

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

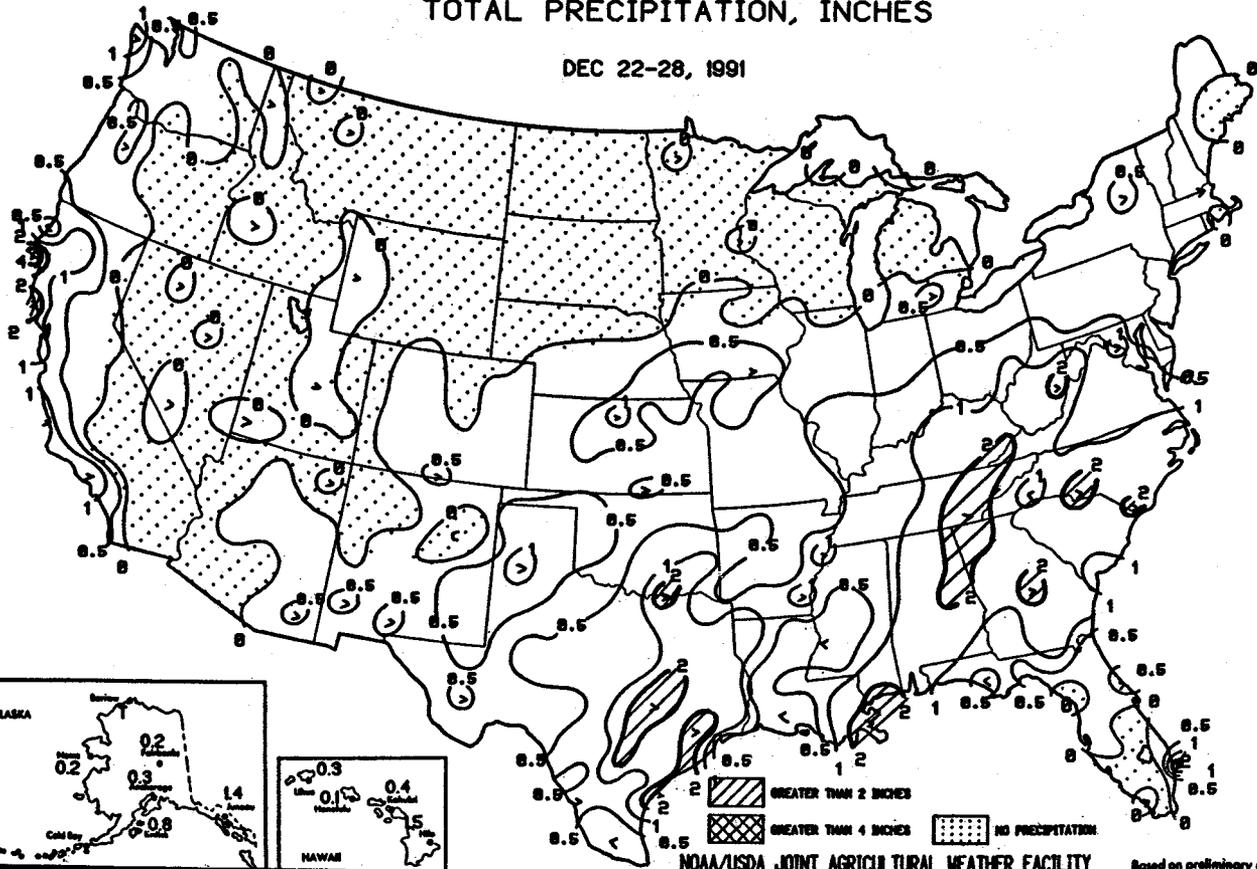
Volume 78, No. 52

Washington, D.C.

December 31, 1991

TOTAL PRECIPITATION, INCHES

DEC 22-28, 1991



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

HIGHLIGHTS

December 22 - 28, 1991

Severe river flooding continued in southeastern Texas, and a major storm traversed California for the first time in 9 months. For the third week in a row, no severe cold was observed in the contiguous States. Early in the week, Texas' flood-producing rainstorm accelerated northeastward and weakened, but not before dumping a final day of heavy rain on east central Texas. On Christmas Day, most of the Nation was dry, but light rain and coastal thunderstorms returned to water-logged Texas. Unlike the previous storm, this one strengthened as it exited Texas, spreading heavy rain into the Southeastern and Middle Atlantic States. Dry topsoils in Georgia and the Carolinas benefited from the soaking. Meanwhile, unusual warmth blanketed much of the Nation. Only Texas, Maine, and interior Western valleys had below normal temperatures, while weekly departures reached +19° F in the northern Plains. By Friday, an approaching Pacific

storm hurled 55 mph wind gusts at central California, raising dust. Hours later, the first wave of precipitation reached the State, producing more than 4 inches of rain in Shelter Cove (northern coast), an inch in Los Angeles, and up to a foot of snow in the Sierra Nevada Mountains. At week's end, stormy conditions covered the East and West coasts, while mild, dry weather prevailed in between.

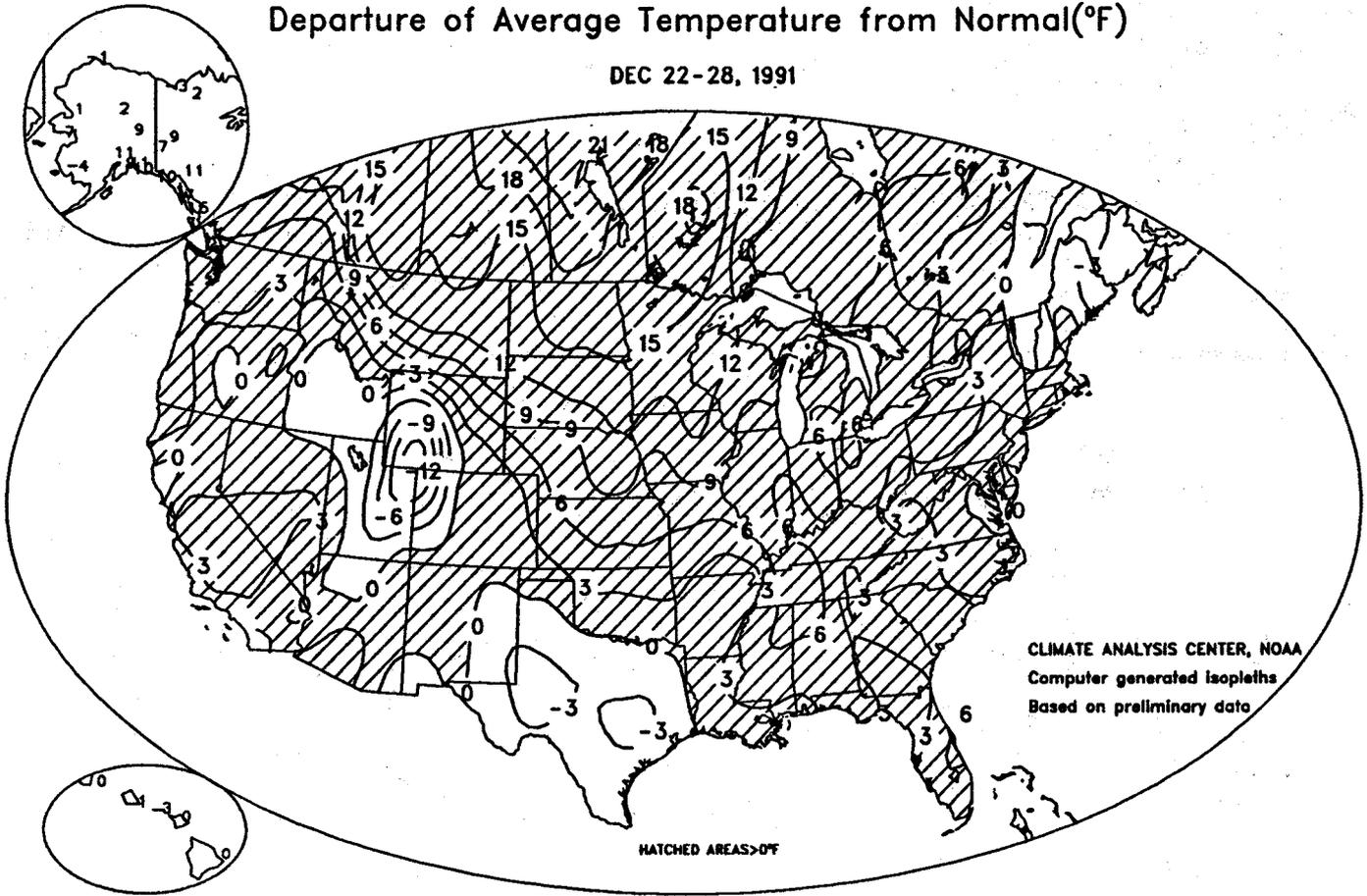
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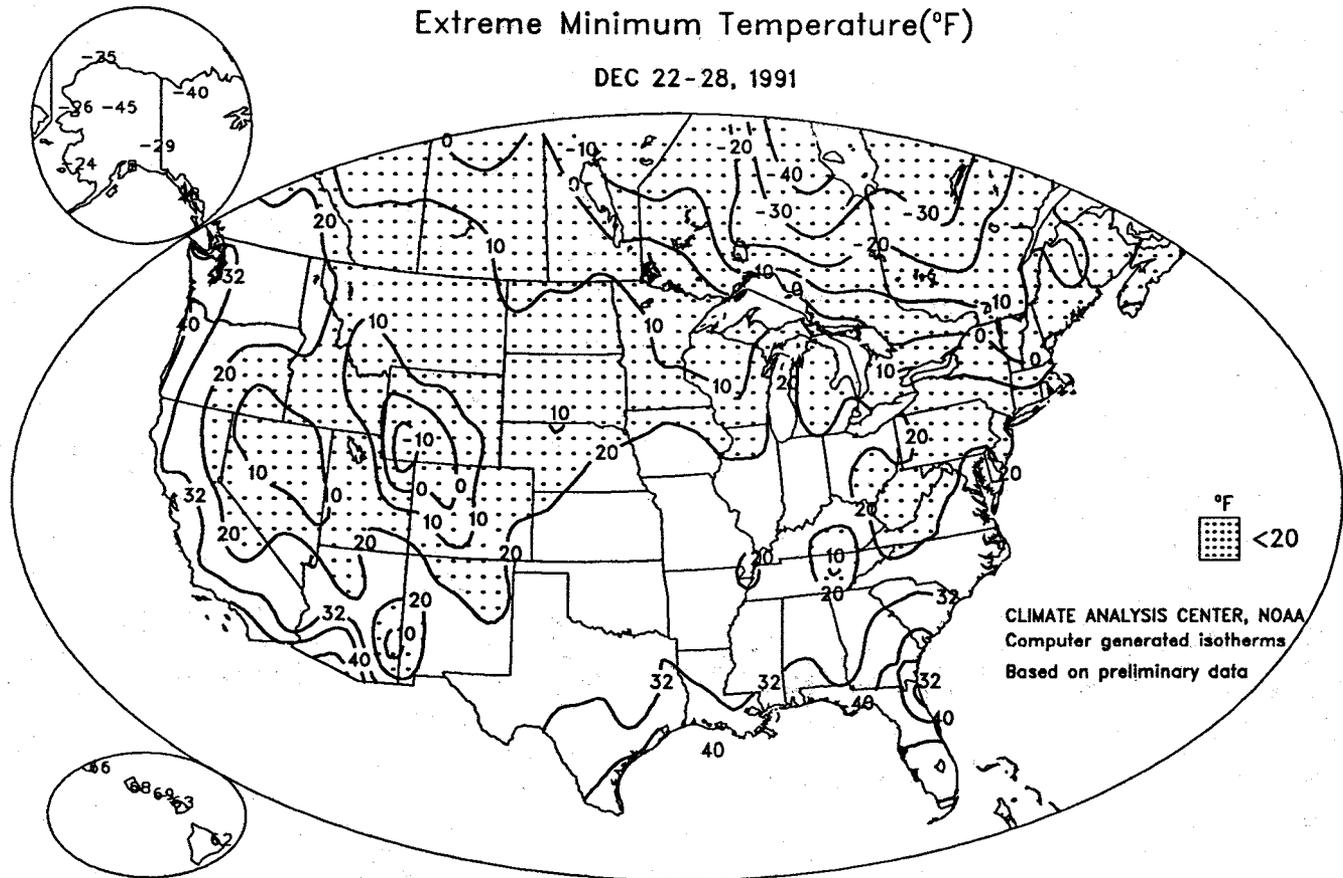
Departure of Average Temperature from Normal(°F)

DEC 22-28, 1991



Extreme Minimum Temperature(°F)

DEC 22-28, 1991



National Weather Data for Selected Cities

Weather Data for the Week Ending December 28, 1991

STATES AND STATIONS	TEMPERATURE °F							PRECIPITATION							RELATIVE HUMIDITY, PERCENT	NUMBER OF DAYS			
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	TEMP. °F		PRECIP.			
														90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE		
AL BIRMINGHAM	59	41	69	24	50	6	1.1	-.1	.5	3.7	83	53.0	99	91	58	0	2	4	1
MOBILE	61	47	74	34	54	2	1.3	-.1	.8	3.1	62	81.6	128	97	70	0	0	3	1
MONTGOMERY	60	42	68	27	51	3	1.8	-.7	1.2	5.3	123	67.4	139	96	61	0	1	3	2
AK ANCHORAGE	28	16	36	5	22	9	1.3	-.1	.2	1.8	185	17.4	118	97	79	0	7	4	0
BARROW	-12	-21	2	-35	-16	-2	.4	-.0	.4	.1	25	1.8	40	87	66	0	7	1	0
FAIRBANKS	5	-12	23	-27	-3	9	.2	-.0	.2	1.1	164	9.5	91	85	74	0	7	1	0
JUNEAU	37	31	43	25	34	9	1.6	-.6	.9	9.0	214	83.1	158	98	82	0	4	3	1
KODIAK	38	22	41	11	30	1	.8	-.5	.3	5.0	100	95.5	159	94	60	0	7	5	0
WOME	5	-12	12	-20	-4	-7	-.2	-.1	.1	.4	73	14.2	98	80	53	0	7	4	0
AZ PHOENIX	66	48	69	45	57	5	.4	-.2	.4	1.6	216	8.4	122	75	35	0	0	0	0
PRESCOTT	50	27	52	21	39	1	-.1	-.2	.1	1.6	156	15.8	124	89	45	0	6	1	0
TUCSON	63	43	69	37	53	2	.4	-.2	.4	1.4	171	10.8	98	88	41	0	0	2	0
YUMA	68	50	71	47	59	4	.0	-.1	.0	1.5	159	2.8	118	59	33	0	0	0	0
AR FORT SMITH	49	36	53	24	43	3	.6	-.0	.5	4.2	163	46.1	117	97	64	0	2	2	0
LITTLE ROCK	51	38	58	30	45	3	.2	-.7	.1	3.9	102	58.5	121	79	61	0	2	3	0
CA BAKERSFIELD	65	40	72	34	53	6	.4	-.2	.4	.2	32	5.1	92	86	35	0	0	0	0
BUREKA	59	46	64	40	52	5	.3	-.1	.3	2.3	41	23.3	62	77	51	0	0	2	0
FRESNO	62	38	72	33	50	6	.2	-.2	.2	.5	34	9.8	96	86	40	0	0	1	0
LOS ANGELES	66	48	71	45	57	1	1.3	-.9	.8	1.7	119	9.9	84	93	48	0	0	2	2
REDDING	57	34	64	28	45	-1	1.8	-.9	1.7	3.4	54	23.9	60	97	53	0	3	2	1
SACRAMENTO	58	38	62	32	48	4	.4	-.3	.3	1.0	37	15.1	91	97	53	0	1	2	0
SAN DIEGO	64	48	66	46	56	-1	.3	-.0	.3	1.1	94	13.0	144	87	47	0	0	1	0
SAN FRANCISCO	58	44	61	39	51	3	1.5	-.6	.9	1.7	55	15.0	79	91	55	0	0	2	2
CO DENVER	46	21	53	18	34	2	.0	-.1	.0	.4	2	20.2	134	87	29	0	7	0	0
GRAND JUNCTION	26	17	35	12	22	-5	-.1	-.1	.4	.7	7	9.1	117	97	75	0	7	0	0
PUEBLO	43	21	51	16	32	1	.2	-.1	.2	1.5	189	14.2	132	91	48	0	7	1	0
CT BRIDGEPORT	41	25	45	19	33	2	.2	-.8	.4	3.2	94	39.4	96	82	44	0	7	1	0
HARTFORD	39	21	49	12	30	3	.4	-.9	.4	2.4	64	46.7	107	83	42	0	7	3	1
DC WASHINGTON	47	30	54	27	38	1	.8	-.1	.5	4.4	153	29.0	75	93	47	0	7	3	1
FL APALACHICOLA	66	50	70	42	58	4	.8	-.0	.6	1.5	48	90.8	166	97	68	0	0	3	1
DAYTONA BEACH	73	51	76	29	62	3	.9	-.4	.9	1.3	66	67.0	139	98	54	0	1	1	1
JACKSONVILLE	69	49	76	43	59	4	.3	-.3	.2	.5	22	79.6	155	98	63	0	0	3	0
KEY WEST	78	67	80	65	73	2	.7	-.3	.4	.7	46	41.2	105	94	66	0	0	2	0
MIAMI	79	65	82	59	72	5	.1	-.4	.1	.2	11	71.5	125	93	58	0	0	1	0
ORLANDO	76	56	81	50	66	6	.5	-.4	.1	.2	14	60.9	124	99	55	0	0	1	0
TALLAHASSEE	67	47	74	37	57	5	.5	-.6	.2	1.6	39	72.3	113	95	64	0	0	2	0
TAMPA	75	54	80	48	65	4	.4	-.5	.3	.7	35	43.2	93	99	61	0	0	1	0
WEST PALM BEACH	79	61	81	54	70	4	.5	-.0	.3	1.4	67	76.8	130	97	59	0	0	2	0
GA ATLANTA	55	41	69	32	48	5	1.2	-.2	.6	2.7	72	55.9	117	93	65	0	1	3	2
AUGUSTA	60	41	72	34	51	5	1.8	1.0	1.3	2.5	90	56.5	133	96	57	0	0	4	1
MACON	60	40	74	31	50	3	2.1	1.2	1.2	3.6	100	52.2	118	99	72	0	1	3	2
SAVANNAH	62	48	73	44	55	5	.9	-.2	.8	1.8	71	68.4	138	97	61	0	0	3	1
HI HILO	79	66	82	62	73	1	1.5	-1.1	.6	14.3	121	151.6	120	91	59	0	0	5	1
HONOLULU	81	69	83	68	75	2	.1	-.8	.0	1.1	37	17.8	78	81	51	0	0	2	0
KAHULUI	79	67	84	63	73	0	.4	-.3	.3	.7	30	11.6	65	90	63	0	0	5	0
LIHUE	76	69	78	67	73	1	.3	-1.0	.2	6.5	133	38.2	88	83	63	0	0	2	0
ID BOISE	39	19	43	16	29	-2	-.1	-.3	.1	.3	27	9.5	84	95	53	0	7	1	0
LEWISTON	43	32	46	29	37	3	.0	-.3	.0	.2	20	11.1	88	87	59	0	4	0	0
POCATELLO	36	8	45	6	22	-3	-.0	-.2	.0	.2	20	13.6	129	91	52	0	7	0	0
IL CHICAGO	40	25	45	17	32	8	.4	-.0	.4	1.7	80	35.6	105	97	68	0	6	1	0
MOLINE	40	27	46	19	34	10	.4	-.0	.4	1.8	105	34.4	94	97	71	0	6	2	0
PEORIA	41	27	46	22	34	9	.3	-.2	.2	2.1	112	36.1	104	98	71	0	7	2	0
QUINCY	42	28	45	24	35	8	.3	-.1	.2	2.0	125	36.7	98	94	68	0	6	2	0
ROCKFORD	37	23	41	14	30	8	.4	-.4	.4	1.8	101	32.3	89	95	70	0	7	0	0
SPRINGFIELD	43	28	47	24	36	8	.2	-.2	.2	1.4	72	38.0	112	95	70	0	6	2	0
IN EVANSVILLE	48	30	56	22	39	6	.7	-.0	.3	3.8	122	32.8	80	97	59	0	4	3	0
FORT WAYNE	39	26	43	21	32	6	-.1	-.4	.1	2.1	93	44.8	131	98	72	0	7	2	0
INDIANAPOLIS	44	28	48	23	36	7	.4	-.2	.4	1.5	54	37.5	97	95	64	0	6	3	0
SOUTH BEND	40	27	44	22	33	7	.2	-.5	.1	1.7	63	36.4	97	96	67	0	7	2	0
IA DES MOINES	40	27	47	24	34	11	.7	-.4	.6	2.1	227	39.7	130	97	73	0	7	2	1
SIoux CITY	39	24	44	19	32	11	.7	-.2	.4	.9	128	26.2	104	98	70	0	7	0	0
WATERLOO	36	27	41	19	31	13	.4	-.2	.4	1.5	141	43.1	132	98	78	0	7	0	0
KS CONCORDIA	42	29	48	26	36	7	.4	-.3	.2	1.3	200	19.6	72	97	70	0	7	3	0
DODGE CITY	43	30	50	25	37	5	.3	-.2	.2	1.4	293	10.6	52	94	60	0	3	3	0
GOODLAND	42	26	46	21	34	5	.1	-.0	.1	.8	229	22.9	143	93	57	0	7	1	0
TOPEKA	44	29	49	23	36	7	.4	-.1	.2	2.2	191	29.0	87	95	64	0	4	3	0
WICHITA	44	30	47	23	37	5	.2	-.0	.1	1.7	193	26.4	93	96	69	0	4	3	0
KY BOWLING GREEN	50	33	65	19	41	5	1.0	-.1	.4	7.1	174	48.7	100	97	64	0	3	4	0
LEXINGTON	49	31	61	22	40	5	1.2	-.4	.7	7.0	206	41.6	92	94	58	0	4	3	2
LOUISVILLE	50	33	61	25	41	6	1.0	-.3	.6	5.2	165	38.2	89	92	56	0	4	3	1
LA ALEXANDRIA	59	45	72	32	52	3	.4	-.7	.3	7.0	159	76.1	147	92	60	0	1	3	0
BATON ROUGE	63	46	78	28	55	3	.5	-.6	.3	2.4	52	71.0	128	88	54	0	1	3	0
LAKE CHARLES	60	47	75	36	54	2	.4	-.8	.3	2.2	47	70.3	131	98	67	0	0	4	0
NEW ORLEANS	64	48	78	35	56	2	1.6	-.4	1.3	2.5	52	102.2	173	96	67	0	0	3	1

Based on 1951-80 normals.

Weather Data for the Week Ending December 28, 1991

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS						
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.		
																		.01 INCH OR MORE	.50 INCH OR MORE			
SHREVEPORT	54	43	67	29	49	1	1.4	.5	.9	7.5	213	82.0	189	93	63	0	1	7	3	1		
ME CARIBOU	17	3	30	-13	10	-3	1.1	.6	.0	2.2	75	35.4	98	84	62	0	1	2	2	0		
PORTLAND	34	13	42	1	24	0	0.0	-1.0	0.0	2.8	68	55.9	130	79	34	0	7	1	1	0		
MD BALTIMORE	44	24	50	20	34	0	0.0	-1.5	0.0	3.4	110	29.6	72	91	47	0	7	2	0	0		
SALISBURY	49	25	53	21	37	0	0.0	-1.7	0.0	3.3	97	43.4	96	93	45	0	7	1	0	0		
MA BOSTON	41	26	50	16	33	2	0.2	-1.0	0.0	2.0	48	41.7	97	69	35	0	6	1	0	0		
CHATHAM	39	28	46	19	34	1	0.1	-1.1	0.0	2.9	64	38.5	83	75	52	0	5	1	0	0		
MI ALPENA	36	19	41	12	27	6	0.6	-1.4	0.0	1.4	79	33.7	118	91	65	0	7	0	0	0		
DETROIT	39	25	42	22	32	6	0.6	-1.4	0.0	1.6	70	29.4	96	92	62	0	7	2	0	0		
FLINT	38	22	41	16	30	6	0.6	-1.4	0.0	1.9	103	31.4	109	93	61	0	7	0	0	0		
GRAND RAPIDS	37	23	40	18	30	4	0.4	-1.5	0.0	2.5	108	44.9	135	97	66	0	7	2	0	0		
HOUGHTON LAKE	35	22	39	14	29	9	0.9	-1.4	0.0	2.0	118	37.8	136	89	66	0	7	0	0	0		
LANSING	38	21	40	17	29	6	0.6	-1.5	0.0	1.8	82	30.5	103	95	65	0	7	0	0	0		
MARQUETTE	34	17	43	6	25	10	1.0	-1.5	0.0	1.5	68	37.1	100	91	71	0	7	0	0	0		
MUSKEGON	39	25	42	20	32	6	0.6	-1.6	0.0	1.8	78	41.3	133	94	65	0	6	0	0	0		
SAULT ST. MARIE	33	18	38	2	25	9	0.9	-1.4	0.0	2.5	108	33.2	101	91	74	0	7	1	0	0		
MN ALEXANDRIA	31	19	37	12	25	15	1.5	-2.2	0.0	0.6	88	28.4	116	95	77	0	7	0	0	0		
DULUTH	31	16	40	5	23	12	1.2	-3.3	0.0	0.6	53	43.4	148	95	68	0	7	0	0	0		
INT'L FALLS	29	16	38	10	23	18	1.8	-2.2	0.0	0.9	115	27.9	116	93	70	0	7	0	0	0		
MINNEAPOLIS	33	22	37	14	28	12	1.2	-2.2	0.0	0.9	118	36.5	140	97	73	0	7	1	0	0		
ROCHESTER	32	23	35	14	28	13	1.3	-2.2	0.0	1.5	181	36.9	131	99	81	0	7	0	0	0		
MS GREENWOOD	60	41	76	27	50	6	0.6	-1.9	0.0	8.4	171	66.5	127	96	53	0	3	3	0	0		
JACKSON	62	42	77	27	52	5	0.5	-1.1	0.0	5.3	109	63.1	123	98	51	0	3	4	0	0		
MERRIDIAN	61	43	74	29	52	5	0.5	-1.6	0.0	6.8	134	73.5	139	96	55	0	1	3	0	0		
MO CAPE GIRARDEAU	49	32	55	24	41	1	0.1	-3.3	0.0	5.1	148	48.2	109	91	60	0	3	3	0	0		
COLUMBIA	46	28	49	22	37	6	0.6	-2.2	0.0	2.7	146	34.8	95	93	61	0	5	3	0	0		
KANSAS CITY	44	28	49	24	36	5	0.5	-1.1	0.0	2.1	155	28.7	80	95	63	0	6	2	0	0		
SAINT LOUIS	47	31	50	26	39	7	0.7	-1.4	0.0	2.1	104	33.5	100	91	57	0	5	3	0	0		
SPRINGFIELD	47	31	50	21	39	5	0.5	-1.1	0.0	3.4	145	37.6	96	92	59	0	4	2	0	0		
MT BILLINGS	46	26	48	23	36	11	1.1	-2.0	0.0	2.2	30	20.6	140	66	32	0	7	0	0	0		
GLASGOW	39	16	40	11	27	14	1.4	-1.0	0.0	0.2	54	11.0	102	90	52	0	7	0	0	0		
GREAT FALLS	48	29	52	26	39	15	1.5	-2.0	0.0	0.1	12	14.1	94	65	30	0	7	0	0	0		
HAYDEN	41	13	48	6	27	10	1.0	-1.0	0.0	0.0	0	9.0	77	92	54	0	7	0	0	0		
HELENA	25	7	34	-1	16	-6	-0.6	-1.1	0.0	8	144	12.0	105	92	75	0	7	0	0	0		
KALISPELL	32	28	36	22	30	7	0.7	-1.4	0.0	0.7	46	15.2	97	97	85	0	7	1	0	0		
MILES CITY	45	19	49	16	32	13	1.3	-1.0	0.0	0.1	13	20.0	141	88	41	0	7	0	0	0		
MISSOULA	30	19	37	13	24	1	0.1	-3.3	0.0	1.0	90	11.6	90	92	77	0	7	0	0	0		
NE GRAND ISLAND	41	26	47	22	34	9	0.9	-3.3	0.0	1.5	253	29.3	127	95	64	0	7	2	0	0		
LINCOLN	41	27	46	22	34	11	1.1	-4.5	0.0	1.8	307	24.6	92	96	68	0	6	2	0	0		
NORFOLK	42	24	49	18	33	12	1.2	-1.1	0.0	0.7	133	29.1	124	96	60	0	7	1	0	0		
NORTH PLATTE	44	20	50	15	32	8	0.8	-2.2	0.0	0.5	135	20.3	106	95	48	0	7	1	0	0		
OMAHA	39	27	46	25	33	9	0.9	-1.6	0.0	1.9	270	37.3	124	93	76	0	7	2	0	0		
SCOTTSBLUFF	45	12	50	9	29	3	0.3	-1.0	0.0	0.0	0	14.3	99	91	37	0	7	2	0	0		
VALENTINE	45	14	50	7	29	7	0.7	-1.0	0.0	0.0	0	21.9	128	93	42	0	7	0	0	0		
NV ELY	44	12	51	7	28	3	0.3	-2.2	0.0	0.3	38	10.0	113	81	41	0	7	0	0	0		
LAS VEGAS	57	36	59	32	46	2	0.2	-1.1	0.0	0.1	38	3.9	99	97	32	0	1	0	0	0		
RENO	46	21	50	17	33	2	0.2	-3.3	0.0	0.1	7	5.1	72	95	42	0	7	0	0	0		
WINNEMUCCA	44	15	51	8	30	0	0.0	-2.2	0.0	0.5	67	7.7	101	89	46	0	7	1	0	0		
NH CONCORD	33	9	44	-1	21	-1	-0.1	-7.7	0.0	2.3	72	38.1	105	86	45	0	7	0	0	0		
NJ ATLANTIC CITY	47	21	52	14	34	0	0.0	-8.8	0.0	1.4	85	33.5	81	90	37	0	7	2	0	0		
NM ALBUQUERQUE	46	29	50	23	37	3	0.3	-1.1	0.0	2.8	314	11.5	147	88	49	0	7	2	0	0		
CLOVIS	44	29	50	23	37	3	0.3	-1.1	0.0	2.8	521	24.1	142	93	53	0	5	2	0	0		
ROSWELL	47	29	55	22	38	1	0.1	-6.6	0.0	2.6	797	21.2	202	94	56	0	6	3	1	0		
NY ALBANY	36	15	40	7	25	2	0.2	-7.7	0.0	2.2	82	35.1	100	88	53	0	7	1	0	0		
BINGHAMTON	35	21	42	13	28	4	0.4	-6.6	0.0	2.0	78	32.7	90	91	56	0	7	1	0	0		
BUFFALO	37	22	41	16	30	3	0.3	-5.5	0.0	3.0	97	39.4	107	95	66	0	7	4	0	0		
NEW YORK	44	33	50	26	38	4	0.4	-5.5	0.0	2.6	97	37.2	88	71	41	0	3	1	0	0		
ROCHESTER	36	20	44	13	28	2	0.2	-1.1	0.0	1.6	69	28.0	90	95	61	0	7	1	0	0		
SYRACUSE	36	19	46	12	28	2	0.2	-6.6	0.0	2.2	77	36.2	94	92	58	0	7	3	0	0		
NC ASHEVILLE	53	34	64	21	43	5	0.5	-3.3	0.0	4.9	169	43.6	100	91	54	0	3	3	1	0		
CHARLOTTE	57	37	65	31	47	6	0.6	-2.9	0.0	2.9	97	45.2	106	85	41	0	2	5	1	1		
GREENSBORO	52	30	60	23	41	3	0.3	-3.3	0.0	1.1	3	0.9	2.7	91	41.7	100	90	47	0	4	5	1
HATTERAS	58	39	67	30	49	1	0.1	-1.9	0.0	3.4	84	63.4	115	94	64	0	3	4	2	1		
NEW BERN	59	34	73	26	47	2	0.2	-6.6	0.0	2.3	69	49.1	93	94	55	0	5	4	1	1		
RALEIGH	54	32	68	24	43	3	0.3	-1.1	0.0	2.5	89	35.3	86	95	46	0	4	5	1	1		
WILMINGTON	61	38	74	30	50	3	0.3	-4.7	0.0	2.0	66	57.3	108	94	54	0	2	5	1	1		
ND BISMARCK	39	17	44	13	28	16	1.6	-1.1	0.0	0.2	66	16.8	111	93	60	0	7	0	0	0		
FARGO	32	18	38	14	25	16	1.6	-1.1	0.0	0.4	65	20.9	108	95	79	0	7	0	0	0		
GRAND FORKS	33	19	40	15	26	19	1.9	-1.1	0.0	0.3	58	21.6	119	92	71	0	7	0	0	0		
WILLISTON	42	13	47	8	27	15	1.5	-0.0	0.0	0.2	41	17.7	132	91	48	0	7	0	0	0		
OH AKRON-CANTON	38	25	40	20	31	3	0.3	-1.5	0.0	3.2	131	24.0	68	96	66	0	7	2	0	0		
CINCINNATI	45	29	52	22	37	5	0.5	-2.5	0.0	4.8	178	39.8	100	94	64	0	5	3	1	0		
CLEVELAND	40	26	44	23	33	4	0.4	-4.1	0.0	2.1	83	32.5	93	91	61	0	6	2	0	0		
COLUMBUS	42	27	48	20	34	4	0.4	-6.6	0.0	3.7	160	32.7	90	90	63	0	5	3	1	1		

Based on 1951-80 normals.

Weather Data for the Week Ending December 28, 1991

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS							
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																			.01 INCH OR MORE	.50 INCH OR MORE		
DAYTON	42	27	45	22	35	5	.7	.2	.5	3.2	143	36.7	107	98	65	0	6	3	1	0		
TOLEDO	39	26	41	22	33	7	.3	.3	.2	1.4	61	27.2	87	96	66	0	7	2	0	0		
YOUNGSTOWN	38	24	42	21	31	4	.1	.5	.1	2.5	99	25.2	68	92	63	0	7	2	0	0		
OK OKLAHOMA CITY	46	35	49	28	40	2	.3	.1	.3	5.3	502	43.1	141	93	63	0	2	1	0	0		
TULSA	48	35	51	26	41	4	.3	.0	.2	4.3	258	33.2	86	92	61	0	2	3	0	0		
OR ASTORIA	50	42	53	39	46	4	.3	.2	.1	6.6	63	57.2	83	93	70	0	0	4	0	0		
BURNS	40	18	43	10	29	3	T	.4	.1	1.0	5.5	54	92	49	0	7	0	0	0	0		
MEDFORD	47	36	63	29	41	4	T	.8	T	1.1	35	14.5	75	92	68	0	2	1	0	0		
PENDLETON	35	30	35	29	33	3	.1	.3	.1	.7	45	13.4	113	95	84	0	7	2	0	0		
PORTLAND	47	40	49	37	44	4	.6	.9	.2	4.6	79	33.9	93	94	65	0	0	4	0	0		
SALEM	47	40	49	36	43	3	.3	.4	.1	3.7	58	33.4	85	95	79	0	0	5	0	0		
PA ALLENTOWN	43	24	48	19	34	4	.1	.7	.1	2.7	80	33.6	77	82	44	0	7	1	0	0		
ERIE	39	27	43	23	33	5	.1	.6	.1	2.6	89	31.2	79	87	57	0	7	1	0	0		
HARRISBURG	42	27	47	20	35	3	.2	.5	.2	2.9	98	31.2	80	82	49	0	7	1	0	0		
PHILADELPHIA	45	27	48	24	36	3	T	.8	T	3.3	107	35.6	87	82	43	0	7	1	0	0		
PITTSBURGH	40	26	45	20	33	4	.5	.1	.3	3.5	151	31.9	89	93	60	0	6	3	0	0		
SCRANTON	38	22	43	15	30	2	.1	.4	.1	2.4	106	29.9	87	88	52	0	7	2	0	0		
RI PROVIDENCE	42	22	52	17	32	2	T	.0	T	2.6	64	45.1	101	81	38	0	7	0	0	0		
SC CHARLESTON	62	48	71	40	55	6	1.2	.5	.9	1.6	59	49.7	97	96	59	0	0	5	1	1		
COLUMBIA	60	39	70	30	50	4	1.8	.9	1.3	2.6	84	62.4	128	97	53	0	2	4	1	1		
FLORENCE	59	40	73	30	50	4	1.5	.8	.7	1.8	67	44.4	102	90	52	0	1	3	1	1		
GREENVILLE	56	35	66	27	46	4	1.7	.7	1.1	2.9	80	47.3	94	90	49	0	3	3	2	0		
SD ABERDEEN	38	16	48	10	27	14	T	.1	T	.1	30	23.1	131	96	65	0	7	0	0	0		
HURON	38	18	43	15	28	12	.0	.1	.0	.1	17	23.4	127	95	63	0	7	0	0	0		
RAPID CITY	47	21	52	16	34	10	.0	.1	.0	T	10	17.3	108	82	36	0	7	0	0	0		
SIoux FALLS	39	22	44	17	30	14	T	.1	T	.2	31	27.4	115	96	67	0	7	0	0	0		
TN CHATTANOOGA	54	37	63	26	45	5	2.5	1.3	1.4	8.1	174	56.0	107	96	63	0	3	4	2	2		
KNOXVILLE	51	35	61	25	43	4	1.7	.7	.9	10.2	247	58.2	125	97	61	0	3	3	4	2		
MEMPHIS	56	38	64	29	47	6	.6	.5	.5	7.1	163	61.1	120	90	59	0	3	3	4	0		
NASHVILLE	54	37	66	26	45	6	.9	.2	.4	7.2	174	46.3	97	94	60	0	3	4	0	0		
TX ABILENE	48	34	61	28	41	4	.7	.6	.3	6.3	795	33.3	144	92	55	0	2	3	4	0		
AMARILLO	44	30	50	25	37	0	.0	.8	.5	2.2	489	15.3	81	94	63	0	6	4	1	1		
AUSTIN	55	42	63	36	48	2	2.4	2.0	1.8	14.2	758	52.2	168	93	63	0	0	4	1	1		
BEAUMONT	58	46	76	30	52	1	1.2	.1	.9	11.5	260	81.4	149	95	64	0	1	4	1	1		
BROWNVILLE	65	52	77	41	59	3	.4	.1	.2	1.0	95	30.4	121	93	65	0	0	3	0	2		
CORPUS CHRISTI	62	50	77	41	56	1	1.8	1.5	1.2	9.4	862	47.7	154	94	67	0	0	4	2	2		
DEL RIO	59	42	69	34	51	0	.3	.2	.2	3.1	614	22.0	129	82	47	0	0	2	0	0		
EL PASO	53	35	58	31	44	0	.5	.4	.2	3.3	>1000	12.2	161	92	51	0	1	3	0	0		
FORT WORTH	51	40	54	30	46	0	.6	.2	.4	8.8	567	53.6	174	93	62	0	1	3	0	0		
GALVESTON	59	51	72	46	55	1	.3	.5	.3	3.6	110	60.3	150	88	64	0	0	3	0	0		
HOUSTON	58	46	76	37	52	2	2.7	1.9	1.7	9.3	273	61.1	133	96	61	0	0	3	2	2		
LUBBOCK	45	33	55	28	39	1	.8	.8	.5	2.2	679	24.1	138	97	66	0	4	3	1	0		
MIDLAND	51	31	59	24	41	4	.1	.0	.1	2.2	558	23.7	176	91	47	0	5	2	0	0		
SAN ANGELO	52	36	65	30	44	3	.6	.5	.4	4.0	702	24.4	136	96	55	0	1	3	0	0		
SAN ANTONIO	58	42	68	35	50	2	1.2	1.0	.6	13.9	>1000	42.7	149	96	59	0	0	3	1	1		
VICTORIA	59	46	75	39	53	2	1.2	.7	.6	6.2	320	56.8	155	94	64	0	0	3	2	0		
WACO	52	41	57	31	46	1	.8	.4	.4	8.5	491	45.6	149	95	65	0	1	4	0	0		
WICHITA FALLS	50	35	58	27	43	0	.5	.2	.4	7.0	644	36.0	136	95	56	0	3	2	0	0		
UT CEDAR CITY	41	22	48	12	31	2	.1	.1	.1	.4	61	12.2	120	95	63	0	6	1	0	0		
SALT LAKE CITY	31	24	39	22	28	1	T	.3	T	.3	28	17.7	118	88	70	0	7	0	0	0		
VT BURLINGTON	30	8	37	-2	19	0	T	.5	T	1.2	54	32.4	97	88	56	0	7	1	0	0		
VA NORFOLK	53	32	64	27	42	1	.8	.1	.4	1.7	59	42.1	94	97	59	0	4	4	0	0		
RICHMOND	52	26	59	23	39	1	.9	.1	.8	3.7	120	34.9	80	90	46	0	7	2	1	0		
ROANOKE	51	29	60	21	40	3	.9	.2	.8	3.6	137	36.8	95	87	47	0	6	2	1	1		
WA QUILLAYUTE	50	42	57	29	46	6	1.2	.8	.3	10.5	67	98.9	94	99	77	0	1	6	0	0		
SEATTLE-TACOMA	51	42	57	38	46	6	.3	.2	.1	3.2	56	35.2	93	94	63	0	0	5	0	0		
SPOKANE	36	30	38	25	33	5	T	.6	T	1.2	54	14.3	88	98	80	0	7	1	0	0		
YAKIMA	41	30	47	25	36	5	.1	.2	.0	.3	23	7.6	100	100	78	0	5	3	0	0		
WV BECKLEY	46	30	54	22	38	6	1.2	.4	.6	6.3	223	40.0	96	92	57	0	4	2	2	2		
CHARLESTON	48	30	58	23	39	3	1.2	.4	.7	5.8	197	42.4	101	96	61	0	5	3	1	1		
HUNTINGTON	48	28	59	20	38	3	1.3	.6	.8	5.2	184	38.5	95	96	58	0	5	3	1	1		
PARKERSBURG	44	27	50	20	35	2	1.0	.4	.6	5.0	203	44.5	119	97	67	0	6	3	1	1		
WI GREEN BAY	34	21	36	12	27	10	.0	.3	.0	1.4	111	26.6	96	92	68	0	7	0	0	0		
LACROSSE	34	23	37	12	29	10	.0	.2	.0	1.4	145	36.3	122	92	68	0	7	0	0	0		
MADISON	36	21	42	10	28	9	T	.3	T	1.7	124	39.2	128	95	69	0	7	0	0	0		
MILWAUKEE	38	27	42	21	32	10	T	.4	T	1.7	94	39.2	128	89	66	0	5	0	0	0		
WAUSAU	32	19	36	6	25	10	T	.3	T	1.4	121	38.9	124	98	72	0	7	0	0	0		
WY CASPER	37	20	42	15	28	4	.0	.1	.0	.3	77	12.4	112	72	41	0	7	0	0	0		
CHEYENNE	45	18	51	14	31	2	.0	.1	.0	T	12	18.6	140	72	28	0	7	0	0	0		
LANDER	22	2	24	-4	12	9	.0	.1	.0	.3	59	14.7	114	92	68	0	7	0	0	0		
SHERIDAN	39	17	43	14	28	5	.0	.2	.0	.6	86	16.0	107	85	51	0	7	0	0	0		

Based on 1951-80 normals.

HEATING DEGREE DAYS (Base 65° F) December 22 - 28, 1991

(Cumulative totals and departures from normal are for the period July 1 - December 28, 1991)

STATES AND STATIONS	WEEKLY	CUMULATIVE			STATES AND STATIONS	WEEKLY	CUMULATIVE			STATES AND STATIONS	WEEKLY	CUMULATIVE					
	TOTAL DEPARTURE	TOTAL	DEPARTURE	DEP. from '90		TOTAL	DEPARTURE	TOTAL	DEPARTURE		DEP. from '90	TOTAL	DEPARTURE	TOTAL	DEPARTURE	DEP. from '90	
AL BIRMINGHAM	106	-40	990	-78	132	NEW ORLEANS	62	-26	550	36	139	CINCINNATI	194	-40	1803	-77	202
MOBILE	75	-23	668	60	191	SHREVEPORT	113	-11	817	-2	24	DAYTON	211	-38	2008	-9	190
MONTGOMERY	97	-24	840	2	173	ME CARIBOU	381	13	3514	-97	212	TOLEDO	224	-52	2177	-165	120
AK ANCHORAGE	300	-68	4324	-336	-555	PORTLAND	288	-5	2508	-169	322	YOUNGSTOWN	234	-34	2184	-136	195
BARROW	564	7	8549	138	206	MD BALTIMORE	214	-1	1608	-34	245	OK OKLAHOMA CITY	171	-19	1364	25	154
FAIRBANKS	474	-70	5953	-227	-150	SALISBURY	194	-3	1445	-73	156	TULSA	164	-28	1293	-40	160
JUNEAU	216	-65	3546	-285	-271	MA BOSTON	221	-15	1798	-79	283	OR ASTORIA	132	-28	1952	-84	05
KODIAK	244	-5	3558	-206	-153	CHATHAM	217	-6	1744	-193	157	BURNS	248	-25	2669	-72	-443
NOME	477	43	5351	-555	-192	MI ALPENA	262	-48	2941	-60	169	MEDFORD	164	-32	1522	-333	-398
AZ FLAGSTAFF	254	0	2421	-311	-271	DETROIT	231	-42	2181	-145	159	PENDLETON	227	14	1937	-127	-118
PHOENIX	55	-36	340	-161	-32	FLINT	242	-42	2474	-3	168	PORTLAND	148	-28	1452	-331	-194
PRESCOTT	181	-22	1580	-197	-147	GRAND RAPIDS	247	-36	2496	51	238	SALEM	149	-26	1581	-317	-235
TUCSON	80	-18	528	-66	-20	HOUGHTON LAKE	253	-61	2927	-77	131	PA ALLENTOWN	219	-32	1896	-165	117
WINSLOW	227	-11	1944	100	-146	LANSING	248	-36	2564	94	238	ERIE	222	-41	1987	-306	179
YUMA	40	-28	219	-127	-102	MARQUETTE	276	-73	3721	186	226	HARRISBURG	211	-26	1770	-118	138
AR FORT SMITH	155	-25	1221	-49	46	MUSKOGON	228	-47	2421	12	179	PHILADELPHIA	201	-21	1498	-200	169
LITTLE ROCK	142	-23	1099	-60	97	SAULT STE MARIE	275	-64	3294	-68	93	PITTSBURGH	221	-31	1974	-165	182
CA BAKERSFIELD	84	-42	807	22	-110	MN ALEXANDRIA	278	-105	3519	178	376	SCRANTON	242	-22	2126	-141	185
EUREKA	86	-35	1741	-233	-7	DULUTH	291	-92	3958	271	412	RI PROVIDENCE	228	-18	1787	-233	147
FRESNO	103	-44	854	-138	-149	INT'L FALLS	296	-130	4126	113	321	SC CHARLESTON	71	-45	638	-117	141
LOS ANGELES	51	-12	267	-212	-25	MINNEAPOLIS	261	-85	3245	351	482	COLUMBIA	107	-32	916	-53	135
REDDING	134	-5	862	-90	-171	ROCHESTER	262	-88	3368	364	466	FLORENCE	106	-29	833	-80	161
SACRAMENTO	114	-30	865	-119	-159	SAINT CLOUD	279	-96	3561	259	364	GREENVILLE	135	-26	1132	-59	164
SAN DIEGO	48	-11	239	-132	-90	MS GREENWOOD	100	-42	900	-114	58	SD ABERDEEN	267	-97	3170	21	148
SAN FRANCISCO	96	-23	861	-313	-30	JACKSON	91	-35	822	-48	54	HURON	257	-89	3011	40	134
STOCKTON	116	-31	876	-93	-137	MERIDIAN	90	-38	838	-90	133	RAPID CITY	215	-73	2690	-11	93
CO DENVER	219	-17	2344	106	207	MO CAPE GIRARDEAU	165	-49	1518	-78	115	SIoux FALLS	241	-100	3047	157	191
GRAND JUNCTION	302	29	2222	51	-122	COLUMBIA	195	-47	1909	55	238	TN CHATTANOOGA	138	-37	1236	-99	184
PUEBLO	229	-7	2304	232	223	KANSAS CITY	200	-51	2019	149	308	KNOXVILLE	150	-29	1351	-13	189
CT BRIDGEPORT	220	-14	1681	-91	171	SAINT LOUIS	182	-52	1638	-124	186	MEMPHIS	123	-42	1079	-82	103
HARTFORD	243	-27	2024	-175	216	SPRINGFIELD	182	-35	1660	-19	166	NASHVILLE	136	-45	1302	-68	175
DE WILMINGTON	207	-15	1559	-158	112	MT BILLINGS	201	-81	2589	-99	72	TX ABILENE	165	24	1094	123	154
DC WASHINGTON	184	-14	1319	-103	156	GLASGOW	262	-99	3129	-196	-87	AMARILLO	197	0	1766	194	208
FL APALACHICOLA	47	-37	473	11	147	GREAT FALLS	181	-113	2758	-153	-92	AUSTIN	115	11	612	-4	68
DAYTONA BEACH	11	-42	203	-65	60	HAVRE	265	-81	3098	-194	-11	BEAUMONT	87	5	517	3	26
FORT MYERS	0	-28	63	-57	31	HELENA	345	39	3067	-130	159	BROWNSVILLE	58	17	246	59	45
JACKSONVILLE	44	-40	453	-32	135	KALISPELL	243	-57	3201	-191	32	CORPUS CHRISTI	67	10	333	13	36
KEY WEST	0	-7	0	-20	-3	MILES CITY	228	-97	2784	-182	23	DEL RIO	97	-1	555	-21	56
MIAMI	0	-14	8	-32	04	MISSOULA	284	-9	2915	-238	-120	EL PASO	145	-7	1042	-35	28
ORLANDO	5	-37	143	-45	51	NE GRAND ISLAND	217	-70	2437	44	228	FORT WORTH	134	6	895	87	63
TALLAHASSEE	56	-42	588	0	155	LINCOLN	214	-76	2360	57	300	GALVESTON	72	4	390	5	59
TAMPA	10	-35	171	-46	80	NORFOLK	222	-87	2657	75	224	HOUSTON	94	8	563	16	28
WEST PALM BEACH	0	-14	32	-28	19	NORTH PLATTE	226	-63	2512	-105	10	LUBBOCK	181	6	1434	117	229
GA ATLANTA	119	-35	955	-144	121	OMAHA	221	-66	2461	237	275	MIDLAND ODESSA	167	26	1211	197	224
AUGUSTA	100	-36	898	-48	142	SCOTTSBLOFF	251	-22	2530	-21	-4	SAN ANGELO	146	18	1005	134	93
MACON	104	-19	807	-29	95	VALENTINE	248	-56	2788	59	99	SAN ANTONIO	104	9	572	-4	00
SAVANNAH	69	-43	582	-112	101	NV ELY	256	-27	2780	-161	-121	VICTORIA	88	15	436	8	25
ID BOISE	250	8	2199	-42	-226	LAS VEGAS	128	-19	863	-91	-96	WACO	128	7	772	34	62
LEWISTON	194	-26	1966	-176	180	RENO	219	-18	1824	-547	-330	WICHITA FALLS	155	-5	1128	29	67
POCATELLO	299	17	2740	14	-12	WINNEMOCCA	247	-5	2250	-274	-401	UT BLANDING	259	-2	2052	-252	-199
IL CHICAGO	225	-57	2388	149	258	NH CONCORD	305	1	2571	-154	239	CEDAR CITY	254	7	2198	-39	-213
MOLINE	218	-75	2393	97	166	NJ ATLANTIC CITY	214	-6	1663	-53	133	SALT LAKE CITY	259	4	2126	-72	-110
PEORIA	217	-64	2273	58	172	NM ALBUQUERQUE	193	-23	1611	-91	-100	VT BURLINGTON	319	0	2679	-152	249
QUINCY	209	-57	2142	99	245	CLOVIS	199	10	1729	192	313	VA LYNCHBURG	188	-12	1444	-127	124
ROCKFORD	245	-58	2560	79	168	ROSWELL	186	21	1409	154	295	NORFOLK	156	-8	1041	-102	199
SPRINGFIELD	203	-57	2039	50	153	NY ALBANY	276	-14	2323	-135	204	RICHMOND	180	-9	1252	-170	165
IN EVANSVILLE	179	-42	1669	-38	186	BINGHAMTON	258	-32	2392	-219	09	ROANOKE	174	-26	1425	-164	198
FORT WAYNE	228	-42	2188	-44	172	BUFFALO	246	-25	2247	-92	189	WA COLVILLE	238	-36	2690	-215	-136
INDIANAPOLIS	203	-50	1919	-97	101	NEW YORK	185	-34	1401	-214	167	QUILLAYOTE	131	-44	2161	-237	-76
SOUTH BEND	219	-51	2260	34	237	ROCHESTER	255	-15	2325	13	175	SEATTLE-TACOMA	129	-46	1618	-385	-244
IA DES MOINES	218	-80	2523	209	292	SYRACUSE	260	-17	2265	-77	133	SPOKANE	223	-39	2506	-225	-165
DUBUQUE	247	-73	2806	158	242	NC ASHEVILLE	148	-41	1490	-123	180	YAKIMA	204	-44	2200	-225	-221
SIoux CITY	232	-83	2751	239	284	CAPE HATTERAS	112	-14	660	-145	69	WV BECKLEY	186	-46	2311	227	648
WATERLOO	234	-95	2873	145	252	CHARLOTTE	126	-42	994	-233	128	CHARLESTON	183	-28	1566	-156	228
KS CONCORDIA	204	-53	2100	96	260	GREENSBORO	164	-22	1265	-151	166	HUNTINGTON	187	-24	1596	-119	189
DODGE CITY	196	-38	1985	149	214	NEW BERN	127	-18	854	-141	115	PARKERSBURG	205	-16	1777	-2	243
GOODLAND	218	-37	2226	-54	94	RALEIGH-DORHAM	150	-22	1150	-134	194	WI GREEN BAY	261	-71	2981	70	292
TOPEKA	198	-54	1939	10	218	WILMINGTON	106	-22	826	-27	200	LA CROSSE	253	-76	2997	292	474
WICHITA	192	-38	1798	72	174	ND BISMARCK	257	-115	3356	-22	36	MADISON	254	-66	2811	40	254
KY BOWLING GREEN	157	-45	1496	-80	169	FARGO	277	-116	3551	127	371	MILWAUKEE	228	-73	2438	-100	269
LEXINGTON	176	-41	1650	-79	153	GRAND FORKS	269	-136	3744	86	311	WASAU	276	-74	3375	249	406
LOUISVILLE	163	-47	1474	-145	145	WILLISTON	264	-111	3370	-113	28	WY CASPER	254	-31	2836	-55	-21
LA ALEXANDRIA	91	-20	696	-7	21	OH AKRON-CANTON	234	-27	2150	-42	194	CHEYENNE	236	-23	2739	0	-6
BATON ROUGE	70	-25	589	-14	61	CLEVELAND	220	-35	2011	-124	108	LANDER	370	66	3083	30	114
LAKE CHARLES	81	-5	561	3	37	COLUMBUS	213	-34	1920	-116	166	SHERIDAN	254	-44	2921	-68	108

Based on 1951-80 normals.

Texas Flooding Persists

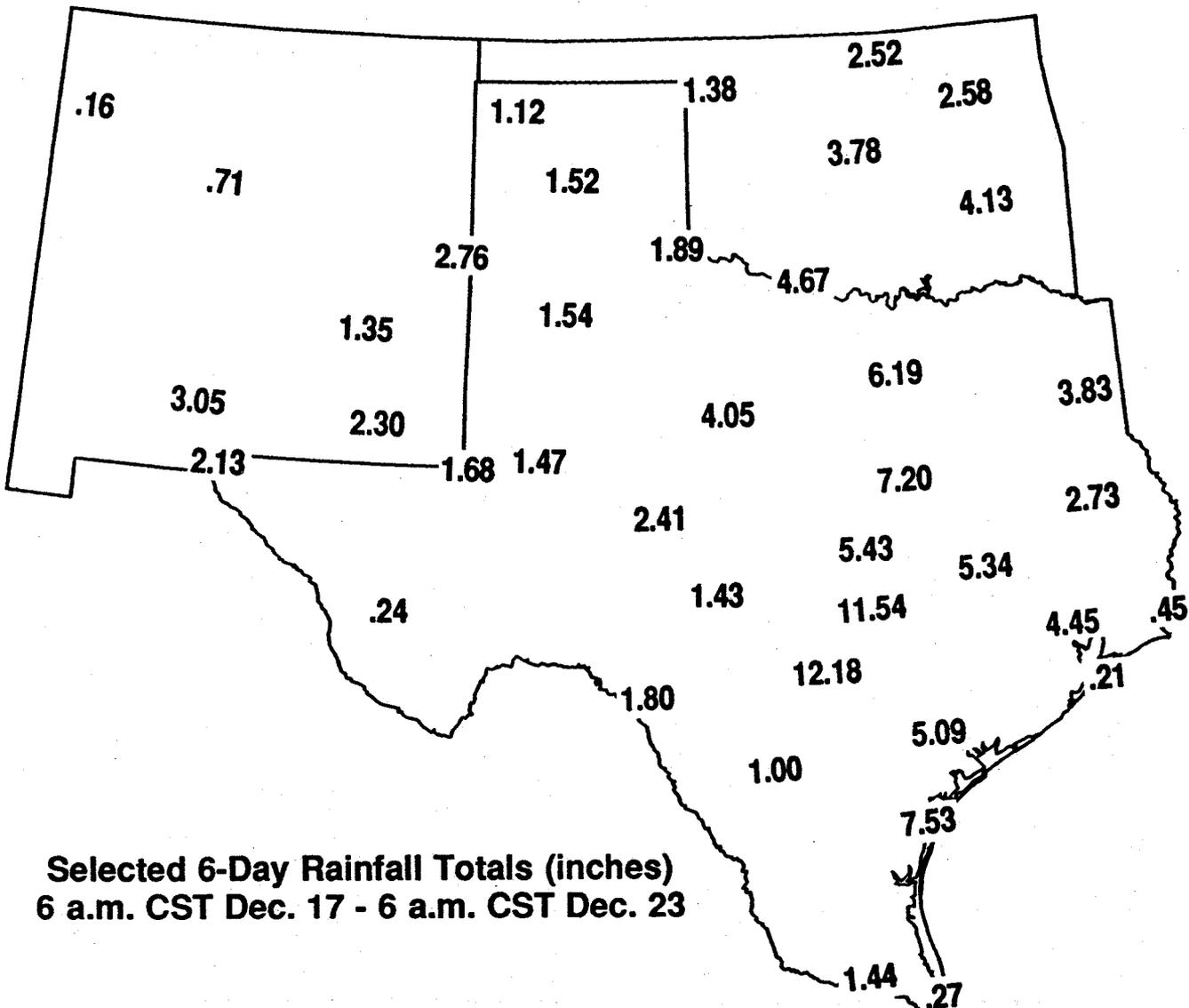
A potent, slow-moving, storm unleashed furious rains on the southern Plains between the 17th and 22nd of December. Drainage basins along the Interstate 35 corridor between Dallas, TX, and San Antonio, TX, absorbed the runoff from more than 6 inches of rain, causing widespread river flooding. More than a week after significant rains ended, crests neared their rivers' mouths on the Gulf of Mexico, flooding communities and farmland in their paths.

Major flooding was reported along the Colorado River, which runs through Austin, Columbus, and Wharton, TX. A dammed portion of the river, Lake Travis, west of Austin, topped a record level previously attained in 1957. Farther south, the Guadalupe River flooded portions of Gonzales, Cuero, and Victoria, TX. High water on the Trinity River, which originates near Dallas, and the Brazos River, which flows through Waco, TX, was partly contained by reservoirs, preventing catastrophic flooding.

In western Texas, the storm hampered efforts to harvest remaining cotton. Twelve percent was unharvested when the rains hit, and the quality of cotton left in the fields continues to deteriorate.

The recent spate of rain has pushed several Texas cities past former December rainfall records, including Wichita Falls, San Antonio, and Corpus Christi. In Austin, this month has been the wettest December on record, and 1991 has been the wettest year on record, breaking the mark set in 1957.

Rain returned to much of Texas between December 25 and 27, compounding the misery in east central and southeastern parts of the State. Locally heavy rain along the Gulf coast added to already near-record river crests. And in east central Texas, light rain falling on saturated soils caused additional minor flooding.



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

California Rainy Season Arrives

Pacific moisture finally lashed California on December 27, heralding a start to the rainy season. California had endured its 8th driest autumn (September-November) on record, an ominous sign for an agriculturally prolific State that is entering a potential sixth year of drought. Rains did not materialize during the previous (1990-91) rainy season until February 27, which was too late to erase huge accumulated rainfall deficits.

Early December data indicated that statewide reservoir holdings stood at just 51 percent of normal, and at 31 percent of capacity. Similarly, as of December 9, the Sierra Nevada precipitation (important because of spring runoff into reservoirs) was 55 percent of normal for the current water year (since October 1).

The first two waves of precipitation struck on December 27 and 29, dampening parched soils

statewide and thickening feeble snowpack. In some cases, the 3-day rainfall exceeded total rainfall during the past 6 months (table 1). Especially heavy rain fell in the mountains near Santa Maria, with storm totals reaching 8.07 inches at Alisal Reservoir, 6.06 inches at Buellton, and 5.39 inches at Lake Cachuma. The Sierra Nevada Mountains, which provide the snowmelt headwaters of spring runoff for much of northern California, received up to 48 inches of snow (at Mammoth Mountain). Other snowfall totals included 36 inches at Sierra Summit and 22 inches at Blue Canyon.

Until the precipitation arrived, this year's slow start to the rains mirrored last year's (table 2). But in 1990-91, California went on to endure its 6th driest January on record en route to its driest October to January period in 97 years of recordkeeping.

Table 1

CITIES	PRECIPITATION		PERCENT OF NORMAL PRECIP.	
	Jul 1-Dec 26	Dec 27-29	Jul 1-Dec 26	thru Dec 29
Bakersfield	0.70	0.51	42	70
Eureka	6.45	0.42	43	44
Fresno	1.14	0.77	36	57
Los Angeles	0.84	2.31	21	74
Oakland	2.85	1.92	45	71
Redding	4.87	3.40	32	52
Sacramento	2.00	1.01	34	49
San Diego	2.05	0.46	72	84
San Francisco	3.52	2.07	52	78
San Jose	1.66	2.19	36	80
Santa Maria	0.69	2.74	19	89
Santa Rosa	3.77	2.08	35	52

Table 2

Percent of Normal
Precipitation
Jul. 1 - Dec. 29, 1990

Bakersfield	47
Eureka	56
Fresno	40
Los Angeles	5
Oakland	37
Redding	30
Sacramento	35
San Diego	42
San Francisco	39
San Jose	60
Santa Maria	32
Santa Rosa	22

National Agricultural Summary

December 23 - 29, 1991

HIGHLIGHTS: Texans enjoyed only a few days of dry weather before additional heavy rains arrived near the end of the week. Rainfall totals were heaviest in South Central and Upper Coast regions of the State, aggravating swollen rivers and causing still more flooding. Conversely, rains were welcomed in the West, where California's hopes for relief from drought were bolstered by rains extending the full length of the State. Rains were also welcomed in the previously dry Southeast.

SMALL GRAINS: Small grain seeding was completed in South Carolina and was near completion throughout the Southeast. Seeding continued in the Southwest with progress past the midway point. Kansas winter wheat stands were showing improvement resulting from recent moisture and mild temperatures. Lack of snow cover continued to concern wheat producers in the Great Plains although relatively mild temperatures have prevailed thus far. Some fields in the Texas Blacklands were lost to floods. Winter wheat rated mainly fair to good in the major producing regions.

CORN: Very little snow fell in the northern Corn Belt allowing some farmers to finish harvesting corn. Some fields, however, remained unharvested in the region.

SOYBEANS: Soybean harvest was virtually complete for the year with only a few scattered fields remaining for harvest in rain plagued Texas.

COTTON: Cotton stalk shredding and plowdown activities were slowed by rains in the West. Fields remained too wet for harvest to resume in Oklahoma and Texas, and excess moisture lowered cotton quality in unharvested fields. Weed control and pre-irrigation of next year's crop continued in California.

OTHER FIELD CROPS: Limited alfalfa harvest remained active in Arizona. Wet conditions dealt the Texas peanut harvest another setback, and yields and quality grades on some fields in the High Plains were reduced to fair. Sugarcane harvest and planting remained active in Florida. Some Georgia tobacco growers were sowing beds for next year's crop and beds were being prepared in North Carolina.

FRUIT AND NUTS: Lemons, grapefruit, oranges, and tangerines were being picked in Arizona.

Freeze protection measures were employed in California to protect citrus fruits from low temperatures. Navel orange harvest continued in California. Florida's early orange harvest slowed for the Holidays with harvest about half complete. Grapefruit movement active for fresh and processing use, and export markets were taking a good portion of the fresh pack. Pruning of apples and grapes continued in the Northern States. Pecan harvest was delayed another week by heavy rains in Texas and much of the unharvested crop in Central Texas was lost to floods. Pecan harvest continued in Arizona and Mississippi.

VEGETABLES: Lettuce and mixed vegetable harvests continued in central and western Arizona. Broccoli harvest was moderately active along California's central coast and nearing completion in Ventura County. Cauliflower harvest neared completion in the Salinas-Watsonville and Oxnard districts. Celery supplies remained fairly heavy in Ventura County and Santa Maria with good quality, while harvest was declining in Salinas-Watsonville. California lettuce shipments were light with variable quality, although packing increased in the Imperial Valley. Florida's volume leaders for the week were tomatoes, peppers, celery, cucumbers, cabbage, squash, and snap beans, though all harvesting and shipping was curtailed somewhat by Christmas. Onion planting was near completion in Georgia.

PASTURES AND LIVESTOCK: Many Texas ranchers were occupied with repairing fences and recovering lost livestock in the wake of floods. Grazing was open but most livestock were receiving some supplemental feed in Montana, and only limited supplemental feeding was necessary in the Corn Belt as open fields permitted the grazing of stalks. Tight hay supplies were reported in parts of Indiana. Early calving started in Oregon.

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 1.00 to 2.00 in.; near 3.00 in. local areas. Temperatures 3 to 6° above normal; near normal extreme southwest.

Primary activities: Seeding small grains; repairing machinery, equipment; maintenance, repair of farm buildings, fences; farm planning; tax preparations; general care of livestock, poultry, catfish.

ARIZONA: Cloudy much of the State, sunny west, 22nd. Sunny statewide, 23rd. Cloudy northeast, 24th. Showers east, 25th. Sunny west, cloudy east, 27th, 28th. Temperatures 3° below to 5° above normal. Extremes 13°; 61° higher elevations, 28°; 71° deserts.

Cotton stalk shredding, plowdown slowed by rains; light to moderate statewide. Alfalfa harvest, light, condition good; sheeping off, light. Small grains seeded 78%, 84% 1990, 76% avg.; small grains established, 65%, 64% 1990, 52% avg. Lemons, grapefruit, oranges, tangerines, mixed vegetables, lettuce harvested central, west. Pecans harvested, central. Peanut harvest wrapping up, west.

ARKANSAS: Temperatures a little above normal with scattered showers first part of the week. Extremes 16°; 65°. Rainfall 0.17 to 1.18 in.

All farming activities are normal for this time of year, curtailed for the holiday season. Livestock were in good condition, increasing the amounts of hay, feed.

CALIFORNIA: Dry conditions over the State accompanied by near normal temperatures. Late in week, low pressure trough developed along coast bringing moisture to much of the State.

Field activities slowed, rainfall late week. Rice stubble burning continued as regulations allowed. Shredding, discing harvested cotton winding down. Weed control, pre irrigation next years crop. Planting garbanzo beans underway. Seeding small grains, forage mixes. Emergence, growth hampered; low soil moisture most areas. Herbicide applications alfalfa, small grains. General activities included ripping, leveling, cultivation, furrowing. Dormant spraying continued in deciduous fruit trees, vineyards. Pruning peaches, nectarines, grapes, apples, plums steady. Grape strip spraying for weed control commenced. Due to lack soil moisture in orchards, irrigating continued, spray applications delayed. Because cold weather, growers used freeze protection measures. Kiwifruit packed out of cold storage. Harvesting Navel oranges continued. Groves treated to control weeds. General rains delayed planting harvesting schedules. Broccoli movement moderate central coast. Nearing completion Ventura County. Cauliflower harvest nearing completion Salinas Watsonville, Oxnard districts. Celery supplies fairly heavy Ventura County, Santa Maria areas. Quality good. Harvest declining Salinas Watsonville. Lettuce shipments light. Variable quality. Packing Imperial Valley increased, below normal volumes. Fall potato shipment steady from Tulelake Butte Valley. Range poor to fair. Supplemental feeding continued. Water supplies short.

COLORADO: A dry week. Temperatures near normal eastern plains but below normal in mountain valleys, western slope. Persistent fog in many western valleys, San Luis Valley through the week. Maximum temperatures near 50s on eastern plains, 20s, 30s in mountains, in the teens to low 20s in northwest, San Luis Valley. Minimum temperatures below zero in high valleys, zero to 10° in mountains, teens to 25° on the western slope, eastern plains.

Major activities for the week include the feed, care of livestock with mostly mild temperatures across the eastern plains. Cold, frequent fog made conditions less favorable in western areas. Except for the continued lack of moisture in eastern areas, the week's weather had no adverse effect on the winter wheat crop. Winds were calm. Shipment of potatoes from the San Luis Valley storages continued at an active pace.

FLORIDA: Temperature 1° above normal west, 6° above normal south. Temperatures 51 to 54° west, 56 to 63° north, 63 to 70° central, 67 to 73° south. Extremes 33°; 84°. Rainfall 0.30 to 1.36 in. Panhandle, trace to 1.19 in. north; zero to 0.67 in. central and south.

Soil moisture Panhandle, southern Peninsula short to adequate; northern, central Peninsula moisture mostly short. Sugarcane harvest, planting active. Most citrus good condition. Rain needed, irrigation continues, spotty rain coastal areas only. Harvest slowed by Christmas, early orange harvest about half complete. Grapefruit movement active for fresh, process use. Export markets receiving almost half of fresh pack. Mild days, cool nights prevailed over major vegetable producing areas. Rainfall limited. Harvest slowed for holidays. Volume leaders: Tomatoes, peppers, celery, cucumbers, cabbage, squash, snap beans. Also available: Carrots, eggplant, escarole/endive, lettuce, radishes. First spring watermelons planted Immokalee area. States pastures poor to good. Pasture ratings 50% poor, 30% fair, 20% good. Moisture levels short to adequate. States cattle herds poor to good.

GEORGIA: Temperatures 2 to 5° above normal. Warmest in the 60s, upper 50s mountains, low 70s southeast. Rainfall 1.00 to 2.00 in.

Soil moisture short to adequate statewide. Land preparation for spring plantings getting underway, mainly South. Pastures and small grains in fair condition. Sowing tobacco beds active. Onion planting near completion. Cattle, hogs good condition.

HAWAII: High winds, sporadic rain caused chilly Christmas week. Wind, rain damaged fruit, caused flower drop in vine, orchard crops. Sunshine returned by weekend, benefiting crop growth, development. Winter weather helped control insect populations. Voluntary water restrictions lifted for Upcountry Maui. Rainfall none to 3.30 in.

Days suitable for fieldwork 7.0. Island crops ranged from poor to good. Banana orchards suffered some leaf stripping by gusty winds. Papaya output heavy with some toppled trees caused by high winds. Winter tomato production underway.

IDAHO: Temperatures 9° below normal to 5° above normal across State. Precipitation was spotty in the north; remainder of the State received none, except for Malta.

Soil moisture adequate across State. Activities: Marketing potato, grain crops, attending meetings, repairing equipment. Hay, roughage supplies adequate. Some hay being fed. Livestock reported in good to excellent condition.

ILLINOIS: Temperatures stabilized, 5 to 10° above normal across the State. Highs mid 30s to upper 40s. Lows lower 30s to the lower 20s. Precipitation was very light, a tenth to a third of an inch in only a few areas.

INDIANA: Temperatures 0 to 7° above normal. Highs upper 30s to mid 40s. Lows, low 20s to low 30s. Extremes, upper 50s. Mild week, precipitation minimal. Frost seldom penetrated as deep as 4.00 in. under sod.

Wet field conditions limited activities. Plowing, spreading lime some fields. Other activities included hauling manure, moving grain to market, soil testing, machinery repair, fixing fence, building maintenance, winterizing farmstead, attending meetings, purchasing supplies, tax preparation. Winter wheat mostly fair condition, poor some fields. Hay supplies tight, some areas. Livestock good.

IOWA: A very mild, cloudy week with temperatures 11 to 14° above normal. Extremes 10° Decorah (25th); 47° Des Moines (25th), Burlington (26th). Measurable precipitation generally confined to south central with maximum of 0.10 in. at Lamoni. State average only trace, weekly normal 0.22 in.

Muddy feedlots are a problem in southern areas, although overall it was a very favorable week for the States livestock. Mild weather allowed more cattle to graze on corn stalks. Progress continues on corn harvest, although there is still corn in the fields.

KANSAS: Temperatures 4° above normal across State. Precipitation fell over much of the State; central, eastern areas receiving the most significant amounts.

Topsoil moisture generally adequate to surplus central, east; adequate west. Wheat stands showing improvement resulting from recent moisture mild temperatures. Wheat has had some additional top growth; root development. Livestock feeding, tending has been hampered by muddy lots in most areas. The cold, wet conditions may contribute to increased livestock disease problems.

KENTUCKY: High temperatures around 50°, 3 to 6° above normal. Low temperatures averaged lower 30s, 5 to 10° above normal. Extremes 17°; 65°. Rainfall 0.50 in. west, 1.00 to 2.00 in. east. Most rain fell 23rd.

Topsoil moisture generally ample, sub soil moisture greatly improved. Soils unfrozen. Fall seeded grains green, mostly good condition. Considerable burley on warehouse floors, markets reopen January 6th. Supplemental feed supplies adequate. Livestock satisfactory condition.

LOUISIANA: Temperatures 2° to 5° above normal. Extremes 26°; 79°. Rainfall 0.18 in. northeast to 1.08 in. northwest.

Main activities: Top dressing winter pastures, wheat, craw fishing, farm equipment maintenance, repair.

MARYLAND & DELAWARE: **MARYLAND:** Precipitation 0.21 in. Temperature 37.7°, normal 34.4°. Extremes 11°; 55°.

Activities: Preparing fields for spring planting; gleaning fields; liming, fertilizer applications; marketing, caring for livestock, holiday preparation.

DELAWARE: Precipitation 0.09 in. Temperature 36.8°, normal 35.5°. Extremes 22°; 50°.

Activities: Clean, store equipment; cleaning seed for next year; marketing, caring for livestock, holiday preparation.

MICHIGAN: Temperatures 12 to 19° above normal. Extremes 1°; 57°. Precipitation 0.01 to 0.89 in. across State. Mostly clear skies, mild temperatures prevailed last week.

Very little snow fell allowing some farmers to finish their corn harvest. Feed supply plentiful, livestock in good condition. Weather conditions were ideal for livestock with little precipitation, moderate temperatures. Major activities: Spreading manure; pruning apples, grapes; combining corn; cleaning, fixing barns; celebrating Christmas.

MINNESOTA: Temperatures 12 to 17° above normal for the State. Extremes 2°; 47°. Precipitation none to 0.02 in. State; 0.08 to 0.24 in. below normal. Greatest weekly total 0.09 in. at Hallock. No significant snowfall. Snow depth at weekend 8 to 14 in. northeast, north central, east central, 3 in. or less elsewhere.

MISSISSIPPI: Temperatures 51°, 5.1° above normal. Extremes 21°; 77°. Coastal region received above average rainfall. The rest of the State received very little rain. Rainfall 0.70 in., 0.55 below normal. Soil temperature 50°.

Days suitable for fieldwork 4.0, 1.2 1990, 1.8 avg. Soil moisture 14% short, 53% adequate, 33% surplus. Hay supply, 33% adequate, 67% surplus. Feed grain 60% adequate, 40% surplus. Pecans 92% harvested, 98% 1990, 98% avg. Wheat 50% fair, 50% good. Activities: Feeding cattle, planning for 1992.

MISSOURI: Temperatures 5 to 8° above normal. Precipitation 0.29 in., nearly all areas light except Osage County over 3.00 in.

Main activities hauling hay, spreading fertilizer, care of livestock, enjoying holidays.

MONTANA: Temperatures near normal to 16° above east and 1 to 8° above normal west. Very dry week all locations except for a few trace amounts.

Winter wheat remains mainly fair to good. Snow cover protection poor. Grazing open, most livestock receiving some supplemental feed.

NEBRASKA: Temperatures 3° above normal west to 11° above normal east. Precipitation none in the west to 0.50 in. southeast, east central.

Winter wheat 17% poor, 55% fair, 28% good. Lack of snow cover was a concern to wheat producers although a mild winter has been experienced thus far. Cattle gleaning stalks, requiring only limited supplemental feeding.

NEVADA: Temperatures above normal. Extremes -2°; 65°. Precipitation none to 0.06. High pressure dominated for most of the week. Snow, rain entered western areas on 28th, dumping up to 8 in. of snow in mountain areas, very little in agricultural valleys.

Livestock, fall seeded crops remain fair to good. Lack of adequate snow cover increasing danger of freeze damage to crops. Livestock feeding continues, hay stocks adequate.

NEW ENGLAND: Precipitation none to 0.20 in. north; none to 0.10 in. south. Temperatures 9° to mid 20s north, mid 20s to mid 30s south. Maximum temperatures low 30s north to low 50s south; minimum temperatures -18° north to high teens south.

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

NEW JERSEY: Temperatures slightly above normal, 32° north, 36° south, 38° coastal. Extremes 13°; 58°. Precipitation near normal; averaged 0.70 in. north, 0.88 in. south, 1.16 in. coastal. Heaviest 24 hour total 1.18 in. on 29th, 30th.

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

NEW MEXICO: Temperatures a couple of degrees below normal at most locations. Extremes 8°; 65°. Precipitation was spotty, light in the north, midweek storm produced amounts between 0.25 and 0.75 in. across much of the south.

NEW YORK: Weather data not available.

Major activities: Tending livestock, general farm maintenance, attending meetings.

NORTH CAROLINA: Temperatures above normal. Coast 1° above; rest of State 3 to 5° above normal. Precipitation above normal. Rainfall 0.03 to 1.97.

Activities: Tending livestock; cutting wood; preparing tobacco plant beds; land preparation; equipment repair; general farm maintenance.

NORTH DAKOTA: Temperatures 11° above normal southwest to 14° above normal northwest, northeast. Extremes 5° north central; 47° northwest, west central, southwest. No measurable precipitation was reported.

Livestock good to excellent condition, pneumonia, lung problems reported some areas. Hay stocks, concentrate supplies adequate. Snow cover limited in many areas causing concern for winter wheat, rye, alfalfa dormancy.

OHIO: A cold front produced some precipitation 23rd, dry days followed until the weekend. Low pressure brought rain, ice, wet snow that melted quickly over the weekend. Precipitation 0.10 in. in the northwest to 1.00 in. in the south. Temperatures slightly warmer than normal over most of the State. Highs upper 30s to mid 40s. Lows around 20°.

Days suitable for fieldwork 3.0. Soils generally remained unfrozen at the 4.00 in. depth with average maximums in the mid, upper 30°. The last of the bird population seemed to get the message that winter has arrived. Bird watchers observed final migration activities. Farmers were generally in a slow period; concentrating mostly on farm management, crop planning and working with livestock. Those who have planted winter wheat want snow cover. Soil moisture 29% short, 62% adequate, and 9% surplus. Pastures 4% very poor, 8% poor, 48% fair, 26% good, 14% excellent.

OKLAHOMA: Temperatures 1° below normal south central to 3° above normal northeast. Precipitation 0.02 in. central to 0.43 in. Panhandle.

Fields remained too wet to harvest cotton; however, harvesting is expected to resume when fields dry out. Wheat growth is generally good.

OREGON: Temperatures 2 to 3° above normal statewide. Precipitation below normal

statewide; 0.60 in. northern Cascades, coast, Willamette Valley 0.40 in., elsewhere none to 0.20 in.

Soil moisture, mostly adequate. Winter wheat fair to good. Cranberry producers report Brown Soft Scale insect problem emerging due to mild winter. Orchard pruning continued. Livestock good to excellent; early calving started, Umatilla County. Range, pasture, fair to excellent across most of State.

PENNSYLVANIA: Seasonably mild temperatures across State with below normal precipitation. Temperature 31°, 2° above normal. Extremes 10°; 49°. Precipitation 0.39 in., 0.30 in. below normal.

Activities: Repairing fence; hauling manure; maintaining machinery; caring for livestock.

PUERTO RICO: No data available.

SOUTH CAROLINA: Temperatures 3 to 5° above normal. Rainfall 1.50 in. mountains to less than 1.00 in. along coast.

Farm activities: small grain seedings virtually complete; pastures average; livestock condition good.

SOUTH DAKOTA: Generally dry with above normal temperatures. temperatures 5 to 15° above normal statewide. Extremes -6°; 55°. Precipitation confined to trace amounts. East covered in fog late in week. Snow cover spotty in Black Hills, trace in east, none elsewhere.

TENNESSEE: Low pressure system brought rain 23rd, followed by colder, drier conditions under influence of high pressure 24th through 27th. Another low pressure system brought rain statewide over weekend. Temperatures 3 to 5° above normal statewide. Extremes 19°; 66°. Precipitation 0.25 to 0.50 in. below normal west, middle; 1.00 in. above normal east. Representative amounts: Chattanooga 2.44 in., Crossville 2.24 in., Memphis 0.15 in.

Soil moisture short to adequate West; mostly adequate Middle, East. Winter wheat mostly fair to good. Livestock good, feed supplies adequate. Major activities: Tending livestock; cutting firewood; general repairs, maintenance.

TEXAS: Week began dry as flood producing storm moved away. Another storm crossed State late in week. Moisture supply not as strong as previous system, however; more aggravating heavy rains fell mainly along Central, Upper Coast, helping swell river basins. Storm exited over weekend, leaving much-needed drier weather. Coastal areas, south central Texas had heaviest rainfall for week. Rains averaged more than one half inch in south central, South Texas. Upper Coast averaged over one inch. Amounts one quarter inch across rest of State. Temperatures degrees below seasonal averages all districts, reflecting the period of cloudy skies, and some rainfall during week.

Crops: Cotton harvest in Plains further delayed by rain. Excess moisture meant lower grades in unharvested fields. Dry weather next week should increase harvest activities, allow producers get modules out fields. Quality remained low. Small grain fields improving from recent moisture, sunshine early in week improved growing conditions. Greenbug problems spread over fields Central Texas. Coastal Bend, rain benefited some fields where limited moisture conditions slowed growth. Some fields in Blacklands lost to floods. Statewide wheat condition rated at 81%, 74% last year. Soybean harvest virtually

complete with only scattered fields remaining. Wet conditions dealt peanut harvest another setback. Yields, grades on some fields in High Plains fair.

Commercial Vegetables: East Texas, some cole crops were progressing well. San Antonio Winter Garden, excessive moisture limited most field activity. Pecan harvest delayed another week by heavy rains. Much unharvested crop in Central Texas lost to floods. Quality lower than normal.

Range and Livestock: Range, pasture condition improved as winter weeds received adequate moisture. Forage remained abundant, quality remained low due to excessive moisture. Some health problems on stocker cattle reported. Many ranchers were building, repairing fences, recovering lost livestock.

UTAH: Maximum temperatures 9° below normal; minimums 1° below normal. Very light precipitation was reported in the central part of the State, none elsewhere.

Farm activities were minimal due to the Christmas Holiday. Moderate temperatures have kept fruit prospects good. Care, feeding of livestock, farm maintenance continue as normal.

VIRGINIA: Temperatures above normal. Extremes 14°; 64°. Precipitation around normal. Over one inch of rain was common at many locations.

Days suitable for fieldwork 4.8. Topsoil 7% very short, 29% short, 64% adequate. Winter grains, grazing condition 9% very poor, 32% poor, 32% fair, 27% good. Forage from pastures, winter grazing crops dairy cattle 22%, beef cattle 34%, sheep 38%. Repairing fences, equipment, marketing tobacco. Livestock mostly good condition.

WASHINGTON: Temperatures 2 to 9° above normal, west; 2° below normal to 5° above normal, east. Precipitation 0.11 to 0.68 in. west; 0.01 to 0.52 in. east.

Days suitable for fieldwork 1.7. Soil moisture 32% short, 67% adequate, 1% surplus. Hay, other roughage 19% short, 65% adequate, 16% surplus. Range, pasture 10% very poor, 15% poor, 42% fair, 33% good. Winter wheat 12% fair, 88% good. No major changes in the grain producing areas. Excellent (mild) weather dominated the area. Soil still lacking deep moisture in the south central part of the State. Pruning was slowed by snow, frost in central areas. Cool temperatures were improving hardiness in the fruit growing areas. Root weevils observed in strawberry fields in Skagit County. Livestock producers continued winter feeding programs.

WEST VIRGINIA: Temperature 36°. Extremes 10°; 59°. Precipitation 1.22 in.

Days suitable for fieldwork 2.3. Soil moisture, 75% adequate, 25% surplus. Wheat, 26% fair, 74% good. Barley, 51% fair, 49% good. Hay feed supplies, 84% adequate, 16% surplus. Other feed supplies, 19% short, 78% adequate, 3% surplus. Cattle, good. Sheep, good. Farm activities: General maintenance, fencing, marketing livestock, stripping tobacco, harvesting soybeans.

WISCONSIN: Temperature 28°. Extremes 1°; 49°. Little to no precipitation.

Late December frost depth 4.90 in., 7.60 in. last year. Snow depth 3.60 in.; 6.30 in. avg. Data as of December 27.

WYOMING: Temperatures 5 to 10° below normal in the Snake, Wind River, Upper Platte River drainage. Across the rest of the State temperatures normal to 5° above. No precipitation was reported across the entire State.

1992 Winter wheat fair to good condition. Additional moisture, snowcover needed. Cattle, sheep in mostly good condition. Supplemental feeding reported. Ranchers marketing calves, culls.

International Weather and Crop Summary

HIGHLIGHTS

December 22 - 28, 1991

WESTERN USSR ... Periodic light snow blankets winter grain areas.

EUROPE ... Heavy precipitation falls in central Europe, with favorable moisture for dormant winter grains across the north.

NORTHWESTERN AFRICA ... Little, if any precipitation covers vegetative winter grains in Morocco and Algeria. Beneficial rain covers Tunisian crop areas.

EASTERN ASIA ... Unseasonable moisture aids winter wheat across the North China Plain. Late week cold spell causes possible damage to southern winter crops.

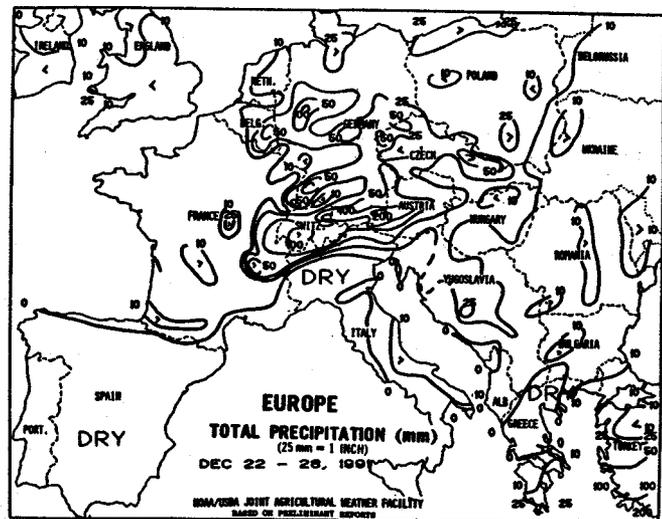
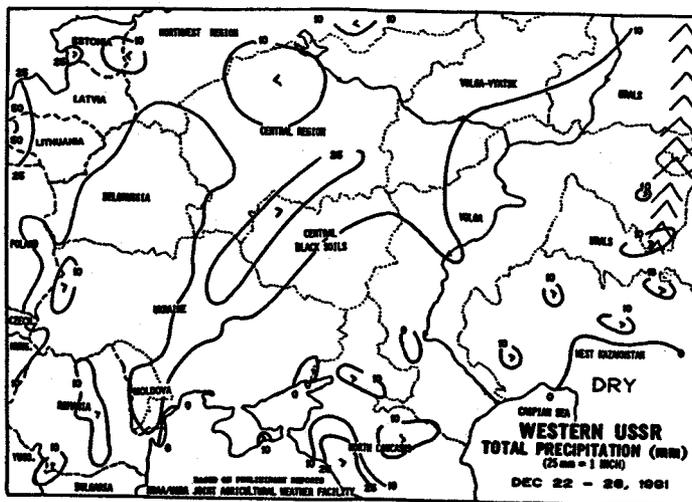
SOUTHEAST ASIA ... Seasonable showers continue over Malaysia and Java but unseasonable rain covers Thailand's primary grain areas.

SOUTH ASIA ... Widespread showers benefit winter grains and oilseeds across northern Pakistan and India.

SOUTH AFRICA ... Scattered showers benefit vegetative corn.

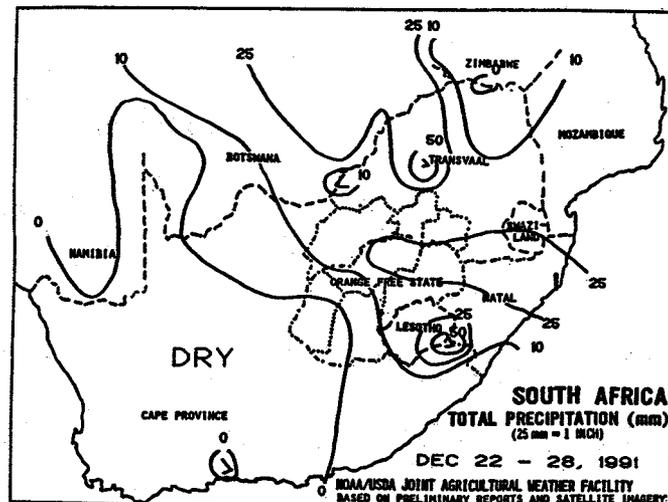
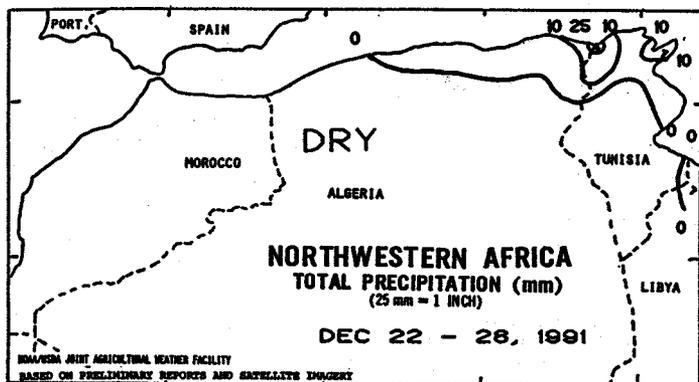
SOUTH AMERICA ... Rains aid corn and soybeans throughout the region, but delay winter wheat harvesting in Argentina.

AUSTRALIA ... Eastern summer crop planting is slightly delayed, while winter wheat harvesting progresses in the southeast.



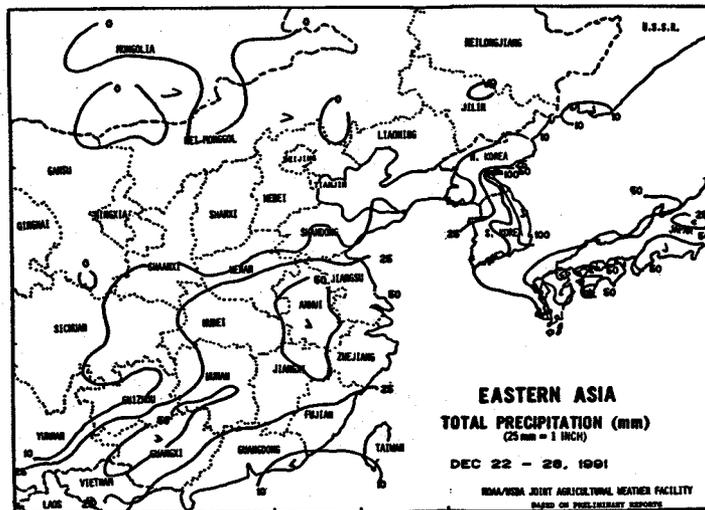
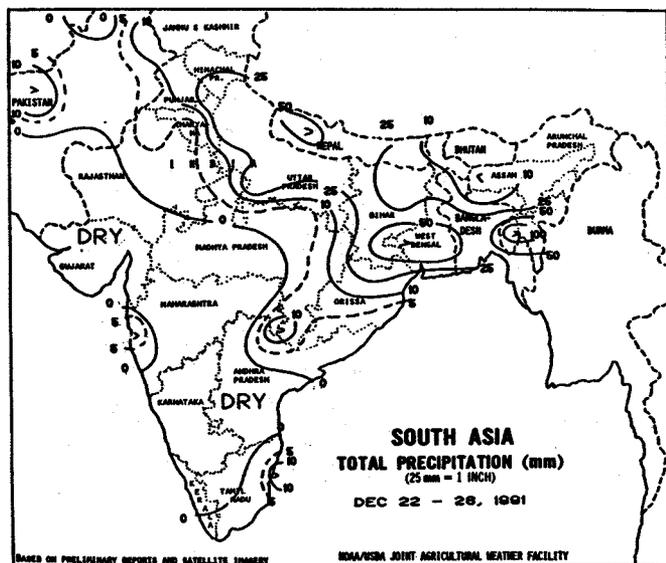
WESTERN USSR ... Winter grains remained dormant. A cooling trend over most winter grain areas was accompanied by periods of snow in the north and drizzle which turned to light snow in the south. Greatest amounts of precipitation, mainly heavy snow (25-33mm liquid equivalent), fell in a narrow band that stretched northeastward from northern Ukraine, through western Black Soils Region, into the southern portion of Central Region. Precipitation over other areas was generally less than 10mm. Snow cover increased during the week, providing protection from bitter cold in Central Region, Black Soils Region, Volga Valley and eastern Ukraine, where extreme lows by week's end ranged from -15 to -22 degrees Celsius (C).

EUROPE ... Heavy precipitation was concentrated in the Alpine region, with total accumulations of 50-200mm or more throughout Switzerland and Austria. Substantial precipitation (20-50mm, with scattered amounts up to 100mm) also fell over most of Germany and Czechoslovakia, eastern Belgium, and extreme southern Poland. Beneficial moisture (10-20mm) for dormant winter grains fell over the remainder of northern Europe. Light showers (mostly less than 5mm) fell in England, France, Italy, and southeastern Europe, while dry weather dominated most of the Mediterranean region. Locally heavy showers (29-64mm) fell in extreme southern Greece. Weekly temperatures averaged near or below 5 degrees C over most of the continent, except along the Mediterranean Sea.



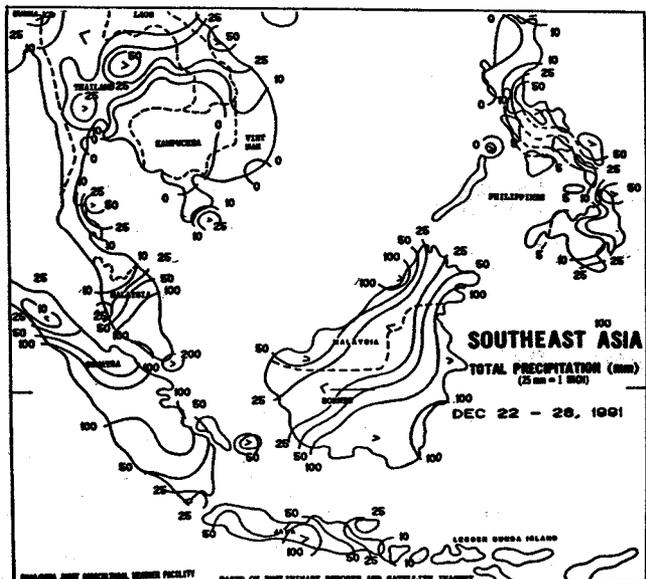
NORTHWESTERN AFRICA ... Dry weather returned to Moroccan winter grains and significant rain is needed to prevent the development of stress on crops in the early vegetative stage. Further east, little, if any, precipitation covered winter grains in Algeria while light rain (around 10mm) benefited crops in Tunisia.

SOUTH AFRICA ... Rainfall tapered off across the region but light to moderate showers (5-44mm) throughout the week benefited vegetative corn in the southern Transvaal and northern Orange Free State. Warm, dry weather returned to corn regions of southern Orange Free State and northern Cape Province. Drier weather also covered crop regions of eastern Cape Province and Natal, with only local stations reporting more than 25mm.

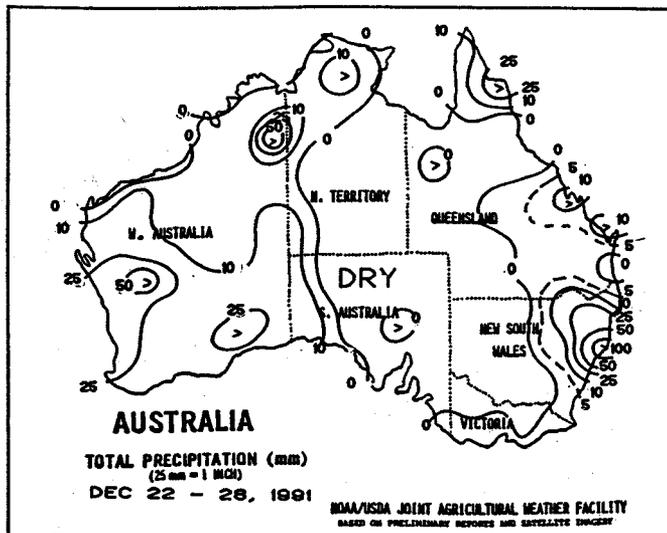


SOUTH ASIA ... Light to moderate rain (5-25mm or more) swept across winter wheat and oilseed regions of northern Pakistan and northern and eastern India, improving moisture reserves for vegetative crops. Heaviest rain (50-82mm) covered winter rice and oilseed regions of southern Bihar and West Bengal. Temperatures across the north averaged near to below normal but isolated minimum temperatures below 3 degrees C had minimal impact on vegetative growth in the northwest. Elsewhere, light rain (3-11mm) fell along rice areas of India's southern coast.

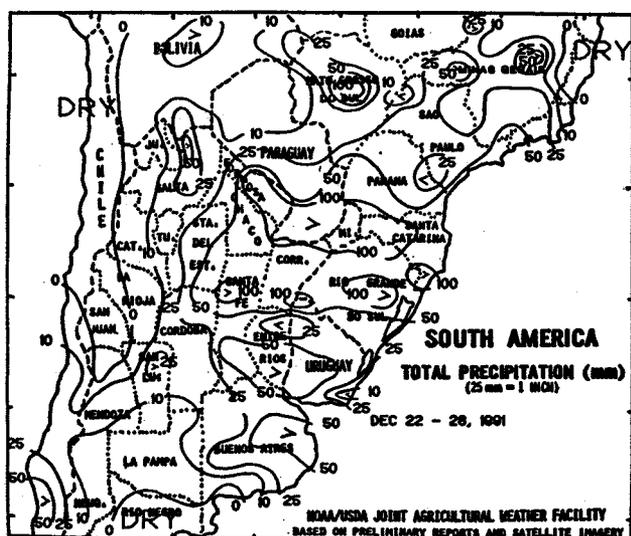
EASTERN ASIA ... A slow moving frontal system brought much needed moisture for winter wheat, in the form of rain and snow, to the southern North China Plain. Precipitation totals for the week ranged from 7-39mm across Shandong and Henan, while the largest amounts, 40-62mm, fell in Anhui and Jiangsu. Late in the week, minimum temperatures ranged from -7 to -12 degrees C across Shandong and northern Anhui. Below freezing temperatures were reported as far south as northern Guangdong, possibly damaging minor winter crops. Northern winter wheat should not be affected due to light snow cover. Weekly temperatures averaged 2-4 degrees C below normal across the North China Plain.



SOUTHEAST ASIA ... Widespread moderate to heavy showers (25-100mm or more) soaked primary crop regions of Malaysia and Indonesia, but notable dry pockets continued in rice areas of eastern Java and northwestern Malaysia. Further north, rainfall tapered off over peninsular Thailand but unseasonable showers (5-71mm) covered most primary rice areas from western Thailand to northern Vietnam. The rainfall will help replenish reservoirs for dry season crops but main season rice harvests typically last through January, and local delays, possibly with some lodging, are likely. In the Philippines, seasonable showers (25-30mm or more) benefited fall grains from southern Luzon through the eastern Visayans to central Mindanao.



AUSTRALIA ... Sporadic light to moderate rain (7-24mm) fell across the eastern summer crop areas, slightly delaying planting. Only light rain (6-15mm) fell over the northeastern Queensland sugarcane areas. Western Australia received moderate showers (25-55mm), delaying late winter wheat harvesting. Drier weather in Victoria aided late winter wheat harvesting. Weekly temperatures averaged 2-4 degrees C below normal in the west and 1-3 degrees C above normal across the eastern summer crop regions.



SOUTH AMERICA ... Heavy rain (117-143mm) fell across southern Brazil and southern Paraguay on the 26th, causing local flooding and late soybean planting delays. Further north, moderate showers spread across the Brazilian crop areas, favoring developing soybeans and reproductive corn. In Argentina, moderate rain (27-82mm) covered most crop areas, aiding already planted soybeans, corn, and cotton but delaying the rest of the soybean planting and winter wheat harvesting, especially in northern Buenos Aires. Weekly temperatures averaged 1-3 degrees C below normal across Argentina and 1-2 degrees C above normal in southern Brazil.

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The Weekly Weather and Crop Bulletin (ISSN 0043-1974) is published weekly and jointly prepared by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Agriculture (USDA). Publication began in 1872 as the Weekly Weather Chronicle. It is issued under general authority of the Act of January 12, 1895 (44-USC 213), 53d Congress, 3d Session. NOAA is responsible for managing, printing, and distributing the bulletin. The contents may be reprinted freely, with proper credit.

Annual subscriptions: domestic second class \$35, first class \$50, foreign \$50 (in U.S. funds by international money order or check drawn on U.S. bank) payable to U.S. Department of Commerce, NOAA. POSTMASTER: Send address changes to Weekly Weather and Crop Bulletin, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 5844, Washington, DC 20250. Order subscriptions from the office and address listed above. Second class postage paid at Washington, DC, and additional mailing offices.

U.S. DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration
National Weather Service/Climate Analysis Center
Managing Editor **Douglas Le Comte**
Meteorologists **Brad Rippey** (202) 720-1444
Vilhelm Bjerknes, David Secora, and Wes Byrd.
Subscriptions **Joyce Houston** (202) 720-7917

U.S. DEPARTMENT OF AGRICULTURE

Economics Management Staff
Editor **Sharon Lee**
National Agricultural Statistics Service
Agricultural Statistician **Martin Owens** (202) 720-2157
World Agricultural Outlook Board
Agricultural Weather Analysts **Ray Motha** (202) 720-9805
Tom Puterbaugh, Mark Brusberg, and Bob Stefanski.

NOAA/USDA Joint Agricultural
Weather Facility
Room 5844 USDA South Building
Washington, D.C. 20250

SECOND CLASS MAIL
POSTAGE AND FEES PAID
NOAA PERMIT NO.
ISSN 0043 1974

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

**WEEKLY NEWS BULLETIN
SECOND CLASS**