

# 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

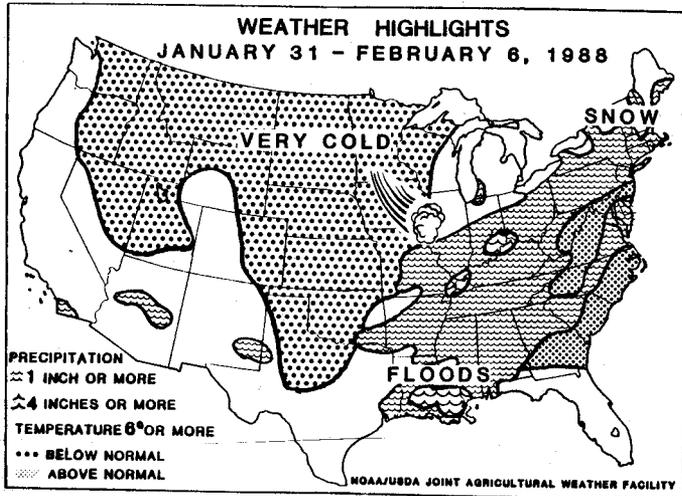
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## National Weather Summary

January 31 - February 6, 1988



**HIGHLIGHTS:** An arctic outbreak caused temperatures to fall across the entire Nation east of the Rocky Mountains. The week began extraordinarily warm in the East and ended cold and windy. Winter storms brought protective snow cover to the northern and central Plains and heavy rains to the Mississippi and Ohio Valleys and parts of the Southeast.

**SUNDAY...**Record high temperatures for the last day of January were set at many locations in the Midwest and the East. A frontal system stretched from the Great Lakes southwestward across the Mississippi Valley to Texas. To the west and north of this front, the weather was generally cold and snowy. In some areas of Montana and North Dakota, temperatures remained below zero throughout the day. Rain was scattered from the Ohio Valley to the Tennessee Valley and lower Mississippi Valley, and from the Carolinas to Florida.

**MONDAY...**An arctic air mass continued to move southeastward, with its leading edge stretching from the Ohio Valley to the lower Mississippi Valley. For the second day in a row, temperatures in the northern Great Plains remained below zero. Rainshowers were scattered ahead of the cold front. Thunderstorms were accompanied by gusty winds and heavy rain in Louisiana and Mississippi. Some flooding occurred in southern Louisiana. Snow, freezing rain, and sleet extended from Colorado into the Texas Panhandle and into Missouri, Illinois, Indiana, and Michigan.

**TUESDAY...**Showers and thunderstorms occurred along a cold front across Georgia and Alabama. A tornado touched down in Alabama. Snow and

freezing rain fell in the middle Mississippi Valley, while snowshowers were scattered across the eastern Great Lakes and upper Ohio Valley. Record high temperatures continued in much of the East. Heavy rain swept into southern California, causing some flooding. Snow fell in Utah, Colorado, and parts of the Pacific Northwest.

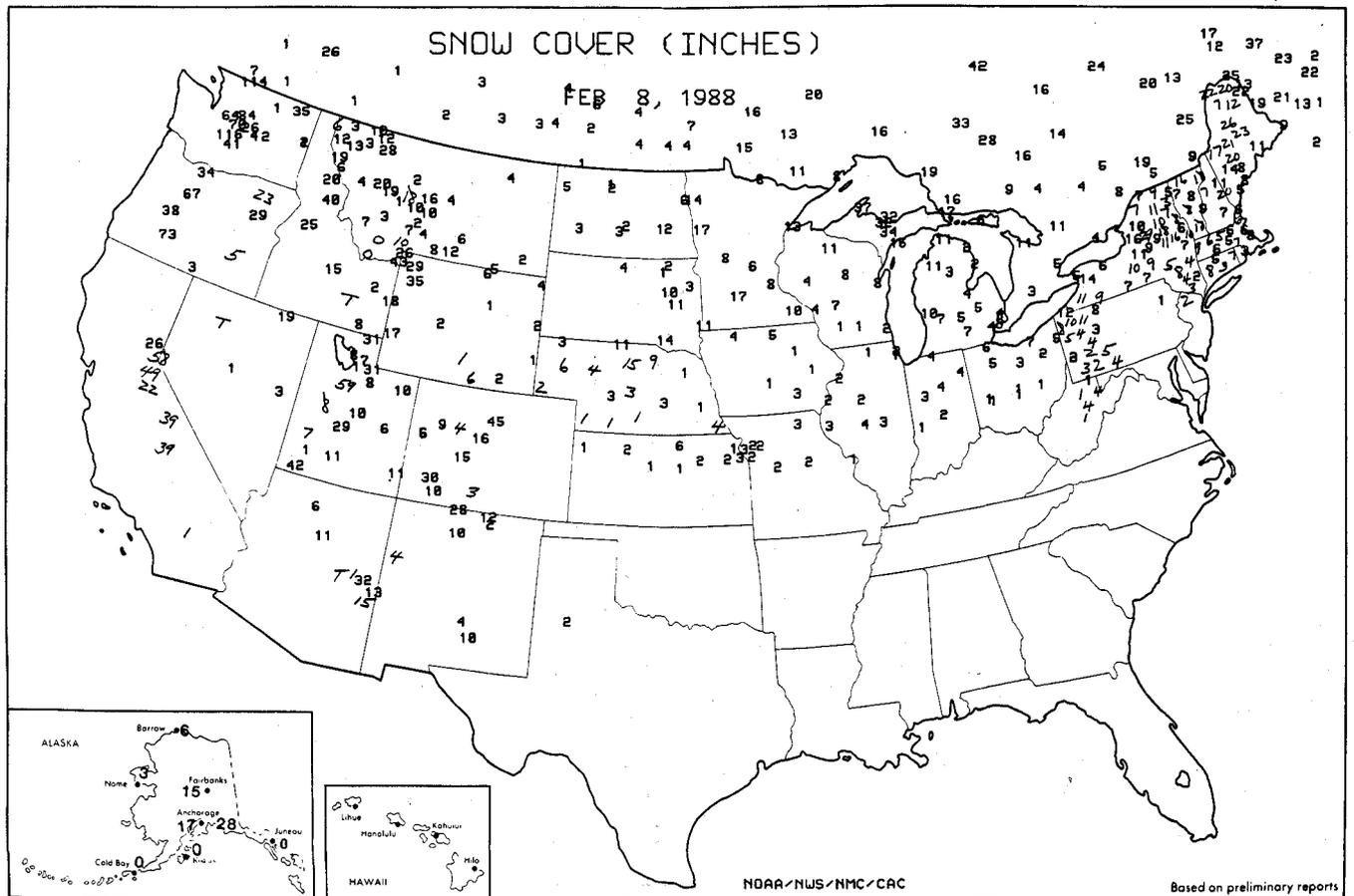
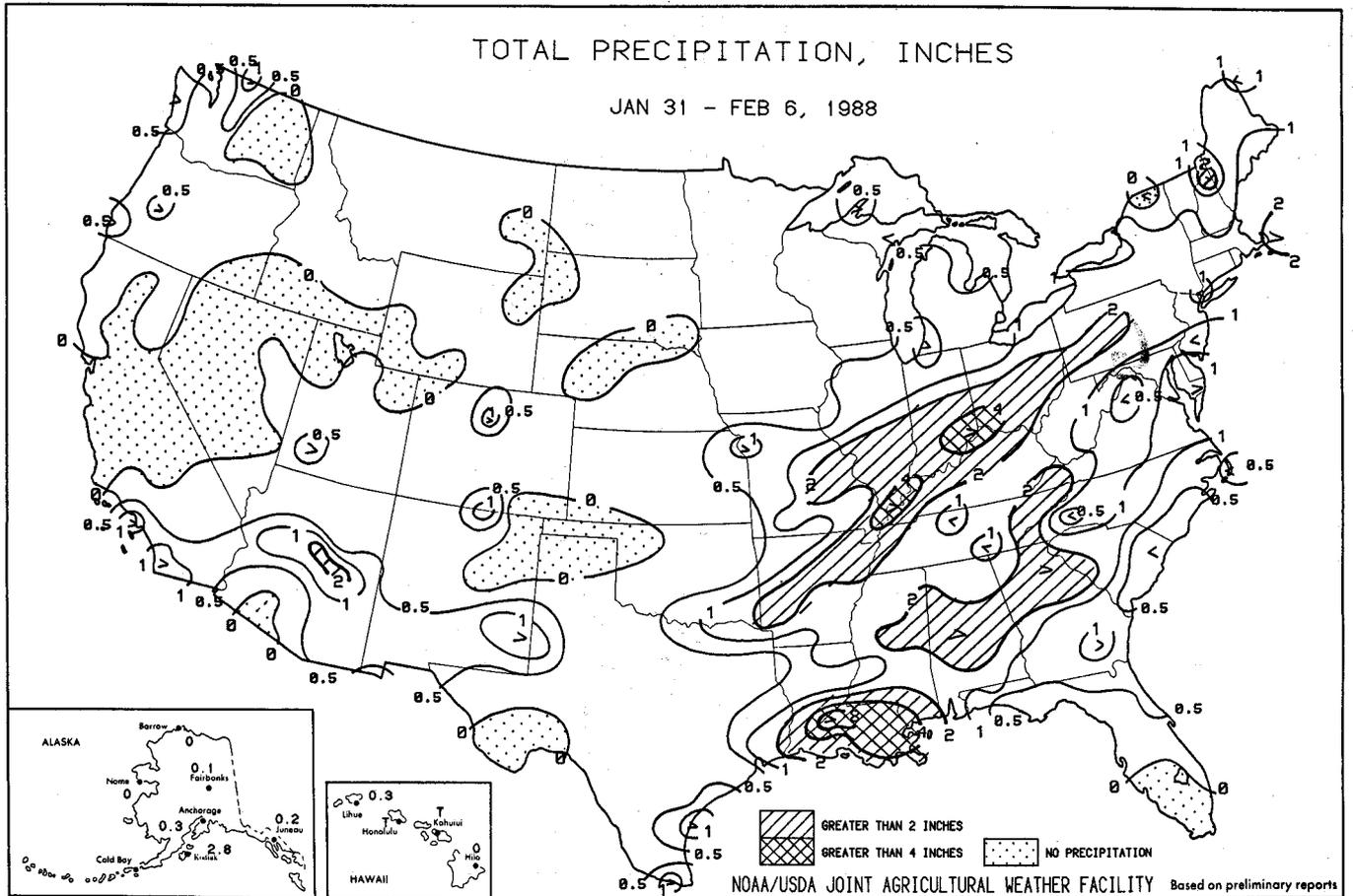
**WEDNESDAY...**A rapidly moving winter storm produced a substantial snowfall from the central Plains to the upper Mississippi Valley, the Great Lakes region, and the Ohio Valley. Snow was mixed with sleet and freezing rain from Missouri to Ohio. Showers and thunderstorms occurred in the Southeast. Very cold air pushed deep into Texas.

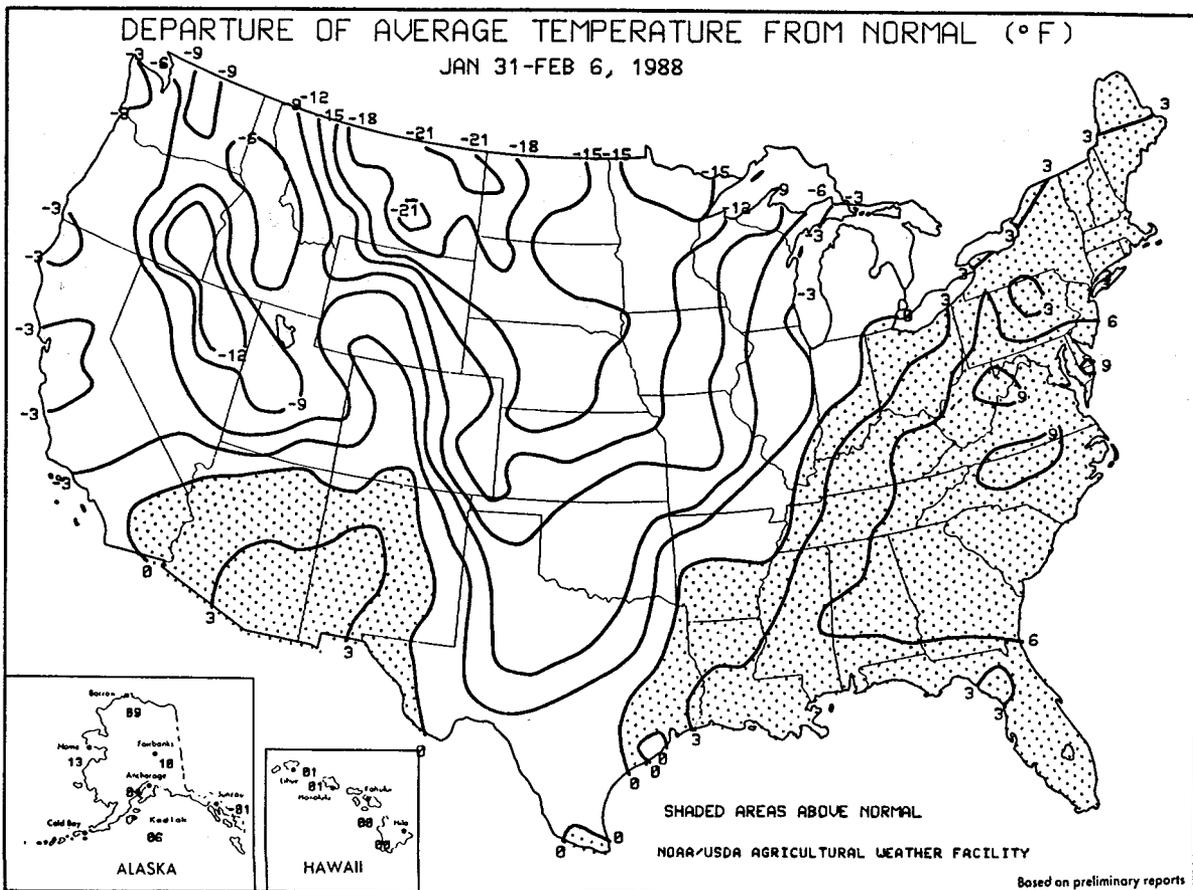
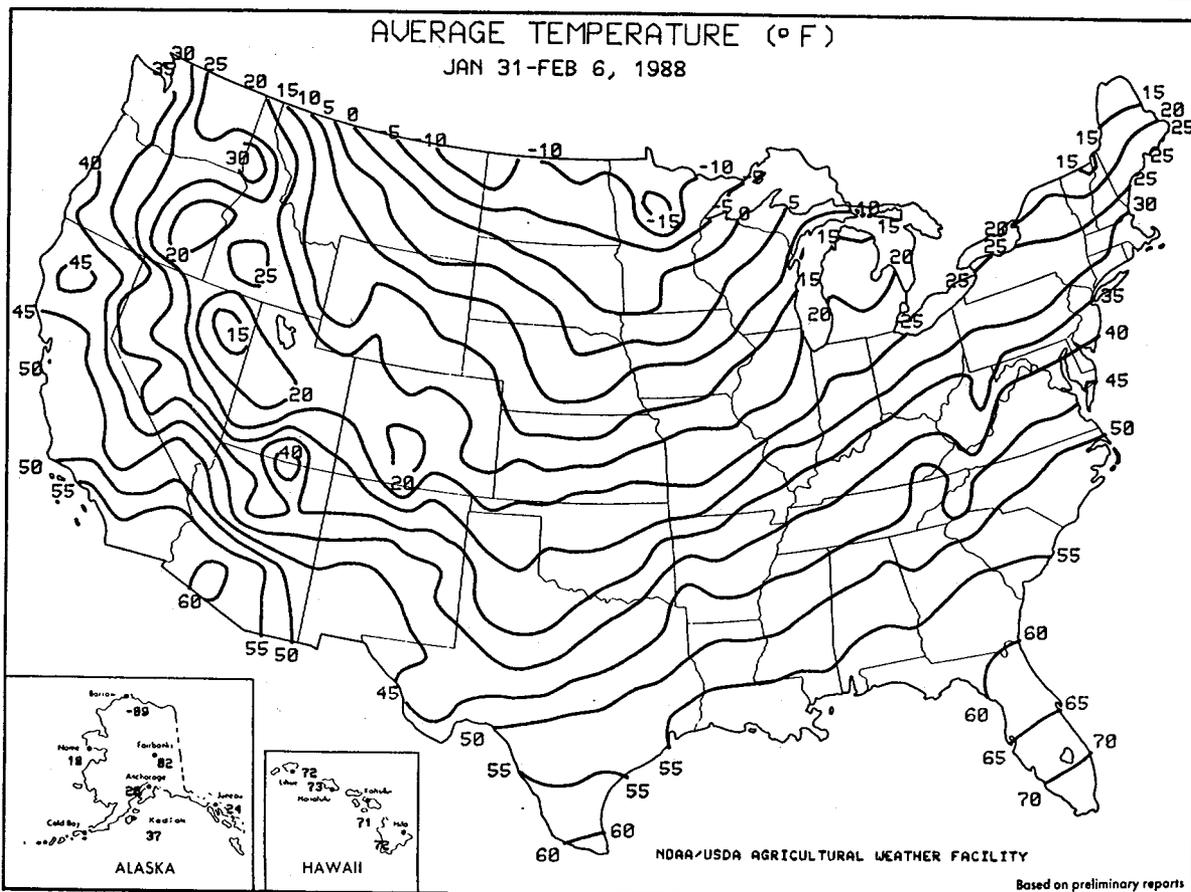
**THURSDAY...**The winter storm that dominated Wednesday's weather in the central Plains continued moving northeastward, producing heavy snow from Ohio to New England. Showers and thunderstorms occurred from Texas to Georgia, and in the Middle Atlantic region. Light snow fell from Montana and Wyoming to Minnesota as bitterly cold air poured into the northern and central Plains. Snow gradually ended over the Northeast, except for snow squalls on the southeast side of the lower Great Lakes.

**FRIDAY...**Strong northerly winds continued to transport very cold air into the eastern half of the Nation. Heavy snowfall was mostly confined to the Southwest, but light snow mixed with sleet fell in the Gulf Coast States. Snow squalls, some of them heavy, continued in the Great Lakes region, Pennsylvania, and New York State. Light snow fell over the northern Plains and the Midwest.

(Continued to p. 6)

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# National Weather Data for Selected Cities

Weather Data for the Week Ending February 6, 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	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	57	43	72	15	50	6	1.6	.5	1.4	9.7	87	6.6	107	91	61	0	2	3	1
MOBILE	60	49	71	25	55	3	1.5	.5	.8	9.8	89	6.2	112	97	74	0	1	6	2
MONTGOMERY	63	46	80	22	55	7	3.8	2.8	2.2	14.0	143	9.7	193	86	57	0	1	3	2
AK ANCHORAGE	26	13	35	0	20	4	.3	0	.3	1.5	74	.4	41	84	61	0	7	1	0
BARROW	0	-17	18	-28	-9	9	T	-1	T	.2	44	T	0	87	71	0	7	0	0
FAIRBANKS	12	-8	17	-20	2	10	.1	0	.1	.9	64	.4	56	83	57	0	7	2	0
JUNEAU	29	19	37	12	24	-1	.2	-7	.2	8.1	89	2.8	62	85	56	0	7	1	0
KODIAK	41	32	47	28	36	6	2.8	1.4	1.3	11.5	92	9.1	132	97	78	0	2	4	2
NOME	26	9	30	-2	18	13	T	-1	T	1.6	105	.4	47	79	51	0	7	0	0
AZ PHOENIX	66	49	71	45	58	4	.2	.1	.1	2.7	166	1.1	134	78	37	0	0	2	0
PRESCOTT	50	29	55	21	40	2	1.1	.7	.9	2.5	67	1.8	87	78	35	0	5	2	1
TUCSON	65	48	73	43	56	4	.6	.5	.4	2.5	135	1.0	110	73	40	0	0	2	0
YUMA	68	51	73	46	59	1	T	0	T	1.0	132	.4	86	57	30	0	0	1	0
AR FORT SMITH	47	32	73	12	39	0	.6	.1	.6	10.4	204	2.3	100	88	62	0	3	2	1
LITTLE ROCK	46	34	66	10	40	-2	1.8	.9	1.0	18.4	207	4.7	100	84	67	0	3	5	2
CA BAKERSFIELD	58	33	62	29	46	-5	T	-3	T	1.7	90	.8	69	94	49	0	4	1	0
EUREKA	53	38	59	33	46	-2	.2	-1.2	.2	18.1	125	7.1	87	84	64	0	0	1	0
FRESNO	59	32	63	28	46	-3	0	0	-5	2.7	67	1.5	62	99	44	0	5	0	0
LOS ANGELES	65	46	74	42	55	-1	.8	.1	.8	4.2	81	2.4	67	82	40	0	0	1	1
REDDING	61	31	68	26	46	-3	0	-1.8	0	16.3	96	7.3	72	82	27	0	5	0	0
SACRAMENTO	58	35	62	31	46	-2	0	-8	0	5.8	76	2.6	55	95	44	0	3	0	0
SAN DIEGO	64	50	73	43	57	1	1.2	.8	1.2	4.9	113	2.2	89	83	44	0	0	1	1
SAN FRANCISCO	58	39	63	36	49	-2	T	-9	T	8.4	94	3.9	72	90	45	0	0	0	0
CO DENVER	33	14	47	9	24	-8	.1	-1	0	1.8	154	.5	75	94	49	0	7	3	0
GRAND JUNCTION	35	13	42	2	24	-6	.2	0	.1	2.1	158	1.2	168	93	64	0	7	2	0
FUEBLO	31	11	40	-4	21	-12	.1	0	.1	1.1	188	.7	231	99	73	0	7	1	0
CT BRIDGEFORD	38	26	54	15	32	3	1.0	.3	.7	5.8	76	3.7	95	80	58	0	5	2	1
HARTFORD	38	20	55	-5	29	4	1.1	.4	.7	6.1	73	4.5	108	85	46	0	5	2	1
DC WASHINGTON	50	32	70	12	41	5	.9	.3	.6	6.6	103	4.0	123	85	56	0	3	3	1
FL APALACHICOLA	64	51	74	31	58	4	.1	-8	.1	3.9	50	3.0	70	96	66	0	1	2	0
DAYTONA BEACH	74	52	84	38	63	5	.5	-2	.5	6.1	117	5.8	194	98	58	0	0	3	0
JACKSONVILLE	72	48	82	31	60	6	.8	-1	.6	7.2	118	7.1	193	98	53	0	1	2	1
KEY WEST	77	67	79	55	72	2	T	-5	T	7.5	194	4.8	222	91	70	0	0	0	0
MIAMI	77	65	80	51	71	4	0	-5	0	6.2	142	1.9	75	89	62	0	0	0	0
ORLANDO	75	55	83	42	65	5	.2	-5	.2	3.8	82	3.3	121	96	50	0	0	1	0
TALLAHASSEE	69	45	79	28	57	5	.5	-7	.3	5.0	49	4.0	70	97	56	0	1	3	0
TAMPA	74	55	83	41	65	5	1	-5	.1	3.4	69	2.9	106	97	54	0	0	1	0
WEST PALM BEACH	77	63	82	50	70	5	.1	-6	.1	4.9	89	3.5	106	93	62	0	0	3	0
GA ATLANTA	58	42	73	16	50	8	2.8	1.7	1.0	11.5	115	7.4	127	86	56	0	2	3	3
AUGUSTA	65	43	77	23	54	9	2.3	1.3	1.8	7.8	97	6.4	133	90	56	0	1	4	1
MACON	63	46	76	22	55	7	.6	-4	.4	8.0	86	6.1	117	87	54	0	1	3	0
SAVANNAH	69	48	79	27	58	8	.2	-5	.1	5.1	78	3.7	98	96	53	0	1	2	0
HI HILO	81	62	82	60	72	0	T	-2.9	T	32.5	131	10.3	86	88	55	0	0	0	0
HONOLULU	81	65	82	63	73	1	T	-7	T	20.3	261	3.1	70	91	59	0	0	1	0
KAHULUI	82	60	83	57	71	0	T	-8	T	13.3	178	7.8	164	90	51	0	0	1	0
LIHUE	78	66	80	62	72	1	.3	-8	.3	21.2	168	10.3	144	91	67	0	0	1	0
ID BOISE	31	22	39	17	26	-7	T	-3	T	2.4	74	1.3	69	96	66	0	7	0	0
LEWISTON	38	24	45	15	31	-5	0	-3	0	1.8	61	1.0	60	78	47	0	7	0	0
POCATELLO	30	8	34	5	19	-8	T	-2	T	2.3	103	1.1	83	92	63	0	7	1	0
IL CHICAGO	27	14	55	-2	20	-1	.6	.3	.4	5.9	140	2.1	115	86	63	0	6	4	0
MOLINE	24	10	55	-3	17	-5	.5	.3	.3	6.4	171	2.0	106	84	66	0	7	4	0
PEORIA	25	13	53	-3	19	-5	.5	.2	.3	6.4	164	2.2	118	89	71	0	7	3	0
QUINCY	27	11	58	-4	19	-7	.5	.2	.3	5.3	160	1.5	95	84	63	0	7	2	0
ROCKFORD	27	10	52	-5	17	-4	.3	.1	.3	6.5	186	2.5	155	82	63	0	7	2	0
SPRINGFIELD	27	14	55	-8	21	-5	.9	.6	.5	7.6	191	2.6	140	89	71	0	6	5	0
TN EVANSVILLE	40	28	65	5	34	2	3.9	3.2	2.0	12.1	172	6.4	180	92	68	0	4	4	3
FORT WAYNE	29	18	53	-5	24	-1	.9	.4	.5	5.7	116	2.2	90	92	68	0	5	4	1
INDIANAPOLIS	33	22	56	-1	27	0	2.5	1.9	1.2	8.9	147	4.2	134	91	68	0	5	5	3
SOUTH BEND	28	16	54	-4	22	-2	1.3	.8	.6	7.0	121	2.9	101	90	68	0	6	6	1
IA DES MOINES	22	1	44	-6	11	-10	.1	-2	0	3.0	138	.4	38	85	54	0	7	3	0
SIOUX CITY	15	-3	29	-8	6	-13	T	-2	T	1.2	81	.8	97	82	54	0	7	1	0
WATERLOO	16	-2	41	-10	7	-9	T	-2	T	2.6	124	.8	81	87	68	0	7	1	0
KS CONCORDIA	24	3	42	-7	14	-15	.5	.3	.5	2.0	137	1.2	158	85	57	0	7	1	0
DODGE CITY	30	11	44	4	21	-11	T	-1	T	1.6	165	.9	190	93	59	0	7	2	0
GOOGLAND	25	5	39	-6	15	-15	.2	.2	.2	2.3	284	1.8	441	93	71	0	7	1	0
TOPEKA	28	9	54	-7	19	-10	.7	.5	.7	3.9	170	2.1	195	85	58	0	7	2	1
WICHITA	31	14	52	4	23	-9	.1	-1	.1	2.8	161	.6	74	88	58	0	7	2	0
KY BOWLING GREEN	48	32	64	2	40	5	1.7	.7	.9	11.8	119	4.8	89	95	67	0	3	4	1
LEXINGTON	46	29	64	0	37	5	2.5	1.8	1.3	11.2	140	5.0	119	90	58	0	3	5	1
LOUISVILLE	44	30	63	3	37	4	2.8	2.0	1.2	10.9	146	6.2	155	98	65	0	3	5	3
LA ALEXANDRIA	60	48	76	27	54	3	2.0	.9	2.0	11.5	112	3.7	69	91	61	0	1	1	1
BATON ROUGE	63	49	77	26	56	5	5.9	4.7	4.2	13.7	129	9.8	175	97	70	0	1	5	3
LAKE CHARLES	63	50	75	28	57	6	2.1	1.2	1.1	9.8	94	4.9	90	95	73	0	1	5	2
NEW ORLEANS	65	53	76	33	59	6	4.9	3.7	2.3	11.5	101	8.6	142	94	70	0	0	6	4

Based on 1951-80 normals.

Weather Data for the Week Ending February 6, 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	TEMPERA- TURE		PRECIPI- TATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
ME SHREVEPORT	56	43	75	20	50	2	.3	-.6	.2	10.5	121	2.4	50	91	63	0	1	3	0
ME CARIBOU	21	5	49	-13	13	2	.5	0	.4	5.8	98	3.3	118	93	64	0	6	3	0
ME PORTLAND	35	16	54	-13	25	4	.9	0	.5	4.8	54	2.8	63	87	49	0	5	3	1
MD BALTIMORE	48	31	71	12	40	7	.9	.2	.6	6.2	89	4.1	115	81	49	0	3	3	1
MD SALISBURY	53	36	70	16	44	9	1.1	.3	.7	7.8	100	4.6	113	80	49	0	3	3	1
MA BOSTON	41	26	60	13	33	4	1.4	.5	.8	6.0	65	3.9	81	80	51	0	5	2	2
MA CHATHAM	38	29	46	16	33	3	2.2	1.2	1.2	9.4	92	5.1	98	90	68	0	4	2	2
MI ALPENA	23	8	47	-1	15	-2	.3	0	.3	3.7	95	1.6	79	90	58	0	7	3	2
MI DETROIT	29	18	53	-2	23	0	.8	.4	.4	6.6	141	2.0	94	89	63	0	6	6	0
MI FLINT	26	13	51	-3	19	-2	.7	.4	.3	4.3	112	1.8	95	89	66	0	6	6	0
MI GRAND RAPIDS	26	14	52	2	20	-2	.9	.6	.6	6.0	124	2.8	120	90	56	0	6	7	1
MI HOUGHTON LAKE	22	10	47	-1	16	0	.6	.3	.5	4.6	127	2.2	124	84	59	0	6	2	0
MI LANSING	25	12	52	-3	19	-1	.7	.4	.3	5.3	121	1.9	99	92	62	0	6	7	0
MI MARQUETTE	13	-2	35	-14	6	-12	T	T	T	7.6	184	4.0	198	95	60	0	7	2	0
MI MUSKOGON	27	16	48	3	21	-1	1.0	.5	.5	7.6	143	3.4	124	89	64	0	6	5	0
MI SAULT ST. MARIE	17	0	40	-11	9	-4	.2	-.2	-.1	6.3	124	3.2	126	72	45	0	7	5	0
MN ALEXANDRIA	5	-15	31	-21	-5	-13	.1	-1	0	1.8	106	1.2	116	85	57	0	7	2	0
MN DULUTH	4	-18	23	-33	-7	-16	.1	-2	0	1.5	56	.8	61	81	52	0	7	2	0
MN INT'L FALLS	-1	-25	10	-36	-13	-16	.1	0	.1	.7	34	.5	45	83	52	0	7	2	0
MN MINNEAPOLIS	10	-6	34	-12	2	-11	T	T	T	2.7	148	1.4	149	80	53	0	7	1	0
MN ROCHESTER	10	-7	36	-15	1	-11	.1	-1	.1	3.0	165	1.3	134	87	65	0	7	2	0
MS GREENWOOD	54	42	70	18	48	3	1.1	0	.7	7.4	64	3.0	50	90	61	0	2	5	1
MS JACKSON	58	44	73	18	51	4	.8	-.3	.4	6.5	58	3.0	51	94	68	0	2	5	0
MS MERIDIAN	60	46	73	17	53	6	1.8	.7	.6	9.3	81	4.8	82	94	66	0	1	5	1
MO CAPE GIRARDEAU	42	28	64	5	35	--	1.8	1.1	.8	12.4	172	4.3	123	90	68	0	5	4	2
MO COLUMBIA	28	13	59	-1	21	-9	1.8	1.4	1.1	7.8	191	2.3	110	90	70	0	6	3	1
MO KANSAS CITY	27	8	57	-8	17	-13	1.2	1.0	.8	3.9	134	1.8	128	90	66	0	7	2	1
MO SAINT LOUIS	32	19	61	2	25	-6	2.7	2.3	1.6	11.9	275	4.4	209	89	67	0	6	4	2
MO SPRINGFIELD	33	18	66	2	25	-8	.9	.5	.4	9.3	206	1.8	92	96	77	0	6	4	0
MT BILLINGS	14	-5	41	-8	5	-21	.5	.3	.3	1.2	65	.9	81	81	61	0	7	3	0
MT GLASGOW	2	-20	21	-30	-9	-20	T	T	T	.5	66	.5	107	80	60	0	7	1	0
MT GREAT FALLS	15	-4	40	-15	5	-18	.4	.2	.3	1.3	69	1.1	96	87	58	0	7	4	0
MT HAVRE	9	-15	36	-28	-3	-20	T	T	T	.3	28	.3	41	70	45	0	7	1	0
MT HELENA	20	-1	42	-14	10	-13	.2	-.1	.1	.8	56	.4	45	89	59	0	7	3	0
MT KALISPELL	23	5	29	-3	14	-9	.2	-.1	.1	2.8	81	1.2	64	89	64	0	7	3	0
MT MILES CITY	12	-11	40	-18	1	-17	T	T	T	.3	25	.3	34	70	47	0	7	0	0
MT MISSOULA	27	9	38	-4	18	-7	.2	0	.2	2.0	70	.8	52	93	61	0	7	2	0
NE GRAND ISLAND	19	-2	33	-9	8	-15	.3	.1	.1	2.2	171	1.4	223	86	61	0	7	3	0
NE LINCOLN	20	0	34	-9	10	-13	T	T	T	1.2	83	.5	60	85	59	0	7	1	0
NE NORFOLK	15	-3	28	-11	6	-14	.1	-.1	.1	1.6	129	.8	130	84	58	0	7	1	0
NE NORTH PLATTE	21	-2	34	-14	10	-15	T	T	T	1.6	183	.8	165	89	60	0	7	4	0
NE OMAHA	18	1	33	-5	10	-14	T	T	T	1.2	75	.5	53	78	52	0	7	2	0
NE SCOTTSBLUFF	28	2	48	-10	15	-12	.1	0	0	1.8	183	.8	161	86	50	0	7	2	0
NE VALENTINE	19	-11	33	-19	4	-17	T	T	T	2.6	447	.8	236	82	45	0	5	0	0
NV ELY	36	2	47	-7	19	-8	.1	-.1	.1	2.0	123	1.3	149	83	43	0	7	1	0
NV LAS VEGAS	58	35	63	31	47	-1	.2	.1	.2	1.8	202	.9	153	76	25	0	3	1	0
NV RENO	46	17	55	14	32	-4	T	T	T	1.1	41	.5	35	87	29	0	7	0	0
NV WINNEMOCCA	40	15	43	R	28	-6	T	T	T	1.9	101	1.2	118	88	38	0	7	0	0
NH CONCORD	35	12	55	-19	24	4	.6	0	.4	4.1	61	2.5	77	88	47	0	6	3	0
NJ ATLANTIC CITY	48	30	66	13	39	7	.8	0	.4	6.0	77	3.8	91	88	52	0	3	3	0
NM ALBUQUERQUE	51	32	58	25	42	4	T	T	T	.5	53	.2	35	79	34	0	4	1	0
NM CLOVIS	51	27	70	20	39	0	.4	.3	.4	2.2	198	.5	87	73	40	0	6	2	0
NM ROSWELL	52	31	73	21	41	0	1.5	1.3	1.1	3.1	369	1.7	363	90	49	0	5	2	1
NY ALBANY	36	18	52	-4	27	6	1.4	.8	.9	4.9	85	3.3	117	92	54	0	5	4	1
NY BINGHAMTON	34	18	53	-3	26	5	1.8	1.3	.6	5.6	95	3.4	113	91	63	0	5	5	1
NY BUFFALO	43	28	62	4	26	3	1.6	1.0	.4	5.9	85	3.1	87	94	66	0	6	7	0
NY ROCHESTER	34	19	63	3	27	4	.6	.1	.2	3.3	62	1.4	49	89	60	0	5	4	0
NY SYRACUSE	35	18	63	-1	27	4	.8	.2	.4	4.3	68	2.3	73	87	56	0	5	4	0
NC ASHEVILLE	50	36	65	8	43	5	.5	-.3	.2	6.5	93	4.2	110	91	63	0	3	5	0
NC CHARLOTTE	59	41	71	21	50	9	.7	-.2	.4	7.5	95	4.1	91	88	51	0	2	3	0
NC GREENSBORO	57	38	70	18	47	9	.8	0	.4	6.6	87	3.2	76	89	54	0	3	4	0
NC HATTERAS	61	46	72	28	53	9	.3	-.8	.3	8.4	82	6.1	107	89	65	0	1	2	0
NC NEW BERN	64	42	76	25	53	9	.5	-.5	.4	8.8	103	5.3	108	89	55	0	1	2	0
NC RALEIGH	59	41	75	21	50	10	1.4	.6	.8	7.6	103	4.6	108	89	50	0	2	4	1
NC WILMINGTON	66	44	76	21	55	9	.2	-.6	.1	7.0	89	5.6	129	91	55	0	1	2	0
ND BISMARCK	6	-16	24	-19	-5	-15	.1	0	.1	.9	85	.8	134	76	57	0	7	2	0
ND FARGO	1	-19	10	-20	-8	-15	.1	0	.1	2.3	189	1.6	265	82	66	0	7	2	0
ND GRAND FORKS	1	-19	12	-25	-9	-14	.1	0	.1	1.1	75	.7	85	79	58	0	7	2	0
ND WILLISTON	1	-25	22	-31	-12	-23	T	T	T	.9	78	.8	130	77	58	0	7	1	0
OH AKRON-CANTON	34	22	58	-4	28	3	1.7	1.2	.7	5.1	90	2.8	92	94	72	0	5	6	1
OH CINCINNATI	41	27	62	-1	34	4	4.3	3.7	2.1	9.8	148	6.4	174	91	68	0	5	6	3
OH CLEVELAND	32	20	59	-5	26	1	1.6	1.0	.5	5.2	92	2.2	77	95	68	0	6	6	1
OH COLUMBUS	39	25	61	-1	32	4	3.2	2.7	1.6	7.9	137	5.0	157	94	68	0	5	5	2

Based on 1951-80 normals.

Weather Data for the Week Ending February 6, 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	TEMPERA- TURE °F		PRECIPI- TATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	34	22	59	-3	28	1	3.2	2.7	1.8	7.2	131	4.2	140	92	75	0	5	5	1
TOLEDO	30	19	54	-4	24	0	.6	.2	.3	5.5	111	1.7	73	98	76	0	6	5	0
YOUNGSTOWN	33	22	58	-4	27	3	1.7	1.1	.6	5.4	92	2.7	85	95	70	0	5	1	0
OK OKLAHOMA CITY	36	22	63	9	29	-9	.2	-.1	.1	5.2	217	1.4	116	87	62	0	6	2	0
TULSA	37	21	69	7	29	-8	.1	-.2	.1	7.1	205	1.2	73	85	58	0	6	2	0
OR ASTORIA	46	33	51	24	39	-4	.5	-1.6	.3	15.9	.66	7.1	56	97	66	0	3	3	0
BURNS	31	4	35	-5	18	-12	T	-.3	T	3.2	85	1.1	52	***	***	0	7	1	0
MEDFORD	48	25	54	21	37	-4	.2	-.4	.2	6.3	85	2.5	65	96	46	0	7	2	0
PENDLETON	36	19	47	7	28	-9	.1	-.3	.1	3.1	85	1.9	93	90	60	0	7	1	0
PORTLAND	43	29	51	22	36	-5	T	-1.1	T	13.0	96	5.0	70	93	57	0	6	2	0
SALEM	44	28	52	19	36	-6	.1	-1.2	.1	17.7	116	6.8	83	95	64	0	5	1	0
PA ALLENTOWN	38	23	51	8	30	3	1.1	.4	.7	5.4	70	3.9	98	90	57	0	6	4	1
ERIE	33	22	60	-1	28	4	1.1	.6	.4	5.9	97	2.5	89	94	67	0	6	7	0
HARRISBURG	42	24	59	8	33	3	1.4	.7	.7	5.4	80	3.6	101	87	56	0	6	4	2
PHILADELPHIA	46	27	65	12	37	5	1.1	.4	.6	5.5	77	3.8	102	87	60	0	4	2	2
PITTSBURGH	40	24	62	-2	32	5	2.7	2.2	1.0	6.6	112	4.2	126	93	65	0	5	6	2
SCRANTON	38	20	56	4	29	4	1.2	.7	.7	3.6	69	2.6	97	89	59	0	6	4	1
RI PROVIDENCE	40	24	62	9	32	4	1.3	.4	.7	6.2	67	4.0	84	91	62	0	5	2	2
SC CHARLESTON	66	47	77	27	56	8	.3	-.5	.3	4.6	66	3.1	77	92	57	0	1	1	0
COLUMBIA	64	42	78	23	53	7	1.3	-.3	.5	6.9	79	5.4	103	92	53	0	1	3	2
FLORENCE	67	43	79	23	55	9	.3	-.6	.2	5.4	75	2.9	70	95	47	0	2	2	0
GREENVILLE	57	38	67	16	48	6	1.3	-.3	.5	9.8	107	5.2	102	92	65	0	2	3	1
SD ABERDEEN	6	-12	14	-21	-3	-14	.1	.1	.1	5	46	.4	67	82	59	0	7	3	0
HURON	10	-11	23	-17	-1	-15	T	-.1	T	1.7	166	.4	79	82	59	0	7	2	0
RAPID CITY	20	-7	45	-13	7	-17	T	-.1	T	.5	53	.2	36	85	50	0	7	2	0
SIoux FALLS	10	-10	27	-17	0	-16	T	-.2	T	2.9	218	1.5	237	83	59	0	7	0	0
TN CHATTANOOGA	56	39	69	10	47	8	.9	-.3	.8	11.2	99	7.9	128	90	59	0	2	5	1
KNOXVILLE	56	37	73	10	47	8	2.6	1.6	1.5	10.4	103	6.9	126	92	54	0	2	4	2
MEMPHIS	49	37	67	11	43	2	2.2	1.2	1.1	17.5	169	6.0	110	91	65	0	3	5	1
NASHVILLE	50	35	64	5	42	4	1.0	0	.6	10.1	102	4.7	88	93	62	0	3	4	1
TX ABILENE	45	29	70	21	37	-8	.1	-.2	.1	4.7	228	.2	13	92	72	0	6	3	0
AMARILLO	39	18	63	12	29	-9	T	-.1	T	2.1	194	.3	57	96	61	0	7	0	0
AUSTIN	56	43	79	27	50	-1	.1	-.5	0	1.6	40	.3	16	92	64	0	1	3	0
BEAUMONT	65	50	77	31	57	4	2.1	1.1	1.2	11.6	117	5.4	108	97	71	0	1	4	2
BROWNSVILLE	68	55	80	40	61	0	.8	.4	.4	5.1	190	4.7	297	99	76	0	0	3	0
CORPUS CHRISTI	65	48	82	37	57	1	1.0	.6	.6	2.8	88	1.9	95	99	69	0	0	3	1
DEL RIO	58	44	78	32	51	-2	.2	0	.2	.9	70	.3	41	86	55	0	1	1	0
EL PASO	59	38	75	30	48	2	.6	.4	.5	3.7	442	.8	174	76	42	0	2	2	1
FORT WORTH	47	34	75	20	41	-5	.1	-.3	.1	3.9	102	1.0	48	89	65	0	5	1	0
GALVESTON	60	48	71	35	54	0	.3	-.4	.3	5.0	70	3.2	90	95	74	0	0	3	0
HOUSTON	61	46	79	31	54	1	.7	-.2	.5	6.5	81	2.0	46	96	65	0	1	5	1
LUBBOCK	44	24	66	15	34	-6	.4	-.3	.3	1.7	210	.7	141	98	71	0	6	2	0
MIDLAND	53	28	80	18	40	-5	.1	-.1	.1	4	46	.1	12	97	65	0	6	1	0
SAN ANGELO	49	32	75	22	40	-7	.2	0	.2	2.3	158	.2	26	97	66	0	4	1	0
SAN ANTONIO	59	45	77	31	52	0	.4	0	.4	3.0	92	.8	43	92	65	0	1	2	0
VICTORIA	61	46	79	33	54	0	.1	-.5	0	2.3	50	.4	17	98	68	0	0	4	0
WACO	52	37	79	24	44	-4	T	-.4	T	3.8	95	.5	23	91	60	0	2	2	0
WICHITA FALLS	40	27	73	15	34	-9	.3	0	.3	6.3	275	1.4	131	90	62	0	6	1	0
UT BLANDING	40	19	44	11	30	-1	.5	.2	.4	3.3	114	2.5	159	95	71	0	7	2	0
CEDAR CITY	38	13	44	0	25	-7	.7	.6	.4	2.5	177	1.5	188	96	54	0	7	2	0
SALT LAKE CITY	33	15	36	11	24	-8	T	-.3	T	2.2	73	1.1	66	97	60	0	7	1	0
VT BURLINGTON	31	11	56	-10	21	5	.8	.3	.6	2.6	57	1.4	66	87	53	0	5	3	1
VA NORFOLK	55	39	74	23	47	7	1.1	.3	.5	6.6	87	4.2	96	85	51	0	2	3	1
RICHMOND	53	35	73	16	44	7	1.0	.3	.8	6.4	88	3.5	92	88	54	0	3	3	1
ROANOKE	53	33	70	10	43	7	.8	0	.4	4.8	76	2.6	76	83	51	0	3	3	0
WA OQUILAYUTE	45	32	51	22	38	-2	.7	-2.5	.4	21.6	63	9.9	58	100	67	0	4	4	0
SPRATTLE-TACOMA	43	31	49	22	37	-4	T	-1.2	T	10.2	77	4.1	58	93	56	0	4	1	0
SPOKANE	29	17	32	6	23	-6	T	-.5	T	6.7	126	1.8	62	85	63	0	7	0	0
YAKIMA	35	16	39	7	25	-7	T	-.2	T	4.0	138	.7	43	88	50	0	7	0	0
WV BRCKLEY	46	27	68	-1	37	6	.9	.1	.5	7.3	102	3.0	74	93	60	0	3	5	0
CHARLESTON	51	30	73	4	40	7	1.4	.6	.8	7.1	97	3.0	73	83	53	0	3	5	2
HUNTINGTON	48	30	71	3	39	5	1.8	1.1	1.1	8.5	122	3.6	95	92	55	0	3	6	1
PARKERSBURG	46	28	68	1	37	5	1.5	.9	1.1	5.8	94	2.6	75	86	51	0	5	5	1
WI GREEN BAY	18	3	41	-9	10	-5	.2	-.1	.1	3.9	141	1.9	136	91	57	0	7	3	0
LACROSSE	15	-2	43	-10	6	-10	T	-.2	T	2.8	129	1.0	91	80	55	0	7	1	0
MADISON	20	6	46	-6	13	-5	.1	-.1	.1	6.1	216	2.0	153	81	59	0	7	2	0
MILWAUKEE	25	11	54	-4	18	-3	.3	0	.2	8.8	226	3.4	181	89	66	0	7	3	0
WAUSAU	13	-1	40	-13	6	-7	T	-.2	T	1.9	79	.4	36	77	50	C	7	1	0
WY CASPER	30	2	44	-8	16	-9	T	-.1	T	.9	87	.3	50	82	40	0	7	1	0
CHEYENNE	29	6	46	-3	18	-10	.1	0	.1	1.4	176	.6	127	87	48	0	7	3	0
LANDER	32	5	46	0	18	-5	T	-.1	T	.8	70	.1	10	80	35	0	7	1	0
SHERIDAN	19	-8	41	-18	5	-18	.3	.1	.2	1.3	81	1.0	110	94	58	0	7	2	0
PR SAN JUAN	81	71	83	67	76	0	1.2	.6	.5	12.5	160	4.7	139	90	74	0	0	6	0

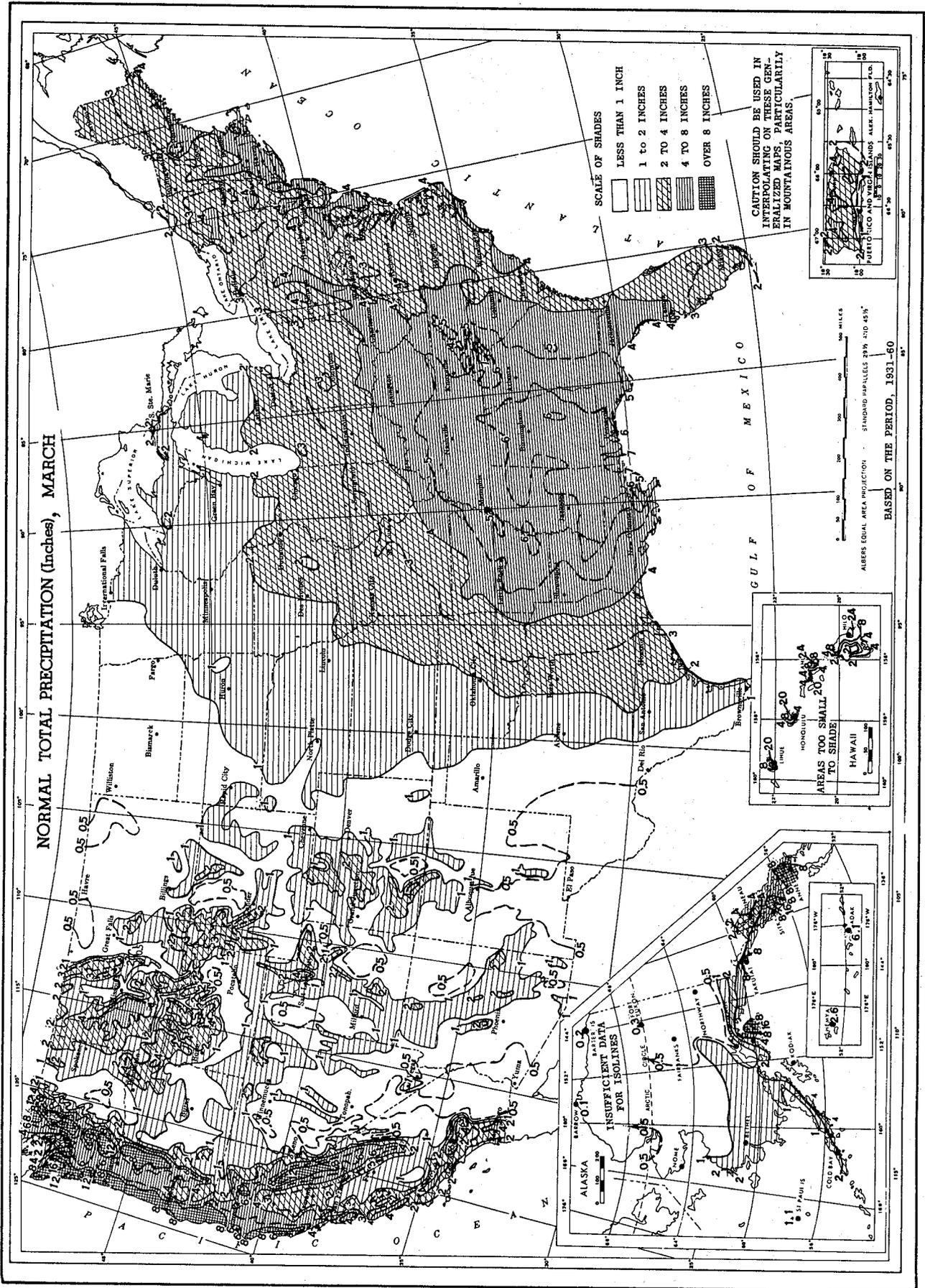
Based on 1951-80 normals.

(Continued from p. 1)

SATURDAY...Snow squalls over Ohio, Pennsylvania, and upstate New York produced large accumulations at some locations. The weather was unseasonably cold over the entire Nation east of the Rocky Mountains. Strong winds exacerbated the bitter

cold east of the Mississippi River. Rain fell over northern and central Florida, while rain was mixed with sleet and snow in extreme northern Florida. Precipitation ended over northern and central Texas and the central Gulf coast region.





## January Weather and Crop Summary

### Weather

**HIGHLIGHTS:** Despite numerous outbreaks of arctic air, temperatures averaged above normal in the extreme northern Great Plains. Temperatures were also above normal in the Pacific coastal regions, the desert Southwest, and in part of the Northeast. Below-normal temperatures prevailed in the Rocky Mountains, the central and southern Plains, and over most of the East. Slightly over 50 percent of the Nation experienced below-normal precipitation. Texas experienced the driest weather with respect to normal. The desert Southwest, the central Rockies, the central Plains, parts of the Midwest, and the extreme Southeast were the wettest areas.

**JANUARY 1-2...**A cold, dry air mass spread across most of the Nation, bringing generally fair weather except for wind-driven snow squalls in the Great Lakes region and light rain along the east and gulf coasts. Cold weather continued in the Southwest.

**JANUARY 3-9...**Temperatures were below normal except in the Southwest and in southern Florida. Heavy precipitation was confined mainly to Pacific coastal regions and to the Southeast. A major winter storm developed over the Great Basin on Tuesday, and through the remainder of the week laid down a swath of snow, sleet, and freezing rain stretching from New Mexico across the southern Plains to the Northeast.

**JANUARY 10-16...**A storm system, accompanied by snow and strong winds, moved from the Northwest to the Northeast between Sunday and Wednesday, followed by very cold weather. A second storm invaded the Pacific Northwest late in the week, producing more rain and snow with high winds.

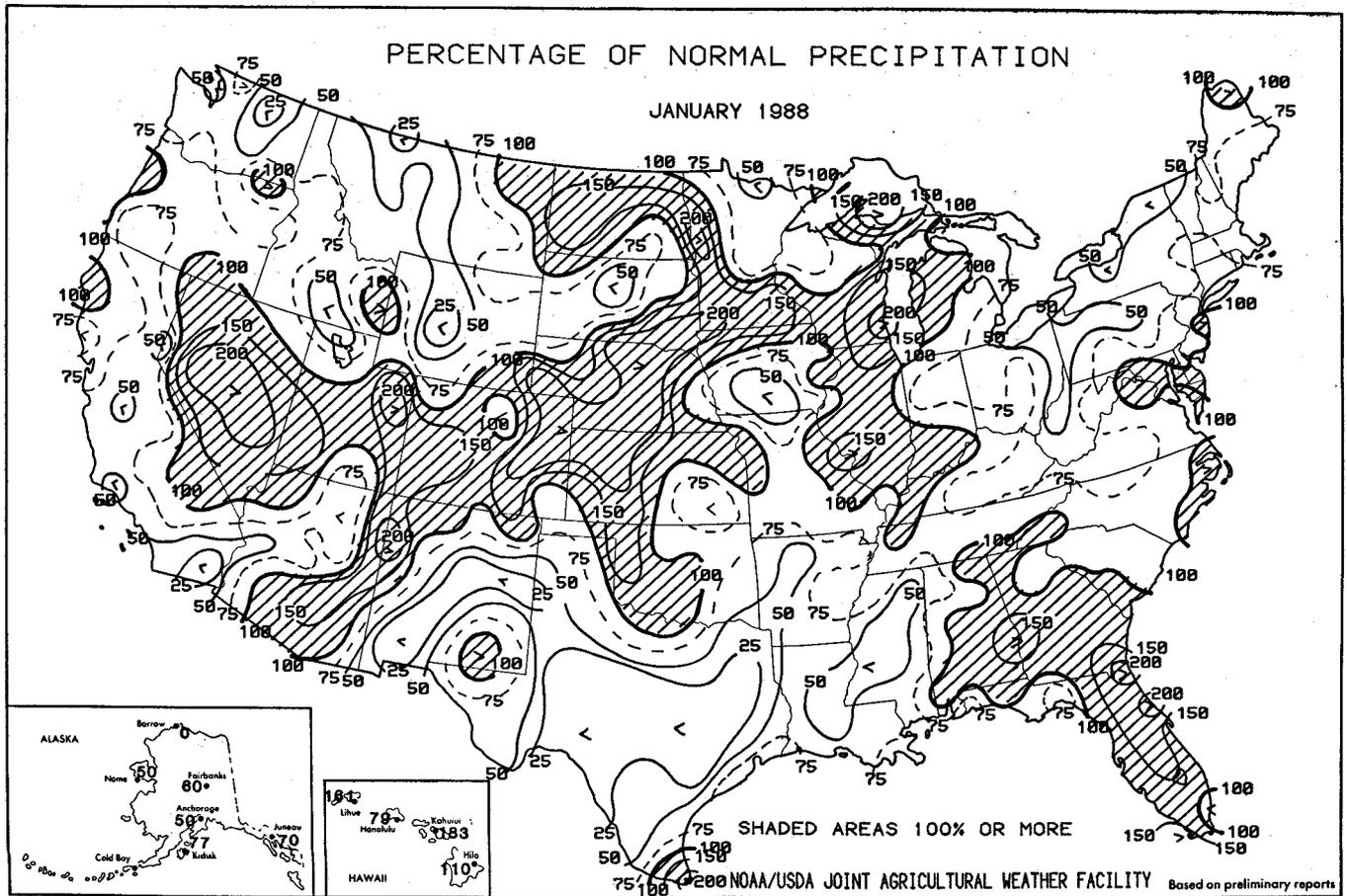
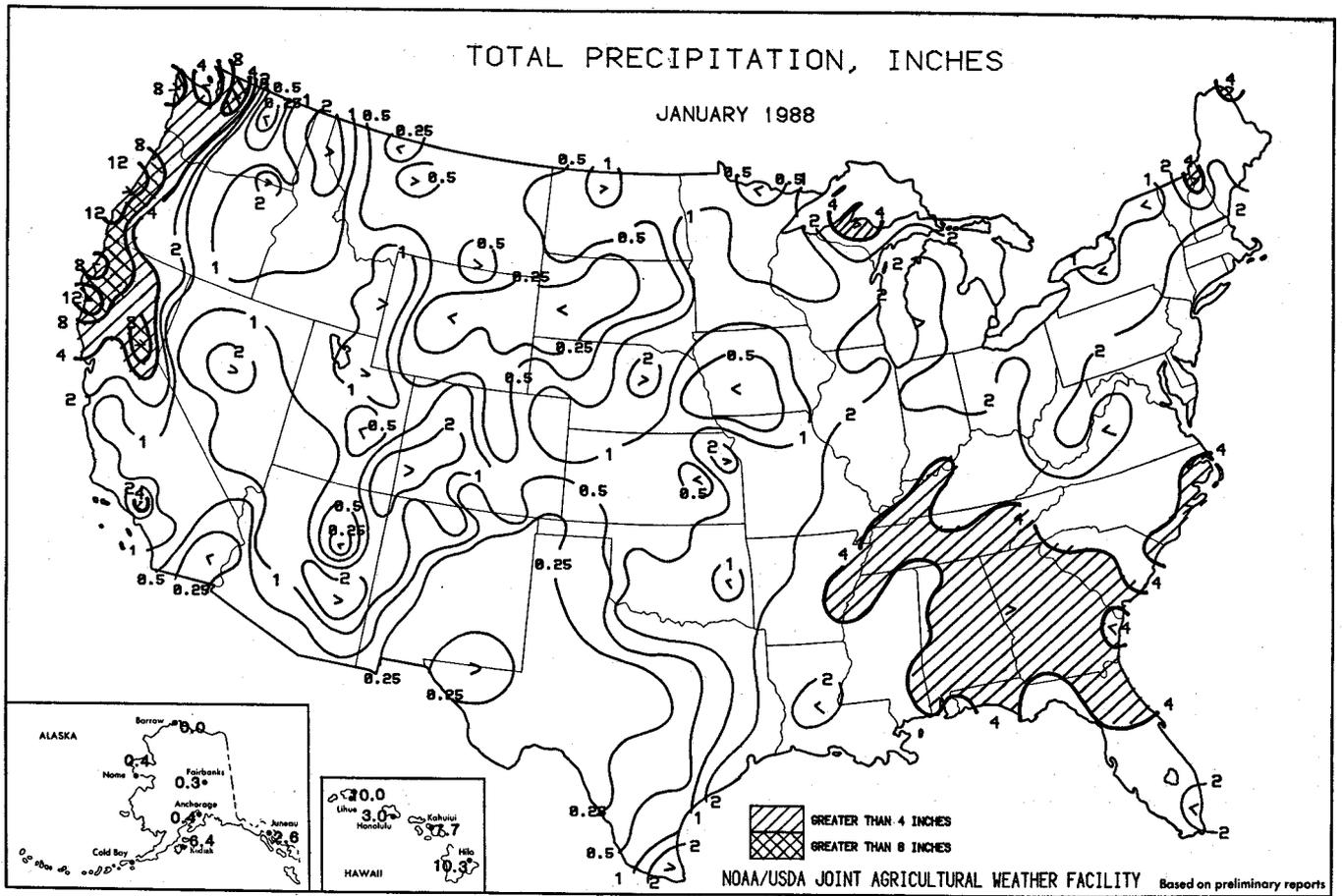
**JANUARY 17-23...**A Pacific storm struck southern California on Sunday, accompanied by damaging winds. From Sunday to Thursday, this storm tracked eastward across the Southwest, then northeastward across the southern and central Plains, the upper Mississippi Valley, and the Great Lakes region. It caused 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.

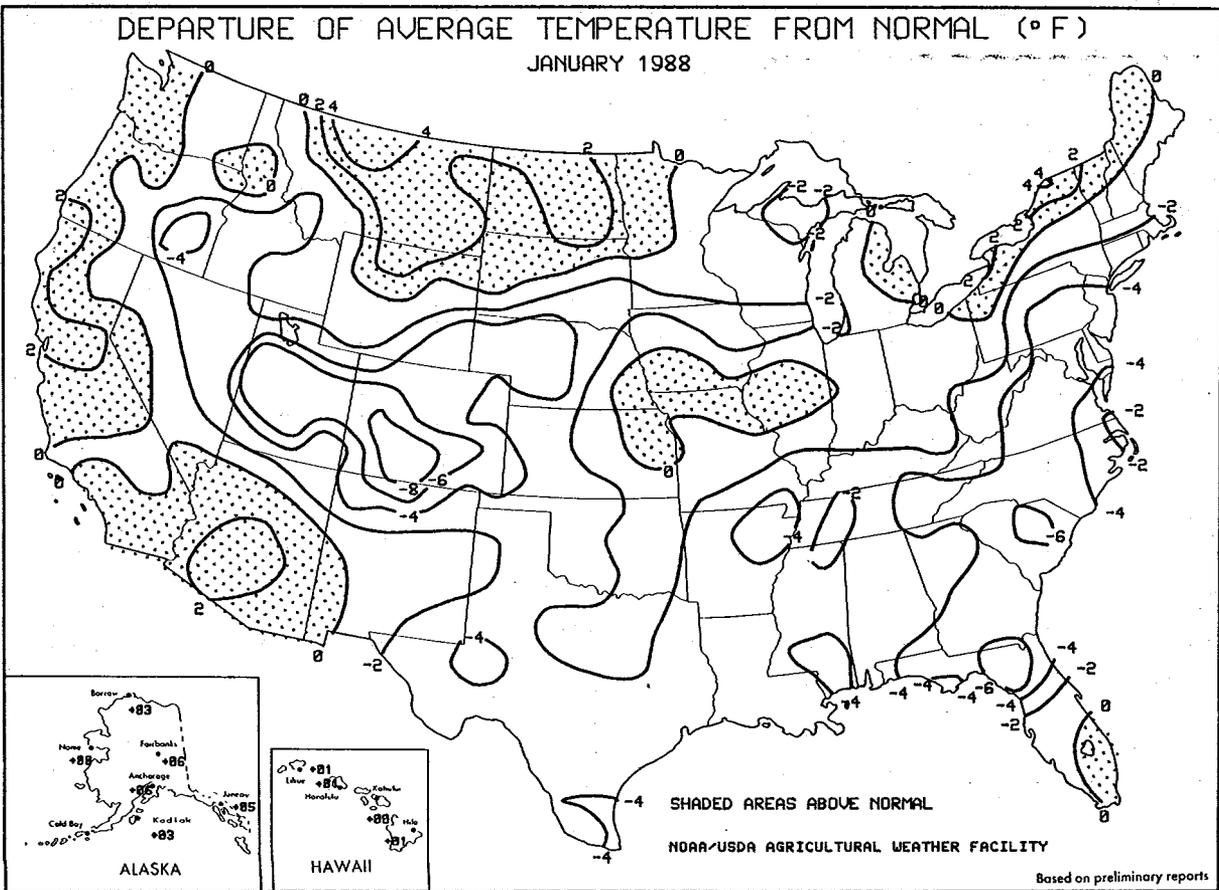
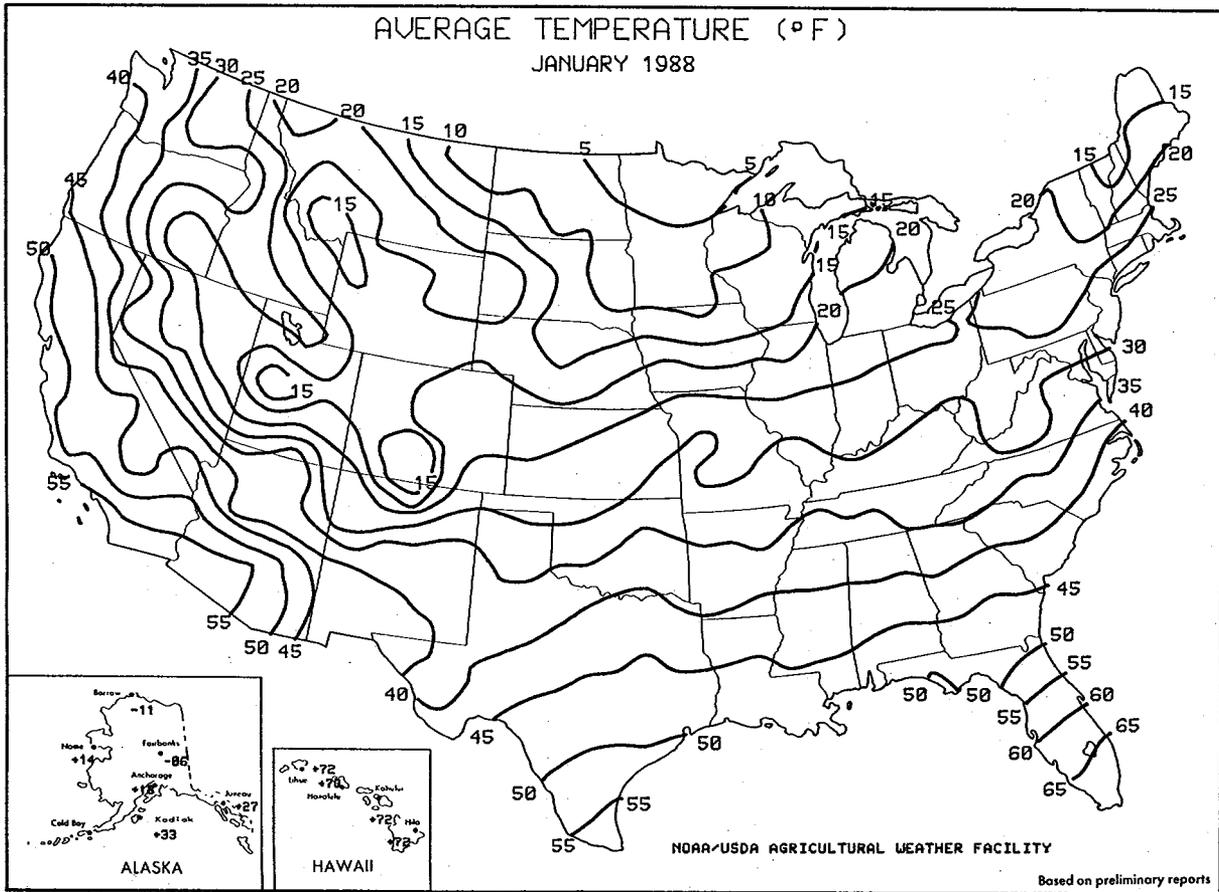
**JANUARY 24-30...**Early in the week, a cold air mass spread across the northern Plains, the Mississippi Valley, and the East as a major winter storm moved up the east coast. At midweek, most of the Nation had dry weather, and cold weather continued in the East. In the latter part of the week, a rapid warming occurred over most of the Nation east of the Rockies. This warmup came to an abrupt end in the northern Plains on Saturday as another arctic air mass advanced southward out of Canada.

**JANUARY 31...**Record high temperatures for the last day of January were set in the Midwest and the East. In parts of the northern Plains, temperatures remained below zero throughout the day. Rain was scattered from the Ohio Valley to the lower Mississippi Valley, and from the Carolinas to Florida.

### Winter Wheat

Winter wheat was mostly good to fair during January. Above-normal temperatures melted most snow cover in the central and northern Great Plains leaving winter wheat vulnerable to freeze damage during most of the month. However, snow protection was available during most periods of extreme low temperatures. The melting snow provided much needed moisture, especially in South Dakota. Snow and low temperatures slowed winter wheat growth from Texas through the Delta and Southeast during the first half of January. The cold temperatures continued plaguing wheat growth in Texas until near the end of the month. By the end of January, Oklahoma's wheat began growing. In California, winter wheat seeding continued until the third week of January. Planting ended in Georgia around midmonth. Cool temperatures slowed emergence and growth early in the month in California. As the month drew to a close, wheat approached the jointing stage in Arizona.





Temperature and Precipitation Data for January 1988

States and Stations	Temperature OF		Precipitation Inches		States and Stations	Temperature OF		Precipitation Inches		States and Stations	Temperature OF		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
AL BIRMINGHAM	40	-3	5.0	-0.2	AL BIRMINGHAM	40	-3	5.0	-0.2	AL BIRMINGHAM	40	-3	5.0	-0.2
AL MOBILE	47	-4	4.6	0.1	AL MOBILE	47	-4	4.6	0.1	AL MOBILE	47	-4	4.6	0.1
AL MONTGOMERY	44	-3	5.9	1.7	AL MONTGOMERY	44	-3	5.9	1.7	AL MONTGOMERY	44	-3	5.9	1.7
AK ANCHORAGE	18	6	0.4	-0.4	AK ANCHORAGE	18	6	0.4	-0.4	AK ANCHORAGE	18	6	0.4	-0.4
AK BARROW	-11	3	0.0	-0.2	AK BARROW	-11	3	0.0	-0.2	AK BARROW	-11	3	0.0	-0.2
AK FAIRBANKS	-6	6	0.3	-0.2	AK FAIRBANKS	-6	6	0.3	-0.2	AK FAIRBANKS	-6	6	0.3	-0.2
AK JUNEAU	28	6	2.6	-1.1	AK JUNEAU	28	6	2.6	-1.1	AK JUNEAU	28	6	2.6	-1.1
AK KODIAK	33	3	6.4	0.6	AK KODIAK	33	3	6.4	0.6	AK KODIAK	33	3	6.4	0.6
AK NOME	14	8	0.4	-0.4	AK NOME	14	8	0.4	-0.4	AK NOME	14	8	0.4	-0.4
AZ FLAGSTAFF	29	1	1.6	-0.5	AZ FLAGSTAFF	29	1	1.6	-0.5	AZ FLAGSTAFF	29	1	1.6	-0.5
AZ PHOENIX	55	3	0.9	0.2	AZ PHOENIX	55	3	0.9	0.2	AZ PHOENIX	55	3	0.9	0.2
AZ PRESCOTT	38	2	0.7	-1.0	AZ PRESCOTT	38	2	0.7	-1.0	AZ PRESCOTT	38	2	0.7	-1.0
AZ TUCSON	53	2	0.4	-0.4	AZ TUCSON	53	2	0.4	-0.4	AZ TUCSON	53	2	0.4	-0.4
AZ YUMA	58	2	0.3	0.0	AZ YUMA	58	2	0.3	0.0	AZ YUMA	58	2	0.3	0.0
AR WINSLOW	33	1	0.2	-0.2	AR WINSLOW	33	1	0.2	-0.2	AR WINSLOW	33	1	0.2	-0.2
AR FORT SMITH	35	-2	1.6	-0.2	AR FORT SMITH	35	-2	1.6	-0.2	AR FORT SMITH	35	-2	1.6	-0.2
AR LITTLE ROCK	36	-4	3.0	-0.9	AR LITTLE ROCK	36	-4	3.0	-0.9	AR LITTLE ROCK	36	-4	3.0	-0.9
CA BAKERSFIELD	48	0	0.8	-0.2	CA BAKERSFIELD	48	0	0.8	-0.2	CA BAKERSFIELD	48	0	0.8	-0.2
CA EUREKA	51	3	7.1	0.2	CA EUREKA	51	3	7.1	0.2	CA EUREKA	51	3	7.1	0.2
CA FRESNO	46	1	1.5	-0.5	CA FRESNO	46	1	1.5	-0.5	CA FRESNO	46	1	1.5	-0.5
CA LOS ANGELES	57	1	1.6	-1.4	CA LOS ANGELES	57	1	1.6	-1.4	CA LOS ANGELES	57	1	1.6	-1.4
CA REDDING	46	-1	7.3	-1.3	CA REDDING	46	-1	7.3	-1.3	CA REDDING	46	-1	7.3	-1.3
CA SACRAMENTO	48	3	2.6	-1.4	CA SACRAMENTO	48	3	2.6	-1.4	CA SACRAMENTO	48	3	2.6	-1.4
CA SAN DIEGO	57	1	0.9	-1.2	CA SAN DIEGO	57	1	0.9	-1.2	CA SAN DIEGO	57	1	0.9	-1.2
CA SAN FRANCISCO	50	2	3.9	-0.7	CA SAN FRANCISCO	50	2	3.9	-0.7	CA SAN FRANCISCO	50	2	3.9	-0.7
CA STOCKTON	47	2	2.0	-1.0	CA STOCKTON	47	2	2.0	-1.0	CA STOCKTON	47	2	2.0	-1.0
CO DENVER	25	-4	0.4	-0.1	CO DENVER	25	-4	0.4	-0.1	CO DENVER	25	-4	0.4	-0.1
CO GRAND JUNCTION	17	-8	1.1	0.5	CO GRAND JUNCTION	17	-8	1.1	0.5	CO GRAND JUNCTION	17	-8	1.1	0.5
CO PUEBLO	20	-10	0.9	0.6	CO PUEBLO	20	-10	0.9	0.6	CO PUEBLO	20	-10	0.9	0.6
CT BRIDGEPORT	26	-3	2.7	-0.6	CT BRIDGEPORT	26	-3	2.7	-0.6	CT BRIDGEPORT	26	-3	2.7	-0.6
CT HARTFORD	23	-3	3.4	-0.2	CT HARTFORD	23	-3	3.4	-0.2	CT HARTFORD	23	-3	3.4	-0.2
DC WASHINGTON	31	-5	3.1	0.4	DC WASHINGTON	31	-5	3.1	0.4	DC WASHINGTON	31	-5	3.1	0.4
FL APALACHICOLA	50	-3	2.9	-0.6	FL APALACHICOLA	50	-3	2.9	-0.6	FL APALACHICOLA	50	-3	2.9	-0.6
FL DAYTONA BEACH	55	-3	5.4	3.0	FL DAYTONA BEACH	55	-3	5.4	3.0	FL DAYTONA BEACH	55	-3	5.4	3.0
FL FT. MYERS	64	1	2.2	0.3	FL FT. MYERS	64	1	2.2	0.3	FL FT. MYERS	64	1	2.2	0.3
FL JACKSONVILLE	49	-5	6.3	3.4	FL JACKSONVILLE	49	-5	6.3	3.4	FL JACKSONVILLE	49	-5	6.3	3.4
FL KEY WEST	69	-1	4.8	3.1	FL KEY WEST	69	-1	4.8	3.1	FL KEY WEST	69	-1	4.8	3.1
FL MIAMI	68	1	1.9	-0.2	FL MIAMI	68	1	1.9	-0.2	FL MIAMI	68	1	1.9	-0.2
FL ORLANDO	58	-2	3.1	1.0	FL ORLANDO	58	-2	3.1	1.0	FL ORLANDO	58	-2	3.1	1.0
FL TALLAHASSEE	46	-5	3.5	-1.1	FL TALLAHASSEE	46	-5	3.5	-1.1	FL TALLAHASSEE	46	-5	3.5	-1.1
FL TAMPA	58	-1	2.8	0.6	FL TAMPA	58	-1	2.8	0.6	FL TAMPA	58	-1	2.8	0.6
FL WEST PALM BEACH	66	1	3.4	0.7	FL WEST PALM BEACH	66	1	3.4	0.7	FL WEST PALM BEACH	66	1	3.4	0.7
GA ATLANTA	39	-3	4.6	-0.3	GA ATLANTA	39	-3	4.6	-0.3	GA ATLANTA	39	-3	4.6	-0.3
GA AUGUSTA	41	-4	4.3	0.3	GA AUGUSTA	41	-4	4.3	0.3	GA AUGUSTA	41	-4	4.3	0.3
GA MACON	42	-5	5.5	1.2	GA MACON	42	-5	5.5	1.2	GA MACON	42	-5	5.5	1.2
GA SAVANNAH	45	-4	3.4	0.4	GA SAVANNAH	45	-4	3.4	0.4	GA SAVANNAH	45	-4	3.4	0.4
HI HILO	72	1	10.3	0.9	HI HILO	72	1	10.3	0.9	HI HILO	72	1	10.3	0.9
HI HONOLULU	73	1	3.0	-0.7	HI HONOLULU	73	1	3.0	-0.7	HI HONOLULU	73	1	3.0	-0.7
HI KAHULUI	72	0	7.7	3.7	HI KAHULUI	72	0	7.7	3.7	HI KAHULUI	72	0	7.7	3.7
HI LIHUE	72	1	10.0	3.8	HI LIHUE	72	1	10.0	3.8	HI LIHUE	72	1	10.0	3.8
ID BOISE	26	-4	1.3	-0.3	ID BOISE	26	-4	1.3	-0.3	ID BOISE	26	-4	1.3	-0.3
ID LEWISTON	34	1	1.0	-0.4	ID LEWISTON	34	1	1.0	-0.4	ID LEWISTON	34	1	1.0	-0.4
ID POCATELLO	21	-3	1.1	-0.1	ID POCATELLO	21	-3	1.1	-0.1	ID POCATELLO	21	-3	1.1	-0.1
IL CAIRO	-	-	2.8	-0.7	IL CAIRO	-	-	2.8	-0.7	IL CAIRO	-	-	2.8	-0.7
IL CHICAGO	20	-1	1.9	0.3	IL CHICAGO	20	-1	1.9	0.3	IL CHICAGO	20	-1	1.9	0.3
IL MOLINE	20	0	1.7	0.1	IL MOLINE	20	0	1.7	0.1	IL MOLINE	20	0	1.7	0.1
IL PEORIA	23	1	2.0	0.4	IL PEORIA	23	1	2.0	0.4	IL PEORIA	23	1	2.0	0.4
IL QUINCY	25	2	1.3	0.0	IL QUINCY	25	2	1.3	0.0	IL QUINCY	25	2	1.3	0.0
IL ROCKFORD	16	-3	2.5	1.1	IL ROCKFORD	16	-3	2.5	1.1	IL ROCKFORD	16	-3	2.5	1.1
IL SPRINGFIELD	26	1	2.2	0.6	IL SPRINGFIELD	26	1	2.2	0.6	IL SPRINGFIELD	26	1	2.2	0.6
IN EVANSVILLE	29	-2	3.3	0.3	IN EVANSVILLE	29	-2	3.3	0.3	IN EVANSVILLE	29	-2	3.3	0.3
IN FORT WAYNE	24	0	1.5	-0.6	IN FORT WAYNE	24	0	1.5	-0.6	IN FORT WAYNE	24	0	1.5	-0.6
IN INDIANAPOLIS	26	-1	2.4	-0.3	IN INDIANAPOLIS	26	-1	2.4	-0.3	IN INDIANAPOLIS	26	-1	2.4	-0.3
IN SOUTH BEND	21	-2	2.2	-0.3	IN SOUTH BEND	21	-2	2.2	-0.3	IN SOUTH BEND	21	-2	2.2	-0.3
IA DES MOINES	20	1	0.4	-0.6	IA DES MOINES	20	1	0.4	-0.6	IA DES MOINES	20	1	0.4	-0.6
IA DUBUQUE	14	-2	1.3	-0.1	IA DUBUQUE	14	-2	1.3	-0.1	IA DUBUQUE	14	-2	1.3	-0.1
IA SIOUX CITY	16	0	0.7	0.1	IA SIOUX CITY	16	0	0.7	0.1	IA SIOUX CITY	16	0	0.7	0.1
IA WATERLOO	13	-1	0.7	-0.1	IA WATERLOO	13	-1	0.7	-0.1	IA WATERLOO	13	-1	0.7	-0.1
KS CONCORDIA	25	-1	0.7	0.1	KS CONCORDIA	25	-1	0.7	0.1	KS CONCORDIA	25	-1	0.7	0.1
KS DODGE CITY	27	-3	0.9	0.5	KS DODGE CITY	27	-3	0.9	0.5	KS DODGE CITY	27	-3	0.9	0.5
KS GOOLAND	24	-3	1.6	1.2	KS GOOLAND	24	-3	1.6	1.2	KS GOOLAND	24	-3	1.6	1.2
KS TOPKA	28	2	2.0	1.2	KS TOPKA	28	2	2.0	1.2	KS TOPKA	28	2	2.0	1.2
KS WICHITA	27	-3	0.5	-0.2	KS WICHITA	27	-3	0.5	-0.2	KS WICHITA	27	-3	0.5	-0.2
KY BOWLING GREEN	32	-2	3.3	-1.3	KY BOWLING GREEN	32	-2	3.3	-1.3	KY BOWLING GREEN	32	-2	3.3	-1.3
KY JACKSON	32	1	2.6	-1.3	KY JACKSON	32	1	2.6	-1.3	KY JACKSON	32	1	2.6	-1.3
KY LEXINGTON	30	-2	2.9	-0.6	KY LEXINGTON	30	-2	2.9	-0.6	KY LEXINGTON	30	-2	2.9	-0.6
KY LOUISVILLE	31	-1	4.0	0.7	KY LOUISVILLE	31	-1	4.0	0.7	KY LOUISVILLE	31	-1	4.0	0.7
LA ALEXANDRIA	45	-3	1.7	-2.7	LA ALEXANDRIA	45	-3	1.7	-2.7	LA ALEXANDRIA	45	-3	1.7	-2.7
LA BATON ROUGE	47	-3	4.0	-0.6	LA BATON ROUGE	47	-3	4.0	-0.6	LA BATON ROUGE	47	-3	4.0	-0.6
LA LAKE CHARLES	47	-3	2.8	-1.8	LA LAKE CHARLES	47	-3	2.8	-1.8	LA LAKE CHARLES	47	-3	2.8	-1.8
LA NEW ORLEANS	49	-3	3.7	-1.3	LA NEW ORLEANS	49	-3	3.7	-1.3	LA NEW ORLEANS	49	-3	3.7	-1.3
LA SHREVEPORT	42	-4	2.1	-2.0	LA SHREVEPORT	42	-4	2.1	-2.0	LA SHREVEPORT	42	-4	2.1	-2.0
ME CARIBOU	12	1	2.8	0.5	ME CARIBOU	12	1	2.8	0.5	ME CARIBOU	12	1	2.8	0.5
ME PORTLAND	21	0	2.0	-1.8	ME PORTLAND	21	0	2.0	-1.8	ME PORTLAND	21	0	2.0	-1.8
MD BALTIMORE	29	-4	3.2	0.3	MD BALTIMORE	29	-4	3.2	0.3	MD BALTIMORE	29	-4	3.2	0.3
MD SALISBURY	31	-4	3.5	0.2	MD SALISBURY	31	-4	3.5	0.2	MD SALISBURY	31	-4	3.5	0.2
MA BOSTON	28	-2	2.5	-1.5	MA BOSTON	28	-2	2.5	-1.5	MA BOSTON	28	-2	2.5	-1.5
MA CHATHAM	30	-1	3.0	-1.3	MA CHATHAM	30	-1	3.0	-1.3	MA CHATHAM	30	-1	3.0	-1.3
MI ALPENA	18	-1	1.5	-0.2	MI ALPENA	18	-1	1.5	-0.2	MI ALPENA	18	-1	1.5	-0.2
MI DETROIT	24	0	1.3	-0.5	MI DETROIT	24	0	1.3	-0.5	MI DETROIT	24	0	1.3	-0.5
MI FLINT	22	0	1.3	-0.3	MI FLINT	22	0	1.3	-0.3	MI FLINT	22	0	1.3	-0.3
MI GRAND RAPIDS	21	-2	2.4	0.4	MI GRAND RAPIDS	21	-2	2.4	0.4	MI GRAND RAPIDS	21	-2	2.4	0.4
MI HOUGHTON LAKE	17	0	2.1	0.6	MI HOUGHTON LAKE	17	0	2.1	0.6	MI HOUGHTON LAKE	17	0	2.1	0.6
MI LANSING	20	0	1.5	-0.1	MI LANSING	20	0	1.5	-0.1	MI LANSING	20	0	1.5	-0.1
MI MARQUETTE	11	-6	4.0	2.3	MI MARQUETTE	11	-6	4.0	2.3	MI MARQUETTE	11	-6	4.0	2.3
MI MUSKEGON	22	-1	2.9	0.5	MI MUSKEGON	22	-1	2.9	0.5	MI MUSKEGON	22	-1	2.9	0.5

Heating Degree Days (Base 65° F.)

January 1988

ALA. Birmingham . . . . .	776	MAINE, Caribou . . . . .	1636	OKLA. Okla. City . . . . .	948
Mobile . . . . .	565	Portland . . . . .	1339	Tulsa . . . . .	928
Montgomery . . . . .	647	MD. Baltimore . . . . .	1121	OREG. Astoria . . . . .	713
ALASKA, Anchorage . . . . .	1453	MASS. Boston . . . . .	1145	Burns . . . . .	1332
Barrow . . . . .	2344	Chatham . . . . .	1090	Medford . . . . .	780
Fairbanks . . . . .	2185	MICH. Alpena . . . . .	1431	Pendleton . . . . .	1004
Nome . . . . .	1639	Detroit . . . . .	1273	Portland . . . . .	801
ARIZ. Flagstaff . . . . .	1104	Flint . . . . .	1326	Salem . . . . .	788
Phoenix . . . . .	311	Grand Rapids . . . . .	1364	PA. Allentown . . . . .	1306
Tucson . . . . .	366	Houghton Lake . . . . .	1473	Erie . . . . .	1166
Winslow . . . . .	972	Lansing . . . . .	1371	Harrisburg . . . . .	1252
Yuma . . . . .	243	Marquette . . . . .	1650	Philadelphia . . . . .	1162
ARK. Fort Smith . . . . .	912	S. Ste. Marie . . . . .	1586	Pittsburgh . . . . .	1181
Little Rock . . . . .	888	MINN. Duluth . . . . .	1862	Scranton . . . . .	1326
CALIF. Bakersfield . . . . .	526	Internatl Falls . . . . .	2011	R.I. Providence . . . . .	1177
Eureka . . . . .	446	Minneapolis . . . . .	1688	S.C. Charleston . . . . .	669
Fresno . . . . .	584	Rochester . . . . .	1755	Columbia . . . . .	780
Los Angeles . . . . .	257	St. Cloud . . . . .	1801	Greenville . . . . .	892
Redding . . . . .	602	MISS. Jackson . . . . .	716	S. DAK. Aberdeen . . . . .	1707
Stockton . . . . .	555	Meridian . . . . .	714	Huron . . . . .	1744
San Diego . . . . .	250	MO. Columbia . . . . .	1149	Rapid City . . . . .	1340
San Francisco . . . . .	440	Kansas City . . . . .	1180	Sioux Falls . . . . .	1715
COLO. Denver . . . . .	1227	St. Louis . . . . .	1102	TENN. Chattanooga . . . . .	919
Grand Junction . . . . .	1469	Springfield . . . . .	1090	Knoxville . . . . .	956
Pueblo . . . . .	1399	MONT. Billings . . . . .	1276	Memphis . . . . .	866
CONN. Bridgeport . . . . .	1186	Glasgow . . . . .	1698	Nashville . . . . .	941
Hartford . . . . .	1292	Great Falls . . . . .	1278	TEX. Abilene . . . . .	715
D.C. Washington . . . . .	1047	Havre . . . . .	1483	Amarillo . . . . .	1010
FLA. Apalachicola . . . . .	472	Helena . . . . .	1426	Austin . . . . .	548
Ft. Myers . . . . .	--	Kalispell . . . . .	1402	Beaumont . . . . .	510
Jacksonville . . . . .	507	Miles City . . . . .	1499	Brownsville . . . . .	298
Key West . . . . .	22	Missoula . . . . .	1374	Corpus Christi . . . . .	374
Miami . . . . .	49	NEBR. Grand Island . . . . .	1441	Del Rio . . . . .	533
Orlando . . . . .	221	Lincoln . . . . .	1341	El Paso . . . . .	686
W. Palm Beach . . . . .	62	Norfolk . . . . .	1508	Fort Worth . . . . .	703
Tallahassee . . . . .	567	North Platte . . . . .	1501	Galveston . . . . .	441
Tampa . . . . .	221	Omaha . . . . .	1362	Houston . . . . .	525
GA. Atlanta . . . . .	791	Valentine . . . . .	1600	Lubbock . . . . .	881
Augusta . . . . .	732	NEV. Ely . . . . .	1353	Midland . . . . .	788
Macon . . . . .	700	Las Vegas . . . . .	612	San Angelo . . . . .	689
Savannah . . . . .	612	Reno . . . . .	982	San Antonio . . . . .	538
IDAHO, Boise . . . . .	1198	Winnemucca . . . . .	1155	Victoria . . . . .	462
Lewiston . . . . .	976	N.H. Concord . . . . .	1436	Waco . . . . .	644
Pocatello . . . . .	1348	N.J. Atlantic City . . . . .	1145	Wichita Falls . . . . .	824
ILL. Cairo . . . . .	--	N. MEX. Albuquerque . . . . .	937	UTAH, Milford . . . . .	1448
Chicago . . . . .	1396	N.Y. Albany . . . . .	1370	Salt Lake City . . . . .	1235
Moline . . . . .	1384	Binghamton . . . . .	1384	VT. Burlington . . . . .	1389
Peoria . . . . .	1306	Buffalo . . . . .	1184	VA. Lynchburg . . . . .	1030
Rockford . . . . .	1513	New York . . . . .	1083	Norfolk . . . . .	851
Springfield . . . . .	1216	Rochester . . . . .	1232	Richmond . . . . .	1008
IND. Evansville . . . . .	1108	Syracuse . . . . .	1291	Roanoke . . . . .	1055
Fort Wayne . . . . .	1277	N.C. Asheville . . . . .	1013	WASH. Colville . . . . .	--
Indianapolis . . . . .	1205	Charlotte . . . . .	899	Quillayute . . . . .	778
South Bend . . . . .	1347	Greensboro . . . . .	984	Seattle-Tacoma . . . . .	767
IOWA, Des Moines . . . . .	1398	Hatteras . . . . .	664	Spokane . . . . .	1240
Dubuque . . . . .	1581	Raleigh . . . . .	932	Walla Walla . . . . .	949
Souix City . . . . .	1514	Wilmington . . . . .	730	Yakima . . . . .	1116
KANS. Concordia . . . . .	1230	N. DAK. Bismarck . . . . .	1737	W. VA. Beckley . . . . .	1148
Dodge City . . . . .	1171	Fargo . . . . .	1832	Charleston . . . . .	1043
Goodland . . . . .	1270	Williston . . . . .	1781	Huntington . . . . .	1043
Topeka . . . . .	1136	OHIO. Akron-Canton . . . . .	1243	WIS. Green Bay . . . . .	1623
Wichita . . . . .	1170	Cincinnati . . . . .	1156	Madison . . . . .	1586
KY. Lexington . . . . .	1085	Cleveland . . . . .	1213	Milwaukee . . . . .	1442
Louisville . . . . .	1048	Columbus . . . . .	1187	WYO. Casper . . . . .	1377
LA. Baton Rouge . . . . .	559	Dayton . . . . .	1200	Cheyenne . . . . .	1343
Lake Charles . . . . .	538	Toledo . . . . .	1269	Lander . . . . .	1417
New Orleans . . . . .	492	Youngstown . . . . .	1252	Sheridan . . . . .	1341
Shreveport . . . . .	700				

## National Agricultural Summary

FEBRUARY 1 to 7, 1988

**HIGHLIGHTS:** Snow protected winter wheat and small grains from the bitter cold temperatures in most areas of the Corn Belt, northern Great Plains, and Rocky Mountain States. Wheat was subjected to possible freeze damage in southern Kansas. Cotton harvest slowly crept toward completion in Oklahoma. Precipitation limited fieldwork in the Corn Belt, Delta, and Southeast. Bitter cold temperatures and snow stressed livestock and increased supplemental feeding in the Rocky Mountain States, northern and central Great Plains, and Corn Belt.

**SMALL GRAINS:** Small grains and winter wheat were mostly good to fair in the Corn Belt and Southeast. Crop condition was mostly fair to good in the northern and central Great Plains and Rocky Mountain States. Extremely cold temperatures swept across the Rocky Mountain States through the northern and central Great Plains and Corn Belt, but snow cover protected winter grains from serious freeze damage in most areas. Small grain seeding was virtually finished in California. Weed control was active in most areas. Rain helped dryland small grain progress in Riverside County. Small grains grew well in Arizona, irrigation and herbicide were applied. Oregon's wheat growers were concerned about winter wheat cold damage in the Columbia Basin because of light snow cover and freezing temperatures. Low night temperatures threatened late planted winter wheat in Washington. Despite minimal snow cover, Idaho's winter wheat was mostly good. Alabama's wheat was mostly good. Arkansas' wheat remained mostly good. Small grains were topped in Georgia. Warm temperatures promoted small growth in Mississippi. Cold weather slowed small grain growth in Texas. The cold temperatures and dry conditions caused some losses in the Low Plains. Favorable weather allowed farmers to topdress wheat in some areas of Oklahoma. Little or no snow accumulations subjected wheat to possible freeze damage in southern Kansas. Wyoming's wheat was fair to good, but widespread Russian aphid infestation are expected later.

**OTHER CROPS:** Oklahoma's cotton harvest reached 97 percent completion. Cotton groundwork progressed well in California. Fields were furrowed and preirrigated in western Arizona. Land preparation continued in eastern areas, but heavy rain prevented fieldwork in southeast Arizona. Some stalks remained to be plowed down in south-central areas.

Precipitation limited fieldwork in the Corn Belt, Delta, and Southeast. Land preparation continued for sugarbeet and other spring seeded crops in California. Sugarbeet seeding and harvesting progressed well in California. Rainy weather slowed sugarcane harvest in the Rio Grande Valley. Sugarcane harvest and a few late plantings continued in Florida. Corn planting started in the Rio Grande Valley, but midweek wetness slowed progress.

Georgia's tobacco plants were good to fair. Seeding tobacco plantbeds continued in North Carolina and South Carolina. Plantbed preparation was underway in Virginia.

**FRUIT AND NUTS:** Florida's citrus trees were excellent with adequate moisture. Warm temperatures pushed out new growth. The brief spell of low temperatures caused no damage. Processing harvest was active in all areas and fruit movement continued for grapefruit, tangelos, and temple oranges. Valencia orange harvest began peaking with shipments expected to increase in Arizona. California almond blooms are expected in 1 to 2 weeks. Early table grape bud break continued. Plum pollinizer began blooming. Frost damaged citrus fruit began dropping. Citrus harvest consisted mostly of grapefruit, lemons, navel oranges, minneola tangelos, and kinmore mandarins.

Fruit tree pruning gained momentum in the Southeast. Fruit and nut tree pruning and spraying continued in Oregon. Cold temperatures slowed fruit tree pruning in Chelan County, Washington. Pruning progressed normally in other areas.

**VEGETABLES:** Near freezing temperatures in Florida's vegetable producing areas caused no damage. Land preparation and planting was active in all areas. The first watermelons were seeded in north-central Florida. Winter crop harvest progressed normally. Tomatoes, cabbage, celery, lettuce, peppers, snap beans, squash, carrots, cucumbers, strawberries, and radishes were volume leaders. Cabbage, celery, and carrot harvests continued in the Rio Grande Valley and the San Antonio Winter-Garden area as the weather allowed. Melons were planted in both areas. Spinach producers were concerned with disease problems in the San Antonio-Winter Garden area. Cabbage planting was underway and onion transplanting continued at Trans-Pecos. Celery harvest neared completion in Arizona. Lettuce, cauliflower, broccoli, spinach, cabbage, and greens were harvested in western areas. Growers prepared land for planting cantaloups, watermelons, and honeydews in western Arizona. Lettuce was thinned, weeded, and sprayed for caterpillars at Westside, California. Lettuce harvest was light, but quality was good in the Palo Verde Valley. Broccoli and cauliflower were harvested at Riverside, Salinas, and Santa Maria. Processing tomatoes were planted at Westside, and land was prepared for planting in the Sacramento Valley.

**PASTURES AND LIVESTOCK:** Livestock was mostly good. Low temperatures, snow, and dangerously cold wind chill caused considerable stress in Illinois and Minnesota. Livestock care became more difficult in the Corn Belt, and northern and central Plains because of low temperatures and snow. Pastures were mostly fair. Cold weather slowed growth in most areas.

## State Summaries of Weather and Agriculture

**ALABAMA:** Rainfall totals 1.00 in. or less north, south; 2.00 in. central. Snow, sleet over south 5th. Temperatures averaged 2 to 3° below normal.

Soil moisture mostly adequate. Wheat mostly fair. Primary activities: Routine care of livestock, poultry; machinery repairs; pruning fruit trees; general farm chores.

**ARIZONA:** Cooling trend 31st to 1st. Pacific weather disturbance 2nd, 3rd; snow level down to

5,500 ft. Another Pacific storm southeastern quarter 4th to 5th. Abundant sunshine, mild conditions prevailed 6th. Precipitation amounts between 0.03 to 1.85 in. Average temperatures varied from 2° below to 5° above normal.

Cotton crop land preparation west; fields furrowed, pre-irrigated. Land preparation continued east. Some plowdown remained south central. Heavy rains southeast prevented field work. Heavy sheeping-off alfalfa west, crop

condition good. Light stand renovation, establishment south central. Heavy sheeping-off southeast; no additional plantings. Small grains good west; 95% stands established, 20% jointing stage. Good growth continued; irrigation, herbicides applied. Almost all wheat, barley planted south central. Harvesting, shipments western lettuce, cauliflower, broccoli continued west. Shipments spinach, greens, cabbage moderate to light. Celery harvest neared completion. Asparagus shipments expected to increase. Land preparation for planting cantaloups, watermelons, honeydews west. Central State shipped mixed vegetables. Grapefruit, valencia orange, lemon shipments west. Valencia oranges began to peak with shipments expected to increase. Central limited sweet and valencia shipments; grapefruit, kinnow tangerines continued to be shipped. Apples, pecans shipped out of cold storage east.

**ARKANSAS:** Rain, scattered thundershowers early week, cold and dry latter part of week. Temperature extremes 2<sup>o</sup>; 73<sup>o</sup>. Rainfall total 0.15 to 3.94 in.

Wheat crop remained good. Livestock good, still being fed.

**CALIFORNIA:** Subtropical moisture moved southland 2nd, 3rd; brought 0.50 to 1.00 in. rain southern coastal sections lighter southeast deserts. Northern area under dry northwesterly wind pattern. Temperatures few degrees below normal.

Warm days, dry weather northern, central portions, dried soil, allowed increased field activities. Good rain Riverside County permitted continued excellent progress dryland small grains. Seeding small grains about complete. Weed control small grains, alfalfa active. Ground work good progress cotton, sugarbeets, other spring seeded crops. Vigorous growth some alfalfa seed fields resulted some being mowed first time for season. Sheeping-off older alfalfa continued. Sugarbeet seeding, harvest progressed. Weed work, pruning active. Almond bloom 1 to 2 weeks away. Bud break continued for early table grapes. Plum pollinizers began to bloom. Increased concern over San Jose scale due to export quarantine. Frost damaged citrus dropped. Harvest continued for grapefruit, lemons, kinnow mandarins, navel oranges, minneola tangelos. Asparagus harvest continued Riverside. Broccoli, cauliflower harvested Riverside, Salinas, Santa Maria, Westside. Lettuce light good quality Palo Verde Valley. Lettuce thinned, weeded, sprayed for caterpillars Westside. Onions planted Westside, growing well Cutler-Orosi. Fall potato harvest active Riverside packing sheds full-time Klamath. Processing tomatoes planted Westside. Ground prepared processing tomatoes Sacramento Valley, Merced-Atwater, Cutler-Orosi. Livestock good. Moderate movement feedlots. Supplemental feeding moderate. Pasture, rangeland growth improved, more moisture needed to maintain current growth. Calving, lambing active.

**COLORADO:** Snow showers in mountains, West Slope. Light snow on Eastern Plains early in week, 0.25 in. of moisture. Temperatures 4 to 8<sup>o</sup> below normal.

Snow cover on Eastern Plains diminishing slowly. Weather cold but otherwise generally favorable for livestock.

**FLORIDA:** High pressure east of State brought near record high temperatures early week with east winds bringing trace amounts rain southeast. Midweek cold front brought trace of rain north before moving southward late week. Near freezing temperatures extended into south morning of 7th, but no frost. Warm temperatures early week pushed averages 2 to 4<sup>o</sup> above normal.

Soil moisture generally adequate. Small grains continued mostly good. Land preparation active. Sugarcane harvest, few late plantings next crop continued. Grazing reduced on central Peninsula pastures browned by frosts previous week. Pastures varied from very poor to good statewide; grazing extreme lower Peninsula continued mostly good. Cattle fair to good, supplemental feeding active. Calving continued. Citrus trees excellent condition. Moisture adequate. Warm temperatures early week helped push out new growth. No damage from temperatures in low 30s, morning of 6th. Harvest for processing very active all areas. Fresh movement continued for grapefruit, tangelos, temples. Unseasonably warm weather early week cooled to near freezing by weekend, vegetable producing areas. No damage. Land preparation, planting active. Harvest winter crops steady. Volume leaders: Tomatoes, cabbage, celery, lettuce, peppers, snap beans, squash, carrots, cucumbers, strawberries, radishes. Also good supplies escarole, endive, sweet corn, eggplant, parsley, chinese cabbage. First north central watermelons planted.

**GEORGIA:** Temperatures 2 to 4<sup>o</sup> above normal, coldest weather prevailed over weekend. Minimum temperatures morning 7th in teens, ranged 2<sup>o</sup> Blairsville to mid 20s along coast. Cold outbreak preceded by much above normal temperatures. South area maximum temperatures upper 70s to low 80s 2nd to 4th. Mixture rain, sleet, snow across portions south 5th, early 6th. Rain 1.00 to 2.00 in., except less than 1.00 in. portions central. Few areas north over 2.00 in. rain.

Soil moisture adequate. Land preparation slowed by cold, wet conditions. Other activities: Small grain topdressing, pruning peach trees, caring for livestock and poultry. Tobacco plants fair to good, also wheat, rye, other small grains. Pastures poor to good mostly fair, cattle mostly fair to good, hogs fair to mostly good.

**HAWAII:** Favorable weather. Mostly sunny, clear nights. Light rainfall, moderate some windward areas. Temperatures mid 60s to low 80s. Rainfall none to 1.60 in. Variable winds 5 to 25 mph.

Days suitable for fieldwork 7.0. Papaya production on seasonal decline, disease prevalent some fields. Banana production seasonally low, increased output from Oahu. Head cabbage output heavy, larger head size and good quality. Chinese cabbage output increased, good quality. Head lettuce production remained light, crop conditions improved. Ginger root harvesting very active, shipments to west coast ports continued. Spraying increased as farmers took advantage of clear weather to control disease, insect infestations. Irrigation normal. Crops improved growth.

**IDAHO:** Temperatures 2 to 5<sup>o</sup> below normal. Precipitation below normal.

Despite minimal snow cover, winter wheat good. Emergence spotty, healthy. Cold weather prevented fieldwork. Main activity feeding, caring for livestock. Others included shipping, marketing products, attending seminars, preparing income taxes, shopwork. Livestock remained good. Range sheep movement to feedlots. Conditions good for calving, lambing; few complications. Hay, roughage supplies adequate, some surplus.

**ILLINOIS:** Temperatures average -1 to -13<sup>o</sup> below normal. Precipitation averaged 0.25 in. north, 1.00 to 2.00 in. south. Snow cover midweek 1 to 4 in. west, north.

Winter wheat helped some areas by snow cover, continued mostly good. Livestock good to fair. Low temperatures, snow, dangerously cold wind chills caused considerable stress later in week.

**INDIANA:** Temperatures averaged 2 to 13° below normal. Lows averaged single digits north to near 20s south, highs averaged low 20s north to mid 30s south. Precipitation mostly above normal. Totals of 0.33 to 0.75 in. north, 1.00 to 3.50 in. south. Snow cover 1.00 to 4.00 in. north and central, little or none south.

Outside activities limited by snow cover, wet muddy conditions. Manure, fertilizer were spread where permitted. Other activities: Hauling grain to market, machinery repair, attending meetings, care of livestock. Hay supplies adequate. Livestock good. Snow protected wheat during cold period. Wheat good most areas of State.

**IOWA:** Cold week, temperatures averaged 10 to 17° below normal. Precipitation light, ranging from traces southwest to 0.20 in. north and east, snow 1st, 3rd.

Cold temperatures made daily livestock care more difficult. Adequate feed, water, shelter important to limit loss in daily weight gain.

**KANSAS:** Temperatures far below normal. Averages ranged mid teens north, low 20s south. Readings 10 to 15° below normal. Precipitation barely measurable southwest, south central to 0.50 in. northeast, east central.

Snowstorm midweek deposited 4 in. snow northern regions provided good snow blanket for wheat crop. Southern areas received no accumulations snow subjecting wheat to possible freeze damage. Increased feeding livestock necessary northern areas due snow cover, colder temperatures over most State. Farmers, ranchers kept busy caring newborn calves, lambs.

**KENTUCKY:** Mild early, daytime highs mid 60s to low 70s. Cold front 2nd, dropped temperatures back to near normal. Cold arctic air over weekend dropped morning lows to 0° or below. Precipitation varied, early week large amount rain. Several inches 1st and 2nd caused some flooding west. Light precipitation continued 3rd, 4th. Cold weather late brought end to precipitation.

Topsoil moisture adequate. Extreme cold froze ground. Winter wheat exposed, some concern over possible freeze damage. Supplemental feeding heavy.

**LOUISIANA:** Temperatures 2 to 6° above normal. Temperature extremes 21°; 77°. Rainfall averaged 0.52 to 5.55 in.

Main activities: Livestock care, harvesting crawfish, routine chores.

**MARYLAND & DELAWARE:** Maryland: Average temperature 44°, normal 32°. Lowest temperature 11°, highest temperature 73°. Weekend 30th to 31st extremely warm, remaining days close to normal temperatures. Precipitation averaged 0.86 in. No recent snow.

Soil moisture remained adequate. Main farm activity caring for livestock.

Delaware: Average temperature 45°, normal 33°. Precipitation averaged 0.98 in. Weekend 30th to 31st extremely warm, remaining days close to normal temperatures. No recent snow.

Soil moisture adequate. Main farm activity caring for livestock.

**MICHIGAN:** Temperatures ranged 9° below to 1° above normal. Temperature extremes -10°; 53°. Precipitation 0.03 to 0.96 in. across State. Above normal temperatures, rain, freezing rain early week followed by widespread snow and very cold conditions by weekend. Light to moderate amounts of snow most areas of Lower Peninsula. Very heavy snow occurred some locations close to Lake

Michigan. New snow cover should help protect winter wheat.

Activities: Marketing crops, pruning fruit trees, applying fertilizer, attending farm meetings, general farm maintenance, equipment repair. Livestock good. Feed supplies remained adequate. Movement of cattle slowed by snow, ice on roads. Cattle sought extra protection from strong winds that accompanied snowstorms.

**MINNESOTA:** Temperatures averaged 11 to 17° below normal for State. Extremes -39°; 36°. Precipitation averaged 0.06 to 0.16 in. below normal. Precipitation totals averaged 0.03 to 0.09 in. Greatest weekly total 0.18 in. Snowfall averaged 1 in. Snow depth weekend averaged 7 to 15 in.

Extremely low temperatures continued to put stress on livestock. Feed consumption mainly for maintenance, weight gains slow, if at all, for livestock on fattening rations. Winter meetings, making plans for spring main activities.

**MISSISSIPPI:** Temperatures 3° below normal; extremes 10°; 73°. Generally fair; warm afternoons, cool nights. Greatest 24-hour total rainfall 1.05 in. Greatest weekly rainfall 1.05 in.

Days suitable for fieldwork 2.5, 1.0 1987, 2.1 avg. Soil moisture adequate to surplus. Livestock fair to good; wheat fair to good. Pastures fair; hay supplies adequate; feed grain supplies adequate. Recent warm temperatures promoted growth winter crops.

**MISSOURI:** Temperatures 2° above normal Bootheel to 12° below normal northwest. Nearly 2.75 in. precipitation St. Louis area, 2.00 in Bootheel, around 0.50 in. northern third and southwest.

Cold weather, rain, snow limited farm activities to livestock chores, tax work, crop planning. Wheat crop received snow cover most areas.

**MONTANA:** Temperatures very cold across State. West, southwest divisions averaged 4 to 13° below normal. Other divisions 16 to 20° below normal. Temperatures began to moderate 6th. Central, south central divisions averaged 0.30 to 0.40 in. moisture from snowfall. Western division averaged 0.20 in. Rest of State 0.10 in. or less.

Winter wheat mostly fair to good. Wind damage to winter wheat fields mostly light. Snow cover protection for winter wheat fields poor to fair. Livestock general good. Nearly all livestock received supplemental feed. Grazing mostly open. Livestock losses average.

**NEBRASKA:** Average temperatures range 12 to 17° below normal. Extremes -19°; 48°. Light snowfall, precipitation ranged trace to 0.25 in.

Farm, ranch activities centered around livestock management. Supplemental hay feeding continued. Early calving, lambing continued, no major problems. Winter wheat remained fair to good. Other farm activities include grain hauling, machinery repair, planning for 1988 operations.

**NEVADA:** Week opened with cold northerly flow into north, central areas. Pattern basically dry except some snow flurries primarily northeast. Ridge built up all areas, remainder of week dry with very cold nights. Temperatures averaged from 3 to 13° below normal for period north, central, near normal south. Some rain south midweek, otherwise dry.

Mild dry weather near ideal calving, lambing operations. Marketing potatoes favored by dry highways. Prices on upswing, movement accelerated. No snow cover remaining winter grains. Livestock mostly good.

**NEW ENGLAND:** Average precipitation (rain, water equivalent of snow) for region generally between 0.50 to 2.00 in. mostly in form of snow. Higher amounts south, lesser amounts north. Average temperature ranged upper single digits over northern Maine to lower 30s over southern coast of Connecticut.

Major farm activities: Tending livestock and poultry, clearing snow, moving products to market.

**NEW JERSEY:** Temperatures averaged slightly below normal, averaged 26° north, 32° south, 33° coastal. Extremes -2°; 70°. Precipitation above normal, averaged 1.05 in. north, 0.95 in. south, 1.03 in. coastal. Heaviest 24-hour total 0.76 in. on 2nd, 3rd. Heaviest 24-hour total snowfall 3 in. on 4th, 5th. Depth of snow on ground 8th, 1 to 2 in. extreme north.

Farmers caring for livestock, tending to normal winter chores.

**NEW MEXICO:** Average temperatures below normal eastern plains, near normal to above normal remainder of State. Rain, snow most areas near end of week.

Days suitable for fieldwork 5.1. Soil moisture 30% short, 60% adequate, 10% surplus. Barley 60% fair, 40% good. Wheat 80% fair, 20% good; showing improvement from 1 week ago. Cattle 50% fair, 50% good; calving underway many areas. Sheep 56% fair, 44% good; lambing gaining momentum. Range 10% very poor, 10% poor, 70% fair, 10% good. Onions 50% fair, 50% good. Lettuce 100% good; planting of lettuce continued.

**NEW YORK:** Early week temperatures 10 to 20° above normal. Record high in 60s Rochester, Buffalo, Syracuse. Heavy snowfall with accumulations to 12 in. eastern areas midweek. Heavy lake effect snow Buffalo area on 6th.

Producers busy doing farm taxes, routine winter chores.

**NORTH CAROLINA:** Temperatures averaged 5 to 8° above normal across State. Temperature extremes 3°; 76°. Precipitation 0.22 to 2.44 in. across State.

Days suitable for fieldwork 2.1. Soil moisture 67% adequate, 33% surplus. Wheat 5% poor, 25% fair, 70% good. Oats 5% poor, 29% fair, 66% good. Barley 8% poor, 29% fair, 63% good. Rye 7% poor, 29% fair, 64% good. Pasture 13% very poor, 15% poor, 36% fair, 34% good, 2% excellent. Hay and roughage supplies 11% short, 85% adequate, 4% surplus. Feed grains supplies 15% short, 81% adequate, 4% surplus. Major farm activities: Equipment repair, maintenance; tending livestock; preparing, seeding tobacco plantbeds; pruning fruit trees, ornamentals; soil sampling; general farm maintenance.

**NORTH DAKOTA:** Temperatures averaged 14 to 18° below normal. Extremes -35° northwest, 1st; 35° southwest, 6th. Precipitation early, midweek. Heaviest 0.68 in. southeast.

Soil moisture below normal. Winter grains fair to poor, spring germination questionable. Insect infestations in stored grain. Livestock good; lambing, calving progressed. Feed supplies adequate. Main activities: Winter meetings, spring preparation.

**OHIO:** Mild early week followed by sharply colder weather late week. Temperatures ranged daytime highs of 60s down to sub-zero overnight lows. Average temperatures 3 to 8° subnormal. Rain early week 1.00 to 2.00 in. Snow 1 to 6 in. late week.

Snow helped protect winter wheat from arctic air. Livestock needed some protection from wind chill.

**OKLAHOMA:** Temperatures averaged 12° below normal central to 9° below normal east central. Precipitation averaged none Panhandle to 0.49 in. south central.

Favorable weather allowed farmers to topdress wheat, harvest cotton. Cotton 97% harvested. Ranchers began working cattle.

**OREGON:** Temperatures below normal across State. West of Cascades averaged 4° below normal; east 10° or more below normal, minimum temperatures near 0°, coldest reading -13° Enterprise. Light precipitation across State. West of Cascades received 0.20 to 0.40 in., except Brookings received no rain. East of Cascades, south central High Desert Plateau up to 1.00 in. of precipitation; most other eastern areas 0.10 in., except northeast 0.40 in.

Soil moisture mostly adequate. Winter weed control, nitrogen fertilizer applications on wheat, grass seed in Willamette Valley. Concern about cold damage to winter wheat in Columbia Basin due to slight snow cover, freezing temperatures. Fruit, nut tree pruning, spraying continued. Livestock good to excellent. Ranges, pastures fair to good. Western pasture growth very slow. Hay supplies adequate.

**PENNSYLVANIA:** Mild, wet middle of week; dry, cold end of week. Average temperature 29°, 2° above normal. Temperature extremes -9°; 65°. Average precipitation 1.58 in., 0.96 in. above normal.

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

**PUERTO RICO:** Island average rainfall 1.88 in., 1.27 in. above normal. Highest weekly total rainfall 7.54 in. Pico Del Este-Luquillo, 5.15 in. Corozal AES, 4.46 in. Quebradillas. Highest 24-hour total 2.23 in. Maunabo. San Juan WSFO mean temperature 77°, 1° above normal. Total rainfall 1.11 in., 0.55 in. above normal. Divisional temperature averaged about 75 to 76° on coasts, 68 to 71° interior divisions, mean station temperature 79° Fajardo to 62° Pico Del Este-Luquillo. Lowest minimum temperature 55° Arecibo OBS. Highest maximum temperature 92° Mayaguez.

**SOUTH CAROLINA:** Temperatures ranged 20° above normal beginning of week to 15° below normal weekend. Precipitation averaged more than 1.00 in. upstate to 0.30 in. along south coast.

Main activities: Tobacco seedbed preparation, planting, care of livestock, poultry, equipment maintenance, routine chores.

**SOUTH DAKOTA:** Average temperatures 13 to 20° below normal. Extremes -23°; 50°. Precipitation heaviest around Black Hills. Largest amount of melted precipitation Belle Fourche 0.38 in.

Winter wheat condition remains unchanged fair to good. Livestock good.

**TENNESSEE:** Cold front brought widespread rainfall to State 1st to 4th. Precipitation averaged 0.75 to 1.00 in. above normal. Average temperatures below normal all sections except east. Some record lows.

Livestock good. Feed supplies adequate. Farm chores, planning spring fieldwork, meetings main activities.

**TEXAS:** Cold weather dominated. Slight break over weekend. Temperatures below to much below normal. Precipitation light across most areas, except moderate amounts extreme south.

Crops: Small grain growth slowed by return of cold weather. After several weeks of milder weather, fields now dormant. Cold temperatures,

dry conditions caused some losses stands Low Plains. Past three weeks, producers applied some fertilizer, helped greening. Additional moisture, warmer weather needed many parts State. Fields provide little grazing livestock. Rains Upper Coast, portions east helped. Insects slight increased with warmer weather; colder temperatures slow problem. Corn planting started Rio Grande Valley. Midweek wet conditions slowed progress. Land preparations virtually complete Coastal Bend, planting to begin soon. Sugarcane harvest slowed by rainy weather Rio Grande Valley.

**Commercial Vegetables:** Rio Grande Valley harvest cabbage, carrots, celery continued as conditions allowed. Some lettuce to be harvested. Melons being planted early week. San Antonio-Winter Garden producers concerned with disease problems in spinach. Few melons planted. Harvest cabbage, carrots continued. Trans-Pecos cabbage planting underway, some transplanting onions continued.

**Range and Pasture:** Slow improvement range, pasture conditions past few weeks ended with cold temperatures. Many pastures dry, in danger of burning. Most low in protein, supplemental feeding continued. Small grain grazing remained short. Some rain helped conditions Upper Coast. Good general rain would benefit most native grasses. Livestock fair, some flesh loss. Markets strong. Calving, lambing continued.

**UTAH:** Precipitation light. Temperatures 9° below to 2° above normal.

Snow cover moderate. Winter range feed poor to fair. Feeding hay on snow covered range. Livestock feed adequate. Livestock mostly good. Major farm activities: Care of livestock, building, equipment maintenance, summarizing tax records, attending farm seminars.

**VIRGINIA:** Began warm, dry with record high temperatures. Cloudy, wet mid period; plummeting temperatures end. Frigid temperatures weekend entire week temperatures averaged 10° above normal. Precipitation averaged 0.90 in.

Days suitable for fieldwork 1.2. Topsoil moisture 40% adequate, 60% surplus. Winter grains good to excellent most areas. Warm spell allowed improvement, some growth. Lambing, calving normal. Livestock care, feeding active. Some tobacco plantbed preparation. Normal winter chores; tax, record preparations, meetings. Some fruit tree pruning.

**WASHINGTON:** North, northwest flow aloft kept temperatures below normal. Weak disturbances moved down from northwest bringing little precipitation to parts of State. Precipitation as mixed rain, snow western region; snow, rain, freezing drizzle eastern part of State.

Soil moisture 40% short, 60% adequate. Snow cover diminishing most areas. Low nighttime temperatures threatening late planted winter wheat. Cold temperatures slowed fruit tree pruning Chelan County. Other areas, pruning progressed normally. Forced rhubarb harvest continued full swing King, Pierce Counties. Calving, lambing season underway. Ranchers concerned about spring, summer forage.

**WEST VIRGINIA:** Average temperature 34°; 2° above normal. Extremes -7° Terra Alta, 77° Creston. Precipitation averaged 1.44 in., 0.75 in. above normal. Most precipitation 3.60 in. Wheeling.

Days suitable for fieldwork 2.0. Soil moisture 60% surplus, 40% adequate. Feed supplies adequate to short. Wheat, barley good to fair. Cows calved 13%; ewes lambed 20%.

**WISCONSIN:** Temperatures below normal. Extremes -30°; 33°. Snowfall 1 to 3 in. mostly north. Bitter cold, windy.

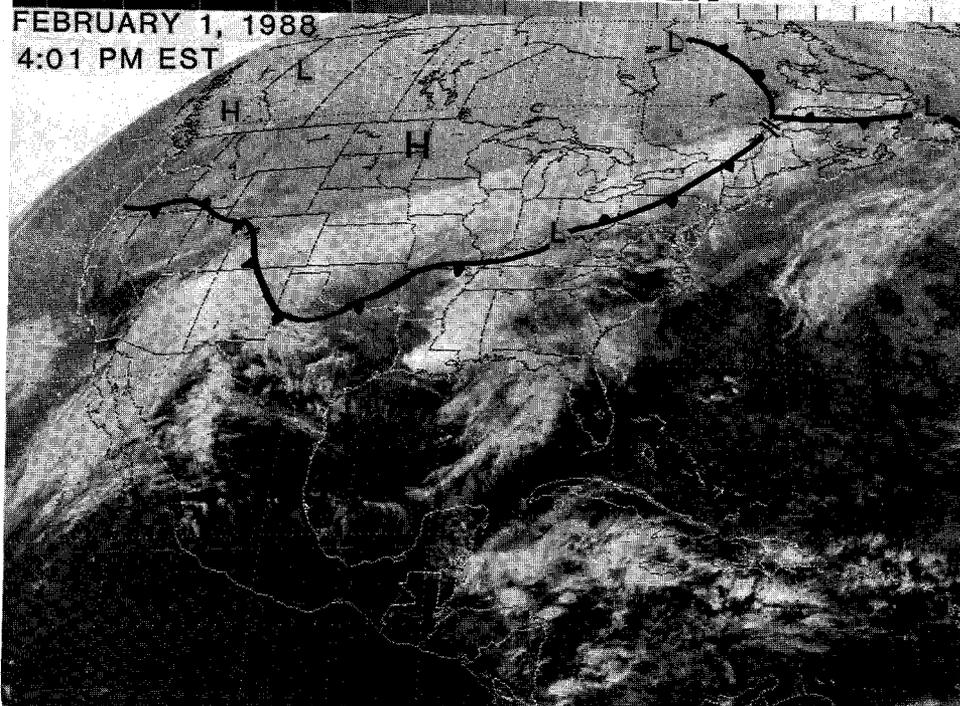
**WYOMING:** Temperatures below normal. Precipitation above normal northeast, elsewhere slightly below.

Winter wheat fair to good. Wide spread Russian aphid infestations expected later. Livestock fair to good. Early calving, lambing, shearing started. Supplemental feeding underway in areas with snow cover or short winter pastures. Winter pastures being utilized where possible. Feed supplies adequate.

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FEBRUARY 1, 1988

4:01 PM EST



THUNDERSTORMS OVER SOUTHERN LOUISIANA CAUSE HIGH WINDS, HEAVY RAINS, AND FLOODING. A MIXTURE OF SNOW, RAIN, SLEET, AND FREEZING RAIN RANGE FROM ARIZONA, ACROSS THE CENTRAL UNITED STATES, TO NEW ENGLAND AND THE MARITIME PROVINCES OF CANADA. A LARGE HIGH PRESSURE SYSTEM, CENTERED OVER THE DAKOTAS, BRINGS FRIGID AIR INTO THE CENTRAL PART OF THE NATION.

International Weather and Crop Summary

January 31 - February 6, 1988

January 1988

MONTHLY DATA FROM SELECTED FOREIGN CITIES  
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA

\*\*\* = DATA NOT AVAILABLE

HIGHLIGHTS:

UNITED STATES...Snow protects winter wheat and small grains from bitter cold temperatures in most areas of the Corn Belt, northern Great Plains, and Rocky Mountain States. Little or no snow subjects wheat to possible freeze damage in southern Kansas. Bitter cold temperatures stress livestock and increase supplemental feeding in the Rocky Mountain States, northern and central Great Plains, and Corn Belt.

WESTERN U.S.S.R....Mild weather favors dormant winter grains.

EUROPE...Wet, mild weather continues over much of Europe. Widespread precipitation in the southeast benefits dry soils for the second week in a row.

SOUTH ASIA...Dry weather covers all crop areas, favoring cotton harvesting to the south.

NORTHWESTERN AFRICA...Adverse dryness continues over Algeria and Tunisia. The second consecutive week of dry weather covers Moroccan winter grain areas.

SOUTH AFRICA...Hot, dry weather stresses reproductive to filling corn over much of the grain belt.

SOUTHEAST ASIA...Variable rain continues throughout Indonesia and Malaysia, increasing irrigation levels but possibly causing local flooding.

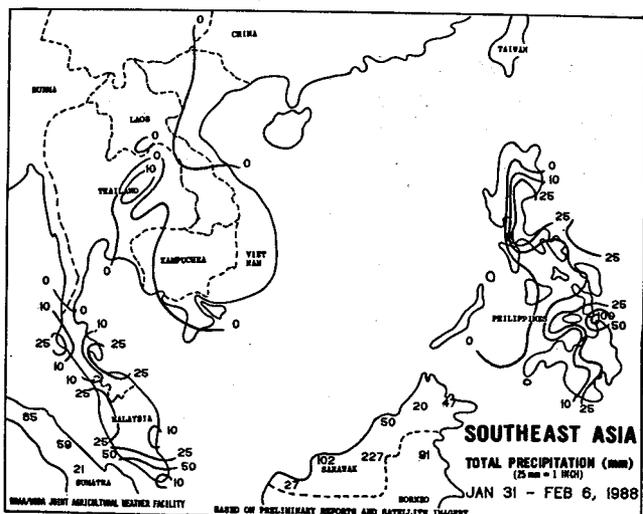
EASTERN ASIA...Widespread rain favors soil moisture levels in southeastern China. Heavy rain and snow fall in western Japan.

SOUTH AMERICA...Beneficial rain favors filling grains and flowering to pod-setting soybeans in south-central Brazil and Argentina.

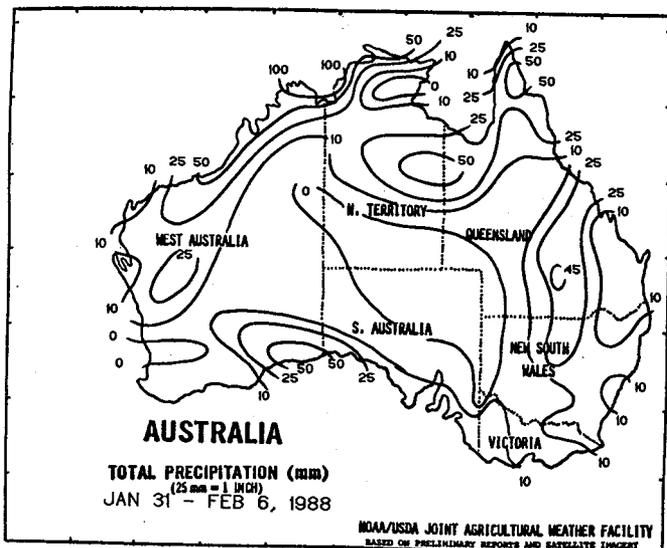
AUSTRALIA...Scattered rains bring some relief to sugarcane in the northeast. Rain also benefits crops in most summer growing areas.

COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)	
	AVG MAX	AVG MIN	HI	LO	AVG	F/NRM	DPART
NORWAY OSLO	0	-2	5	-10	-1	6.3	137.8
SWEDEN STOCKHOLM	1	0	5	-6	1	3.2	44.9
FINLAND HELSINKI	-1	-4	5	-19	-3	3.1	52.0
U KING GLASGOW	6	2	12	-4	4	0.6	144.9
EDINBURGH	6	2	12	-3	4	1.0	87.4
BIRMINGHAM	7	3	13	-3	5	1.9	92.6
LONDON	8	4	12	-4	6	2.5	181.2
IRELAND DUBLIN	8	4	13	0	6	1.0	114.9
ICELND REYKJAVIK	-1	-5	7	-14	-3	-2.6	47.3
DENMRK COPENHAGEN	5	2	10	-1	3	3.3	73.2
LUXEMB LUXEMBOURG	6	2	11	-2	4	3.6	196.4
SWITZL ZURICH	6	2	13	-3	4	4.1	55.4
GENEVA	7	2	13	-4	5	3.7	94.0
FRANCE PARIS	10	5	16	-2	8	4.2	101.6
STRASBOURG	8	3	15	-4	5	4.5	24.1
BOURGES	10	5	15	-2	7	4.1	122.6
BORDEAUX	12	7	17	-2	10	4.3	221.4
TOULOUSE	12	6	18	-1	9	4.5	102.2
MARSEILLE	13	7	16	-1	10	3.6	98.2
SPAIN VALLADOLID	10	4	14	-1	7	3.0	57.8
MADRID	11	5	15	-2	8	2.5	55.8
SEVILLE	16	8	19	4	12	1.5	132.4
E GRMY LEIPZIG	6	2	13	-4	4	4.5	27.4
DRESDEN	6	2	15	-3	4	5.1	46.9
W GRMY HAMBURG	6	3	12	-1	5	4.1	106.6
BERLIN	6	2	13	-3	4	4.1	48.5
DUSSELDORF	8	5	14	0	7	4.8	76.8
STUTTGART	7	1	14	-5	4	4.3	42.8
NURNBERG	6	1	12	-7	3	4.1	44.0
MUNICH	6	-1	15	-9	3	4.4	50.1
AUSTRI VIENNA	5	0	13	-6	2	3.7	22.0
INNSBRUCK	7	-1	14	-7	3	4.8	40.4
CZECH PRAGUE	4	0	11	-7	2	4.0	32.1
POLAND WARSAW	3	-1	11	-7	1	4.4	13.5
LODZ	4	0	11	-4	2	4.4	19.4
KATOWICE	5	0	11	-9	3	5.2	25.1
PRZEMYSL	2	-1	12	-8	1	3.7	31.0
HUNGAR BUDAPEST	5	1	12	-4	3	4.4	43.3
YUGOSL SARAJEVO	5	-2	17	-10	2	3.6	70.2
ROMANI BUCHAREST	4	-1	15	-7	2	4.0	30.3
BULGAR SOFIA	6	-1	16	-5	3	4.9	2.4
ITALY MILAN	7	3	12	-5	5	3.9	103.0
VERONA	8	3	15	-2	6	4.3	53.0
VENICE	9	4	13	-1	6	3.6	62.7
GENOA	12	7	16	3	10	1.8	190.6
ROME	15	8	17	-1	12	3.5	60.2
NAPLES	15	6	18	0	10	2.2	87.8
GREECE THESSALONIKA	10	5	14	-2	7	2.0	22.9
LARISSA	10	4	18	-2	7	2.1	39.0
ATHENS	14	9	19	3	12	1.1	50.5
TURKEY ISTANBUL	10	5	15	1	7	2.0	17.3
ANKARA	5	-4	12	-11	1	0.3	19.3
CYPRUS LARNACA	16	8	20	2	12	0.3	85.9
USSR TALLINN	-1	-5	6	-15	-3	2.2	51.3
LENINGRAD	-3	-6	5	-17	-5	2.8	36.3
KAUNAS	-1	-4	9	-15	-2	2.6	36.7
MINSK	-3	-7	5	-21	-5	1.8	25.6
KAZAN	-12	-17	2	-26	-15	-1.1	22.0
MOSCOW	-6	-9	3	-23	-7	2.1	21.7
SVERDLOVSK	-11	-18	5	-32	-14	0.7	6.6
OMSK	-13	-19	0	-31	-16	2.5	18.6
KUSTANAY	-13	-21	2	-29	-17	0.9	13.5
KRASNOYARSK	-13	-22	0	-38	-17	-1.4	9.4
NOVOSIBIRSK	-13	-19	-1	-29	-16	3.0	16.6
BARNAUL	-12	-17	-1	-29	-15	1.2	20.7
KHABAROVSK	-16	-23	-5	-33	-19	2.0	28.5
VLADIVOSTOK	-6	-12	3	-19	-9	4.4	7.1
KIEV	-3	-7	10	-21	-5	0.5	7.8
LVOV	1	-3	11	-10	-1	3.6	52.2
KIROVOGRAD	-4	-9	9	-24	-6	-1.0	12.7

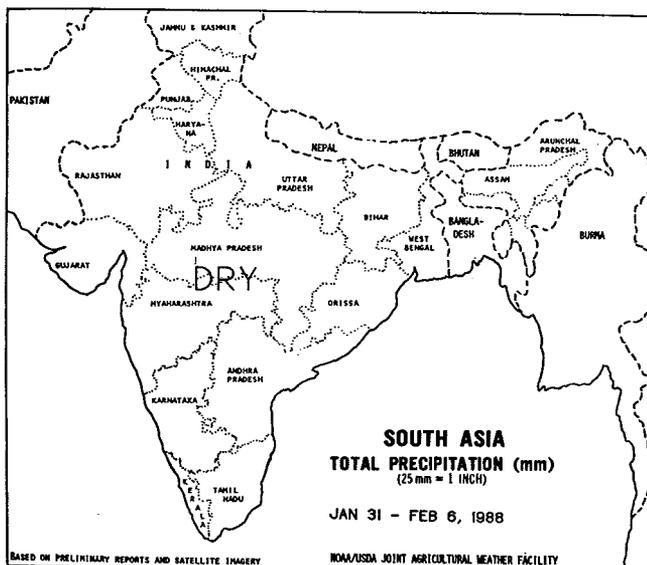
COUNTRY CITY		TEMPERATURE (C)					PRECIPITATION (MM)			COUNTRY CITY		TEMPERATURE (C)					PRECIPITATION (MM)					
		AVG	AVG	HI	LO	DPART	DPART			DPART	DPART	AVG	AVG	HI	LO	DPART	DPART			DPART	DPART	
		MAX	MIN	MAX	MIN	AVG	F/NRM	TOTAL	F/NRM			MAX	MIN	MAX	MIN	AVG	F/NRM	TOTAL	F/NRM			
<b>January 1988</b>																						
USSR	ODESSA	1	-3	11	-15	-1	0.6	76.5	33.0	KENYA	NAIROBI	28	13	32	5	21	1.3	45.9	-3.0			
	YALTA	6	3	13	-2	4	0.5	51.4	-14.6	TANZAN	DAR ES SALAAM	32	24	34	21	28	0.9	168.0	100.5			
	VORONEZH	-6	-11	3	-26	-9	0.5	38.4	1.9	GABON	LIBREVILLE	30	24	31	22	27	0.6	132.6	-154.4			
	SARATOV	-8	-12	10	-23	-10	1.3	19.6	-15.0	TOGO	LOME	32	24	34	18	28	1.1	0.1	-14.1			
	KHARKOV	-5	-9	5	-25	-7	-0.2	28.9	-12.8	B FASO	OUAGADOUGOU	32	17	38	12	24	-0.9	0.1	0.1			
	VOLGOGRAD	-7	-11	5	-29	-9	-1.0	17.2	-18.2	IVRY C	ABIDJAN	31	24	33	19	27	0.7	2.3	-19.6			
	ROSTOV	-4	-8	10	-24	-6	-1.3	45.2	-1.9	MOZAMB	MAPUTO	32	23	39	20	28	1.5	13.4	-159.4			
	ASTRAKHAN	-3	-10	13	-26	-6	-0.1	10.3	-3.8	ZAMBIA	KABWE	23	17	23	17	20	-0.9	34.5	-205.5			
	KRASNODAR	1	-5	14	-26	-2	-2.0	45.0	-21.0	ZIMBAB	HARARE	27	17	29	15	22	1.8	265.4	66.5			
	ORENBURG	-11	-18	2	-29	-14	-0.3	22.4	-2.0	S AFRI	PRETORIA	30	19	35	14	25	2.9	64.7	-83.8			
	TSELINGRAD	-11	-17	-1	-30	-14	3.5	14.9	7.9		KROONSTAD	33	17	37	12	25	2.1	25.2	-67.8			
	KARAGANDA	-9	-16	0	-30	-13	1.6	29.8	13.0		JOHANNESBURG	28	16	31	12	22	2.9	95.1	-32.3			
	TBILISI	5	-1	11	-5	2	0.4	61.3	41.3		BETHAL	26	15	31	10	21	1.1	53.5	-80.6			
	TASHKENT	7	-1	16	-8	3	2.2	21.4	-29.2		DURBAN	28	22	32	18	25	1.4	66.0	-60.3			
	ASHKHBAD	6	-1	14	-10	3	0.5	32.3	7.3		CAPE TOWN	25	16	30	10	20	-0.1	0.9	-10.6			
SYRIA	DAMASCUS	12	3	20	-5	8	0.7	28.1	-16.0	CANADA	TORONTO	0	-9	14	-24	-5	1.9	21.8	-28.6			
ISRAEL	JERUSALEM	12	5	20	1	8	-0.8	134.2	12.3		MONTREAL	-3	-13	11	-29	-8	1.9	26.4	-45.7			
PAKIST	KARACHI	27	12	30	8	20	1.9	1.0	-7.2		WINNIPEG	-14	-23	1	-33	-19	0.3	5.6	-15.8			
INDIA	AMRITSAR	20	5	24	1	13	1.0	11.1	-16.9		REGINA	-9	-22	4	-37	-16	1.9	11.6	-5.1			
	NEW DELHI	23	9	26	6	16	1.5	0.4	-19.3		SASKATOON	-12	-23	1	-36	-18	1.6	12.8	-4.5			
	AHMEDABAD	29	15	31	10	22	2.2	0.1	-2.4		LETHBRIDGE	-1	-13	14	-28	-7	3.4	8.0	-15.6			
	INDORE	29	11	32	8	20	2.0	0.1	-9.0		CALGARY	-3	-14	11	-31	-9	3.0	4.3	-11.9			
	CALCUTTA	27	13	29	10	20	0.2	0.1	-11.3		EDMONTON	-7	-15	5	-29	-11	3.7	5.4	-19.1			
	VERAVAL	30	16	33	13	23	1.9	0.1	-0.5		VANCOUVER	7	0	13	-7	4	1.0	94.1	-59.7			
	BOMBAY	32	19	35	16	25	1.9	0.1	-0.1	MEXICO	GUADALAJARA	25	4	29	-3	14	-1.3	0.1	-11.9			
	POONA	30	12	32	10	21	0.1	0.1	0.1		MEXICO CITY	22	7	27	0	14	2.0	0.1	-5.2			
	BEGAMPET	29	16	33	11	23	1.2	0.1	-2.9		ACAPULCO	33	21	37	17	27	0.4	0.1	-9.8			
	MADRAS	29	21	30	20	25	0.6	0.3	-20.4		BERMUD	ST. GEORGES	20	16	23	11	18	0.4	226.4	101.9		
	MANGALORE	33	20	39	17	27	0.3	0.1	-5.0		BAHAMA	NASSAU	25	19	29	14	22	1.2	34.9	-8.9		
H KONG	HONG KONG	20	16	24	12	18	2.6	1.0	-26.0		CUBA	HAVANA	26	19	31	15	22	0.6	19.1	-42.9		
N KREA	PYONGYANG	-1	-11	5	-22	-6	2.7	5.3	-3.6		JAMAIC	KINGSTON	32	23	35	17	28	1.9	2.5	-15.9		
S KREA	SEOUL	2	-5	10	-12	-2	3.2	4.3	-12.7		P RICO	SAN JUAN	28	22	29	19	25	0.1	95.6	22.3		
JAPAN	SAPPORO	-1	-7	7	-11	-4	0.9	79.5	-34.3		GUADEL	RAIZET	30	21	30	17	25	1.6	34.1	-34.1		
	NAGOYA	10	2	15	-1	6	2.5	28.5	-21.7		MARTINQ	LAMENIN	29	23	30	18	26	2.0	71.1	-43.4		
	TOKYO	12	4	16	1	8	3.2	28.5	-25.5		BARBAD	BRIDGETOWN	28	23	29	19	26	0.2	32.0	-29.1		
	YOKOHAMA	11	4	16	0	8	2.8	38.2	-23.0		TRINID	PORT OF SPAIN	31	21	33	19	26	1.7	23.0	-50.5		
	KYOTO	10	3	14	-2	7	3.4	33.0	-18.2		COLOMB	BOGOTA	21	6	30	0	13	0.7	14.0	-19.8		
	OSAKA	11	4	15	0	7	2.4	36.0	-15.4		VENEZU	CARACAS	30	22	33	20	26	1.3	0.1	-43.0		
THAILN	PHETCHABUN	33	18	37	14	25	2.4	0.1	-9.0		F GUIA	CAYENNE	29	23	31	22	27	1.3	125.9	-297.2		
	BANGKOK	33	22	34	18	28	1.4	0.1	-10.2		BRAZIL	FORTALEZA	31	25	33	22	28	0.4	250.6	112.6		
MALAYS	KUALA LUMPUR	32	24	35	23	28	1.6	254.7	86.8		RECIFE	31	24	33	21	27	0.5	65.1	-2.3			
VIETNM	HANOI	21	16	29	3	18	1.6	94.6	76.8		BELO HORIZONTE	30	20	35	18	25	2.4	240.8	-43.7			
CHINA	HARBIN	-10	-20	-1	-28	-15	5.3	4.2	0.5		CAMPO GRANDE	31	22	35	20	26	2.1	163.6	-65.5			
	HAMI	-3	-14	6	-17	-8	3.2	0.1	-1.8		FRANCA	29	19	32	16	24	2.1	176.6	-73.3			
	LANCHOW	2	-9	9	-14	-4	3.1	0.1	-1.2		RIO DE JANEIRO	33	25	38	20	29	2.8	52.8	-94.1			
	BEIJING	2	-7	14	-13	-3	2.1	1.0	-2.0		LONDRINA	31	21	35	16	26	2.1	216.4	-17.5			
	TIENHSIN	2	-7	7	-12	-2	1.3	4.6	1.4		SANTA MARIA	30	20	38	12	25	0.4	153.5	12.5			
	LHASA	9	-9	13	-19	0	1.8	0.1	0.1		PORTO ALEGRE	31	22	37	19	26	1.5	12.8	-106.3			
	KUNMING	17	3	19	0	10	2.1	4.3	-7.4		PERU	LIMA	27	20	28	19	23	1.4	0.1	0.1		
	CHENGCHOW	7	-4	16	-8	2	1.1	0.1	-8.6		BOLIVI	LA PAZ	14	4	18	3	9	-0.3	136.5	-6.7		
	YEHCHANG	8	3	13	-1	5	0.6	27.4	7.3		CHILE	SANTIAGO	29	11	32	1	20	-0.9	0.1	-0.5		
	HANKO	7	1	13	-4	4	1.2	18.3	-16.7		ARGENT	IGUAZU	32	22	36	15	27	***	187.0	***		
	CHIKKIANG	8	3	16	-3	5	0.6	42.1	4.8		FORMOSA	35	23	39	16	29	1.3	98.3	-25.7			
	SHANGHAI	9	3	16	-4	6	2.1	26.6	-17.4		CERES	31	20	37	11	25	-0.7	237.4	111.1			
	NANCHANG	7	3	15	-2	5	0.4	50.2	-8.1		CORDOBA	29	17	34	7	23	-0.6	182.9	65.8			
	TALPEI	20	16	26	11	18	2.6	120.7	30.8		RIO CUARTO	28	17	36	10	23	-0.2	80.4	-33.7			
	CANTON	21	12	27	3	16	3.3	26.3	-10.8		ROSARIO	30	17	36	7	24	-0.2	110.0	-18.1			
	NANNING	17	12	25	7	15	1.9	37.7	-0.3		BUENOS AIRES	30	17	36	7	24	0.4	38.9	-72.3			
CNRY I	LAS PALMAS	21	15	28	12	18	0.9	31.2	11.6		SANTA ROSA	31	16	38	3	23	-0.4	26.3	-40.9			
MOROCC	CASABLANCA	17	10	23	6	13	0.6	127.4	53.6		TRES ARROYOS	29	14	37	7	21	0.0	46.0	-5.9			
	MARRAKECH	16	7	21	5	12	0.2	61.0	32.3		MIDW I	MIDWAY ISLAND	22	18	27	13	20	1.5	63.8	-120.2		
ALGERI	ALGER	18	8	23	4	13	2.2	41.5	-56.2		N CALD	NOUMEA	28	23	32	20	26	0.2	270.8	156.9		
	BATNA	12	4	18	-4	8	2.8	3.8	-36.1		FILJI	NAUSORI	30	24	32	22	27	0.9	346.9	10.9		
TUNISI	TUNIS	18	8	24	4	13	2.1	48.6	-14.8		SAMOA	PAGO PAGO	31	26	32	22	28	1.2	211.9	-110.0		
NIGER																						



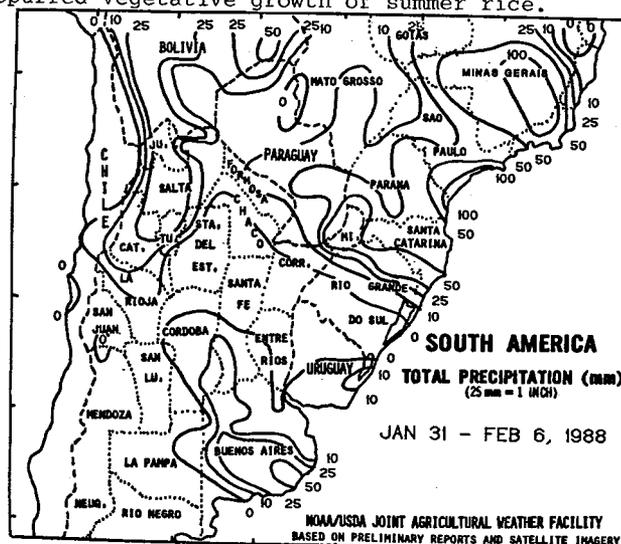
**SOUTHEAST ASIA...**Variable rainfall (10-59mm) covered the southern half of the Malay Peninsula, as light rain (less than 25mm) returned to portions of western Malaysia. Moderate to heavy showers (50-227mm) continued in eastern Malaysia. Generally moderate to heavy showers (50-100mm or more) increased irrigation water supplies throughout Indonesia but may have caused local flooding in southern areas, including rice regions of northern Java. In the Philippines, mostly moderate rain (10-34mm) continued over the eastern half, reaching crop areas of southern Mindanao. Dry weather covered grains in northern Luzon.



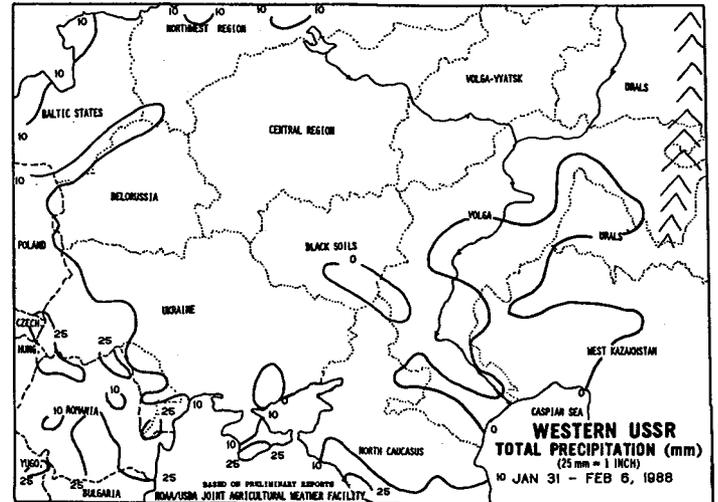
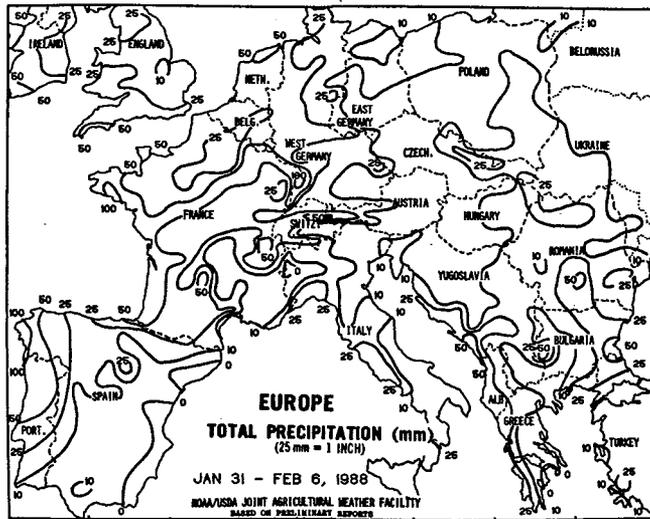
**AUSTRALIA...**Scattered rain (up to 93mm) continued along Queensland's northeastern sugarcane growing areas, although area coverage was still not complete. Many soils in the region are becoming unfavorably dry, stressing some of the sugarcane crop, which is vegetative. In the summer crop areas, mostly light rain favored vegetative to reproductive crops. Soil moisture levels and crop conditions remain favorable in most of the region except for scattered areas in southeastern Queensland, where below-normal rainfall has stressed some crops. In the south, widespread light to moderate rain covered most wheat areas, benefiting soil moisture levels and seasonal soil profile recharge.



**SOUTH ASIA...**Dry weather covered the major crop areas, including northernmost winter wheat areas of Pakistan and India which had received sporadic, light rain since mid-January. Moisture for the normal development of heading to filling wheat continued limited over much of India. The seasonably dry, warm weather over southern India benefited mature cotton and spurred vegetative growth of summer rice.

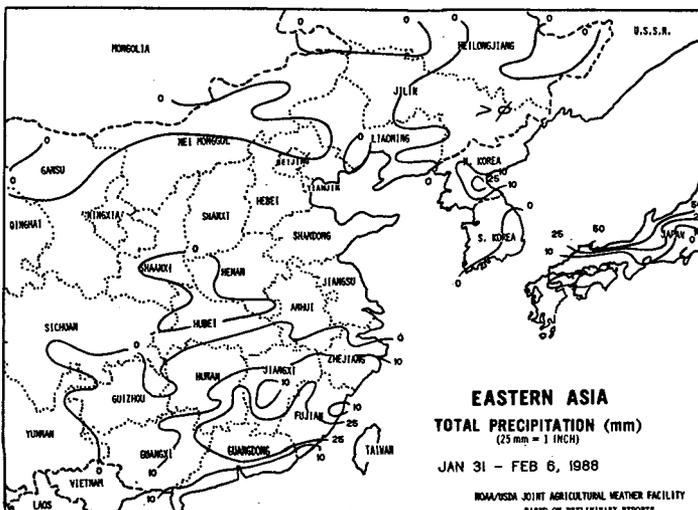


**SOUTH AMERICA...**In Brazil, beneficial, widespread rain (10-50mm) fell over the primary soybean areas. Heavier rain (50-100mm or more) fell in extreme northern Rio Grande do Sul, extreme southwestern Parana and southern Minas Gerais. The moisture improved conditions for flowering to pod-setting soybeans, especially in northern crop areas where rainfall has trended below average during the past several weeks. Dry pockets were restricted to northern Mato Grosso do Sul, extreme western Sao Paulo and southern Rio Grande do Sul. However, most of these areas received some beneficial rain during the previous week. In Argentina, light to moderate showers (4-20mm) covered the primary corn and soybean areas while heavier rain (20-50mm) fell in southern Buenos Aires. Mostly light showers (less than 10mm) covered northern cotton. In general, moisture is adequate for filling grains and flowering to pod-setting soybeans. Drier areas are confined mostly to La Pampa and isolated areas of Buenos Aires.

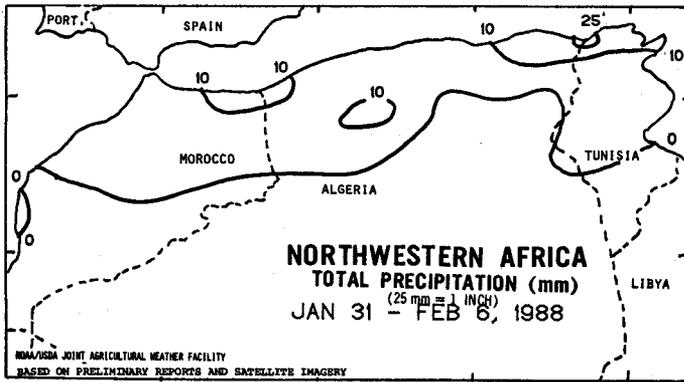


**EUROPE...**Wet and warmer-than-normal weather continued over much of Europe, with precipitation occurring over all of the continent except for portions of the Mediterranean Coast. Moderate to heavy rain (greater than 25mm) soaked already wet fields in the Iberian Peninsula, France, Great Britain, the Low Countries, and West Germany. Combined with above-normal temperatures since mid-December, the persistent wetness has left winter grains in northwestern Europe insufficiently hardened for potential cold weather and more susceptible to disease. In eastern Europe, temperatures were colder, with light to moderate rain and snow over nearly all of the region. Snow cover over growing areas diminished late in the week due to a warming trend and was confined to the extreme east and higher elevations. The light to moderate precipitation helped to relieve persistent dryness in the southeast, although amounts in Bulgaria, southern Hungary, and northern Yugoslavia were very light, and much more precipitation is needed to bring soil moisture up to normal levels.

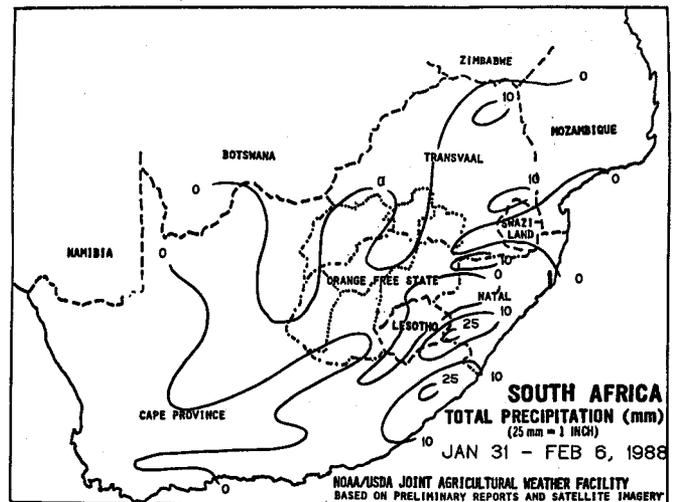
**WESTERN U.S.S.R...**The arctic high pressure system which had kept the region bitterly cold since January 22 weakened and moved eastward. As a result, mild maritime air from Europe moved swiftly over the region, causing temperatures to rise above normal. By week's end, maximum temperatures in the Baltic States, Belorussia, the western and southern Ukraine, and the central North Caucasus ranged from 3 to 6 degrees C, melting snow cover. Minimum temperatures in these areas ranged from -2 to 1 degrees C. Further east, minimum temperatures in the Central Region, Black Soils, the eastern Ukraine, and the northern North Caucasus ranged from -3 to -6 degrees C, and maximum temperatures ranged from -4 to 2 degrees C. In addition, light precipitation, generally less than 10mm, accompanied the warmer weather.



**EASTERN ASIA...**Widespread rain covered southeastern China, with some heavy amounts (greater than 20mm) in Hunan, Guangdong, and Fujian. The rain favored pre-season soil moisture levels for early double-crop rice, which is usually planted beginning in late February. A slow-moving storm in the sea of Japan brought heavy rain and snow (up to 99mm) to western Japan, where heavy precipitation during the past several weeks has saturated soils. In northern areas, high pressure kept seasonably dry weather over much of the region except for scattered areas of Manchuria and North Korea, where mostly light snow fell. Cold temperatures covered wheat growing areas early in the period, followed by a moderating trend and normal temperatures by week's end.

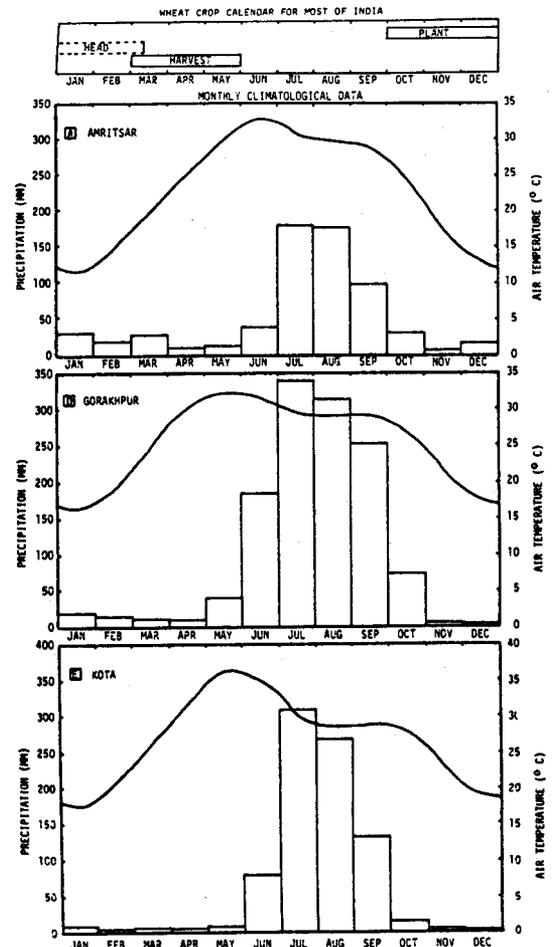
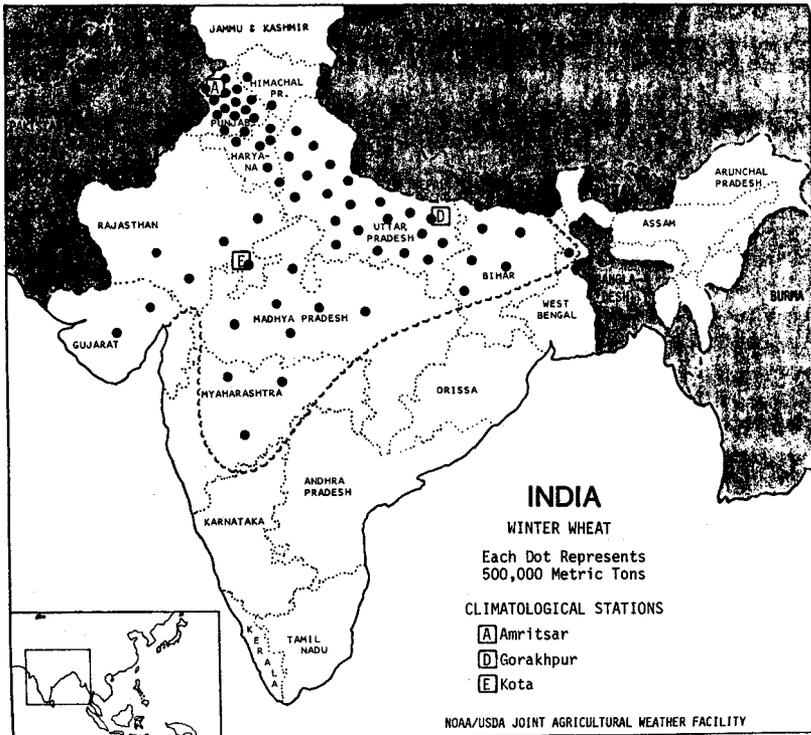


**NORTHWESTERN AFRICA...**Chronic dryness continued over winter grain areas in central and eastern Algeria and Tunisia. Southernmost winter grain areas in eastern Algeria and Tunisia have not received significant precipitation since the beginning of the growing season, resulting in significant planting delays. The drought conditions in these areas have also limited the growth of natural vegetation needed to maintain livestock. Further west, the second consecutive week of dry weather covered winter grains in Morocco and western Algeria. Although soil moisture was able to meet the increasing moisture demands of crops in the vegetative stage, moisture supplies are limited and rain is needed to prevent crop stress.



**SOUTH AFRICA...**Mostly dry weather covered the primary corn areas as temperatures averaged 1-4 degrees C above normal, increasing evaporation rates and reducing soil moisture levels. By week's end, maximum temperatures reached 36 degrees C in the central Maize Triangle, stressing reproductive to filling corn. Temperatures reached 40 degrees C in minor crop areas of the southwestern Triangle and northern Transvaal, where conditions continued unfavorable for reproductive to filling crops. Light to moderate rain (10-25mm) and milder temperatures benefited crops in Natal and eastern Cape Province.

**Indian Wheat Areas & Climate Profiles**



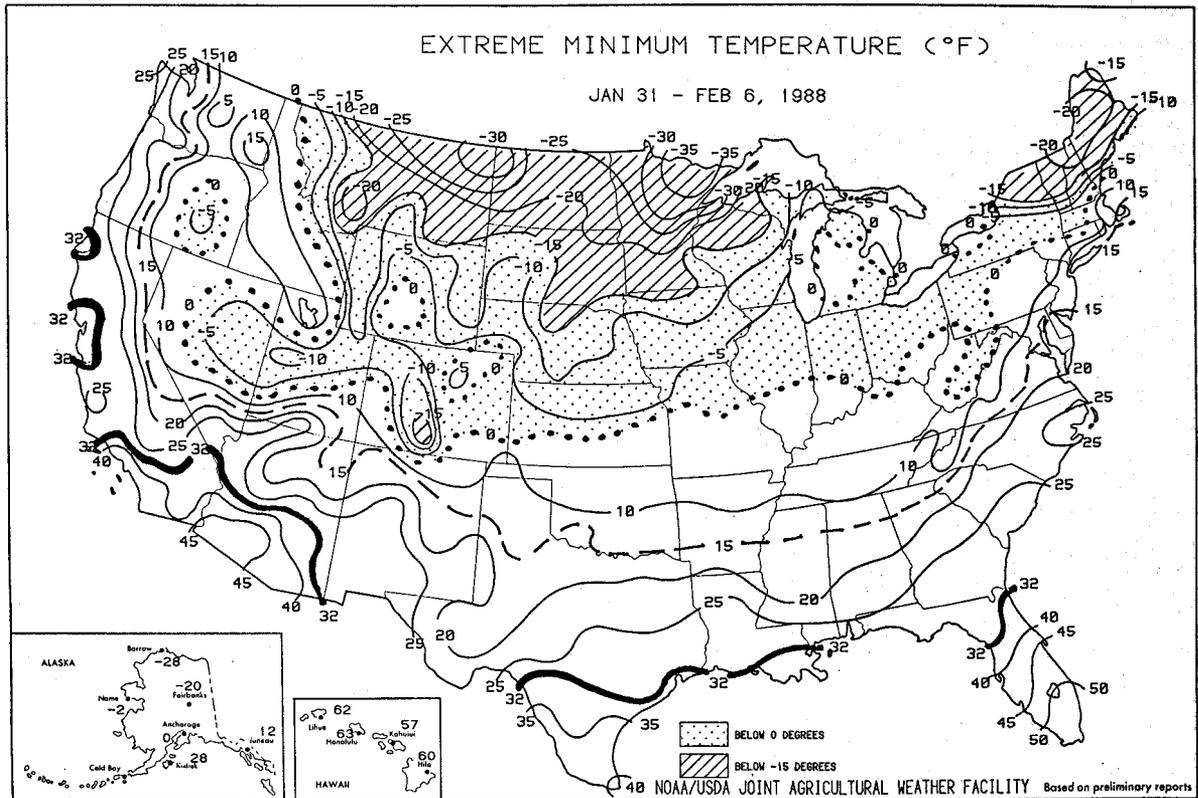
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