WEEKLY WEATHER AND CROP BULLETIN

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National Oceanic and Atmospheric Administration, National Weather Service

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National Agricultural Statistics Service and World Agricultural Outlook Board

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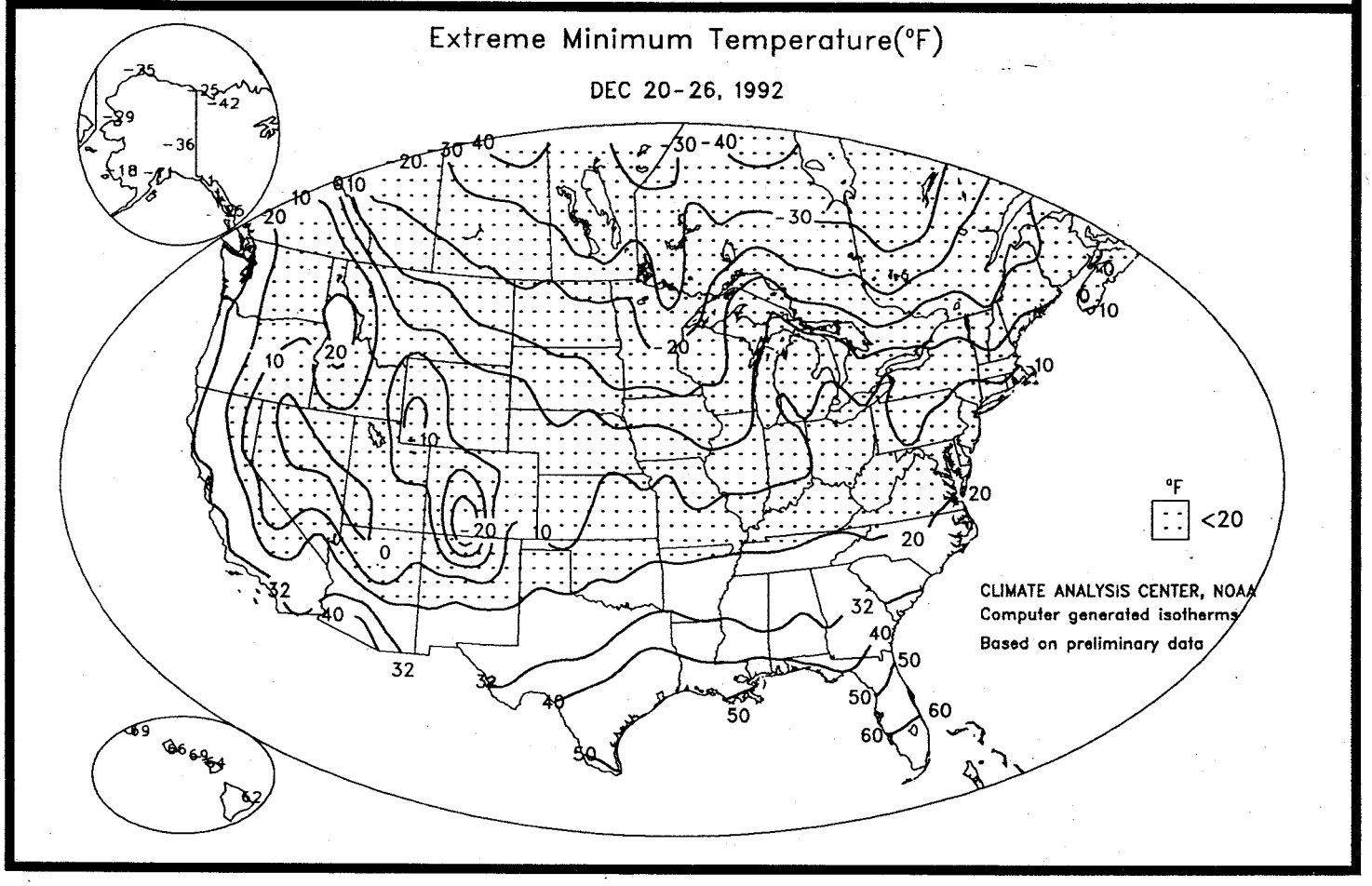

HIGHLIGHTS

December 20 - 26, 1992

Arctic air tumbled into the **north-central United States**, dropping temperatures below -20°F in **northern Minnesota**. Southwesterly winds associated with the subtropical jet stream deflected the frigid air eastward, away from the **Gulf Coast States**. Early in the week, weather conditions contrasted sharply on either side of the **Rockies**. In the **West**, a chilly, stagnant high pressure system kept valleys calm and cold. Low temperatures on Sunday included -17°F in **Richfield, UT**, and -27°F in **Alamosa, CO**. **Barstow, CA**, measured 22°F. But east of the **Continental Divide**, winds increased in response to the approaching arctic front. **Casper, WY**, noted a wind gust to 75 mph. On Tuesday morning in **interior Alaska**, at the core of the cold air, temperatures plummeted to lower than -40°F along the **Yukon River**. **Ft. Yukon, AK**, recorded -44°F. A day later, **Glasgow, MT**,

(Continued to p. 10)

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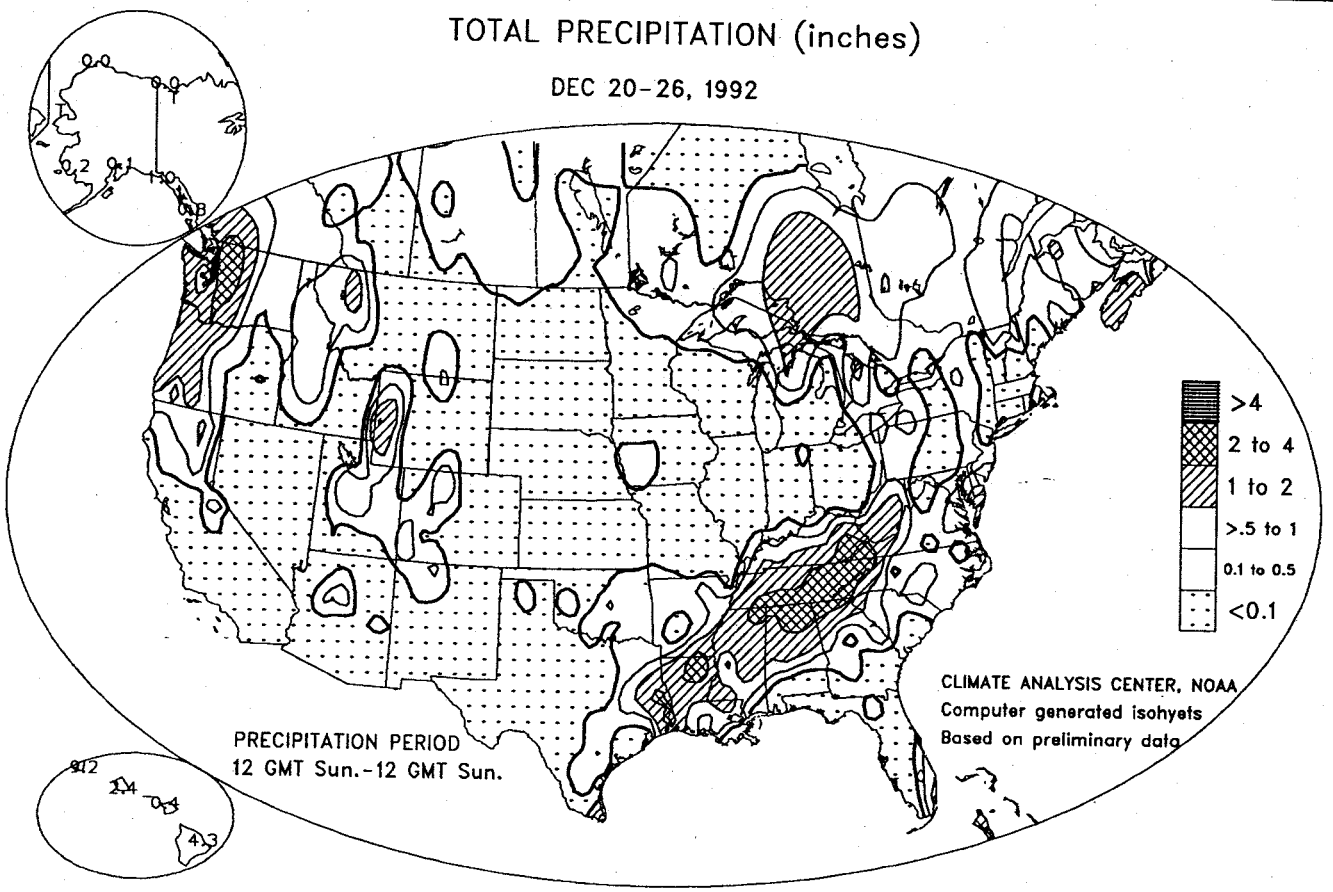
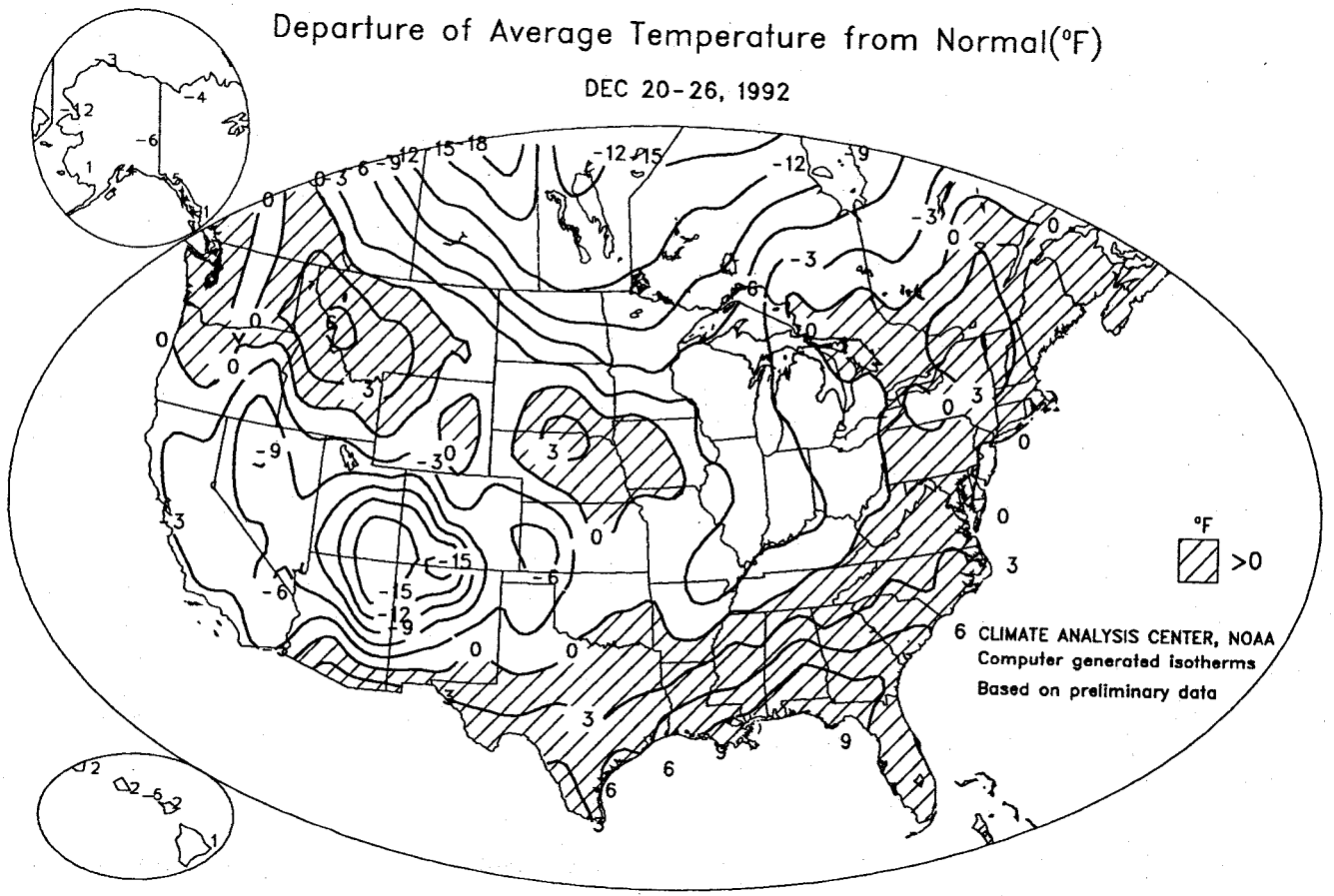
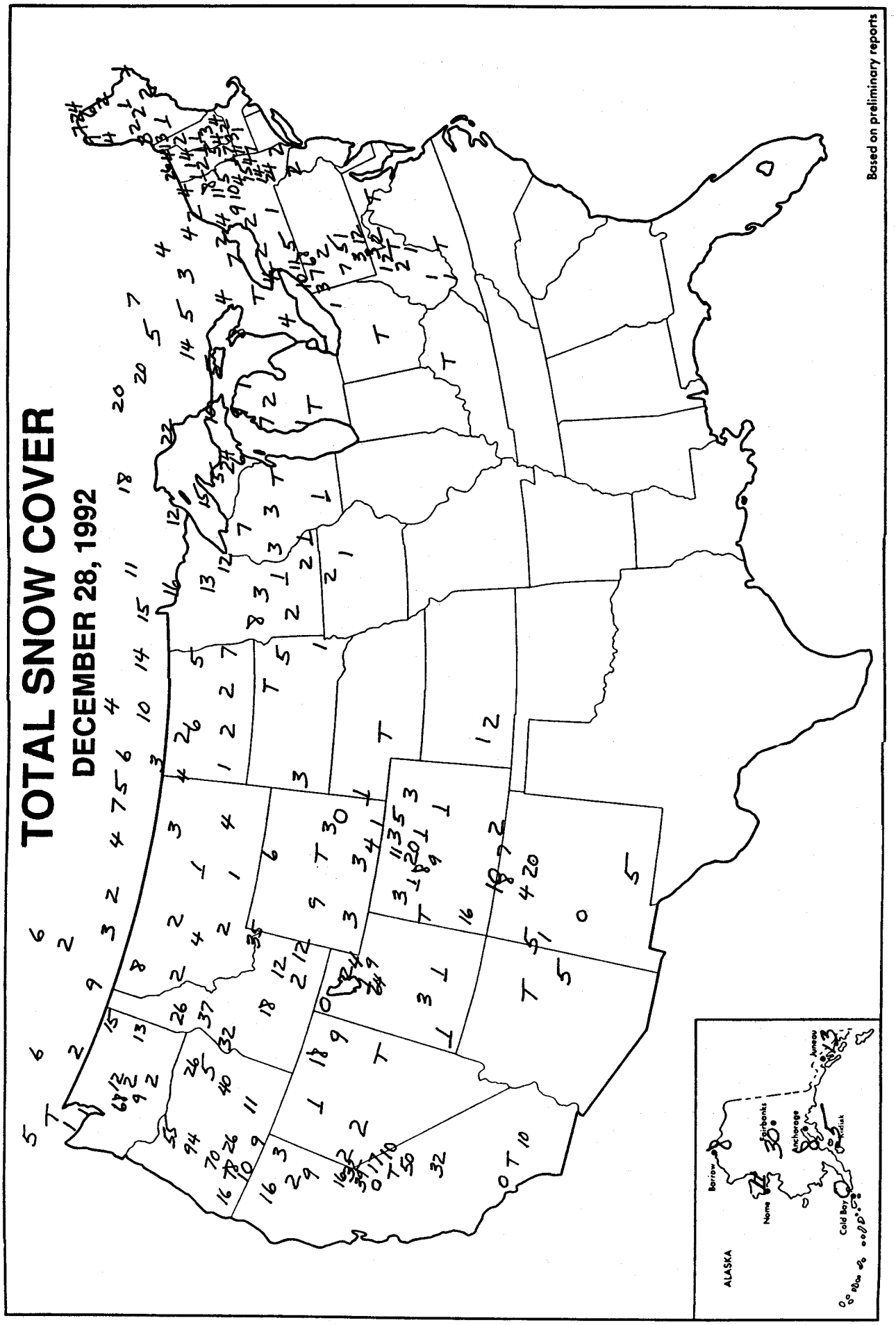

TOTAL PRECIPITATION (inches)
DEC 20-26, 1992
>4
2 to 4
1 to 2
>.5 to 1
0.1 to 0.5
<0.1
CLIMATE ANALYSIS CENTER, NOAA
Computer generated isohyets
Based on preliminary data
PRECIPITATION PERIOD
12 GMT Sun.-12 GMT Sun.


Departure of Average Temperature from Normal(°F)
DEC 20-26, 1992
°F
>0
CLIMATE ANALYSIS CENTER, NOAA
Computer generated isotherms
Based on preliminary data


TOTAL SNOW COVER
DECEMBER 28, 1992
Based on preliminary reports
ALASKA
Barrow
Nome
Fairbanks
Anchorage
Kodiak
Cold Bay
Juneau

Arctic Air Deals a Glancing Blow

1992 Outbreak Pales Against Late-December Cold of 1983, 1989, and 1990

An arctic express roared to life during the week preceding Christmas for the fifth time in 10 years, but the brunt of the cold blast pushed eastward across the U.S.-Canadian border. Citrus and winter vegetable areas of southern Texas and Florida remained completely frost-free, protected by a stubborn upper level ridge of high pressure. Farther north, however, temperatures dropped below 0°F as far south as Moline, IL, on December 24, and plunged to -37°F in Roseau, MN, on December 26.

Climatologically, late December is a favored time for the first major arctic outbreak of the winter for the continental United States. Pools of cold air have been building for several months over the large, high-latitude land masses of the northern hemisphere--including Siberia in Asia, and Canada and Alaska in North America. As the northern hemisphere day reaches its shortest length on the winter solstice (on or about December 21), odds increase that a northern Pacific storm system will dislodge a bubble of cold air and send it roaring southward into the contiguous United States. The exact path of the cold air is dependent on factors such as the storm's track, as well as pre-existing air flow patterns over the United States.

A favored track of Alaskan and western Canadian arctic airmasses is to slide through the High Plains east of the Rockies' crest. Such a scenario occurred in 1983 (figs. 1 and 2) and 1989 (figs. 3 and 4), when southern Texas' citrus and winter vegetables sustained extensive damage. In both cases, the arctic air retained enough strength to spill into Florida. The December 25-26, 1983, freeze resulted in frozen fruit throughout Florida's citrus belt, with some tree mortality in the north. The December 24-25, 1989, freeze was somewhat less severe in Florida, but still caused damage to citrus fruit and foliage.

An arctic outbreak prior to Christmas of 1985 bore similar characteristics to the outbreak of 1992, except that it was somewhat stronger. In 1985, sub-zero temperatures pushed as far south as central Missouri and southern Indiana, and Waterloo, IA, noted -25°F. But as in 1992, winter crop areas in Texas and Florida remained free of sub-freezing temperatures.

A less common type of arctic outbreak invaded the West in December 1990. The arctic airmass poured southward, bucking the rough terrain of western North America before settling over California's agricultural valleys (figs. 5 and 6). From December 21-25, 1990, nighttime temperatures dipped into the upper 10s and lower 20s in the San Joaquin Valley. The State's orange production dropped 60 percent from pre-freeze estimates.

A year ago, flooding, not cold air, made weather headlines in December. An enhanced subtropical jet stream associated with the then-active El Niño event contributed to the moisture source for inundating rains in eastern Texas from December 17-23 (fig. 7). Extensive river flooding ensued from San Antonio to Dallas, and later from Corpus Christi to Galveston as crests moved downstream.

1983:

Figure 1

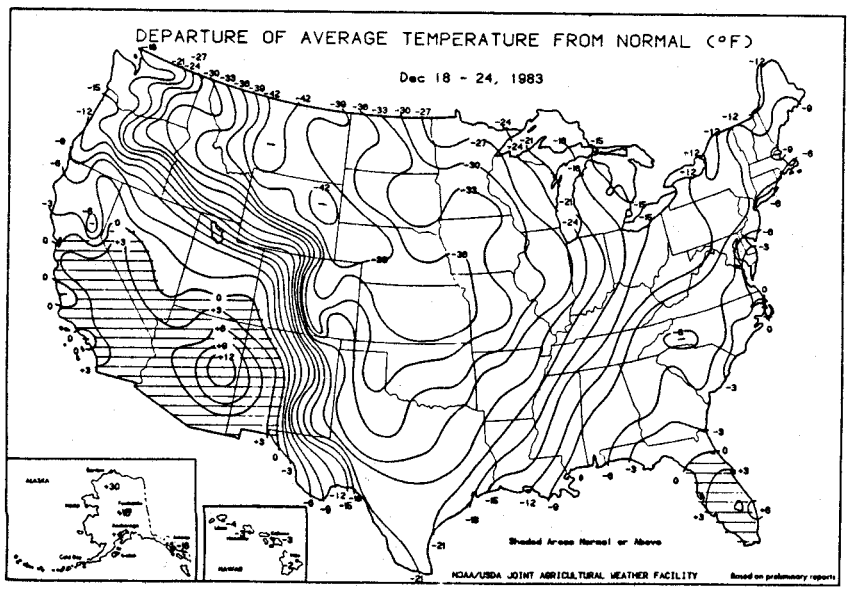
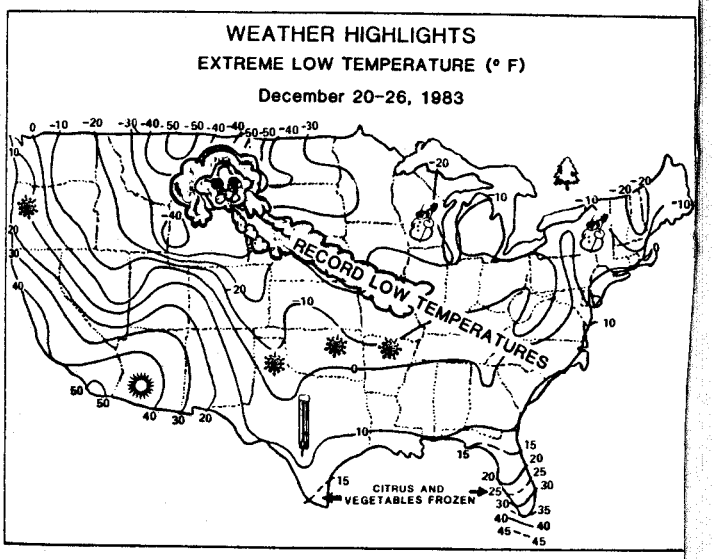


Figure 2



1989:

Figure 3

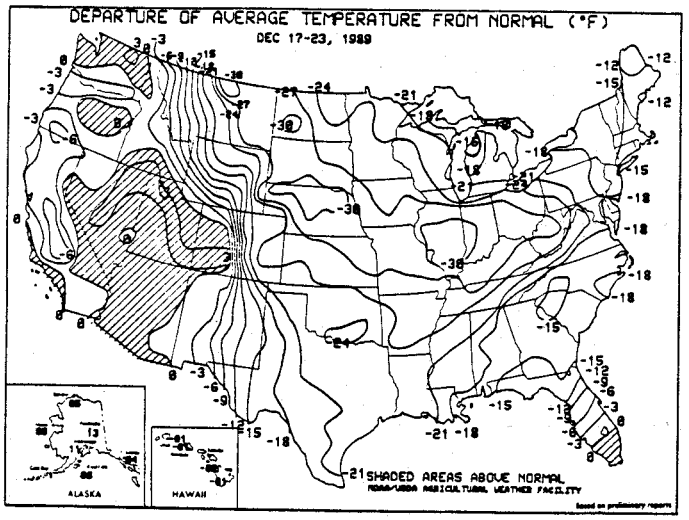
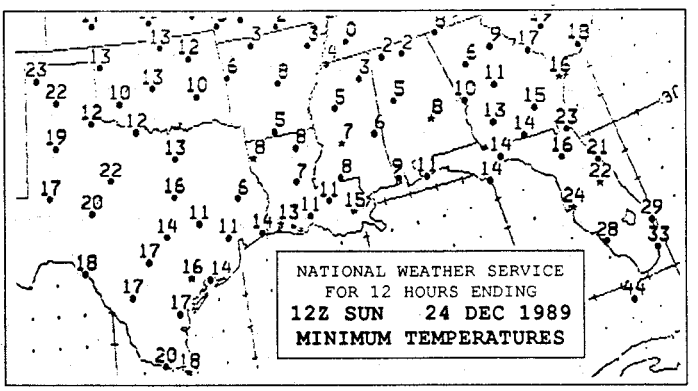


Figure 4



1990:

Figure 5

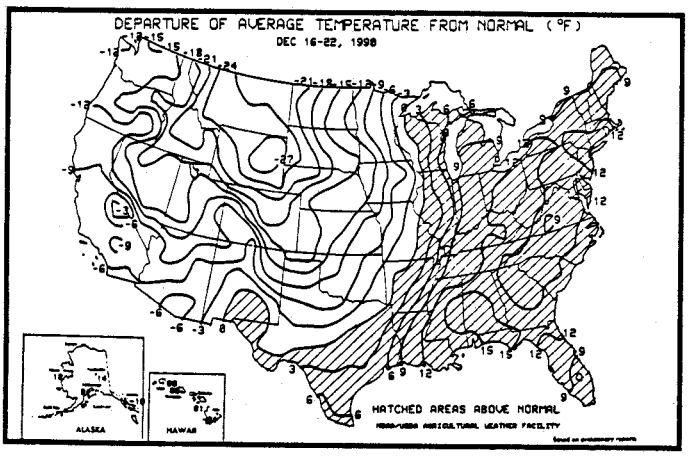
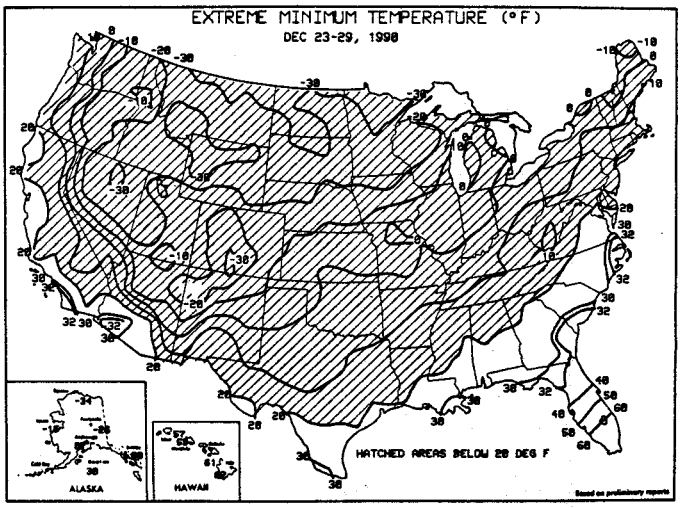
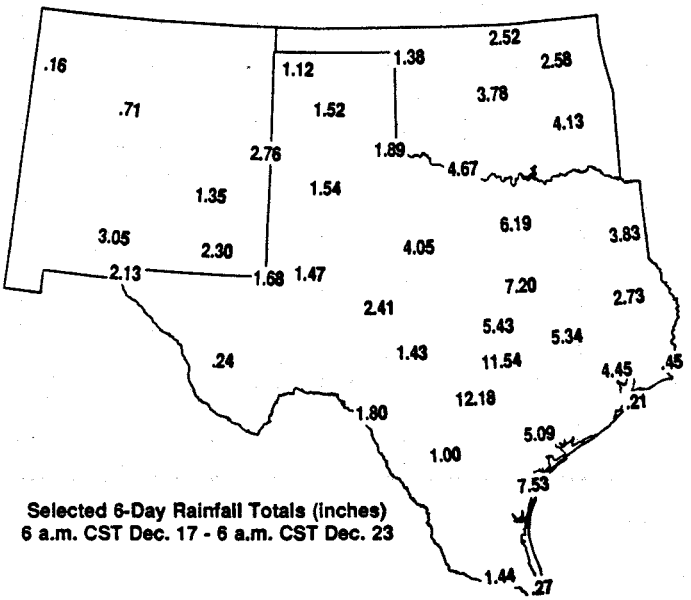


Figure 6



1991:

Figure 7



Selected 6-Day Rainfall Totals (inches)
6 a.m. CST Dec. 17 - 6 a.m. CST Dec. 23

National Weather Data for Selected Cities

Weather Data for the Week Ending December 26, 1992

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMP. °F		PRECIP.	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	59	42	67	29	50	6	1.2	.1	.6	5.1	124	56.4	105	99	69	0	1	6	1
MOBILE	70	53	75	40	62	10	T	-1.2	T	5.3	116	70.5	111	97	68	0	0	1	0
MONTGOMERY	66	47	76	30	57	9	.6	-.6	.3	7.1	178	64.9	135	93	60	0	1	3	0
AK ANCHORAGE	13	0	20	-8	7	-6	.1	-.2	.1	.6	68	14.4	98	93	77	0	7	2	0
BARROW	-12	-25	-7	-35	-18	-4	T	.0	T	.1	55	2.6	57	79	70	0	7	0	0
FAIRBANKS	-10	-31	9	-45	-20	-8	.3	.1	.2	1.1	177	12.7	123	80	69	0	7	3	0
JUNEAU	28	14	38	6	21	-4	2.0	.9	.9	5.7	146	79.1	151	95	61	0	7	6	1
KODIAK	37	26	41	22	32	2	.9	-.4	.6	4.5	97	56.9	95	94	70	0	7	2	1
NOME	2	-20	15	-26	-9	-12	T	-.1	T	1.0	194	12.5	87	80	57	0	7	0	0
AZ PHOENIX	66	42	71	36	54	2	.0	-.2	.0	2.2	317	13.3	196	73	26	0	0	0	0
PRESCOTT	48	18	52	12	33	-5	.0	-.3	.0	1.2	132	19.8	156	87	35	0	7	0	0
TUCSON	65	39	73	32	52	1	.0	-.2	.0	2.8	353	15.8	144	88	34	0	1	0	0
YUMA	64	46	68	40	55	0	.0	-.1	.0	2.3	833	5.7	240	37	18	0	0	0	0
AR FORT SMITH	48	32	62	24	40	0	.4	-.2	.4	5.4	224	48.6	124	93	57	0	2	1	0
LITTLE ROCK	47	34	57	26	40	-1	.3	-.6	.1	4.4	124	45.9	95	83	63	0	3	3	0
CA BAKERSFIELD	48	34	55	30	41	-6	.0	-.2	.0	1.4	262	8.0	146	95	65	0	3	0	0
EUREKA	53	39	56	35	46	-2	.2	-1.3	.1	5.6	109	25.5	68	95	74	0	0	3	0
FRESNO	46	34	55	30	40	-4	T	-.4	T	2.0	155	13.5	133	97	70	0	3	0	0
LOS ANGELES	70	44	75	40	57	1	.0	-.4	.0	2.9	222	15.3	131	47	16	0	0	0	0
REDDING	54	33	67	26	44	-3	.3	-1.4	.3	8.1	139	35.5	89	94	47	0	4	1	0
SACRAMENTO	44	34	51	29	39	-5	T	-.7	T	3.5	147	15.2	92	98	80	0	2	0	0
SAN DIEGO	67	42	72	38	54	-3	.0	-.3	.0	1.7	159	11.9	133	67	24	0	0	0	0
SAN FRANCISCO	53	41	60	36	47	-2	.0	-.9	.0	4.0	139	18.7	99	92	60	0	0	0	0
CO DENVER	46	11	55	-4	28	-3	T	-.1	T	.7	153	15.7	105	86	25	0	7	0	0
GRAND JUNCTION	26	2	34	0	14	-12	.0	-.1	.0	.3	62	9.1	117	93	57	0	7	0	0
PUEBLO	47	13	59	6	30	-1	.0	-.1	.0	.4	176	12.3	115	95	27	0	7	0	0
CT BRIDGEPORT	42	26	49	16	34	2	.1	-.7	.1	3.3	104	45.2	111	77	45	0	6	1	0
HARTFORD	38	20	46	11	29	2	.1	-.8	.1	3.6	102	41.3	95	83	42	0	7	1	0
DC WASHINGTON	46	30	55	20	38	1	.4	-.3	.2	2.3	87	35.9	93	82	36	0	4	2	0
FL APALACHICOLA	71	55	76	45	63	9	.4	-.4	.4	1.6	53	56.4	103	--	--	0	0	1	0
DAYTONA BEACH	77	58	81	53	67	9	T	-.5	T	.2	11	46.1	96	99	60	0	0	0	0
JACKSONVILLE	74	53	80	46	64	9	.1	-.5	.1	.6	31	63.2	124	99	56	0	0	1	0
KEY WEST	80	71	81	69	76	5	T	-.3	T	.1	5	37.1	95	91	66	0	0	2	0
MIAMI	82	69	84	65	75	8	.5	.1	.4	.5	32	56.4	99	92	60	0	0	2	0
ORLANDO	79	59	82	56	69	9	T	-.4	T	.8	47	52.8	108	99	57	0	0	1	0
TALLAHASSEE	73	50	81	38	61	9	.2	-.9	.2	1.4	36	62.8	99	96	56	0	0	1	0
TAMPA	80	58	81	55	69	9	.1	-.4	.1	2.0	111	36.7	79	96	57	0	0	1	0
WEST PALM BEACH	81	66	83	62	74	7	.4	-.1	.3	.4	23	59.7	101	97	63	0	0	3	0
GA ATLANTA	56	40	69	29	48	5	.7	-.3	.4	5.9	170	59.6	125	96	67	0	2	5	0
AUGUSTA	61	42	73	28	51	6	.2	-.5	.2	1.5	59	50.7	120	93	55	0	1	4	0
MACON	62	44	76	32	53	5	.3	-.7	.2	2.9	86	57.7	131	92	61	0	1	2	0
SAVANNAH	68	50	79	37	59	9	T	-.7	T	1.5	64	58.4	118	96	52	0	0	0	0
HI HILO	80	67	81	62	73	2	4.3	1.6	1.3	11.2	102	114.1	90	96	70	0	0	6	4
HONOLULU	82	70	86	67	76	3	2.4	1.6	2.3	2.7	96	15.2	67	94	62	0	0	3	1
KAHULUI	84	67	90	65	75	3	.4	-.3	.4	1.0	46	15.2	86	90	56	1	0	2	0
LIHUE	79	70	81	69	75	2	9.2	8.0	7.1	16.2	357	41.4	96	92	76	0	0	7	3
ID BOISE	36	25	44	19	31	0	T	-.3	T	.8	70	7.6	67	94	65	0	7	1	0
LEWISTON	46	34	51	25	40	6	T	-.3	T	.1	9	10.3	82	71	45	0	2	0	0
POCATELLO	33	16	36	2	25	0	T	-.2	T	1.2	153	8.3	79	85	62	0	7	1	0
IL CHICAGO	30	10	43	-3	20	-4	T	-.5	T	1.1	55	28.8	85	80	46	0	7	0	0
MOLINE	33	11	46	-1	22	-2	T	-.4	T	2.6	160	38.6	105	84	48	0	7	0	0
PEORIA	33	12	43	3	23	-3	T	-.4	T	2.1	122	31.7	92	86	53	0	7	0	0
QUINCY	36	16	45	5	26	-1	.0	-.4	.0	1.8	120	30.0	80	80	50	0	7	0	0
ROCKFORD	29	8	42	-5	19	-4	T	-.4	T	2.4	150	30.4	84	86	50	0	7	1	0
SPRINGFIELD	36	18	46	6	27	-1	.0	-.5	.0	1.9	107	29.1	86	86	51	0	7	0	0
IN EVANSVILLE	40	21	53	13	31	-3	.1	-.7	.1	1.0	33	35.0	85	89	51	0	7	2	0
FORT WAYNE	32	16	39	10	24	-3	T	-.5	T	1.3	61	43.2	126	85	60	0	7	2	0
INDIANAPOLIS	35	17	46	8	26	-3	T	-.7	T	.9	37	43.2	112	84	50	0	7	0	0
SOUTH BEND	30	14	38	9	22	-5	.1	-.6	.1	1.6	64	36.3	97	87	60	0	7	2	0
IA DES MOINES	36	13	44	3	25	2	T	-.2	T	1.6	189	33.2	109	83	50	0	7	0	0
SIOUX CITY	37	10	42	0	24	3	T	-.2	T	.5	78	29.7	117	91	53	0	7	0	0
WATERLOO	31	5	39	-6	18	-1	T	-.2	T	1.0	106	30.4	93	89	69	0	7	1	0
KS CONCORDIA	39	19	45	12	29	0	.0	-.1	.0	1.2	195	41.2	153	83	49	0	7	0	0
DODGE CITY	36	13	40	5	25	-7	.0	-.1	.0	1.2	272	22.7	112	87	60	0	7	0	0
GOODLAND	35	11	42	9	23	-6	.0	-.1	.0	.2	47	25.7	160	84	48	0	7	0	0
TOPEKA	41	17	50	10	29	0	.0	-.3	.0	1.9	180	35.9	108	90	43	0	7	0	0
WICHITA	41	21	49	14	31	-1	.0	-.2	.0	1.1	137	35.1	123	86	44	0	7	0	0
KY BOWLING GREEN	43	24	53	16	34	-3	1.1	.0	.4	2.6	68	38.5	79	96	65	0	6	5	0
LEXINGTON	43	22	52	10	32	-2	.5	-.3	.3	1.5	48	48.8	108	91	55	0	6	5	0
LOUISVILLE	42	23	53	14	33	-2	.2	-.6	.1	1.2	41	40.4	94	91	52	0	6	3	0
LA BATON ROUGE	68	53	76	43	61	9	.5	-.7	.2	4.5	108	70.1	127	99	74	0	0	4	0
LAKE CHARLES	66	52	75	44	59	7	1.0	-.1	.5	3.8	91	62.7	117	98	81	0	0	3	1
NEW ORLEANS	71	56	76	46	63	10	.1	-1.1	.0	5.6	126	82.0	139	98	71	0	0	3	0
SHREVEPORT	55	43	71	33	49	2	.5	-.4	.3	5.6	172	51.2	119	93	70	0	0	4	0

Based on 1951-80 normals.

Weather Data for the Week Ending December 26, 1992

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMP. °F		PRECIP.	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
ME CARIBOU	25	5	37	-13	15	2	.5	-.2	.3	.9	33	35.6	99	89	62	0	7	3	0
PORTLAND	35	15	46	2	25	2	.1	-.9	.1	1.3	33	37.7	88	86	42	0	7	3	0
MD BALTIMORE	46	26	54	15	36	1	.3	-.5	.2	4.0	140	38.3	93	89	42	0	6	2	0
SALISBURY	46	27	52	14	36	-1	1.2	.3	.9	4.9	156	45.6	101	93	52	0	5	3	1
MA BOSTON	41	24	48	13	32	1	.1	-.9	.1	7.3	194	42.8	99	77	38	0	7	2	0
CHATHAM	42	25	49	13	33	0	.2	-.9	.2	5.3	126	66.3	144	76	52	0	5	2	0
MI ALPENA	29	12	35	3	21	-1	.1	-.3	.0	.8	45	26.0	91	85	52	0	7	3	0
DETROIT	33	19	44	12	26	0	T	-.5	T	.9	43	35.9	118	81	51	0	7	1	0
FLINT	31	16	41	9	23	-1	T	-.4	T	.7	41	35.6	124	84	53	0	7	1	0
GRAND RAPIDS	30	15	37	7	23	-3	.2	-.4	.1	1.3	58	40.1	121	91	61	0	7	3	0
HOUGHTON LAKE	24	12	33	3	18	-2	.2	-.3	.1	1.3	84	28.7	103	91	65	0	7	3	0
LANSING	31	15	40	6	23	-1	.1	-.5	.1	.8	38	33.5	114	87	56	0	7	2	0
MARQUETTE	18	3	28	-6	11	-5	.3	-.2	.1	1.8	85	30.6	83	85	67	0	7	6	0
MUSKEGON	31	17	39	13	24	-2	.1	-.5	.0	1.4	65	28.5	92	87	62	0	7	2	0
SAULT ST. MARIE	25	5	33	-6	15	-2	1.3	.7	.5	3.0	139	35.4	107	89	65	0	7	7	1
MN ALEXANDRIA	18	-8	28	-15	5	-6	.1	-.1	.0	.6	98	18.1	74	87	65	0	7	2	0
DULUTH	16	-7	26	-20	5	-7	.3	.0	.2	.8	77	28.3	97	81	62	0	7	4	0
INT'L FALLS	6	-18	15	-36	-6	-11	.4	.2	.2	1.1	149	22.9	95	84	67	0	7	5	0
MINNEAPOLIS	25	-1	36	-11	12	-4	T	-.1	T	.8	104	29.4	113	81	58	0	7	2	0
ROCHESTER	25	0	34	-13	13	-2	T	-.2	T	1.1	138	26.8	95	87	66	0	7	2	0
MS GREENWOOD	56	40	67	30	48	3	2.0	.7	1.0	5.6	124	46.6	89	98	67	0	2	5	2
JACKSON	59	45	69	33	52	5	1.2	-.1	.6	4.3	96	48.4	95	97	74	0	0	6	1
MERIDIAN	62	45	72	30	53	7	1.0	-.4	.4	5.8	122	65.3	124	97	69	0	2	6	0
MO CAPE GIRARDEAU	40	23	54	15	31	--	.1	-.7	.1	1.1	35	37.9	86	92	59	0	7	2	0
COLUMBIA	40	17	50	7	29	-2	.0	-.4	.0	2.6	153	34.3	94	87	45	0	7	0	0
KANSAS CITY	40	19	49	10	30	-1	.0	-.3	.0	3.6	294	50.5	141	82	45	0	7	0	0
SAINT LOUIS	40	22	53	11	31	-1	.0	-.5	.0	3.4	179	33.2	99	77	41	0	7	0	0
SPRINGFIELD	44	22	52	13	33	-1	T	-.5	T	4.1	186	47.9	122	85	44	0	7	1	0
MT BILLINGS	39	16	45	3	28	2	.1	-.1	.1	.4	70	11.4	77	64	39	0	7	1	0
GLASGOW	25	0	41	-22	13	-1	.1	.0	.1	.1	42	9.1	84	87	64	0	7	3	0
GREAT FALLS	41	11	44	-6	26	2	.1	-.1	.1	.2	31	14.4	97	79	41	0	7	2	0
HAVRE	33	5	40	-12	19	2	T	-.1	T	T	0	9.1	78	83	64	0	7	0	0
HELENA	37	9	45	3	23	1	.2	.1	.1	.4	84	9.2	81	82	48	0	7	3	0
KALISPELL	36	22	43	16	29	6	.3	-.1	.2	.8	62	16.0	103	95	72	0	7	3	0
MILES CITY	34	9	44	-7	21	2	.1	.0	.1	.3	51	14.5	103	83	54	0	7	1	0
MISSOULA	39	24	43	16	32	8	.1	-.2	.0	.2	24	10.6	82	91	59	0	7	3	0
NE GRAND ISLAND	37	13	42	7	25	1	T	-.1	T	.5	95	31.2	136	84	52	0	7	0	0
LINCOLN	39	13	45	6	26	2	T	-.1	T	.9	158	25.7	96	91	44	0	7	0	0
NORFOLK	37	10	42	0	24	2	T	-.1	T	.8	157	29.0	123	87	53	0	7	0	0
NORTH PLATTE	40	9	50	2	24	0	.0	-.1	.0	.3	97	23.0	120	92	43	0	7	0	0
OMAHA	39	16	45	3	27	2	T	-.2	T	.9	133	35.0	116	80	48	0	7	0	0
SCOTTSBLUFF	38	10	46	0	24	-2	.0	-.1	.0	.6	151	15.8	109	85	48	0	7	0	0
VALENTINE	40	11	50	-1	26	3	T	-.1	T	.1	39	18.3	107	80	43	0	7	0	0
NV ELY	40	2	46	0	21	-4	.0	-.2	.0	.3	44	9.1	104	78	34	0	7	0	0
LAS VEGAS	52	29	58	26	41	-3	.0	-.1	.0	1.1	478	9.3	234	69	25	0	7	0	0
RENO	43	15	46	10	29	-3	.0	-.3	.0	.7	69	4.2	59	94	45	0	7	0	0
WINNEMUCCA	34	3	39	-4	19	-11	T	-.2	T	.8	113	3.9	52	86	59	0	7	0	0
NH CONCORD	34	14	46	0	24	2	.1	-.7	.0	1.6	54	29.1	80	88	43	0	7	2	0
NJ ATLANTIC CITY	45	21	53	9	33	-2	.2	-.6	.2	3.5	115	36.5	88	88	44	0	7	2	0
NM ALBUQUERQUE	42	18	45	16	30	-4	.0	-.1	.0	1.0	237	11.9	152	82	36	0	7	0	0
CLOVIS	49	23	57	18	36	-2	.0	-.1	.0	.2	49	19.8	117	84	32	0	7	0	0
ROSWELL	54	27	64	23	40	1	.0	-.1	.0	.5	168	13.1	125	82	35	0	7	0	0
NY ALBANY	36	19	45	7	28	4	.2	-.5	.1	2.3	92	30.7	87	81	43	0	7	2	0
BINGHAMTON	32	16	39	5	24	0	.2	-.4	.2	1.9	79	40.0	110	84	53	0	7	3	0
BUFFALO	34	20	42	12	27	0	.6	-.2	.3	2.4	84	46.2	125	80	44	0	7	4	0
NEW YORK	42	27	48	18	35	0	.1	-.7	.1	4.8	157	36.8	87	75	41	0	5	2	0
ROCHESTER	34	19	42	9	26	0	.5	-.1	.3	2.1	96	35.4	114	89	52	0	7	5	0
SYRACUSE	36	19	45	7	28	2	.2	-.5	.1	1.6	59	42.7	111	87	47	0	7	5	0
NC ASHEVILLE	50	33	61	22	41	3	.8	.1	.6	3.2	121	53.5	123	94	55	0	3	3	1
CHARLOTTE	52	38	64	24	45	3	.9	.1	.6	2.1	76	53.1	125	85	47	0	2	3	1
GREENSBORO	48	32	58	17	40	1	.5	-.3	.5	2.2	78	43.7	105	83	45	0	4	4	0
HATTERAS	58	44	64	35	51	4	.4	-.6	.3	2.2	60	58.6	106	95	64	0	0	3	0
NEW BERN	59	41	75	26	50	5	.2	-.7	.1	1.9	63	49.1	93	92	51	0	2	3	0
RALEIGH	53	34	67	19	44	3	.8	.0	.7	2.1	79	42.8	104	88	46	0	3	3	1
WILMINGTON	60	42	74	28	51	4	.3	-.5	.1	2.6	92	64.4	122	94	52	0	2	4	0
ND BISMARCK	19	-5	42	-18	7	-6	T	-.1	T	.4	88	12.6	84	85	62	0	7	1	0
FARGO	13	-8	24	-13	2	-7	.1	-.1	.0	.4	76	20.3	105	84	66	0	7	3	0
GRAND FORKS	10	-14	22	-19	-2	-10	.1	-.1	.0	.6	114	16.9	93	85	69	0	7	3	0
WILLISTON	20	-6	39	-18	7	-6	T	-.1	T	.1	29	12.2	91	84	63	0	7	2	0
OH AKRON-CANTON	35	20	44	13	27	-1	.2	-.5	.2	1.2	52	44.1	125	85	53	0	7	1	0
CINCINNATI	39	19	49	9	29	-3	.1	-.5	.1	1.0	40	37.2	94	85	47	0	7	3	0
CLEVELAND	35	21	43	13	28	-1	.2	-.5	.1	1.3	54	45.5	131	81	49	0	7	3	0
COLUMBUS	38	21	47	14	30	0	.1	-.5	.1	.8	38	39.1	108	84	49	0	7	3	0
DAYTON	37	18	47	10	28	-2	T	-.5	T	.7	35	39.8	116	82	49	0	7	1	0

Based on 1951-80 normals.

Weather Data for the Week Ending December 26, 1992

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMP. °F		PRECIP.	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTRME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
TOLEDO	33	18	41	13	26	-1	T	-.6	T	1.0	44	34.5	110	84	56	0	7	0	0
YOUNGSTOWN	34	19	43	8	27	-1	.2	-.4	.2	1.6	68	40.8	111	86	52	0	7	2	0
OK OKLAHOMA CITY	49	25	63	18	37	-1	T	-.3	T	3.1	314	43.3	141	83	43	0	6	0	0
TULSA	47	24	57	16	36	-2	.3	-.1	.3	5.0	329	43.3	113	90	45	0	6	1	0
OR ASTORIA	49	39	50	29	44	1	1.2	-1.4	.5	5.2	54	47.9	70	97	77	0	1	7	0
BURNS	29	8	38	-7	19	-7	.1	-.3	.1	1.0	80	9.1	91	92	66	0	7	2	0
MEDFORD	40	33	49	30	36	-1	.3	-.5	.2	2.6	91	14.1	73	99	85	0	5	2	0
PENDLETON	48	36	55	29	42	7	T	-.4	T	.5	36	8.5	72	81	53	0	1	2	0
PORTLAND	48	38	52	33	43	3	.5	-1.0	.2	4.0	75	28.1	77	97	78	0	0	7	0
SALEM	47	37	51	31	42	2	.7	-.9	.5	6.7	112	32.2	82	93	77	0	3	3	0
PA ALLENTOWN	40	22	48	10	31	1	.2	-.7	.2	2.9	93	38.4	88	80	40	0	7	1	0
ERIE	35	22	44	15	29	0	.4	-.3	.2	1.6	58	42.4	107	84	49	0	7	4	0
HARRISBURG	41	26	49	18	33	2	.2	-.5	.2	2.0	75	32.7	84	72	38	0	6	1	0
PHILADELPHIA	44	28	52	20	36	2	.2	-.5	.2	4.3	150	30.1	74	82	40	0	4	2	0
PITTSBURGH	39	20	46	11	30	0	.3	-.3	.3	2.3	106	36.1	100	83	45	0	6	3	0
SCRANTON	39	21	47	10	30	2	.2	-.3	.2	1.9	91	28.5	83	80	43	0	7	2	0
RI PROVIDENCE	41	20	50	12	31	0	.2	-.8	.2	5.7	152	46.3	104	87	41	0	7	3	0
SC CHARLESTON	66	46	78	33	56	7	.1	-.6	.1	1.3	49	53.7	105	93	49	0	0	2	0
COLUMBIA	59	42	70	27	51	5	.2	-.7	.1	1.2	40	47.9	99	89	52	0	1	5	0
FLORENCE	61	42	75	28	51	6	.6	-.2	.5	1.3	53	47.6	109	88	47	0	2	3	1
GREENVILLE	52	36	67	21	44	2	.8	-.2	.6	4.3	127	59.7	118	89	54	0	3	4	1
SD ABERDEEN	23	0	41	-12	11	-2	T	-.1	T	.1	32	16.8	96	83	64	0	7	1	0
HURON	30	3	42	-9	16	0	T	-.1	T	.3	74	22.5	122	86	60	0	7	1	0
RAPID CITY	37	11	46	2	24	0	T	-.1	T	.5	138	13.5	84	85	48	0	7	2	0
SIOUX FALLS	31	2	37	-8	16	-1	T	-.1	T	.6	92	32.2	135	86	63	0	7	1	0
TN CHATTANOOGA	51	37	63	24	44	4	2.3	1.1	1.5	4.8	111	55.0	106	96	63	0	2	5	2
KNOXVILLE	48	33	62	21	40	1	2.8	1.7	1.3	6.1	160	43.7	94	99	65	0	3	5	2
MEMPHIS	49	35	59	25	42	0	1.0	-.1	.4	3.2	78	47.2	93	93	56	0	3	5	0
NASHVILLE	49	30	58	21	39	0	1.3	.2	.6	2.3	60	39.3	83	92	62	0	5	5	1
TX ABILENE	55	36	66	26	46	1	T	-.2	T	1.0	137	27.9	120	87	44	0	2	1	0
AMARILLO	46	22	51	19	34	-3	T	-.1	T	.4	102	20.5	109	89	36	0	7	0	0
AUSTIN	59	47	69	40	53	2	.2	-.2	.2	3.0	175	45.8	148	92	67	0	0	4	0
BEAUMONT	66	55	75	48	61	8	.9	-.2	.4	6.4	155	65.1	119	99	79	0	0	3	0
BROWNSVILLE	72	57	82	50	64	3	.6	.3	.5	.8	82	31.8	127	100	81	0	0	2	1
CORPUS CHRISTI	71	55	81	45	63	6	.1	-.2	.0	.9	91	41.4	134	96	71	0	0	2	0
DEL RIO	65	47	73	40	56	5	.1	.0	.1	.3	74	20.4	119	77	51	0	0	2	0
EL PASO	58	35	64	32	46	3	.0	-.1	.0	1.2	374	11.2	149	73	32	0	1	0	0
FORT WORTH	56	41	68	32	49	2	T	-.4	T	4.6	314	42.6	138	86	53	0	1	0	0
GALVESTON	66	56	74	49	61	5	.3	-.5	.1	3.8	126	52.7	132	99	80	0	0	3	0
HOUSTON	67	52	78	47	59	6	.1	-.7	.1	3.3	104	52.2	114	95	69	0	0	3	0
LUBBOCK	51	29	65	22	40	0	.0	-.1	.0	1.1	355	22.2	127	80	30	0	5	0	0
MIDLAND	57	35	68	29	46	1	T	-.1	T	.5	143	21.3	159	88	37	0	3	0	0
SAN ANGELO	57	39	67	33	48	1	T	-.1	T	.7	140	21.0	117	90	48	0	0	0	0
SAN ANTONIO	63	50	74	44	56	5	.1	-.2	.1	1.9	164	46.2	161	91	65	0	0	2	0
VICTORIA	68	53	79	44	61	6	.1	-.3	.1	2.0	112	51.3	140	97	71	0	0	3	0
WACO	56	43	66	36	50	2	T	-.4	T	3.2	201	38.5	126	94	64	0	0	1	0
WICHITA FALLS	53	32	63	24	43	0	.0	-.3	.0	2.2	219	29.0	110	82	42	0	4	0	0
UT CEDAR CITY	37	3	40	-6	20	-10	.0	-.1	.0	.5	87	10.8	106	88	39	0	7	0	0
SALT LAKE CITY	34	16	38	7	25	-4	.0	-.3	.0	.7	63	11.7	78	90	54	0	7	0	0
VT BURLINGTON	35	15	43	-2	25	5	.1	-.4	.1	.7	33	30.6	92	79	45	0	7	4	0
VA NORFOLK	52	36	62	21	44	2	.5	-.3	.5	2.5	95	46.6	105	90	51	0	2	3	0
RICHMOND	51	30	60	17	41	2	.5	-.3	.4	2.0	68	40.9	94	85	42	0	4	3	0
ROANOKE	48	28	57	14	38	2	.4	-.3	.2	2.0	82	42.3	110	84	38	0	4	3	0
WA QUILLAYUTE	46	38	48	30	42	2	1.9	-2.2	.4	8.5	58	89.1	85	100	81	0	1	7	0
SEATTLE-TACOMA	46	39	50	31	43	2	.4	-1.1	.2	3.7	70	32.5	87	96	75	0	1	5	0
SPOKANE	35	22	39	11	28	0	.4	-.2	.4	1.3	64	13.7	85	95	81	0	7	2	0
YAKIMA	36	14	49	9	25	-5	.1	-.2	.1	1.4	133	7.3	96	97	72	0	7	1	0
WV BECKLEY	43	24	52	15	34	2	1.4	.6	.6	3.6	140	37.7	90	95	48	0	5	4	1
CHARLESTON	46	26	56	17	36	1	1.0	.2	.6	3.3	122	39.9	95	94	48	0	5	3	1
HUNTINGTON	44	26	53	17	35	-1	.6	-.1	.4	2.6	99	37.2	92	88	51	0	5	4	0
PARKERSBURG	43	23	50	14	33	-1	.4	-.3	.3	1.7	75	34.6	92	85	43	0	5	3	0
WI GREEN BAY	26	5	36	-3	15	-3	.1	-.2	.1	1.9	162	30.0	109	79	54	0	7	2	0
LACROSSE	28	6	36	-8	17	-2	T	-.2	T	1.1	121	31.5	106	76	57	0	7	1	0
MADISON	28	7	38	-5	18	-2	T	-.3	T	1.8	140	31.6	104	75	51	0	7	1	0
MILWAUKEE	29	10	39	0	20	-3	T	-.4	T	1.4	83	33.0	108	76	44	0	7	1	0
WAUSAU	22	-2	32	-12	10	-5	T	-.2	T	1.3	121	32.9	105	88	65	0	7	3	0
WY CASPER	34	18	39	1	26	1	T	-.1	T	.7	180	9.2	83	73	47	0	7	0	0
CHEYENNE	40	18	47	10	29	0	T	-.1	T	.5	158	13.0	98	68	29	0	7	0	0
LANDER	30	7	41	-5	19	-3	.0	-.1	.0	.8	188	13.1	102	71	41	0	7	0	0
SHERIDAN	36	7	49	0	22	-2	.2	.0	.2	1.0	167	14.8	100	84	44	0	7	2	0

Based on 1951-80 normals.

HEATING DEGREE DAYS (Base 65° F)
December 20 - 26, 1992

(Cumulative totals and departures from normal are for the period July 1 - December 26, 1992)

STATES AND STATIONS	WEEKLY TOTAL	WEEKLY DEPARTURE	CUMULATIVE TOTAL	CUMULATIVE DEPARTURE	CUMULATIVE DEP. from '91
AL BIRMINGHAM	102	-42	1026	0	65
MOBILE	34	-63	550	-30	-96
MONTGOMERY	62	-57	775	-27	-39
AK ANCHORAGE	405	39	4600	46	358
BARROW	577	20	8319	66	-93
FAIRBANKS	592	50	6201	177	362
JUNEAU	304	27	3541	-208	68
KODIAK	231	-20	3724	30	242
NOME	513	79	6280	498	1059
AZ FLAGSTAFF	295	43	2678	20	332
PHOENIX	75	-15	427	-48	99
PRESCOTT	222	19	1637	-82	109
TUCSON	89	-9	641	75	130
WINSLOW	344	106	2137	361	259
YUMA	67	1	336	10	131
AR FORT SMITH	175	-3	1240	22	58
LITTLE ROCK	171	8	1144	33	83
CA BAKERSFIELD	168	42	753	4	-40
EUREKA	130	11	1577	-361	-142
FRESNO	174	27	840	-110	05
LOS ANGELES	53	-9	293	-168	44
REDDING	161	24	885	-27	58
SACRAMENTO	177	35	883	-59	44
SAN DIEGO	48	-9	275	-78	54
SAN FRANCISCO	127	10	763	-377	-79
STOCKTON	183	38	847	-80	-4
CO DENVER	256	22	2406	236	123
GRAND JCT.	353	83	2184	92	51
PUEBLO	242	8	2444	440	215
CT BRIDGEPORT	217	-14	1806	102	185
HARTFORD	249	-19	2251	130	286
DE WILMINGTON	210	-10	1663	10	162
DC WASHINGTON	186	-8	1479	115	214
FL APALACHICOLA	18	-64	331	-107	-134
DAYTONA BEACH	0	-51	184	-68	-19
FORT MYERS	0	-28	52	-60	-11
JACKSONVILLE	20	-63	395	-66	-47
KEY WEST	0	-7	3	-15	03
MIAMI	0	-13	13	-23	05
ORLANDO	0	-42	132	-44	-11
TALLAHASSEE	27	-70	470	-90	-105
TAMPA	0	-43	136	-67	-35
W. PALM BEACH	0	-14	36	-20	04
GA ATLANTA	118	-35	1064	9	148
AUGUSTA	92	-42	897	-9	34
MACON	83	-38	867	67	93
SAVANNAH	46	-65	585	-77	29
ID BOISE	239	-1	2378	207	245
LEWISTON	173	-45	2054	-24	141
POCATELLO	280	2	2869	225	209
IL CHICAGO	311	33	2404	247	75
MOLINE	300	11	2389	178	59
PEORIA	295	18	2188	55	-23
QUINCY	268	7	2150	185	70
ROCKFORD	323	24	2599	206	101
SPRINGFIELD	264	8	1915	2	-65
IN EVANSVILLE	240	21	1594	-49	-27
FORT WAYNE	286	19	2217	63	93
INDIANAPOLIS	271	22	1971	29	106
SOUTH BEND	300	33	2275	127	77
IA DES MOINES	281	-12	2384	157	-72
DUBUQUE	342	27	2850	295	112
SIOUX CITY	288	-22	2588	168	-92
WATERLOO	330	7	2703	71	-102
KS CONCORDIA	248	-5	2179	250	143
DODGE CITY	278	48	2220	452	293
GOODLAND	290	37	2571	365	409
TOPEKA	249	1	1940	85	57
WICHITA	236	9	1759	100	14
KY BOWLING GREEN	218	18	1558	40	104
LEXINGTON	229	15	1705	39	103
LOUISVILLE	222	15	1498	-60	72
LA BATON ROUGE	35	-58	553	-22	-19
LAKE CHARLES	43	-41	524	-8	-13
NEW ORLEANS	22	-63	437	-51	-97
SHREVEPORT	111	-11	867	84	85
ME CARIBOU	349	-16	3407	-98	-4
PORTLAND	275	-16	2577	-16	141
MD BALTIMORE	202	-11	1616	36	69
SALISBURY	198	3	1522	61	132
MA BOSTON	228	-6	1989	180	245
CHATHAM	220	-1	1908	35	222
MI ALPENA	310	4	3072	161	214
DETROIT	270	0	2246	-1	129
FLINT	288	7	2480	85	75
GRAND RAPIDS	294	15	2512	149	85
HOUGHTON LAKE	326	15	2986	73	137
LANSING	291	10	2617	229	127
MARQUETTE	379	33	3745	311	105
MUSKEGON	282	11	2466	137	114
SAULT ST MARIE	348	13	3465	201	246
MN ALEXANDRIA	415	38	3363	134	-75
DULUTH	420	42	3767	191	-100
INT'L FALLS	493	73	4017	128	-24
MINNEAPOLIS	369	29	2918	125	-254
ROCHESTER	363	18	3151	249	-144
SAINT CLOUD	419	49	3348	155	-134
MS GREENWOOD	119	-20	911	-61	38
JACKSON	91	-33	824	-10	29
MERIDIAN	79	-47	801	-89	-9
MO CAPE GIRARDEAU	234	22	1591	57	116
COLUMBIA	252	13	1921	137	69
KANSAS CITY	246	-1	1946	149	-14
SAINT LOUIS	237	7	1649	-45	63
SPRINGFIELD	224	10	1661	45	50
MT BILLINGS	259	-19	2661	55	129
GLASGOW	365	10	3188	-32	134
GREAT FALLS	271	-17	3000	175	292
HAVRE	320	-20	3246	55	231
HELENA	290	-12	3144	36	189
KALISPELL	250	-46	3308	3	185
MILES CITY	304	-16	2790	-81	72
MISSOULA	233	-57	3141	73	314
NE GRAND ISLAND	276	-7	2504	195	135
LINCOLN	271	-14	2339	121	45
NORFOLK	289	-16	2556	64	-28
NORTH PLATTE	283	-2	2697	164	252
OMAHA	262	-20	2314	174	-78
SCOTTSBLUFF	286	16	2831	359	375
VALENTINE	275	-25	2867	226	155
NV ELY	305	24	2861	2	148
LAS VEGAS	168	21	931	19	104
RENO	252	17	1966	-337	198
WINNEMUCCA	323	72	2482	30	287
NH CONCORD	285	-15	2768	131	278
NJ ATLANTIC CITY	225	8	1802	150	198
NM ALBUQUERQUE	243	29	1760	120	210
CLOVIS	200	12	1610	127	-62
ROSWELL	170	7	1292	85	-64
NY ALBANY	259	-27	2488	114	237
BINGHAMTON	284	-3	2793	266	472
BUFFALO	264	-5	2370	109	192
NEW YORK	212	-3	1611	60	257
ROCHESTER	268	0	2511	277	256
SYRACUSE	257	-17	2450	188	258
NC ASHEVILLE	163	-26	1614	55	167
CAPE HATTERAS	97	-28	676	-93	34
CHARLOTTE	140	-27	1141	-38	186
GREENSBORO	173	-11	1464	102	247
NEW BERN	103	-40	864	-89	40
RALEIGH-DURHAM	148	-22	1241	7	136
WILMINGTON	97	-29	816	1	16
ND BISMARCK	405	38	3432	162	150
FARGO	436	48	3479	169	06
GRAND FORKS	466	67	3646	106	-19
WILLISTON	406	36	3564	190	266
OH AKRON-CANTON	264	7	2283	167	199
CLEVELAND	255	3	2141	80	192
COLUMBUS	246	3	1959	-5	96
CINCINNATI	251	20	1907	95	158
DAYTON	261	15	2061	116	112
TOLEDO	274	1	2239	-23	126
YOUNGSTOWN	267	3	2366	124	248
OK OKLAHOMA CITY	192	6	1368	85	55
TULSA	204	15	1439	162	191
OR ASTORIA	148	-10	2047	57	129
BURNS	322	51	3193	530	586
MEDFORD	200	4	1542	-257	46
PENDLETON	159	-51	2064	62	193
PORTLAND	152	-23	1577	-155	167
SALEM	159	-16	1637	-211	97
PA ALLENTOWN	238	-11	2088	99	254
ERIE	252	-8	2054	-163	133
HARRISBURG	219	-16	1906	86	200
PHILADELPHIA	204	-16	1562	-72	120
PITTSBURGH	247	-2	2100	34	188
SCRANTON	245	-17	2175	-16	119
RI PROVIDENCE	238	-5	1977	28	249
SC CHARLESTON	68	-45	645	-75	32
COLUMBIA	98	-39	974	45	93
FLORENCE	94	-39	864	-9	66
GREENVILLE	145	-15	1326	181	233
SD ABERDEEN	373	14	3209	166	119
HURON	340	-1	3008	138	75
RAPID CITY	285	1	2838	221	217
SIOUX FALLS	338	2	2907	116	-65
TN CHATTANOOGA	146	-28	1281	-4	81
KNOXVILLE	172	-5	1413	101	102
MEMPHIS	159	-4	1109	-4	62
NASHVILLE	180	1	1311	-7	44
TX ABILENE	134	-5	923	-7	-124
AMARILLO	217	22	1804	289	96
AUSTIN	84	-16	563	-21	-15
BEAUMONT	36	-44	512	22	26
BROWNSVILLE	18	-21	170	-5	-51
CORPUS CHRISTI	26	-30	279	-24	-26
DEL RIO	63	-33	501	-47	-21
EL PASO	129	-21	1089	56	86
FORT WORTH	114	-10	819	49	-39
GALVESTON	31	-35	356	-9	-5
HOUSTON	44	-40	527	6	-4
LUBBOCK	172	-1	1299	32	-85
MIDLAND-ODESSA	131	-9	1023	50	-136
SAN ANGELO	116	-10	829	-4	-132
SAN ANTONIO	59	-34	526	-22	-14
VICTORIA	36	-35	396	-10	-8
WACO	106	-11	742	40	08
WICHITA FALLS	155	-3	1072	19	-12
UT BLANDING	300	41	2201	-27	227
CEDAR CITY	313	68	2275	110	144
SALT LAKE CITY	278	25	2268	144	213
VT BURLINGTON	280	-36	2696	-43	105
VA LYNCHBURG	174	-24	1524	11	137
NORFOLK	145	-17	1085	-10	84
RICHMOND	170	-17	1392	24	193
ROANOKE	186	-12	1625	94	258
WA COLVILLE	263	-8	2939	113	318
QUILLAYUTE	162	-12	2243	-105	113
SEATTLE-TACOMA	155	-18	1748	-205	162
SPOKANE	255	-5	2761	106	320
YAKIMA	278	34	2468	115	326
WV BECKLEY	217	-12	----	---	---
CHARLESTON	201	-7	1683	22	168
HUNTINGTON	208	0	1654	0	107
PARKERSBURG	222	3	1806	91	87
WI GREEN BAY	345	17	2946	131	31
LA CROSSE	336	12	2744	135	-185
MADISON	328	12	2741	63	-5
MILWAUKEE	314	18	2478	28	100
WAUSAU	382	37	3252	228	-47
WY CASPER	273	-10	2778	-31	09
CHEYENNE	250	-7	2832	167	161
LANDER	322	21	3069	104	92
SHERIDAN	302	8	3063	160	217

Based on 1951-80 normals.

National Agricultural Summary

December 21 - 27, 1992

HIGHLIGHTS: Cold weather in the West the early part of the week moved across the Nation by midweek. The remainder of the week saw temperatures near normal. Precipitation was confined to the extreme Northwest and the Southeast. The cold, dry conditions in the Midwest froze muddy fields and allowed harvest to advance. Rain in the Southeast continued to hamper late harvest activity.

SMALL GRAINS: Winter wheat was generally in good condition in Kentucky. But condition was not as good as last year in Texas. Snow cover in North Dakota was adequate to protect their wheat and rye. In Texas, small grain stands continued to improve with additional moisture, but growth was limited by cloudy weather. Disease and insect pressures were decreasing.

CORN: The corn harvest progressed last week as more favorable conditions prevailed in the Corn Belt. Cold, dry weather aided farmer's efforts in harvesting the remaining fields. In Michigan, the harvest advanced to 70 percent (%) complete, up 10 percentage points from the previous week. The Pennsylvania harvest advanced to 83% complete, compared with 79% last week.

COTTON: The Texas harvest resumed last week. However, drier conditions were needed to complete harvest. Harvest of a few remaining Blacklands fields were delayed by wet conditions. By week's end, 94% of the crop was harvested, compared with 90% last year and the average of 96%. Some cotton was harvested in Alabama and Georgia where conditions allowed.

OTHER FIELD CROPS: Soybean harvest remained active in the Southeast where weather conditions allowed. Frozen fields allowed the sorghum harvest to advance in Kansas. Some sunflower fields still need to be harvested in North Dakota. Sugarcane harvest remained active in Florida and Louisiana. Tobacco seedbed preparation was active in Florida and Georgia. Planting of the Georgia onion crop continued where weather permitted, while in the Rio Grande Valley of Texas, the crop continued to progress well. Irrigation of the crop in the Trans-Pecos region continued.

FRUIT AND NUTS: The Florida Citrus crop was in very good condition in spite of dry conditions. Early orange harvest was active up until Christmas Eve. Grapefruit harvest was good on the lower east coast for domestic and export shipments. The early tangerine harvest was slowing, but the Dancy tangerine harvest was increasing. Tangelo harvest was active in all areas. In California, the Navel orange harvest continued with good size and quality. Grapefruit, lemons, tangerines, and tangelos were also being harvested. Citrus growers in California were protecting their crops with wind machines and water. The Arizona citrus harvest continued active in the central and western areas. The pecan harvest was active. The Texas pecan area was active in several areas. Dry weather was needed in the Cross Timbers and Hill Country to complete the harvest. The harvest in east, central, and south Texas was nearing completion.

VEGETABLES: Growing conditions in the major vegetable areas of Florida, remained favorable. Heavy rains delayed vegetable harvest in east Texas. Harvest in all current production areas were slowed by the holidays. Broccoli harvest advanced in western and central Arizona and in California. Cabbage harvest continued in Arizona, California, and Florida, while cauliflower harvest was active in California and Arizona. Celery harvest moved from the Salinas-Watsonville and the Santa Maria areas to the Coachella Valley. The tomato harvest remained active in Florida.

PASTURES AND LIVESTOCK: Livestock was in generally good condition with no major problems indicated. Supplemental feeding continued in many areas and feed supplies were adequate. Some producers were preparing for lambing and calving. Cattle conditions in the Texas High Plains improved with warmer temperatures. Supplemental feeding was still heavier in the plains than in other areas. Most winter pastures were improving with increased moisture, but in several areas cattle had to be moved from extremely wet pastures.

(Continued from front cover)
registered -22°F. Light snow preceded and accompanied the front in the **northern Plains**, protecting **Montana's** winter wheat. Farther east, temperatures dropped into the single digits (°F) in the northern soft red winter wheat areas, quickly freezing damp soils. **Springfield, IL**, dropped to 6°F. By late in the week, bitterly cold air continued to build over **Alaska** as **Ft. Yukon** reached -56°F. In the **Southeastern States**, subtropical moisture overran modified arctic air, producing light rain and snow from **eastern Texas** to the **central Appalachians**. Snowfall reached 1 inch as far south as **Dyersburg, TN**. Farther north, **Great Lakes snowbelt** areas received local snowfall of up to 20 inches. Meanwhile, stagnant air persisted in the **West's valleys**. Dense fog plagued **California's San Joaquin Valley**. However, at week's end, an eastern Pacific storm gathered strength, promising to deliver **California's** most substantial precipitation in more than 2 weeks.

State Summaries of Weather and Agriculture

These summaries provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Weather and Crop Bulletins published each Monday by NASS State Statistical Offices in cooperation with the National Weather Service.

ALABAMA: Rainfall 0.66 to 2.33 in. north; 0.32 to 1.39 in. central; 0.01 to 0.03 in. south. Temperatures 1 to 6° above north; 2 to 6° above normal central; 7 to 10° above normal south. Lows 23 to 33° north; 24 to 35° central; 31 to 40° south. Highs 60 to 67° north; 64 to 76° central; 75 to 77° south.

Primary activities: Harvesting cotton, soybeans, timber; planting small grains; marketing cattle; maintaining farm records, equipment; land-use planning, management, repairing machinery, fences; general care of livestock, poultry, catfish.

ARIZONA: Temperatures warmed, still remained mostly below normal. Temperatures 19° below normal to 3° above. Extremes -7°; 69° higher elevations, 20°; 73° deserts.

Cotton stalk shredding, plowdown active where fields have dried. Alfalfa good; harvest, light all areas. Small grains planted 75, 74% 1991, 70% avg.; stands established 55%, 61% 1991, 47% avg.; field preparations slow, central, southeast. Fruit, vegetable harvest active, slowed for holiday. Broccoli, cabbage, lettuce, napa, spinach available western, central areas. Also available west: Cauliflower, escarole, endive, anise. Leeks, beets, dill, mixed greens, rapini available, central. Citrus harvest continued active central, western areas. Pecan harvest active.

ARKANSAS: Temperatures below normal, light rain statewide. Extremes 15°; 77°. Rainfall 0.07 to 1.51 in.

Soil moisture supplies adequate to surplus. Cotton gins were cleaning up modules, starting to close down. As of December 24th, the cotton classing office reported 1,604,619 bales of Arkansas cotton had been classed. Wheat fair to good. Livestock good. Producers were feeding hay. Pastures good.

CALIFORNIA: Fog plagued central valley. Small amounts of precipitation received.

Field activities progressed, mostly open weather. No rice stubble burned, disced; fields too wet. Cotton plowdown for pink bollworm control virtually complete. Final compliance deadline northern areas December 31st. Ground preparation next year's cotton, other row crops gained momentum. General activities included fertilizer, pre-emergent herbicide applications. Growth small grains, winter forages slowed, cold temperatures northern counties. Elsewhere grains, forages progressing well. Seeding barley, oats, wheat increased as soils dried. Few grain sorghum fields remained unharvested. Some alfalfa sprayed weed control. Stone fruit, nut, grape growers pruning vineyards, orchards. Weed control, dormant spraying being done. Navel orange harvest continued. Good size, quality reported. Citrus growers protected crop with wind machines, water. Grapefruit, lemons, tangerines, tangelos harvested. Pomelos, Blood oranges packed. Broccoli movement light, variable quality Salinas-Watsonville, Santa Maria. Broccoli Westside, San Jacinto district continued harvests. Celery harvest ended Salinas-Watsonville. Celery harvest winding down Santa Maria, light movement, variable quality. Celery harvest continued Coachella Valley. Cauliflower movement light, variable quality Salinas-Watsonville, Santa Maria. Cauliflower harvest continued Westside. San Jacinto district potato, carrot harvests continued. Lettuce, oriental vegetables Coachella Valley harvested. Other crops harvested: Radishes, beets, sweetpotatoes, green onions, turnips. Rangeland, pasture good to fair. More rain needed for continued growth, development. Cool temperatures slowed growth. Stockwater supplies improved. Supplemental feeding, movement active. Lambing, calving active.

COLORADO: Relatively windy, dry with seasonable temperatures. A mostly dry, westerly flow prevailed aloft. High pressure was the rule over the west slopes at the surface with a trough of low pressure, downsloping winds in the east. Weak arctic cold front did move through the east on the 24th. Although some flurries occurred over the higher elevations no precipitation was recorded at the lower elevations through the period.

Feeding livestock, some late corn harvesting, year-end financial planning are the main activities.

FLORIDA: Temperatures 5 to 10° above normal. Extreme highs, mid to upper 70s across Panhandle, upper 70s to lower 80s over Peninsula except mid 80s along the southeast coast. Coolest readings mid 30s, lower 40s north, mid 50s, low 60s central, south except near 70° southeast. Rain totals generally under 0.25 in. except 0.72 in., 2.00 in. along east central, southeast coast.

Soil moisture mostly adequate to surplus Panhandle, short to adequate Peninsula. Cotton harvest virtually complete. Winter wheat planting complete. Sugarcane harvest, planting active. Tobacco plant bed preparation. Citrus very good condition in spite of dry conditions; irrigation continues. Early orange harvest active up until Christmas eve. Grapefruit movement good on lower east coast for domestic, export shipments. Early tangerine harvest slowing. Dancy tangerine harvest increasing. Tangelo movement active all areas. Caretakers cutting cover crops for fire prevention. Major vegetable producing areas temperatures several degrees above normal. Weekend showers on east coast, south. Volume leaders: Tomatoes, peppers, celery, squash, cucumbers. Also available: Snap beans, cabbage, carrots, chinese cabbage, sweet corn, eggplant, escarole, iceberg lettuce, specialty lettuce, radishes, strawberries, cherry tomatoes. State's pastures poor to good. Pasture 30% poor, 35% fair, 35% good. Moisture levels short to adequate. State's cattle herds fair to good.

GEORGIA: Temperatures north 2 to 7° above normal, 4 to 9° above central, south. Warmest highs lower 60s mountains to middle 70s central, upper 70s extreme south. Lows lower 20s northeast mountains, lows around 40° extreme south. Rain northern third 4 to 6 days, 1.00 to 2.00 in. Zero to 3 rain days central, south; amounts under 0.20 in.

Soil moisture adequate to surplus. Some harvesting cotton, soybeans, pecans southern half of State. Too wet for fieldwork northern third. Tobacco bed sowing, onion planting as weather permitted. Some land preparation south. Cattle, hogs good.

HAWAII: Variable weather occurred in the State. A cold front brought Christmas rains to most islands in the State. Oahu, Kauai were drenched over the weekend from the passing band of showers. Shower activity then spread to the tri-isles region. Minor damages including low lying flooding, runoff. Temperatures mid 80s to mid 60s. Rainfall 0.18 to 8.70 in.

Days suitable for fieldwork N/A. Rainy weekend delayed normal farming activities. Shower activity increased soil moisture levels reducing irrigation usage. Cool, rainy weather slowed progress for some crops. Orchard growers increased spraying efforts to reduce disease outbreaks. Banana harvesting slowed slightly by holidays. Papaya output will decline seasonally. Sweet corn picking was very light.

IDAHO: Temperatures 10° below normal to 8° above normal throughout State. Scattered precipitation across State with Kellogg receiving 1.36 in.

Soil moisture varied across State. Adequate amount southwest, south central, north; short amount southeast. Activities: Marketing crops, repairing farm machinery, attending commodity meetings, workshops. Hay, roughage supplies adequate. Livestock activities: Marketing cattle, cattle on winter hay, some lambing has begun in a few areas of State. Livestock good.

ILLINOIS: Arctic air blasted into the State on a couple of occasions during the week sending temperatures to their lowest level of the season. The dry nature of the arctic air kept most of the state dry. Temperatures 30 to 40° across State. Precipitation that developed was in the south, which ranged 0.02 to 0.64 in.

Coldest temperatures occurred Christmas Eve morning when sub-zero readings were reported far north with single digits, teens most everywhere. Even with the cold morning overall temperature readings did not average much below normal as days were mild due to bright sunshine.

INDIANA: Temperatures 4° below normal to 2° above. Single digit and low teen temperatures arrived on 25th; were offset by unseasonably mild weather earlier in the week. Highs low 30s to low 40s. Lows, low teens to low 20s, except mid to upper 20s along Ohio River. Precipitation 0.20 in. or less.

Topsoil moisture 3% short, 46% adequate, 51% surplus. Subsoil moisture 7% short, 51% adequate, 42% surplus. Corn Harvest 95%, 93% last week. Corn moisture content 22%, same as last week. Frozen ground late in week improved harvest conditions for getting to unharvested corn. Other activities: Stripping tobacco, machinery repair, hauling grain, fence repair, bookkeeping, care of livestock.

IOWA: A dry, windy week with rapidly fluctuating temperatures. Temperatures near normal northeast to 6° above normal southwest. Extremes -14° Decorah, 24th; 47° Lamoni 27th. Precipitation: a trace southwest two-thirds of State to 0.13 in. Mason City; State average only 0.01 inches, all in the form of snow.

Dryness, freezing temperatures helped corn harvest. Marketings of agricultural commodities slowed due to holiday season.

KANSAS: Temperatures 4 to 8° below normal western one-third, near normal central third, 1 to 3° above normal eastern third. Precipitation fell only in the southeast.

Harvest remaining fall crops proceeding slowly mostly on frozen ground. Some corn, sorghum harvested. Soybean harvest at standstill in southeast. Supplemental feeding livestock due cold, wet, muddy lots. Wheat good.

KENTUCKY: Temperatures 1 to 4° below normal. Highs 20s to 30s, lows in teens. Coldest readings latter half week. Precipitation light, many locations receiving 0.10 in. or less. Rain 22nd, 23rd, snow, rain 25th. Snowfall on 25th mostly 1 to 3 in.

December precipitation below normal, soil moisture mostly adequate. Winter wheat green, generally satisfactory. Burley being stripped as weather brings leaf into order, markets reopen 4th. Livestock good, ample feed supplies.

LOUISIANA: Weather data not available (weather facility closed for holidays).

Sugarcane harvesting continued in the mud. Crawfishing, caring for livestock. Top-dressing pastures.

MARYLAND & DELAWARE: MARYLAND: Precipitation 0.50 in. Temperature 37.9°, normal 34.5°. Extremes 5°; 58°.

Snow in western pastures; cattle mostly excellent. Hay supplies adequate. Small grains good. Enjoying the holidays. Cutting firewood, feeding hay, caring for livestock.

DELAWARE: Precipitation 0.45 in. Temperature 38.3°, normal 35.5°. Extremes 17°; 53°.

Hay supplies adequate. Pastures, livestock mostly excellent. Small grains good. Celebrating the holidays.

MICHIGAN: Extremes -6°; 37°. Precipitation none to 1.25 in. across State.

Soybeans 98% harvested, 100% 1991, 100% avg. Corn 70% harvested, 100% 1991, 100% avg. Major activities: Cutting firewood, drying corn, harvesting when possible, grading apples, repairing machinery.

MINNESOTA: Temperatures 10° below normal in the north to 1° above normal in the south. Extremes -37°; 39°. Precipitation 0.03 to 0.40 in., 0.20 in. below normal in the south to 0.19 in. above normal in the northeast. Snowfall for the week averaged 3 to 11 in. in the north, less than 2 in. other areas. Snow depth averages 7 to 16 in. across the northern third of the State, 1 to 2 in. elsewhere. Temperatures highly variable in the southern half of the State, bitterly cold temperatures, snow, blowing snow prevailed in the north.

MISSISSIPPI: No weather data available.

Days suitable for fieldwork 1.5, 2.5 1991, 4.0 avg. Soil moisture 65% surplus, 35% excessive. Wheat 15% poor, 75% fair, 10% good. Hay supply 100% adequate. Feed grain 100% adequate. Livestock 40% fair, 50% good, 10% excellent. Activities: Livestock feeding, shop work, planning for 1993.

MISSOURI: Temperatures 3° above normal. Precipitation 1.88 in.; varied from 1.00 in. or less northwestern, southeastern districts to over 2.00 in. west central, central, east central, southwestern, south central districts, with flooding in low areas.

Continued wet weather continued to delay completion of late crop harvesting, with virtually no fieldwork possible. Of the nearly 10% of the corn crop left to be harvested, most is in northern third of State.

MONTANA: Temperatures west slightly above normal. Elsewhere temperatures normal or below. Precipitation amounts up to 0.30 in. west, 0.10 in. east.

Recent snow will provide needed protection for winter wheat as cold weather invades the State. Livestock condition remains normal.

NEBRASKA: Temperatures near normal in the Panhandle to 3 to 6° above normal over the rest of the State. Only a trace of precipitation.

Activities included limited harvesting, care of grain in storage, care of livestock.

NEVADA: Period generally dominated by dry high pressure pattern. A few weak disturbances brushed extreme northern areas early in period with some light snow showers, failed to produce any measurable amounts. Temperatures 5 to 10° below normal over most of State.

Generally dry, mild weather favorable for all livestock activities. Farm/ranch activities: Feeding, care of livestock, chopping ice for livestock water, general maintenance.

NEW ENGLAND: Precipitation 0.06 to 0.56 in. Maine, 0.02 to 0.35 in. elsewhere. Temperatures high teens to low 30s. Maximum temperatures high 30s to low 60s. Minimum temperatures -13 to 18° north, minus 3 to 15° south.

Major farm activities: Tending livestock, cutting firewood, making general repairs.

NEW JERSEY: Temperatures below normal, 26° north, 31° south, 34° coastal. Extremes 6°; 53°. Precipitation below normal; averaged 0.07 in. north, 0.06 in. south, 0.11 in coastal. Heaviest 24-hour total: trace amounts on several days. Maximum depth of snow on ground 28th: 3 in.

Farmers caring for livestock, tending to other normal winter chores.

NEW MEXICO: State was treated to a lull in the stormy weather pattern that had persisted for the first 3 weeks of the month. No measurable precipitation was reported anywhere in the State. Temperatures were near normal in the eastern plains, southern lowlands, well below normal in the elevated valleys, northwest plateau, where cold air has been trapped for several weeks. Gallup, Taos reported minimums below 0° every day of the week.

Pecan, chile harvest progressed during the week. Ranchers were busy with supplemental feeding, maintenance activities.

NEW YORK: Temperatures above normal early week. Highs in mid 30s to mid 40s. Weather turned much colder late week as series of arctic airmasses dropped out of central Canada. On 24th, high temperatures fell to 0 to 15°, while nighttime readings plunged to near or below 0°. Second arctic airmass on 26th brought similar temperatures. Precipitation below normal; amounts generally less than 0.50 in. However, locally heavy snows fell to the lee of Lakes Erie, Ontario during arctic outbreaks at week's end. Several inches of snow also fell in Adirondacks, St. Lawrence Valley during passage of second arctic cold front night of 25th.

Major activities: Caring for livestock, grading onions, scattered cabbage harvesting, corn harvesting, drying corn, winter chores.

NORTH CAROLINA: Temperatures 1 to 5° above normal. Precipitation ranged from less than 0.25 in New Bern to nearly 1.00 in. at Charlotte.

Crop condition: Winter wheat 1% poor, 26% fair, 69% good, 4% excellent. Oats 2% poor, 25% fair, 72% good, 1% excellent. Barley 21% fair, 77% good, 2% excellent. Rye 2% poor, 22% fair, 75% good 1% excellent. Wheat 87% emerged, 81% 1991, 90% avg. Hay, roughage supplies 94% adequate, 6% surplus. Feed grain supplies 2% short, 92% adequate, 6% surplus. Major activities: Harvesting soybeans, cotton. Other activities: Harvesting sorghum; seeding small grains; preparing tobacco plant beds; tending livestock; equipment repair.

NORTH DAKOTA: Temperatures 10° below normal in the northeast to 2° below normal southwest. Extremes -34° northeast; 43° southwest, south central. Precipitation 0.02 in. south central to 0.21 in. north central.

Snowcover mostly adequate; was sufficient to protect winter wheat, rye, alfalfa. Some corn, sunflower remained in the field. Frigid temperatures stressed livestock, which remained mostly good. Supplemental feed supplies were adequate. Grain marketing in some areas was above normal due to cash flow requirements at year's end.

OHIO: Coldest readings occurred over the weekend with lows reaching the single digits to the mid-teens. Daily highs low 30s in parts of the north to the low 40s in the south. This was normal to 3° below normal. Lows averaged mostly in the mid-teens to low 20s except for the mid to upper 20s in the south along the Ohio River. These readings were below normal except for the south central, northwest areas. Water equivalent precipitation less than 0.10 in. over the central, north; 0.35 in. or less over much of the south, which was 0.50 to 0.70 in. drier than normal. Most snowcover melted by the end of the period. Frost penetration had reached the 4.0 in. depth over parts of the central, north.

Hopefully, as the soil freezes and hardens, corn harvest can be completed as scattered fields remain standing.

OKLAHOMA: Temperatures 1° below normal west central to 1° above normal south central. Precipitation none western two-thirds of State to 0.32 in. east central.

Poor drying, humidity hampered row crop harvest. Cool weather limited small grain growth. Cattle good. Prices for feeder steers, heifers steady to $2.00 higher than preceding week.

OREGON: Western areas 1 to 3° above normal, north central, northeastern areas 5° or more above normal. Southeastern, south central areas were quite cold, 1 to 12° below normal due to snow cover. Rain was recorded in western areas; coastal locations 1.00 to 3.50 in., Willamette Valley 0.65 to 1.00 in., southwestern valleys 0.10 to 0.50 in. Snow was recorded east of the Cascade ranging from 12 in. or more in Lakeview, Klamath Falls in the south central to 3 in. the northeast. The Cascades received over 1 foot of snow.

Soil moisture mostly adequate to surplus west, short to adequate east. Wheat looks excellent, Columbia Basin; cold weather reduced Russian Wheat aphids. Fruit, nut orchard winter activities continue, Willamette Valley. Livestock good. Western pastures continue improvement. Some pasture flooding southern coast. Rains, snows continue to improve eastern stockwater supplies; pastures, ranges dormant, continued supplemental feeding.

PENNSYLVANIA: Extremes -8°; 53°. Average temperature 29°, 1° below normal. Precipitation 0.09 in.; normal 0.70 in.

Corn 83% harvested, 100% 1991, 100% avg. Soybean harvest 97% complete, 100% 1991. Activities: Hauling manure; maintaining machinery; harvesting soybeans, grain corn; fixing fence; caring for livestock.

PUERTO RICO: Island rainfall 1.29 in. was 0.39 in. above normal. Highest rainfall 3.74 in. at Manati 2E, 2.69 in. at Trujillo Alto 2SSW, 2.66 in. at Arecibo 3 ESE. Highest 24 hour total 1.75 in. at Manati 2E. Island temperatures 76 to 77° on the Coasts, 71 to 72° Interior with mean station temperature 70.1° at Cayey 1E to 81.4° at Guayama. Extremes 58°; 91°.

SOUTH CAROLINA: Weather data not available.

Farm activities: More rain during the period slowed land preparation for small grains; pastures wet; livestock fair to good.

SOUTH DAKOTA: Temperatures 0 to 3° below normal in the north, 4 to 8° above normal in the south. Extremes -23°; 57°. Precipitation was light, patchy. The locations that did have precipitation reported less than a tenth of an inch.

TENNESSEE: Temperatures were slightly below normal in all areas except east where temperatures were normal. Highs 40s, lows 20s to 30s. Rain occurred in some portion of the State each day except on the 24th. West was only area that received rainfall slightly below normal. The greatest amount of rain fell along the Plateau with nearly 2.00 in. of precipitation reported, 0.76 in. above normal. Activities mostly consisted of livestock care, winter chores, general farm maintenance.

TEXAS: Generally cloudy, overcast skies across most State. Temperatures increased, aided in melting remaining snow, ice northern High Plains. Heavy showers parts East Texas, other areas only light, scattered showers. Most areas, wet conditions limited activity to livestock feeding. Heavy supplemental feeding continued Plains, feeding occurred to some extent all areas, as cattle continued to be moved off wet, muddy winter pastures.

Crops: Cotton harvest resumed Plains, drier conditions needed to finish. Harvest of few remaining fields Blacklands delayed by wet conditions. Cotton 94% harvested, 90% 1991, 96% avg. Small grain stands continued to improve with increased moisture, growth slowed by cloudy skies. Wheat pasture Blacklands still too wet to graze, but several fields Low Plains withstanding heavy grazing. Wheat still being planted South Texas. Insect, disease pressures diminishing. Statewide wheat condition 64% normal, 79% 1991. Remaining peanut fields Blacklands may not be harvested due to excess moisture. 98% harvested, 96% 1991, 98% avg.

Commercial Vegetables: Rio Grande Valley, onions progressed well. Citrus harvest continued. East Texas, harvest greens delayed by heavy rains. Trans-Pecos, irrigation onions continued. Pecan harvest continued several areas. Dry weather needed Cross Timbers, Hill Country to complete harvest. Harvest East, Central, South Texas nearing completion.

Range and Livestock: Condition cattle High Plains improved with warmer temperatures. Supplemental feeding still heavier Plains than other areas. Cross Timbers, tanks were filling; range, pasture moisture levels adequate. Most winter pastures improving with increased moisture, but several areas' cattle had to be moved off extremely wet pastures. Overall livestock condition remained fair, good.

UTAH: Temperature maximums 9° below normal, minimums 11° lower than normal. Precipitation moderate in the mountainous regions to light elsewhere.

Many farm activities slowed due to the Christmas Holidays, however, the major activities were feeding livestock, marketing, shipping onions, year-end bookkeeping.

VIRGINIA: Temperatures above normal. Extremes 4°; 63°. Precipitation near normal. Greatest 2.00 in. recorded at Bristol.

Days suitable for fieldwork 1.4. Topsoil moisture was 37% adequate, 63% surplus. Soybeans harvested 95%, 100% 1991, 96% avg. Cotton harvested 96%, 100% 1991, 100% avg. Winter grains, grazing crops 4% very poor, 7% poor, 30% fair, 59% good. Forage from pastures, grazing crops dairy cattle 12%, beef cattle 36%, sheep 34%. Wet weather hampered soybean, cotton harvesting. Marketing dark-fired, burley tobacco.

WASHINGTON: Temperatures normal to 3° above normal west; 11° below normal to 4° above normal east. Rainfall 0.47 to 1.38 in. west; none to 0.81 in. east.

Days suitable for fieldwork 5.6. Soil moisture 16% short, 64% adequate, 20% surplus. Hay, other roughage 12% short, 75% adequate, 13% surplus. Range, pasture 19% very poor, 32% poor, 18% fair, 16% good, 15% excellent. Winter wheat dryland 60% fair, 40% good; irrigated 100% good. Barley dryland 75% fair, 25% good; irrigated 100% good. Cold weather continued, with limited farming activities. Pruning of fruit trees continues. Crops protected by snowcover most areas. Livestock feed becoming short, as winter feeding continues.

WEST VIRGINIA: Average temperature 32°. Extremes 0°; 55°. Precipitation 0.60 in.

Days suitable for fieldwork 2.3. Soil moisture 82% adequate, 18% surplus. Corn virtually harvested. Cattle good. Sheep good. Hay feed supplies adequate. Other feed supplies adequate. Soybeans virtually harvested. Farm activities: General maintenance, feeding livestock.

WISCONSIN: Temperature 14°, which was 2° below normal. Extremes -21°; 43°. Every district experienced below zero lows during the week. A few flurries in the north on the 21st to 22nd. On the 23rd, State experienced the coldest air of the season with bitter cold wind chills in the north, falling daytime temperatures in the south. Snow in the extreme northern counties on the 24th with 3.5 to 5.0 in. falling. Frost depth 3.5 in., 4.9 in. 1991, 7.5 in. 31-year avg. Snow depth 2.4 in., 3.9 in. 1992, 6.2 in. avg. Data on snow, frost depths relates to December 25, 1992.

WYOMING: Temperatures were below normal. Most areas 2 to 8° below normal. Some areas in the southwest, northeast were as much as 14° below normal. Precipitation was limited to the southwest, northeast regions where amounts were near to below normal. The rest of the State received no precipitation.

1993 winter wheat fair to good, snowcover adequate in most areas. Livestock mostly good. Cold weather increasing feed requirements. Some stress due to wind. Supplemental feeding continuing. Farm, ranch activities include feeding, caring for livestock, preparation for calving, lambing, tax season.

International Weather and Crop Summary
HIGHLIGHTS

December 20 - 26, 1992

FSU: Light precipitation protected winter grains from very cold weather.

EUROPE: Bitter cold weather moved into eastern Europe.

NORTHWESTERN AFRICA: Unfavorable dryness prevailed over most of Morocco's winter grain area.

SOUTH AFRICA: Much-needed rain returned to the western corn belt.

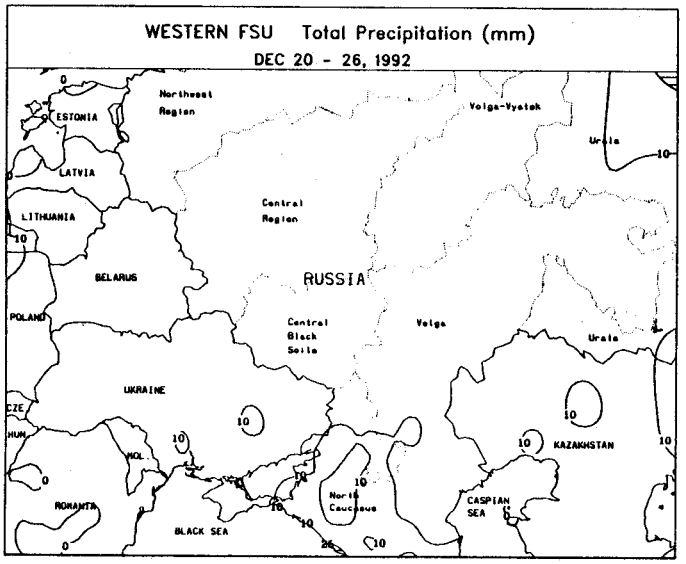
SOUTH ASIA: Seasonable dryness favored fieldwork.

SOUTHEAST ASIA: Showers decreased over Java's rice areas but increased over Malayan crop areas. Unseasonable rain boosted Indochinese reservoirs.

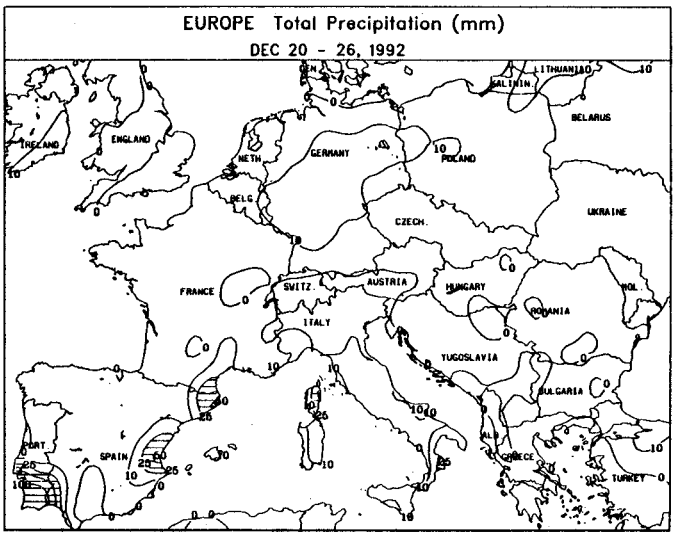
EASTERN ASIA: Widespread rain helped southern China's reservoirs. Winter grains continued hardening in the south.

AUSTRALIA: Wheat harvest delays persisted in the southeast. A tropical cyclone crossed northern Queensland.

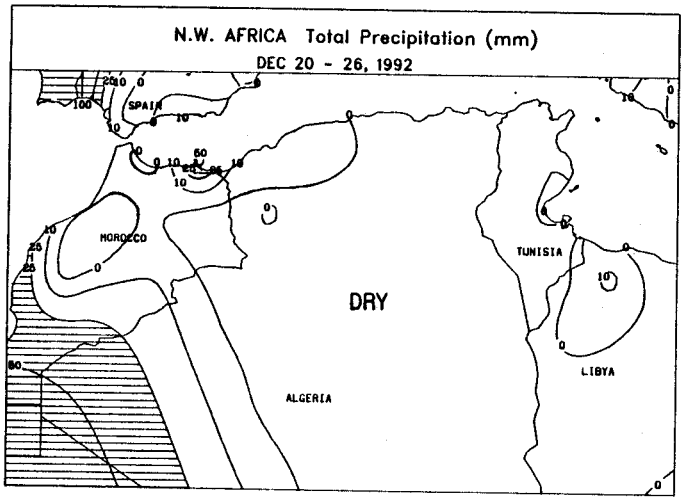
SOUTH AMERICA: Unfavorable wetness continued in Argentina. Warm, drier weather prevailed over Brazil's soybeans.



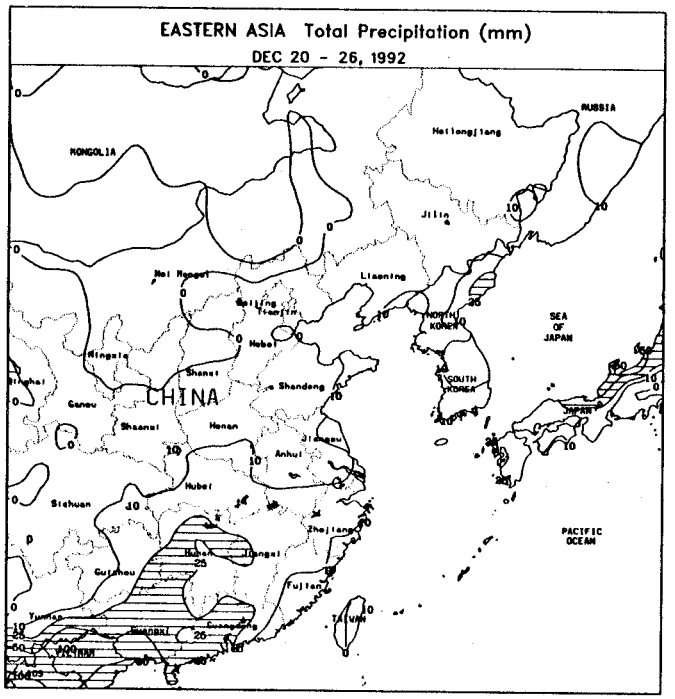
FSU-WESTERN: Dormant winter grains benefited from mostly light precipitation (less than 10 mm), while cold weather continued. Heavier precipitation (10-17 mm) fell over scattered portions of southern Ukraine and North Caucasus. Minimum temperatures generally ranged from -8 to -13 degrees Celsius (C), but daily minimum readings dropped closer to -20 degrees C or lower in the snow-covered east. The blanket of snow was essential for protection of winter grains with such bitter cold weather.



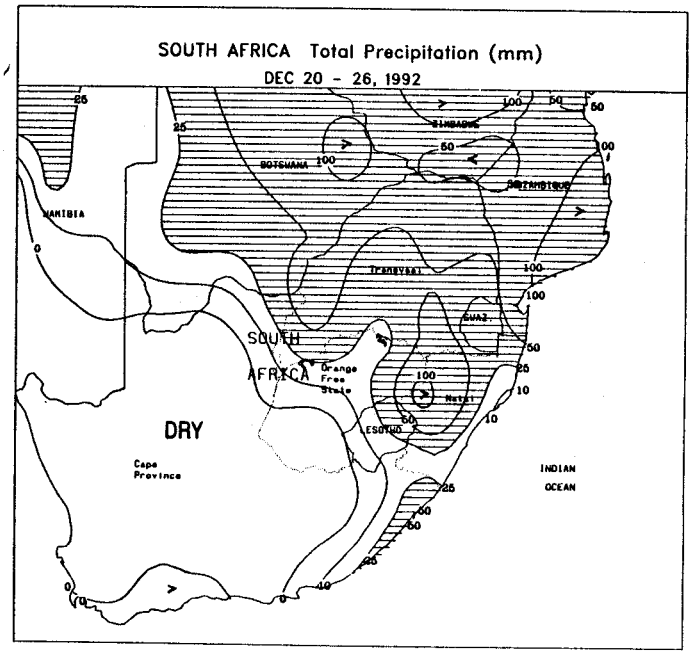
EUROPE: Colder weather moved over northern and eastern crop regions, with minimum temperatures averaging from 1 to -6 degrees C in England and northern Germany, and from -6 to -13 degrees C throughout eastern Europe. In the east, lowest minimum temperatures plummeted to the -12 to -19 degree C range during the latter part of the week, raising concern for potential winterkill in some winter crop areas. Precipitation was light (less than 10 mm) across most of Europe, except along the Mediterranean region from Spain to Italy. Coastal rainfall was locally heavy in this area, with scattered totals ranging from 25 to over 50 mm. Heavier rain (50-100 mm or more) fell in southern Portugal.



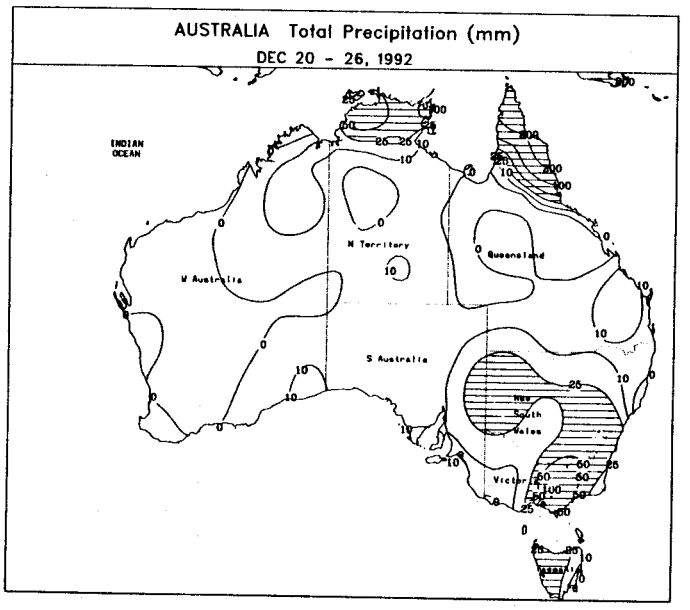
NORTHWESTERN AFRICA: Mostly dry weather prevailed over the winter grains of Tunisia, Algeria, and most of Morocco. Very light rain (1-5 mm) provided little help from the moisture deficiency affecting winter grains in Morocco and western Algeria. The optimum planting period has passed. Moisture is adequate for developing winter crops in eastern Algeria and Tunisia.



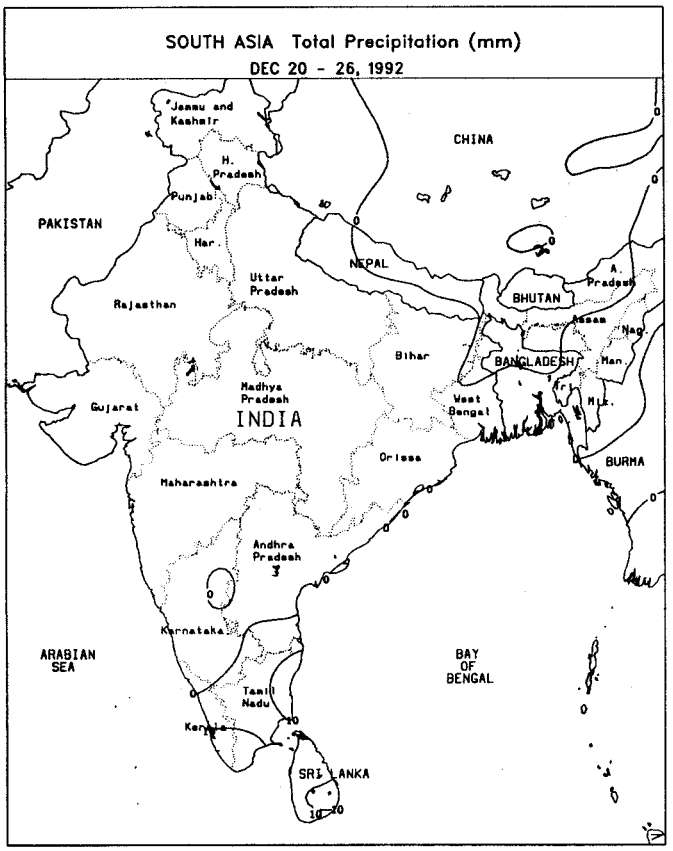
EASTERN ASIA: Light to moderate showers (10-50 mm) boosted reservoirs over a large area of southern China. Amounts exceeded 50 mm at many locations in the southwest (Yunnan and Guangxi Provinces). Further north, little or no precipitation (10 mm or less) covered dormant winter wheat over the North China Plain. Temperatures reached -8 to -10 degrees C in the northern wheat areas while further south, freezing temperatures pushed south of the Yangtze Valley, helping to harden winter grains.



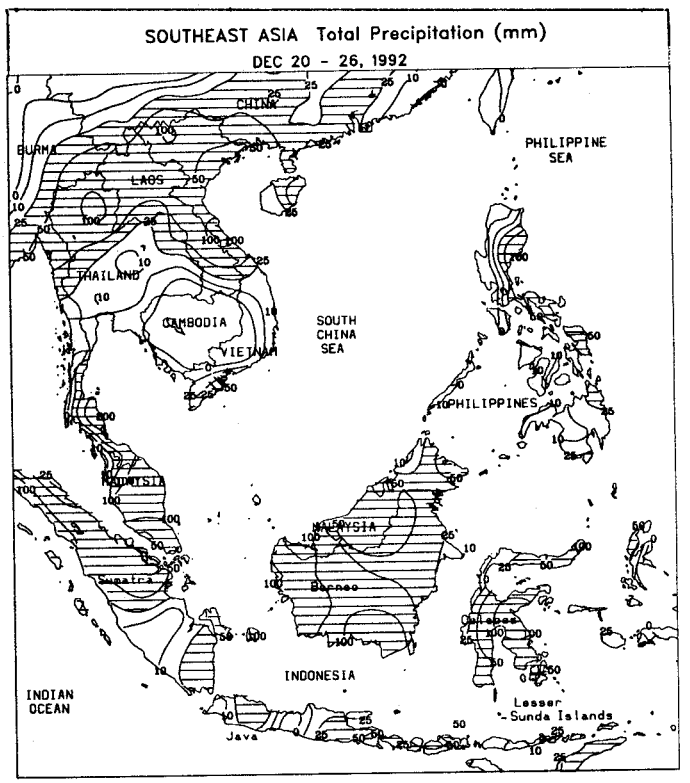
SOUTH AFRICA: Much-needed rain covered primary western corn areas, with many locations in western Transvaal and central Orange Free State receiving 25-58 mm. The rain brought relief to vegetative corn following a month-long drying trend, but missed fringe crop areas in the far west and south. Beneficial showers (20-122 mm) continued over eastern grain areas from southern Transvaal to eastern Cape Province, but rainfall was light (4-16 mm) over Natal's coastal sugarcane areas.



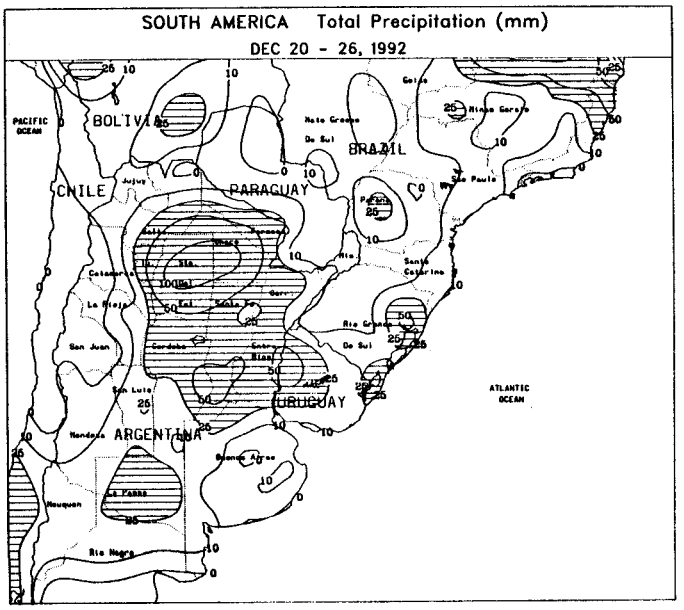
AUSTRALIA: Cool, wet weather continued over much of New South Wales and Victoria, worsening quality prospects of winter wheat and fomenting disease. However, drier and warmer weather returned to winter grain areas of Queensland and South Australia, with highs in the mid 30's C aiding drydown. Favorable harvest weather continued in Western Australia's winter wheat belt. Further north, Tropical Cyclone Nina (sustained winds reaching 70 knots, but generally in the 30 to 40 knot range) passed over the Cape York Peninsula, bringing inundating rains (100-300 mm or more) to northern sugarcane areas.



SOUTH ASIA: Seasonably dry weather prevailed, with warmer temperatures across northern growing areas aiding winter crop germination and establishment. In the south, light rain (21 mm or less) fell over Sri Lanka and sections of Tamil Nadu that received heavy rains last week. Dry weather elsewhere favored fall crop growth and summer crop drydown.



SOUTHEAST ASIA: Showers tapered off over Java's rice areas, with only local areas exceeding 50 mm. However, rainfall picked up over the Malay peninsula, with heavy showers (100-200 mm or more) causing localized flooding in rice areas of peninsular Thailand and some Malaysian oil palm areas. Further north, unseasonably heavy showers (25-50 mm or more, with local totals exceeding 100 mm) boosted reservoirs for winter crops from northern Thailand to northern Vietnam. In the Philippines, light to moderate showers (10-50 mm or more) covered eastern grain areas from southeastern Luzon to Mindanao. While showers have been frequent in the eastern Philippines, accumulations continue to be well below normal.



SOUTH AMERICA: In Argentina, unfavorable wetness continued to hamper early wheat harvesting and delay completion of summer crop planting. The heaviest rain (25-78 mm) fell in the major soybean area of southern Santa Fe and southeastern Cordoba. Another area of heavy rain (50-111 mm) soaked northern cotton areas of Chaco and southwestern Formosa. Drier weather over most of Buenos Aires province favored fieldwork. In south-central Brazil, drier weather prevailed over most soybean areas, following the previous week's soaking in Rio Grande do Sul and southern Minas Gerais. Rainfall averaged less than 10 mm. Temperatures averaged 1-4 degrees C above normal in Brazil's soybean areas.

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