WEEKLY WEATHER AND CROP BULLETIN

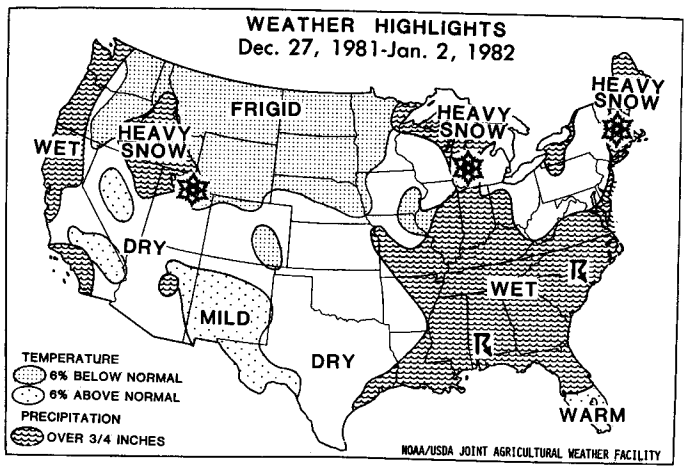
U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration, National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
Statistical Reporting Service and World Agricultural Outlook Board

Volume 69, No. 1 WASHINGTON, D.C. Jan. 5, 1982

National Weather Summary

Dec. 27, 1981-Jan. 2, 1982



HIGHLIGHTS: Frigid arctic air stagnated over the northern Plains and Rockies. Average temperatures were as much as 30° colder than normal over the northern Rockies. The extreme low in the northern Plains was -33° at Williston, North Dakota. In contrast, the southern tier of States was unusually warm, averaging 12° above normal in central Florida. Moderate to heavy snow in much of the mountain areas of the West built up snowpack in the watersheds. Moderate to heavy rain in the Southeast will help restore low water tables.

SUNDAY...A cold front moving through the eastern States produced showers from central Florida and Georgia through New England. Snow fell in the Appalachians and upper Ohio Valley. Another weather system in the western Great Lakes region caused snow through the Lakes and the northern Plains. Rain or snowshowers fell throughout the West, north of a frontal surface extending from Oklahoma through southern California.

MONDAY...Rainshowers continued in the Southeast from southern Louisiana through the Carolinas. Another cold front moving eastward through the Great Lakes to the central Plains brought snow to the lower Lakes and southward to the Ohio River and central Appalachians. Snow, and later rainshowers, covered the Northeast. Rainshowers were along the northwestern coast from northern California through Washington, but inland areas, across the northern Plateau through the Rockies, had mostly snow. Light snow fell across the northern Plains where temperatures were very cold--well below zero.

TUESDAY...Cold arctic air gripped the northern Plains. Early morning temperatures were as low as -22° in much of the area. Light snow fell through the Great Lakes region and across the northern Plains. Snow turned to rain in the Northeast from New York through New England. Rainshowers covered the gulf coast and northward through the Carolina coasts. Out West, rainshowers covered the coast to southern California, and snow continued through the northern Plateau to the Rockies.

WEDNESDAY...A large low-pressure system moved into the central Plains and spread snow from the Rockies to the Great Lakes. Frigid air continued to grip the northern tier of States but showed no sign of moving very far southward. Light showers dotted the west coast, but moderate amounts fell in the Los Angeles area. The main weather maker was a storm in the Gulf of Mexico. Showers or thundershowers spread over all of the coast and northward to Tennessee and South Carolina. Some moderate to heavy amounts were scattered through the area.

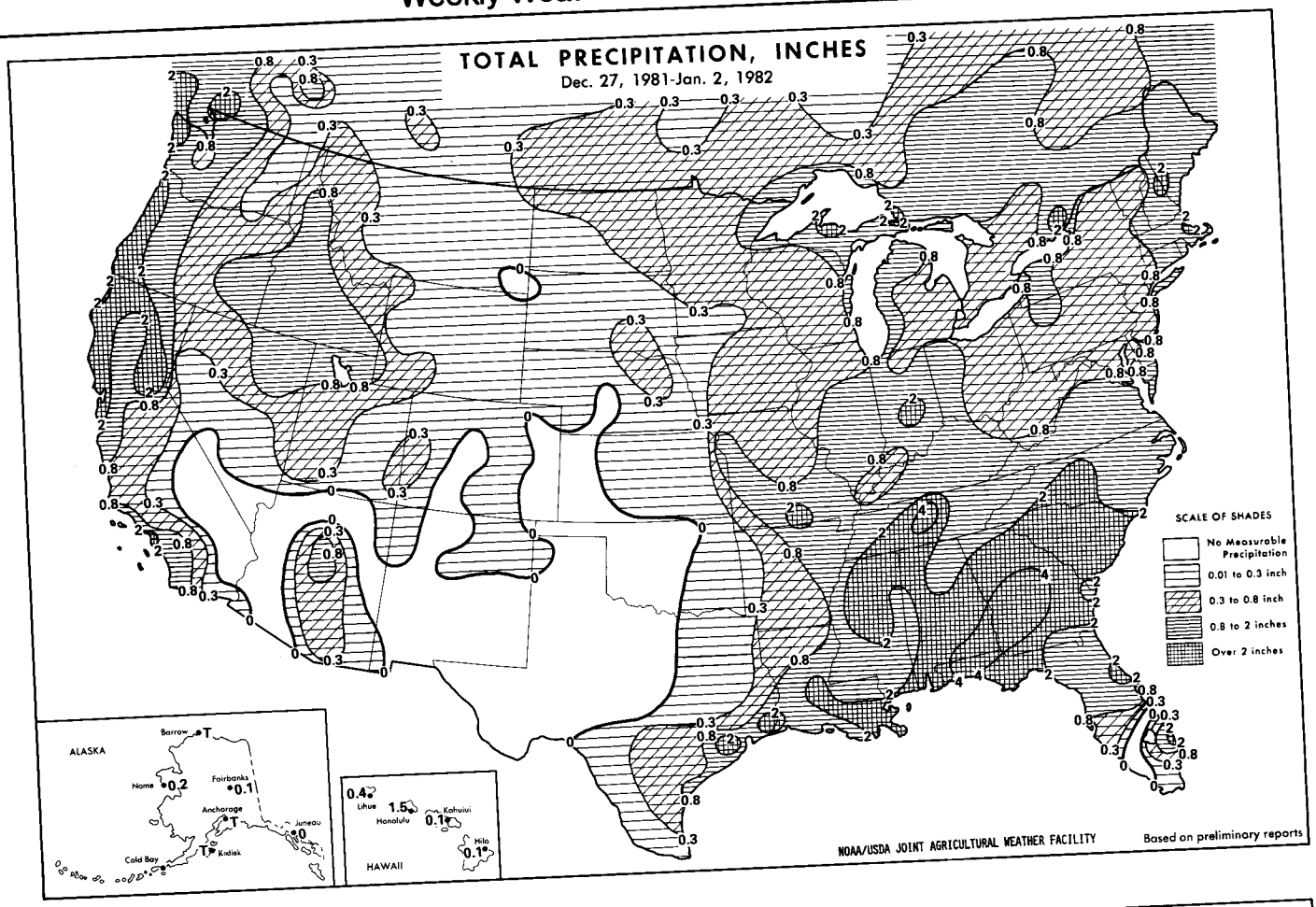
THURSDAY...Storms moving into the Great Lakes area and through the Gulf of Mexico produced a variety of precipitation types over the entire area east of the Mississippi River. Showers and thunderstorms covered the southern area, and freezing rain changed to rain from South Carolina to New Jersey. Snow covered the Lakes region and the Appalachians, and snow changed to rain through the Ohio Valley. Rainshowers were over the west coast, and snow covered the entire Plateau and Rockies.

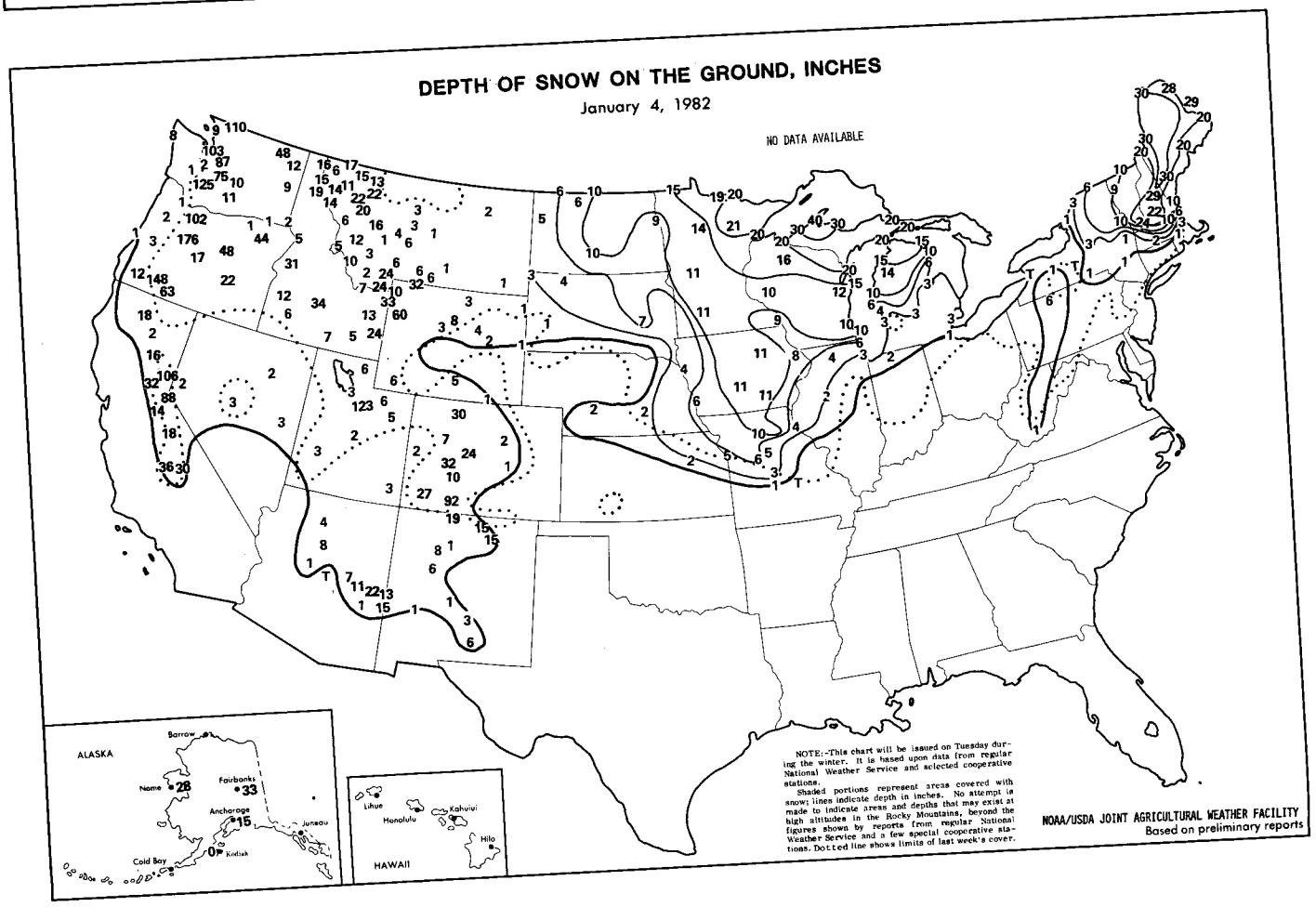
FRIDAY...Rainshowers covered all of the west coast and parts of the Southwest. A severe winter storm brought cold weather and snow to the northern Plateau and the Rockies into New Mexico. The snow spread into the central and northern Plains. Another storm covered the Northeast with snow, but warming temperatures changed it to rain by midday. A few light showers remained along the gulf coast and spread northward into central Texas.

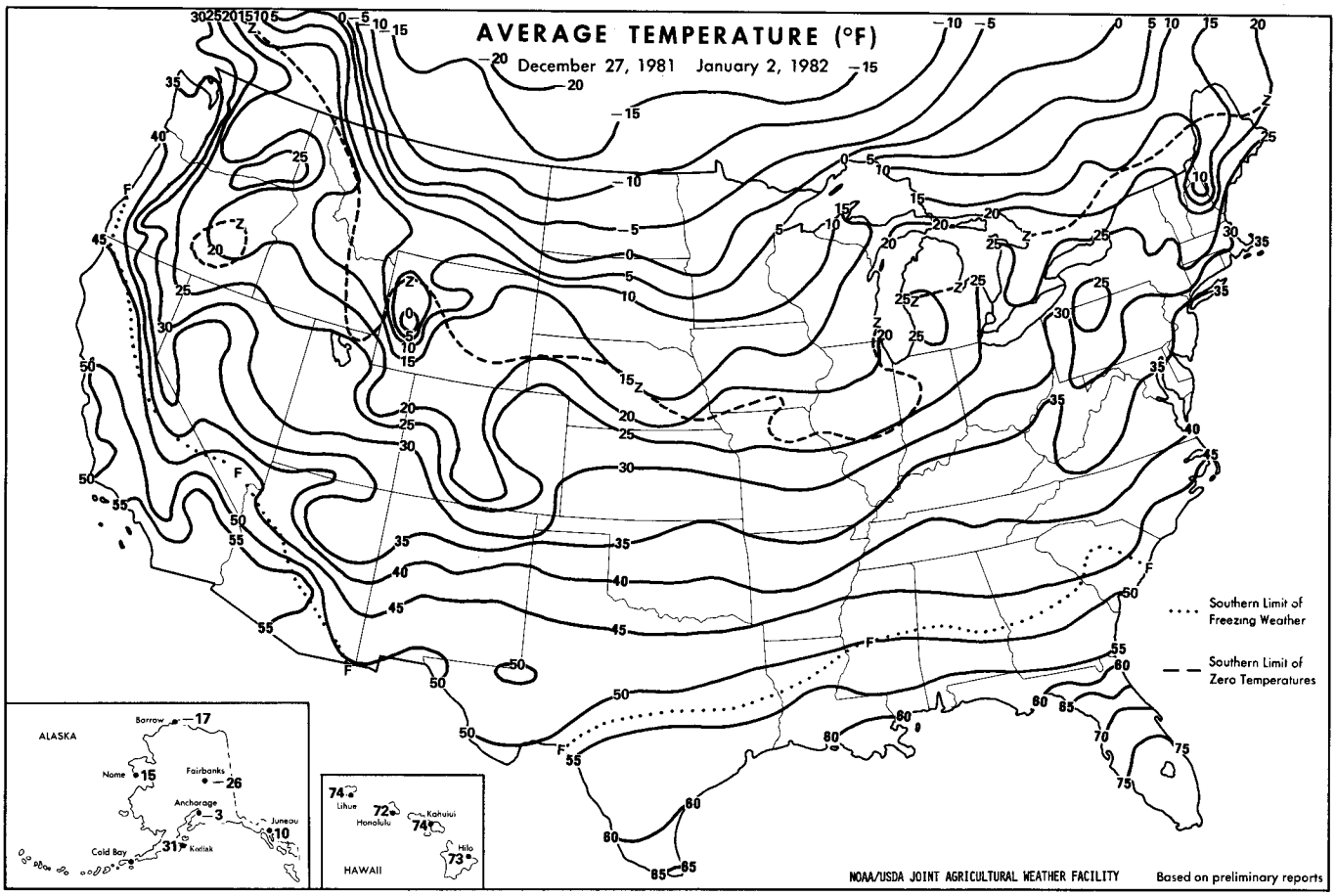
(Continued on page 12.)

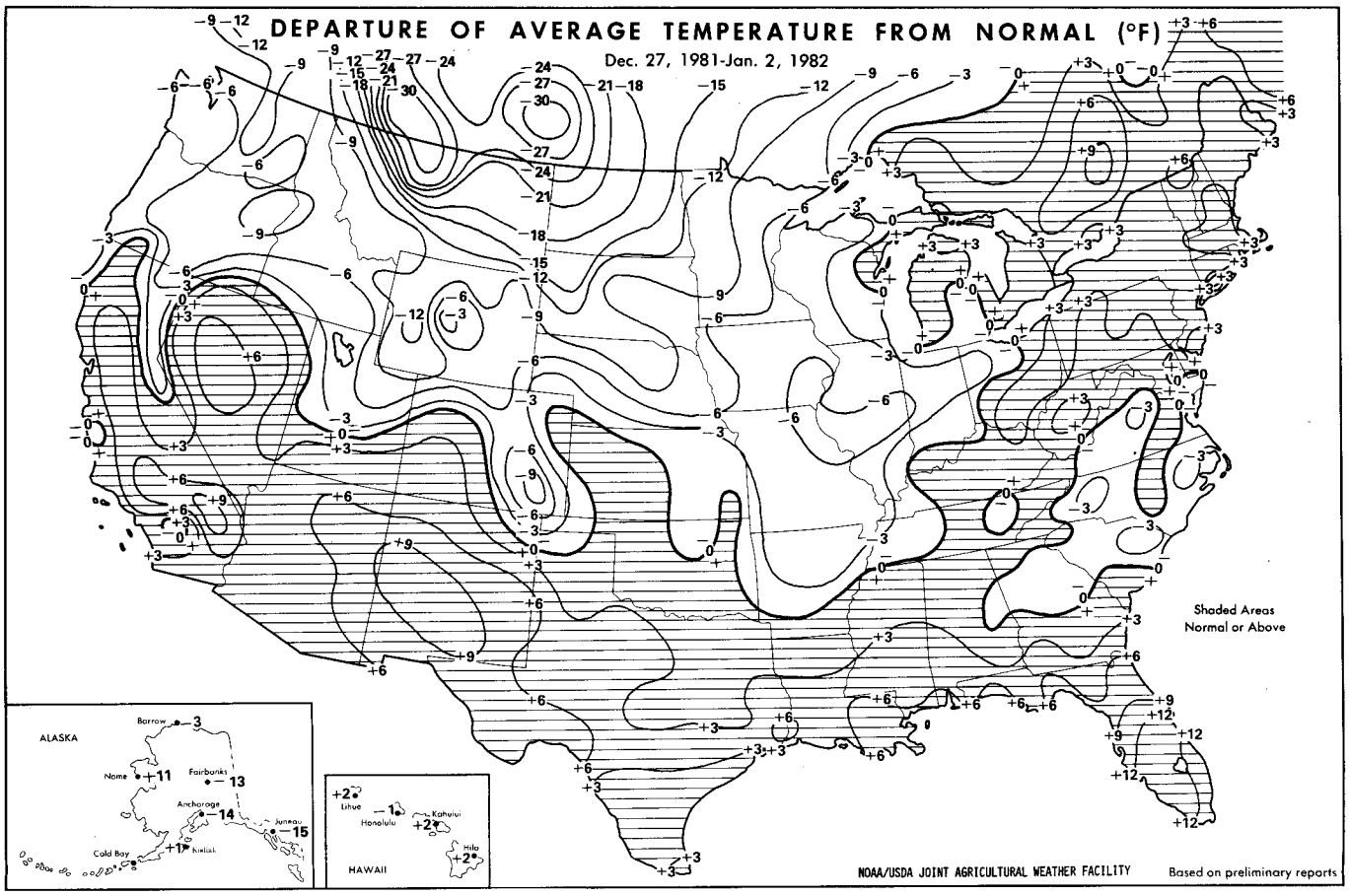
Contents

	Page
National Weather Summary & Highlights	1
Precipitation & Snow	2
Average Temperature & Departure	3
Weather Data for Selected Cities	4
Heating Degree Days	7
National Agricultural Summary & 1981 Index--Additions and Corrections	8
State Summaries of Weather & Agriculture	9
Eurasia 30-day Weather Outlook & International Weather & Crop Summary	13
Subscription Information & 90-day Outlook	16


TOTAL PRECIPITATION, INCHES
Dec. 27, 1981-Jan. 2, 1982
SCALE OF SHADES
No Measurable Precipitation
0.01 to 0.3 inch
0.3 to 0.8 inch
0.8 to 2 inches
Over 2 inches
ALASKA
Barrow
Nome
Fairbanks
Anchorage
Juneau
Cold Bay
Kodiak
HAWAII
Lihue
Honolulu
Kahului
Hilo
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


DEPTH OF SNOW ON THE GROUND, INCHES
January 4, 1982
NO DATA AVAILABLE
ALASKA
Barrow
Nome
Fairbanks
Anchorage
Juneau
Cold Bay
Kodiak
HAWAII
Lihue
Honolulu
Kahului
Hilo
NOTE:-This chart will be issued on Tuesday during the winter. It is based upon data from regular National Weather Service and selected cooperative stations.
Shaded portions represent areas covered with snow; lines indicate depth in inches. No attempt is made to indicate areas and depths that may exist at high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular National Weather Service and a few special cooperative stations. Dotted line shows limits of last week's cover.
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


AVERAGE TEMPERATURE (°F)
December 27, 1981 January 2, 1982
Southern Limit of Freezing Weather
Southern Limit of Zero Temperatures
ALASKA
Barrow -17
Nome 15
Fairbanks -26
Anchorage -3
Juneau 10
Cold Bay 31
Kodiak
HAWAII
Lihue 74
Honolulu 72
Kahului 74
Hilo 73
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)
Dec. 27, 1981-Jan. 2, 1982
Shaded Areas Normal or Above
ALASKA
Barrow -3
Nome +11
Fairbanks -13
Anchorage -14
Juneau -15
Cold Bay +1
Kodiak
HAWAII
Lihue +2
Honolulu -1
Kahului +2
Hilo +2
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

Weather Data for the Week Ending January 2, 1982

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	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 Nov. 29	PCT. NORMAL SINCE Nov. 29	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	55	36	61	28	46	2	1.9	.8	1.7	7.0	121	42.2	78	93	55	0	2	4	1
MOBILE	65	49	74	41	57	5	3.4	2.1	1.3	7.4	112	57.4	86	91	61	0	0	6	3
MONTGOMERY	55	40	63	33	47	0	3.2	2.2	1.4	8.6	156	48.3	96	97	69	0	0	5	3
AK ANCHORAGE	5	-10	15	-16	-3	-14	T	- .2	T	.3	25	20.6	139	95	65	0	7	1	0
BARROW	-11	-22	-6	-28	-17	-3	T	0	T	.1	50	--	--	78	64	0	7	0	0
FAIRBANKS	-19	-32	-7	-40	-26	-13	.1	- .1	T	.6	86	10.2	94	72	59	0	7	3	0
JUNEAU	14	6	26	1	10	-15	0	- .9	0	2.7	52	52.9	97	53	28	0	7	0	0
KODIAK	36	26	42	22	31	1	T	- 1.1	T	7.0	125	69.0	120	78	46	0	7	1	0
NOME	20	10	26	-8	15	11	.2	.1	.1	1.2	150	16.6	106	94	76	0	7	6	0
AZ FLAGSTAFF	42	27	50	16	34	6	1.5	1.1	.9	1.5	65	23.5	118	94	61	0	4	4	1
PHOENIX	66	46	70	40	56	5	.3	.1	.2	.8	80	6.9	100	68	32	0	0	2	0
TUCSON	65	40	70	36	53	3	.5	.3	.4	1.1	110	13.9	128	62	27	0	0	2	0
WINSLOW	54	28	62	19	41	9	.3	.1	.2	1.0	167	9.9	119	--	--	0	6	2	0
YUMA	70	47	75	43	59	4	T	- .1	T	.1	20	1.6	47	69	33	0	0	1	0
AR FORT SMITH	48	27	52	18	37	-2	.2	- .4	.2	2.3	70	40.7	95	88	42	0	5	1	0
LITTLE ROCK	46	29	52	24	38	-3	.6	- .3	.6	1.8	40	42.8	88	93	66	0	6	2	1
CA BAKERSFIELD	59	44	64	38	52	6	.1	- .1	.1	.2	25	5.8	100	82	52	0	0	2	0
EUREKA	52	43	57	38	47	0	1.7	.1	.5	10.4	139	43.1	107	91	69	0	0	6	1
FRESNO	53	40	61	33	46	2	.7	.3	.3	1.1	55	10.1	95	95	65	0	0	5	0
LOS ANGELES	61	51	63	46	56	1	2.5	2.1	1.5	2.5	125	11.1	93	87	58	0	0	3	2
RED BLUFF	52	41	59	34	47	2	.9	- .1	.5	3.9	89	30.4	134	89	54	0	0	5	1
SAN DIEGO	63	54	66	50	59	3	1.5	1.1	.6	2.2	110	10.9	111	88	60	0	0	4	1
SAN FRANCISCO	53	46	57	38	50	2	2.7	1.8	2.0	4.5	100	23.8	118	88	64	0	0	5	1
STOCKTON	55	42	60	37	49	5	.7	0	.7	1.6	53	16.0	111	96	56	0	0	1	1
CO DENVER	37	16	54	8	27	-4	.1	0	.1	.9	180	13.0	84	76	41	0	7	1	0
GRAND JUNCTION	38	21	47	11	30	3	.4	.3	.2	.9	180	8.5	110	95	61	0	7	4	0
PUEBLO	36	12	49	-1	24	-7	T	0	T	.6	150	7.7	62	92	59	0	7	1	0
CT BRIDGEPORT	48	27	95	20	38	7	.6	- .1	.4	4.1	108	32.3	84	85	50	1	6	5	0
HARTFORD	36	24	41	13	30	5	1.2	.4	.7	4.6	100	35.1	82	74	49	0	7	4	1
DC WASHINGTON	45	29	50	21	37	2	.5	- .1	.4	2.9	85	31.8	82	78	45	0	5	3	0
FL APALACHICOLA	64	54	74	49	59	5	2.0	1.3	1.0	5.6	151	40.3	69	98	79	0	0	5	2
DAYTONA BEACH	73	60	81	57	67	8	3.0	2.6	1.6	4.2	200	41.0	81	97	78	0	0	3	3
FORT MYERS	86	68	88	66	77	13	0	- .4	0	.8	50	52.3	96	99	60	0	0	0	0
JACKSONVILLE	69	51	77	48	60	6	1.9	1.2	.9	3.4	121	36.0	65	100	80	0	0	3	2
KEY WEST	81	73	83	70	77	6	T	- .3	T	0	0	26.9	67	100	82	0	0	1	0
MIAMI	83	70	87	67	77	9	T	- .4	T	.1	6	51.1	84	97	63	0	0	1	0
ORLANDO	80	64	83	60	72	12	1.4	.9	1.4	2.9	138	47.7	92	99	66	0	0	1	1
TALLAHASSEE	66	51	70	46	58	6	2.1	1.2	1.0	5.2	111	51.1	83	100	79	0	0	5	2
TAMPA	78	63	83	58	71	10	.6	.1	.6	3.7	148	39.1	79	100	73	0	0	2	1
WEST PALM BEACH	81	68	84	65	75	9	2.0	1.4	1.8	2.7	100	50.3	81	100	69	0	0	3	1
GA ATLANTA	48	34	53	30	41	-1	3.1	2.1	2.1	7.8	163	42.5	87	96	64	0	3	5	2
AUGUSTA	53	36	63	32	45	0	3.0	2.2	2.4	9.1	233	44.4	103	96	60	0	2	5	1
MACON	54	40	62	34	47	0	4.6	3.6	2.5	9.1	190	48.8	108	93	63	0	0	6	2
SAVANNAH	57	45	65	41	51	2	1.4	.7	1.2	3.2	89	40.0	79	92	68	0	0	5	1
HI HILO	81	65	84	63	73	2	.1	- 2.7	.1	21.1	120	--	--	91	65	0	0	2	0
HONOLULU	79	64	81	62	72	-1	1.5	.6	1.5	5.1	121	12.3	53	97	71	0	0	1	1
KAHULUI	83	66	85	61	74	2	.1	- .7	.1	2.8	82	--	--	87	60	0	0	1	0
LIHUE	82	65	85	61	74	2	.4	- 1.1	.1	9.0	123	--	--	98	67	0	0	5	0
ID BOISE	31	15	33	5	23	-7	.8	.5	.6	2.9	171	15.2	124	88	60	0	7	7	1
LEWISTON	31	21	33	19	26	-6	.2	- .1	.2	1.3	93	14.1	104	96	76	0	7	2	0
POCATELLO	28	10	34	-4	19	-5	1.0	.8	.4	2.4	218	14.4	135	94	70	0	7	7	0
IL CAIRO	45	30	53	24	37	0	.9	0	.8	--	--	41.6	87	--	--	0	5	2	1
CHICAGO	29	11	37	-2	20	-4	.5	.2	.3	1.7	85	39.1	122	92	60	0	7	3	0
MOLINE	29	8	36	-12	18	-4	.7	.3	.4	1.6	76	36.6	102	85	61	0	7	4	0
PEORIA	31	11	38	-4	21	-3	.8	.4	.5	2.1	100	39.3	111	89	64	0	7	4	0
ROCKFORD	27	8	34	-6	17	-4	.6	.2	.3	1.3	65	35.0	96	94	70	0	7	3	0
SPRINGFIELD	31	12	37	-6	22	-6	1.5	1.1	.8	3.5	167	48.2	136	98	69	0	7	4	2
IN EVANSVILLE	43	27	50	19	35	2	.6	- .1	.5	3.4	92	43.3	102	94	63	0	6	4	0
FORT WAYNE	31	16	36	5	23	-3	1.3	.8	.6	3.4	136	37.8	106	96	75	0	7	4	1
INDIANAPOLIS	34	19	39	7	27	-1	2.1	1.5	1.7	5.4	174	37.7	97	93	69	0	7	4	1
SOUTH BEND	32	16	38	-4	24	-1	.5	- .1	.2	2.2	76	38.3	104	90	65	0	7	4	0
IA BURLINGTON	30	13	38	0	21	-3	.5	.1	.2	1.3	72	--	--	95	67	0	7	4	0
DES MOINES	30	7	39	-3	18	-3	.4	.2	.2	1.7	155	31.5	101	85	58	0	7	4	0
DUBUQUE	24	7	32	-4	16	-3	--	--	--	--	--	--	--	97	75	0	7	-	-
SIOUX CITY	24	2	36	-9	13	-7	.1	- .1	.1	1.6	200	20.5	80	94	70	0	7	2	0
KS CONCORDIA	36	16	47	13	26	-1	T	- .1	T	1.8	200	33.9	123	84	52	0	7	1	0
DODGE CITY	38	23	48	14	31	0	0	- .1	0	.6	120	24.9	119	79	50	0	7	0	0
GOODLAND	41	16	59	10	28	0	T	- .1	T	.9	180	22.3	132	84	33	0	7	0	0
TOPEKA	38	16	46	11	27	-2	.1	- .2	.1	1.1	65	40.3	115	92	56	0	7	3	0
WICHITA	39	21	47	16	30	-2	.1	- .2	.1	1.3	100	27.9	90	88	54	0	7	1	0
KY LEXINGTON	43	26	48	18	34	1	.9	.1	.4	3.8	95	36.2	82	96	55	0	7	4	0
LOUISVILLE	44	26	50	19	35	1	1.0	.2	.6	4.0	103	34.0	78	89	56	0	7	4	1
LA BATON ROUGE	66	50	74	41	58	7	1.1	0	.6	6.1	107	43.7	80	90	54	0	0	4	1

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

Weather Data for the Week Ending January 2, 1982

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	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 Nov. 29	PCT. NORMAL SINCE Nov. 29	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
LAKE CHARLES	65	49	79	38	57	4	1.1	0	.6	2.7	42	50.1	89	90	56	0	0	2	2
NEW ORLEANS	68	52	81	40	60	7	2.0	.9	1.2	5.7	97	54.9	96	96	67	0	0	4	1
SHREVEPORT	59	38	67	29	49	1	.3	-.7	.3	1.9	40	41.2	92	91	47	0	1	1	0
ME CARIBOU	25	8	32	-5	16	4	1.3	.8	.8	4.7	162	47.4	129	84	65	0	7	4	1
PORTLAND	34	18	39	4	26	4	1.4	.6	1.0	5.5	120	46.6	112	88	57	0	7	4	1
MD BALTIMORE	43	27	51	20	35	2	.9	.2	.5	3.7	97	31.4	78	85	53	0	6	3	0
MA BOSTON	38	27	42	20	33	2	2.0	1.1	1.4	8.0	167	36.1	85	85	49	0	6	4	1
CHATHAM	41	29	49	25	35	--	.8	--	.6	8.6	--	46.6	--	85	65	0	6	3	1
MI ALPENA	31	15	34	-7	23	3	.8	.4	.5	1.3	57	21.4	76	90	64	0	7	5	1
DETROIT	34	17	38	3	25	0	.6	.2	.3	2.3	96	33.5	104	91	64	0	7	3	0
FLINT	32	17	36	3	24	1	.3	0	.2	1.2	60	34.3	114	94	66	0	7	5	0
GRAND RAPIDS	33	19	37	9	26	1	.8	.3	.3	1.4	54	45.2	138	84	62	0	7	5	0
HOUGHTON LAKE	27	15	33	-5	21	1	.8	.5	.4	1.1	52	30.3	104	88	66	0	7	5	0
LANSING	32	15	36	0	23	--	.7	--	.4	1.1	--	31.7	--	96	71	0	7	4	0
MARQUETTE	22	1	29	-14	12	-3	1.2	.8	.6	4.9	196	34.7	96	97	68	0	7	6	1
MUSKEGON	32	21	35	10	27	1	1.0	.5	.8	2.5	89	33.2	104	86	64	0	7	3	1
SAULT STE. MARIE	26	10	30	-7	18	2	1.5	1.0	.7	3.0	107	28.7	88	87	62	0	7	7	1
MN DULUTH	16	-4	24	-16	6	-4	.8	.5	.4	1.3	87	28.1	93	84	55	0	7	4	0
INT'L FALLS	6	-14	18	-24	-4	-8	.4	.2	.2	1.1	92	22.3	86	82	60	0	7	3	0
MINNEAPOLIS	20	-2	28	-12	9	-5	.5	.3	.2	1.3	130	27.5	106	88	56	0	7	4	0
ROCHESTER	20	-1	30	-12	10	-5	.3	.2	.2	1.2	150	33.2	121	91	69	0	7	2	0
SAINT CLOUD	14	-9	23	-22	2	-9	.6	.5	.3	1.3	144	25.4	101	86	63	0	7	4	0
MS JACKSON	62	42	74	33	52	5	1.7	.6	1.5	6.2	109	47.0	94	92	62	0	0	2	1
MERIDIAN	62	40	73	33	51	4	1.7	.5	1.4	7.4	116	43.8	85	94	62	0	0	3	1
MO COLUMBIA	35	15	42	3	25	-5	.1	-.2	.1	2.1	111	48.6	128	94	60	0	7	3	0
KANSAS CITY	36	13	47	5	24	-3	1.2	.9	1.2	3.0	167	42.2	116	87	52	0	7	3	1
SAINT LOUIS	36	17	44	7	26	-6	1.1	.6	.8	3.9	163	45.7	127	98	68	0	7	3	1
SPRINGFIELD	44	22	51	14	33	-1	1.8	1.3	1.8	4.9	175	43.8	113	84	44	0	7	1	1
MT BILLINGS	19	0	31	-9	9	-14	.2	.1	.2	.5	83	16.1	113	88	57	0	7	2	0
GLASGOW	0	-16	16	-22	-8	-20	.1	0	T	.2	40	8.8	78	69	51	0	7	4	0
GREAT FALLS	4	-14	18	-21	-5	-28	.2	0	.1	.5	63	14.5	97	77	62	0	7	3	0
HAVRE	-5	-22	12	-28	-14	-27	T	-.1	T	0	0	9.5	81	85	55	0	7	2	0
HELENA	18	-1	28	-11	9	-11	.1	0	.1	.3	60	13.7	126	73	55	0	7	3	0
KALISPELL	18	-4	22	-15	7	-13	.5	.1	.3	2.2	116	18.9	109	97	78	0	7	5	0
MILES CITY	8	-7	22	-18	0	-17	.1	0	.1	.3	60	10.8	78	93	58	0	7	1	0
MISSOULA	22	10	26	4	16	-6	.3	0	.2	2.0	167	17.3	128	98	69	0	7	4	0
NE GRAND ISLAND	27	3	40	-4	15	-9	.1	.1	.1	2.6	520	23.6	102	90	58	0	7	3	0
LINCOLN	28	2	41	-7	15	-8	.2	0	.1	2.3	256	24.3	92	85	67	0	7	3	0
NORFOLK	24	3	37	-7	14	-7	.3	.2	.2	2.2	367	21.7	90	87	60	0	7	3	0
NORTH PLATTE	32	6	40	0	19	-5	.1	.1	.1	1.6	400	23.9	120	96	55	0	7	1	0
OMAHA	25	7	38	-3	16	-6	.1	0	.1	2.2	275	28.7	97	80	63	0	7	1	0
VALENTINE	21	1	29	-8	11	-10	.2	.2	.2	1.4	700	18.6	104	92	71	0	7	3	0
NV ELY	39	16	43	7	28	3	.3	.1	.1	.5	56	10.5	134	90	55	0	7	6	0
LAS VEGAS	57	37	62	31	47	4	0	-.1	0	0	0	3.1	70	69	31	0	2	0	0
RENO	43	27	49	19	35	4	.2	-.1	.1	1.2	92	6.7	91	88	41	0	6	4	0
WINNEMUCCA	39	26	45	21	33	4	.8	.5	.3	1.7	155	8.5	99	92	56	0	7	6	0
NH CONCORD	33	12	37	-4	22	1	1.3	.7	1.0	5.2	141	46.1	129	88	56	0	7	4	1
NJ ATLANTIC CITY	44	25	50	16	34	1	.8	0	.6	4.7	104	--	--	97	62	0	5	4	1
TRENTON	43	29	49	23	36	3	--	--	--	--	--	--	--	77	48	0	6	-	-
NM ALBUQUERQUE	52	29	60	20	40	6	T	-.1	T	.2	40	7.7	97	73	30	0	6	1	0
ROSWELL	62	32	71	21	47	8	0	-.1	0	.1	20	24.6	222	59	22	0	4	0	0
NY ALBANY	34	17	39	4	26	3	.5	-.1	.3	3.8	115	30.5	91	90	55	0	7	4	0
BINGHAMTON	33	21	39	15	27	5	.5	-.1	.2	2.9	91	30.8	83	86	56	0	7	4	0
BUFFALO	35	22	41	15	29	4	.9	.2	.3	3.1	89	36.6	101	91	54	0	7	5	0
NEW YORK	41	32	45	28	37	4	1.5	.8	1.1	5.7	143	35.5	85	76	44	0	3	3	1
ROCHESTER	34	22	40	16	28	3	.6	.1	.2	3.0	111	35.5	113	95	67	0	7	6	0
SYRACUSE	35	22	40	12	29	4	.6	-.1	.2	3.4	92	34.5	97	91	57	0	7	5	0
NC ASHEVILLE	43	29	49	20	36	-1	1.6	.8	1.6	5.3	133	34.6	75	100	63	0	6	2	1
CHARLOTTE	46	34	56	28	40	-1	2.3	1.5	2.1	6.7	172	38.0	88	94	57	0	3	4	1
GREENSBORO	47	27	59	19	37	-1	2.4	1.7	2.3	6.8	189	42.4	102	96	53	0	4	2	1
HATTERAS	51	40	60	38	46	-1	.9	-.1	.5	7.2	141	51.9	92	93	69	0	0	3	0
RALEIGH	48	32	59	25	40	0	1.1	.4	1.1	4.9	140	36.4	85	93	57	0	5	2	1
WILMINGTON	54	36	64	31	45	-1	1.2	.5	.7	5.8	149	44.3	82	95	63	0	2	3	2
ND BISMARCK	6	-17	15	-26	-6	-16	.1	.1	.1	.6	120	14.4	90	92	65	0	7	3	0
FARGO	7	-13	17	-18	-3	-11	.4	.3	.2	1.0	200	17.8	91	78	56	0	7	3	0
WILLISTON	1	-23	18	-33	-11	-21	.3	.2	.1	.6	120	11.4	80	75	54	0	7	4	0
OH AKRON-CANTON	37	23	42	15	30	3	.4	-.2	.1	3.4	117	41.0	115	87	52	0	7	4	0
CINCINNATI	38	22	42	14	30	-1	.8	.2	.3	3.4	110	35.0	90	96	63	0	7	4	0
CLEVELAND	36	22	41	13	29	2	.4	-.1	.3	3.5	130	39.3	109	83	52	0	7	4	0
COLUMBUS	39	25	48	20	32	4	.6	.1	.3	3.0	115	37.9	102	95	62	0	7	4	0
DAYTON	36	22	40	14	29	1	.8	.3	.3	3.8	146	43.7	127	97	73	0	7	4	0
TOLEDO	31	17	36	8	24	-1	.8	.3	.3	3.0	115	38.5	120	98	70	0	7	4	0
YOUNGSTOWN	35	22	39	13	29	3	.3	-.3	.1	2.9	94	35.2	92	93	57	0	7	5	0
OK OKLAHOMA CITY	50	25	65	19	37	0	T	-.3	T	.7	47	38.8	121	89	40	0	6	0	0

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

Weather Data for the Week Ending January 2, 1982

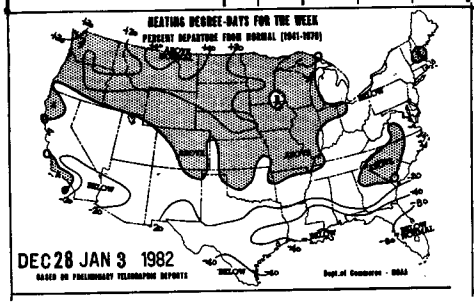
STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Nov. 29	PCT. NORMAL SINCE Nov. 29	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
TULSA	49	25	64	17	37	0	0	- .4	0	1.0	50	37.1	99	89	48	0	7	0	0
OR ASTORIA	43	34	47	31	39	-3	1.8	.9	.4	14.5	121	68.7	104	93	71	0	2	6	0
BURNS	25	10	29	-6	17	-8	1.2	.8	.5	3.8	190	15.5	128	100	88	0	7	4	1
MEDFORD	40	34	46	30	37	1	1.7	.9	.9	8.6	215	22.4	107	96	74	0	2	5	1
PENDLETON	35	24	40	19	30	-3	T	- .3	T	2.2	122	15.2	117	90	63	0	6	1	0
PORTLAND	41	33	46	31	37	-2	.9	- .6	.3	9.4	136	34.4	91	99	78	0	3	6	0
SALEM	42	31	46	25	36	-3	1.6	0	.4	10.3	136	41.3	99	95	77	0	5	5	0
PA ALLENTOWN	37	24	42	16	31	3	.5	- .3	.2	3.3	79	34.7	82	88	52	0	7	3	0
ERIE	36	26	41	17	31	5	.4	- .2	.2	2.9	88	42.1	111	75	45	0	7	3	0
HARRISBURG	40	28	46	21	34	4	.8	.2	.4	2.7	77	35.2	95	87	49	0	7	3	0
PHILADELPHIA	42	28	47	21	35	2	.7	0	.6	4.7	124	36.9	93	88	52	0	6	3	1
PITTSBURGH	38	23	40	16	30	2	.3	- .3	1.0	3.1	103	37.0	102	84	49	0	7	4	0
SCRANTON	37	25	43	19	31	5	.5	0	.4	2.6	90	35.7	103	82	57	0	7	3	0
RI PROVIDENCE	37	26	41	18	32	3	1.3	.5	1.0	7.2	157	36.4	85	78	50	0	7	3	1
SC CHARLESTON	56	40	66	36	48	0	2.9	2.2	1.9	5.9	159	50.6	97	94	65	0	0	4	2
COLUMBIA	52	37	57	33	44	-1	3.2	2.4	2.5	9.3	238	40.0	85	96	59	0	0	4	1
GREENVILLE	48	35	59	29	42	-1	2.8	1.9	2.7	8.4	183	36.1	76	91	55	0	2	4	1
SD ABERDEEN	9	-7	20	-16	1	-10	--	--	--	--	--	--	--	81	57	0	7	-	-
HURON	18	-4	23	-11	7	-7	.3	.2	.2	1.6	320	15.8	82	91	60	0	7	3	0
RAPID CITY	19	4	29	-3	11	-12	.1	0	.1	.4	80	14.5	81	91	59	0	7	2	0
SIOUX FALLS	22	-2	29	-10	10	-6	.1	0	.1	.9	129	18.0	73	86	55	0	7	3	0
TN CHATTANOOGA	50	32	56	28	41	1	1.3	.1	1.1	6.5	110	46.0	90	89	49	0	4	3	1
KNOXVILLE	49	31	54	27	40	0	1.3	.3	.9	5.2	102	44.0	95	90	55	0	4	3	1
MEMPHIS	50	33	54	24	41	0	1.5	.4	1.5	4.5	87	39.5	79	91	55	0	4	2	1
NASHVILLE	50	30	61	18	40	1	5.1	4.1	4.9	8.9	178	41.6	89	88	47	0	4	3	1
TX ABILENE	63	35	75	25	49	5	0	- .2	0	.7	58	27.7	116	75	29	0	3	0	0
AMARILLO	53	21	64	13	37	1	T	- .1	T	.2	25	21.3	108	79	29	0	7	0	0
AUSTIN	65	44	79	38	55	4	.2	- .2	.2	.6	23	46.2	140	87	39	0	0	2	0
BEAUMONT	67	51	79	41	59	7	2.6	1.6	1.7	4.2	76	50.6	91	89	56	0	0	2	2
BROWNSVILLE	74	56	84	48	65	4	T	- .3	T	.7	47	30.2	118	95	63	0	0	1	0
CORPUS CHRISTI	68	50	81	42	59	2	.4	.1	.4	1.3	72	44.3	152	94	63	0	0	1	0
DEL RIO	68	46	78	34	57	7	T	- .1	T	.1	17	27.4	157	69	39	0	0	1	0
EL PASO	65	36	69	29	51	8	T	- .1	T	.2	40	12.7	159	55	22	0	3	0	0
FORT WORTH	61	35	77	27	48	3	.1	- .3	.1	.8	38	44.9	138	84	34	0	3	1	0
GALVESTON	63	52	72	44	57	2	.5	- .3	.5	2.6	62	36.2	85	95	65	0	0	1	1
HOUSTON	64	47	76	37	56	3	.6	- .2	.6	5.7	127	53.9	115	92	54	0	0	2	1
LUBBOCK	56	28	67	19	42	2	0	- .1	0	.7	117	23.1	126	74	31	0	6	0	0
MIDLAND	65	32	71	26	48	4	0	- .1	0	.1	17	17.5	130	71	23	0	4	0	0
SAN ANGELO	66	34	74	23	50	4	0	- .2	0	0	0	30.0	172	81	31	0	3	0	0
SAN ANTONIO	67	44	74	34	55	4	.5	.2	.3	.9	56	37.5	133	90	43	0	0	2	0
VICTORIA	67	46	79	39	57	2	.4	0	.4	1.4	64	45.1	131	91	51	0	0	2	0
WACO	63	37	77	29	50	2	T	- .4	T	1.0	43	33.8	107	87	40	0	2	1	0
WICHITA FALLS	56	28	73	20	42	0	T	- .3	T	1.0	67	31.5	112	89	36	0	5	0	0
UT BLANDING	38	18	45	6	28	1	.4	.2	.2	.5	36	12.3	104	87	66	0	7	3	0
SALT LAKE CITY	37	23	43	17	30	2	.5	.2	.3	2.1	131	16.6	108	82	55	0	6	5	0
VT BURLINGTON	31	16	36	-3	24	5	.7	.3	.3	2.4	92	41.9	132	87	60	0	7	4	0
VA LYNCHBURG	44	26	52	19	35	-1	.9	.2	.9	4.0	114	36.0	94	98	49	0	6	1	1
NORFOLK	47	32	56	16	39	-1	1.0	.3	.8	5.6	160	40.9	91	92	60	0	2	5	1
RICHMOND	48	29	60	22	39	2	1.1	.4	.9	5.2	141	36.3	85	92	58	0	6	3	1
ROANOKE	43	24	49	17	34	-2	.9	.3	.9	3.8	112	31.4	80	90	51	0	7	2	1
WA COLVILLE	26	14	30	10	20	-5	.5	0	.3	2.9	121	24.8	144	91	86	0	7	5	0
OMAK	25	14	31	5	20	--	.3	--	.2	2.8	--	14.5	--	--	--	0	7	4	0
QUILLAYUTE	38	29	41	24	33	-6	2.7	- .8	.9	18.0	102	104.9	99	100	85	0	6	6	3
SEATTLE-TACOMA	40	32	49	30	36	-3	.6	- .7	.4	5.7	86	35.5	91	94	67	0	4	4	0
SPOKANE	25	14	30	7	20	-6	.2	- .4	.1	2.5	89	15.0	82	96	82	0	7	4	0
WALLA-WALLA	35	24	38	21	30	-5	.5	.1	.3	3.8	165	23.3	138	94	69	0	7	3	0
YAKIMA	27	11	33	5	19	-9	.5	.2	.4	2.9	207	9.3	116	89	71	0	7	3	0
WV BECKLEY	41	23	47	10	32	1	.4	- .4	.4	3.4	92	37.4	87	93	45	0	7	3	0
CHARLESTON	48	25	55	15	36	2	.4	- .4	.2	2.8	78	36.1	87	91	40	0	7	5	0
HUNTINGTON	45	25	51	12	35	1	.6	- .1	.3	2.9	81	38.0	96	86	46	0	7	4	0
PARKERSBURG	41	23	47	12	32	0	.3	- .5	.2	1.8	56	31.4	81	72	39	0	7	5	0
WI GREEN BAY	27	7	33	-2	17	0	.7	.5	.4	1.4	93	23.7	87	96	74	0	7	4	0
LA CROSSE	24	3	33	-9	14	-4	.4	.2	.3	1.4	117	34.6	119	97	64	0	7	2	0
MADISON	27	8	36	-3	18	0	.4	.1	.3	1.1	73	32.1	105	92	70	0	7	2	0
MILWAUKEE	28	12	32	4	20	-1	.8	.4	.4	1.6	80	33.6	116	92	60	0	7	2	0
WY CASPER	29	3	38	-1	16	-8	.1	.1	.1	.4	100	11.1	103	90	49	0	7	3	0
CHEYENNE	31	13	45	8	22	-5	.1	0	.1	.6	100	16.7	112	81	45	0	7	1	0
LANDER	28	7	36	4	18	-3	T	- .1	T	0	0	10.1	74	91	35	0	7	1	0
SHERIDAN	20	1	28	-4	11	-12	.1	- .1	T	.6	75	14.0	86	82	51	0	7	2	0
PR SAN JUAN	83	73	85	72	78	2	2.6	1.7	1.9	14.0	269	70.6	119	94	73	0	0	7	2

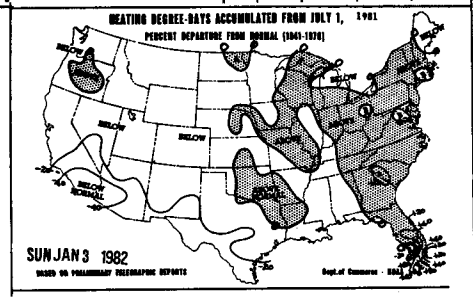
BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

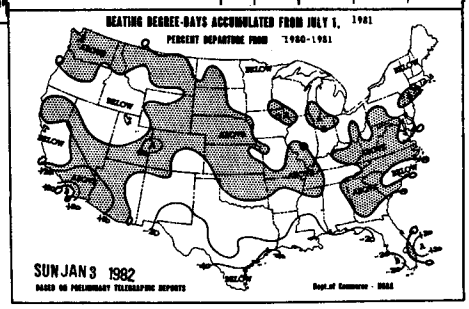
HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING JAN. 3, 1982.

BASED ON 1941-70 NORMALS. + ACCUMULATION FROM JULY 1, 1981.

STATES AND STATIONS	WEEKLY TOTAL	WEEKLY DEPARTURE*	SEASONAL ACCUMULATION + TOTAL	SEASONAL ACCUMULATION + DEPARTURE*	SEASONAL ACCUMULATION + DEPARTURE FROM 1980-81
ALA. BIRMINGHAM	126	-21	1189	-22	-84
MOBILE	50	-48	630	-47	-138
MONTGOMERY	109	-17	855	-110	-189
ARIZ. FLAGSTAFF	233	-26	2427	-567	-188
PHOENIX	68	-30	290	-339	-48
TUCSON	95	-3	494	-201	-13
WINSLOW	206	-26	1575	-417	-261
YUMA	53	-17	198	-216	-55
ARK. FORT SMITH	183	1	1459	79	45
LITTLE ROCK	176	-4	1282	-110	-87
CALIF. BAKERSFIELD	96	-37	667	-251	-113
EUREKA	131	7	1882	-178	-90
FRESNO	138	-9	984	-109	-14
LOS ANGELES	72	2	357	-242	-75
RED BLUFF	149	5	948	-113	-56
SAN DIEGO	50	-19	217	-275	-3
SAN FRANCISCO	116	-3	1135	-61	-29
STOCKTON	127	-20	970	-145	-134
COLO. DENVER	263	21	1979	-426	-50
GRAND JUNCTION	260	-10	2293	-65	-396
PUEBLO	285	43	1826	-387	-125
CONN. BRIDGEPORT	221	-17	2206	264	53
HARTFORD	256	-24	2399	-75	-362
DEL. WILMINGTON	210	-21	1979	-76	-110
D.C. WASHINGTON	199	-11	1545	-115	-6
FLA. APALACHICOLA	33	-50	494	-40	-161
DAYTONA BEACH	2	-47	392	-62	-13
FORT MYERS	0	-28	122	-46	-43
JACKSONVILLE	33	-44	570	-40	-32
KEY WEST	0	-7	26	-13	-5
LAKELAND	0	-42	299	-53	-38
MIAMI	0	-14	81	-6	-6
ORLANDO	0	-42	284	-21	-15
TALLAHASSEE	38	-53	750	-100	-23
TAMPA	0	-42	307	-49	-38
WEST PALM BEACH	0	-21	167	-58	-43
GA. ATLANTA	166	5	1375	86	128
AUGUSTA	141	1	1397	312	200
MACON	122	-4	995	37	78
SAVANNAH	85	-27	852	-33	-47
IDAHO. BOISE	299	49	2301	-128	-79
LEWISTON	271	39	2168	-154	-145
POCATELLO	305	15	2708	-205	-129
ILL. CAIRO	227	29	1631	73	24
CHICAGO	303	13	2622	68	17
MOLINE	319	21	2627	-100	-11
PEORIA	299	15	2291	-137	-198
ROCKFORD	322	15	2691	-25	-106
SPRINGFIELD	288	23	2245	-30	-15
IND. EVANSVILLE	196	-28	1812	-78	-81
FORT WAYNE	284	11	2578	124	72
INDIANAPOLIS	253	-6	2336	-99	-22
SOUTH BEND	288	5	2585	61	211
IOWA. BURLINGTON	310	21	2526	-88	-30
DES MOINES	342	31	2502	-146	-42
DUBUQUE	350	26	2928	19	75
SIOUX CITY	378	57	2832	44	87
KANS. CONCORDIA	281	13	2154	-94	121
DODGE CITY	246	8	1885	-151	-150
GOODLAND	252	-7	2180	-303	-37
TOPEKA	268	11	2074	-43	-29
WICHITA	254	19	1947	-50	-185
KY. LEXINGTON	195	-29	2000	-91	-8
LOUISVILLE	198	-21	1893	-11	-107
LA. BATON ROUGE	38	-60	575	-110	-302
LAKE CHARLES	49	-41	584	-6	-225
NEW ORLEANS	29	-58	478	-107	-163
SHREVEPORT	99	-26	971	-79	-35
MAINE. CARIBOU	347	-25	3637	-237	-611
PORTLAND	275	-25	2832	-82	-311
MD. BALTIMORE	185	-39	1973	-112	-1
MASS. BOSTON	236	-9	2235	-159	-200
MICH. ALPENA	284	-33	3254	-75	-232
DETROIT	273	-5	2690	-191	-164
FLINT	277	-14	2993	-252	-60
GRAND RAPIDS	271	-15	2688	-52	-212
HOUGHTON LAKE	311	-12	3252	-59	-284
LANSING	284	-3	2907	-218	-109
MARQUETTE	372	-17	3835	-28	-232
MUSKEGON	269	-9	2768	-132	-164
S. STE. MARIE	326	-17	3878	-277	-346
MINN. DULUTH	428	43	3891	-42	-279
INTERNATL FALLS	473	43	3886	-457	-620
MINNEAPOLIS	405	47	3197	-51	-23
ROCHESTER	351	-3	3395	-115	-91
ST. CLOUD	454	75	3341	-220	-192
MISS. JACKSON	72	-54	917	-33	-247
MERIDIAN	80	-49	900	-129	-171
MO. COLUMBIA	270	22	2094	-66	-38
KANSAS CITY	285	24	2161	-13	-27
ST. LOUIS	262	30	1966	-65	-101
SPRINGFIELD	226	3	1810	-41	-14
MONT. BILLINGS	402	109	2735	-188	-240
GLASGOW	527	154	3314	-298	-57
GREAT FALLS	491	191	3002	-79	-16
HAVRE	564	200	3329	-222	-10
HELENA	388	68	3099	-337	-28
KALISPELL	406	92	3618	-83	-267
MILES CITY	477	143	3032	-174	-184
MISSOULA	341	36	3387	-34	-299
NEBR. GRAND ISLAND	366	73	2652	-73	-271
LINCOLN	344	51	2437	-51	-60
NORFOLK	374	59	2749	-44	-131
NORTH PLATTE	325	36	2670	-98	-158
OMAHA	354	65	2632	-232	-21
VALENTINE	386	79	2859	-86	-150
NEV. ELY	270	-17	2690	-505	-186
LAS VEGAS	125	-24	841	-270	-99
RENO	220	-18	2201	-331	-7
WINNEMUCCA	232	-27	2357	-423	-99
N.H. CONCORD	312	5	3046	-128	-346
N.J. ATLANTIC CITY	215	-9	2047	-157	-261
TRENTON	217	-11	2069	-188	-39
N. MEX. ALBUQUERQUE	189	-26	1653	-173	-144
ROSWELL	146	-45	1142	-493	-443
N.Y. ALBANY	283	-17	3028	-331	-119
BINGHAMTON	269	-30	2950	-100	-274
BUFFALO	245	-36	2661	-35	-104
NEW YORK	200	-24	1911	-119	-239
ROCHESTER	272	-8	2767	-214	-26
SYRACUSE	257	-25	2670	-147	-238
N.C. ASHEVILLE	201	-5	1871	-92	-119
CHARLOTTE	176	-8	1528	-176	-26
GREENSBORO	202	-13	1784	-182	-88
HATTERAS	130	-3	1171	-225	-36
RALEIGH	175	-0	1574	-113	-22
WILMINGTON	126	-7	1131	-163	-69
N. DAK. BISMARCK	483	100	3344	-305	-24
FARGO	471	70	3710	-6	-50
WILLISTON	541	158	3411	-329	-30
OHIO. AKRON-CANTON	240	-26	2385	-54	-187
CINCINNATI	225	-12	2262	-239	-37
CLEVELAND	241	-22	2449	-76	-196
COLUMBUS	225	-33	2445	-146	-129
DAYTON	239	-18	2348	-107	-116
TOLEDO	283	-3	2760	-235	-84
YOUNGSTOWN	259	-14	2645	-129	-258
OKLA. OKLAHOMA CITY	199	4	1519	26	81
TULSA	185	-11	1484	-2	77
OREG. ASTORIA	184	16	1909	-299	79
BURNS	354	76	3172	-153	-3
MEDFORD	197	-6	1827	-232	-87
PENDLETON	245	18	2165	-50	57
PORTLAND	194	9	1688	-307	120
SALEM	201	19	2001	0	150
PA. ALLENTOWN	241	-18	2371	81	91
ERIE	234	-39	2410	-190	-303
HARRISBURG	225	-20	2148	-59	-298
PHILADELPHIA	213	-11	2044	173	60
PITTSBURGH	237	-22	2584	192	20
SCRANTON	239	-33	2554	60	-166
R.I. PROVIDENCE	241	-11	2433	182	-137
S.C. CHARLESTON	111	-8	1017	134	54
COLUMBIA	144	-4	1239	137	-38
GREENVILLE	168	-7	1540	212	70
S. DAK. ABERDEEN	466	90	3163	-307	-50
HURON	420	64	2980	-246	-75
RAPID CITY	388	95	2738	-166	-137
SIOUX FALLS	400	53	3007	-153	-93
TENN. CHATTANOOGA	162	-13	1556	69	14
KNOXVILLE	167	-8	1559	96	-110
MEMPHIS	153	-16	1288	-48	126
NASHVILLE	158	-29	1536	-4	-36
TEXAS. ABILENE	123	-24	901	-164	-155
AMARILLO	197	-5	1607	-89	-159
AUSTIN	63	-42	494	-194	-228
BEAUMONT	63	-28	495	-105	-196
BROWNSVILLE	18	-28	137	-71	-220
CORPUS CHRISTI	43	-21	263	-72	-259
DEL RIO	63	-40	456	-201	-241
EL PASO	119	-35	951	-248	-268
FORT WORTH	106	-32	922	-15	-60
GALVESTON	47	-29	342	-70	-254
HOUSTON	51	-40	470	-81	-210
LUBBOCK	166	-16	1262	-207	-157
MIDLAND	122	-25	917	-175	-435
SAN ANGELO	100	-32	945	-1	-42
SAN ANTONIO	68	-30	559	-67	-113
VICTORIA	55	-25	402	-57	-221
WACO	91	-33	792	-25	-83
WICHITA FALLS	159	-5	1193	-15	-26
UTAH SALT LAKE CITY	253	-6	2097	-379	-126
VT. BURLINGTON	299	-28	3086	-29	-500
VA. LYNCHBURG	211	-8	1978	241	152
NORFOLK	174	-1	1442	111	11
RICHMOND	183	-13	1687	-93	-57
ROANOKE	200	-3	2062	303	251
WASH. QUILLAYUTE	225	-43	2453	-86	139
SEATTLE-TACOMA	209	-24	1996	-186	-70
SPOKANE	313	-39	2798	-110	-43
WALLA WALLA	252	-34	1870	-181	-4
YAKIMA	329	-69	2627	-5	-328
W. VA. BECKLEY	231	-7	2505	177	139
CHARLESTON	184	-33	2018	-131	-9
HUNTINGTON	203	-14	1990	102	-1
PARKERSBURG	212	-12	2057	-120	-133
WIS. GREEN BAY	341	-4	3195	-1	-137
LACROSSE	364	-31	2959	-16	-118
MADISON	342	-12	3124	-37	-50
MILWAUKEE	315	-3	3054	-168	-94
WYO. CASPER	334	-44	2853	-204	-112
CHEYENNE	300	-35	2658	-259	-177
LANDER	333	-18	2911	-344	-112
SHERIDAN	378	-78	2719	-421	-147







National Agricultural Summary

December 28, 1981-January 3, 1982

HIGHTLIGHTS: A continued progression of storm systems brought heavy snow to the Cascades Sierras and Rocky Mountains, making the care of livestock difficult, but providing a good snowpack to supply this year's irrigation needs. Cold temperatures and high winds across the Northern Plains caused light damage to Winter Wheat in scattered areas. Small grains improved as rainfall continued over much of the Southeast. Dry conditions persisted in the Southwest causing limited regrowth of grazed fields and resulting in range fires in New Mexico. The Cotton harvest in Texas was 96% complete but ginning lagged. The harvest in other areas was nearly finished.

Florida's citrus groves were mostly in good condition, and the processing orange harvest was active. Soil moisture rated short to adequate across the South. Pastures were rated fair to good. Cattle were in good condition, and supplemental feeding was becoming more widespread across the Nation.

SMALL GRAINS: Winter wheat rated fair to good throughout the major production areas, although wind and cold temperatures caused light damage in parts of Kansas and eastern Montana. Warm temperatures in the Corn Belt reduced snow cover, and producers looked for additional snow to reduce the risk of Winterkill. Rainfall in the Southeast eased moisture deficiency, and early seeded grains improved with the moisture. Late seedings had germinated, and good stands were reported across the South.

Fall seeded grains were in good condition in the Pacific Northwest, but slugs and weeds caused concern in parts of Oregon. A lack of precipitation across the Southwest and high winds depleted surface moisture. Texas wheat was in good condition, although late planted fields were showing stress from lack of moisture. South central Texas had little regrowth on grazed small grain fields. In Oklahoma, leaf rust was a problem, but the wheat condition was good.

OTHER CROPS: Cotton harvest in Texas reached 96% completion while ginning lagged. Cotton was being stored in modules. The Arizona cotton harvest was active and making rapid progress in nearly all growing areas prior to weekend rains. The second picking and scrapping was winding down in many areas. Harvesting reached 99% completion in New Mexico as progress was unhampered by the weather. Picking was virtually completed in California, but some fields remained in the Imperial Valley.

Tobacco auctions reopened after the holidays. Marketing and stripping by producers continued. Tobacco seedbed preparation was active in some areas and plants were emerging in Georgia. Florida sugarcane rated good and the harvest was active. Sugarbeets continued to make very good progress in Arizona; growth was ahead of normal. Marketing of potatoes was light in California. Movement out of storage was slowed by snow in Idaho. Potato planting was active in Arizona.

FRUITS AND NUTS: The pecan harvest was finishing up in New Mexico and was 93% picked in Texas.

Florida citrus groves were in very good condition with good soil moisture in the upper half of the Citrus Belt. The south central area was dry and still recovering from freezing temperatures. The orange harvest was active for processing. Several nights of near freezing temperatures in Arizona hampered Citrus leaf growth. Seasonal progress was made in harvesting lemons, grapefruit, navels, miscellaneous oranges and early tangerines.

Cold weather stimulated the lemon bloom in south central California. Navel orange movement was heavy, but wet fields delayed picking. Desert grapefruit movement was at a record low due to the lack of a market. Central valley lemon movement was also slow. Harvesting of Texas grapefruit and early oranges continued in the Rio Grande Valley.

Growers pruned deciduous fruit trees and continued dormant spraying as the weather permitted. Marketing of storage apples increased.

VEGETABLES: Above normal temperatures prevailed in Florida's vegetable areas. Irrigation remained active in addition to scattered showers. Total shipments increased 33% from previous weeks holiday lull. Volume increased for all crops except okra. Strawberries had a good bloom and fruit set. Volume was increasing from early planted fields.

California's asparagus cutting started in desert area. Artichoke and broccoli supplies were light. The carrot harvest was moderate in the kern area, but very light in the Salinas Valley and Desert. The south coast tomato harvest was light while the celery harvest was picking up. Lettuce volume was increasing from the Imperial Valley and remained light from the Palo Verde Valley. The lettuce harvest in Arizonia remained in full swing in the Yuma area until wet conditions during the weekend slowed progress. Other vegetable harvests progressed rapidly. Planting of lettuce, onions, and late winter and early spring vegetables was active. New Mexico's fall planted onions continued good growth, while early onions were up to good stands in Texas. The harvesting of carrots, cabbage and green peppers was active in all major producing areas of Texas. The chilli pepper harvest was completed in the Trans-Pecos region. Washington growers were actively forcing rhubarb crowns.

PASTURE AND LIVESTOCK: Southern pastures rated fair to good. More snow in Northern areas and muddy conditions in the Southeast caused widespread supplemental feeding of livestock. Grazing was active in the Southwest but regrowth was limited due to dry conditions. Range fires remained a problem in New Mexico. Lambing was active in many areas.

Additions and Corrections to 1981 Bulletin Index, published December 29, 1981.

Bulletin No.

10 Article: "A New Chart: Additional Precipitation Needed to Bring Drought Index to Near Zero" by Don Haddock and Lyle Denny.

14 Article: "Weather Patterns Cause Dryness in Spain and Northern Italy" by Ray McInturff and J. Larason Lambert.

31 Article: "Dry Hot Weather Affects Parts of USSR" by Ray McInturff and Mike Halpert.

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 SRS State Offices in cooperation with the National Weather Service.

ALABAMA: Temperatures were above normal at all stations with 3.00 in. of rainfall or more at most stations. Sand Mountain and Winfield received over 7.00 in.

Fieldwork: 1.9 days. Soil moisture adequate. Activities: Routine chores, winter maintenance and repairs. Plowing ranged from over 50% in some northern counties to less than 5% in the south. Fieldwork was on, or slightly behind schedule. Condition: Wheat fair to good; pasture, livestock mostly fair; stored feed adequate; pasture feed mostly short.

ARIZONA: Rain, snow eastern two-thirds State. Late on 2nd snow reached many 3,000 foot areas. Between 2 to 4 in. fell 5,000 foot level, 5 to 10 in. Grand Canyon, Mogollon Rim, 10 to 25 in. White Mountains. South central mountains near Tucson received around 15 in. Moisture amounts 0.25 to 0.50 in. south central, southeastern Deserts. Rim, White Mountains mostly between 1.00 to 2.00 in. Western one-third State received very little moisture. Average temperature 1° below normal to 7° above.

Moderately heavy rain halted virtually all field activities late week. Cotton harvest active, making rapid progress in nearly all growing areas prior to rain. Second picking, scrapping rapidly winding down many areas. Land preparations, planting wheat, barley active until halted by muddy conditions. Earliest plantings good stand, growing very well. Later plantings just emerging to establishing stands. Alfalfa haying seasonally slow, many alfalfa fields used for sheep winter pasture. Sugarbeets continued very good progress, top and tap root development ahead normal. Sorghum harvest mostly completed in December. Lettuce harvest remained full swing Yuma area until slowed or stopped by rain and muddy conditions. Mixed vegetables harvest good progress until week's end. Land preparation, planting lettuce, mixed vegetables late winter, early spring active. Land preparation, planting potatoes, dry onions active. Harvest lemons, grapefruit, Navels, miscellaneous oranges, early tangerines made seasonal progress, slowed or stopped by weekend rain and poor conditions. Several nights near freezing, hampered citrus leaf growth. Ranges fair to good, southwestern Deserts poor. Livestock fair to good, water supplies adequate.

ARKANSAS: Temperatures were below normal north, above south. Very small amounts precipitation at end of week. Highest normal 47°, lowest 38°. Highest mean 50°, lowest 32°. Highest temperature 73°, lowest 10°. All departures from normal ranged from +4 to -7°. Most rainfall 1.84 in., least 0.02 in.

Pastures in good to fair condition. Weekend rain improved surface moisture, subsoil still dry. Early planted wheat good condition. Late planted wheat germinated and up to stand. Livestock and poultry good condition.

CALIFORNIA: Rain producing storms kept moving across the State at varying time intervals. During the holiday week, rain and snow was scattered through the period, although somewhat concentrated toward the onset of the 1st. Weekly mean temperatures were narrowly mixed but the southeast interior was several degrees warmer than normal.

Field activity standstill due to rains, northern area. Most grains planted, more planting expected with better conditions. Some grains turning yellow due to heavy rains. Limited amount of corn, milo, and rice unharvested. Cotton harvest virtually complete, some fields remain Imperial Valley. Weed control hampered. Alfalfa fields grazed. Rain in Sacramento Valley curtailed cultural activities. Dormant spraying, pruning, and fertilizer application continued in San Joaquin Valley. Avocado harvest continued. Desert grapefruit movement at record low. No market. Central Valley lemons also going slow due to market. Market so bad for Desert that 50% could be left on trees. Cold weather stimulated lemon bloom in Southern Coastal counties. Navel oranges movement heavy 84% fresh, 16 processed. Harvest delayed at times by wet fields. Artichokes light supply. Asparagus cutting started Desert. Broccoli harvest light. Carrot harvest moderate Kern, very light Salinas Valley and Desert. Celery harvest increasing South Coast. Lettuce volume increasing Imperial Valley, very light Palo Verde Valley. Potato movement light Tulelake. Light tomato harvest South Coast. Rains over most of State great benefit ranges, pastures. More moisture needed southern areas. Lambing continues active. Sheep grazing alfalfa fields.

COLORADO: A continued progression of storm systems brought heavy snows to the mountains, with up to 4 ft. of new snow reported in some areas. The Western Slope also benefited from the recurring storms with above normal precipitation. Over the Eastern Plains, skies were cloudy with light precipitation during the period. Temperatures were below normal over all regions.

FLORIDA: The period was characterized by cloudy skies over northern half with several stationary fronts and mostly sunny elsewhere with little rain over southern half. Temperatures remained warm, dipping into the 40's morning of 31st, north only once, mostly 50's, 60's at night, 70's and 80's during day. A few thunderstorms produced around 1.00 in. of spotty rain, in east central area. Otherwise amounts over north, central areas averaged near 0.25 in. daily.

Topsoil moisture mostly adequate; few dry areas remaining south central Peninsula and Panhandle. Sugarcane good condition, harvest active. Small grains improving after recent rains and mild temperatures. Preparation tobacco seedbeds continues. Farm work slow but increasing. Early rains, above normal temperatures greatly improved pasture prospects, especially in central, northern areas. Some permanent pastures in central areas showing new growth. Cattle mostly fair condition. Upper half of Citrus Belt very good condition with good soil moisture. South central portion of State dry and recovering from below freezing temperatures on 20th. Harvest active for processing. Above normal temperatures prevailed in vegetable areas. Daytime highs mostly in 80's; nighttime lows, 60's and 70's. Skies mostly clear to partly cloudy. Rainfall light, scattered. Winds light to moderate. Irrigation active. Crop volume increasing after holiday lull. Total shipments increased 33% from previous week. Volume increased for all crops except okra which was lower. Strawberry progress, bloom, fruit set good. Volume from early planted fields increasing.

GEORGIA: North and central mostly 1 to 5° below normal. Temperatures a little above normal in extreme south. Good soaking rains over the entire

State throughout the week. Most rain fell 30th and 31st. Temperatures on 2nd and 3rd were near normal north and several degrees above normal south. Heavy rainfall extreme north averaged more than 4.00 in. while moderate rain fell central with little or none extreme south.

Soil moisture adequate to mostly surplus, minor flooding north. Fieldwork restricted to routine care of livestock. Small grains good. Tobacco seedbeds planted, most emerging. Pastures fair to mostly good. Cattle and hogs fair to good.

HAWAII: Weather favorable most Islands. Heavy rains, cloudy conditions, Island of Oahu again slowed crop progress. Spoilage to some leafy crops reported. Farm activities other Islands increased. Spray intensified to control diseases. Quality down for leafy vegetable crops which required trimming from spoilage. Cucumber production light since affected by the wet conditions. Bananas suppplies steady. Quality affected from bruising caused by the previous week's winds. Papayas supplies down seasonally. Wet weather intensifying spraying. Industry reported pineapple operation to close for the first three months of 1982 for economic reasons. Only few sugar mills grinding. Rains in the dry Kona and south Kohala areas, Island of Hawaii, were beneficial to pastures.

IDAHO: Temperatures averaged 5 to 12° below normal in most areas. Highs were in the 20's and 30's. Frequent snowfalls greatly increased snow cover over the State. Precipitation was well above normal.

Farmers over the entire State were busy feeding livestock and moving snow to get around. Snow cover on the winter wheat is excellent. Jefferson County farmers continue to hold jackrabbit drives in an effort to reduce the population.

ILLINOIS: Temperatures 2 to 5° below normal northern two-thirds State, near normal southern third. Precipitation 0.75 to 1.25 in. north, 1.25 to 2.00 in. southern two-thirds State. Snow cover 1 to 3 in. in north, decreasing to trace to 2 in. in central. South free of snow cover.

Activities: Livestock feeding and care, machinery repair.

INDIANA: In spite of warm weekend, temperatures for week averaged within a few degrees of normal. Temperatures ranged from -4 to 56°. Precipitation averaged 1.04 in. north, 0.93 in. central, and 1.11 in. south. Snow cover remained sparse in south. Midweek snow depth of 6 to 9 in. north and 2 to 4 in. central dwindled rapidly in the weekend rains. Sunshine about 25% except as high as 40% in central sections.

Activities: Snow removal, cutting wood, hauling manure, limited movement of grain, some repair work, attending meetings, caring for livestock and usual chores.

IOWA: A cold, snowy week. Temperatures averaged 3 or 4° subnormal. Snowfall heavy over State except moderate over western-most counties. Snow fell December 31, January 2, 3 and 4 with accumulations to 11 in. over eastern half of State by the 4th. Western counties reported 4 to 8 in. snow depths.

KANSAS: Little or no precipitation until 3rd, 0.10 in. to 0.25 in. central and northeast to over 0.75 in. extreme southeast. Temperatures averaged 26° north central, 34° southeast and 28 to 31° elsewhere, or 4° below normal southwest and within 2° of normal elsewhere.

Row crop harvest clean up continuing in spots. Most farmers settled into winter routine. Wheat condition good, some scattered light wind damage southern half. Moisture supplies mostly adequate. Feed and roughage supplies adequate. Principal farm activities book work and livestock care.

KENTUCKY: Mild and wet weather covered State. Temperatures averaged around normal although high temperatures were normally in 40's and 50's. Rainfall exceeded normal most locations with amounts ranging from 0.75 in. to over 2.00 in.

Burley markets reopened January 4. December drier than normal, but January starting out wet. Late stripping and marketing of tobacco. Farm activity primarily routine chores and machinery repair.

LOUISIANA: Temperatures averaged 5 to 9° above normal. Extremes were 81 and 31°. Several cities reported record highs. Rainfall ranged 0.50 to 3.15 in.

Main activities included harvest of citrus and winter vegetables, caring for livestock and routine chores.

MARYLAND AND DELAWARE: Temperatures averaged 1° below normal. Highs averaged in the low to mid 40° range. Lows averaged in the mid to upper 20's. Greatest precipitation reported at Oakland at 1.29 in. Least was 0.15 in. at Glen Dale. The average of the remaining 8 reporting stations was 0.80 in. Most sunny and cold on 2nd, high in the low 40's and lows in the upper 20's. Cloudy and cold on 3rd with temperatures the same as 2nd and rain most of the day.

MICHIGAN: Above normal temperatures were recorded everywhere, but the west portion of the Upper Peninsula. The northern portion of the Lower Peninsula had temperatures 4 to 6° above normal. Precipitation ranged from 0.43 in. the east central portion of the Lower Peninsula to over 1.40 in. in the Upper Peninsula. December precipitation totals were generally below normal. The exceptions were the western portion of the Upper Peninsula which was 3.30 in. over normal and the northwest portion of the Lower Peninsula which was 2.60 in. above normal. The southeast section of the Lower Peninsula had a near normal precipitation total.

MINNESOTA: Temperatures averaged from 16° below normal extreme south and northeast to 14° below normal northwest. Extremes were 30° at Grand Marais and Rochester and -25° at Hibbing. Precipitation totaled around 0.10 in. extreme southwest and generally 0.25 to 0.73 in. elsewhere with largest amount of 0.73 in. reported at Duluth. Precipitation was near normal extreme southwest and generally 0.10 to 0.45 in. above normal elsewhere. Snowfall ranged from 2 in. southwest to generally 3 to 6 in. elsewhere except 6 to 12 in. northern one-third of State. Snow on ground at weeks end was around 4 in. southwest and generally 9 to 11 in. elsewhere except 11 to 21 in. north central and northeast with a 21 in. depth at Hibbing.

MISSISSIPPI: Weather fairly normal, until 3rd. Temperatures slightly above normal, except north. On afternoon of 3rd, a slow moving cold front brought severe thunderstorms to most sections of the State. A tornado was reported at Newton, resulting in extensive property damage. High winds, heavy rains and hail were reported in a number of locations. Greatest 24-hour rainfall was 4.40 in. at Aberdeen. Low temperature 18° at Oxford and Iuka while high was 77°at Bay St. Louis.

Soil moisture adequate. Days suitable for fieldwork: 1.3. Hay, roughage and field grain supplies adequate. Wheat condition fair to good. Pasture fair and livestock good to fair.

MONTANA: Arctic air held over State all week. North central temperatures averaged 28° below normal and northeast temperatures 19° below normal. Temperatures below zero entire week over most of north central. Highest 35° Thompson Falls, lowest 29° below zero Havre. Precipitation near normal over most of State. West and southwest received heaviest amounts.

Winter wheat condition fair to good. Light wind damage reported eastern two-thirds of State. Snow cover poor to fair. Most livestock on supplemental feed. Cattle and sheep condition good. Grazing open except some western areas.

MISSOURI: Cold air fell brought average temperatures from 1 to 6° below normal. Precipitation was widespread but generally less than 0.25 in.

Livestock in mostly good condition. Supply for hay adequate to surplus. Condition of winter wheat fair to good. Supply of topsoil moisture adequate to surplus.

NEBRASKA: Temperatures were near normal over Panhandle but 7 to 10° below normal over remainder of State. Light snow widespread with moisture amounts less than 0.10 in.

Winter wheat condition good. Additional snow cover needed in Panhandle, southwestern and south central areas to reduce possible winter kill. Corn and sorghum fields being pastured 40%, 50% last year. Hay, forage and feed grain supplies average or above.

NEVADA: A strong westerly airflow aloft steered a series of storms over the State, beginning in the north the first part of the week and spreading over the entire State by end of the week. Rain and snow over most of north with up to 2 ft. of snow falling at Lake Tahoe. Temperatures generally 2 to 11° above normal.

Caring and feeding of livestock continued, with some difficulty in isolated areas, due to snow.

NEW ENGLAND: Precipitation averaged between 0.75 and 1.50 in. across the region. Precipitation on the 27th and again on the 1st, fell mostly as rain or mixed in the south and mostly as snow in the north. Over a foot of new snow was reported in the higher elevations during the period. Temperatures averaged near normal. The coldest readings were on 3rd morning, with several northern locations reporting sub-zero minimum temperatures.

NEW JERSEY: Temperatures near normal averaging 30° north, 34° south and 36° coastal. Extremes 8° at Newton and 55° at Hammonton. Precipitation well above normal averaging 1.89 in. north, 2.00 in. south and 2.08 in. coastal. Heaviest 24-hour total reported 1.77 in. at New Brunswick.

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

NEW MEXICO: Precipitation was mostly limited to the mountain areas. Temperatures averaged 1 to 6° above normal.

Open weather in most areas allowed outdoor activities to progress unhampered. Soil moisture short to adequate. Cotton harvest practically over with 99% harvested. Wheat and barley in good condition. Grazing of fields active. Pecan harvest winding down. Fall planted onions growing well. Ranges in fair to good condition depending on fall moisture received. Range fires a hazard in some areas. Livestock in good condition with supplemental feeding more widespread.

NEW YORK: Wide variety of precipitation which included heavy, snow, sleet, freezing rain and rain. Temperatures ranged from unseasonably cold to much warmer than normal.

NORTH CAROLINA: Temperatures 1 to 3° below normal. Precipitation generally 1.00 to 3.00 in.

Fieldwork: 1.1 days suitable. Soil moisture: 4% short, 73% adequate, 23% surplus. Hay and feed grain supplies mostly adequate to surplus. Major farm activities: Tending livestock, cutting firewood, and repairing farm equipment.

NORTH DAKOTA: Quite cold with above normal precipitation. Temperatures averaged 20 to 22° below normal in the northwest, north central and west central and 11 to 12° below normal in the east central and southeast. Extremes from 35° southeast to -33° west central and northeast. Precipitation above normal, ranging from 0.41 in. east central to 0.13 in. southwest. Additional snowfall beginning 1st left a general blanket of snow. Snow cover depths from 2 to 5 in. southwest, 8 to 12 in. east central. No severe storms.

Relatively calm and wind conducive to livestock care and travel. Snow cover excellent for protecting winter wheat and rye and preventing soil erosion. Winter wheat and rye in fair to good condition. Pastures nearly all closed with virtually all livestock receiving supplemental feed. Extreme cold and snow causing increased feeding but feed supplies still adequate. Livestock generally in good condition with normal winter shrinkage. Hay supplies accessible although difficult to reach in some places. Rural roads open but most snow-packed or icy.

OHIO: Average temperatures above normal. Highs averaged in the mid to upper 30's but climbed to as high as 50°. Lows fell into the teens over most of the State early in the week. The lowest reported was zero. Precipitation was scattered throughout the week; much of it fell as rain on weekend. Totals, generally above normal, ranged from 0.71 to 1.31 in. Snow cover dwindled rapidly late in week. Soil temperatures 4.00 in. under bare ground near freezing in many areas. Temperatures 4.00 in. under sod are still in low to mid 30's.

OKLAHOMA: Temperatures averaged near normal. Precipitation ranged from a trace north central and west central to 0.53 in. southeast.

Wheat good condition with widespread reports leaf rust. Cotton harvest wind-up. Cattle good condition.

OREGON: The week began warm and wet and ended cold and snowy. Heaviest precipitation was along the Coast and in Western Valleys where rainfall averaged near 2.00 in. East of the Cascades precipitation was mainly in the form of snow. Water equivalent amounts ranged from 0.25 in. at Baker to nearly 1.50 in. at Burns. Redmond reported 0.73 in. Snowfalls were very heavy in the mountains with temperatures averaging 5 to 10° below normal over east and normal to 4° above normal over west.

Winter wheat good to excellent. Some slug problems in west and weed problems in east. Livestock condition fair to good. Confinement lots in west very muddy and grazing caused damage to pastures. Heavy snows in parts of east over the weekend made it difficult for feeding stock.

PENNSYLVANIA: Seasonable temperatures most of the week. Daily highs 20's to 40's and lows teens to 30's with extremes 0 and 49°. Light snow early in week with mixture of snow, sleet, freezing rain. Rain on 1st and 3rd.

PUERTO RICO: Island average rainfall 2.35 in. or 1.48 in. above normal. Highest weekly total 10.03 in. Highest 24-hour total 3.49 in. Temperatures averaged about 79 to 78° on Coasts and 74° Interior Divisions. Mean station temperatures ranged from 78.5 to 71.2°. Extremes 89 and 58°.

SOUTH CAROLINA: Rainfall was again well above normal further easing the moisture deficiency which has prevailed for so long. Between 2.00 to 3.00 in. was common. Temperatures averaged below normal for the week.

Winter wheat and other small grains in good condition. Pecan harvesting nearing completion. Tobacco bed preparation continues. Farmers were active caring for livestock, maintaining farm equipment, pruning fruit trees and other routine chores.

SOUTH DAKOTA: Temperatures averaged much below normal. Departures from normal ranged from 19° below to 8° below normal. Extremes: -21 to +33°. Precipitation was above normal in central and northeast, near normal in the west, and below normal in the southeast. Largest amount of precipitation was 0.61 in. in the northeast.

TENNESSEE: A series of frontal systems caused widespread rains throughout the week. Precipitation amounts were quite heavy averaging about 2.00 in. in the west and 2.00 to 3.00 in. over the remainder of the State, except for the southeast corner, which reported near 5.00 in. Temperatures were near normal in the east and about 2° below normal in the west and mid-State.

Farm activities include caring for livestock and general farm chores.

TEXAS: Weather: Dry weather, mild temperatures. Rainfall scanty, except Upper Coast. Two weak cool fronts moved across State. Fronts resulted in strong gusty winds and low humidities.

Crops: Lack of precipitation problem across most State, especially where high winds depleting surface moisture. Land preparation continued good progress. High Plains, cotton ginning lag behind harvest. Most cotton in modules. Some small grain fields show signs of stress from lack of moisture. South Central Texas little regrowth on grazed fields. Wheat good condition, although late planted fields suffering lack of moisture. Blacklands producers top dressing fields. Reported wheat condition 14% excellent; 55% good; 30% fair; and 1% poor. Cotton harvested 96%, 91% 1980, 96% average. Wheat emerged 100%, 99% 1980. Soybeans harvested 100%, 99% 1980, 100% average. Pecans harvested 93%, 91% 1980, 95% average.

Commercial vegetables: Rio Grande Valley, harvest of carrots, cabbage, green peppers continued. Early onions up to good stands, progressing rapidly. Harvest of grapefruit, early oranges continued. Coastal Bend, East Texas land preparation for spring planting continued. San Antonio-Winter Garden area harvest of cabbage, carrots active. Onions developing well, available moisture becoming short. Some land preparation underway. Trans-Pecos region harvest of cabbage continued; chili pepper harvest completed. Pecan harvest active, completed in many areas. Prices remain low, good demand for native, improved varieties.

Range and livestock: Range and pasture condition good although moisture needed. Dryness, colder temperatures combined to slow growth of grasses, weeds. Grazing becoming short, supplemental feeding increasing. Plains small grains still providing some grazing.

(Continued from page 1.)

Severe cold weather continued to cover the northern Plains with minimum temperatures as low as -33° at Williston, North Dakota.

UTAH: Recurring periods of snow most areas of State. Moisture extremely variable ranging from none to well over 1.00 in. Marked cooling trend northwest half of State. Averages ranged from 5° below normal to 8° above. Serious drifting of snow northwest.

Activities limited due to weather and holiday. Routine livestock care. Some repair of farm buildings and machinery. Marketing of apples, onions, and potatoes.

VIRGINIA: Low pressure developed off the east coast 28th spreading precipitation over the eastern half of the State. Midweek was fair, cool and dry followed by another storm system 31st and 3rd. Temperature extremes: 60° at Richmond to 15° at Chilhowie. Precipitation ranged from 0.50 to 1.50 in.

Topsoil moisture rated 13% short, 70% adequate, 17% surplus. Days suitable for fieldwork: 1.8. Winter grains and grazing crops in good to excellent condition. Outdoor activities mainly care and feeding of livestock.

WASHINGTON: West: Average weekly temperatures ranged from 2 to 6° below normals. Precipitation was below normal except in the north where amounts were at or slightly above normal. Weekly amounts were nearly 2.00 in. below normals on the Coast. Weekend weather consisted of rain or mixed rain and snow. Digging of rhubarb for forcing continued. Caneberry and blueberry pruning was done. Feed supplies adequate.

East: Average weekly temperatures were well below normal. Differences varied from 6 to 9° just east of the Cascades to 5° in other eastern areas. Precipitation amounts varied considerably. The area just east of Cascades was mostly 0.01 to 0.20 in. below normal. The extreme was near normal to 0.20 in. above normal. Weekend weather consisted of periods of snow and below normal temperatures. Pruning of tree fruit and grapes continued. Hay supplies remain adequate. Soil moisture in dryland areas is good. Small grains are in average condition.

WEST VIRGINIA: Temperatures averaged 1 to 4° above normal. High 55°, low 1°. Precipitation averaged below normal except in extreme south where 1.50 in. were reported.

Soil moisture adequate. Days worked averaged 2.8. Main activities: General maintenance and feeding. Hay, grain and other feed supplies adequate.

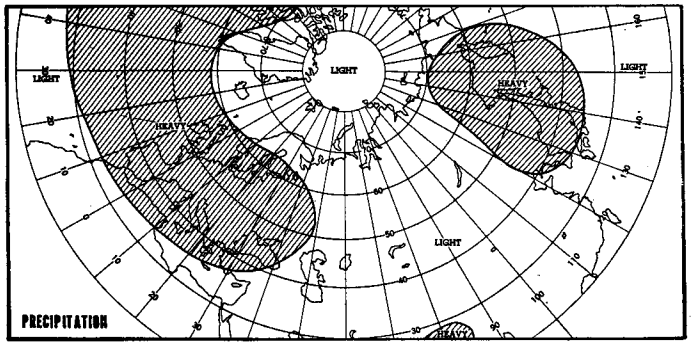
WISCONSIN: No report received. Heavy snow closed offices.

WYOMING: All stations colder than normal. Belle Fourche Drainage coldest averaging 10° below normal. Warmest temperature 52°. Coldest 11° below zero. Northwest half well above normal moisture while rest near normal, 2.55 in. greatest amount of moisture.

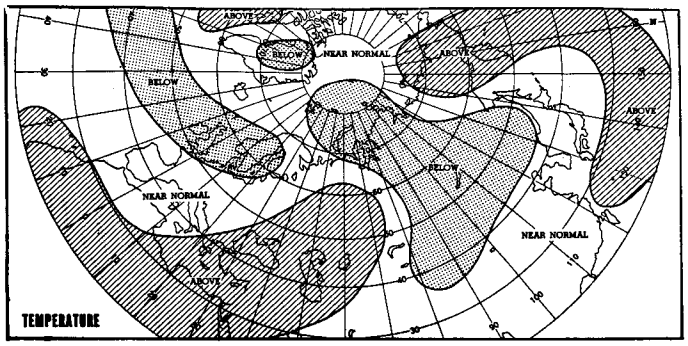
Winter wheat mostly good condition. Additional moisture would be beneficial. Livestock mostly good condition. Snow cover, colder weather increasing supplemental feeding.

SATURDAY...The snow got deeper in most of the mountains of the West, and snowshowers early in the day changed to rainshowers in Arizona and New Mexico. A complex frontal system produced thundershowers, rain, freezing rain, or snow from eastern Texas through the Plains and eastward to the Appalachians, the mid-Atlantic, and southeastern States. Showers were moderate from Mississippi to Georgia and through most of the Mississippi River Valley. Freezing rain covered the middle portion of the Valley.

EURASIA OUTLOOK FOR JANUARY



OUTLOOK FOR JANUARY 1982

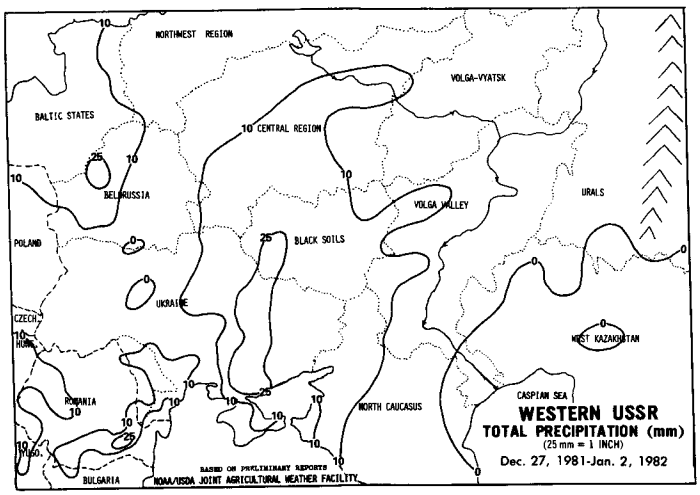


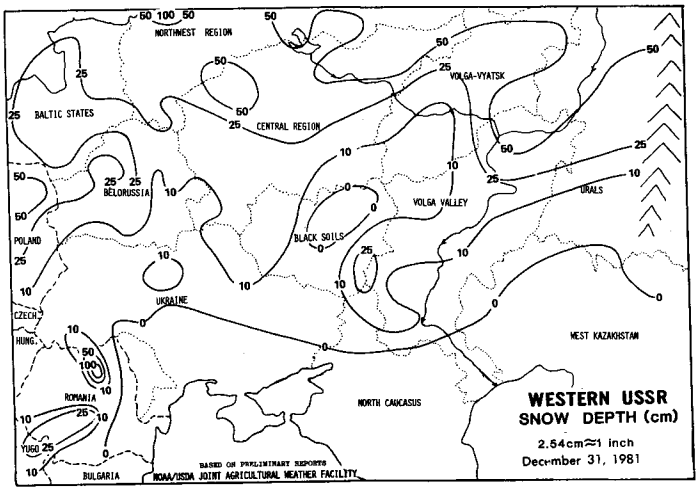
The predicted monthly temperature and precipitation patterns outside the United States are by-products of the procedures used to make monthly forecasts for the United States itself. Those procedures require the construction of charts of expected monthly upper-air circulation around the Northern Hemisphere, from which inferences about corresponding surface weather can be made. In areas outside the United States, inferences should be regarded as tentative since they have not been systematically tested by observation and their average accuracy remains unknown. The weather services of many of the nations of the Hemisphere issue tested monthly forecasts for their own territories. Those forecasts should be consulted where available.

International Weather and Crop Summary

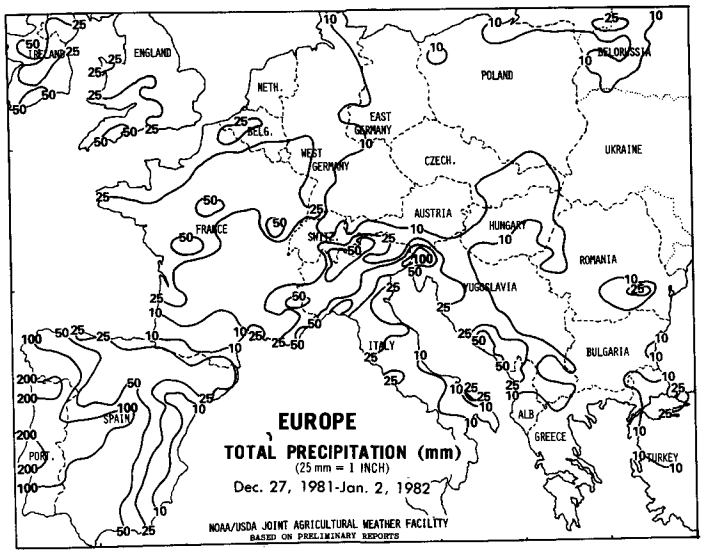
HIGHLIGHTS
Dec. 27, 1981-Jan. 2, 1982

WESTERN USSR:	Generally light precipitation and above normal temperatures.
EUROPE:	Wet weather continued over crop areas of the Iberian Peninsula.
MEXICO:	Dry, mild conditions favored harvesting and other field operations.
NORTHWESTERN AFRICA:	Beneficial rainfall over much of Morocco; drier to the east.
SOUTH AFRICA:	Light rains; soil moisture adequate in most areas.
SOUTH AMERICA:	Favorable moisture for crop development; showers slow late wheat harvest.
AUSTRALIA:	Warm, dry weather aids late grain harvest.
EASTERN ASIA:	Light precipitation benefited China's southern winter grain area.
SOUTH ASIA:	Precipitation only in northern Pakistan--beneficial for winter grains.

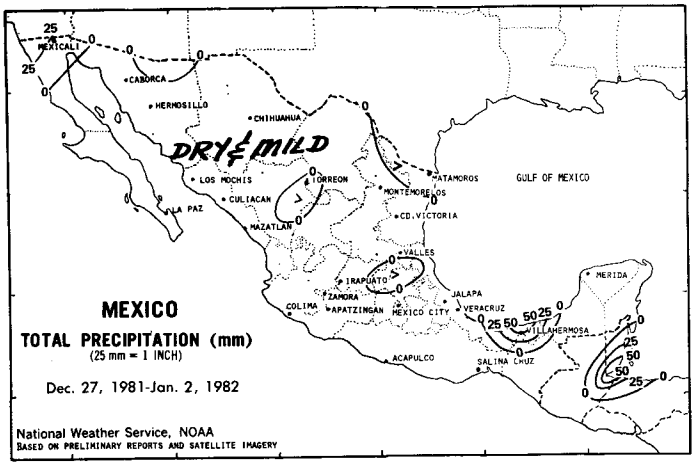




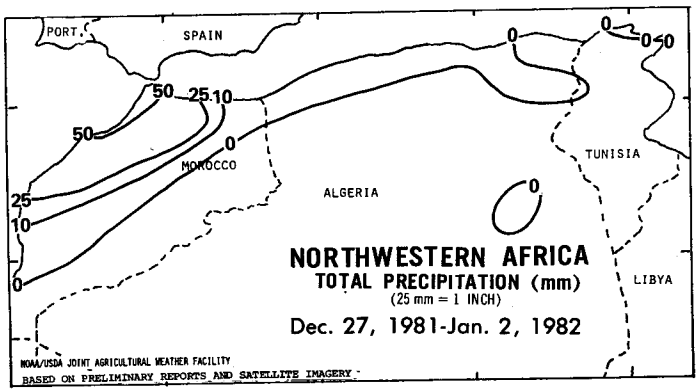
WESTERN USSR: Available data indicated generally light precipitation fell over most of the region except a narrow band of wet weather from the eastern Ukraine into the western Black Soils. Average temperatures were generally above normal for the week varying around 0°C in the west, central, and southeast and -10°C in the northeast. Snow cover as of December 31, 1981, was reduced in the Ukraine but increased in the Black Soils and southern Volga Valley. No substantial change in snow cover was reported over the remainder of the region.



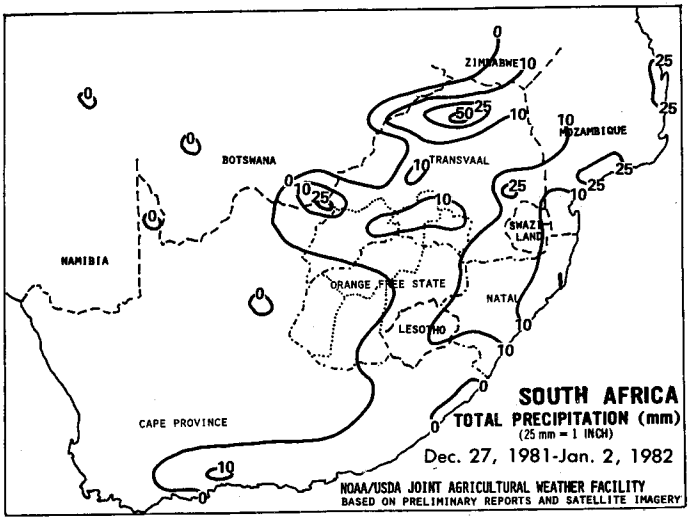
EUROPE: Widespread precipitation continued over the Iberian Peninsula. Some local flooding occurred in Portugal which received 100 to 200 mm of rain during each of the last 2 weeks. Reports indicate that the precipitation in Spain significantly increased the water level of dams, but water supplies are still below the average of past years. In France, Italy, and Yugoslovia, widespread precipitation of 10 to 50 mm further improved soil moisture conditions. Lighter amounts of rain fell on the remainder of Europe. Temperatures over the region remained below normal in the North, near normal over central Europe, and above normal both in the South and West.



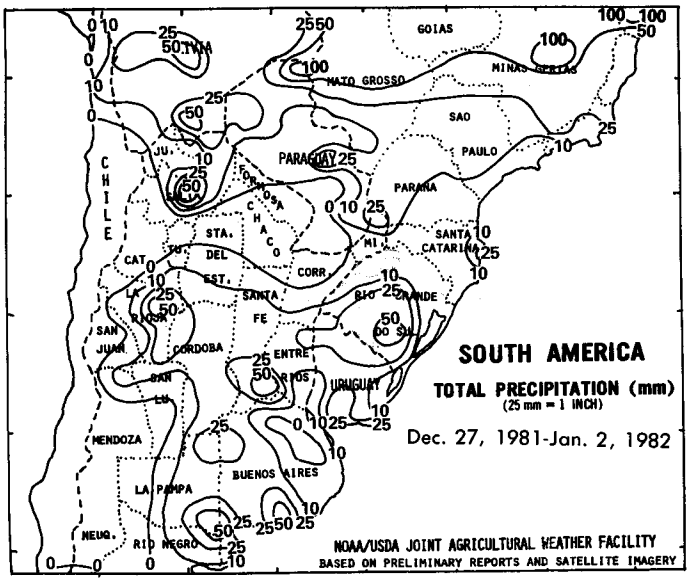
MEXICO: Mild, dry weather covered most of country, allowing general field operations to progress satisfactorily. The open weather favored cutting of sugarcane and harvesting of coffee in the east central coastal plains and mountain slopes. West Coast tender vegetables and winter wheat continued to develop well with seasonal temperatures. In the Culiacan Valley, afternoon highs averaged 26°C while overnight lows averaged 14°C.



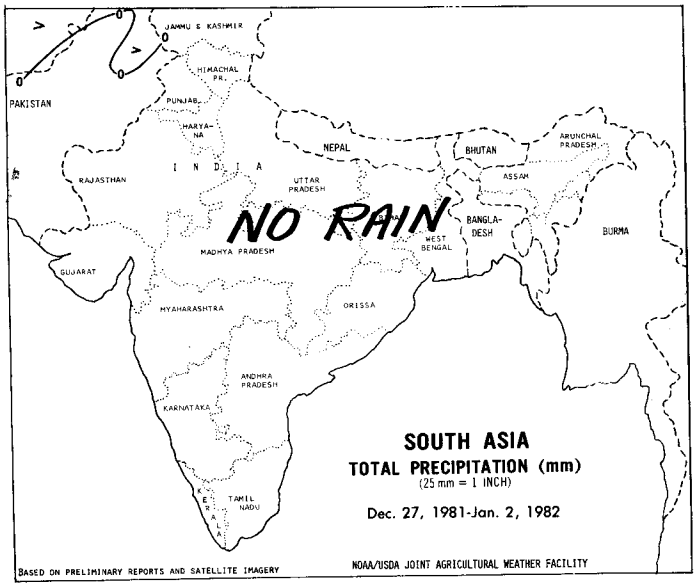
NORTHWESTERN AFRICA: Precipitation in Morocco spread to cover most winter grain areas. Amounts of 20 to 30 mm from just south of Casablanca to the Safi area should allow winter grain sowing. However, potential yields have already been reduced because of late sowing, and timely rainfall will be needed to maintain the young plants. Crop areas closer to the Atlas Mountains remained too dry for sowing. Northern crop areas of Morocco had continued abundant rainfall of 30-50 mm, and conditions have become quite favorable for winter grain growth. Only light rain fell across northern Algeria, and northern Tunisia received virtually none. Soil moisture was quite adequate in winter grain areas from central Algeria eastward through Tunisia, but conditions in western Algeria remained too dry for sowing. Temperatures over the whole region ranged somewhat above normal.



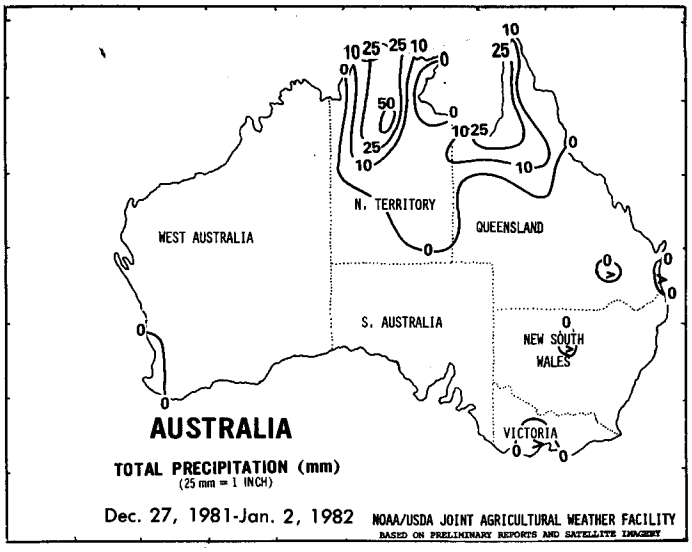
SOUTH AFRICA: Light showers continued over all but the southwestern quarter of the Maize Triangle during most of the week. However, accumulations were substantially below normal. Apart from some dry pockets in the southwestern portion of the growing area, soil moisture should be adequate for plant development for the time being. Temperatures averaging only slightly above normal indicated that there was no excessive water need by the crop. Nevertheless, timely rainfall in near-normal amounts will be needed during the next few weeks as the crop advances into the flowering stage of development.



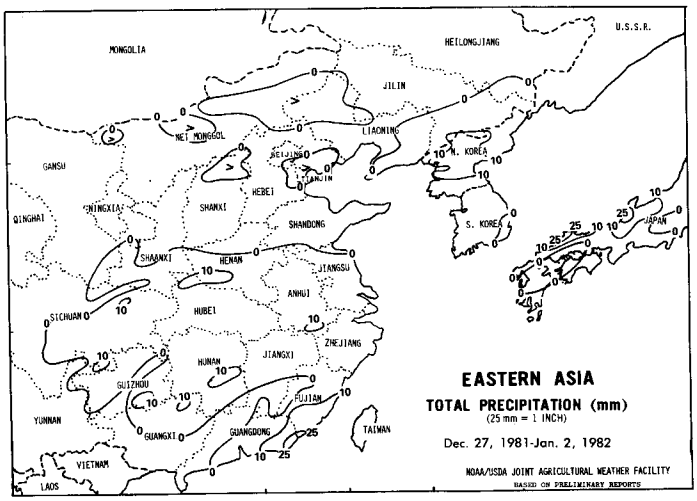
SOUTH AMERICA: Widespread showers fell over most crop areas. In Argentina, locally heavy showers in southern Buenos Aires likely interfered with the late wheat harvest. Otherwise, the moisture aided vegetative growth of soybeans and reproductive development of corn, sorghum, and sunflowers in Argentina. Cotton areas of northern Argentina were mostly dry, but soil moisture is generally adequate for development of the flower buds. In Brazil, abundant moisture benefited vegetative growth of soybeans in Rio Grande do Sul, while the more advanced soybean and corn crops in Parana and Sao Paulo, which were well watered during the previous week, received relatively light rainfall. Soil moisture supplies are favorable for promoting fruit growth in Sao Paulo's citrus area. Locally heavy showers occurred in Minas Gerais where early corn is maturing.



SOUTH ASIA: No precipitation was reported in southern India. The tropical shower band has continued its southern migration, essentially ending the northeast monsoon. Major winter grain areas in northern India and Pakistan had not received significant precipitation in recent weeks, but crop moisture needs have stayed minimal. Late in the week, a westerly storm was moving across Pakistan, dropping some light precipitation in the north and benefiting winter grains. The storm should continue across northern India.



AUSTRALIA: Warm, dry weather allowed rapid progress in the winter grain harvest throughout Australia's major crop areas. Harvesting is now concentrated mostly in southern grain areas as the harvest season enters its final month. Mostly light showers fell over northern portions of the Northern Territory and Queensland, but sugar cane areas of eastern Queensland received little or no rainfall.



EASTERN ASIA: Light precipitation fell on the southern half of China's winter grain belt during the week. Amounts have been substantially lighter than normal in recent weeks, but winter grains have been dormant in all but the southernmost areas. Northern winter grain areas were dry, except for very light precipitation in eastern Hebei. Moderate rainfall along the southern coast of China was triggered by tropical storm Lee passing to the south. In South Korea, light precipitation maintained favorable moisture conditions, but above-normal temperatures were still too low to allow winter grain growth.

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

IMMEDIATE – U. S. Weather Report

This Report Will be Treated in All Respects as Letter Mail

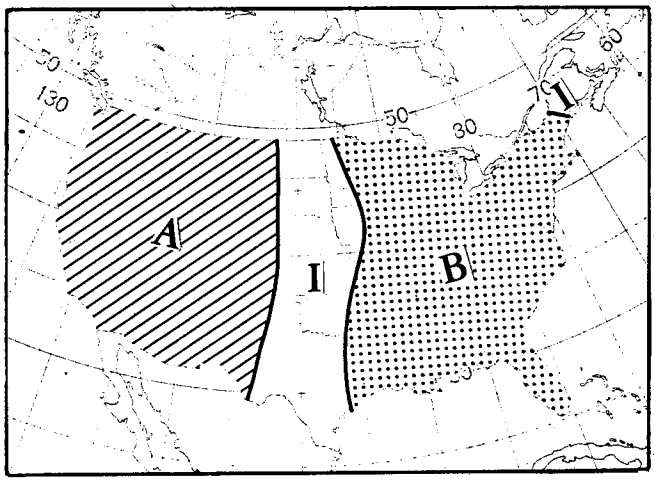
FIRST CLASS MAIL

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF COMMERCE
210

U.S.MAIL

See box below for subscription information.

OUTLOOK FOR 90 DAY AVERAGE TEMPERATURES
JANUARY THROUGH MARCH 1982



A — ABOVE NORMAL, 60% CHANCE OF OCCURRENCE

B — BELOW NORMAL, 60% CHANCE OF OCCURRENCE

I — INDETERMINATE, 50% CHANCE OF ABOVE NORMAL
50% CHANCE OF BELOW NORMAL

The two categories Above and Below are to be compared to the long-term average or "normal" temperatures of the year 1941-70. Each category has a natural climatic frequency or probability of 50%. Each carries a 60% probability of occurring where forecast (shaded area), based on the verification scores of twenty-two years of experimental seasonal predictions.

NOAA,National Weather Service,Climate Analysis Center

The Weekly Weather and Crop Bulletin is 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), 53rd Congress, 3d Session. NOAA is responsible for managing, printing, and distributing the Bulletin. The contents may be reprinted freely, with proper credit.

Annual subscription: $13 domestic and $18 foreign airmail. Draft checks on U.S. banks or international money orders in U.S. funds, payable to U.S. Department of Commerce, NOAA. Order from the NOAA/USDA Joint Agricultural Weather Facility, USDA South Bldg., Room 5844, Washington, DC 20250.

Multi-year subscriptions are encouraged to ensure continous coverage, reduce paperwork, and eliminate your receiving annual renewal letters.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service/Climate Analysis Center
Managing Editor . . . . . Don Haddock
Meteorologists . . . . . Jim Williams
Ray McInturff Wes Byrd
Lyle Denny
Dave Smith

Subscriptions (202) 447-7917 . . . . Tamara Bibber

U.S. DEPARTMENT OF AGRICULTURE
Economic Management Service
Editor . . . . . Don Dickson
Statistical Reporting Service
Agricultural Statistician . . . . . Bill Blackson
World Agricultural Outlook Board
Agricultural Weather Analysts . . . . Laras Lambert
Ray Motha Tom Puterbaugh