

WEEKLY WEATHER AND CROP BULLETIN

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

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

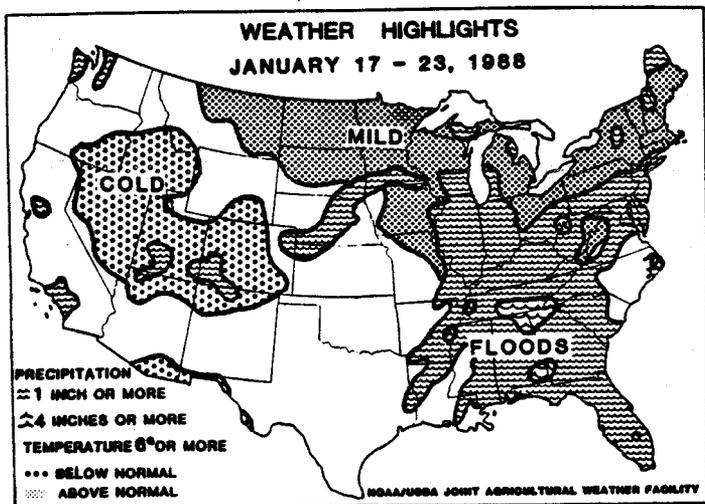
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National Weather Summary

January 17 - 23, 1988



TUESDAY...The winter storm continued to deepen as it moved across the southern Plains, producing snow through the Missouri Valley and the central Mississippi Valley, and rain farther South. Damaging tornadoes struck in Tennessee, Alabama, and Mississippi. Cold weather invaded southern California. Heavy rains fell in the mid-Atlantic region.

WEDNESDAY...Near-blizzard conditions continued in parts of the northern Plains and the Great Lakes region. Snow fell in northern Maine, freezing rain in central Maine, and rain in southern New England. Rain was scattered along the east coast from New England to Florida. Rain also reached from eastern Ohio across southern Indiana. Snow continued to fall over Illinois, Missouri, Michigan, and Wisconsin.

THURSDAY...Strong winds brought blizzard conditions to parts of Colorado. Rain and thunderstorms continued over central and northeastern Florida, with rainshowers scattered along the coasts of Georgia and the Carolinas. Snow extended from western Pennsylvania across West Virginia, eastern and southern Ohio, Kentucky, western Tennessee, southern Indiana, central Illinois, and central Missouri. Snow was scattered across southern Wyoming, northern New Mexico, northeast New York State, and northern Maine.

FRIDAY...Another arctic airmass invaded the northern Plains, accompanied by snow and strong gusty winds. Strong winds also ushered cold air into the desert Southwest. Rain fell along the northern Pacific coast.

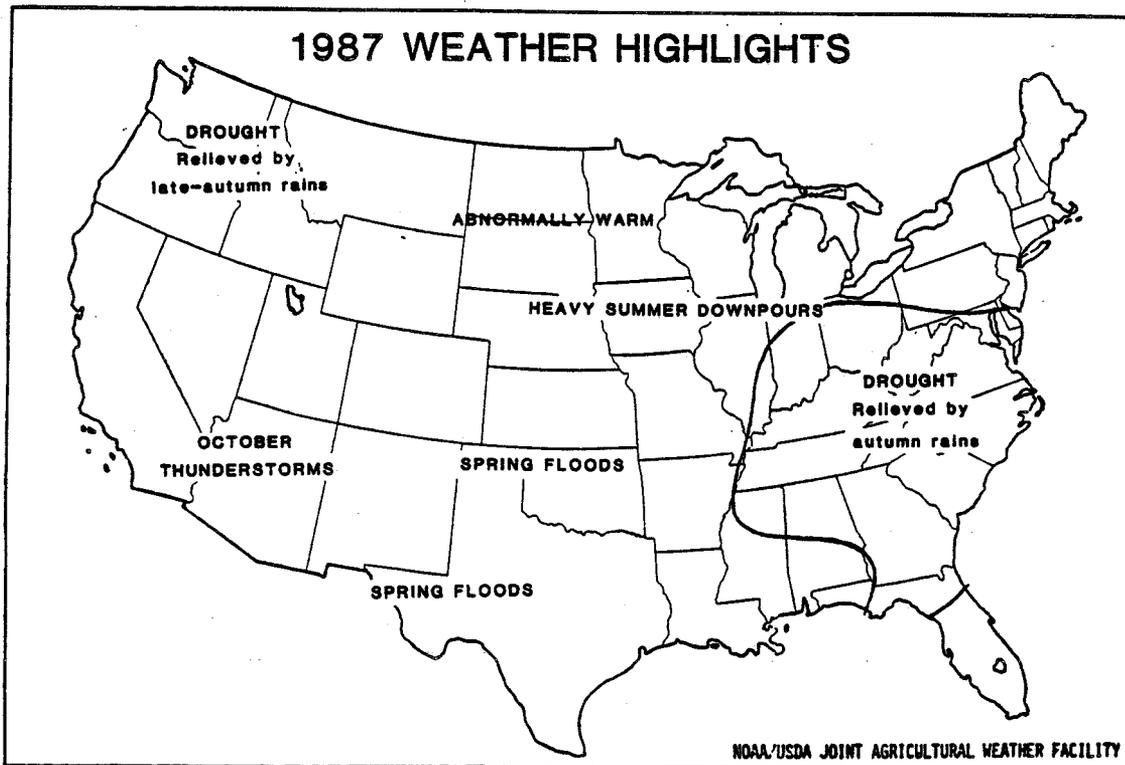
SATURDAY...Winds diminished late in the day over the northern Plains, but snow and blowing snow continued over the central Great Plains, the upper Mississippi Valley, the Great Lakes region, and parts of the Northeast.

HIGHLIGHTS: A Pacific storm struck southern California on Sunday, accompanied by damaging winds. From Sunday to Thursday, this storm tracked eastward across the Southwest, then northeastward across the southern and central Plains, the upper Mississippi Valley, and the Great Lakes region. It caused blizzard conditions in the north-central part of the Nation and severe thunderstorms in the South. Late in the week, strong winds brought cold air to the Southwest and an arctic air mass invaded the northern Plains.

SUNDAY...An intense Pacific storm produced heavy rains, snow, and damaging winds over much of the Southwest. Thunderstorms were scattered over southern California and southwestern Arizona. A band of light to moderate rain extended from northern Illinois and southern Wisconsin across lower Michigan, the upper Ohio Valley, the Middle Atlantic States, and Georgia. Rain changed to snow in parts of Wisconsin, northern Illinois, and Michigan. A few thunderstorms occurred over the Tennessee Valley.

MONDAY...The storm that struck the Southwest on Sunday moved eastward and developed further, spreading snow through the southern Rockies. Rainshowers were scattered from Kansas into southeastern South Dakota. Strong winds continued over much of the Southwest. Blizzard conditions prevailed in parts of Colorado and Utah. Rain extended from northern and central New York State through northern New England. Showers and thunderstorms were scattered along the central gulf coast and over Arkansas, south Georgia, and South Carolina.

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1987 Weather Review

During the winter, the northern part of the Nation was mostly mild and dry, and the southern half was generally damp with near-normal temperatures. In the spring, ample moisture came to the West, but the Corn Belt and most of the eastern half of the Nation were dry and relatively warm. With the arrival of summer, the central and western Corn Belt became wet, but drought plagued many parts of the Ohio Valley, the Middle Atlantic States, and the Southeast. In the fall, unfavorably warm, dry weather in the Pacific Northwest persisted until November, while conditions were unusually wet in the desert Southwest, in the lower Mississippi Valley, and along the east coast.

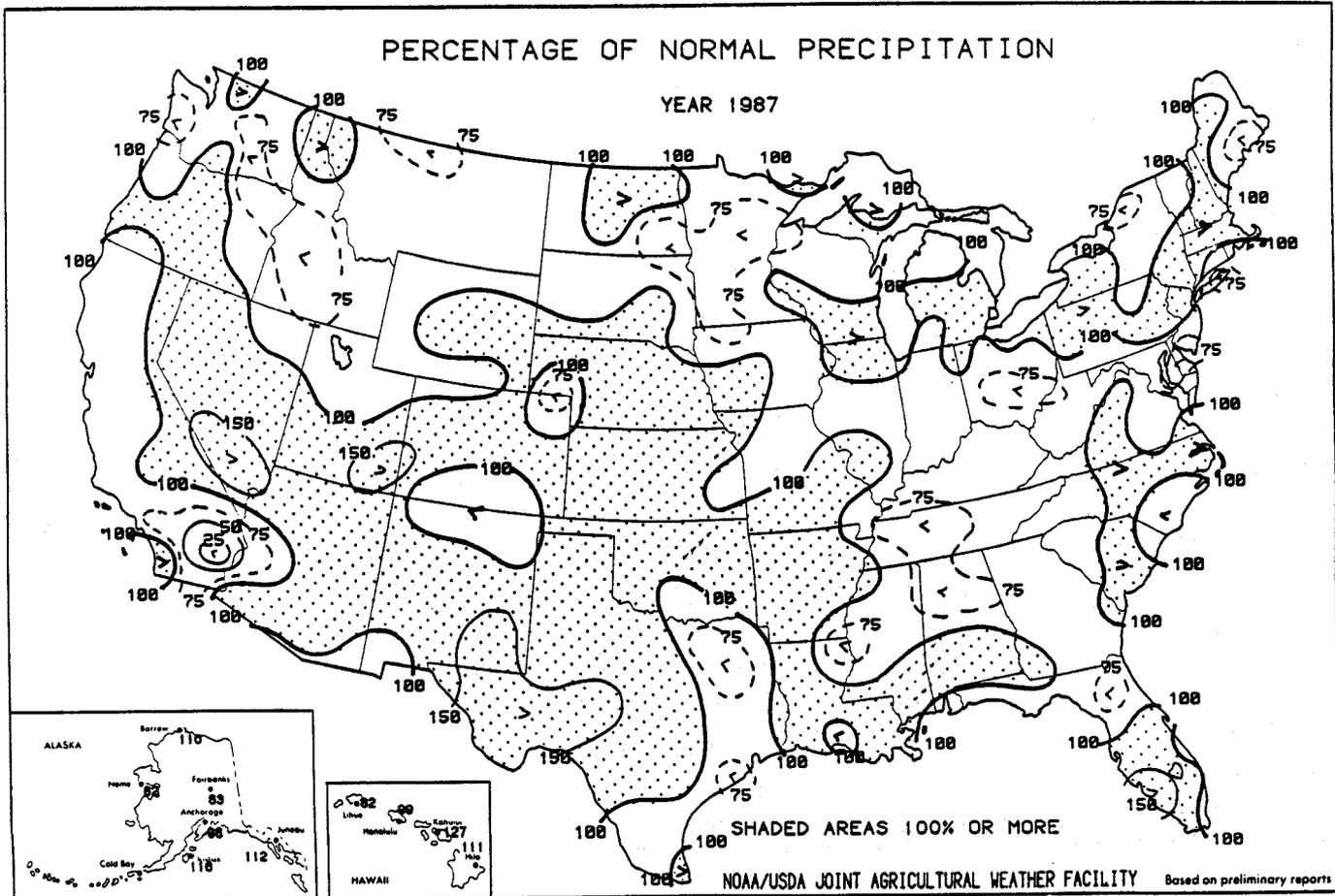
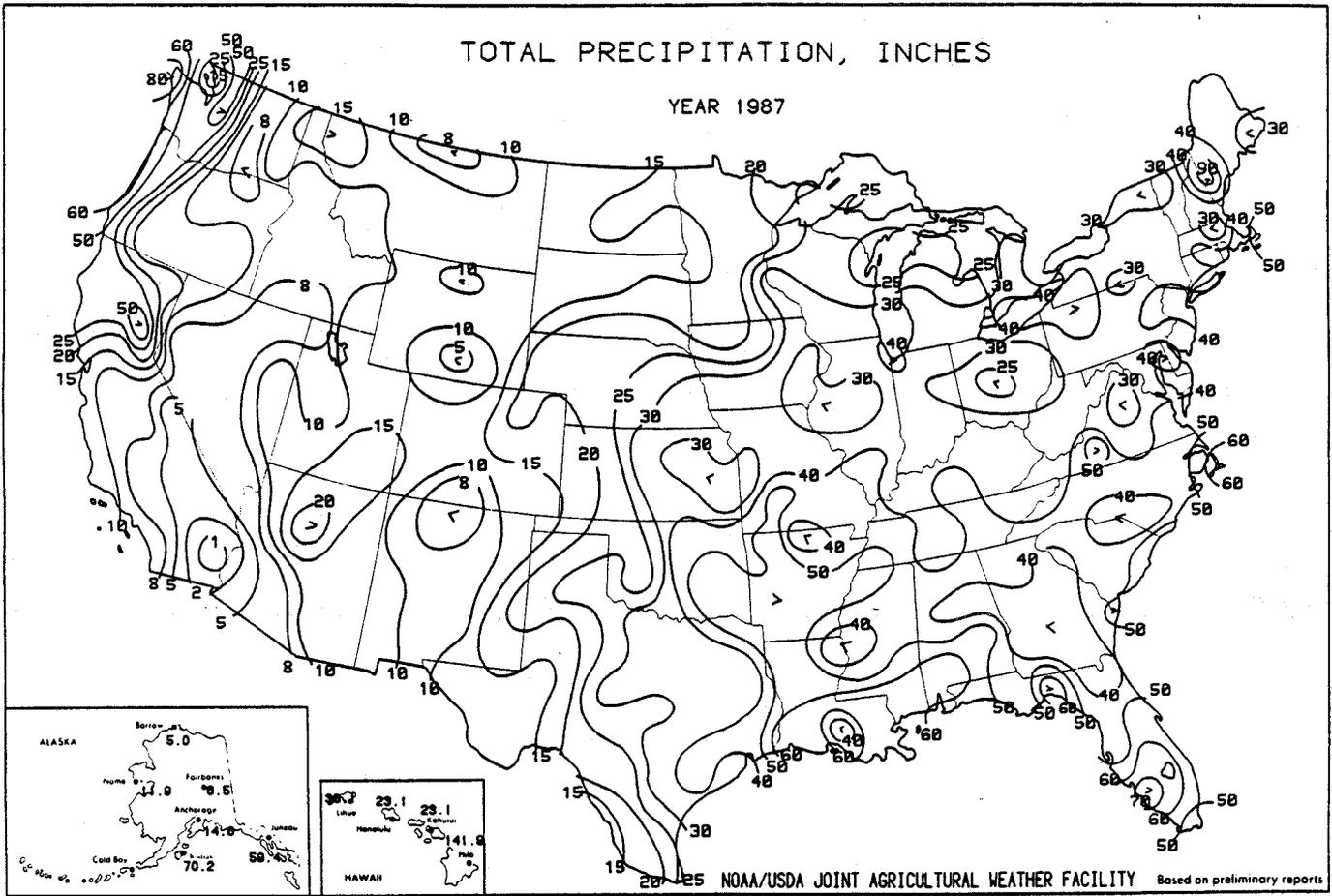
WINTER (DECEMBER 1986 - FEBRUARY 1987): Unusually mild weather prevailed in the central and northern Great Plains and the Great Lakes region. Average temperatures in parts of the northern Plains were as much as 13 degrees higher than normal. Temperatures were near normal to slightly below normal through much of the South and in the central Plateau of the West. Precipitation was below normal in the upper Mississippi Valley and the northern High Plains, from the Ohio Valley through the Great Lakes, in the western part of the Northeast, and in the Northwest. Ample to excessive precipitation fell in the central Plateau, most of the Southwest, the central and southern Rockies and Plains, through the South, and from the mid-Atlantic States to southern New England.

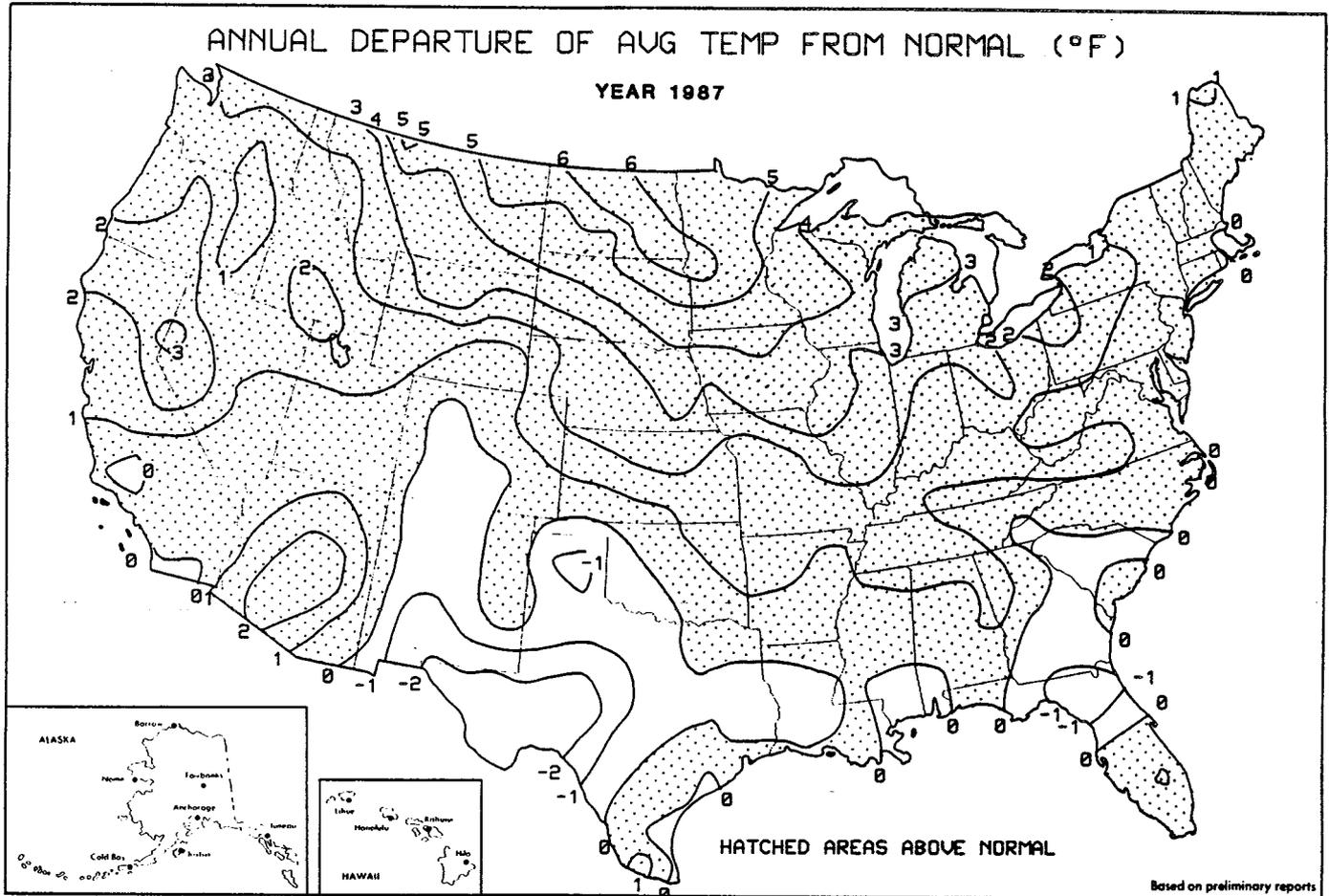
SPRING (MARCH - MAY): Spring rains produced much-less-than-normal moisture in most of the crop areas of the East, but rain was ample early and late in the season through the Great Plains and much of the West. The Corn Belt was much drier than normal, but timely showers provided moisture for early crops. The thunderstorm season got underway early, and by the end of the season, storms were widespread through much of the

Nation. Heavy downpours in the central and southern Plains and in parts of New England and the mid-Atlantic States resulted in serious flooding. Average temperatures were below normal over most of Texas, the gulf coast, and most of the east coast. The rest of the country experienced above-normal temperatures. Seasonal averages were as much as 10 degrees above normal in parts of the northern Plains and the upper Mississippi Valley.

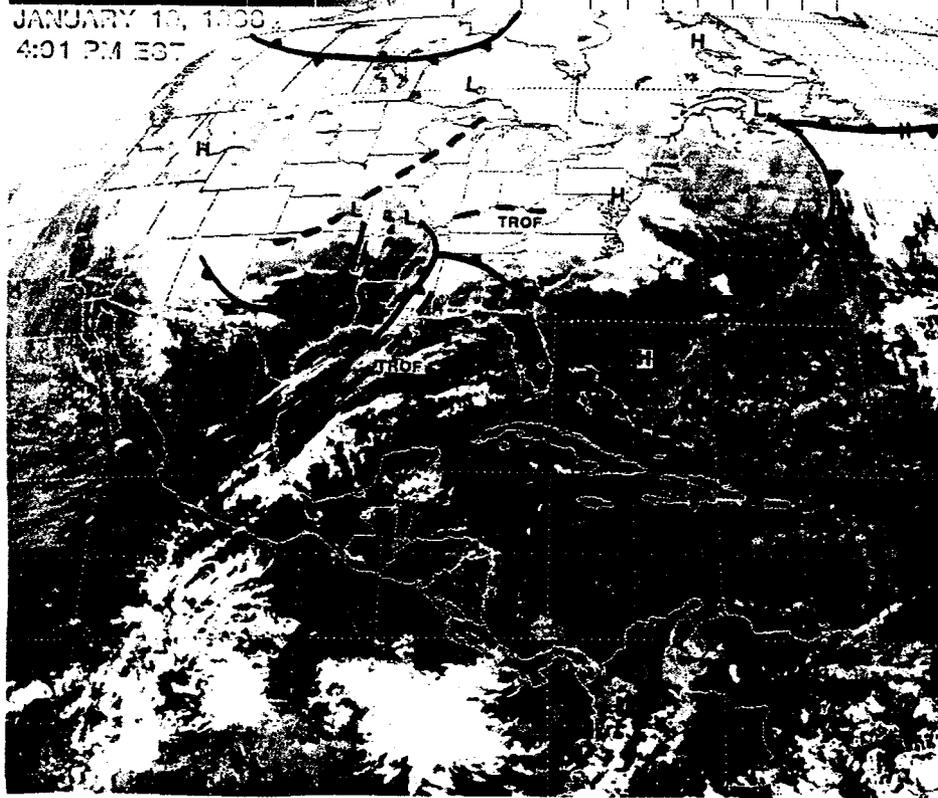
SUMMER (JUNE - AUGUST): Above-normal precipitation accumulated through much of the central and western Corn Belt. Moisture was much scarcer from the upper Ohio Valley through the mid-Atlantic States. Parts of Virginia, Maryland, and Delaware had less than half of normal rainfall. The dryness extended through much of the lower East Coast States. Very dry weather also extended from southeastern Oklahoma through Arkansas and the Tennessee Valley. Most of Texas and the gulf coast had normal or above-normal rainfall in thunderstorms. Most of the Nation was warmer than normal. Temperatures were consistently below normal from western Texas and the southern Rockies to central Nebraska, especially in western Texas. Below-normal temperatures characterized most of the Rockies.

FALL (SEPTEMBER - NOVEMBER): West of the Rockies, warm dry weather prevailed during September. About half the area east of the Rockies had above-normal September precipitation, with the east coast especially wet. In October, widespread thunderstorms brought unusual wetness to much of the desert Southwest, while the Pacific Northwest remained very dry. October was mostly cool and dry in the East. In November, seasonal rains started moving into the Pacific Northwest, and above-normal precipitation returned to the Plateau region of the West, the Mississippi Valley, and the Southeast, while temperatures were near normal or above normal over most of the Nation.

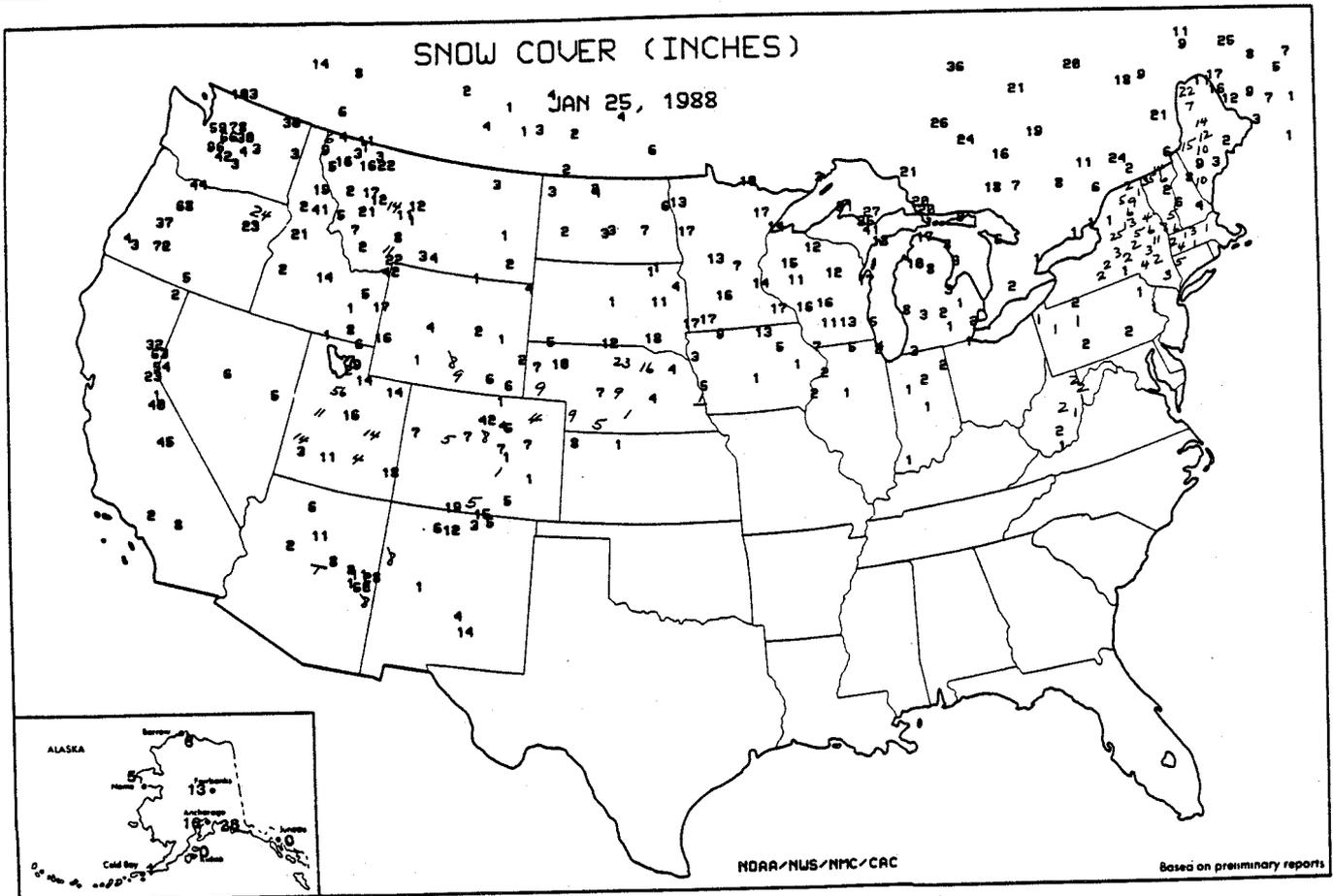
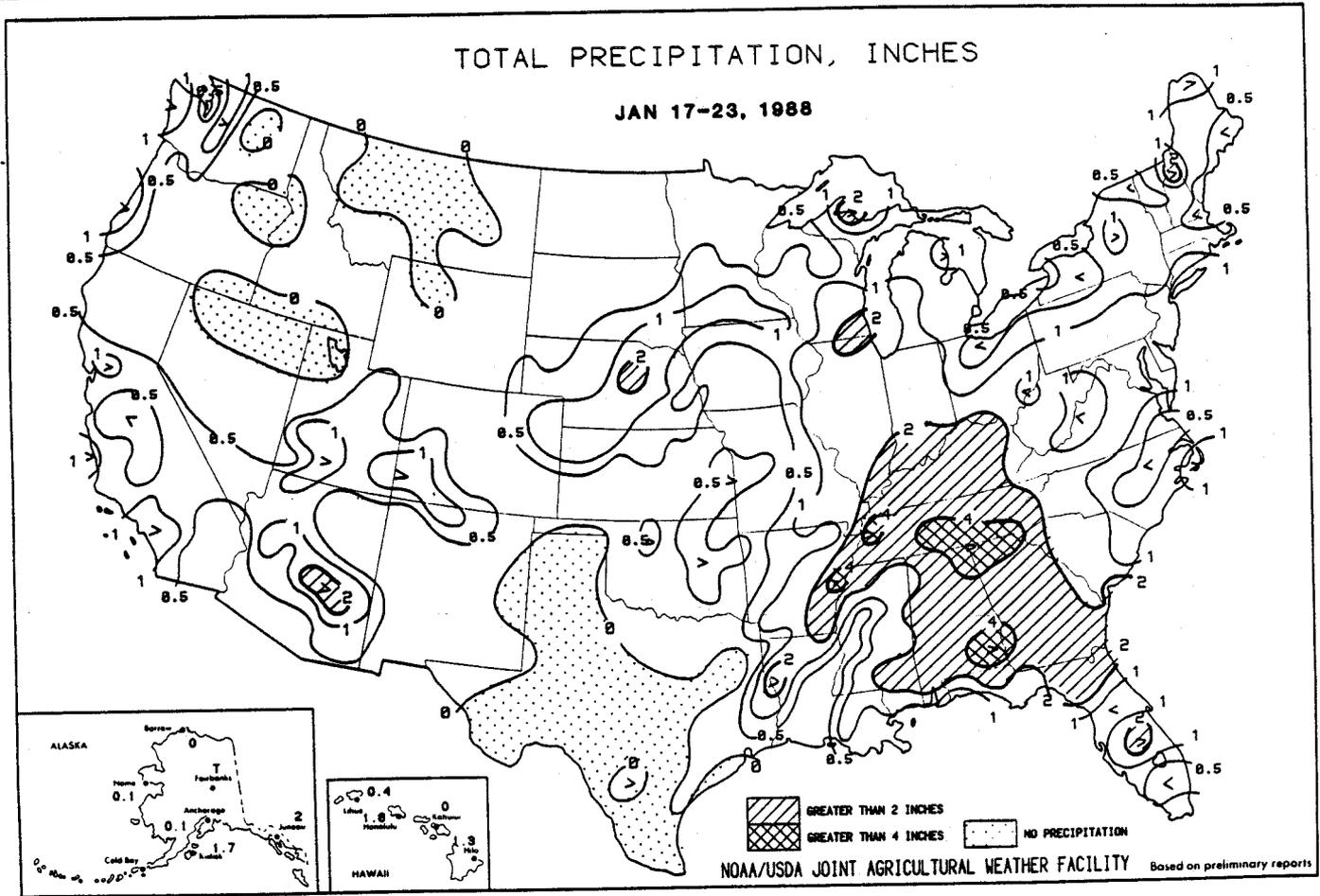


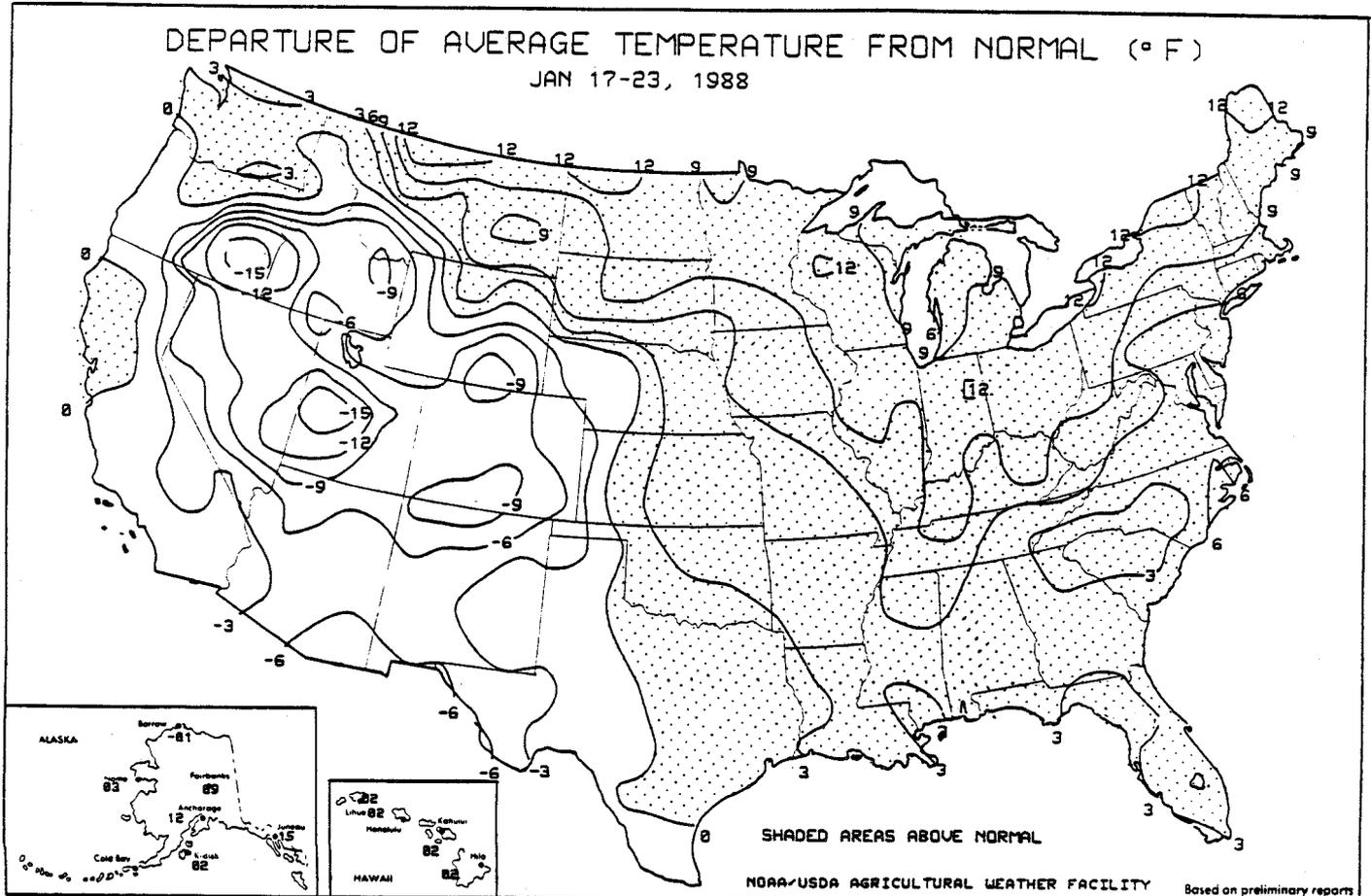
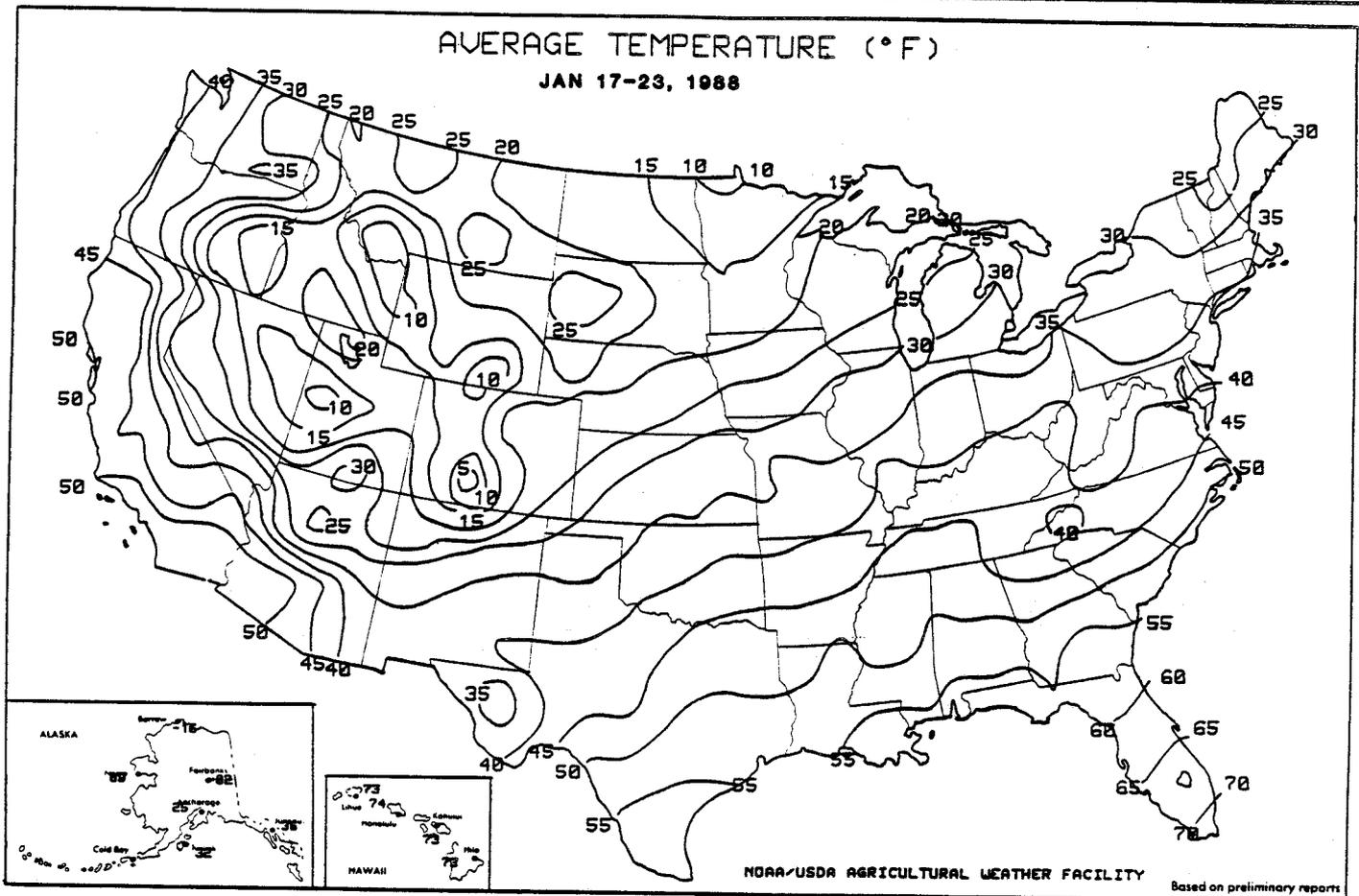


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 JANUARY 19, 1988
 4:01 P.M. EST



A MASSIVE STORM SYSTEM BRINGS HEAVY SNOW FROM THE SOUTHERN AND CENTRAL ROCKIES TO THE UPPER GREAT LAKES, AND RAIN FROM THE MIDDLE MISSISSIPPI VALLEY TO THE EASTERN SEABOARD. A LINE OF THUNDERSTORMS MOVES THROUGH THE LOWER MISSISSIPPI VALLEY. EARLIER IN THE WEEK, THE STORM CAUSED HIGH WINDS, HEAVY RAINS, AND SNOW IN THE SOUTHEAST.





National Weather Data for Selected Cities

Weather Data for the Week Ending January 23, 1988

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION								RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC. 1	PCT. NORMAL SINCE DEC. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
AL BIRMINGHAM	55	39	68	25	47	5	2.7	1.6	1.8	8.1	92	5.1	129	93	51	0	2	2	2	
MOBILE	63	47	72	29	55	5	2.2	1.2	1.0	7.3	82	3.7	107	93	58	0	2	3	1	
MONTGOMERY	61	44	76	25	52	6	2.8	1.9	2.0	9.8	125	5.6	177	90	50	0	2	4	2	
AK ANCHORAGE	30	20	39	14	25	12	.1	-1.1	0	1.2	71	.1	11	89	66	0	7	3	0	
BARROW	-10	-21	-4	-31	-16	-1	-1	-1.1	0	.2	68	T	11	79	71	0	7	0	0	
FAIRBANKS	5	-10	26	-24	-2	9	T	-1.1	T	.6	50	.1	15	86	65	0	7	1	0	
JUNEAU	40	33	43	26	36	15	2.0	1.2	1.3	7.7	104	2.4	87	96	77	0	3	6	1	
KODIAK	39	26	43	17	32	2	1.7	-1.4	.8	8.6	87	6.3	146	96	73	0	5	5	1	
NOME	15	2	20	-6	9	9	.1	-1.1	0	1.6	130	.4	65	86	68	0	7	5	0	
AZ PHOENIX	58	40	69	34	49	3	.7	.5	.4	2.5	182	.9	158	70	28	0	0	2	0	
PRESSCOTT	43	19	56	9	31	1	.7	.3	.4	1.4	48	.7	57	77	43	0	7	2	0	
TUCSON	57	34	67	26	45	5	.1	-1.1	1.1	1.7	112	.2	38	76	26	0	4	1	0	
YUMA	63	44	70	38	54	-2	.2	.2	0	.9	143	.2	89	53	21	0	0	1	0	
AR FORT SMITH	53	30	66	19	41	4	.4	0	.2	9.8	233	1.7	120	93	52	0	4	4	0	
LITTLE ROCK	53	36	67	25	45	5	1.2	.3	.5	16.6	233	2.9	99	79	53	0	3	3	0	
CA BAKERSFIELD	58	34	64	29	46	-3	.3	-1.1	.2	1.5	111	.6	93	93	45	0	3	2	0	
EUREKA	55	41	58	35	48	0	.3	-1.3	.2	17.3	151	6.4	121	92	66	0	0	2	0	
FRESNO	55	33	61	29	44	-2	.4	-1.1	.4	2.7	88	1.5	101	96	52	0	4	1	0	
LOS ANGELES	62	45	68	40	54	-2	1.4	.7	1.4	3.4	89	1.6	73	76	33	0	0	1	1	
REDDING	61	35	70	28	48	1	.1	-1.8	.1	15.5	115	6.4	100	86	26	0	2	1	0	
SACRAMENTO	58	38	67	35	48	2	.8	-1.1	.8	5.7	97	2.6	86	91	46	0	0	1	1	
SAN DIEGO	62	46	68	39	54	-1	.8	.4	.7	3.7	106	.9	59	76	35	0	0	2	1	
SAN FRANCISCO	59	43	65	38	51	2	.9	-1.1	.9	8.0	114	3.5	101	86	48	0	0	1	1	
CO DENVER	35	14	47	4	24	-5	.3	.2	.2	1.7	190	.4	111	87	43	0	7	2	0	
GRAND JUNCTION	28	8	38	-2	18	-8	.3	-1.1	.3	1.9	187	1.1	244	86	54	0	7	2	0	
FUELO	33	5	48	-8	19	-11	.2	.2	.2	1.0	211	.6	317	93	58	0	7	3	0	
CT BRIDGEPORT	41	29	48	17	35	6	.9	.2	.6	4.0	64	1.9	77	87	59	0	3	2	1	
HARTFORD	41	26	50	12	33	8	.8	-1.1	.5	3.7	55	2.2	81	86	52	0	6	2	1	
DC WASHINGTON	45	34	52	29	39	4	1.6	.9	.9	5.1	97	2.5	122	91	56	0	2	4	1	
FL APALACHICOLA	63	49	68	31	56	3	1.3	.5	.8	3.4	55	2.5	94	96	65	0	1	3	1	
DAYTONA BEACH	71	51	81	39	61	3	.6	-1.1	.5	2.3	58	2.0	119	96	53	0	0	2	1	
JACKSONVILLE	69	48	80	35	59	5	2.8	2.1	1.6	5.8	126	5.6	265	94	53	0	0	3	2	
KEY WEST	75	67	81	58	71	2	.9	.5	.9	7.1	239	4.3	352	86	65	0	0	1	1	
MIAMI	76	64	83	50	70	3	.1	-1.4	-1	5.9	176	1.6	108	86	55	0	0	1	0	
ORLANDO	72	54	82	44	63	3	.8	.3	.8	2.0	58	1.5	97	91	51	0	0	2	1	
TALLAHASSEE	64	45	73	23	55	3	1.8	.7	1.3	4.1	52	3.1	91	98	59	0	2	3	1	
TAMPA	71	55	81	42	63	3	.8	.3	.7	1.7	47	1.2	80	93	57	0	0	2	1	
WEST PALM BEACH	76	61	84	48	69	3	.6	-1.1	.6	4.8	113	3.3	166	90	53	0	0	2	1	
GA ATLANTA	53	39	66	28	46	4	2.4	1.3	1.0	8.5	108	4.4	120	92	56	0	2	3	2	
AUGUSTA	58	39	68	27	49	4	1.1	-1.1	.5	5.3	87	4.0	135	95	57	0	3	4	1	
MACON	59	41	73	23	50	3	2.4	1.5	1.0	7.0	97	5.1	162	98	56	0	2	4	2	
SAVANNAH	64	46	74	31	55	6	1.7	.9	.5	4.5	90	3.1	137	92	59	0	1	5	1	
HI HILO	81	66	83	62	73	2	1.3	-0.9	.9	29.3	149	7.1	104	94	64	0	0	5	1	
HONOLULU	82	66	85	62	74	2	1.8	.9	1.3	20.7	331	3.5	121	95	61	0	0	2	1	
KAHULUI	82	64	84	60	73	2	T	-0.9	T	12.0	208	6.4	213	90	59	0	0	0	0	
LIHUE	80	66	83	62	73	2	.4	-1.0	.3	12.7	125	1.8	39	94	67	0	0	2	0	
ID BOISE	28	6	32	-2	17	-13	T	-1.4	T	2.1	82	1.0	83	96	67	0	7	1	0	
LEWISTON	42	28	48	24	35	3	T	-0.3	T	1.4	61	.6	58	78	49	0	6	0	0	
POCATELLO	24	8	31	2	16	-8	T	-0.2	T	2.0	116	.8	99	95	68	0	7	1	0	
IL CHICAGO	35	27	41	10	31	11	1.4	1.0	.7	5.2	142	1.4	109	96	70	0	5	5	2	
MOLINE	34	27	38	16	31	11	1.3	1.0	1.0	5.8	183	1.3	106	95	76	0	6	4	1	
PEORIA	36	29	41	21	33	12	1.6	1.3	1.0	5.8	177	1.6	131	96	80	0	5	6	2	
QUINCY	37	27	49	20	32	9	1.0	.7	.8	4.8	174	1.0	97	90	76	0	6	3	1	
ROCKFORD	33	25	37	5	29	11	2.1	1.8	1.3	6.1	204	2.1	189	96	77	0	6	5	2	
SPRINGFIELD	38	30	45	24	34	10	1.7	1.3	1.3	6.7	202	1.7	139	94	79	0	4	4	1	
IN EVANSVILLE	45	35	57	30	40	9	2.2	1.5	1.7	8.1	142	2.4	108	94	69	0	2	3	1	
FORT WAYNE	41	30	51	26	35	12	1.2	.7	.9	4.7	117	1.3	80	93	68	0	6	5	1	
INDIANAPOLIS	43	32	54	27	37	11	1.5	1.0	.8	6.4	129	1.6	82	96	72	0	3	5	2	
SOUTH BEND	37	27	46	21	32	9	1.2	.6	.7	5.5	114	1.4	72	94	70	0	6	6	1	
IA DES MOINES	33	20	38	7	27	8	.4	-1.1	.3	3.0	168	.4	51	95	77	0	6	4	0	
STOUK CITY	33	9	44	-9	21	5	.7	.6	.5	1.2	98	.7	156	94	72	0	7	3	1	
WATERLOO	31	17	36	0	24	11	.6	.4	.5	2.5	143	.7	110	98	77	0	7	4	0	
KS CONCORDIA	38	21	48	6	30	5	.6	.4	.3	1.5	131	.7	160	89	59	0	7	3	0	
DODGE CITY	41	23	52	10	32	3	.1	0	.1	1.6	194	.9	287	93	52	0	7	2	0	
GOOGLAND	32	14	37	-4	23	-4	1.5	1.4	1.1	2.1	315	1.6	589	92	68	0	7	2	1	
TOPEKA	43	22	54	11	32	6	.2	.3	.4	2.3	121	.5	70	92	56	0	6	3	0	
WICHITA	42	24	48	15	33	3	.2	-1.1	.2	2.8	186	.5	100	94	57	0	7	1	0	
KY BOWLING GREEN	50	36	61	30	43	10	2.8	1.8	2.2	10.0	126	3.1	89	95	59	0	3	2	2	
LEXINGTON	46	33	59	26	40	8	2.2	1.4	1.6	8.5	132	2.4	87	93	60	0	3	4	2	
LOUISVILLE	47	35	59	27	41	9	3.4	2.7	3.0	8.3	138	3.6	141	92	57	0	2	2	1	
LA ALEXANDRIA	62	40	73	28	51	3	.4	-0.6	.3	9.5	117	1.7	52	83	50	0	3	2	0	
BATON ROUGE	66	44	76	28	55	4	1.6	.6	1.6	7.6	91	3.7	110	91	49	0	2	2	1	
LAKE CHARLES	64	42	75	29	53	3	T	-1.0	T	7.7	89	2.7	77	90	44	0	2	2	0	
NEW ORLEANS	66	47	78	32	56	4	.6	-0.6	.4	4.9	54	2.0	55	91	53	0	1	2	0	

Based on 1951-80 normals.

Weather Data for the Week Ending January 23, 1988

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS					
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC. 1	PCT. NORMAL SINCE DEC. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE				
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
SHREVEPORT	61	36	73	24	48	2	.1	-.8	.1	10.2	147	2.1	68	90	41	0	4	1	0	0
ME CARIBOU	30	17	37	-6	23	13	1.0	-.5	.4	4.3	86	1.7	96	93	69	0	4	7	4	0
PORTLAND	39	23	46	8	31	10	.4	-.5	.2	3.2	44	1.2	42	92	53	0	6	6	3	0
MD BALTIMORE	45	31	52	23	38	6	1.3	-.7	.7	4.5	79	2.4	106	87	54	0	4	4	4	1
SALISBURY	50	32	59	25	41	7	1.9	1.1	1.4	6.1	98	2.9	115	95	51	0	4	4	4	1
MA BOSTON	43	31	50	25	37	8	.4	-.5	.2	3.6	49	1.5	51	88	53	0	4	4	2	0
CHATAM	41	31	47	27	36	5	.5	-.4	.3	6.1	74	1.9	58	87	69	0	5	5	3	0
MI ALPENA	34	16	44	-1	25	7	1.0	-.6	.4	3.2	97	1.0	77	96	66	0	6	6	4	0
DETROIT	39	27	50	17	33	10	.7	-.3	.5	5.4	137	.8	56	91	65	0	5	5	6	0
FLINT	37	23	47	12	30	9	.8	-.4	.6	3.4	106	.8	69	95	66	0	6	6	6	0
GRAND RAPIDS	34	22	42	14	28	6	1.1	-.7	.7	4.7	115	1.4	94	97	73	0	7	7	1	1
HOUGHTON LAKE	32	19	40	-2	26	9	.6	-.3	.3	3.2	106	.8	66	95	70	0	6	6	5	0
LANSING	37	24	47	14	30	10	.9	-.5	.7	4.4	116	1.0	73	95	70	0	6	6	4	0
MARQUETTE	30	13	43	7	22	5	2.4	2.0	2.2	7.0	205	3.4	259	98	75	0	7	7	4	1
MUSKEGON	35	21	41	9	28	5	1.4	-.9	.7	6.0	136	1.8	99	98	74	0	6	6	4	1
SALT ST. MARIE	28	13	39	-3	20	7	.8	-.3	.6	5.9	139	2.8	169	95	68	0	7	3	1	1
MN ALEXANDRIA	25	5	40	-6	15	10	.8	-.6	.7	1.8	127	1.1	170	95	76	0	7	4	1	1
DULUTH	26	7	37	-9	17	10	.1	-.1	.1	1.4	64	.7	81	93	71	0	7	4	0	0
INT'L FALLS	23	1	30	-10	12	12	.1	-.1	.1	.4	28	.2	34	94	69	0	7	1	0	0
MINNEAPOLIS	27	11	34	-6	19	9	.9	-.8	.6	2.5	170	1.2	202	93	71	0	7	5	1	1
ROCHESTER	26	10	31	-9	18	9	.9	-.7	.6	2.8	186	1.1	170	96	80	0	7	4	2	0
MS GREENWOOD	58	38	74	25	48	5	.2	-.9	.2	6.3	68	1.9	50	90	53	0	3	2	0	0
JACKSON	60	37	74	22	49	3	.7	-.4	.6	5.6	61	2.1	55	95	52	0	3	2	1	1
MERIDIAN	60	39	72	23	50	4	1.4	-.4	1.3	7.3	77	2.8	74	98	53	0	3	2	1	1
MO CAPE GIRARDEAU	47	34	59	30	41	—	2.0	1.4	1.4	10.7	179	2.5	114	93	66	0	3	2	2	0
COLUMBIA	40	26	46	19	33	5	.4	-.1	.3	6.0	182	.5	39	95	74	0	6	2	2	0
KANSAS CITY	40	20	50	7	30	3	.4	-.1	.4	2.5	105	.5	49	97	70	0	6	2	0	0
SAINT LOUIS	43	30	51	20	37	8	1.6	1.2	1.4	9.1	262	1.7	129	94	75	0	5	2	1	1
SPRINGFIELD	45	25	61	10	35	4	.4	0	.2	8.4	224	.9	76	97	65	0	6	5	0	0
MT BILLINGS	37	19	43	7	28	7	.1	-.2	.1	.7	47	.4	54	68	35	0	7	1	0	0
GLASGOW	27	6	39	-10	16	9	.1	0	.1	.4	59	.3	119	91	64	0	7	1	0	0
GREAT FALLS	37	19	45	13	28	9	0	-.2	0	.9	62	.7	94	68	37	0	7	0	0	0
HAVRE	37	11	43	5	24	12	0	-.1	0	.1	5	0	82	44	0	7	0	0	0	0
HELENA	32	12	42	-4	22	4	T	-.1	T	.6	54	.2	37	84	50	0	7	0	0	0
KALISPELL	30	12	38	4	21	2	T	-.3	T	2.2	79	.6	51	93	70	0	7	1	0	0
MILES CITY	35	12	44	1	24	10	T	-.1	T	.2	16	.1	20	78	45	0	7	0	0	0
MISSOULA	31	12	40	1	21	0	T	-.3	T	1.7	74	.6	51	89	58	0	7	0	0	0
NE GRAND ISLAND	33	13	46	-5	23	3	1.0	-.9	.8	1.9	189	1.1	311	92	65	0	7	4	1	1
LINCOLN	36	13	49	-1	25	6	.5	-.3	.4	1.2	109	.5	107	91	62	0	7	2	0	0
NORFOLK	34	11	47	-7	23	5	.6	-.5	.5	1.4	147	.7	181	93	69	0	7	4	1	1
NORTH PLATTE	31	8	42	-14	20	-2	.6	-.6	.5	1.5	228	.7	267	92	69	0	7	3	1	1
OMAHA	34	17	45	3	26	6	.4	-.3	.4	1.2	91	.4	78	89	70	0	7	1	0	0
SCOTT'S BLUFF	31	7	39	-5	19	-5	.6	-.5	.4	1.6	195	.6	174	87	58	0	7	3	0	0
VALENTINE	30	7	40	-13	19	1	.7	-.6	.5	2.5	573	.7	394	91	63	0	7	2	0	0
NV ELY	28	-1	42	-16	13	-11	.1	0	.1	1.8	140	1.1	207	83	49	0	7	2	0	0
LAS VEGAS	51	33	58	25	42	-3	.6	-.5	.6	1.5	237	.7	186	70	24	0	3	1	1	1
RENO	38	14	49	1	26	-6	.4	-.1	.4	1.3	61	.7	76	90	47	0	7	1	0	0
WINNEMUCCA	34	7	43	0	21	-10	0	-.2	0	1.8	122	1.1	178	89	48	0	7	0	0	0
NH CONCORD	38	20	43	4	29	9	.5	-.1	.3	2.7	48	1.1	53	94	50	0	7	2	0	0
NJ ATLANTIC CITY	46	28	53	19	37	5	1.2	.4	.9	4.8	77	2.6	100	96	57	0	4	3	1	1
NM ALBUQUERQUE	41	22	49	13	31	-4	1.1	-.1	.1	.5	63	.2	52	83	40	0	7	3	0	0
CLOVIS	47	24	58	15	35	-2	T	-.1	T	1.9	197	.1	23	62	24	0	6	0	0	0
ROSWELL	53	22	65	16	38	-2	T	-.1	T	1.6	252	.2	81	82	24	0	7	1	0	0
NY ALBANY	37	25	42	9	31	10	.6	-.1	.3	2.9	60	1.2	68	88	53	0	6	2	0	0
BINGHAMTON	35	23	42	9	29	8	.8	-.3	.5	3.4	72	1.3	65	92	67	0	6	5	1	1
BUFFALO	41	31	54	22	36	12	.8	-.2	.4	3.8	66	1.0	43	87	61	0	4	4	0	0
NEW YORK	42	33	48	24	38	6	1.1	-.4	.6	4.3	72	2.1	88	80	51	0	3	2	2	0
ROCHESTER	40	28	51	17	34	11	.4	-.1	.2	2.6	60	.6	37	89	61	0	5	4	0	0
SYRACUSE	38	27	45	12	33	10	.9	-.4	.4	3.2	63	1.2	64	90	61	0	4	4	0	0
NC ASHEVILLE	47	30	61	17	39	2	2.1	1.4	.8	5.9	106	3.5	150	96	60	0	4	4	2	0
CHARLOTTE	50	35	55	28	43	2	1.1	-.2	.4	6.6	107	3.2	116	93	64	0	2	3	0	0
GREENSBORO	49	33	61	24	41	4	.7	-.1	.3	5.5	93	2.2	82	88	55	0	2	3	0	0
HATTERAS	59	42	68	30	50	6	1.5	-.4	.6	7.1	88	4.9	135	99	75	0	2	4	1	1
NEW BERN	62	40	77	24	51	7	.7	-.2	.3	8.1	121	4.5	152	95	58	0	2	6	0	0
RALEIGH	50	35	56	23	42	3	.5	-.3	.3	5.5	97	2.5	97	94	60	0	2	3	0	0
WILMINGTON	59	42	73	28	51	5	.7	-.2	.4	5.9	96	4.5	167	99	65	0	2	3	0	0
ND BISMARK	28	5	36	-3	16	10	.1	0	0	.7	87	.6	169	93	71	0	7	3	0	0
FARGO	23	4	31	-4	14	10	.3	-.2	.3	1.9	188	1.2	300	93	76	0	7	3	0	0
GRAND FORKS	24	1	33	-7	13	11	.1	0	-.1	.8	70	.4	80	90	73	0	7	2	0	0
WILLISTON	25	3	37	-14	14	7	T	-.1	T	.6	72	.5	147	89	66	0	7	2	0	0
OH AKRON-CANTON	41	29	56	21	35	10	.7	-.1	.5	3.2	69	.9	44	92	62	0	5	6	0	0
CINCINNATI	45	32	57	27	38	10	1.9	1.2	1.5	5.4	101	1.9	83	93	62	0	4	7	1	1
CLEVELAND	42	28	55	23	35	10	.5	-.1	.2	3.7	79	.7	37	94	62	0	5	5	0	0
COLUMBUS	43	30	57	23	36	9	1.3	-.6	.9	4.2	91	1.3	65	91	58	0	5	3	1	1

Based on 1951-80 normals.

Weather Data for the Week Ending January 23, 1988

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC. 1	PCT. NORMAL SINCE DEC. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	43	31	55	26	37	10	.9	-.3	.6	3.9	88	.9	46	93	62	0	5	6	1
TOLEDO	40	27	51	21	33	10	.9	-.4	.6	4.7	112	.9	55	95	66	0	5	4	1
YOUNGSTOWN	41	29	57	19	35	11	.6	0	.4	3.5	72	.7	36	90	58	0	4	3	0
OK OKLAHOMA CITY	49	29	60	20	39	3	.2	0	.2	5.0	265	1.2	172	83	43	0	4	1	0
TULSA	49	31	57	20	40	5	.3	0	.2	7.0	249	1.1	111	85	46	0	4	4	0
OR ASTORIA	47	33	52	29	40	-1	.8	-1.6	.3	14.4	73	5.6	68	97	75	0	3	4	0
BURNS	26	-5	34	-15	10	-16	0	-.4	0	3.2	103	1.1	75	**	**	0	7	0	0
MEDFORD	41	31	47	26	36	-2	.1	-.7	.1	5.8	95	2.0	77	98	72	0	4	1	0
PENDLETON	43	27	49	24	35	2	.3	-.4	T	3.0	100	1.7	131	90	57	0	7	0	0
FORTLAND	44	33	52	28	38	-1	.3	-1.1	.2	12.2	110	4.2	89	97	75	0	3	3	0
SALEM	44	32	53	29	38	-1	.3	-1.3	.2	16.9	136	6.0	111	99	77	0	4	3	0
PA ALLENTOWN	39	26	46	14	32	5	1.2	-.4	.7	3.3	53	1.8	73	94	61	0	4	5	1
ERIE	42	29	58	22	35	11	.3	-.3	.1	4.3	85	.9	51	91	61	0	4	3	0
HARRISSBURG	40	28	45	18	34	4	1.1	-.4	.6	3.2	58	1.3	60	94	59	0	4	4	1
PHILADELPHIA	43	28	50	21	35	4	1.2	-.5	.7	3.6	62	1.9	80	94	62	0	5	3	1
PITTSBURGH	45	32	61	23	38	12	1.2	-.5	.8	3.8	81	1.4	65	87	55	0	4	6	1
SCRANTON	38	26	43	14	32	7	.5	0	.3	1.7	41	.7	43	96	64	0	6	4	0
RI PROVIDENCE	42	27	50	19	34	6	.8	-.1	.5	4.0	53	1.8	58	96	55	0	5	2	0
SC CHARLESTON	62	44	70	28	53	5	.7	0	.2	3.9	70	2.3	94	97	69	0	1	4	0
COLUMBIA	57	39	69	27	48	3	1.1	-.1	.5	5.4	80	3.9	121	98	60	0	3	4	0
FLORENCE	57	39	67	27	48	3	.7	-.1	.3	5.1	92	2.7	103	97	62	0	2	3	0
GREENVILLE	50	33	57	24	41	0	1.7	.7	.6	8.4	117	3.8	121	97	68	0	3	4	3
SD ABERDEEN	28	8	43	-3	18	11	.1	0	.1	.4	42	.3	75	93	72	0	7	2	0
HURON	27	7	36	-9	17	6	.3	-.2	.3	1.6	210	.4	133	92	76	0	7	3	0
RAPID CITY	40	15	48	6	28	7	T	-.1	T	.4	53	.1	19	75	36	0	7	1	0
SIoux FALLS	26	5	36	-11	16	4	1.3	1.2	1.0	2.9	270	1.5	414	95	80	0	7	4	1
TN CHATTANOOGA	51	35	65	22	43	4	4.8	3.6	3.6	10.1	112	6.9	176	96	57	0	3	2	2
KNOXVILLE	51	33	67	24	42	4	2.6	1.5	2.2	7.4	92	4.0	114	95	61	0	4	2	1
MEMPHIS	54	40	68	27	47	7	3.1	2.1	2.8	15.2	183	3.8	110	86	53	0	3	3	1
NASHVILLE	52	39	65	30	46	9	2.9	1.9	2.4	9.1	114	3.6	108	92	50	0	2	2	2
TX ABILENE	58	29	72	16	43	0	0	-.2	0	4.6	289	.1	7	71	25	0	4	0	0
AMARILLO	45	20	57	11	32	-3	T	-.1	T	2.1	247	.4	97	87	32	0	7	0	0
AUSTIN	64	40	75	30	52	3	T	-.4	T	1.6	50	.3	24	75	25	0	3	0	0
BEAUMONT	66	43	76	28	55	3	.1	-.8	.1	9.3	117	3.1	102	89	44	0	2	1	0
BROWNSVILLE	67	50	76	37	58	-2	T	-.3	T	4.3	217	3.9	444	96	54	0	0	0	0
CORPUS CHRISTI	66	46	79	32	56	1	T	-.4	T	1.8	74	.9	73	87	39	0	1	1	0
DEL RIO	63	35	75	21	49	-2	0	-.1	0	.7	71	.1	16	70	27	0	4	0	0
EL PASO	49	27	60	16	38	-6	.2	-.2	.2	3.1	488	.3	93	85	33	0	6	1	0
FORT WORTH	58	33	64	24	45	2	.2	-.2	.2	3.3	109	.4	30	85	35	0	3	2	0
GALVESTON	62	48	75	39	55	2	0	-.7	0	4.7	80	2.9	127	79	50	0	0	0	0
HOUSTON	66	41	77	27	53	1	T	-.8	T	5.8	92	1.3	49	88	35	0	3	1	0
LUBBOCK	50	26	62	19	38	0	0	-.1	0	1.2	192	.1	52	85	28	0	6	0	0
MIDLAND	56	25	68	13	40	-3	0	-.1	0	.4	55	T	4	70	23	0	6	0	0
SAN ANGELO	61	28	75	14	44	-1	0	-.1	0	2.1	191	T	2	80	22	0	4	0	0
SAN ANTONIO	64	35	77	24	50	0	0	-.4	0	2.5	102	.3	29	83	22	0	4	0	0
VICTORIA	66	42	77	30	54	2	0	-.4	0	2.2	62	.3	22	90	40	0	2	0	0
WACO	61	33	71	23	47	1	T	-.4	T	3.8	122	.5	39	88	31	0	4	0	0
WICHITA FALLS	53	29	63	20	41	1	.1	-.1	.1	6.0	321	1.2	172	87	39	0	4	1	0
UT BLANDING	31	12	38	-1	21	-6	1.6	1.3	.9	2.8	121	2.0	199	93	74	0	7	2	2
CEDAR CITY	29	5	38	-8	17	-13	.2	-.1	.2	1.5	134	.4	91	99	63	0	7	1	0
SALT LAKE CITY	30	14	40	7	22	-6	T	-.3	T	2.1	88	1.0	97	86	55	0	7	0	0
VT BURLINGTON	36	22	43	6	29	13	.4	0	.4	1.7	44	.5	37	84	51	0	6	2	0
VA NORFOLK	55	36	66	23	46	6	.5	-.4	.2	5.2	88	2.9	105	93	57	0	2	5	0
RICHMOND	49	33	59	24	41	4	1.1	-.4	.5	5.0	86	2.1	88	95	56	0	3	4	0
ROANOKE	47	31	61	21	39	4	1.0	-.3	.4	3.8	77	1.7	79	87	52	0	3	4	0
WA QUILLAYUTE	47	33	49	30	40	1	1.6	-1.5	.7	19.1	67	7.4	67	99	70	0	4	4	1
SEATTLE-TACOMA	46	35	49	33	41	1	.2	-1.1	.1	9.6	88	3.5	75	96	66	0	0	2	0
SPOKANE	32	18	37	13	25	-1	T	-.5	T	6.6	152	1.7	91	95	72	0	7	1	0
YAKIMA	41	21	50	9	31	2	T	-.3	T	4.0	169	.7	63	93	58	0	7	1	0
WV BECKLEY	44	31	60	23	38	8	1.2	.5	.7	6.1	108	1.9	73	87	51	0	3	6	1
CHARLESTON	49	34	66	29	41	9	1.0	.3	.5	5.6	95	1.4	54	89	55	0	4	6	1
HUNTINGTON	48	34	65	27	41	8	1.4	-.7	1.0	6.6	119	1.8	74	94	56	0	4	5	1
PARKERSBURG	47	33	64	26	40	9	.8	.1	.5	4.2	86	1.0	46	82	49	0	4	3	1
WI GREEN BAY	29	16	37	2	23	9	.9	.7	.5	3.3	141	1.2	136	98	79	0	7	4	0
LACROSSE	29	18	37	-5	23	10	.8	.6	.3	2.7	151	.9	127	93	73	0	7	3	0
MADISON	30	21	36	4	25	10	1.4	1.2	1.0	5.5	236	1.5	173	95	76	0	7	5	1
MILWAUKEE	33	25	38	9	29	10	2.7	2.3	1.5	8.3	252	2.8	226	98	78	0	6	5	2
WAUSAU	29	15	39	6	22	11	T	-.2	T	1.6	84	.2	26	94	68	0	7	1	0
WY CASPER	27	8	36	0	17	-5	.2	-.1	.1	.9	107	.3	78	82	48	0	7	2	0
CHEYENNE	27	10	35	5	19	-7	.2	-.2	.1	1.3	195	.4	148	80	50	0	7	2	0
LANDER	27	7	37	-3	17	-2	T	-.1	T	.8	93	.1	25	78	43	0	7	1	0
SHERIDAN	36	13	49	4	25	5	.2	0	.1	.7	53	.4	65	83	49	0	7	2	0
PR SAN JUAN	82	70	83	66	76	-1	.6	0	.5	10.4	157	2.7	118	82	60	0	0	4	0

Based on 1951-80 normals.

Heating Degree Days Summary

CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
ASSESSMENT AND INFORMATION SERVICES CENTER-NESDIS-NOAA

LAST DATE OF DATA COLLECTION PERIOD IS 1-23-1988
ACCUMULATIONS ARE FROM JULY 1
** = NORMAL LESS THAN 100 OR RATIO INCALCULABLE

Table with columns: STATE CITY, CALL WEEK, WEEK WEEK, CUM CUM CUM CUM CUM, DEV DEV DEV DEV DEV, FROM FROM FROM FROM FROM, NORM L YR, L YR, L YR, L YR, L YR, PRCT, PRCT. Rows list various cities and their corresponding heating degree day data.

National Agricultural Summary

January 18 to 24, 1988

HIGHLIGHTS: Snow and wetness virtually halted fieldwork in the central Great Plains, Corn Belt, Delta, and Southeast. Snow cover dwindled in the northern Great Plains, leaving small grains exposed to cold temperatures in some areas. Wetness and cold weather held cotton harvest at a standstill in Oklahoma. Livestock was mostly good. Heavy snow increased supplemental feeding in the central Great Plains.

SMALL GRAINS: Winter wheat was mostly good to fair in most northern and central Great Plains States, the Corn Belt, and Southeast. Crop condition was fair to good in the Delta and some Rocky Mountain States. Small grain seeding progressed well in California. Germination and growth were good to excellent in most fields. Wheat and barley plantings were virtually complete in central Arizona. Eighty to 90 percent (%) of the acreage was planted in south-central and eastern areas. Early planted wheat and barley approached the jointing stage in western Arizona. In Colorado, snow cover remained mostly adequate for winter wheat protection, but high wind resulted in considerable drifting. Small grains were topdressed where conditions allowed in Georgia. Idaho's winter grains were protected from low temperatures in most areas. Early-week snow provided good protection in western Kansas. Eastern and east-central wheat was vulnerable to possible freeze damage from the lack of snow cover. Extreme temperature variations could cause winter grain damage in Kentucky. North Dakota's winter grains lacked proper snow cover protection. Melting snow benefited winter wheat in some areas of South Dakota. Many areas are still dry and winterkill is expected to be above normal. Warmer weather promoted small grain growth in Texas. Snow and ice kept many fields dormant in the Plains. Slow growth limited grazing in the Plains. In east Texas, small grains began showing signs of nitrogen deficiency.

COTTON: Wetness prevented cotton harvest in Oklahoma. Cotton harvest neared completion in New Mexico. Rain and wet field conditions slowed stalk plowdown in south-central and eastern Arizona. Seedbed preparation continued in western areas. In California cotton seedbeds were preirrigated and fertilized.

OTHER CROPS: Snow and wet weather virtually halted fieldwork across much of the eastern half of the Nation. Sugarcane harvest continued in Florida. In most areas of the Nation, farmers were preparing next season's crops.

FRUITS AND NUTS: Rain and cool temperatures were beneficial to Florida's citrus crop. Groves were excellent. Harvest was active in all areas. Processing plants were open long hours with large volumes of early fruit types. Texas citrus harvest continued at a steady slow pace. Fruit size and quality increased. Grapefruit and navel oranges were harvested in central Arizona. Lemons, oranges, and grapefruit were packed in western areas. Pruning and dormant spraying increased in California. Avocado harvest was active but earlier freeze damage was apparent. Desert grapefruit, lemons, and royal mandarins were picked. Tangelo, navel orange, and pomelo harvests continued. Fruit tree pruning and berry training continued in Oregon. Copper treatments were applied for eastern filbert blight.

VEGETABLES: Spring vegetable planting increased in Florida. Winter vegetables were actively harvested. Tomato, cabbage, celery, pepper, lettuce, snap bean, carrot, squash, strawberry, radish, escarole, carrot, and eggplant volumes were good. Cantaloups and watermelons began emerging in the Rio Grande Valley. In the San-Antonio Winter Garden area, cold weather caused some minor damage to vegetables. Land preparation and spring planting were underway at Trans-Pecos. Lettuce, broccoli, and cauliflower movements were heavy in western Arizona. Celery shipments were at a standstill but were expected to resume. Lettuce was thinned and seedbeds prepared in eastern Arizona. Onion fields lost to extreme cold were replanted in New Mexico. Cool weather slowed most vegetable growth in California. Asparagus harvest began at Riverside. Young lettuce plants were thinned and irrigated at Westside. Onion planting progressed at Westside, and plants began emerging in the Culter-Orosi area. Broccoli, carrot, and cauliflower harvests continued at Riverside, Santa Maria, and Westside. Processing tomato growers prepared land in the Riverside Sacramento Valley.

LIVESTOCK AND PASTURES: Freezing temperatures caused increased supplemental feeding in California. Alabama's poultry producers were recovering from earlier ice and snow damage. Hay supplies were short in Arkansas but had not reached the critical stage. Livestock suffered from blizzard conditions in eastern Colorado. Cold weather slowed livestock weight gains in Iowa. Wind, snow, and cold temperatures intensified livestock management in the Rocky Mountain States and central Great Plains. Pastures were mostly fair. Slow growth limited grazing and increased supplemental feeding.

State Summaries of Weather and Agriculture

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

ALABAMA: Rainfall totals mostly between 1.00 to 3.00 in. Temperatures averaged 1 to 5° above normal.

Soil moisture mostly adequate. Poultry producers recovering from earlier ice, snow damage. Livestock mostly fair to good. Primary activities: Providing supplemental feed to livestock; routine farm chores.

ARIZONA: Very strong cold Pacific storm 17th. Rain, snow spread eastward. Morning 18th, snow level down to 4,000 ft. Snowfall 2 to 10 in. over central basins; 1 to 7 in. higher southeast valleys; 8 to 25 in. Mogollon Rim, White Mountains. Rainfall 0.25 to 1.00 in. Clear skies, good snow cover, minimum temperatures morning 20th plunged below zero high country; single digits 5,000 ft.; 20s, 30s lower deserts. Sunny skies 20th, 21st, temperatures well below normal. Strong upper level disturbance, associated cold front pushed southward through eastern area 21st. Scattered areas light snow. Dry northwesterly flow prevailed 22nd, 23rd. Significant warming 23rd statewide. Average temperatures 2 to 9° below normal.

Wheat, barley stands progressed west. Established stands good, early planting approaching jointing stage. Wheat, barley plantings virtually complete central, 80% stands established, crop mostly good; 90% seedbeds prepared south central, 80% planted, 60% stands established; 90% seedbeds prepared east, 90% planted, 10% stands established. Cotton stalk shredding, plowdown neared completion statewide. Rain, wet field conditions slowed plowdown south central and east. Land preparation continued west. Alfalfa west recovering from previous frost damage. Crop fair, light harvest progress, light stand renovation, heavy sheeping-off. Harvest progress, stand renovations south central light, crop good. Crop fair southeast, moderate sheeping-off. Harvest, heavy movement western lettuce, broccoli, cauliflower west; light shipment leaf lettuce, bok choy, cabbage, spinach, napa. Celery shipments standstill; future shipments expected later. Central area greens, cabbage, rapini, cauliflower, mixed vegetables harvested, shipped. Lettuce seedbed preparation, thinning east. Western area packing lemons, oranges, grapefruit. Central area navel oranges shipped. Grapefruit packed central. Apples shipped out of cold storage east. Pecan harvest completed, shipping continued central.

ARKANSAS: Warmer weather returned to State after 3 very cold weeks. Temperature extremes 14°; 70°. Rainfall statewide heaviest eastern part of State. Rainfall total 0.04 to 5.51 in.

Wheat fair to good. Livestock good, being fed hay and grains. Hay supply still short, not critical.

CALIFORNIA: Rain throughout State early week. High pressure dominated remainder of week. Overall temperatures seasonal normals except spring-like conditions at weekend.

Good fieldwork progress. Herbicide applications active small grains, prepared cotton seedbeds, alfalfa. Seeding small grains progressed. Germination, growth; most fields good to excellent. Pre-irrigation, fertilization cotton seedbeds. Some new alfalfa seeded. Southern alfalfa sheeped-off, green-chopped. Pruning, dormant spraying increased. Avocado harvest active; earlier freeze

damage noticed. Desert grapefruit, lemons, royal mandarins picked. Minneola tangelo, navel orange, pomelo harvests continued. Cool weather slowed most vegetable crops. Riverside area asparagus harvest began. Broccoli movement continued Riverside, Merced, Salinas, Santa Maria, Westside. Carrots harvested Riverside, Merced, Westside. Cauliflower harvest progressed Riverside, Westside, Santa Maria. Celery harvested Riverside. Lettuce picked Palo Verde Valley, where late lettuce planting continued. Westside, young lettuce plants thinned, irrigated. Onion planting progressed Westside, plants emerging Cutler-Orosi. Fall potato harvest active Riverside packing sheds full time north. Sweetpotatoes packed Westside. Processing tomato growers prepared land Riverside Sacramento Valley. Livestock good statewide. Freezing temperatures firmed ground northern feedlots, caused increase supplemental feeding. Movement to market very light Redding, heavier Tulalake-Butte Valley due to increased prices. Fresno feedlots 50% of capacity. Range, pasture condition very good or excellent due to rains. Water supply levels full most areas. Calving, lambing active.

COLORADO: Snow, blizzard conditions throughout State early in week. Remainder of week mostly dry with high winds. Precipitation 0.50 to 1.20 in. Average temperatures 4 to 7° below normal.

Caring for livestock, snow removal major activities. Livestock suffered from blizzard conditions on Eastern plains. Snow cover remained mostly adequate for winter wheat protection, but high winds resulted in considerable drifting.

FLORIDA: Partly cloudy. Some sunshine. Very little rain, 18th. Cloudy, windy, colder by evening, 22nd, as cold front moved offshore into Florida Straits by night. Rainfall amounts mostly around 0.50 in., some accumulations in northerly areas 2.00 to 3.00 in.

Soil moisture improved to mostly adequate. Small grains generally good. Farmers preparing for next season's crops. Sugarcane harvest continued. Late week rains very beneficial to forage growth. Dryness early week some Peninsula areas limited growth, lowered conditions to only fair many areas. Panhandle grazing varied from poor to good. Cattle continued fair to good. Groves excellent. Two days rain with cool temperatures very beneficial. Harvest very active all areas; processing plants open long hours, large volumes early fruit types. Mild, dry weather early week turned cool, wet late week over vegetable producing areas. Spring crop planting increased. Harvest winter crops active. Good volume available tomatoes, cabbage, celery, peppers, lettuce, snap beans, carrots, squash, strawberries, radishes, escarole, endive, carrots, eggplant.

GEORGIA: Warm, wet week. Temperatures 2 to 5° above normal. Extreme lows teens northeast mountains to mid 20s central, upper 20s south. Extreme highs mid 60s north, low and mid 70s central, upper 70s south. Rainfall 2.00 to 3.00 in. northern half, 1.00 to 3.00 in. central, south.

Soil moisture surplus. Land preparation, small grain topdressing active where conditions allowed. Wheat, rye, other small grains fair to good, mostly good. Tobacco plants fair to good. Pastures poor to good. Cattle fair to good, mostly fair. Hogs good.

HAWAII: Mostly sunny, light windward showers. Light to heavy showers late week. Temperatures low 60s to mid 80s. Rainfall none to 1.90 in. Variable winds 5 to 15 mph.

Days suitable for fieldwork 7.0. Plantings increased. Irrigation, spraying also increased. Banana, papaya production on seasonal decline. Chinese cabbage supplies higher. Head cabbage output moderate to heavy, good quality. Head lettuce production very light. Ginger root harvesting active, out of State shipments continued.

IDAHO: Precipitation below normal. Temperatures near, above normal over north, below normal remainder.

No field activity. Most winter wheat fields snow covered. Fields near hilltops no snow cover. Main farm activities feeding, caring for livestock, marketing, shipping products. Others included shop work, attending seminars, preparing income taxes. Livestock remained good. Calving, lambing active. Hay, roughage supplies adequate.

ILLINOIS: Temperatures average 3 to 7° above normal. Precipitation averaged 1.00 in. north, 1.50 in. central and south.

Winter wheat good. Warm air, rain thawed frozen ground south and reduced thickness of frozen layer north. Livestock good to fair.

INDIANA: Temperatures 5 to 10° above normal. Lows mid 20s to 30°, highs mid 30s to low 40s. Precipitation 0.01 to 1.50 in.

Muddy conditions limited field activities. Other activities: Hauling grain, spreading manure, machinery repair, topdressing and fertilizer spreading, tax preparation, cutting wood, attending meetings and care of livestock. Wheat mostly good. Hay supplies adequate. Livestock good.

IOWA: Windy, wet week. Temperatures 4° above normal west to 10° above normal east. Weekend brought high winds, snow, low temperatures. Ground blizzards many areas, wind chills -35 to -55°.

Livestock mostly good. Cold weather caused slow weight gains. Snow cover restricted field activities. Farmers planning for 1988 crop planting.

KANSAS: Temperatures near normal western third, above normal central, east. Temperatures western 3 districts ranged 26 to 31°, 1° below normal northwest; 2° above normal west central, southwest. Eastern two-thirds 4 to 7° above normal, ranged 30 to 35°.

Snow early week provided good snow cover western districts but eastern, east central areas wheat fields vulnerable, possible freeze damage lack snow cover. Heavier feeding cattle necessary western areas due lower temperatures, snow covering wheat pastures.

KENTUCKY: Heavy rain 18th and 19th 1 to 3 in. most places. Almost 4.00 in. Princeton. No significant precipitation remainder week. Above normal temperatures first 3 days; maximum in 60s south, east and 50s elsewhere. Temperatures at or below normal rest week.

Surface soil moisture generally adequate. Farm ponds, stock dams replenished most areas. Light snow, but mostly no snow cover. Winter grains believed okay, extreme temperature variations could cause damage. Livestock wintering well. Supplemental feeding heavy.

LOUISIANA: Temperatures 2 to 5° above normal. Temperature extremes 21°; 78°. Rainfall averaged 0.19 to 1.59 in.

Main activities: Livestock care, routine maintenance.

MARYLAND & DELAWARE: Maryland: Temperatures averaged 36°, 3° above normal. Lows averaged 7°. Highs averaged 52°, ranging 47 to 57°. Precipitation averaged 1.69 in., ranging 1.04 to 2.12 in. Southern areas received greatest average precipitation.

Topsoil moisture levels adequate throughout State. Farmers caring for livestock, planning for spring planting.

Delaware: Temperatures averaged 37°, 3° above average. Lows ranged 3 to -16°, averaging 9°. Highs averaged 52°, ranging 49 to 55°. Precipitation averaged 1.57 in. Greatest precipitation 2.12 in. Georgetown.

Topsoil moisture adequate throughout area. Farmers caring for livestock, planning for spring planting.

MICHIGAN: Temperatures ranged 7 to 10° above normal. Temperature extremes -3°; 50°. Precipitation 0.34 to 2.37 in. across State. Both rain, snow over State during week. Warming trend eliminated most of snow cover central, southern parts of State.

Activities: Marketing crops, pruning fruit trees, attending farm meetings, routine farm maintenance. Livestock excellent, food supplies abundant. Unseasonably mild temperatures favorable for livestock.

MINNESOTA: Temperatures averaged 3 to 10° above normal. Extremes -15°; 47°. Precipitation averaged 0.78 to 1.37 in. above normal southern third, and near normal to 0.53 in. above normal elsewhere. Precipitation totals averaged 0.98 to 1.56 in. southern third, 0.15 to 0.70 in. elsewhere. Greatest weekly total 2.17 in. Snowfall averaged 3 to 5 in. northern third, 9 to 15 in. elsewhere. Snow depth weekend averaged 11 to 15 in. for State.

Snow throughout State virtually stopped all farm activity except care for livestock. Livestock good winter condition.

MISSISSIPPI: Temperatures 4 to 5° above normal; extremes 21°; 76°. Mild temperatures until cold front passed through on 20th. Greatest 24-hour total rainfall 2.48 in. Greatest weekly rainfall 2.93 in.

Days suitable for fieldwork 0.3, 0.6 1987, 2.2 avg. Soil moisture adequate to surplus. Some areas saturated. Wheat mostly fair. Livestock fair to good; pastures fair. Hay, feed grain supplies adequate. Tornadoes 19th.

MISSOURI: Temperatures averaged 6° above normal, ranging 4° above normal southeast, to 9° above normal northeast. Rainfall widespread, averaging around 0.50 in. northwest to 2.25 in. Bootheel.

Livestock doing well. Farmers studying farm programs, planning for crop season.

MONTANA: Temperatures western third near or little below normal. Elsewhere readings 2 to 15° above normal. Snow flurries across most of State.

Winter wheat 8% poor, 70% fair, 22% good. Wind damage to winter wheat fields 79% light, 21% moderate. Snow cover protection for winter wheat fields 59% poor, 31% fair, 10% good. Cattle, calves generally 84% good, 16% excellent. Sheep, lambs 80% good, 20% excellent. Livestock receiving supplemental feed 95%. Grazing 67% open, 32% difficult, 1% closed. Cattle losses compared with average 18% lighter, 80% same, 2% heavier. Sheep losses 20% lighter, 72% same, 8% heavier.

NEBRASKA: Temperatures averaged 6° below normal west, 5° above normal east. Extremes 15°; 46°. Precipitation ranged 0.50 to 1.00 in. across State.

Major snow storm hit State early week. Snowfall heavy northwest, north central, central, southwest. Strong winds accompanied storm, which intensified livestock management, forced supplemental feeding and provided less than ideal early calving conditions.

NEVADA: Moist, low pressure system early, remainder dry, high pressure prevailed. Temperatures well below normal. Significant rainfall early some southern areas. Scattered, light precipitation central, north. Temperature extremes 25° below zero; 58°.

Cold weather hard on newborn calves, lambs. Snow cover melt plus below normal temperatures not favorable fall snow grains.

NEW ENGLAND: Average precipitation (rain, water equivalent of snow) 0.50 to 1.00 in. Temperatures averaged above normal from low 20s near Canadian border to mid 30s south.

Major Farm Activities: Repairing machinery, tending livestock; moving apples, potatoes from storage.

NEW JERSEY: Temperatures above normal, averaged 32° north, 35° south, 36° coastal. Extremes 4°; 53°. Precipitation normal north, above normal south, coastal, averaged 0.76 in. north, 0.92 in. south, 1.39 in. coastal. Heaviest 24-hour total 1.33 in. on 19th, 20th.

Farmers cared for livestock, tended to normal winter chores.

NEW MEXICO: Average weekly temperatures below normal statewide. Snow scattered locations.

Days suitable for fieldwork 4.8. Soil moisture 13% short, 87% adequate. Cotton 100% fair; 99% harvested statewide. Barley 83% fair, 17% good. Wheat 9% poor, 83% fair, 8% good. Rain, warmer weather needed for improvement. Pecans 103% fair; harvest neared 90% completion, Cattle 43% fair, 57% good. Sheep 33% fair, 67% good. Range 14% poor, 72% fair, 14% good. Onions 50% fair, 50% good; some replanting fields lost to extreme cold. Lettuce 100% good, planting continued.

NEW YORK: Temperatures midweek well above normal; melting snow, lowering snow pack considerably. Seasonable temperatures returned 21st. Rain, freezing rain midweek.

Producers busy with routine winter chores.

NORTH CAROLINA: Temperatures averaged near normal west, up to 4° above normal along coast. Temperature extremes 10°; 77°. Precipitation 0.34 to 4.93 in. across State.

Days suitable for fieldwork 0.7. Soil moisture 2% short, 31% adequate, 67% surplus. Wheat 2% poor, 28% fair, 68% good, 2% excellent. Oats 3% poor, 35% fair, 62% good. Barley 33% fair, 67% good. Rye 3% poor, 38% fair, 59% good. Pasture 8% very poor, 8% poor, 54% fair, 27% good, 3% excellent. Hay and roughage supplies 2% short, 90% adequate, 8% surplus. Feed grain supplies 5% short, 90% adequate, 5% surplus. Major farm activities: Equipment repair, maintenance; tending livestock; general farm maintenance.

NORTH DAKOTA: Temperatures averaged 8 to 12° above normal. Extremes -15° west central; 43° southeast. Precipitation totals averaged 0.05 in. southwest, south central to 0.24 in. north central.

Soil moisture below normal. Inadequate snow cover for winter grain, alfalfa protection. Insect infestations stored grain. Livestock good. Feed supplies adequate.

OHIO: Average temperatures 5 to 9° above normal. High 50s to low 20s. Precipitation 0.25 in. northwest to 1.50 in. south.

Warm air, mild rain raised soil temperatures at four inches to 30° except northwest corner.

OKLAHOMA: Temperatures averaged 2° below normal Panhandle to 3° above normal east central. Precipitation averaged none Panhandle to 0.21 in. northeast.

Fields drying slowly. Cattle trampling wheat pasture. Grain prospects fair. Cotton remained 90% harvested.

OREGON: Temperatures 1 to 2° below normal west of Cascades; 2 to 5° above normal north central section; chilling 12 to 17° below normal southeast. Precipitation light, just over 1.00 in. at coast; 0.30 to 0.50 in. western interior; eastern amounts 0.10 in. or less.

Soil moisture adequate to surplus east, surplus west. Much of east remained snow covered; due to late plantings, fall seeded grains subject to above-normal cold damage, winterkill. Western wheat fields good condition, but slow growth; grass, clover seed fields show some stand reductions due to frost heaving. Fruit tree pruning, training continued. Copper treatments for eastern filbert blight applied. Livestock good. Western pastures poor to fair. Low elevation winter ranges mostly fair. Calving, lambing underway.

PENNSYLVANIA: Mild, wet week. Average temperature 33°, 7° above normal. Temperature extremes 7°; 63°. Average precipitation 0.98 in., 0.33 in. above normal.

Activities: Hauling manure; machinery maintenance; caring for livestock; cutting firewood.

PUERTO RICO: Island average rainfall 0.39 in., 0.27 in. below normal. Highest weekly total rainfall 1.77 in. Pico Del Este-Luquillo, 0.84 in. San Juan City, 0.68 in. San Juan WSFO. Highest 24-hour total 0.72 in. Pico Del Este-Luquillo. San Juan WSFO mean temperature 75°, 1° below normal. Total rainfall 0.68 in., 0.05 in. above normal. Divisional temperature averaged 73 to 76° on coasts, 70 to 73° interior divisions. Mean station temperature 60° Pico Del Este-Luquillo to 77° San Juan City. Lowest minimum temperature 46° Pico Del Este-Luquillo. Highest maximum temperature 89° San Sebastian.

SOUTH CAROLINA: Temperatures averaged slightly above normal. Precipitation 1.50 to 3.00 in. northwest, 0.50 to 1.50 in. coastal plains. Low land river flooding continued eastern half.

Main activities: Preparing tobacco seedbeds, pecan harvesting, care of livestock, poultry, equipment repair, routine chores.

SOUTH DAKOTA: Average temperatures ranged normal to 11° above. Extremes -16°; 55°. Snow cover ranged 1 to 2 ft. east, 1 in. central, less than 1 in. west. Precipitation 1 to 2 in. snow southeast, less than trace southwest and northeast.

Winter wheat benefited some areas of State from melting snow but many areas still in same situation they have been throughout season. They went into fall dry, then had some real cold temperatures and expecting an above normal amount of winterkill. In some of these areas snow has all blown off fields, some soil blowing. Overall crop still poor to fair. Livestock good.

TENNESSEE: Rain statewide early week with severe weather west. Ranged 1.00 to 5.00 in. Temperatures averaged 2 to 7° above normal. Extremes 22°; 68°.

Topsoil moisture supplies continued to be replenished. Main activities include livestock chores, meetings, tax preparation.

TEXAS: Weather generally fair, but cool as series of cold fronts, cold air surges developed across State. Few weak disturbances caused some showers east early week, isolated activity west. Otherwise spring-like conditions. Temperatures near or below normal. Below normal precipitation.

Crops: Small grains some growth certain areas with open weather. Many fields Plains still dormant snow, ice continued melt which provided some moisture; many fields need additional moisture. Grazing Plains very short because slow growth. Some freeze damage occurred, minor. Some fields Blacklands signs slow growth with early warming trend. Additional sunshine be beneficial. Fields east need nitrogen as dry out. Overall conditions holding steady; continued sunshine, warmer temperatures, with some rain Plains, ensure some improvement. Other crops harvested: Pecans 99%, 98% 1986, 99% avg.

Commercial Vegetables: Rio Grande Valley cantaloup, watermelons being planted some fields emerging. Harvest carrots, cabbage, lettuce, celery, broccoli. Citrus harvest steady, slow pace. Sizes, quality increased. San Antonio-Winter Garden cold weather some minor damage; most crops satisfactory progress. Harvest continued spinach, carrots, lettuce, cabbage. Trans-Pecos land preparation spring planting underway. Pecan harvest west linger, majority harvested. Markets slow. Peach producers continued pruning east, began pruning Blacklands.

Range and Pastures: Warmer temperatures promoted some new growth pastures, ranges; forage remained light. Supplemental feeding steady levels. Some stockers moved off small grains Plains because slow forage regrowth. Livestock break from severe cold early week. Some bloat occurring where forage better. Calving, lambing continued few problems.

UTAH: Precipitation light north central, heavy extreme southwest, moderate elsewhere. Temperatures 4 to 11° below normal.

Snow cover 4 to 12 in. on fall seeded grains. Winter wheat good. Winter range feed fair to poor. Livestock mostly good. Major farm activities: Feeding range livestock, livestock chores, equipment maintenance, tax records summaries, attending farm seminars.

VIRGINIA: Temperatures averaged 3° above normal. Moderate precipitation 0.50 to 1.56 in.

Days suitable for fieldwork less than 1.0. Topsoil moisture 40% adequate, 60% surplus. Snow thawing quickly with warmer weather. Winter grains good to excellent. Lambing, calving activities progressed normally. Livestock good. Isolated areas shortage of livestock feed.

WASHINGTON: Several weak disturbances moved through State early week, high pressure ridge moved into region end of period. Precipitation generally light western area, moderate amounts along coast. Cascades blocked most precipitation from reaching eastern area. Temperatures mainly above normal, some eastern towns near mountains slightly below normal levels.

Soil moisture 40% short, 60% adequate. Winter wheat mostly fair. Rain, warmer temperatures caused snow cover to diminish central, eastern areas. Soil erosion problem exists Whitman, Garfield Counties. Active participation expected for sixth CRP sign-up. Orchard pruning continued Yakima County. Vegetable growers centering efforts on next year's plans. Livestock winter feeding continued.

WEST VIRGINIA: Average temperature 38°; 6 to 10° above normal. Extremes 16° White Sulphur Springs, 71° Creston. Precipitation averaged 1.10 in., 0.42 in. above normal.

Days suitable for fieldwork 3.3. Soil moisture 83% adequate, 17% surplus. Farm activities: Livestock care, general farm maintenance. Feed supplies adequate to short. Wheat, barley good to fair.

WISCONSIN: Temperatures above normal, averaged 23°. Extremes -11°; 43°. Precipitation 0.60 to 1.80 in. Snowfall 6 to 12 in. central, north on 20th; 1 to 5 in. statewide on 23rd to 24th.

WYOMING: Temperatures generally below normal. Precipitation mostly below normal except south.

Winter wheat fair to good, snow cover most areas. Livestock fair to good. Early lambing, calving, shearing started. Supplemental feeding underway many areas. Wind, snow making feeding difficult. Feed supplies adequate. Winter pastures being utilized where possible.

International Weather and Crop Summary

January 17 - 23, 1988

HIGHLIGHTS:

UNITED STATES... Snow and wetness virtually halts fieldwork in the central Great Plains, Corn Belt, Delta, and Southeast. Snow cover dwindles in the northern Great Plains, leaving small grains exposed to cold temperatures in some areas.

WESTERN U.S.S.R.... Snow accompanies colder weather.

EUROPE... Heavy rain in the west keeps soils unfavorably wet. Dryness continues across the southeast.

SOUTH ASIA... Light rain falls over vegetative wheat in northern Pakistan and parts of northern India.

NORTHWESTERN AFRICA... Rain benefits winter grains in Morocco and western Algeria. Adverse dryness continues over southern crop areas in eastern Algeria and Tunisia.

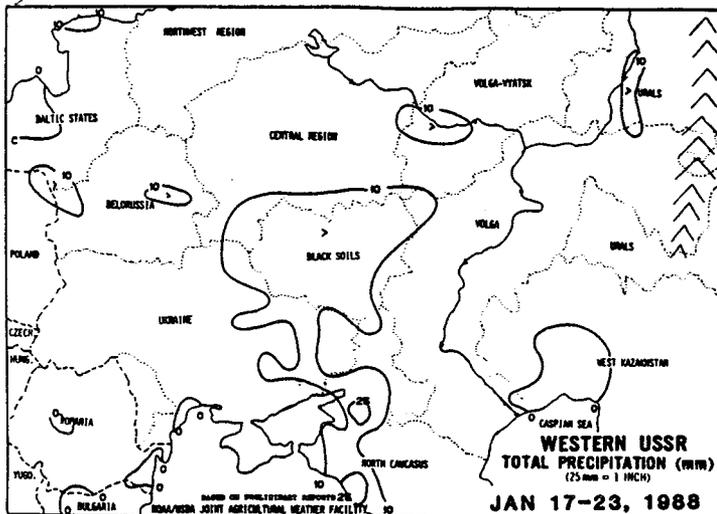
SOUTH AFRICA... Widespread showers benefit vegetative to tasseling corn throughout the primary production areas.

SOUTHEAST ASIA... Moderate to heavy showers cover Indonesia. Variable showers cover the eastern half of the Philippines.

EASTERN ASIA... Colder air covers northern China. Light to moderate rain falls over growing areas in central and southern China.

SOUTH AMERICA... Widespread rain benefits crop development throughout south-central Brazil and Argentina.

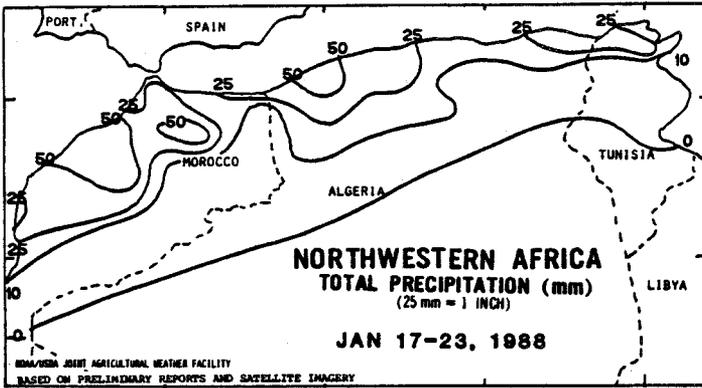
AUSTRALIA... Moderate to heavy rain benefits crops in eastern growing areas. Temperatures in the east are moderate to normal levels.



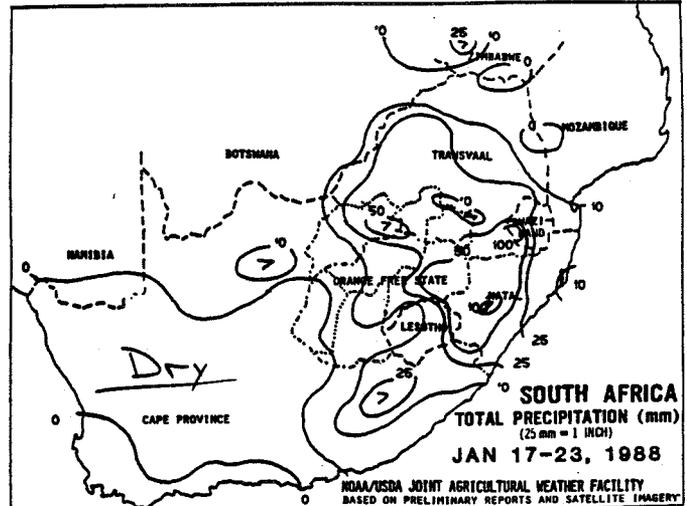
WESTERN U.S.S.R... Snow accompanied colder weather. Snow cover increased in the Baltic States, Belorussia, the western and southern Ukraine, and the North Caucasus. Temperatures fell sharply with early-week, above-normal temperatures dropping to below normal by week's end. Coldest weather occurred on January 23, with minimum temperatures in the eastern Ukraine, Black Soils Region, lower Volga, and the northern North Caucasus, ranging from -15 to -20 degrees C. Snow cover in these areas was sufficient to protect winter grains from potential winterkill. Minimum temperatures in the Baltic States, Belorussia, and the western Ukraine ranged from -5 to -13 degrees C.



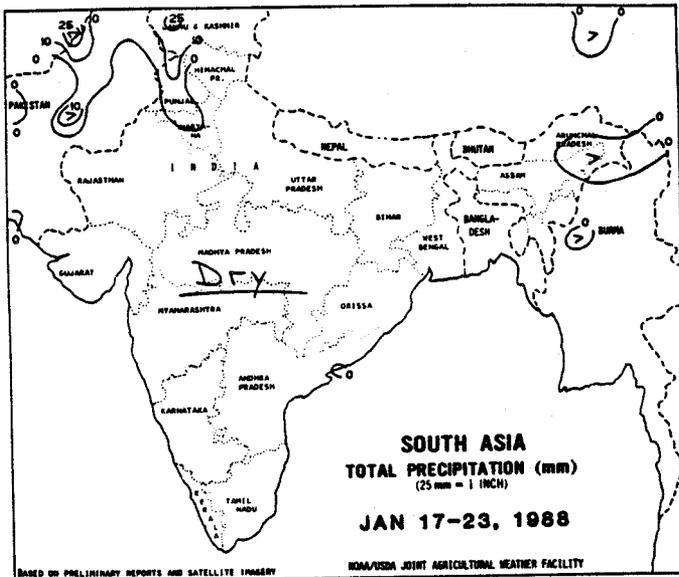
EUROPE... Moderate to heavy rain (greater than 25mm) continued over much of western Europe from Spain northward to England and the Low Countries, keeping many soils unfavorably wet. Heavy rain (greater than 150mm) may have caused flooding across southwestern France. Lighter rain and some snow covered northern and eastern Europe, with some moderate rain in West Germany. In southern Europe, a series of weak, low pressure centers moving eastward across the Mediterranean brought moderate to heavy rain to much of Italy, western Yugoslavia, and southern Greece. Little or no precipitation fell across interior sections of the Balkans, however, and soil moisture levels remained at unfavorably low levels. Temperatures across Europe were cooler than the previous week, but still normal to above normal in most sections.



NORTHWESTERN AFRICA...Soaking rains (25-65mm) covered Morocco and western Algeria, benefiting winter grains in the vegetative stage. Northern winter grain areas in eastern Algeria and Tunisia received light showers (17-25mm) which brought temporary relief to crop areas that had been dry since December. Chronic dryness continued over southern winter grain areas in eastern Algeria and Tunisia. A cooling trend occurred over the region, lowering evaporation rates.



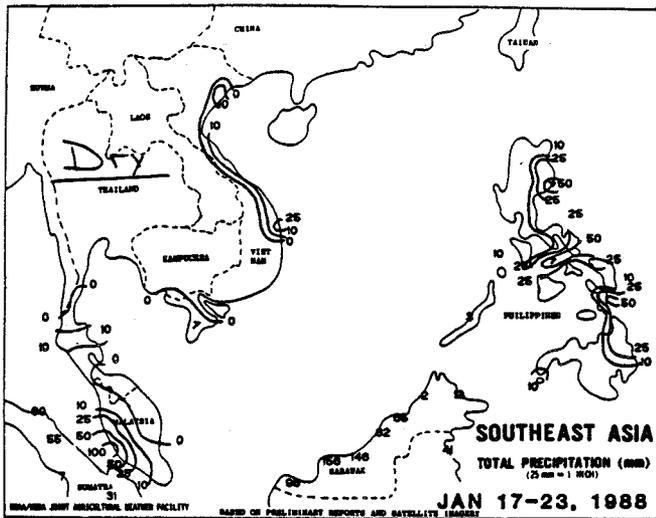
SOUTH AFRICA...Widespread, beneficial showers (15-71mm) covered vegetative to tasseling corn in most primary production areas of the Maize Triangle and reached grain areas in Natal, eastern Cape Province, and north-central Transvaal. Mostly dry weather persisted in minor production areas of the southern and western Maize Triangle and northeastern Transvaal, where moisture continued limited for normal crop development. Temperatures generally averaged 1 to 2 degrees C above normal in all grain regions, with maximum temperatures reaching the middle thirties Celcius in the driest regions.



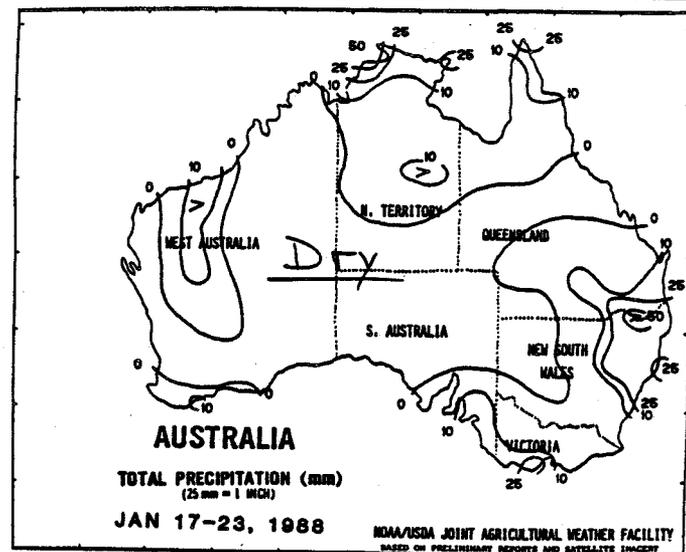
SOUTH ASIA...Light rain (1-10mm) fell over grain regions of northern Pakistan and India's Punjab and Haryana states, with isolated, heavier rain (17-33mm) in central Pakistan and northernmost India. Dry weather dominated all other crop regions. Moisture continued limited for northern and central India's vegetative to heading wheat. The dry, warm weather in the south benefited mature cotton. Southern India's summer rice, mostly irrigated, is in the vegetative stage of development.



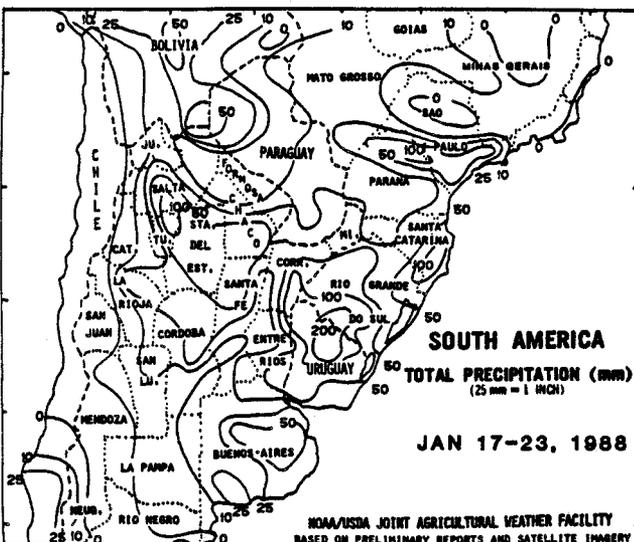
EASTERN ASIA...A strong area of high pressure brought much colder weather to northern China and North Korea. Warmer-than-normal weather over the past several weeks melted protective snow cover over most winter grain areas, however, leaving crops more vulnerable to extreme cold temperatures. The cold front associated with the air mass set off light to moderate rainfall across the Korean Peninsula, Japan, and most of central and southern China except for the extreme south, which remained dry. Heavy rain (greater than 25mm) continued over western Japan, where rainfall has been excessive during the past 2 weeks. Temperatures and soil moisture levels remained generally favorable for secondary crops across southern China.



SOUTHEAST ASIA...Moderate to heavy showers (25-100mm or more) covered Indonesia, increasing irrigation levels. Rainfall in Java averaged over 100mm, with amounts greater than 200mm in north-central rice areas. Moderate to heavy showers (32-150mm) covered eastern Malaysia and the southwestern Malay Peninsula. Except for a pocket of light rain (4-17mm) over peninsular Thailand, dry weather dominated the southeastern and northern Malay Peninsula and continued in Thailand's rainfed crop regions. Light to moderate rain (10-32mm) continued along Vietnam's central coast. In the Philippines, variable showers continued in the eastern half of the islands with minimal rain to the west. Rainfall ranged from 5 to 25mm in grain regions of northern Luzon.



AUSTRALIA...Moderate to heavy rain (greater than 25mm) continued over summer crop areas of southeastern Queensland and northeastern New South Wales. The rain caused delays in fieldwork but was beneficial to vegetative summer crops. Soil moisture levels remained favorable for most crops. Rain also caused delays in wheat harvest in southern South Australia and Victoria, where the harvest was nearing completion. Mostly dry weather covered Queensland's northeastern sugarcane areas. Temperatures across most eastern growing areas moderated to more normal levels after earlier extreme heat.

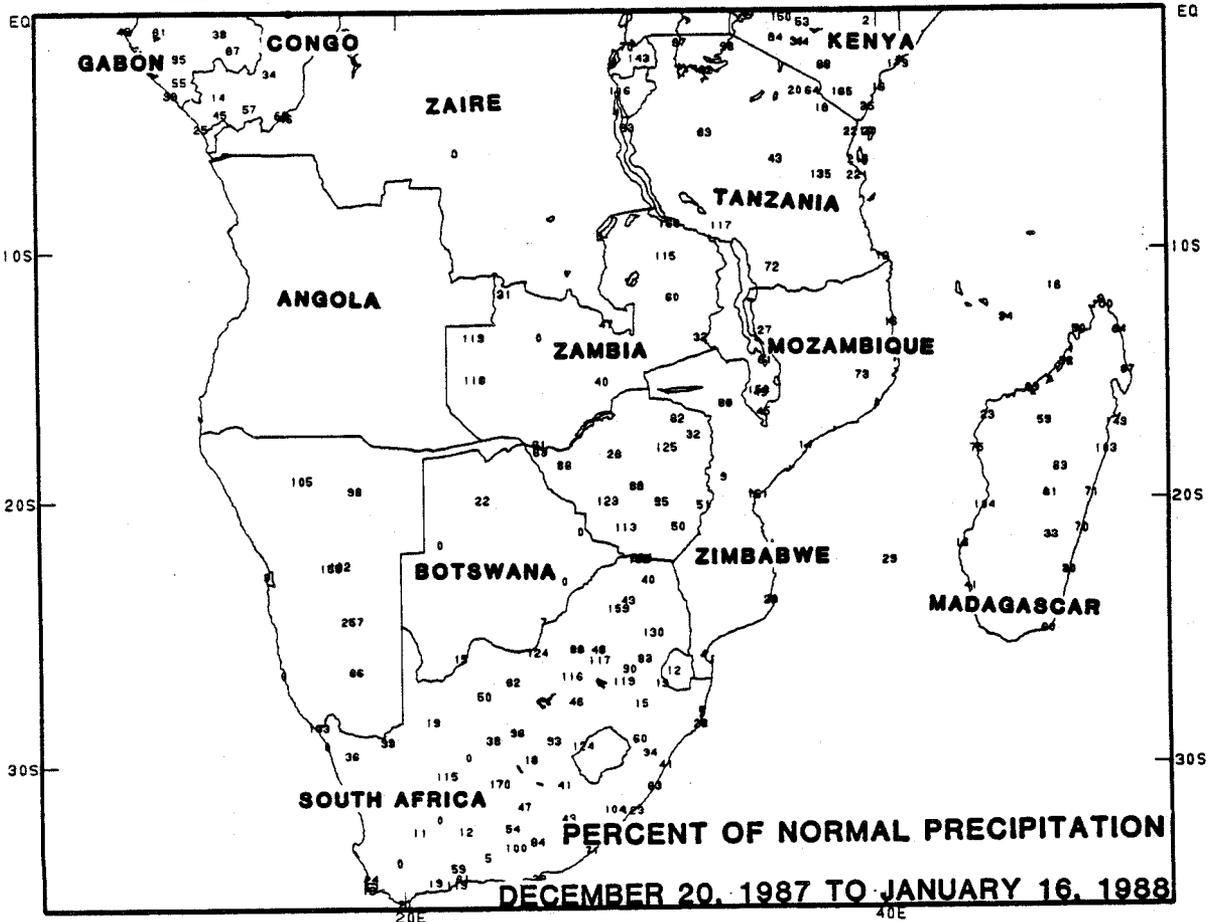
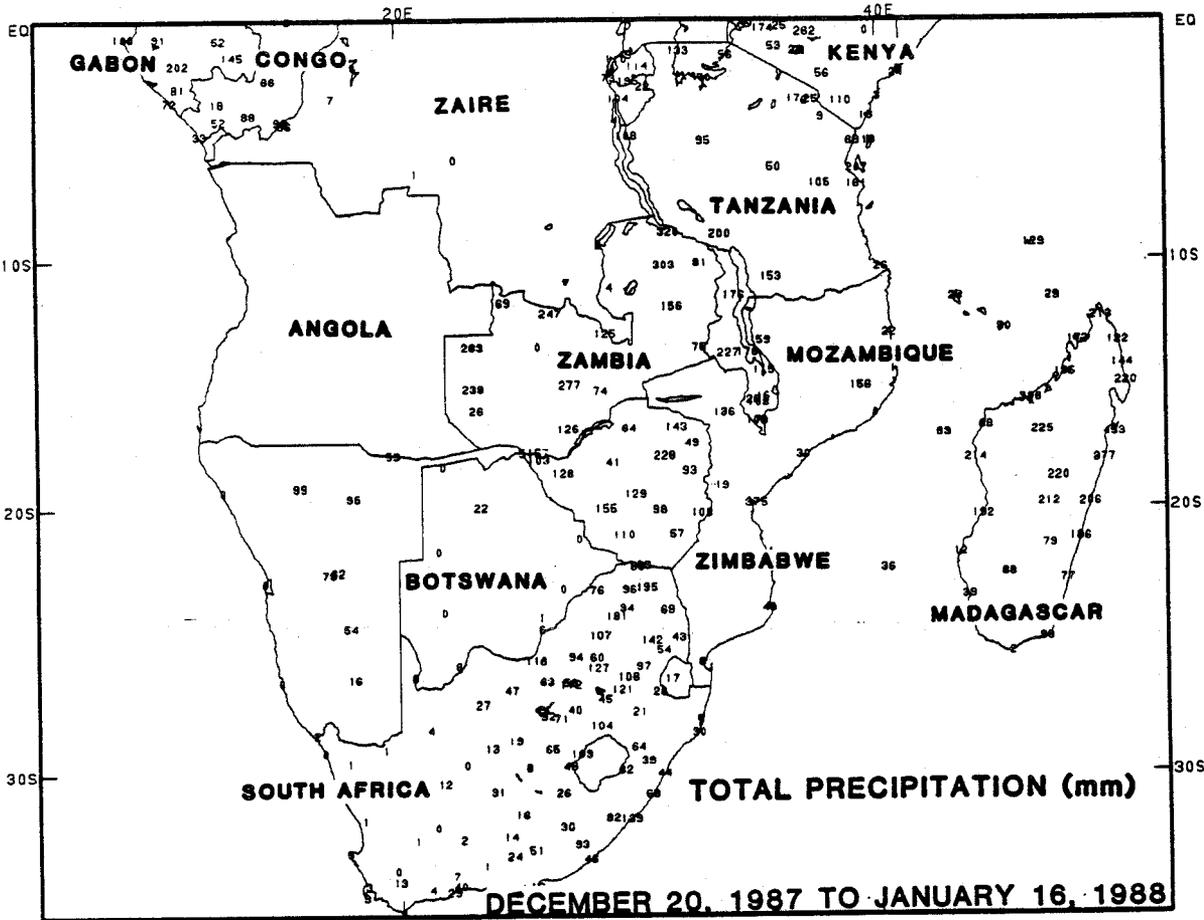


SOUTH AMERICA...Rain fell over most crop areas of Argentina and south-central Brazil. In Rio Grande do Sul, Brazil's southernmost state which is one of the leading soybean producers, locally heavy rain (50-100mm or more) soaked southern and western portions while beneficial showers (20-45mm) helped flowering soybeans in the north. Locally heavy showers (50-100mm) also fell in northern Parana. Elsewhere, weekly rainfall averaged 10-30mm, providing favorable moisture for soybeans ranging from late vegetative growth to setting pods. Weekly temperatures averaged 2-4 degrees C above normal in south-central Brazil. In Argentina, showers benefited summer crop development throughout the region, accompanied by favorably mild, weekly average temperatures. Weekly rainfall averaged 20-50mm in northern Buenos Aires, 7-30mm in southern Santa Fe, and 8-40mm in southern Cordoba. Substantial rain also fell in northern cotton areas. Conditions remained favorable for summer crops advancing through weather-sensitive phases of development.

African Agricultural Weather Summary

In southern Africa, beneficial showers throughout December in Zambia, Zimbabwe, and parts of central, northwestern, and southern Mozambique boosted moisture levels for planting. Since early January, however, generally dry, warmer-than-normal weather in Mozambique and southern Zimbabwe stressed late planted vegetative crops. In early January, dry weather covered central Zambia and northern Zimbabwe, but mid-month rain brought

relief to vegetative crops. Some areas of northeastern Mozambique have yet to receive sufficient planting rains. Moderate to heavy showers benefited vegetative to reproductive crops in Tanzania's western half. In eastern Tanzania, a drying trend developed in early December and persisted until recently, when showers brought some relief to vegetative to reproductive crops in east-central regions stressed by the unfavorably hot, dry weather.



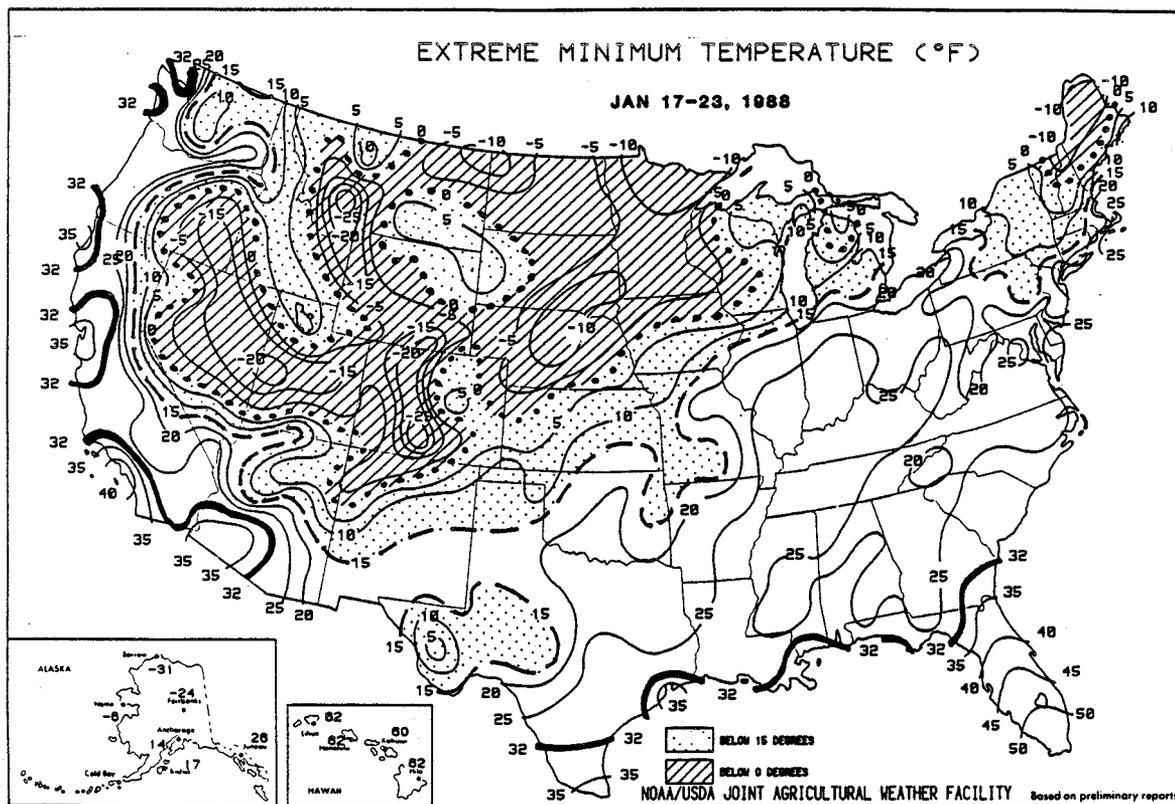
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