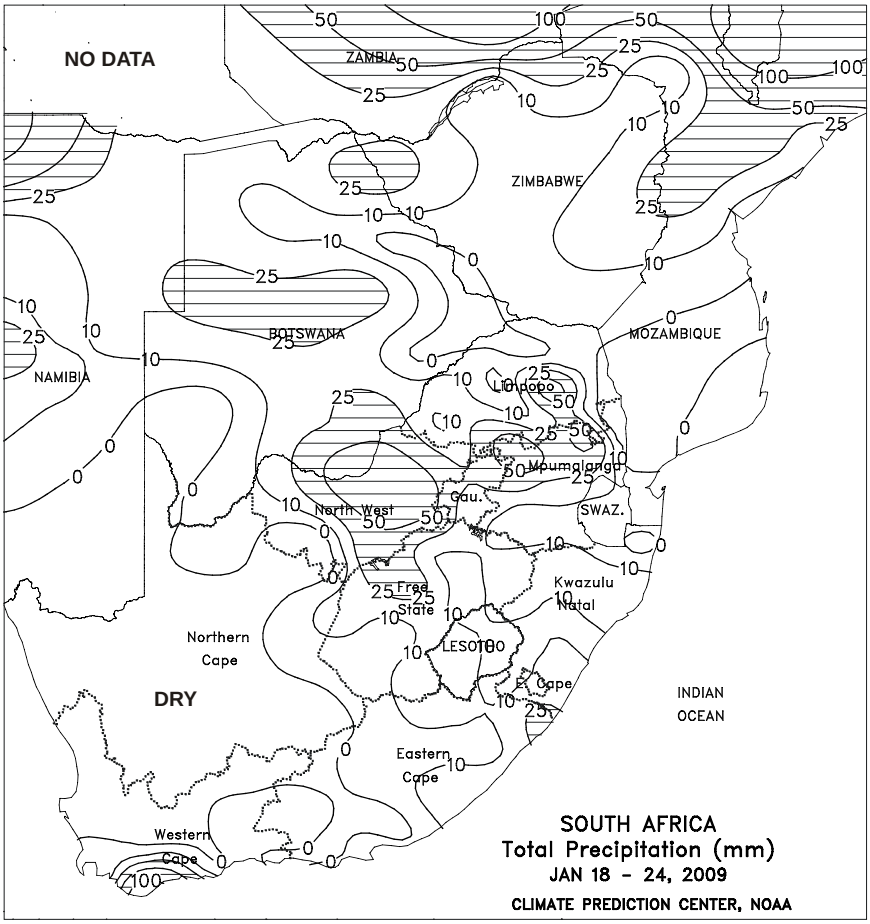
EUROPE

Wet weather returned to western and central crop areas, while unsettled, warm conditions overspread eastern Europe. A series of Atlantic storm systems generated widespread, locally heavy showers (15-130 mm) across the western half of the continent, maintaining favorable moisture reserves for dormant to semi-dormant winter crops. In Italy, rain and mountain snow (25-50 mm liquid equivalent) increased reservoir levels and irrigations reserves for winter wheat but hampered planting of winter barley. Light showers (2-15 mm) and weekly average temperatures up to 5 degrees C above normal over northeastern Europe melted much of the region's protective snow cover, exposing dormant winter wheat and rapeseed to potential bitter cold. Periods of rain and high elevation snow (10-65 mm liquid equivalent) across the Balkans maintained adequate to abundant soil moisture reserves for spring growth, although most primary wheat areas (Danube River Valley) are devoid of snow cover.



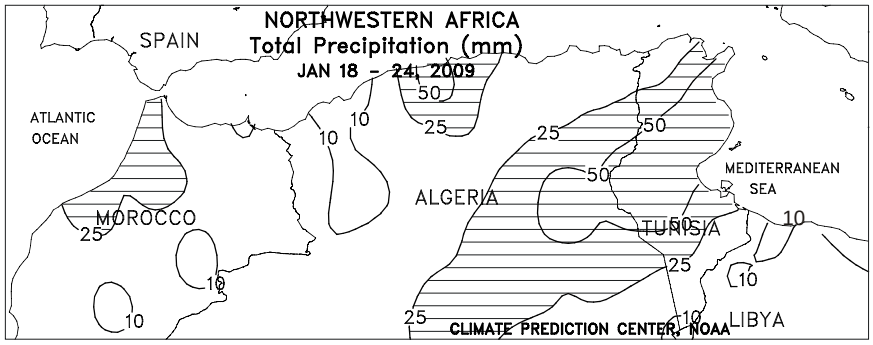
FSU-WESTERN

Warmer-than-normal weather prevailed across Ukraine, Belarus, and Russia, providing generally favorable overwintering conditions for dormant winter grains. Weekly temperatures averaged 2 to 4 degrees C or more above normal in these areas. Light to moderate snow (5-10 mm or more of liquid equivalent) increased the depth of snow cover across most of northern Russia (Central and Volga Districts). Bitter cold (minimum temperatures at or below -15 degrees C) was confined to northern and eastern locations in the Volga District, where winter grains were insulated by a moderate to deep snow cover. Farther south, occasional rain, freezing rain, and snow fell in Ukraine, Belarus, and the Southern District in Russia. Extreme maximum temperatures in these areas ranged from 2 to 6 degrees C, melting some of the protective snow cover and leaving winter grains in western and southernmost crop areas exposed to potential weather extremes.



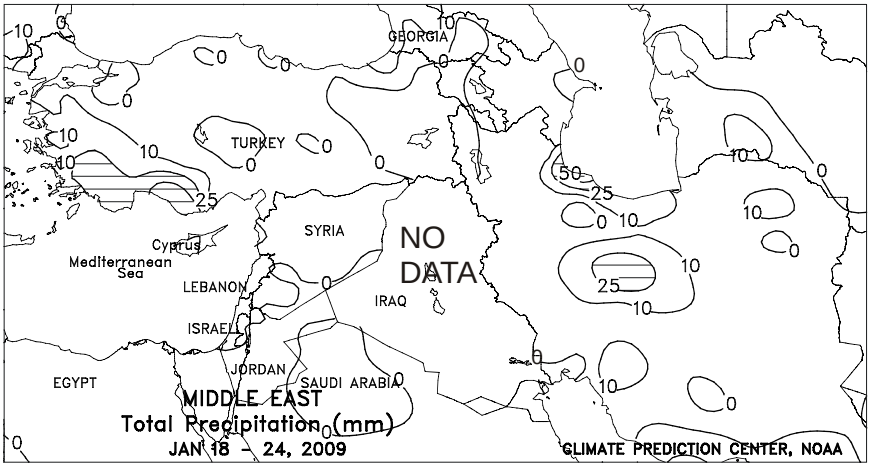
SOUTH AFRICA

A warm, showery weather pattern continued across the corn belt. Moderate to heavy showers (25-50 mm) fell across western and northern growing areas (western Free State, North West, and northern growing areas of Gauteng and Mpumalanga), improving moisture levels for vegetative to reproductive corn. Lighter rain (5-15 mm) fell in parts of the eastern corn belt that received heavier rain last week (southern Mpumalanga and nearby locations in Free State and KwaZulu-Natal). Temperatures were slightly above normal (highs near 30 degrees C) in these drier eastern locations, advancing growth of reproductive summer crops that are currently developing with adequate moisture. However, rain is needed in sections of the central Free State that have received limited amounts of rain the past few weeks. Elsewhere, scattered, mostly light showers (less than 25 mm) continued throughout southern sugarcane areas of KwaZulu-Natal and in eastern farming areas of Eastern Cape. Mostly dry, seasonably warm weather promoted development of irrigated crops in Northern and Western Cape Provinces.



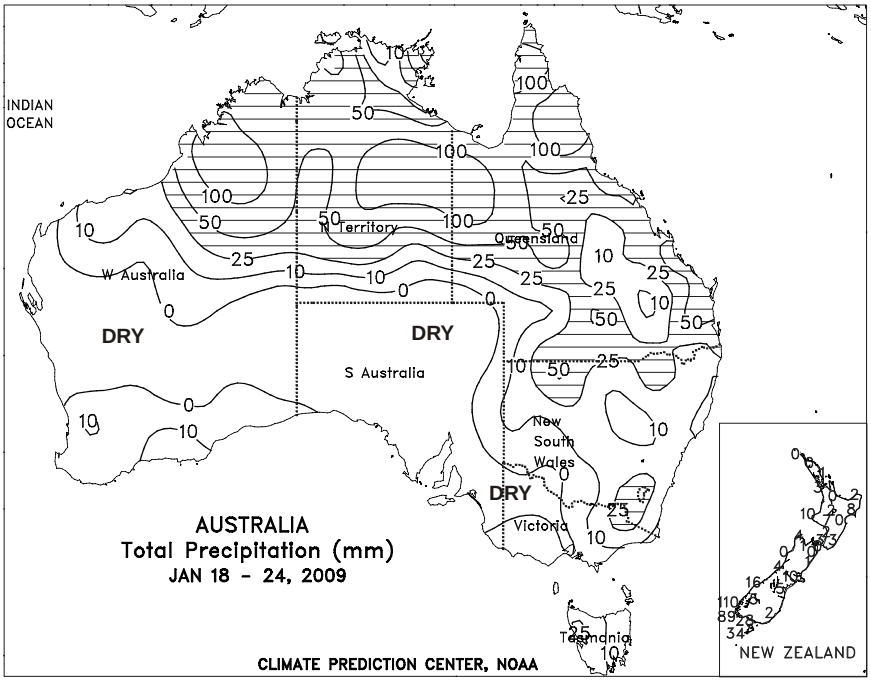
NORTHWEST AFRICA

Showers continued over the region's wheat belt, hampering late fieldwork but maintaining adequate to excessive moisture supplies for vegetative winter grains. Rainfall totals ranged from less than 10 mm in southern Morocco to locally more than 50 mm in northern Morocco and southern Tunisia. Producers are experiencing one of the wettest growing seasons on record, although the moisture- and temperature-critical period in northwestern Africa still looms in mid to late spring.



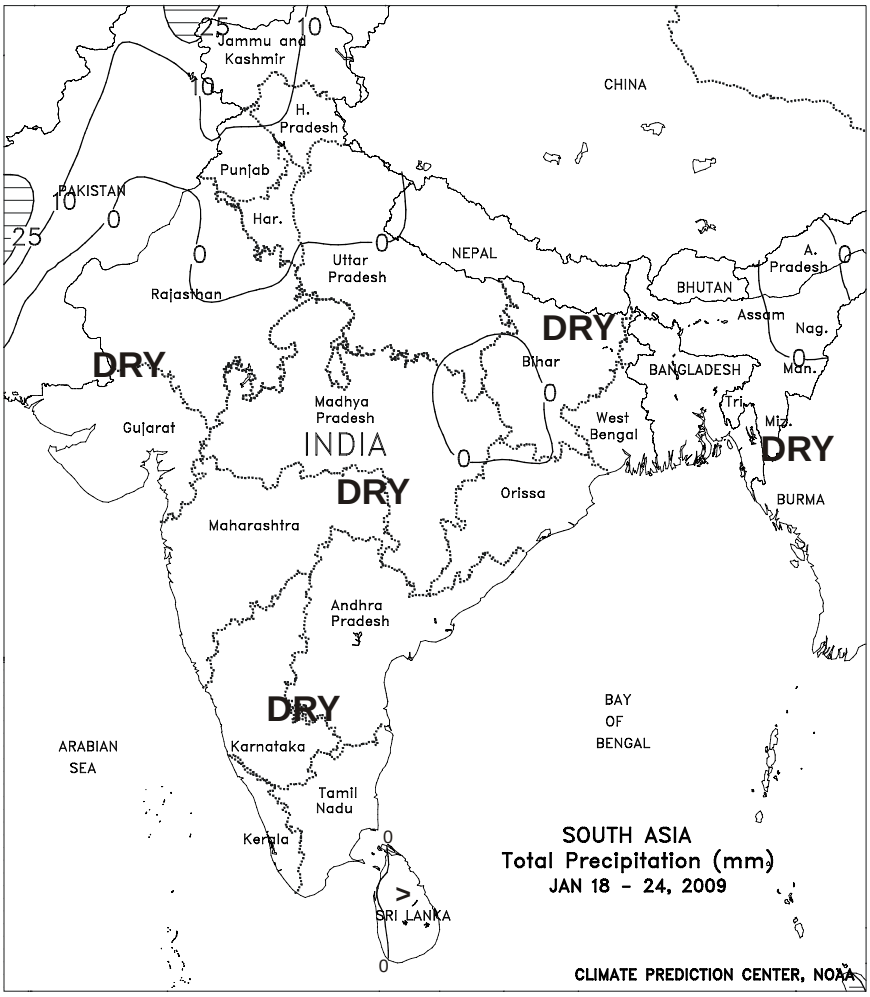
MIDDLE EAST

Mild, showery weather prevailed over most primary growing areas. In Iran, weekly average temperatures up to 4 degrees C above normal coupled with early-week showers (2-25 mm) maintained favorable moisture reserves for spring growth but melted much of the region's protective snowpack. Consequently, dormant winter grains in Iran are exposed to potential bitter could outbreaks. In Turkey, late-week showers (10-60 mm) in western and southern crop districts increased irrigation reserves and provided additional soil moisture for dormant to semi-dormant winter grains. Mostly dry weather prevailed from the eastern Mediterranean Coast into northern Iraq, although winter grain prospects are vastly improved in these areas over last year's drought afflicted crop.



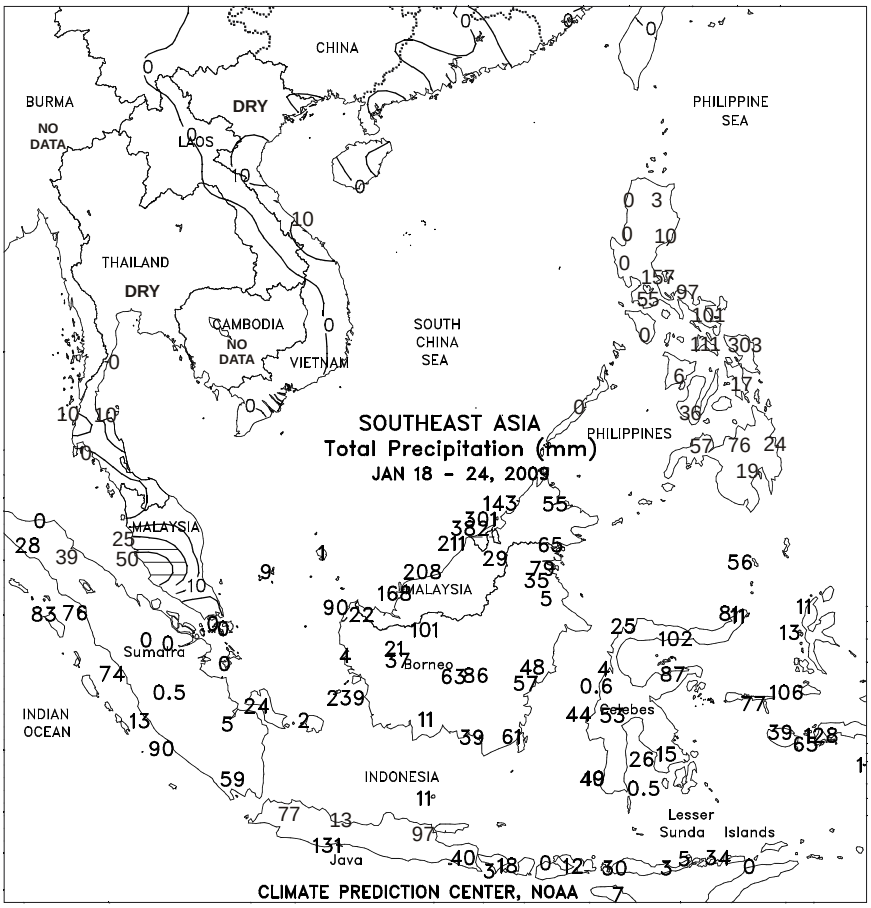
AUSTRALIA

Widespread, soaking rains (generally 10-45 mm) fell across much of northern New South Wales and Queensland. The rain was beneficial for dryland and irrigated summer crops, providing a welcomed boost in moisture supplies following three weeks of relatively dry weather. The rain was epecially timely because cotton and sorghum are generally in or near the reproductive stages of development. Temperatures in major summer crop areas averaged about 1 degree C above normal, with maximum temperatures generally in the lower to middle 30s degrees C.



SOUTH ASIA

Following last week's unseasonable, albeit beneficial rain, dry weather returned to northern crop areas. However, persistent southwesterly flow from the Arabian Sea led to locally heavy mountain snow (10-25 mm or more liquid equivalent) across northern Pakistan and far northern India, boosting snowpacks and water reserves for vegetative winter wheat. Elsewhere, dry, warm weather maintained a rapid pace of fieldwork, including cotton harvesting in southern India and winter (rabi) rice planting from West Bengal into Andhra Pradesh.

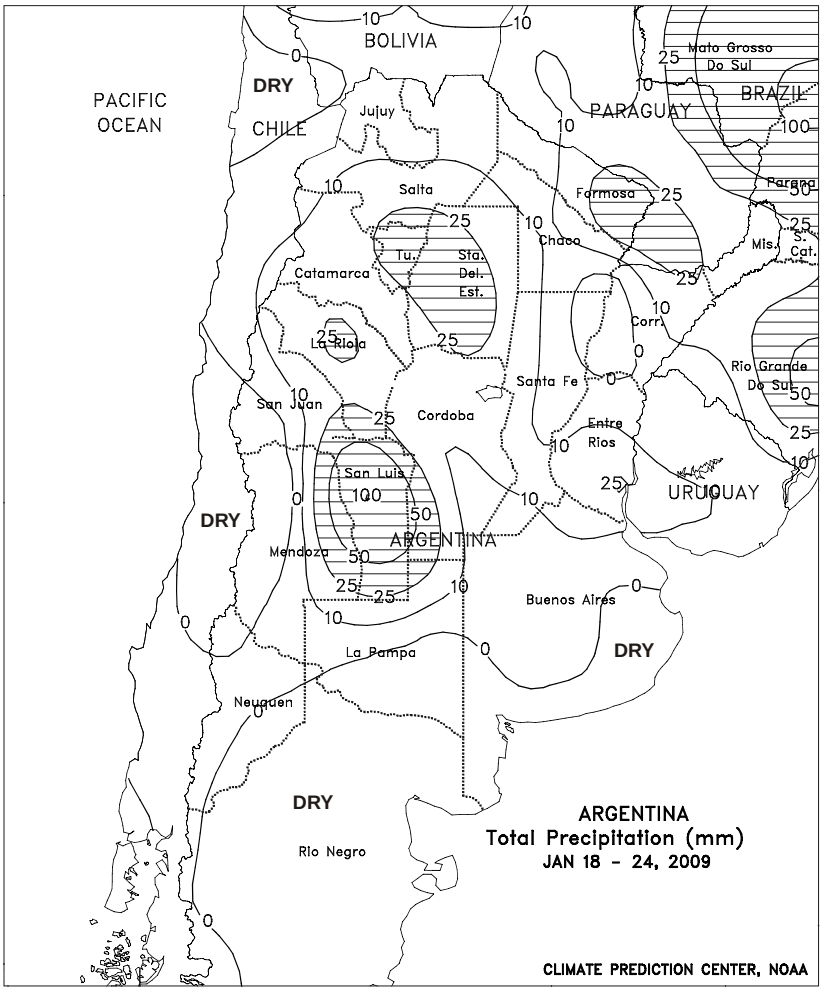


SOUTHEAST ASIA

The monsoon remained active across rice areas of Indonesia, bringing 50 to 100 mm of rainfall to much of Java. Similar rainfall amounts prevailed in oil palm areas of Indonesia, with dry weather occurring in parts of eastern Sumatra. Likewise, mostly dry weather in western Malaysia aided oil palm harvesting, while 100 to 400 mm of rain likely caused flooding and harvest delays in eastern areas. Seasonable showers continued in the Philippines, with 25 to 100 mm benefiting rice and corn in the south, while localized amounts over 100 mm caused some flooding in the eastern Visayas. Meanwhile, seasonably sunny, warm weather prevailed in Vietnam, favoring developing winter-spring rice in the south.

BRAZIL

Beneficial rain (15-50 mm, locally exceeding 100 mm) continued early in the week across the south (Rio Grande do Sul to Mato Grosso do Sul and Sao Paulo), improving prospects of corn and soybeans; this is particularly true for later-planted crops not significantly stressed during earlier periods of dryness. Furthermore, the rain was accompanied by near- to below-normal temperatures (highs ranging in the upper 20s and lower 30s degrees C), lowering crop moisture demands and losses through evaporation. Farther north, moderate to heavy rain (25-50 mm or more) maintained generally favorable moisture levels for crop development throughout much of central Brazil, including soybean and cotton areas of the northeastern interior. Temperatures averaging near to slightly above normal (highs in the lower and middle 30s degrees C) promoted crop growth in the absence of stressful heat. Dry weather promoted sugarcane harvesting and other seasonal fieldwork on plantations along Brazil's northeastern coast, but locally heavy rain (greater than 25 mm) boosted moisture reserves for agriculture farther inland.



ARGENTINA

Hot, dry weather dominated central Argentina for much of the week, stressing summer grains and oilseeds in various stages of development. The heat and dryness developed after a brief period of scattered, generally light showers (isolated showers exceeding 25 mm) at the beginning of the week. Highs exceeded 35 degrees C for up to 5 consecutive days, with temperatures reaching 40 degrees C in several locations, posing locally severe stress on reproductive crops and otherwise hampering normal development. The unseasonably hot weather gradually migrated northward and settled in over the northern cotton belt by week's end, with highs of 38 to 40 degrees C stressing summer row crops and livestock functioning on limited water supplies. However, early-week rain was heavier in the north, with more than 25 mm covering much of northern Cordoba and Santiago del Estero.

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