

The warming trend to the west continued into the Plains. Record high temperatures included 62° at Billings, Mont., and 67° at Concordia, Kans. Kansas City, where the low temperature on Monday was -1°, reported a high on Tuesday of 61°, up 62 degrees difference. Rain in the Pacific Northwest brought flooding to parts of Washington and Oregon.

On Wednesday, a frontal system across the Great Lakes spread snow from Michigan to Pennsylvania and New York. The snow spread eastward to the Coast during the day. Fair skies and cold temperatures prevailed across the South. Much of the Gulf Coast States were below freezing Wednesday morning. The warming trend continued to spread eastward from the Plains and Wednesday showed another series of recordbreaking high temperatures. Sioux City, Iowa, tied its 1894 record with 54°.

The rainy weather in the West extended southward into northern California and into Montana. Snow or freezing rain prevailed in the mountains.

Snow was falling from southern New England to Maryland and Delaware on Thursday. Half a foot of snow was on the ground in parts of eastern Pennsylvania and New Jersey. Very cold weather continued in New England. Light rain was still falling in the Pacific Northwest. Scattered showers fell in the lower Mississippi Valley. The heat wave through the Plains moderated and cooler air moved in from the West. The precipitation was still falling in the Pacific Northwest and extended to central California. Snow began to accumulate in the mountains.

The wet weather continued in the West on Friday. Showers and thundershowers were scattered through California and southern Arizona. Snow fell in the

Cascades and Sierras and across the Great Basin into Idaho. Elsewhere, light rain fell in parts of central Texas, Missouri and western Kentucky. Some light snow was still being reported in parts of Pennsylvania and Maryland. Frigid weather held on in New England.

Saturday was warm and wet in the Nation's mid-section. Rain extended from eastern Texas to the lower Great Lakes. The heaviest rainfall was concentrated in the South where some areas got over 2 inches. Late in the day thunderstorms were scattered throughout the rain area. However, on the first day of winter, a snow storm was developing in the Rockies. By the end of the day, snow was falling in the central and northern Rockies and had moved into the Plains.

It was still unseasonably warm from the lower Mississippi Valley through the Ohio Valley. The low temperature Saturday morning at Little Rock, Arkansas was only 54°.

Light snow continued over the mountains of Colorado and Wyoming and parts of the central Plains on Sunday but the precipitation changed to rain or freezing rain as it moved eastward. Warm weather with rain showers continued in the lower Mississippi Valley. Thunderstorms and even tornadoes belied the fact that winter had officially begun. The warm weather extended to the Great Lakes where more record high temperatures were recorded. Chicago chalked up a springlike 62°.

Meanwhile, on Sunday, another weather system moved onto the West Coast spreading heavy rain from northern California to Washington. Snow was heavy in the Cascades and Sierras. The much-needed snowpack was building in the California mountains.



National Agricultural Summary

December 17 - 23

HIGHLIGHTS: Additional rain brought relief to Texas rangelands and also brought surplus moisture to the Mississippi and Ohio River Valleys and the Pacific Coast. Relatively mild temperatures, 15 to 18 degrees above normal in the northern Plains were very helpful to livestock and reduced the need for heavy feeding. Soil moisture rated adequate except short in the northern Plains and parts of the West. Small grains generally rated fair to good, although much of the crop lacked snowcover and was subject to wind damage. The cotton harvest was almost complete in the Southwest, ranging from 95% in Arizona to 93% in Texas. Growers in the Southeast harvested a few soybeans. Southern pastures rated poor to fair. In the Southwest, dry soils caused rangeland to deteriorate, and stock tanks ran low.

SMALL GRAINS: Winter wheat rated fair to good throughout the Nation. Most areas needed snowcover to prevent damage from winds. Rains improved growing conditions in some parts of the South, but from Texas westward stands could use additional moisture.

Kansas wheat showed no change in condition. Soils were dry and wind damage continued to threaten. Farmers engaged in emergency tillage operations. Texas rains and above-normal temperatures aided emergence and growth of late seedings. Only limited grazing was available. Earliest Arizona fields began jointing. In California, dryland fields showed stress; some planting continued. Pacific Northwest winter wheat grew well and had no snowcover. Montana wheat rated fair with only light to moderate wind damage. Winter wheat in the Corn Belt rated good but needed snowcover.

OTHER CROPS: Cotton picking wound down throughout all major production areas. The Georgia harvest advanced to 99%, equaling last year. South Carolina growers scrapped cotton. The Alabama harvest reached 98%. Arkansas picking reached 100% as growers turned their attention to stalk destruction. Texas cotton picking reached 93%, surpassing last year's 79% and the 91% average. Gins had a heavy backlog of cotton stored in modules. The Arizona harvest reached 95%, equaling the average and 10 points ahead of last year. California cotton picking was virtually finished.

Soybean combining reached 98% in Georgia, 94% in North Carolina, and moved rapidly toward completion in South Carolina.

Corn picking was virtually complete, although a few areas reported some minor acreages remaining for harvest.

FRUITS AND NUTS: Deciduous fruit growers continued to prune and spray trees. Pecan harvest across the South ranged from 81% in Texas to 94% in Georgia.

Florida citrus groves generally were in very good condition. Growers irrigated groves on light soils to supplement showers. Harvest of early oranges was very active. The Texas citrus harvest advanced at a fast pace as groves dried. Arizona growers harvested Navel and sweet oranges, tangerines, lemons, and grapefruit. California growers harvested desert grapefruit in moderate volume, good-quality lemons, excellent-quality Navel oranges with good size but low demand, and good-to excellent-quality tangerines.

VEGETABLES: Florida vegetable crops generally rated fair to very good. Older crops declined seasonally while planting was active for later crops. Total vegetable shipments from Florida increased 8% from the previous week. Cabbage and cauliflower supplies increased considerably. The strawberry crop progressed well; good volume is expected in early January. Hard freezes reached into all areas of Texas except the Lower Rio Grande Valley; growers in the Valley harvested cabbage, lettuce, broccoli, cauliflower, and bell peppers.

California growers harvested good supplies of broccoli, carrots, and lettuce, and light supplies of cauliflower, celery, and fresh-market tomatoes.

PASTURES AND LIVESTOCK: In northern areas, a few cattle herds remained on crop stubble. Winter wheat provided only minimum grazing in almost all areas of the Nation. Southern grasslands generally rated only poor to fair. In Texas, rains improved rangeland, but ponds remained low. Arizona rangeland continued to deteriorate from the dry soils, and stock tanks were drying. Ranchers culled herds to conserve water and feed supplies. California grassland also needed additional moisture to improve growth.

Weather Data for the Week Ending **Dec. 23, 1979**

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. 3	Pct. normal since Dec. 3	Average maximum	Average minimum	Temperature °F		Precipitation	
														90 and above	32 and below	.01 inch or more	.50 inch or more
ALA. Birmingham.	55	34	67	19	45	0	0	-1.2	0	.7	19	76	47	0	4	0	0
Mobile.	59	38	74	22	49	-4	.5	-.9	.4	3.4	83	78	53	0	3	2	0
Montgomery.	59	36	71	23	47	-1	0	-1.1	0	2.3	68	70	37	0	4	0	0
ALASKA. Anchorage.	12	0	18	-12	6	-6	T	T	T	.3	38	73	58	0	7	4	0
Barrow.	-13	-20	0	-30	-16	-2	T	T	T	0	0	62	48	0	6	1	0
Fairbanks.	-9	-7	-3	-35	-8	-4	T	T	T	.1	25	71	39	0	4	4	0
Kodiak.	26	14	41	9	20	-9	T	T	T	.3	24	77	52	0	3	3	0
Nome.	0	-18	13	-22	9	-12	T	T	T	.6	120	69	44	0	7	0	0
ARIZ. Flagstaff.	44	19	58	3	31	2	.8	-.3	.3	.8	53	76	39	0	7	4	0
Phoenix.	70	45	77	35	57	.5	.1	-1.1	.1	.1	20	59	27	0	0	1	0
Tucson.	68	46	79	33	57	.6	T	T	T	.1	17	49	22	0	0	0	0
Winslow.	49	22	57	11	35	3	.4	-.3	.2	.4	133	--	--	0	6	2	0
Yuma.	73	49	78	38	61	.6	0	-.1	0	0	0	60	24	0	0	0	0
ARK. Fort Smith.	56	32	68	10	44	4	1.2	.6	.9	2.7	135	88	50	0	3	3	1
Little Rock.	57	37	66	10	47	6	1.4	.5	1.2	2.9	104	71	49	0	3	2	1
CALIF. Bakersfield.	66	42	75	34	54	7	.2	-.1	.1	.2	50	--	42	0	0	2	0
Eureka.	60	47	72	36	53	5	1.7	-.2	.4	1.9	42	63	51	0	0	4	0
Fresno.	58	34	71	29	46	1	.4	0	.3	.4	33	97	57	0	2	2	0
Los Angeles.	67	48	78	41	58	2	.1	-.4	.1	.1	7	64	49	0	0	1	0
Red Bluff.	55	40	63	32	47	2	2.7	-1.8	1.8	2.7	108	95	55	0	1	1	1
San Diego.	69	51	82	46	60	4	T	T	T	0	0	65	55	0	0	0	0
San Francisco.	57	43	61	37	50	1	1.9	-.9	1.3	1.9	70	85	63	0	0	4	1
Stockton.	52	39	60	31	45	1	.6	0	.2	.6	33	--	73	0	1	6	0
COLO. Denver.	53	27	66	17	40	9	.5	-.4	.4	.6	200	62	33	0	6	2	0
Grand Junction.	39	19	43	13	29	1	.1	0	.1	.1	33	78	57	0	7	2	0
Pueblo.	59	19	70	12	39	6	.2	-.1	.1	.2	67	--	31	0	7	2	0
CONN. Bridgeport.	34	24	49	14	29	-3	.2	-.6	.1	1.5	62	49	50	0	5	3	0
Hartford.	33	17	49	7	25	-1	.1	-.8	.1	1.2	43	70	49	0	6	1	0
D.C. Washington.	43	31	54	21	37	1	T	T	T	.4	19	74	62	0	5	0	0
FLA. Apalachicola.	60	40	66	31	50	-4	0	-.8	0	3.3	138	86	59	0	2	0	0
Daytona Beach.	65	47	69	38	56	-3	.2	-.3	.2	.6	46	94	61	0	0	1	0
Ft. Myers.	75	55	81	49	65	1	0	-.3	0	5.1	567	89	57	0	0	0	0
Jacksonville.	60	40	66	32	50	-5	T	-.6	T	1.8	106	86	62	0	1	0	0
Key West.	75	66	78	62	70	-1	0	-.3	0	1.1	100	85	61	0	0	0	0
Miami.	75	59	79	56	67	-1	.1	-.3	.1	2.9	242	88	55	0	0	1	0
Orlando.	71	49	78	45	60	-1	0	-.4	0	.8	67	94	53	0	0	0	0
Tallahassee.	62	34	70	23	48	-5	0	-1.0	0	5.2	179	91	49	0	4	0	0
Tampa.	70	48	78	41	59	-2	T	-.5	T	1.4	93	92	46	0	0	0	0
W. Palm Beach.	74	53	77	50	63	-5	.1	-.5	.1	2.6	173	93	52	0	0	1	0
GA. Atlanta.	52	33	60	22	43	0	T	-1.0	T	.2	7	70	46	0	3	0	0
Augusta.	54	32	61	21	43	-2	0	-.8	0	.7	30	92	46	0	4	0	0
Macon.	58	35	67	20	47	-1	0	-1.1	0	1.1	37	85	46	0	3	0	0
Savannah.	56	38	62	25	47	-3	T	-.8	T	2.3	100	73	48	0	2	0	0
HAWAII. Hilo.	--	--	--	--	74	3	1.4	-2.2	0	4.1	37	--	--	0	0	0	0
Honolulu.	84	69	87	63	76	3	T	-.8	T	.9	38	85	55	0	0	1	0
Kahului.	--	--	--	--	--	--	0	-.6	0	0	0	--	--	0	0	0	0
Lihue.	--	--	--	--	73	1	.4	-1.1	0	2.3	53	--	--	0	0	0	0
IDAHO. Boise.	46	27	55	21	37	6	.3	0	.2	.4	40	82	49	0	5	4	0
Lewiston.	46	34	50	27	40	6	.3	0	--	.6	67	85	60	0	2	0	0
Pocatello.	42	19	54	7	30	5	.2	0	.2	.3	43	79	50	0	7	2	0
ILL. Cairo.	49	36	61	13	43	5	1.7	0	.9	2.9	107	--	--	0	0	3	2
Chicago.	42	28	59	2	35	8	.5	0	.3	.9	60	72	61	0	5	1	0
Moline.	44	23	57	-1	33	9	1.2	.8	1.2	1.4	117	78	55	0	5	1	1
Peoria.	44	25	59	-2	35	8	1.0	.6	.7	1.3	108	82	57	0	5	2	1
Rockford.	39	22	55	-5	30	7	.6	.2	0	.8	67	74	61	0	5	0	0
Springfield.	49	29	63	3	39	10	.7	.3	.4	.8	62	79	57	0	4	2	0
IND. Evansville.	45	30	57	11	38	3	1.0	.3	.6	2.2	96	87	66	0	5	3	1
Ft. Wayne.	37	25	50	10	31	4	1.2	.7	.8	1.6	107	81	65	0	5	3	1
Indianapolis.	43	27	56	6	35	5	1.6	-.6	.6	1.7	94	82	59	0	5	3	2
South Bend.	41	28	56	7	34	8	.5	-.1	.4	1.5	83	86	74	0	5	3	0
IOWA. Burlington.	46	29	56	-1	36	10	.8	-.4	.7	1.0	83	--	--	0	0	2	1
Des Moines.	46	23	55	-2	35	11	.1	-.1	.1	.1	14	71	45	0	6	2	0
Dubuque.	41	22	51	-5	32	11	1.0	-.6	--	1.2	92	82	47	0	6	0	0
Sioux City.	47	19	55	-4	33	11	T	-.1	T	0	0	86	49	0	7	1	0
KANS. Concordia.	52	24	67	1	38	9	T	-.2	T	0	0	68	45	0	7	0	0
Dodge City.	54	21	71	0	38	5	T	-.1	T	0	0	77	36	0	7	1	0
Goodland.	57	25	76	16	41	12	.3	-.2	.3	.3	100	74	39	0	7	1	0
Topeka.	53	21	65	0	37	7	T	-.4	0	.1	8	78	37	0	6	0	0
Wichita.	54	23	64	3	38	5	T	-.3	0	0	0	80	36	0	6	0	0
KY. Lexington.	47	30	56	13	38	4	.5	-.3	.4	3.0	125	80	50	0	4	2	0
Louisville.	47	30	55	13	39	5	1.6	-.9	1.3	3.1	135	79	54	0	5	2	1

Based on preliminary reports and 1941-70 normals

Weather Data for the Week Ending Dec. 23, 1979

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-hours, in.	Total, in., since Dec. 3	Pct. normal since Dec. 3	Average maximum	Average minimum	Temperature °F		Precipitation		
														90 and above	32 and below	.01 inch or more	.50 inch or more	
LA. Baton Rouge . . .	61	41	78	20	51	-1	.4	-.8	0	2.6	74	88	58	0	3	0	0	
Lake Charles . . .	64	43	73	24	54	0	.8	-.5	.8	2.9	74	76	59	0	3	2	2	
New Orleans . . .	63	43	76	26	53	-1	.9	-.3	.3	2.2	61	81	53	0	2	2	2	
Shreveport . . .	62	41	75	16	52	4	1.6	.6	.8	2.9	104	81	50	0	3	3	2	
MAINE. Caribou . . .	19	-3	35	-17	8	6	.5	-1.1	.4	1.3	68	68	56	0	7	2	0	
Portland . . .	29	11	42	-1	20	-4	.3	-1.1	.1	1.1	39	82	53	0	6	2	0	
MD. Baltimore . . .	41	27	53	17	34	0	.3	-1.1	.1	1.5	22	63	55	0	5	1	0	
MASS. Boston . . .	34	19	50	5	26	-5	.1	-.8	.1	1.1	38	71	51	0	6	3	0	
Chatham . . .	38	24	50	15	31	-1	.2	-.7	.2	2.9	100	79	56	0	6	3	0	
MICH. Alpena . . .	31	21	43	-1	26	4	.6	.2	.3	1.4	108	71	51	0	0	5	0	
Detroit . . .	37	23	51	5	30	3	.4	-1.1	.3	.6	38	83	70	0	5	3	0	
Flint . . .	36	24	50	4	30	4	.2	-1.1	.1	.8	67	91	77	0	5	3	0	
Grand Rapids . . .	38	26	53	7	32	6	.2	-.3	.2	.7	44	93	80	0	5	2	0	
Houghton Lake . . .	31	20	45	5	26	5	.4	0	0	.8	62	89	79	0	5	0	0	
Lansing . . .	36	21	51	0	29	3	.2	-1.1	0	.6	43	88	76	0	5	0	0	
Marquette . . .	29	20	35	-5	25	2	.1	-.3	.1	1.1	79	90	76	0	7	1	0	
Muskegon . . .	37	25	51	14	31	4	.5	0	.3	1.0	59	76	69	0	5	2	0	
S. Ste. Marie . . .	26	17	37	-1	22	3	.7	.2	.2	2.2	138	84	86	0	5	5	0	
MINN. Duluth . . .	30	18	35	-3	24	12	T	-.3	T	.1	9	80	66	0	7	0	0	
Internatl. Falls . . .	28	14	41	-18	21	14	T	-.2	T	.4	67	85	63	0	7	0	0	
Minneapolis . . .	37	20	45	-1	29	12	.1	-1.1	.1	.3	50	80	60	0	7	2	0	
Rochester . . .	37	21	46	-3	29	12	.2	-1.1	.1	.3	60	88	60	0	7	2	0	
St. Cloud . . .	36	17	44	-2	26	12	T	-.2	T	.3	50	89	77	0	7	0	0	
MISS. Jackson . . .	57	36	70	17	47	-1	1.0	-.2	.8	3.5	100	86	58	0	3	2	1	
Meridian . . .	59	35	70	20	47	0	.4	-.9	.3	1.8	47	81	50	0	3	2	0	
MO. Columbia . . .	50	31	59	2	40	9	.8	-.4	.8	.8	67	68	53	0	3	2	1	
Kansas City . . .	52	27	64	-1	40	10	T	-.4	T	0	0	66	39	0	4	1	0	
St. Louis . . .	51	33	62	6	42	9	.7	.3	.6	.7	50	71	54	0	3	2	1	
Springfield . . .	57	34	63	6	46	11	1.1	.5	.7	1.1	61	76	46	0	2	2	1	
MONT. Billings . . .	49	30	62	24	40	14	T	-1.1	T	.1	25	57	36	0	4	0	0	
Glasgow . . .	47	22	59	12	34	19	0	-1.1	0	0	0	90	53	0	6	0	0	
Great Falls . . .	49	31	58	15	40	12	T	-1.1	T	.3	75	57	36	0	4	1	0	
Havre . . .	49	23	57	6	36	19	0	-1.1	0	.2	67	81	39	0	6	0	0	
Helena . . .	34	12	39	-3	23	0	0	-1.1	0	.6	200	86	61	0	7	0	0	
Kalispell . . .	38	26	44	17	32	10	.1	-.3	T	.8	80	92	80	0	6	5	0	
Miles City . . .	46	17	62	-8	32	11	0	-1.1	0	.1	33	75	50	0	7	0	0	
Missoula . . .	33	24	36	19	28	5	T	-.3	T	.7	88	95	82	0	7	1	0	
NEBR. Grand Island . . .	52	22	66	5	37	11	T	-1.1	T	0	0	81	41	0	7	1	0	
Lincoln . . .	50	20	64	-1	35	9	T	-1.1	T	.1	20	88	46	0	6	0	0	
Norfolk . . .	49	21	69	3	35	12	.3	-1.1	.3	.4	100	87	47	0	7	2	0	
N. Platte . . .	57	23	66	10	40	14	0	-1.1	0	0	0	79	30	0	7	0	0	
Omaha . . .	47	25	57	0	36	12	T	-1.1	T	.1	20	64	48	0	6	2	0	
Valentine . . .	57	20	70	-3	39	14	0	-1.1	0	0	0	79	29	0	6	0	0	
NEV. Ely . . .	48	17	66	2	32	7	.1	0	.1	.1	25	54	30	0	7	2	0	
Las Vegas . . .	59	36	67	27	48	3	T	-1.1	T	0	0	48	26	0	1	0	0	
Reno . . .	48	19	60	12	34	2	.8	.5	.4	.8	114	80	45	0	7	3	0	
Winnemucca . . .	48	17	58	8	33	3	.2	0	.2	.2	33	80	39	0	6	4	0	
N.H. Concord . . .	29	9	42	-8	19	-4	.1	-1.1	.1	.7	30	70	55	0	6	2	0	
N.J. Atlantic City . . .	41	25	54	13	33	-1	.7	-.2	.5	1.8	64	86	62	0	5	2	1	
Trenton . . .	37	26	49	20	31	-2	.4	-.3	.3	1.4	61	77	61	0	0	3	0	
N.MEX. Albuquerque . . .	53	23	60	16	38	3	.2	-1.1	.1	.2	67	69	30	0	7	2	0	
Roswell . . .	56	28	67	14	42	4	0	-1.1	0	.2	67	77	61	0	5	0	0	
N.Y. Albany . . .	31	8	46	1	19	-4	T	-.6	T	.4	20	79	61	0	6	1	0	
Binghamton . . .	29	16	45	4	23	-1	.5	-1.1	.4	1.2	63	92	56	0	6	3	0	
Buffalo . . .	34	22	49	9	28	2	.4	-1.1	.2	1.1	55	77	62	0	5	4	0	
New York . . .	38	26	51	19	32	-2	.3	-.5	.2	1.5	60	76	63	0	5	3	0	
Rochester . . .	31	18	48	7	24	-2	.7	-.2	.3	1.1	65	88	69	0	6	5	0	
Syracuse . . .	30	15	50	-2	23	-4	.3	-.4	.1	.8	38	89	62	0	6	3	0	
N.C. Asheville . . .	53	28	67	20	41	3	T	-.8	T	.1	4	81	29	0	5	0	0	
Charlotte . . .	50	32	59	26	41	0	0	-1.1	0	.6	25	76	43	0	4	0	0	
Greensboro . . .	46	28	60	17	37	-2	T	-.7	T	.8	38	80	54	0	6	0	0	
Hatteras . . .	53	38	64	25	46	-1	T	-1.0	T	4.7	147	82	63	0	2	2	0	
Raleigh . . .	48	31	59	20	39	-1	T	-.7	T	.6	29	79	54	0	4	0	0	
Wilmington . . .	56	35	67	25	46	-1	T	-.8	T	1.7	71	74	44	0	2	0	0	
N.DAK. Bismarck . . .	42	14	56	2	28	14	T	-.1	T	.2	67	94	54	0	7	0	0	
Fargo . . .	34	18	43	0	26	15	T	-.1	T	.1	33	88	76	0	7	0	0	
Williston . . .	42	16	56	8	29	15	T	-.1	T	0	0	89	52	0	7	0	0	
OHIO. Akron-Canton . . .	38	25	50	9	32	4	.4	-1.1	.3	1.0	62	76	62	0	5	2	0	
Cincinnati . . .	44	28	54	10	36	3	1.3	-.7	.7	1.8	95	94	64	0	5	3	2	
Cleveland . . .	39	26	53	6	32	4	.7	-.2	.7	1.3	81	72	62	0	5	2	1	
Columbus . . .	43	28	54	12	35	6	.4	-1.1	.2	1.1	69	83	62	0	5	1	1	
Dayton . . .	43	27	54	10	35	6	.8	-.3	.3	1.4	93	84	69	0	5	3	1	
Toledo . . .	39	24	54	3	31	5	.8	-.3	.6	1.1	73	85	70	0	5	3	1	
Youngstown . . .	37	24	50	9	31	3	.4	-1.2	.4	.9	50	71	60	0	5	3	0	

Based on preliminary reports and 1941-70 normals

Weather Data for the Week Ending Dec. 23, 1979

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-hours, in.	Total, in., since Dec. 3	Pct. normal since Dec. 3	Average maximum	Average minimum	Temperature °F		Precipitation	
														90 and above	32 and below	.01 inch or more	.50 inch or more
OKLA.Okla. City . . .	58	30	70	2	44	5	.3	0	.3	.4	44	75	34	0	4	1	0
Tulsa . . .	59	35	70	7	47	8	.4	0	.4	.4	33	75	47	0	3	1	0
OREG.Astoria . . .	53	44	60	34	49	6	4.7	2.3	2.0	9.3	127	90	74	0	0	7	4
Burns . . .	40	22	50	13	31	4	.8	.4	.7	.8	67	85	61	0	3	2	1
Medford . . .	51	36	60	30	43	6	.4	.3	1.1	.6	46	86	62	0	2	4	0
Pendleton . . .	51	32	60	24	41	6	.1	.3	.1	.3	27	79	54	0	3	2	0
Portland . . .	49	39	57	30	44	4	2.8	1.5	.9	4.0	100	88	80	0	1	5	2
Salem . . .	54	41	61	34	48	7	3.0	1.5	.9	4.3	96	91	77	0	0	7	3
PA.Allentown . . .	34	22	43	13	28	-1	.3	.5	.3	1.7	71	81	61	0	6	2	0
Erie . . .	37	26	50	16	31	2	.8	.2	.5	1.5	79	--	--	0	5	5	1
Harrisburg . . .	36	26	48	20	31	0	T	.7	T	1.0	48	67	50	0	6	0	0
Philadelphia . . .	37	26	48	19	31	-2	.4	.3	.4	1.6	70	74	62	0	5	1	0
Pittsburgh . . .	40	25	54	8	33	4	T	.6	T	1.0	56	68	48	0	6	1	0
Scranton . . .	33	21	45	13	27	0	.3	.3	.3	1.0	56	75	56	0	5	3	0
R.I.Providence . . .	36	18	49	4	27	-3	.1	.8	.1	1.3	45	61	45	0	7	1	0
S.C.Charleston . . .	57	35	69	23	46	-3	T	.7	T	2.5	114	87	46	0	3	0	0
Columbia . . .	54	30	61	21	42	-3	0	.8	0	.7	30	96	47	0	4	0	0
Greenville . . .	53	34	62	25	44	2	0	.0	.0	.2	7	69	44	0	3	0	0
S.DAK.Aberdeen . . .	43	17	58	-3	30	15	T	.1	T	.1	33	88	52	0	7	0	0
Huron . . .	46	21	57	0	34	16	0	.1	0	0	83	51	0	0	7	0	0
Rapid City . . .	51	24	70	7	37	12	T	.1	T	.1	33	71	34	0	6	0	0
Sioux Falls . . .	43	21	50	-1	32	14	T	.1	T	0	93	61	0	0	6	0	0
TENN.Chattanooga . . .	50	29	56	18	39	-1	.1	.1	T	.5	14	75	45	0	5	2	0
Knoxville . . .	50	31	59	22	41	0	.2	.8	.2	.9	30	73	46	0	5	1	0
Memphis . . .	55	39	65	17	47	5	1.6	.5	1.3	4.6	139	80	58	0	2	3	1
Nashville . . .	52	33	62	15	42	3	1.3	.3	1.2	4.4	147	74	51	0	4	2	1
TEX.Abilene . . .	61	39	73	17	50	4	.9	.6	.9	1.6	229	76	38	0	2	1	1
Amarillo . . .	58	25	70	10	42	4	T	.2	T	0	63	26	0	0	5	1	0
Austin . . .	63	44	72	25	53	2	1.1	.6	1.1	2.2	138	73	51	0	2	2	1
Beaumont . . .	66	45	77	22	56	2	1.0	.1	.8	2.3	70	85	52	0	0	2	1
Brownsville . . .	73	50	81	33	61	-1	0	.3	0	1.5	167	89	59	0	0	0	0
Corpus Christi . . .	70	47	86	29	59	0	T	.4	T	.9	75	85	48	0	1	0	0
Del Rio . . .	65	43	77	27	54	3	.1	0	T	.8	267	83	43	0	2	3	0
El Paso . . .	57	31	67	19	44	0	T	.1	T	.1	33	82	35	0	4	1	0
Fort Worth . . .	62	41	73	18	52	5	1.6	1.2	1.4	2.6	217	65	51	0	2	2	1
Galveston . . .	61	51	67	37	56	0	.3	.5	.3	2.4	100	78	67	0	0	2	0
Houston . . .	67	44	80	24	56	2	1.0	.1	1.0	3.3	118	83	54	0	2	2	1
Lubbock . . .	55	32	68	12	44	3	T	.1	T	1.3	433	78	42	0	3	2	0
Midland . . .	62	37	74	24	50	5	.6	.5	.6	2.8	933	81	36	0	2	2	1
San Angelo . . .	63	39	73	21	51	4	.9	.8	.9	1.6	533	88	49	0	2	2	1
San Antonio . . .	66	46	74	28	56	4	.3	0	.3	1.2	109	79	54	0	2	2	0
Victoria . . .	65	44	76	24	55	-1	T	.4	T	.8	62	75	58	0	2	3	0
Waco . . .	62	40	74	21	51	2	2.7	2.3	1.7	3.0	214	83	59	0	2	2	2
Wichita Falls . . .	60	35	76	14	48	4	.5	.2	.5	.9	100	77	31	0	2	1	1
UTAH.Blanding . . .	43	21	51	13	32	3	.5	.2	.4	.5	56	81	43	0	0	2	0
Salt Lake City . . .	44	20	55	12	32	3	.5	.2	.3	.5	50	90	54	0	7	2	0
VT.Burlington . . .	26	10	45	-7	18	-3	.3	.2	.1	.5	31	72	54	0	6	4	0
VA.Lynchburg . . .	43	27	59	17	35	-2	T	.7	T	.8	36	63	--	0	6	0	0
Norfolk . . .	47	33	60	22	40	-1	.1	.6	.1	.7	33	64	51	0	3	1	0
Richmond . . .	45	28	62	16	37	-1	T	.7	T	1.3	59	89	65	0	5	0	0
Roanoke . . .	46	26	58	19	36	0	T	.7	T	.6	29	82	50	0	6	2	0
WASH.Colville . . .	41	34	49	25	37	10	.5	0	.3	.8	53	--	--	0	0	5	0
Omak . . .	35	30	41	23	33	7	.7	.3	.3	.9	75	--	--	0	0	5	0
Quillayute . . .	50	42	53	32	46	6	8.5	4.9	5.0	22.3	208	96	77	0	1	7	4
Seattle-Tacoma . . .	50	41	56	32	45	6	2.1	.8	1.8	8.3	208	87	75	0	1	7	3
Spokane . . .	45	33	51	20	39	11	.5	.1	1.1	.1	69	80	63	0	3	5	0
Walla Walla . . .	50	36	56	28	43	7	.2	.3	0	.7	54	77	63	0	2	0	0
Yakima . . .	40	29	46	24	35	4	.4	.1	.2	.7	88	91	80	0	5	4	0
W.VA.Beckley . . .	43	24	56	7	34	2	.1	.7	.1	.6	26	76	48	0	5	2	0
Charleston . . .	49	27	62	12	38	3	.1	.6	.1	2.0	95	76	40	0	4	2	0
Huntington . . .	48	30	59	16	39	4	.4	.2	.4	2.3	121	65	39	0	4	2	0
Parkersburg . . .	44	27	55	11	35	1	.1	.5	0	1.4	78	78	48	0	5	0	0
WISC.Green Bay . . .	33	19	39	-7	26	7	.4	.1	.2	.9	100	91	77	0	6	2	0
La Crosse . . .	37	22	44	-1	30	10	.5	.3	0	.7	100	91	74	0	5	0	0
Madison . . .	38	20	50	-3	29	9	.6	.3	.3	.8	73	89	71	0	5	2	0
Milwaukee . . .	38	24	52	-2	31	9	.3	.1	.3	.5	42	81	73	0	5	2	0
WYO.Casper . . .	44	27	51	17	35	10	.1	.0	.1	.4	133	67	40	0	6	1	0
Cheyenne . . .	50	32	58	26	41	12	T	.1	T	0	52	31	0	0	5	0	0
Lander . . .	41	18	55	8	30	8	1.0	.9	.8	1.1	367	78	49	0	7	2	1
Sheridan . . .	50	20	60	12	36	11	T	.1	T	.3	75	79	37	0	7	0	0
P.R.San Juan . . .	83	73	85	73	78	2	1.4	.4	1.2	3.4	106	85	60	0	0	6	1

Based on preliminary reports, and 1941-70 normals

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 ESCS State offices in cooperation with the National Weather Service.

ALABAMA: Temperatures ranged from 15° subnormal on 17th to 16° above normal on 23d. Rainfall totals under 1.00 in., with most rain occurring on 23d.

Fieldwork: 4.8 days suitable. Soil moisture adequate. Crop harvest wrap-up, land preparation, livestock and poultry care main activities. Soybean harvest, wheat seeding virtually complete. Cotton 98% harvested. Pecans 86% harvested. Wheat, livestock mostly good condition. Pastures generally fair.

ARIZONA: Storm brought 0.50 to 1.50 in. precipitation central basins, Mogollon Rim, White Mountains. Snow level 4,000 feet, 3 to 11 in. accumulation over Rim, White Mountains. Western, southern areas recorded traces to 0.25 in. rain. Temperatures mostly 2 to 7° above normal.

Cotton harvest 95% completed, 85% last year, average 95%. Residue disposal continued. Sorghum, corn harvest winding down. Wheat, barley seeding continued. Early fields jointing stage. Sugarbeets continue good growth. Safflower planting continued central areas. Alfalfa hay good growth; new fields good stands. Lettuce harvest, large scale. Cauliflower, cabbage, broccoli various stages from just seeded to nearly mature. Harvest Navel, sweet oranges, tangerines, lemons steady pace. Grapefruit harvest slow. LP gas supplies adequate. Diesel, gasoline supplies mostly adequate but some central, southeast areas report deficit to tight. Ranges continue deteriorate. Stock tanks dry; supplemental feeding, water hauling required much of State. Cattle, calves fairly good condition. Many ranchers reducing herd, lack of forage.

ARKANSAS: Temperatures above normal in most areas. Cold weather noted early week, mild temperatures rest of week. General rainfall late week. Highest normal 48°, lowest 39°. Highest mean 52°, lowest 41°. Highest temperature 72°, lowest 2°. Most rainfall 1.26 in., least 0.06 in.

Cotton harvest complete. Stalk destruction continued. Small grains in excellent condition from mild weather. Livestock and pastures satisfactory.

CALIFORNIA: Relatively rainfree period broken midweek. High pressure which had dominated replaced by low pressure and southward dropping storm track. Rainfall totals relatively light. Only coastal points and northern mountains had amounts more than 1.00 or 2.00 in. Average temperatures above seasonal norms; early morning temperatures in low 30's and upper 20's common.

Cotton harvest virtually complete; still active Blythe area. Dryland grains show moisture stress some areas, planting continued. Sugarbeet harvest continued, planting for next year active. Alfalfa being sheeped, green chopped. Some weed control new fields. Seasonal cultural practices full swing. Harvest avocados and dates continued. Desert grapefruit moving in moderate volume, good quality. Good quality lemons being harvested. Navel orange quality excellent, very good size, demand low. Tangerine movement very good, quality good to excellent. Broccoli good supply central and south coast. Carrot harvest active central coast, Kern district. Cauliflower light supply, mostly central coast. Celery harvest light south

coast, Santa Maria-Oceano. Lettuce supply heavy Imperial Valley, nearly finished Palo Verde Valley. Potato movement moderate from Tulalake-Butte Valley cellars. Market tomato harvest about complete San Diego County. Ranges need moisture to continue growth. Supplemental feeding necessary. Livestock good condition.

COLORADO: Mild, dry. Only precipitation on weekend in light to moderate amounts. Most areas received less than 0.20 in. Temperatures generally 3 to 6° above normal.

FLORIDA: Strong cold front late 16th brought below normal temperatures and dry conditions statewide 17th - 20th. Freeze and frost conditions Panhandle, north. Gradual warming to normal temperatures 21st, 22d with warmer conditions 23d. Few showers along Atlantic Coast early on 22d with amounts 0.10 in. or less; dry elsewhere. Dense morning fog, 21st to 23d.

Soil moisture mostly adequate with a few dry spots in central and southern areas. Very little farm activity. Soybean, cotton harvest practically complete, but sugarcane cutting continued. Small grains good condition. Fuel supplies mostly adequate, except a little tight in central areas. Permanent pastures poor to fair. Mole crickets a problem in some areas. Small grain pastures progressing well. Supplemental feeding necessary. Cattle fair to good condition. Citrus grove condition generally very good. Only light rain received; some irrigation on sand hill groves. Fruit excellent condition, harvest early types very active. Cold front moved through vegetable growing areas early week, dropping temperatures into 40's some colder locations. High readings in 60's to 80's, skies clear and sunny with negligible rain. Winds generally light to very light. Overall crop condition fair to very good, some excellent. Older crops declining seasonally, completing harvest. Planting active some crops. Total shipments up 8% from previous week. Cabbage, cauliflower increased considerably while supplies snap beans, carrots, celery, okra, parsley, radishes gained. Holding steady volume are peppers, tomatoes. Chinese cabbage, sweet corn, cucumbers, eggplant, escarole, lettuce, squash supplies decreased. Strawberry crop progressing well. Fruit set, bloom good most fields. Harvest continues light some areas but good volume expected early January. Watermelon planting increasing southwest, light seeding underway west central area.

GEORGIA: Temperatures averaged 1 to 5° below normal. Averages in upper 30's extreme north to upper 40's extreme south. Rainfall averaged 0.33 in. south; little or no rain north.

Soil moisture adequate. Fieldwork: 5 days suitable. Cotton 99% harvested, 99% last year. Soybeans 98% harvested, 99% last year. Corn for grain 99% harvested, 99% last year. Pecans 94% gathered, 88% last year. Wheat 99% planted, 98% last year. Rye 99% planted, 99% last year. Other small grains 99% planted, 96% last year. Pastures fair to good. Cattle and hogs fair to mostly good. LP gas 94% adequate. Diesel fuel 92% adequate, 7% tight. Gasoline 95% adequate, 5% tight.

HAWAII: Weather continued favorable. Sunny weather with occasional showers at windward and higher elevations.

Crop conditions fair to good. Frequent spraying necessary to control insect, disease damage. Vegetable supplies light to moderate. Banana supplies light. Papaya supplies decreasing seasonally. Spraying active. Pineapple harvesting slow. Most sugar mills shut down for annual repairs. Pastures generally fair to good. Fuel supplies adequate.

IDAHO: Temperatures averaged 5 to 12° above normal. Extremes: 59 and -6°. No precipitation south; north above normal.

Farm activities centered around livestock care. Warm temperatures lessened feed demand. Livestock mostly in good to excellent condition. Hay supplies adequate. Some fieldwork south central. Most fields too wet or frozen other areas.

ILLINOIS: Temperatures 5 to 10° above normal; maximums 50's and 60's. Precipitation 0.50 in. to over 1.00 in.

Winter wheat mostly good condition, needs snowcover. Fieldwork limited. Activities: Caring for livestock, some on stubble; repairing machinery; general farm chores.

INDIANA: Warm, wet. Temperature averaged 7° above normal and ranged from 57 to 12°. Precipitation averaged 1.70 in. south, 1.60 in. central, 1.20 in. north. No snowcover. Sunshine averaged 54%. Some lowland flooding late weekend south.

Limited tilling and harvesting of few remaining fields of corn and soybeans. Some installation of farm drainage, spreading lime and fertilizer, mending fences, caring for livestock, usual chores.

IOWA: Temperatures averaged 10 to 15° above normal. Week began with subzero readings followed by quick moderation to near-record or record-high temperatures on 19th. Early week, fair, dryness gave way to cloudy, drizzly, foggy late week with light rain, drizzle west and moderate to heavy amounts in the east and central.

KANSAS: Warm; little or no precipitation. Temperatures averaged 10° above normal northwest, 5° above normal south central. Minimal precipitation statewide except southeast with 0.60 in. and northwest with 2 in. new snow, 0.26 in. water equivalent.

Wheat condition steady. Dry conditions prevail. Blowing threat strong. Emergency tillage in progress. Minimal grazing. Livestock care active. Fall tillage, fertilizing underway.

KENTUCKY: Very cold early in period but temperatures rose to well above normal by end of week and averaged several degrees above normal. Precipitation last 3 days brought rainfall totals ranging from 0.25 in. to over 1.00 in. in a few areas. Precipitation averaged around 0.50 in.

Tobacco stripping continued as weekend rains kept burley tobacco in case. Burley markets closed for holidays, will reopen January 7. Livestock in good condition with little supplemental feeding necessary.

LOUISIANA: Temperatures normal to 8° below normal. Scattered light showers.

Activities: Caring for livestock, farm maintenance.

MARYLAND & DELAWARE: Temperatures averaged slightly below normal. Highs around 40° to mid-40's and lows in mid-20's to near 30° except in teens in mountains. Precipitation very light and aver-

aged only 0.07 in. Some light snowfall averaging 1 in. or less from 19th thru 21st but mostly on 20th except western Maryland where 2 in. fell on 17th. Weekend cloudy and cold with scattered light showers and gradual warming trend.

MICHIGAN: Mild with temperatures averaging 3 to 8° above normal. Cold early week, warming through weekend. Extremes: -5 and 53°. Precipitation light averaging from 0.25 to 0.60 in. occurring as traces of snow early in period and as showers over weekend. Warm temperatures melted most snowcover over Lower Michigan. Greatest snow depth 8 in.

Main farming activities feeding livestock and farm chores.

MINNESOTA: Temperatures averaged 10 to 17° above normal. Extremes: 49° at Redwood Falls, -18° at International Falls. Precipitation averaged 0.10 to 0.30 in. below normal except normal to 0.25 in. above normal extreme southeast. Precipitation totals near zero except 0.10 to 0.45 in. east central through southeast late in weekend. Snowfall near zero except about 1 in. east central. Snow depth near zero except about 1 in. east central and 1 to 2 in. north central and northeast.

MISSISSIPPI: Temperatures ranged 4 to 9° below normal. Rainfall light early week, heavy rainfall 23d. Extremes: 10 to 70°.

Soil moisture adequate. Fieldwork: 2.9 days suitable. Farmwork slowed by wet fields. Harvest wrapped up. Machinery being cleaned and stored. Winter wheat condition fair to good. Pastures fair condition. Livestock condition fair to good. Hay and roughage supplies adequate. Feed grain supplies adequate. Gasoline, diesel, and LP gas supplies adequate.

MISSOURI: Weather mostly dry and mild with rain occurring at end. Significant rainfall 21st and 22d confined to eastern and southern areas.

MONTANA: Extreme cold early week gave way rapidly to general warmup. Temperatures generally 5 to 13° above normal except over portions of west and southwest where cold air remained trapped with temperatures averaging slightly below normal. Precipitation confined to west and southwest with mostly light amounts. Few areas in west had moderate amounts of rain or snow.

Winter wheat condition fair with minimum snowcover. Wind damage to winter wheat light to moderate. About 55% of cattle and 75% of sheep receiving supplemental feed. Cattle, sheep in good condition.

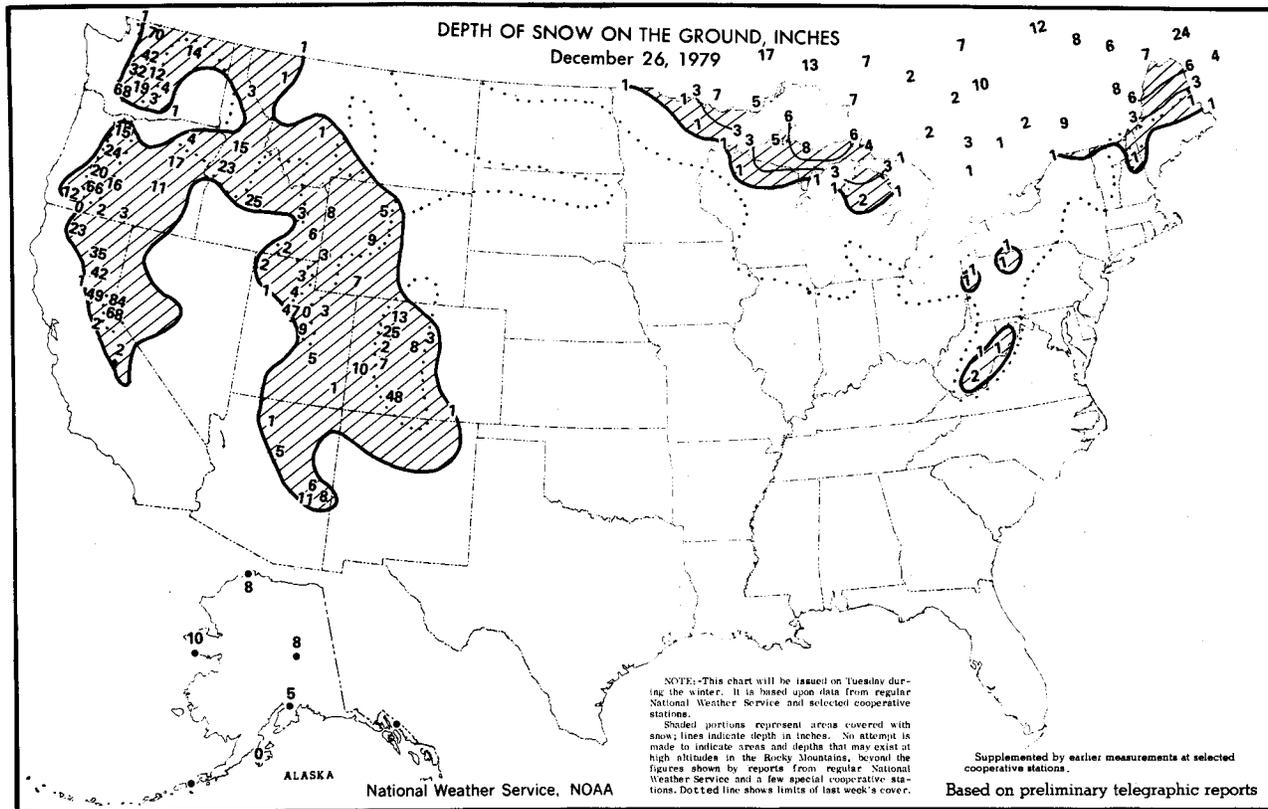
NEBRASKA: Temperatures averaged 15° above normal west and 10° above normal east. Only trace amounts of precipitation.

NEVADA: Dry and mild early in period. Series of storms last half of week brought significant precipitation most areas. Temperatures averaged mostly above average. Extremes: 72 and 6°.

Cotton harvest about completed. Livestock care increased by snow and inclement weather.

NEW ENGLAND: Strong high pressure system early week brought unusually cold temperatures, 10 to 20° subnormal. Temperatures rose to 10° above normal by weekend. Little precipitation early week, scattered showers by weekend.

NEW JERSEY: Temperatures 3 to 8° below normal averaging 22° north, 29° south, 34° coastal. Extremes: -1° Newton 21st, 58° Pomona 16th. Pre-



precipitation slightly below normal averaging 0.56 in. north, 0.36 in. south, 0.25 in. coastal. Snow on 19th generally amounting to between 3 and 5 in. Farmers caring for livestock and tending to regular winter chores.

NEW YORK: Temperatures averaged much below normal, but a return toward more normal temperatures near end of week. Temperatures well below zero in many Adirondack areas. Precipitation generally light; less than 0.25 in. Early week precipitation snow, all rain by weekend.

NORTH CAROLINA: Temperatures average or just below normal. Precipitation sparse, generally traces to few hundredths of an inch.

Fieldwork: 5.1 days suitable. Soil moisture adequate. Condition of wheat, oats, barley, rye fair to mostly good. Pasture fair to good. Soybeans harvested 94%, 1978 92%, average 93%. Small grain seeding virtually complete. Major activities: Soybean combining, tobacco plant bed preparation, discing fields, general farm maintenance.

NORTH DAKOTA: Dry and very mild. No measurable precipitation. Temperatures averaged 15 to 20° above normal. Extremes: -22° north central, 62° southwest and south central. Mild weather virtually depleted snowcover.

Soil moisture low. Fog and freezing drizzle east at weekend. Some travel restrictions and power outages. Overall, mild weather benefiting livestock producers.

OHIO: High and low temperatures above normal. Average highs in 30's to mid-40's. Readings in 50's some areas. Low temperatures below 10° northwest; in teens statewide early week. Temperatures rose later in week, however, and weekly average

minimums above average. Precipitation totals ranged from 0.33 in. parts of south to over 2.00 in. at some stations. Rain and cool, but not freezing, temperatures left soils soft in most areas.

OKLAHOMA: Temperatures averaged near normal to well above normal. Temperatures showed great range. No snowcover. Rains heaviest in southeast at 2.26 in. Most temperatures averaged 2 to 4° above normal. East central and northeast sections 6 to 8° above normal.

OREGON: Rain abundant over most of west with amounts ranging from 1.50 in. at some spots to 6.50 in. along coast. Eastern areas much drier with amounts generally less than 0.25 in. Temperatures well above normal.

Soil moisture supplies vary from short in some eastern portions to surplus in many western areas. Condition of winter wheat fair to mostly good. Some spraying taking place. Pruning getting started. Livestock condition fair to mostly good. Range and pasture conditions poor to good. Hay supplies tight.

PENNSYLVANIA: Weather data not available. Normal winter chores.

SOUTH CAROLINA: Near-normal average temperatures cool first, then above normal. Extremes: 21° at Walhalla, 69° at Charleston. Rainless.

Final cotton scrapping continued, maintaining exceptional quality. Soybean harvest ending rapidly in clear days. Winter wheat, rye conditions generally good with most stands excellent. Pruning fruit trees, grape vines. Sampling, liming soil or applying fumigants, disking in preparation for spring planting.

SOUTH DAKOTA: Temperatures exceptionally warm. Eastern portions 50°, western portions 60°. Extremes: 74 and -15°. Precipitation generally light.

TENNESSEE: Fair early week. Temperatures 5 to 8° above normal. Cold front at weekend. Rainfall heavy some locations. Amounts averaged 1.50 to 2.00 in. west and middle, 0.25 to 0.50 in. east.

Soil moisture surplus. Farmers busy marketing tobacco. Stripping nearing completion. Pastures fair. Cattle good condition.

TEXAS: High pressure system promoted fair skies first of week followed by front bringing rain weekend. Temperatures normal to 5 to 10° above Central, West. Rainfall 1.00 to 2.00 in. state-wide except South Texas, Valley received none.

Hard freeze first of week followed by warming trend; good weekend rains most of State. Cotton harvest winding down Plains, Trans-Pecos; gin backlog with heavy module storage. Moisture, warm temperatures aided small grain emergence, growth but still limited amount for winter grazing; insect activity light to moderate. Flax seeding, emergence still lagging in dry South Texas. Valley escaped freeze but sugarcane harvest slowed by wet conditions.

Cotton harvested 93%, 79% 1978, 91% average. Wheat planted 99%, 100% 1978, 100% average; emerged 92%. Pecans harvested 81%, 89% 1978, 91% average. Barley planted 99%, 100% 1978. Flax planted 71%, 91% 1978, 93% average.

Supplemental feeding continued. Ranges and pastures benefited from needed moisture in some areas and from moderating temperatures. Water in stock ponds getting low and runoff water needed. Livestock generally good condition.

Lower Rio Grande Valley, harvests of cabbage, lettuce, broccoli, cauliflower active. Some bell peppers available in light volume. Citrus harvest resumed at fast pace as groves dried. Coastal Bend cabbage continued to make good progress. San Antonio-Winter Garden carrots and cabbage continued to move in good volume. Onions growing well. El Paso red chili pepper harvest continued with light volume. Onions making good progress. Pecan harvest activity slowed. Quality on remaining nuts quite varied and prices low.

UTAH: Few isolated very light snow showers forepart period. New storm heavier intensity over weekend. Accumulated amounts of moisture generally

light to moderate but locally heavy. Average temperatures generally much above normal but cooling trend over weekend. Averages ranged between 4° below normal and 11° above.

Limited farm activities, caring for and feeding livestock, maintaining and repairing farm equipment. Sorting and marketing potatoes, onions, apples.

VIRGINIA: Cloudy skies, cool temperatures most of period moderating well above normal by the end of period. Average temperatures upper 30's; near normal. Extremes: 11° and 60's. Precipitation light occurring at about half the stations averaging less than 0.10 in. Trace of snow on 18th in some mountain locations.

WASHINGTON: West: Temperatures averaged about 4° above normal. Precipitation well above normal.

Producers pruning and tying cranberries when weather permits. Hay supplies short to adequate.

East: Temperatures averaged 4 to 9° above normal. Precipitation near normal.

Small grains doing well. Soil moisture improved. Protective snowcover lacking. Vine and tree pruning continued. Hay shipments steady. Livestock feeding active.

WEST VIRGINIA: Temperatures normal. Extremes: 1 and 57°. Precipitation below normal.

Fieldwork: 4.8 days suitable. Soil moisture adequate. Feed supplies adequate. Fuels adequate to tight.

WISCONSIN: Very cold 17th; subzero readings all stations. Temperatures began to moderate during 17th and by midweek had reached 30's to 40's during day; nighttime lows in 20's. Dense fog developed over east and southern sections 21st and state-wide 22d and 23d. Some rain or freezing rain and freezing drizzle statewide 22d and 23d.

WYOMING: Temperatures averaged above normal. Minimum temperatures below zero. Precipitation in very small amounts, mostly trace.

Ranchers able to cut back on supplemental feeding. Cattle and sheep in generally good condition with no unusual death losses. Soil moisture being depleted by above normal temperatures and dry winds. Most winter seeded crops in fair to good condition. Few corn fields continue to be harvested as fields dry.

International Weather and Crop Summary

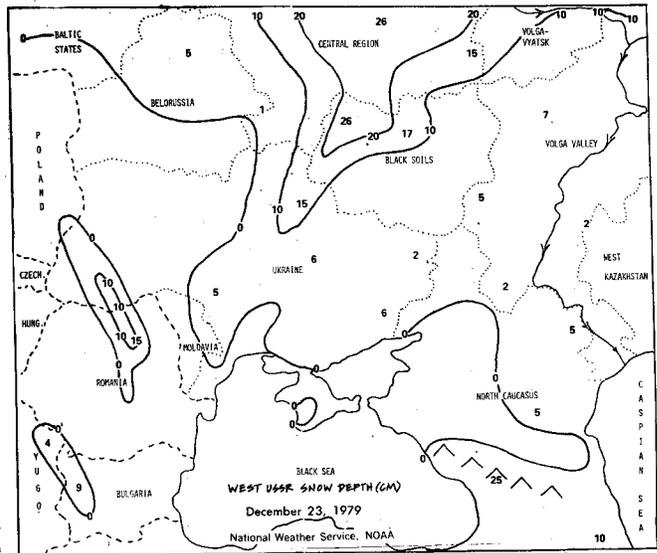
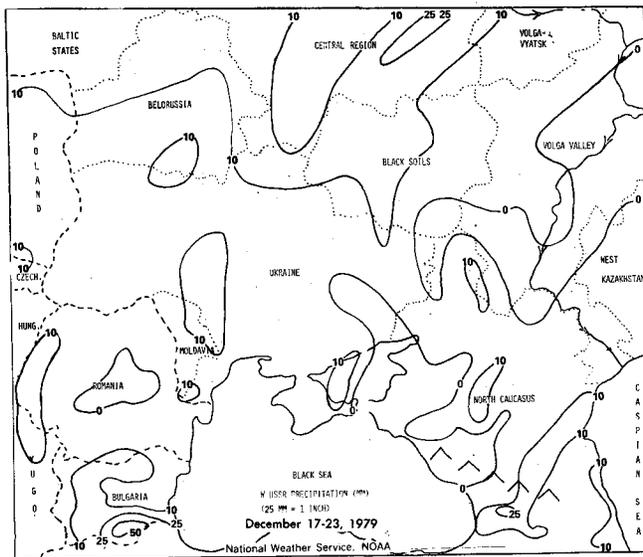
December 17 - 23

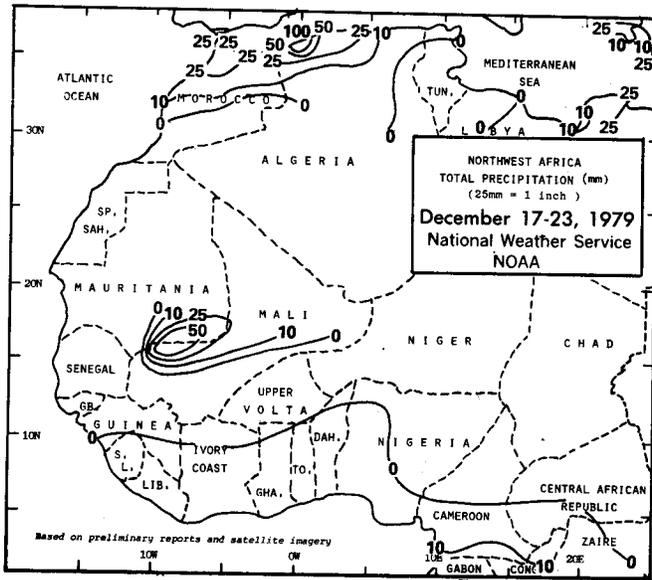
HIGHLIGHTS:

- USSR. Winter grains dormant...little snowcover; above-normal temperatures.
- EUROPE. Winter grains sowing nearly complete in the south*...continued dry in Spain.
- CHINA. Winter grains dormant only in the north...beneficial rainfall.
- INDIA. Sowing winter wheat...dry weather.
Cotton harvesting nearly complete*...favorable weather.
- AUSTRALIA. Harvesting winter grains in the south*...favorable weather.
- AFRICA. Northern: sowing winter grains*...beneficial rainfall in the west.
Southern: planting nearly complete in the Maize Triangle*...adequate moisture.
- ARGENTINA. Harvesting wheat*...favorable weather.
- BRAZIL. Soybean planting nearly complete...favorable weather.
- MEXICO. Vegetables growing in the west...rain in southern Sonora and Colima.

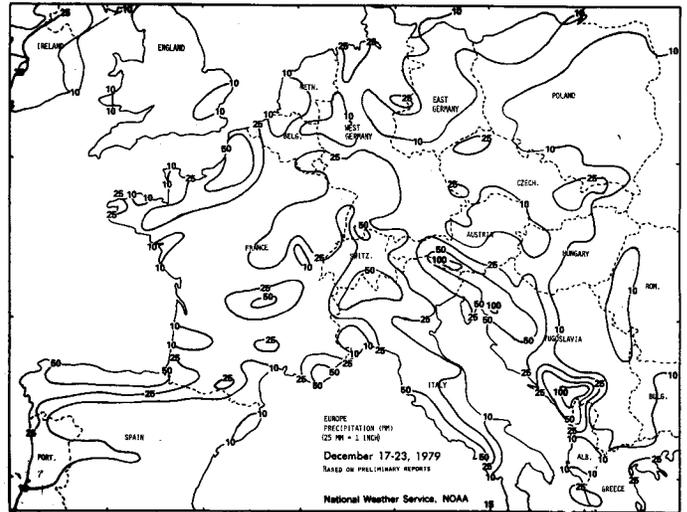
*Based on normal crop calendar information.

USSR. Moderate snowfall in the western half of the Soviet winter grain belt maintained moist conditions. Snow depths increased over the northern two-thirds of the Ukraine early in the week, but a weekend warming trend melted much of it, leaving 10 cm of cover only in the north central Ukraine and to the north. The above-normal temperatures did not reach sufficiently high levels to permit growth. Precipitation in the North Caucasus was quite variable, but crop moisture needs remained minimal.

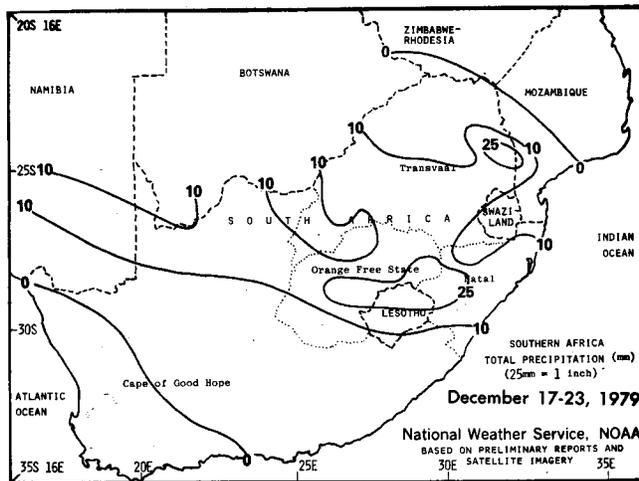


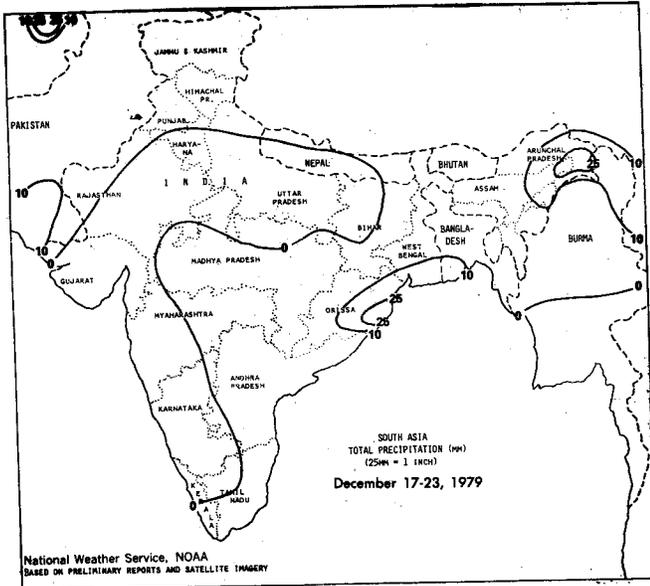


AFRICA. Beneficial rains doused previously dry winter grain areas in northwestern Africa, where seven-week totals were running only a fourth of normal. Conditions in some areas with lighter soils were becoming quite unfavorable for germination and development, but near-normal weekly rainfall in Morocco and above-normal totals in western Algeria boosted prospects immensely. Tunisia and eastern Algeria remained relatively dry for the third consecutive week, raising similar concerns there. Moderate rainfall in southern portions of South Africa's Maize Triangle kept growing conditions in the favorable category. Lighter, somewhat-belownormal totals in the northeast maintained adequate soil moisture following abundant rainfall earlier.



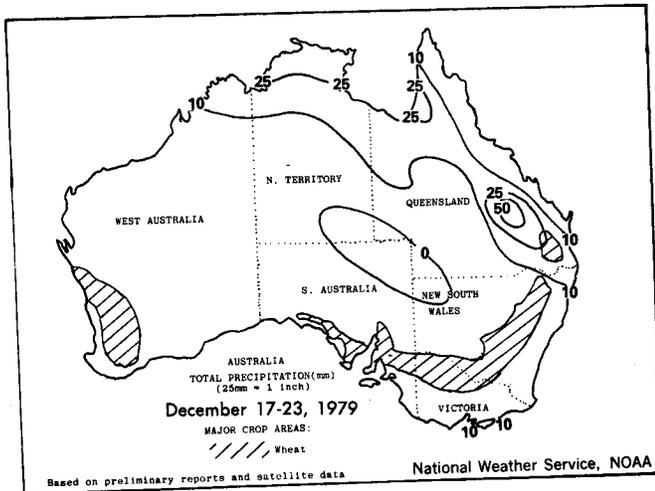
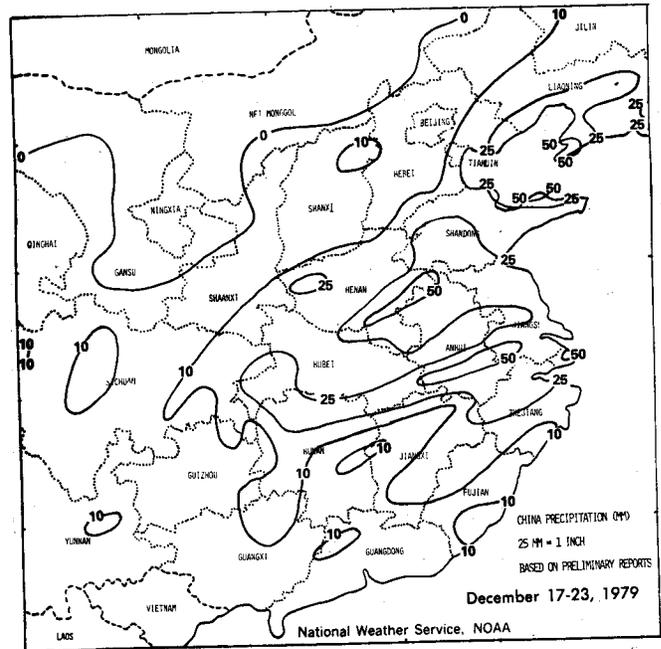
EUROPE. Much of western Europe received above-normal precipitation again this week. Temperatures became too low for plant growth in most winter grain areas. Only in central and southern Italy were conditions warm enough for wheat to benefit from the generous rainfall. Excessively wet conditions continued in the mountains of western Yugoslavia and southern Austria but with no direct impact on crops. At the other extreme, dry weather persisted over much of Spain for the fifth consecutive week, slowing germination and early growth of winter grain in the southeast.



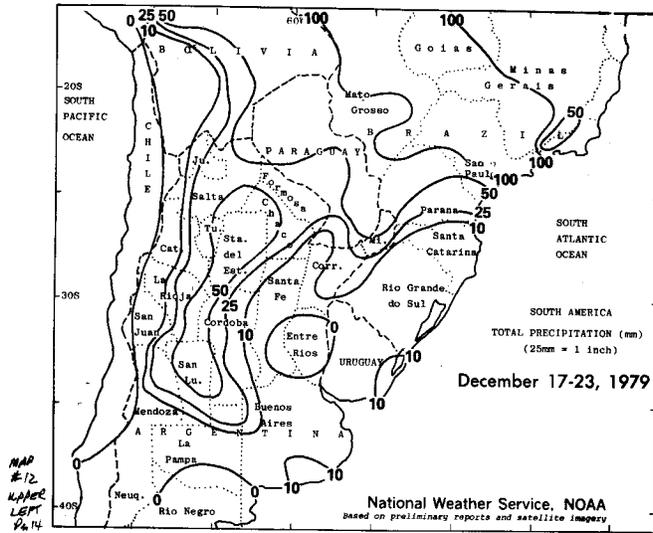


INDIA. Only a few millimeters of rain dampened scattered portions of the winter grain belt. At this time, precipitation has been in shortest supply in Punjab, where irrigation supplies should be adequate to carry the crop through. Central India received less than 5 mm of rainfall, while coastal areas of Orissa and West Bengal saw above-normal totals of 10 to 25 mm. Dry weather in the south favored late harvest activity.

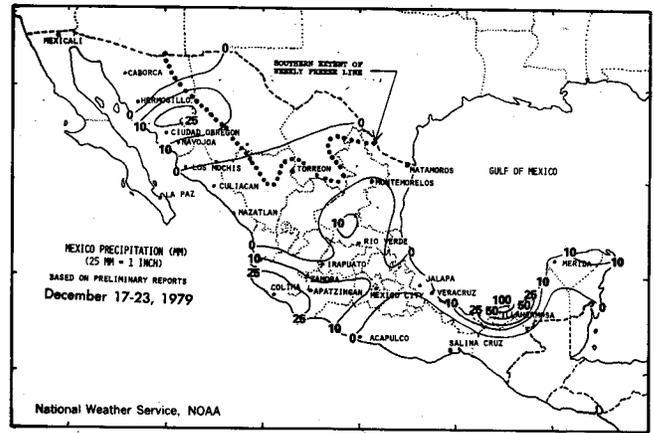
CHINA. Southwestern agricultural areas dried out, while much of the North China Plain received abundant precipitation. Normally, weekly totals range from only a few millimeters near Beijing to 8 or 10 mm in the Yangtze Valley, but 20-40 mm fell this week. Temperatures from Henan and Shandong to the north remained too cold for the moisture to benefit winter wheat immediately, but irrigation needs in most areas have eased considerably.



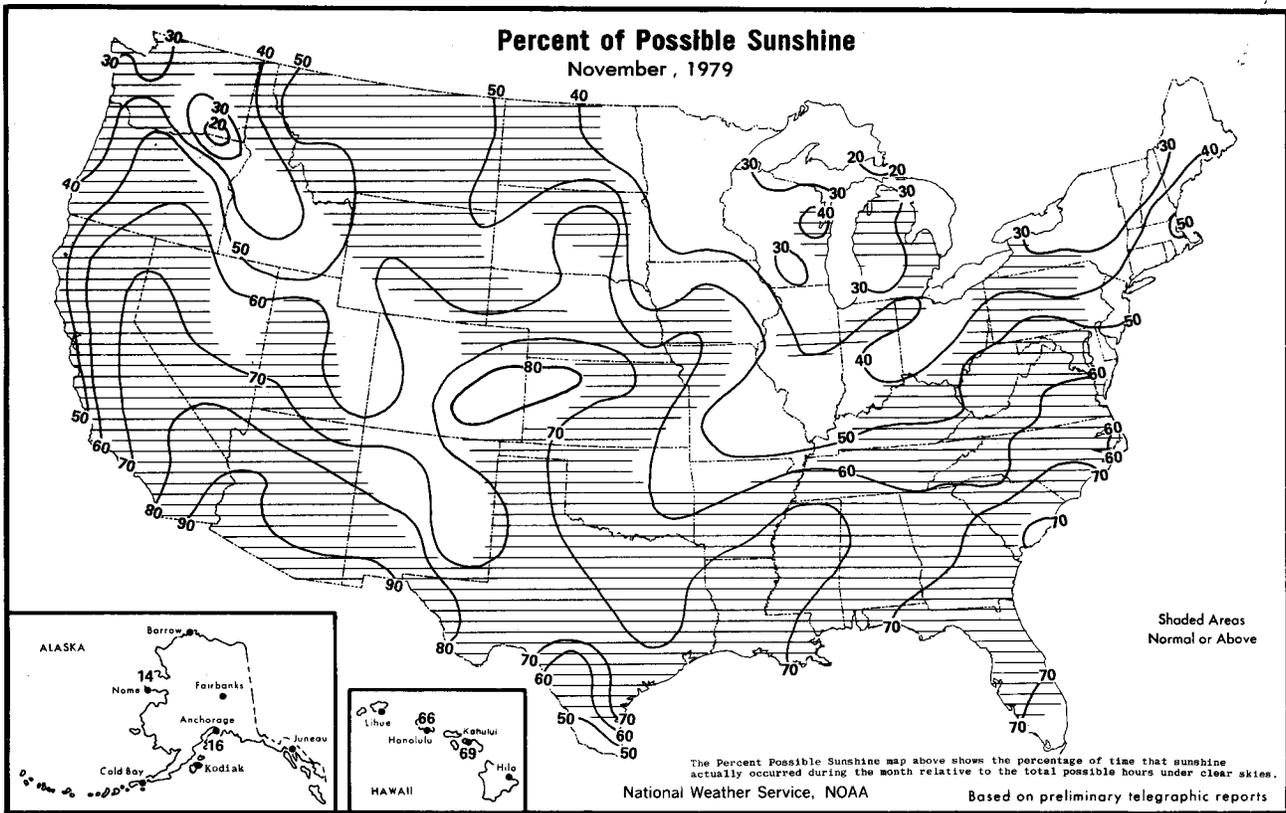
AUSTRALIA. A fourth consecutive dry week in southern winter wheat areas provided excellent conditions as the harvest moved into the latter stages. Rainfall increased in Queensland and the Northern Territory, but lagged noticeably in northeastern portions of Queensland where sugarcane is concentrated.



SOUTH AMERICA. Somewhat-above-normal rainfall in Parana soybean areas maintained excellent growing conditions. Amounts increased to become nearly excessive in Sao Paulo, but drier weather in Rio Grande do Sul probably allowed planting to near completion. Drier weather also returned to winter wheat areas in Argentina, with harvest activity probably moving further south in Buenos Aires Province. Abundant rain fell in marginally dry agricultural areas to the west in San Luis, La Rioja, Santiago del Estero, and western Cordoba, getting crops off to a good start.



MEXICO. Rains of 25 mm fell over the west coast vegetable areas of southern Sonora and Colima. A few sprinkles dotted eastern citrus orchards, central highland strawberries, and the drought-stricken north central rangelands; however, rainfall was too small to improve soil moisture. Heavy rains fell at the southern Gulf of Mexico coast. Considerable cloudiness reduced sunlight and kept temperature minima about five degrees Celsius warmer than normal over the west coast vegetables. The freeze line continued over the north central portion. Culiacan's afternoon maxima averaged 28°C with a relative humidity of 47 percent, while overnight minima averaged 18°C with a 96-percent humidity.

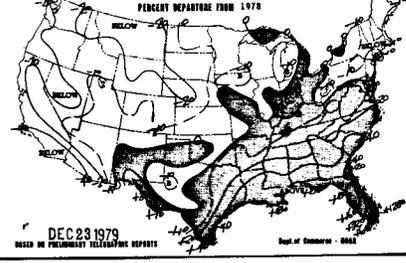
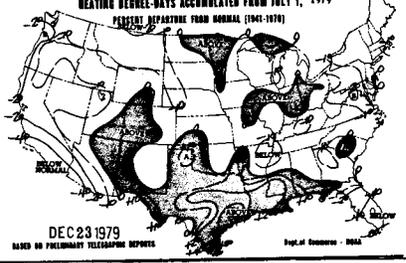


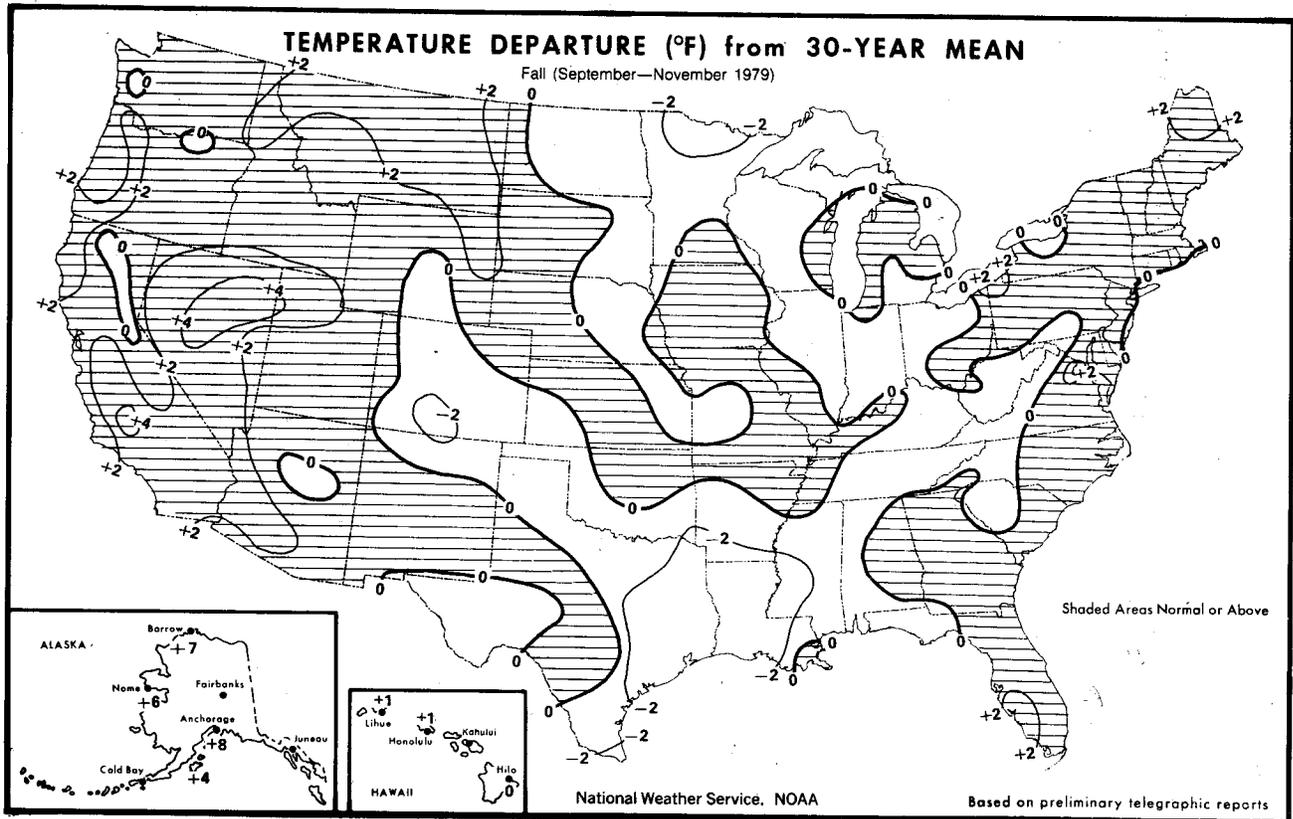
The Percent Possible Sunshine map above shows the percentage of time that sunshine actually occurred during the month relative to the total possible hours under clear skies. National Weather Service, NOAA Based on preliminary telegraphic reports

HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING DEC. 23, 1979.

BASED ON 1941-70 NORMALS. + ACCUMULATION FROM JULY 1, 1979.

Table with columns for STATES AND STATIONS, WEEKLY DEPARTURE*, SEASONAL ACCUMULATION +, and DEPARTURE FROM 1978-79. Rows list various cities across the United States.





Fall Weather Review

HIGHLIGHTS: Fall of 1979 was typical in many respects. Early in the season, two hurricanes dumped large amounts of rain in the eastern United States, and at the end of the season, a raging blizzard left 24 inches of snow in the Cheyenne, Wyoming area. Temperatures fluctuated wildly. Many areas experienced both record high and record low temperatures during each month of the season. The season ended with much less than the normal snowcover, although some heavy snow fell in the Rockies, the central Plains, the Great Lakes area, and in New England.

The fall season began with a typical month of September. In the first week, Hurricane David marched up the East Coast dumping 4 to 8 inches of rain and triggering tornadoes and flash floods. The second week of September ushered in Hurricane Frederic, which plowed across southern Florida and then slammed into the central Gulf Coast near Mobile, Alabama. Eight to 9 inches of rain soaked some Florida and Alabama points. The weakening storm carried heavy rain northward along the western slopes of the Appalachians. Later, a low pressure system formed in the western Gulf of Mexico and caused torrential downpours along the southeastern Texas Coast before tracking on to the mid-Atlantic States.

The resulting rainfall pattern for September showed heavy rain in most areas from East Texas through New England. Moderate amounts accumulated along the coastal areas of the Pacific Northwest and from parts of the north central Plains to the northern Great Lakes. Little or no rain was recorded elsewhere.

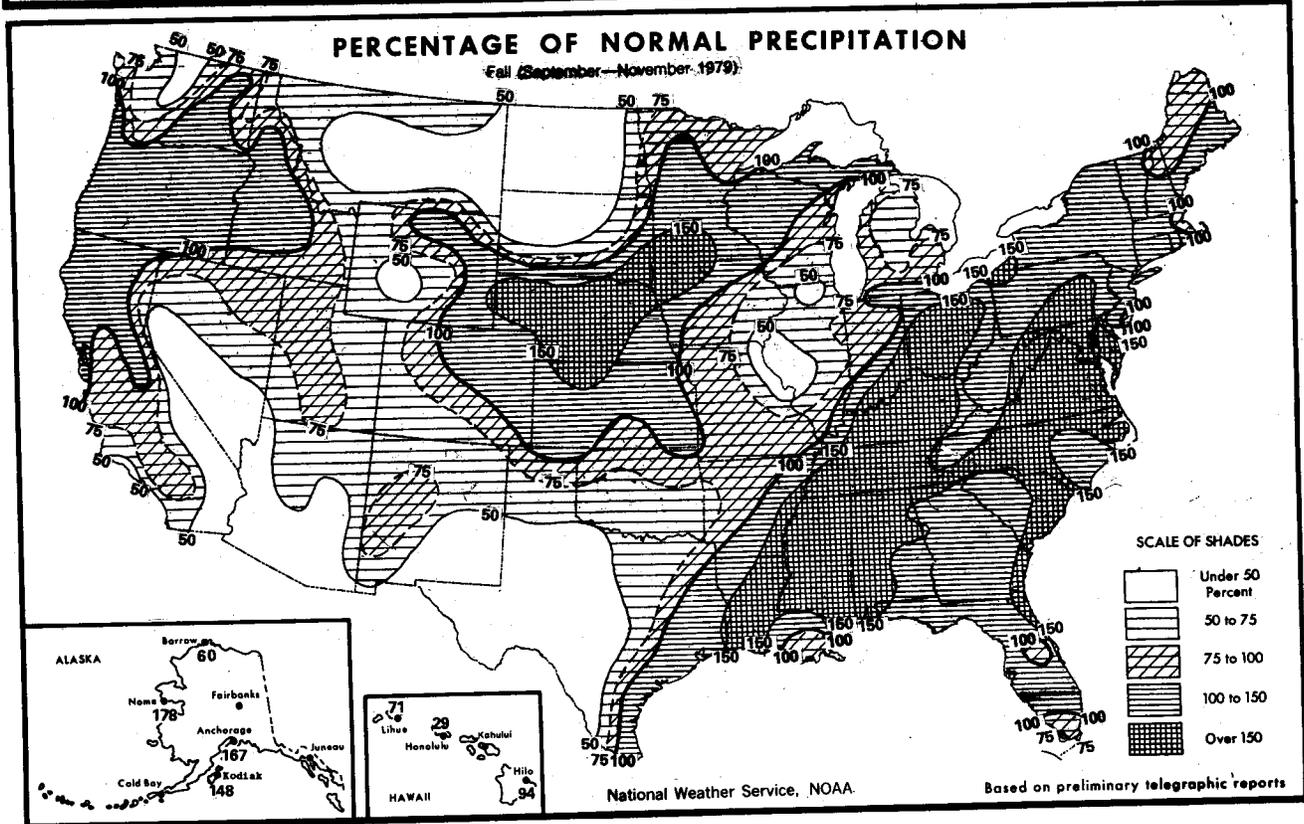
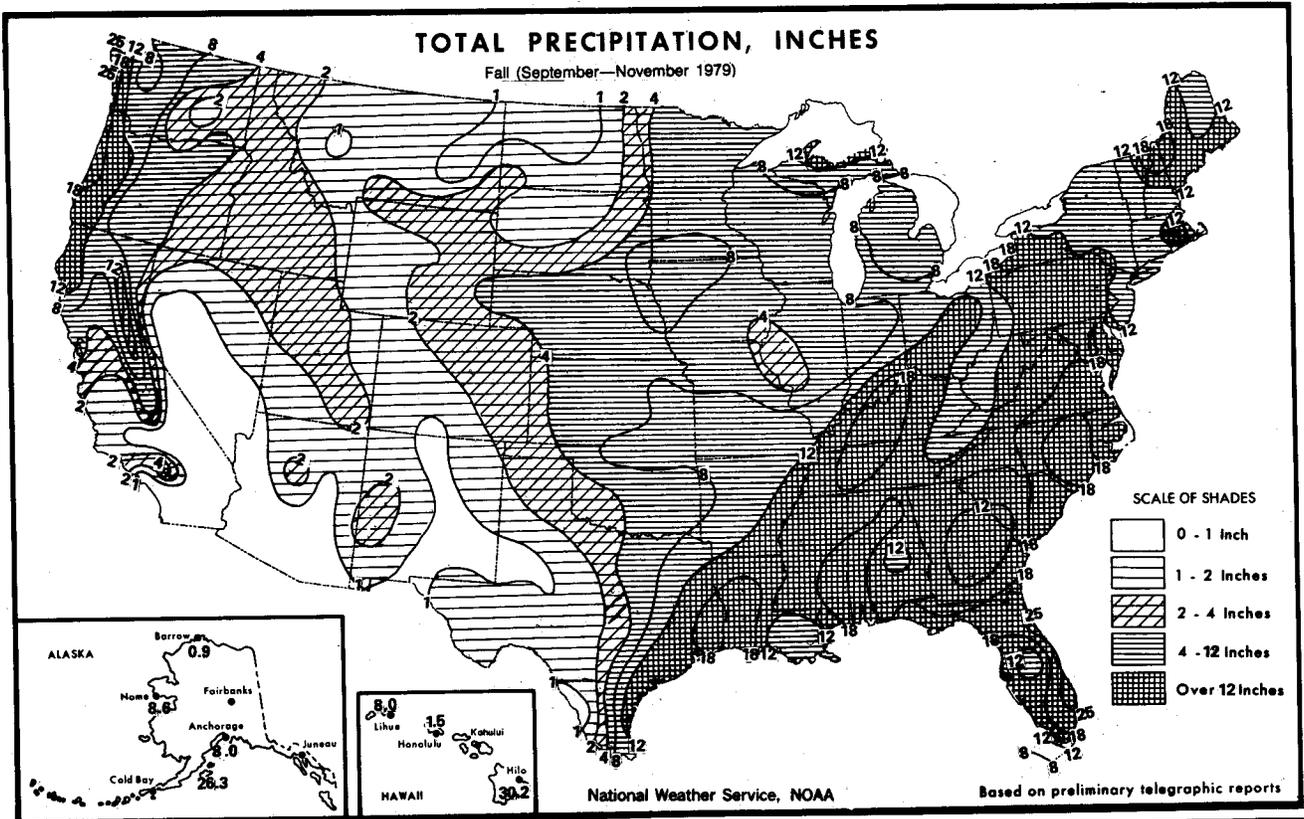
Average temperatures for the month were warm in the West and near normal in the East. A heat wave in the West centered in southern California and began to break as the month ended.

The month of October was unusually wet in many parts of the Nation. Rain totals for the month were up to one and a half times normal from the lower Mississippi River Valley to eastern New England. Totals were 2 to 4 times the usual October rain from the central Plains to the upper Mississippi Valley. At midmonth, the seasonal rain began in the West. Most of the Coast and northern portion of the Intermountain Region measured more than the normal amount. The Southwest and part of the northern Plains were very dry.

October temperatures averaged warmer than normal in the West and cooler in the East. Although September ended with a breaking of the heat wave in the West, the warm weather returned and continued until the last week in October before a cold airmass enveloped most of the Nation. Several cold outbreaks into the northern Plains spread eastward and kept most of the East a little cooler than a normal October.

November reversed the previous temperature pattern, and the area west of the Mississippi River averaged colder than normal, while the East was warmer.

Early in November, heavy rain in the East dominated the precipitation pattern, although some snow fell in the western mountains and northern Great Lakes. Shortly after midmonth, a storm formed in northern New Mexico and moved northeastward. Blizzard conditions existed in Colorado and Wyoming and moved east-northeastward toward the Great Lakes. Warm, moist air from the Gulf of Mexico was pulled northward, and heavy rain doused parts of the central Plains. Cold, windy weather moved eastward with the storm. The low pressure system was located in eastern Canada during the last days of the month. The resulting flow of cold air southward over the warmer Great Lakes produced heavy snow squalls along the lee shores.



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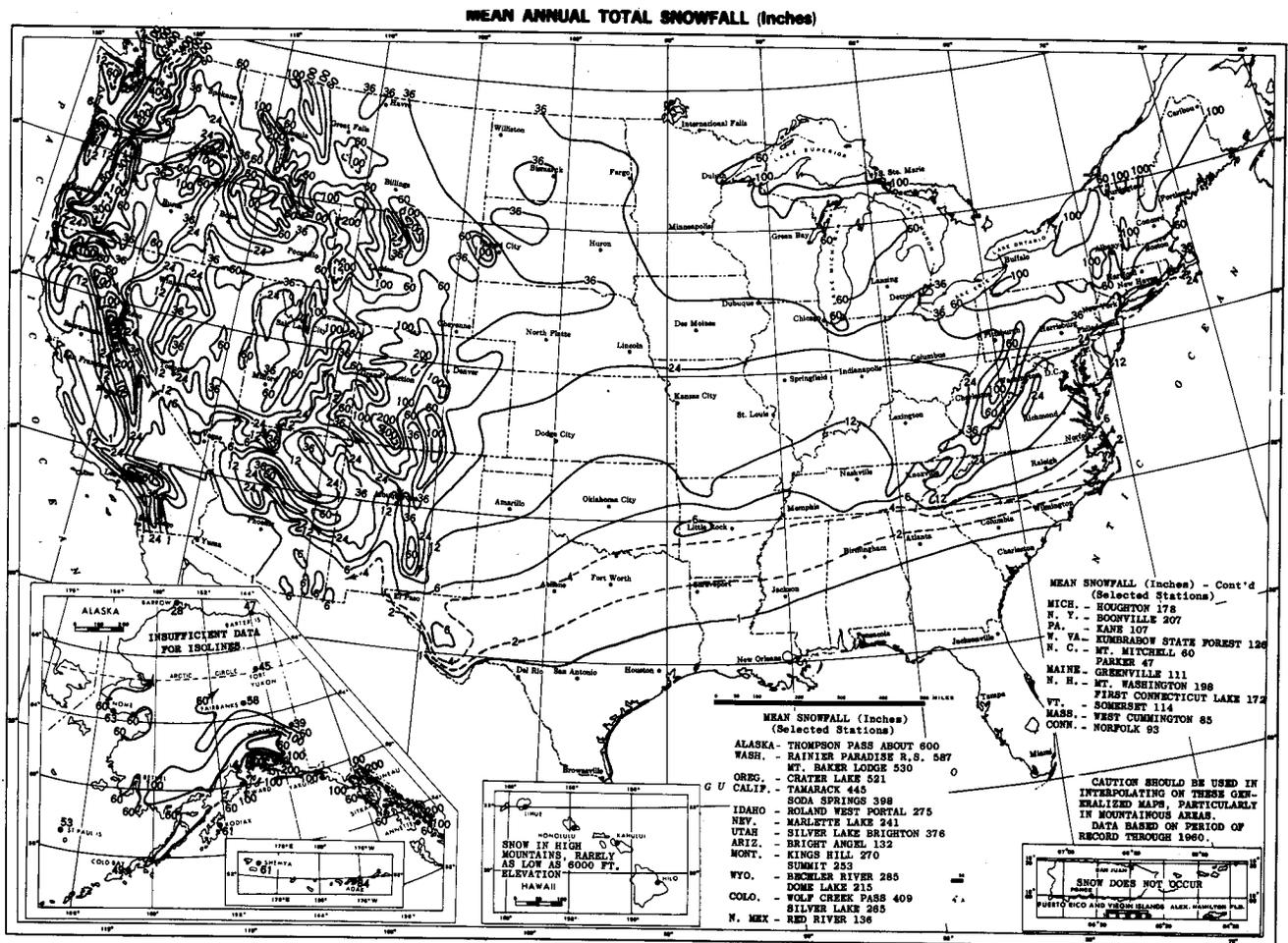
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