

WEEKLY WEATHER AND CROP BULLETIN

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

U.S. DEPARTMENT OF AGRICULTURE
Economics and Statistics Service
World Food and Agricultural Outlook and Situation Board

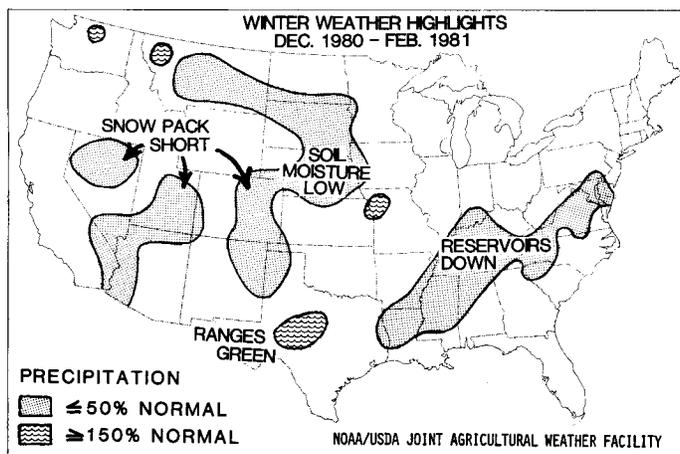
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Mar. 24, 1981

National Weather Summary

March 16-22, 1981



HIGHLIGHTS: Drought index values continued to fall in the Northeast as only light precipitation fell. Most reservoir levels are still adequate but water demand is depleting them. Drought intensified slightly in the central Plains but wheat growth is being maintained by reserve soil moisture which is short.

Moderate to heavy rains fell in southeastern United States, accompanied by some severe thunderstorms. Hail, up to the size of golf balls, fell in some areas. Moderate rain on the west coast was helpful to pastures. Snow accumulated in most mountain areas and helped build up depleted snow-pack. Average temperatures for the week were cooler than normal in the southern Plains and in most of the East. Averages were as much as 12 to 14° colder than normal in the central Appalachians. The West was generally warmer than normal but some mountain areas were near normal.

MONDAY...A series of low pressure systems moving northward along the east coast caused light rain or snow. Some thunderstorms were reported in the Carolinas. Widely scattered rain or snow showers fell over much of the Northwest and some thunderstorms produced small hail in the Salt Lake Valley in Utah. Temperatures reached record-highs in the northern Plains.

TUESDAY...Gusty winds and light snow showers continued in the East from Virginia through New England while deepening low pressure swept high winds laden with dust across the southwestern Plains. Thunderstorms developed over eastern Kansas and Oklahoma. Snow fell over much of Wyoming and Montana. Record-low temperatures occurred in the Southeast.

WEDNESDAY...The low pressure system moved eastward and picked up moisture from the Gulf of Mexico. Showers and thunderstorms caused some heavy rain

from Mississippi through Georgia. Temperatures behind the storm dropped sharply into the 30's -- 40° cooler than the day before. Rainshowers moved into the Pacific coast from Oregon to central California.

THURSDAY...A storm system moving onto the West coast spread rain and thundershowers from Oregon to southern California and heavy snow in the mountain region and caused snow showers from Arizona to Montana. The storm system in the East moved northward, leaving showers in its wake. Cold air behind the storm spread into the Southeast.

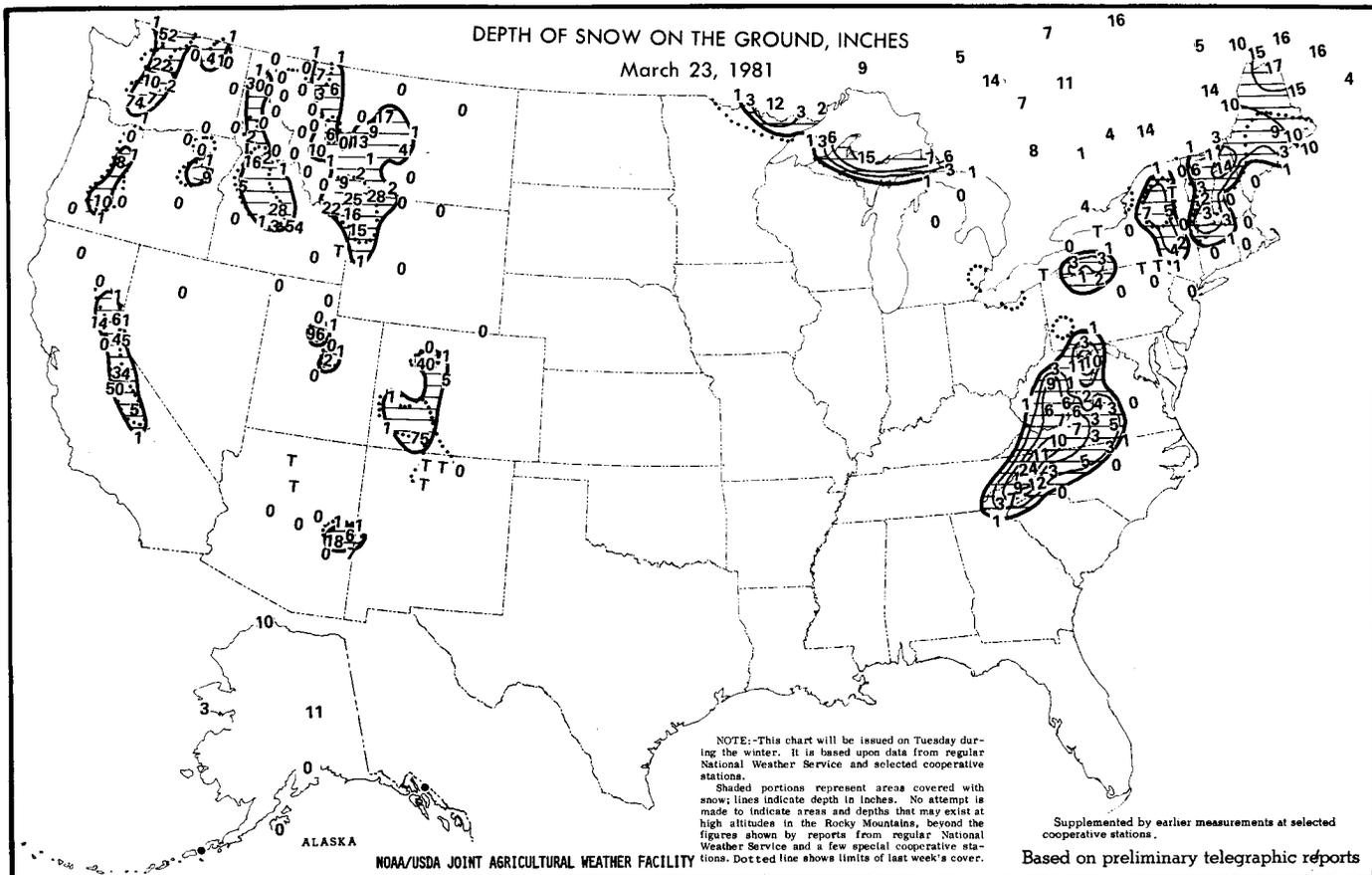
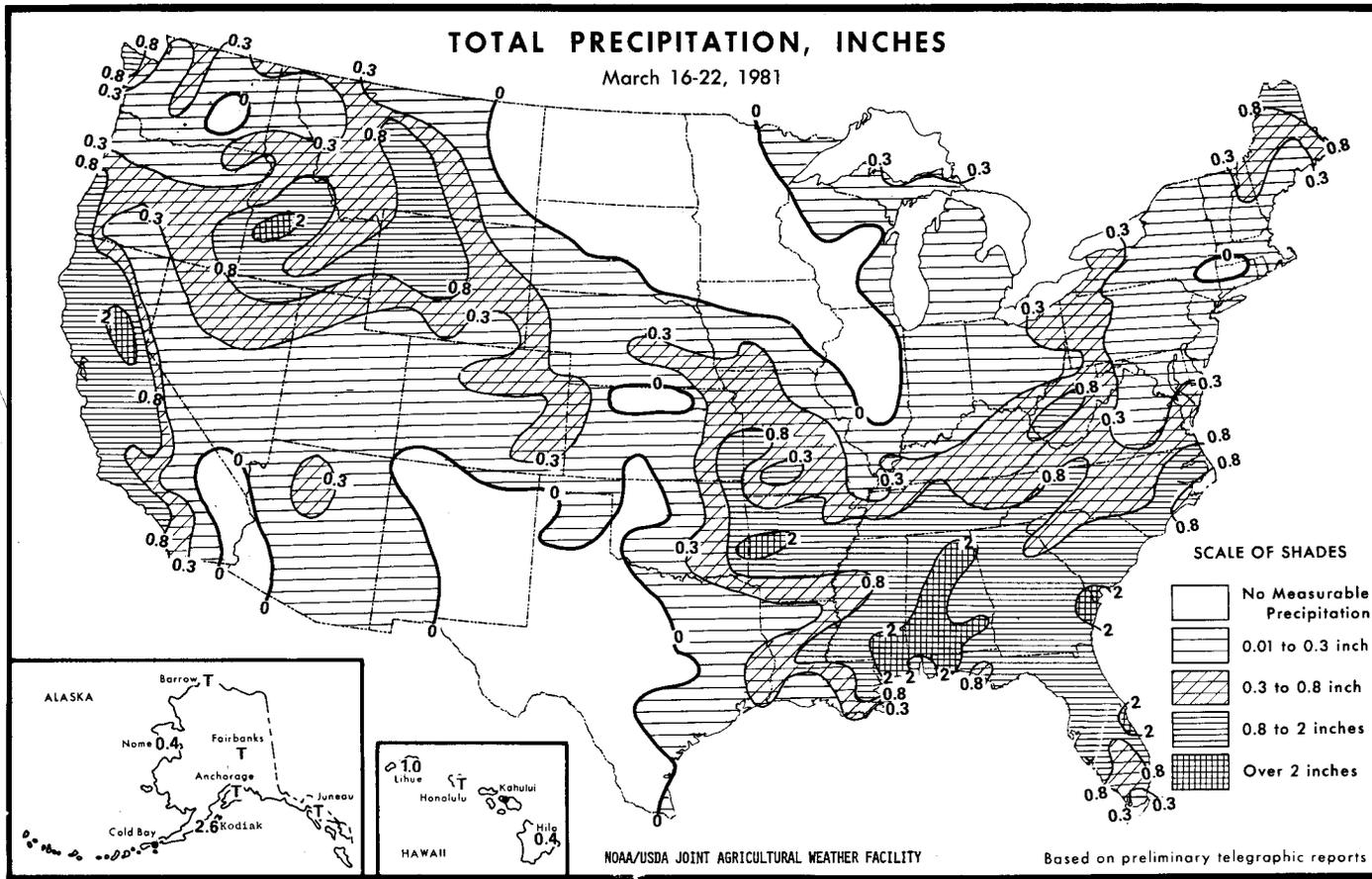
FRIDAY...On this first day of spring, a developing winter storm spread snow from the mountains of Utah and northern Arizona into Wyoming and Colorado. Snow also fell in the Sierras and the mountains of northern California. Freezing temperatures reached into the Southeast in the early morning but strong southerly winds warmed Oklahoma to the 60's while the Texas coast had readings in the 70's.

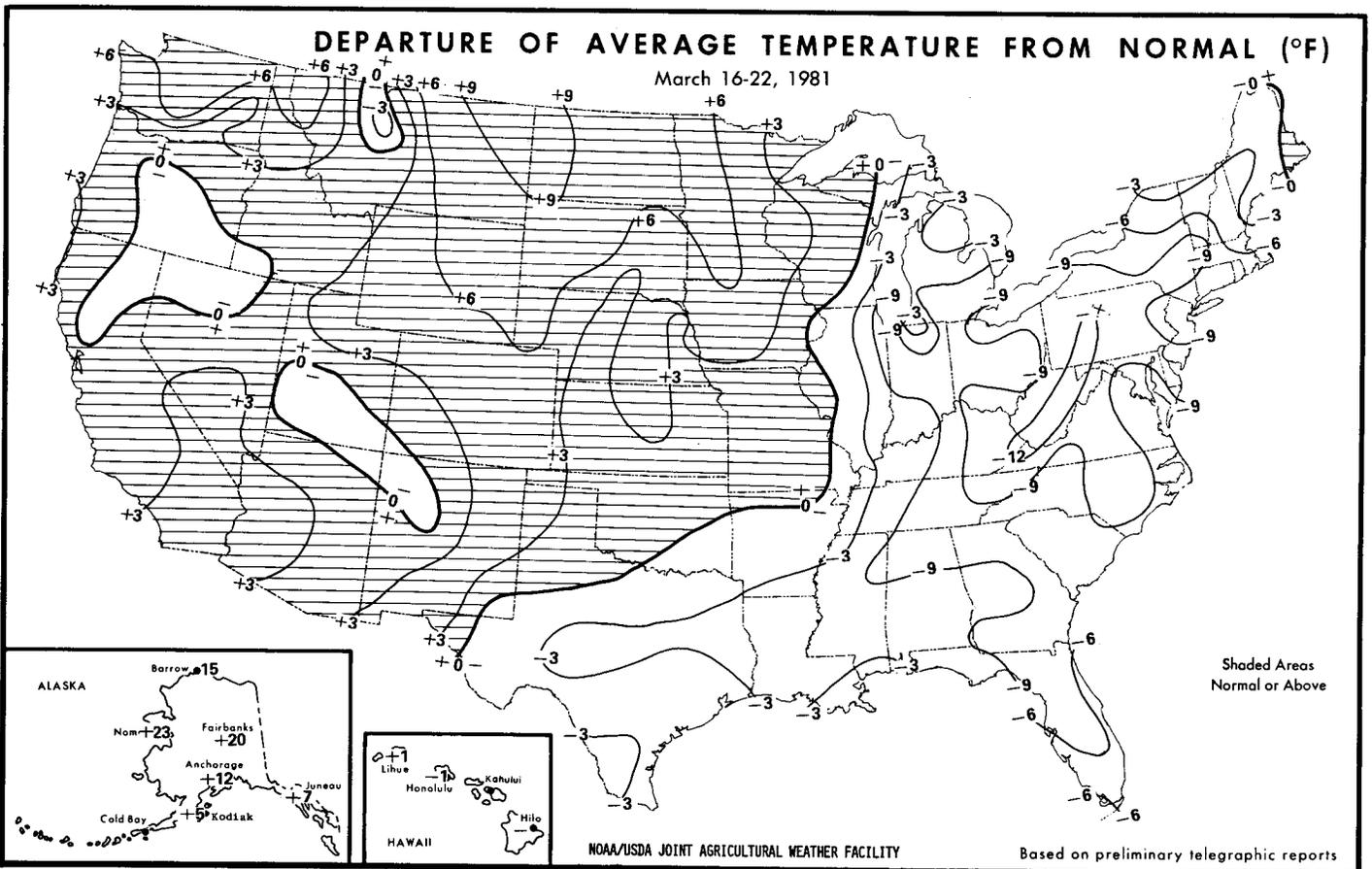
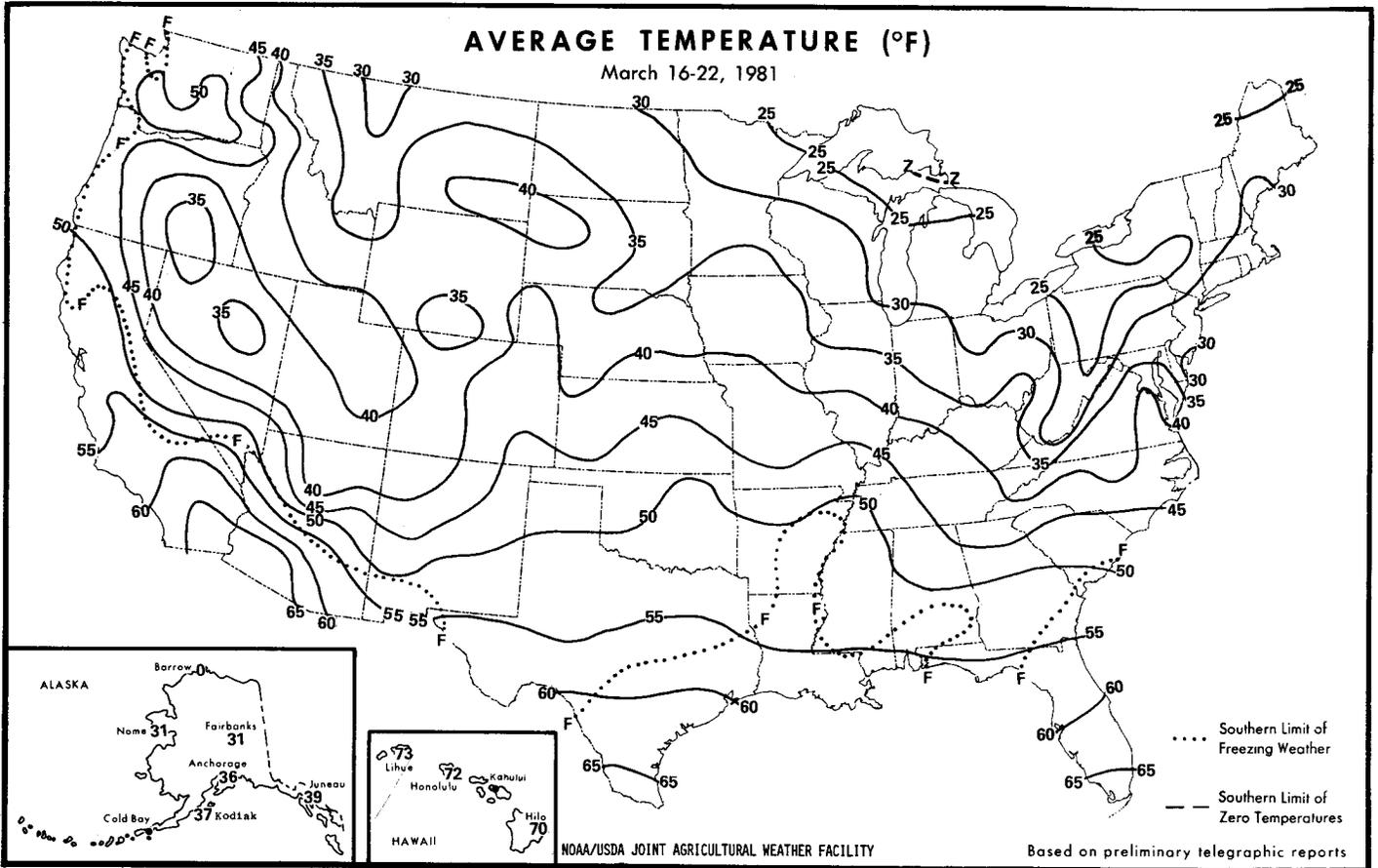
SATURDAY...Snow was still falling in Wyoming, Colorado, and Nebraska. Strong northerly winds blew snow in the central Plains while rain fell from Iowa and Missouri to the gulf coast. Thunderstorms were reported over the lower Mississippi Valley. Showers with snow at the higher elevations continued over the West from central California northward.

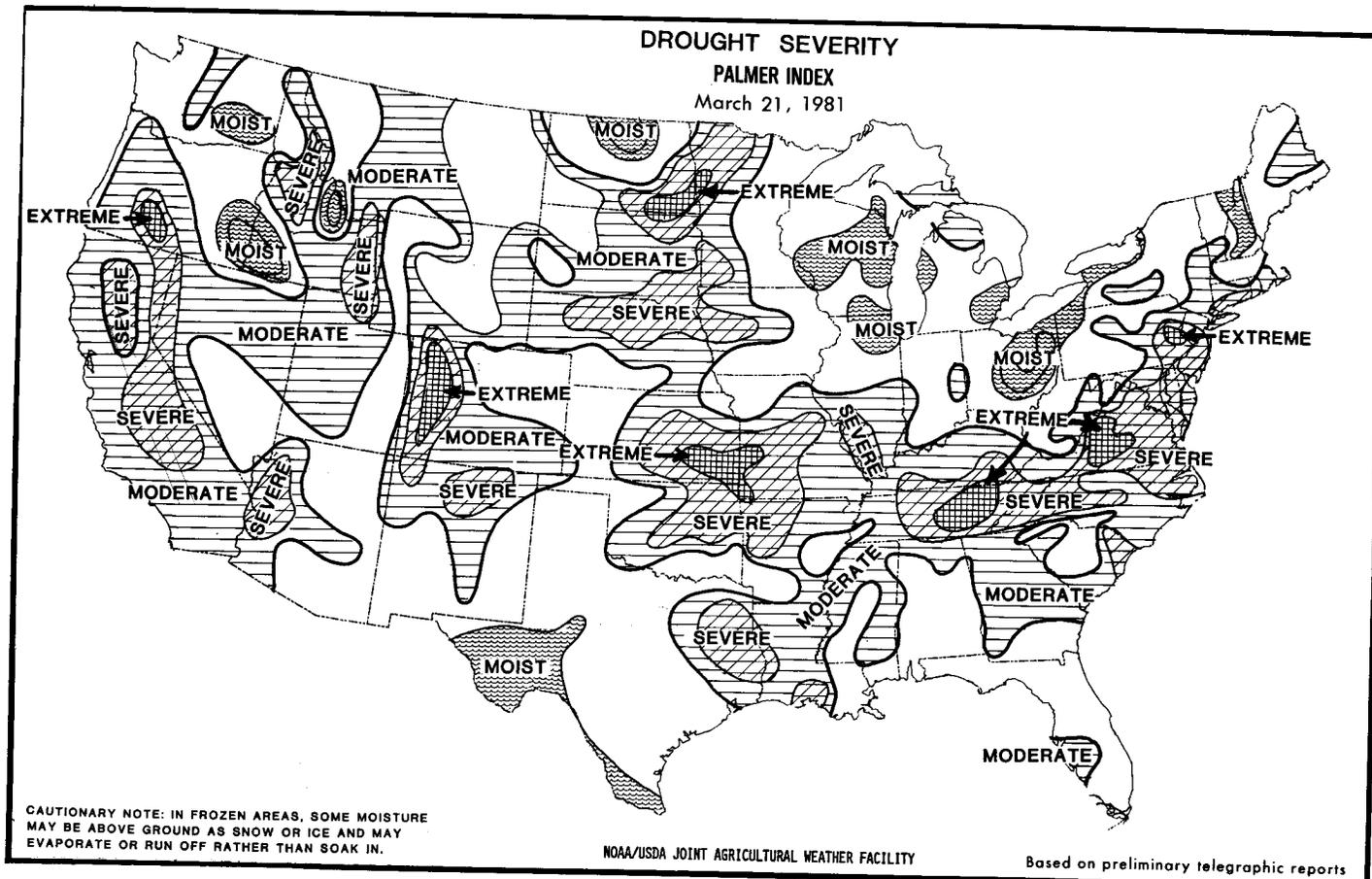
SUNDAY...Thunderstorms rumbled from Louisiana to Georgia. Damaging wind and hail, up to the size of golf balls, swept the gulf coast from Mississippi to the Florida Panhandle. Many of the drought-stricken areas in the South received heavy rain. Snow fell in the southern Appalachians. Rainshowers were scattered over the west coast with snow in the mountains.

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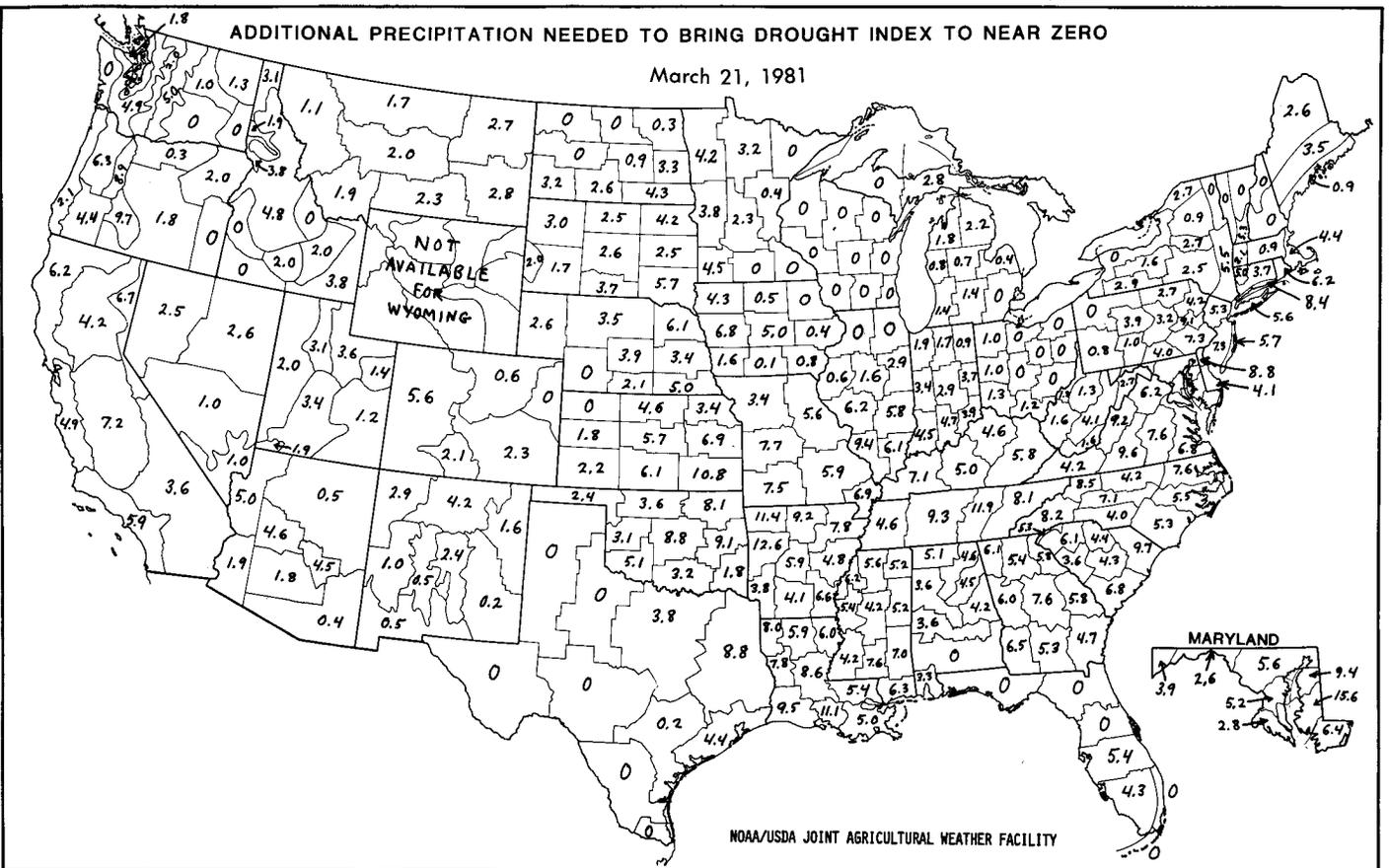
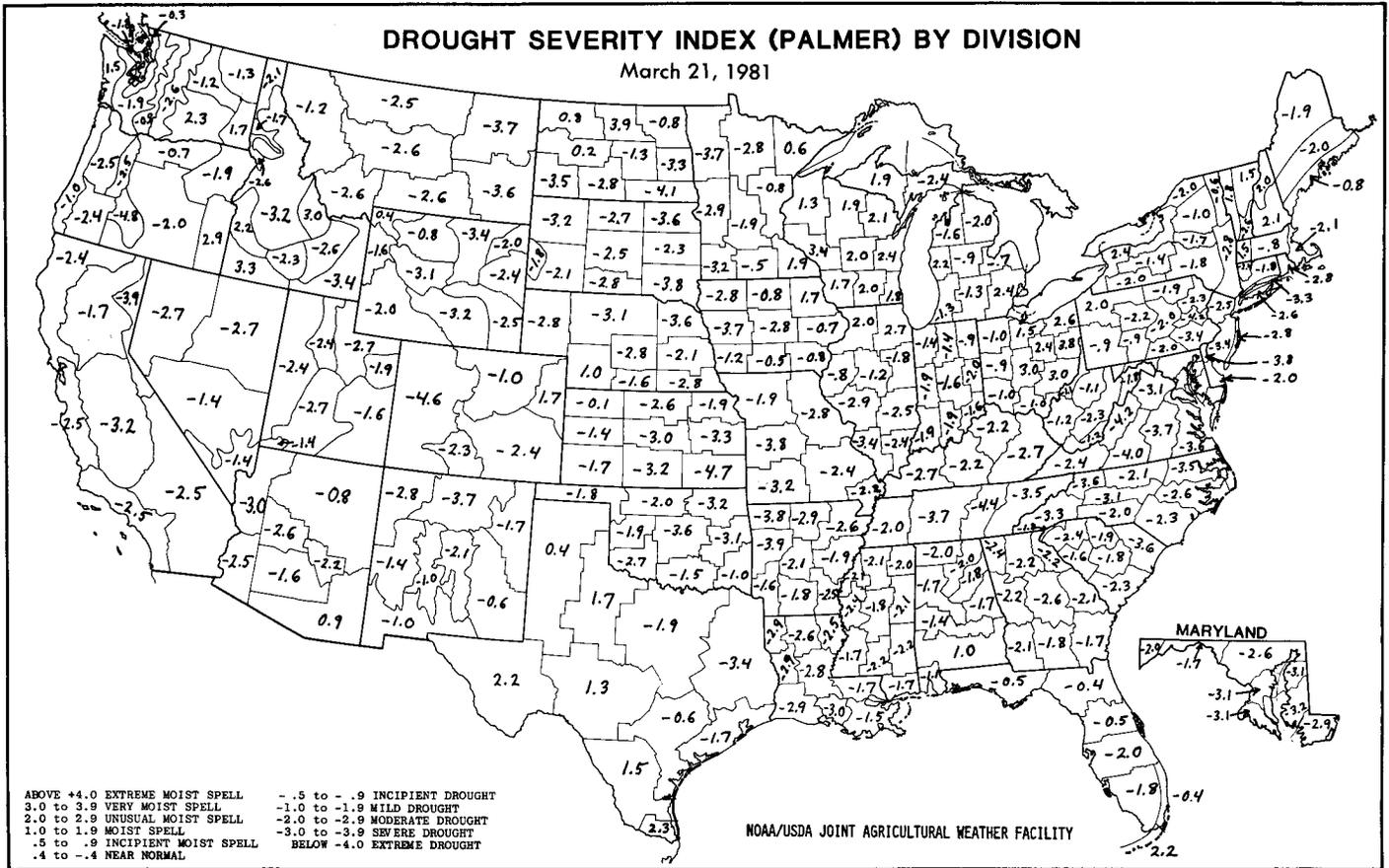
DROUGHT SEVERITY INDEX (PALMER)

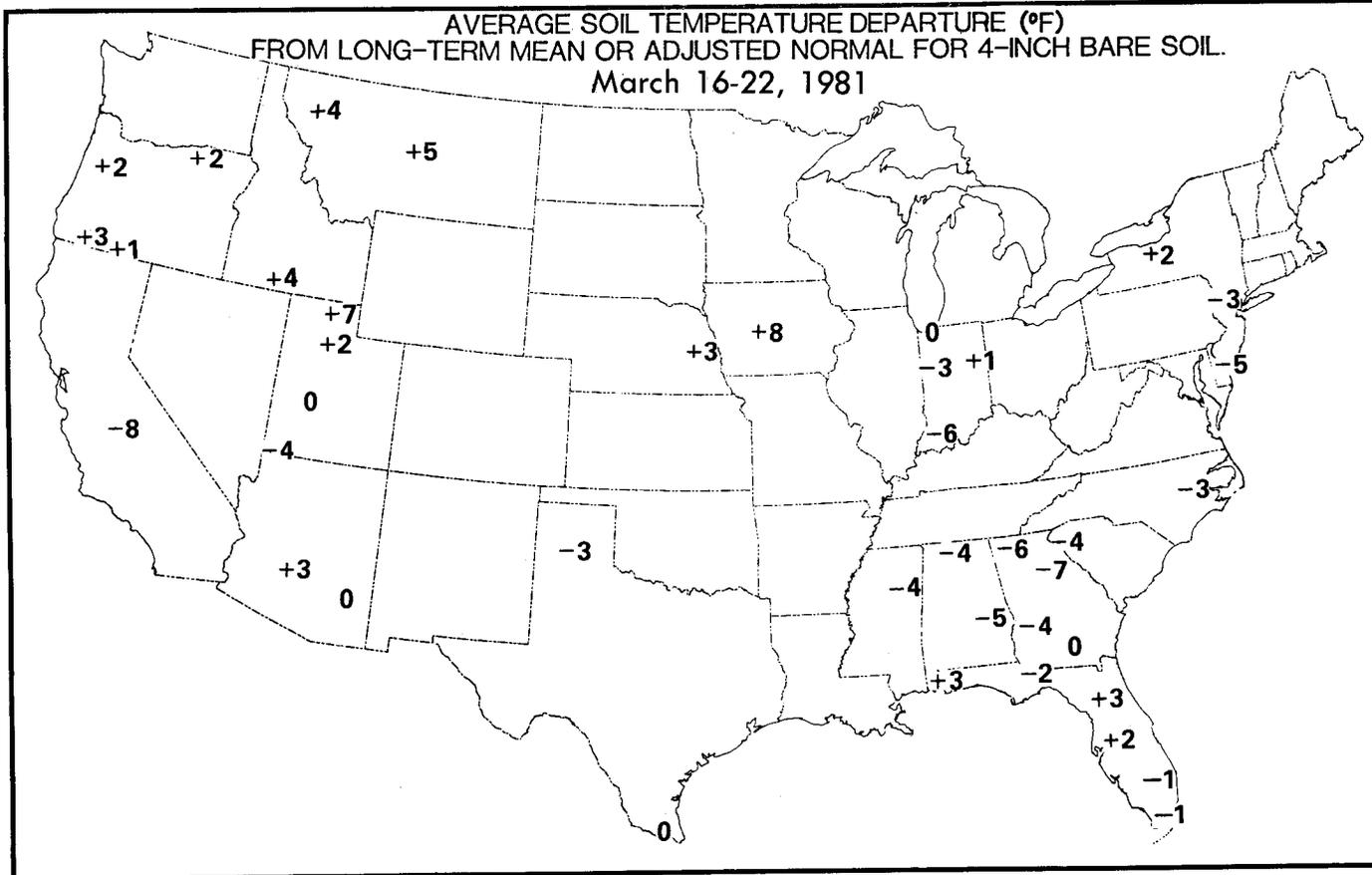
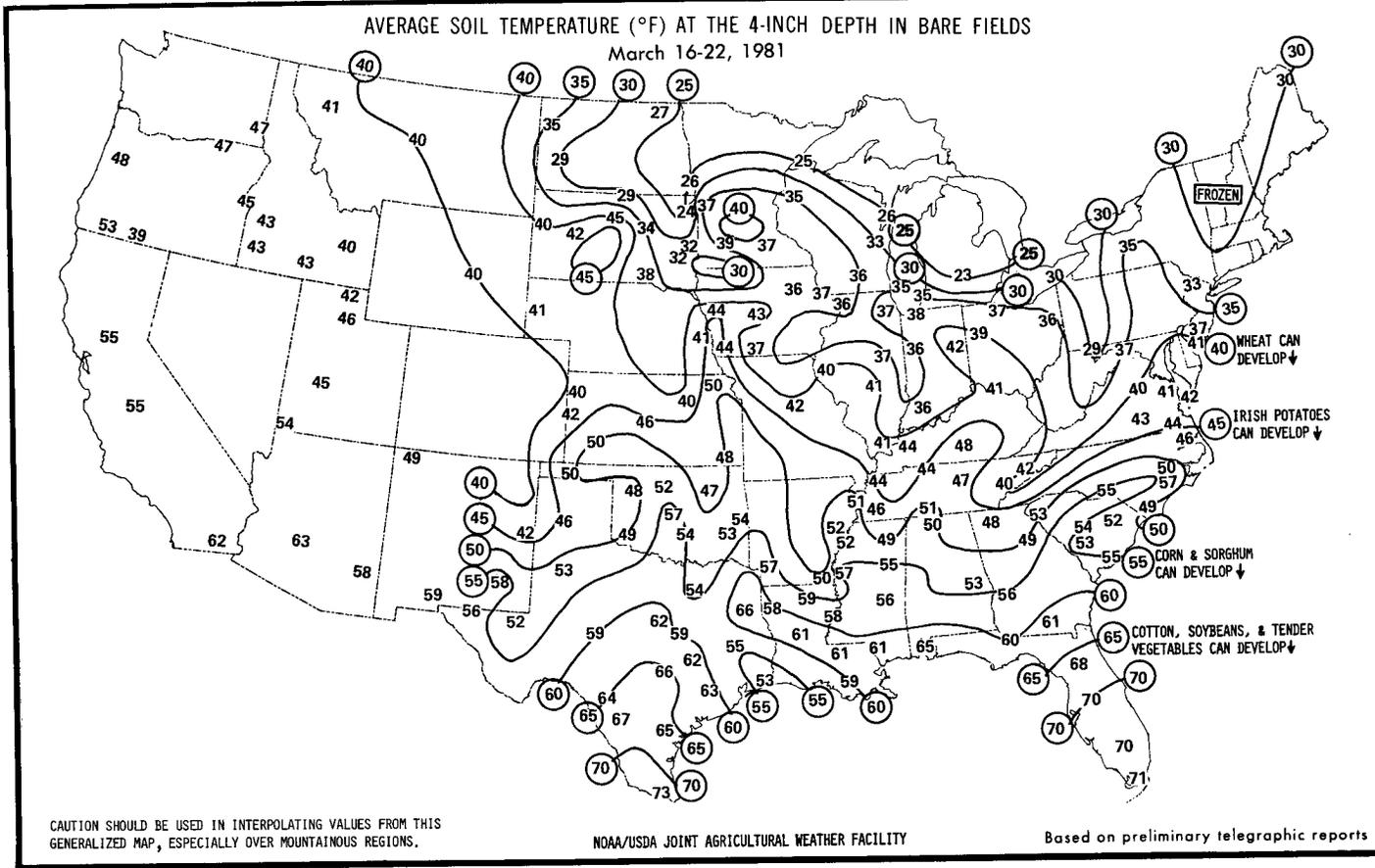
The Drought Severity Index is an indicator of meteorological drought, which may be defined as a prolonged and abnormal moisture deficiency. The general concept is one of supply and demand. Supply is represented by precipitation and stored soil moisture. Demand is the combination of potential evapotranspiration, the amount needed to recharge the soil moisture, and the runoff needed to keep the rivers, lakes, and reservoirs at a normal level. The results of this water balance accounting produce a positive or negative anomaly which is then weighted by a climate factor. The final product is an index that expresses the abnormality for that particular place for the period of time being computed. This manipulation allows the index to have a reasonably comparable local significance in space and time, that is, a certain index value obtained for a division in New York would have the same local significance as a like value in the more arid areas of western Kansas. This monthly increment is added to a portion of the previous month's index to include the duration of the anomaly in the final index.

The index was designed as a climatological indicator of the scope and severity of past droughts. Using the index on a real-time basis presents difficulties. A day or so of normal or better rainfall is certainly welcome in an area that has experienced a long drought, but one cannot know whether it indicates the end of the drought or just a brief respite. In order to make the program have some real-time value, a system of com-

puting a "probability" that a weather spell has ended was devised. This is not entirely satisfactory, but does allow one to assign a definite index value at times when there may be some doubt as to whether it should be positive (wet) or negative (dry).

Another aspect of using the Drought Index is that one must remember that the demand part of the computations includes three parameters-- potential evapotranspiration, recharge of soil moisture, and runoff, any one of which may produce a negative index. For instance if only enough rain fell to satisfy most of the expected evapotranspiration, but not enough to supply the expected recharge and runoff, then a negative index would result. If such a situation continued then one might find that agriculture was progressing at a near normal pace but the index would be indicating a worsening drought. In this situation the drought would cause shallow wells and springs to go dry and the levels of rivers, lakes and reservoirs to fall below normal and, if this odd situation continued long enough, would cause serious economic stress to the livestock industry and eventually to other industries and cities. Then, if rainfall fell below the minimum needed for agriculture, crops would suffer drastic and rapid decline because there would be no reserve water in the soil. Such a situation, to some extent, occurred during the Northeast drought in the 1960's when New York City almost ran out of water.





Weather Data for the Week Ending Mar. 22, 1981

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 Mar. 2	PCT. NORMAL SINCE Mar. 2	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	62	34	72	30	48	-6	2.1	.7	1.3	3.2	74	9.6	65	78	33	0	3	3	1
MOBILE	71	44	80	37	57	-2	1.4	.3	1.3	1.5	31	11.5	79	77	32	0	0	2	1
MONTGOMERY	66	40	72	31	53	-4	1.3	.1	1.0	3.4	83	11.6	92	95	41	0	1	3	1
AK ANCHORAGE	45	30	47	25	36	12	T	T	T	T	0	2.1	100	72	51	0	5	1	0
BARROW	4	-4	17	-12	0	15	T	T	T	T	0	.4	50	90	80	0	7	1	0
FAIRBANKS	41	20	50	7	31	20	T	T	T	T	0	1.0	83	50	36	0	7	0	0
JUNEAU	49	29	59	24	39	7	T	T	1.6	67	10.9	111	89	53	0	5	1	0	0
KODIAK	43	32	44	33	37	5	2.6	1.7	1.0	7.0	259	25.7	202	93	80	0	0	6	3
NOME	36	27	40	20	31	23	.4	.3	.2	.7	117	3.6	157	69	62	0	6	1	0
AZ FLAGSTAFF	52	25	57	16	38	4	.7	.3	.6	3.2	267	5.7	119	--	29	0	7	2	1
PHOENIX	78	52	81	49	65	5	.1	.1	.1	1.0	167	2.9	171	49	18	0	0	1	0
TUCSON	72	45	81	41	59	1	.1	.1	.1	2.0	400	4.1	216	58	22	0	0	1	0
WINSLOW	63	30	71	25	47	1	T	T	T	T	0	.9	75	--	--	0	4	1	0
YUMA	82	53	86	51	68	4	0	.1	0	.2	67	1.0	83	43	16	0	0	0	0
AR FORT SMITH	62	37	76	30	50	-2	1.6	.7	.6	2.6	104	6.9	85	75	36	0	2	4	2
LITTLE ROCK	61	41	76	34	51	-2	1.6	.4	1.3	2.6	79	8.8	73	66	41	0	0	3	1
CA BAKERSFIELD	67	51	75	43	59	2	.4	.3	.3	1.2	240	3.1	119	--	44	0	0	4	0
EUREKA	58	44	62	37	51	3	.8	.3	.4	2.5	74	13.7	85	90	63	0	0	4	0
FRESNO	64	48	68	43	56	2	1.2	.9	.6	1.9	158	6.2	141	86	56	0	0	4	1
LOS ANGELES	64	53	69	51	59	2	.8	.4	.8	2.5	208	6.2	98	83	64	0	0	2	1
RED BLUFF	61	45	66	39	53	0	1.4	.8	.6	2.9	153	10.3	105	--	52	0	0	5	1
SAN DIEGO	68	56	71	53	62	3	.6	.3	.6	2.1	191	7.6	169	89	62	0	0	2	1
SAN FRANCISCO	60	47	63	41	54	0	1.4	.8	.7	3.1	172	11.4	121	77	59	0	0	4	1
STOCKTON	65	43	69	38	54	1	1.1	.7	.7	2.7	208	7.8	120	--	56	0	0	4	1
CO DENVER	51	31	64	26	41	4	.7	.5	.3	1.7	243	2.4	133	71	41	0	4	4	0
GRAND JUNCTION	54	34	59	29	44	2	.1	.1	.1	.6	120	.9	56	68	28	0	3	2	0
PUEBLO	58	31	70	25	45	4	.1	0	.1	.5	167	1.1	92	78	37	0	4	1	0
CT BRIDGEPORT	40	23	46	14	32	-7	.1	.8	.1	.3	12	5.4	68	78	57	0	5	2	0
HARTFORD	42	20	49	14	31	-5	T	.9	T	1	4	7.7	83	63	31	0	7	0	0
DC WASHINGTON	50	29	62	23	40	-6	.2	.6	.2	.6	26	3.8	51	67	38	0	7	2	0
FL APALACHICOLA	66	47	73	35	57	-4	1.6	.5	1.6	1.9	58	6.5	62	73	57	0	0	1	1
DAYTONA BEACH	70	48	77	34	59	-6	1.5	.7	1.4	1.9	79	7.7	103	70	30	0	0	3	1
FORT MYERS	74	56	80	44	65	-4	1.2	.5	.5	1.4	67	3.8	64	75	54	0	0	4	1
JACKSONVILLE	69	43	78	32	56	-6	1.3	.5	1.0	4.3	172	9.9	110	76	36	0	1	3	1
KEY WEST	74	63	78	56	69	-6	.3	0	.3	.8	80	3.5	74	82	59	0	0	1	0
MIAMI	78	57	85	50	68	-4	.4	.1	.3	.8	73	6.1	109	80	40	0	0	2	0
ORLANDO	73	48	81	35	61	-6	1.6	.8	1.0	1.7	71	6.3	80	74	28	0	0	3	1
TALLAHASSEE	70	40	79	28	55	-6	1.5	.1	1.4	6.9	164	17.1	133	84	33	0	3	2	1
TAMPA	69	50	77	42	60	-7	1.4	.5	1.4	1.7	63	7.5	93	71	52	0	0	3	1
WEST PALM BEACH	75	51	83	42	63	-7	1.2	.4	.6	2.5	114	7.1	95	79	34	0	0	4	1
GA ATLANTA	58	34	70	29	46	-6	1.0	.4	.7	2.0	51	9.6	73	72	38	0	3	2	1
AUGUSTA	61	36	68	28	49	-6	1.3	.2	.8	2.1	66	8.2	77	76	30	0	3	3	2
MACON	65	39	71	32	52	-5	1.4	.2	.7	2.7	73	12.6	105	83	33	0	1	4	2
SAVANNAH	64	41	71	33	53	-6	2.3	1.2	1.2	3.4	106	7.3	81	73	31	0	0	3	2
HI HILO	--	--	--	--	70	-1	.4	2.6	--	--	--	--	--	--	--	0	0	--	0
HONOLULU	80	64	83	61	72	-1	T	.8	T	.5	21	2.3	24	93	54	0	0	0	0
KAHULUI	--	--	--	--	--	--	0	.6	--	--	--	--	--	--	--	0	0	--	0
LIHUE	--	--	--	--	73	1	1.0	.1	--	2.0	61	--	--	--	--	0	0	0	0
ID BOISE	52	36	58	24	44	1	2.1	1.9	1.6	2.1	300	4.3	123	76	45	0	2	5	1
LEWISTON	57	38	65	32	48	4	.4	.2	.2	.5	83	2.5	89	75	38	0	1	3	0
POCATELLO	47	30	53	22	38	2	.9	.6	.4	1.0	143	2.4	92	81	54	0	4	5	0
IL CAIRO	60	39	71	33	49	0	.1	1.0	.1	1.2	36	5.9	53	--	--	0	0	1	0
CHICAGO	41	23	47	15	32	-7	T	.6	T	.3	19	2.6	55	75	44	0	7	1	0
MOLINE	46	24	52	21	35	-1	0	.6	0	.2	13	2.8	61	69	32	0	7	0	0
PEORIA	47	26	52	20	36	-2	T	.7	T	.2	11	3.0	58	73	28	0	7	0	0
ROCKFORD	42	24	51	18	33	-2	T	.6	T	.2	13	2.8	60	78	39	0	7	0	0
SPRINGFIELD	51	29	58	22	40	0	T	.6	T	1.2	75	3.7	71	64	29	0	5	0	0
IN EVANSVILLE	50	30	66	25	40	-5	.1	1.1	.1	1.0	30	4.4	43	79	44	0	5	1	0
FORT WAYNE	39	23	48	17	31	-6	T	.6	T	.3	16	4.0	60	81	47	0	7	1	0
INDIANAPOLIS	43	24	51	20	33	-7	.1	.8	T	.8	33	4.1	53	77	45	0	7	2	0
SOUTH BEND	42	26	53	22	34	-2	.1	.5	.1	.2	13	2.9	48	83	50	0	6	1	0
IA BURLINGTON	49	28	54	23	38	0	T	.6	T	.2	13	2.0	43	--	--	0	0	0	0
DES MOINES	51	28	57	20	39	5	T	.5	T	.1	7	1.5	39	57	27	0	5	1	0
DUBUQUE	44	24	50	18	34	1	T	.7	T	.1	6	2.9	60	71	36	0	7	0	0
SIOUX CITY	51	23	64	13	37	3	T	.4	T	.2	20	1.0	38	63	28	0	6	1	0
KS CONCORDIA	57	30	69	22	44	4	T	.4	T	.7	64	.9	35	69	29	0	4	0	0
DODGE CITY	59	31	71	22	45	3	T	.3	T	.9	113	1.3	68	63	30	0	5	1	0
GOODLAND	53	29	67	22	41	4	.6	.4	.6	3.2	640	4.2	300	74	37	0	6	1	1
TOPEKA	56	33	70	25	45	3	.7	.2	.5	1.1	92	1.6	50	63	33	0	4	3	1
WICHITA	60	33	73	26	47	3	.1	.3	.1	1.3	118	1.8	60	63	33	0	4	2	0
KY LEXINGTON	44	28	63	22	36	-8	.4	.7	.2	1.3	39	6.2	57	81	55	0	6	4	0
LOUISVILLE	49	31	64	29	40	-5	.1	1.1	.1	.9	28	4.5	42	72	40	0	5	2	0
LA BATON ROUGE	69	44	75	39	58	-3	.4	.7	.4	1.1	32	9.5							

Weather Data for the Week Ending Mar. 22, 1981

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 Mar. 2	PCT. NORMAL SINCE Mar. 2	TOTAL, IN., SINCE Jan. 1	PCT. NORMAL SINCE Jan. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMPERATURE °F		PRECIPITATION		
																		.01 INCH OR MORE	.50 INCH OR MORE			
LAKE CHARLES	69	45	73	37	57	-4								79	39	0	0	1	0	0	1	
NEW ORLEANS	72	47	81	41	59	-2	1.2	.1	1.1	1.3	34	6.3	55	82	40	0	0	0	2	1	0	1
SHREVEPORT	67	39	77	31	53	-4	.2	.7	.2	1.1	42	7.5	71	78	38	0	2	1	1	0	0	1
ME CARIBOU	30	19	39	8	25	0	1.3	.8	.7	2.1	140	6.5	110	80	70	0	7	5	1	0	0	1
PORTLAND	39	23	47	13	31	-2	.2	.6	.2	.5	21	8.5	89	63	42	0	7	2	0	0	0	0
MD BALTIMORE	45	25	50	22	35	-9	.2	.7	.2	.9	36	4.4	53	68	34	0	7	1	0	0	0	0
MA BOSTON	41	25	52	20	33	-6	T	T	.9	.2	7	7.9	80	64	45	0	6	2	0	0	0	0
CHATHAM	40	25	52	20	33	-1	.3	-	.2	.8	-	8.6	-	72	54	0	7	3	0	0	0	0
MI ALPENA	33	17	49	8	25	-2	.2	.2	.1	.5	42	3.0	68	-	-	0	7	4	0	0	0	0
DETROIT	37	21	45	15	29	-7	T	T	.5	T	.1	7	3.7	73	83	47	0	7	2	0	0	0
FLINT	35	21	47	16	28	-5	T	.4	T	.1	8	2.7	57	80	55	0	7	3	0	0	0	0
GRAND RAPIDS	37	19	47	14	28	-6	.1	.5	.1	.1	7	2.5	50	80	46	0	7	1	0	0	0	0
HOUGHTON LAKE	33	18	48	9	26	-2	.1	.3	.1	.3	25	3.4	83	74	51	0	7	5	0	0	0	0
LANSING	37	21	49	15	29	-5	.1	.5	.1	.2	13	2.1	41	87	56	0	7	3	0	0	0	0
MARQUETTE	31	15	47	5	23	0	.7	.2	.3	1.8	138	6.1	130	88	68	0	7	4	0	0	0	0
MUSKOGON	37	20	48	15	28	-5	.1	.4	T	.2	13	3.9	70	78	56	0	7	3	0	0	0	0
MN SAULT STE. MARIE	31	11	48	-4	21	-4	.3	.1	.2	.6	55	3.7	80	80	66	0	7	4	0	0	0	0
DULUTH	37	18	50	16	27	3	T	.4	T	.1	8	1.8	55	74	47	0	7	0	0	0	0	0
INT'L FALLS	36	16	51	10	26	4	T	.3	T	T	0	.5	22	72	51	0	7	1	0	0	0	0
MINNEAPOLIS	46	24	56	20	35	5	0	.4	0	T	0	2.4	96	67	30	0	7	0	0	0	0	0
ROCHESTER	43	24	54	20	33	4	0	.4	0	T	0	2.2	100	76	40	0	7	0	0	0	0	0
MS. JACKSON	47	20	57	17	33	6	0	.3	0	T	0	1.5	63	79	-	0	7	0	0	0	0	1
MERIDIAN	66	38	76	29	52	-5	1.4	.1	1.1	3.7	95	9.1	69	82	32	0	2	2	1	1	0	0
MO. JACKSON	69	37	76	30	53	-4	2.0	.6	1.9	4.2	98	11.3	83	85	29	0	2	2	1	1	0	0
COLUMBIA	52	33	69	26	43	0	.3	.3	.3	.9	56	2.8	55	59	30	0	4	1	0	0	0	0
KANSAS CITY	53	31	66	23	42	1	.5	.1	.4	.8	50	1.6	37	62	35	0	4	3	0	0	0	0
SAINT LOUIS	53	34	65	28	44	0	T	.7	T	1.1	58	4.0	69	67	33	0	3	1	0	0	0	0
SPRINGFIELD	56	34	72	26	45	0	.1	.6	.1	1.3	68	4.0	66	68	37	0	3	1	0	0	0	0
MT BILLINGS	49	29	66	21	39	6	1.0	.8	.7	1.0	167	1.3	68	74	48	0	6	5	1	0	0	0
GLASGOW	50	22	67	10	36	10	T	.1	T	T	0	.1	8	69	34	0	6	0	0	0	0	0
GREAT FALLS	37	19	58	7	28	-3	1.1	.9	.5	1.2	200	2.0	87	86	65	0	7	5	1	0	0	0
HAVRE	45	22	65	9	34	6	.1	0	.1	.2	67	.3	25	91	51	0	6	3	0	0	0	0
HELENA	42	23	55	16	33	2	.5	.4	.2	.6	150	.8	62	88	57	0	7	3	0	0	0	0
KALISPELL	49	25	56	18	37	6	.3	.1	.2	.5	83	4.0	121	81	43	0	6	2	0	0	0	0
MILES CITY	52	27	66	16	39	8	T	.1	T	T	0	.2	17	65	35	0	6	0	0	0	0	0
MISSOULA	49	29	59	25	39	5	.3	.2	.1	.3	100	1.2	52	80	53	0	6	2	0	0	0	0
NE GRAND ISLAND	52	27	71	21	40	4	.6	.3	.6	1.7	243	2.1	111	73	33	0	5	1	1	1	0	0
LINCOLN	53	28	66	17	40	3	.4	0	.4	1.4	140	1.8	75	66	33	0	4	1	0	0	0	0
NORFOLK	51	25	69	14	38	4	.1	.3	.1	.1	11	.6	27	62	28	0	5	1	0	0	0	0
NORTH PLATTE	53	23	71	13	38	3	T	.2	T	.8	133	1.1	73	74	38	0	7	1	0	0	0	0
OMAHA	50	28	62	21	39	4	.2	.2	.2	.6	60	1.0	37	68	31	0	5	1	0	0	0	0
VALENTINE	51	22	71	10	36	4	.2	0	.1	.2	50	.4	31	71	36	0	6	3	0	0	0	0
NV ELY	47	24	55	14	36	2	.2	0	.2	.9	150	1.9	119	66	38	0	5	3	0	0	0	0
LAS VEGAS	69	47	76	41	58	3	T	.1	T	.9	300	1.8	150	46	17	0	0	0	0	0	0	0
RENO	54	30	58	20	42	1	.2	.1	.1	.4	100	1.4	54	74	35	0	7	4	0	0	0	0
WINNEMUCCA	51	23	57	9	37	-1	.5	.3	.3	.5	100	1.5	68	88	35	0	7	4	0	0	0	0
NH CONCORD	39	18	45	8	29	-5	.2	.4	.1	.5	26	8.7	124	66	39	0	7	2	0	0	0	0
NJ ATLANTIC CITY	40	20	51	15	30	-12	.1	.9	.1	.9	30	5.2	51	65	44	0	7	1	0	0	0	0
TRENTON	41	26	48	17	34	-8	.1	.8	.1	.6	23	4.4	54	-	-	0	6	1	0	0	0	0
NM ALBUQUERQUE	61	31	67	22	46	-1	0	.1	0	.6	150	1.4	108	53	15	0	3	0	0	0	0	0
ROSWELL	68	38	74	31	53	3	0	.1	0	.2	67	.7	58	-	-	0	1	0	0	0	0	0
NY ALBANY	36	14	44	8	25	-9	.1	.5	T	.1	6	5.7	90	75	41	0	7	4	0	0	0	0
BINGHAMTON	32	14	43	3	23	-9	.1	.5	T	.4	21	5.2	78	86	53	0	7	3	0	0	0	0
BUFFALO	33	15	47	7	24	-9	.6	0	.3	1.1	58	5.7	77	85	51	0	7	5	0	0	0	0
NEW YORK	41	27	50	17	34	-8	.1	.8	.1	.8	30	6.8	77	54	42	0	7	5	0	0	0	0
ROCHESTER	34	15	45	6	24	-10	.3	.3	.1	.6	35	5.0	77	73	48	0	7	5	0	0	0	0
SYRACUSE	37	17	50	10	27	-7	.2	.5	.1	.5	24	4.5	59	82	46	0	6	3	0	0	0	0
NC ASHEVILLE	52	29	65	25	41	-6	1.0	.1	.9	1.7	53	6.9	66	77	34	0	6	3	1	1	0	0
CHARLOTTE	55	31	63	26	43	-8	.6	.5	.6	1.1	34	5.2	48	60	39	0	5	2	1	1	0	0
GREENSBORO	51	28	63	22	40	-9	.5	.3	.5	1.3	52	5.6	61	64	40	0	5	3	1	1	0	0
HATTERAS	52	36	60	26	44	-7	.6	.3	.4	1.1	41	4.9	43	64	52	0	1	3	0	1	1	0
RALEIGH	52	26	63	18	39	-11	.6	.1	.6	1.4	61	5.4	61	67	35	0	7	3	0	1	1	0
WILMINGTON	56	38	66	28	47	-8	1.1	.2	.7	2.7	93	6.9	72	69	44	0	3	4	1	1	0	0
ND BISMARCK	48	21	64	18	34	8	T	.2	T	T	0	.6	46	82	30	0	7	0	0	0	0	0
FARGO	46	20	63	13	33	7	0	.2	0	T	0	.6	46	75	27	0	7	0	0	0	0	0
WILLISTON	50	21	70	14	35	10	T	.1	T	T	0	.4	33	75	31	0	7	0	0	0	0	0
OH AKRON-CANTON	37	19	46	11	28	-9	.6	.1	.2	1.0	50	6.4	91	73	43	0	6	2	0	0	0	0
CINCINNATI	43	26	52	21	34	-9	.2	.8	.1	1.0	36	5.5	59	74	39	0	6	2	0	0	0	0
CLEVELAND	35	20	42	13	27	-10	.6	.1	.2	.8	42	4.4	62	84	55	0	7	5	0	0	0	0
COLUMBUS	42	25	50	17	34	-6	.2	.6	.1	.7	32	6.1	81	71	45	0	6	5	0	0	0	0
DAYTON	43	24	49	17	33	-7	.1	.7	T	.8	36	4.4	60	85	41	0	7	4	0	0	0	0
TOLEDO	36	19	45	10	28	-9	.1	.5	.1	.2	13	4.1	75	79	49	0	7	4	0	0	0	0
YOUNGSTOWN	35	19	46	10	27	-10	.5	.3	.3	1.0	45	5.7	75	79	49	0	7	4	0	0	0	0
OK OKLAHOMA CITY	63	38	76	27	50	1	T	.5	T	2.3	177	3.6	90	73	32	0	2	0	0	0	0	0

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

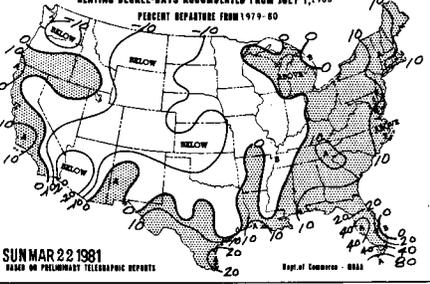
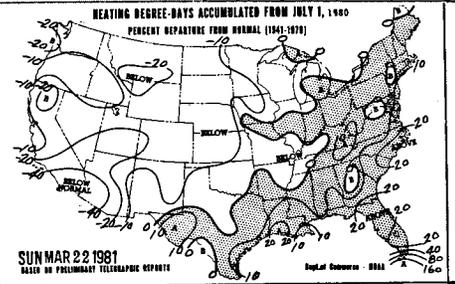
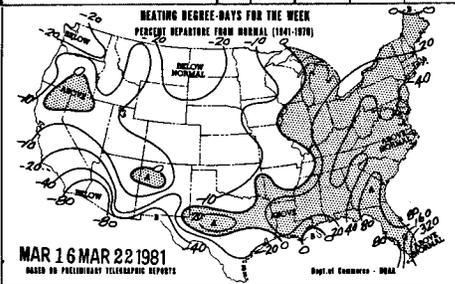
Weather Data for the Week Ending Mar. 22, 1981

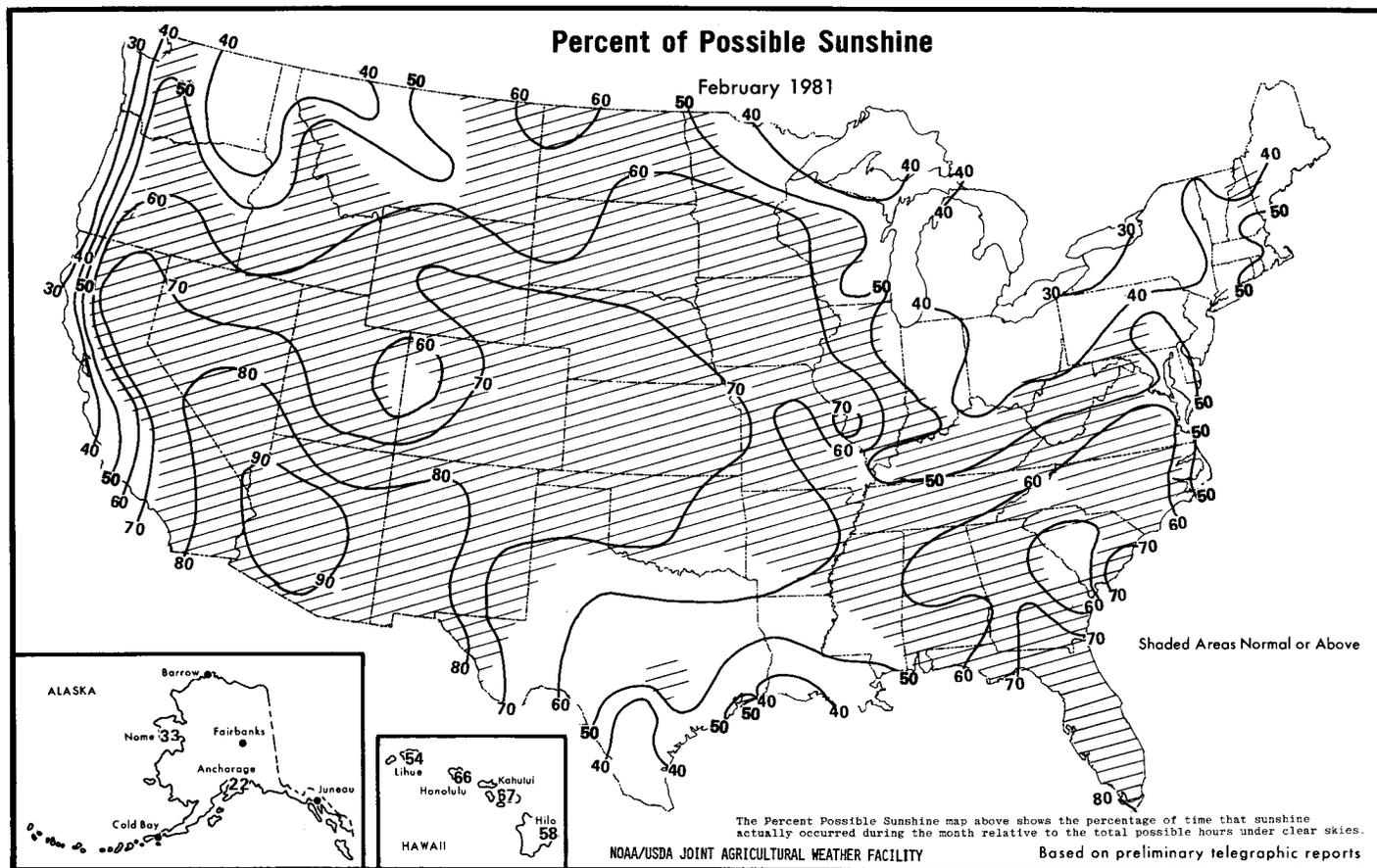
STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar. 2	PCT. NORMAL SINCE Mar. 2	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
OR TULSA	66	41	80	32	53	4	.3	-.3	.3	1.6	100	4.0	82	64	28	0	1	2	0
OR ASTORIA	58	38	61	31	48	3	.2	-1.2	.2	1.2	26	12.3	55	83	52	0	1	0	0
OR BURNS	44	26	48	16	35	-2	.6	-.4	.3	1.0	167	2.7	75	89	56	0	7	5	0
OR MEDFORD	59	36	63	26	48	2	.1	-.3	.1	.7	54	3.1	44	91	41	0	1	2	0
OR PENDLETON	55	37	65	30	46	2	.1	-.1	.1	.5	83	2.8	80	76	45	0	2	2	0
OR PORTLAND	58	38	60	30	48	2	.1	-.7	.1	1.6	62	7.0	56	86	51	0	1	3	0
OR SALEM	58	33	60	25	45	0	.2	-.7	.2	1.6	50	7.0	47	90	55	0	3	3	0
PA ALLENTOWN	40	21	50	12	30	-9	T	-.8	T	.6	25	5.9	71	78	40	0	7	2	0
PA ERIE	32	17	40	.13	25	-9	.4	-.2	.1	.9	50	7.0	106	--	--	0	7	6	0
PA HARRISBURG	41	22	49	15	31	-11	.2	-.6	.1	.9	41	7.2	97	--	--	0	7	2	0
PA PHILADELPHIA	42	24	51	16	33	-10	.2	-.6	.2	1.2	50	4.7	60	74	36	0	7	1	0
PA PITTSBURGH	36	19	46	10	28	-11	.7	-.2	.3	1.5	63	6.2	82	85	44	0	7	5	0
PA SCRANTON	37	17	47	8	27	-10	.1	-.4	.1	.3	19	9.0	158	76	42	0	7	3	0
RI PROVIDENCE	42	21	52	12	32	-6	.1	-.8	.1	.2	7	5.8	59	72	45	0	7	1	0
SC CHARLESTON	62	39	67	29	50	-7	1.5	.4	.9	2.0	61	5.2	54	85	36	0	3	3	1
SC COLUMBIA	59	33	66	25	46	-9	1.3	.3	.7	1.8	56	6.7	63	74	38	0	4	3	2
SC GREENVILLE	56	31	66	21	43	-8	.8	-.4	.7	1.5	42	5.6	46	65	34	0	5	2	1
SD ABERDEEN	50	19	64	12	35	7	0	-.2	0	T	0	.4	27	74	19	0	6	0	0
SD HURON	50	17	65	10	33	3	0	-.2	0	T	0	.1	6	81	24	0	7	0	0
SD RAPID CITY	54	25	68	14	40	8	.1	-.1	.1	.1	20	.4	27	71	34	0	7	1	0
SD SIOUX FALLS	49	21	62	11	35	4	0	-.3	0	T	0	.5	19	68	24	0	6	0	0
TN CHATTANOOGA	55	32	71	25	43	-7	1.0	-.3	.7	2.3	58	9.5	69	73	29	0	5	3	1
TN KNOXVILLE	53	30	64	27	41	-9	.6	-.5	.5	1.5	44	6.3	48	86	41	0	6	3	0
TN MEMPHIS	63	42	74	35	52	0	1.1	0	.6	2.7	82	7.7	58	63	35	0	0	3	1
TN NASHVILLE	55	32	73	27	44	-6	1.0	-.2	1.0	2.1	58	7.6	59	74	36	0	4	1	1
TX ABILENE	66	42	78	31	54	-1	0	-.2	0	1.9	380	4.5	173	64	27	0	1	0	0
TX AMARILLO	63	35	71	28	49	3	T	-.2	T	1.8	450	2.1	162	60	23	0	2	0	0
TX AUSTIN	71	47	79	36	59	-1	T	-.4	T	2.5	192	5.9	91	67	30	0	0	0	0
TX BEAUMONT	70	47	74	39	59	-2	.3	-.3	.3	2.0	95	8.8	83	74	42	0	0	1	0
TX BROWNSVILLE	78	54	86	43	66	-2	.1	-.1	.1	3.5	875	6.1	169	87	38	0	0	1	0
TX CORPUS CHRISTI	74	53	84	41	64	-2	0	-.2	0	2.4	343	6.8	155	72	35	0	0	0	0
TX DEL RIO	73	50	80	43	62	-2	0	-.1	0	1.0	250	1.9	90	61	26	0	0	0	0
TX EL PASO	75	45	80	38	60	5	0	-.1	0	.4	100	2.0	154	46	15	0	0	0	0
TX FORT WORTH	67	42	77	35	55	-1	T	.5	T	2.5	167	4.9	84	76	32	0	0	1	0
TX GALVESTON	66	54	68	46	61	0	T	.6	T	.3	16	3.8	49	72	56	0	0	1	0
TX HOUSTON	73	46	80	36	60	-2	.2	-.4	.2	1.4	74	6.0	65	64	32	0	0	1	0
TX LUBBOCK	64	39	75	28	51	2	0	-.2	0	1.2	200	2.1	140	62	23	0	1	0	0
TX MIDLAND	66	40	78	30	53	-2	0	-.1	0	.4	100	1.7	131	66	24	0	1	0	0
TX SAN ANGELO	67	41	79	30	54	-4	0	-.2	0	2.2	367	4.5	205	74	24	0	1	0	0
TX SAN ANTONIO	73	47	81	38	60	-1	T	-.3	T	1.2	120	5.0	100	70	28	0	0	0	0
TX VICTORIA	73	49	83	35	61	-2	.1	-.3	.1	1.0	83	4.4	81	75	35	0	0	1	0
TX WACO	68	41	75	29	55	-3	T	-.5	T	1.3	87	4.5	78	84	34	0	2	1	0
UT WICHITA FALLS	66	40	81	29	53	0	T	-.4	T	1.7	155	5.2	149	67	29	0	1	1	0
UT BLANDING	48	29	58	20	39	0	T	-.2	T	2.4	400	2.8	104	77	29	0	5	1	0
UT SALT LAKE CITY	53	35	60	27	44	4	.3	-.1	.2	.6	55	2.1	57	71	42	0	2	2	0
VT BURLINGTON	35	19	41	11	27	-3	.2	-.2	.1	.8	67	6.7	146	83	53	0	7	4	0
VA LYNCHBURG	48	25	61	19	37	-9	.2	-.6	.1	.8	33	5.1	64	87	--	0	7	4	0
VA NORFOLK	50	31	59	26	40	-8	.4	-.3	.3	.9	39	4.2	46	70	37	0	6	3	0
VA RICHMOND	51	27	60	24	39	-9	.2	-.6	.2	.7	29	4.1	49	61	33	0	7	2	0
VA ROANOKE	46	27	56	24	37	-9	.7	0	.6	1.1	50	3.9	48	59	37	0	7	4	1
WA COLVILLE	55	36	60	27	46	8	.3	0	.2	.9	100	3.7	84	--	--	0	3	3	0
WA OMAK	62	34	67	28	48	8	T	-.2	T	.5	83	3.6	109	--	--	0	4	1	0
WA QUILLAYUTE	58	37	63	31	48	5	1.1	-1.3	.6	3.4	45	19.0	55	83	44	0	1	2	0
WA SEATTLE-TACOMA	58	41	62	36	50	5	.1	-.7	.1	1.0	40	7.9	64	75	40	0	0	3	0
WA SPOKANE	52	31	58	27	41	3	.2	-.2	.1	.3	27	2.6	48	84	45	0	4	2	0
WA WALLA-WALLA	58	41	64	34	50	4	.5	-.2	.3	1.4	156	5.6	122	78	42	0	0	3	0
WA YAKIMA	61	39	65	31	50	8	T	-.1	T	.1	25	1.7	68	72	27	0	1	1	0
WV BECKLEY	36	21	48	16	28	-13	.6	-.4	.3	1.3	45	4.0	40	82	53	0	7	6	0
WV CHARLESTON	41	26	50	24	33	-12	.9	0	.2	1.4	52	7.0	73	87	57	0	7	7	0
WV HUNTINGTON	42	27	52	24	35	-10	.7	-.3	.2	1.4	48	6.3	69	80	52	0	7	7	0
WV PARKERSBURG	42	29	50	26	36	-8	.3	-.6	.3	.8	32	4.8	57	80	45	0	5	3	0
WI GREEN BAY	39	22	49	15	30	0	T	-.4	T	.1	10	2.8	85	73	46	0	7	0	0
WI LA CROSSE	46	24	56	19	35	3	0	-.5	0	T	0	2.3	74	74	34	0	6	0	0
WI MADISON	44	19	53	16	32	1	T	.5	T	.1	8	2.6	70	75	38	0	7	0	0
WI MILWAUKEE	37	21	42	18	29	-3	.1	-.4	T	.1	7	3.3	77	64	52	0	7	3	0
WY CASPER	45	28	58	25	37	6	.6	.4	.4	.6	100	1.3	87	87	55	0	6	4	0
WY CHEYENNE	47	25	60	20	36	4	.2	0	.1	.4	67	.9	60	81	46	0	6	4	0
WY LANDER	46	28	57	22	37	5	1.3	1.0	.7	1.3	186	2.2	122	79	53	0	7	4	1
WY SHERIDAN	51	26	63	20	39	7	.3	0	.2	.3	43	.9	41	79	48	0	6	4	0
PR SAN JUAN	89	76	94	75	82	6	.2	-.2	.1	2.5	192	7.9	104	74	48	3	0	3	0

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING MAR. 22, 1981.
BASED ON 1941-70 NORMALS. + ACCUMULATION FROM JULY 1, 1980.

Table with columns for STATES AND STATIONS, WEEKLY ACCUMULATION, and SEASONAL ACCUMULATION. Rows list various states and cities with their corresponding heating degree day values.





Winter Weather Review

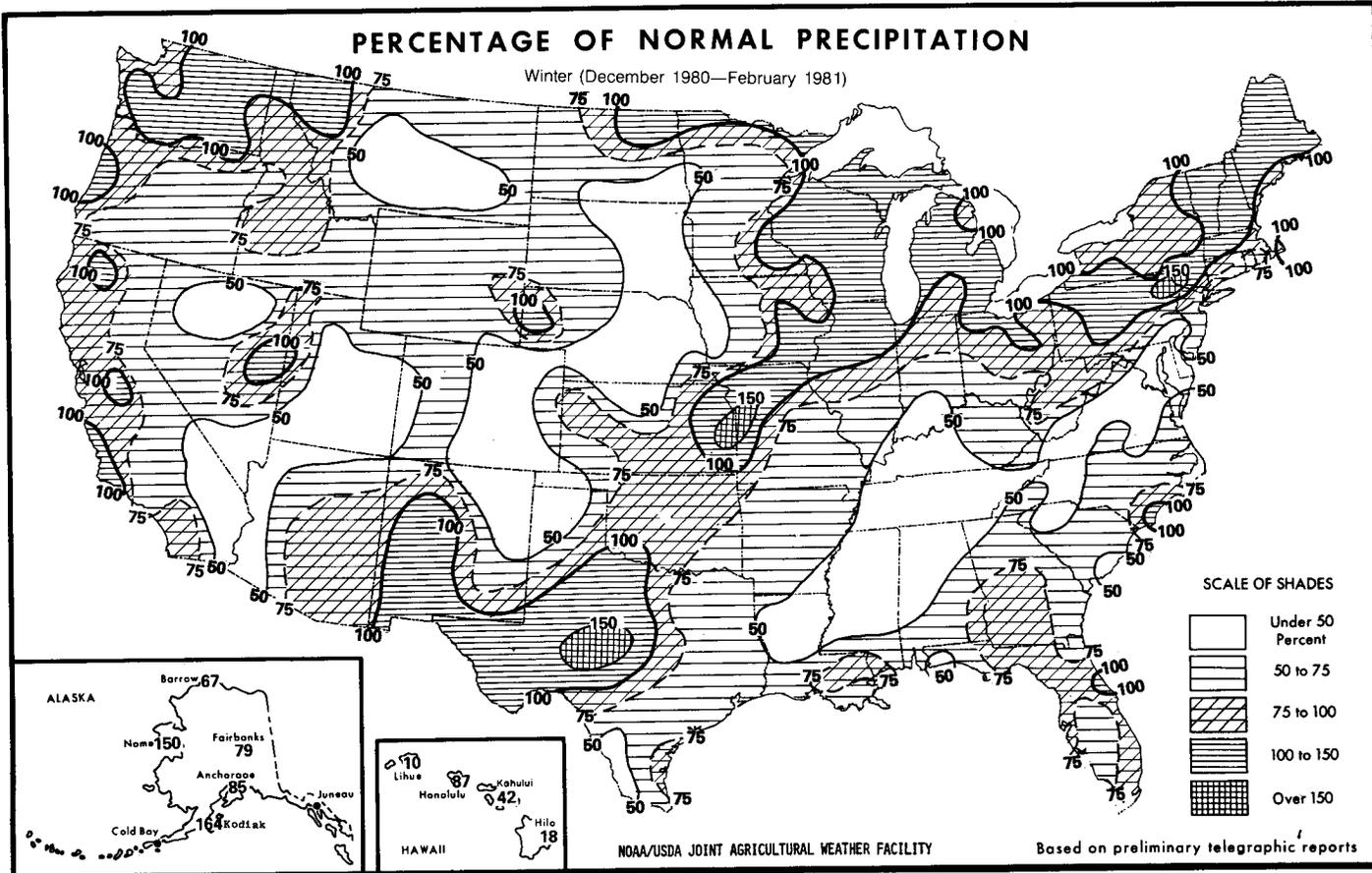
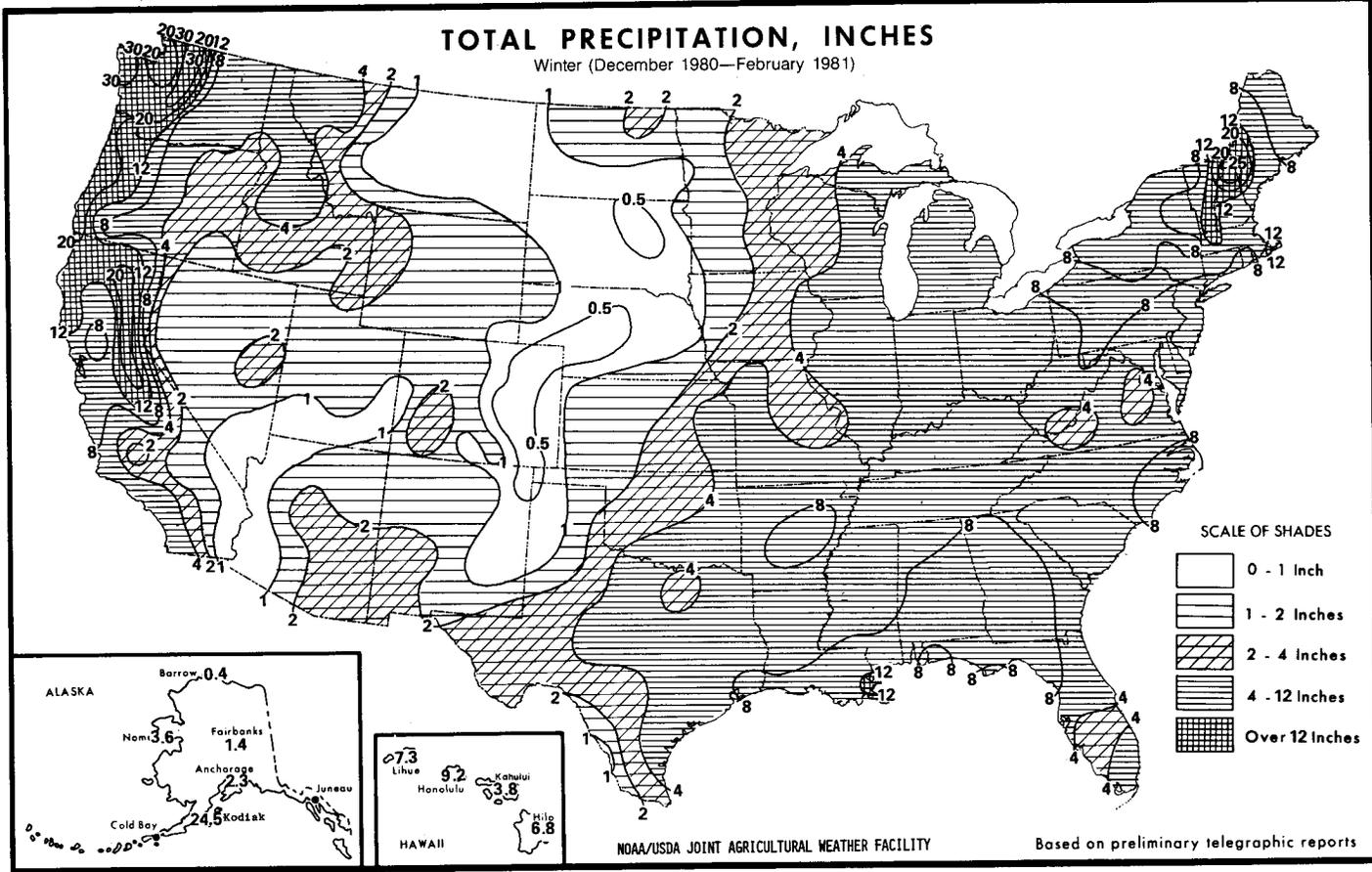
HIGHLIGHTS: The most significant feature of this winter season was the widespread drought that affected most of the Nation. Drought that began in the summer continued through the fall and winter. Some relief came in February when heavy rains fell in New England and in the Southeast but more rain is needed in those areas and in most of the Nation. Public water supplies had become critically low in parts of the Northeast before the partial relief in February. In the West, the seasonal rain began on time but was much less than normal except in parts of the State of Washington. Not only was precipitation short in the West, but unusually warm temperatures caused much of the precipitation to fall as rain instead of snow; snow that fell melted and ran off. This affects water storage in the mountainous snow pack.

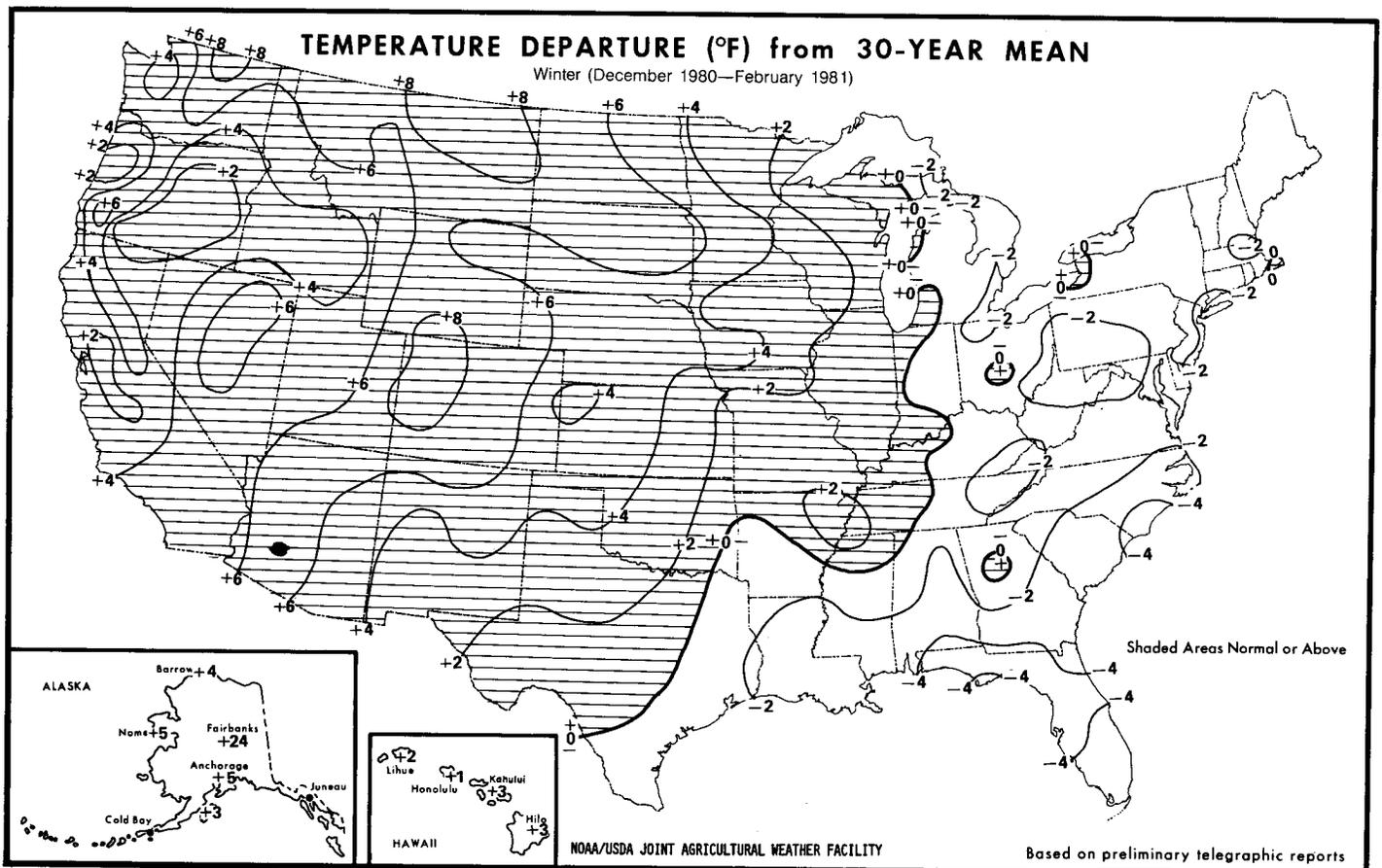
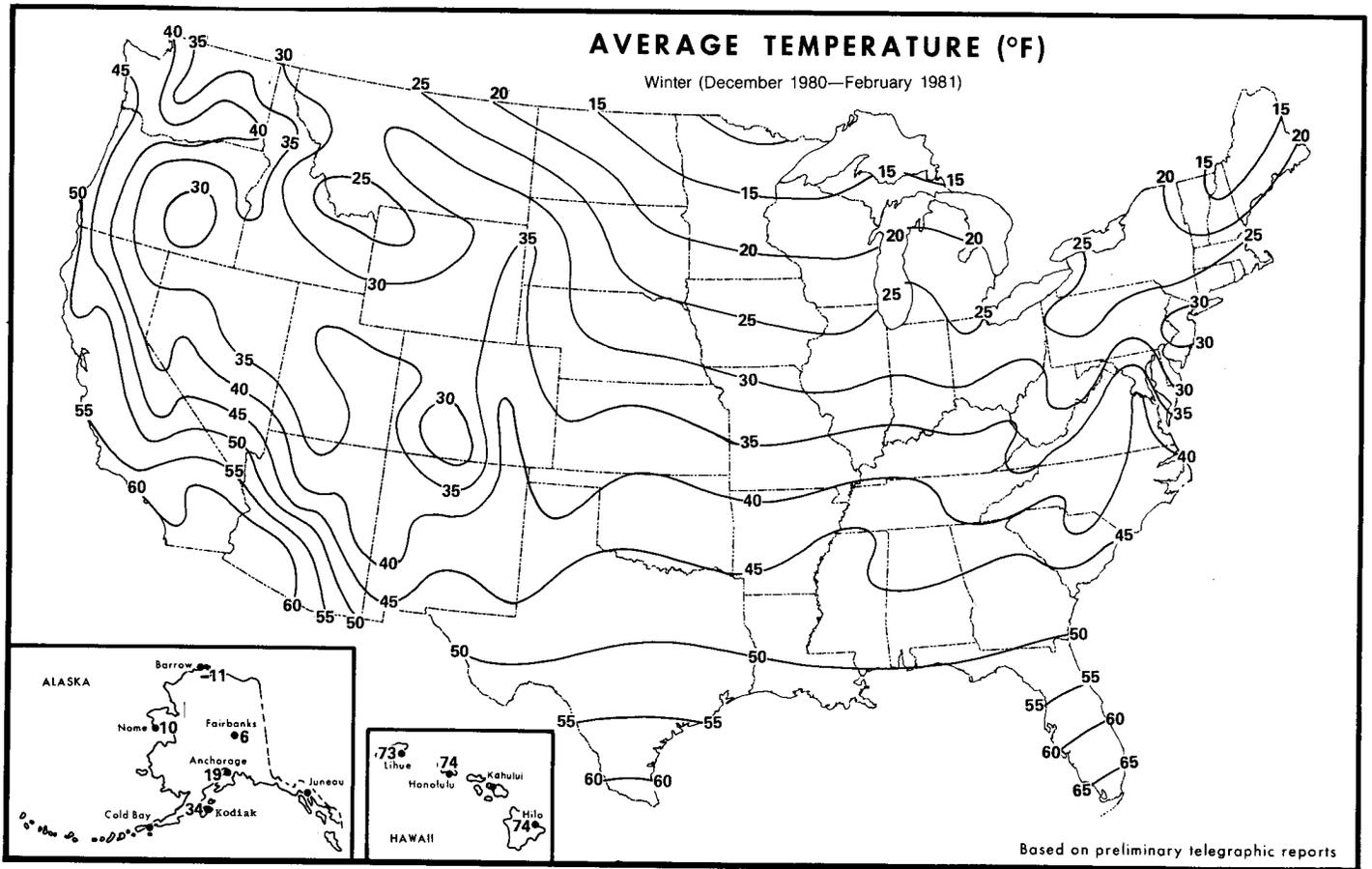
DECEMBER...A series of storm systems moved through the Pacific Northwest and brought seasonally heavy rain to the coastal areas of Washington and Oregon and snow to the northern Plateau and Rockies. The storms tended to weaken as they moved southeastward so that precipitation was much below normal in the central and southern parts of the West. Several surges of cold arctic air moved into the northern Plains and then southeastward, but several days of warming followed each episode so that the Plains, Ohio Valley, and parts of the mid-Atlantic States averaged warmer than normal for the month. The warmer air from the Gulf of Mexico carried moisture northward so that an area from western Texas to the Great Lakes accumulated above-normal precipitation. The western portion of the winter wheat in the cen-

tral and southern Plains welcomed rain or snow which produced 1 to 2 inches of moisture. Temperatures over all the West were well above normal, melting much of the snow that had fallen early in the month. Drought was worsening in much of the Nation.

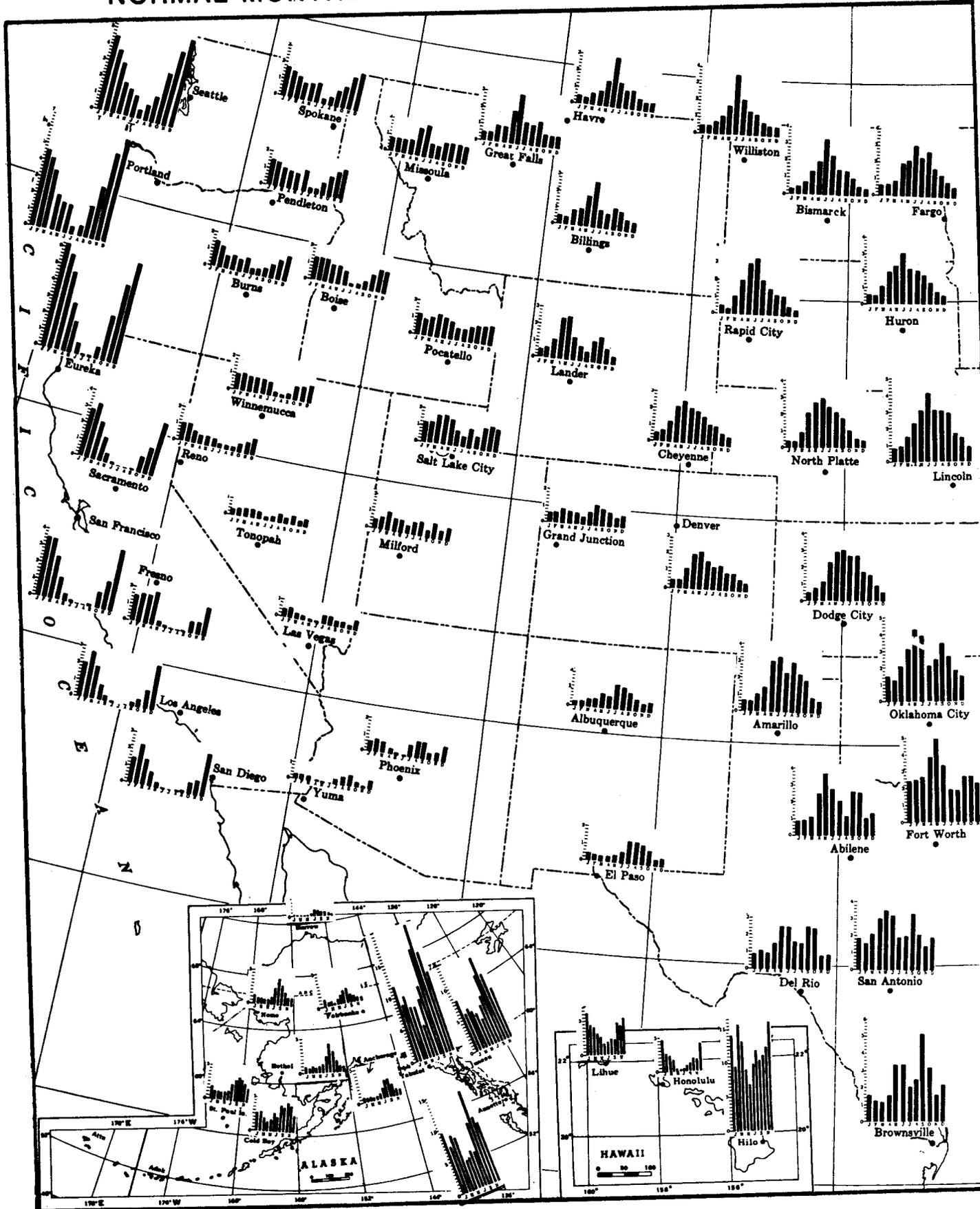
JANUARY...Drought intensified in most of the East and much of the West. Precipitation was spotty in the West but most of the East had less than half the normal precipitation. Warm weather continued to deplete the sparse snowpack in the West, but almost continuous surges of cold air into the northern Plains moved rapidly eastward and southward until a hard freeze spread into Florida on the 13th and 14th. Severe damage resulted. At month's end, snowcover was again accumulating in the western mountains.

FEBRUARY...The first part of the month was typically winter in most of the Nation. Frigid, arctic air from Colorado spread over the Rockies and the East. High winds, mixed with light snow, blew the dry soils in the central Plains. Later, Pacific storms dominated and spread warmer air across the country. Moisture from the Gulf of Mexico spread northward to the northern Mississippi Valley and through New England. Heavy rains in the Northeast and much of the Southeast greatly relieved the drought in those areas; but dry weather continued in the Plains, endangering the greening winter wheat. Average temperatures were up to 14° above normal in New England and 10° above normal in the northern Plains.



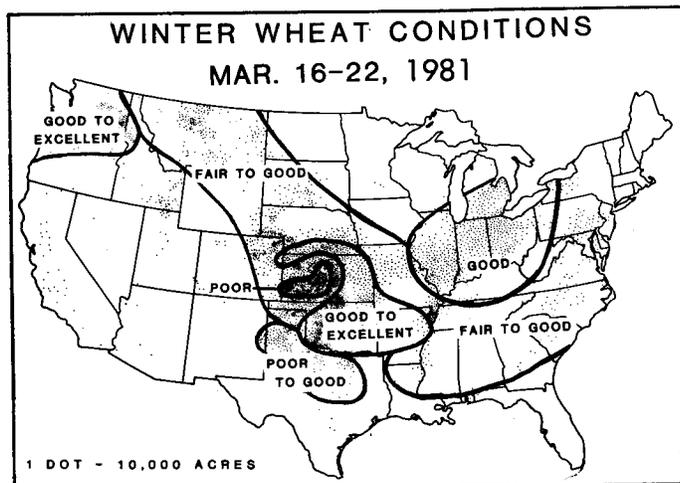


NORMAL MONTHLY PRECIPITATION (IN.) - WESTERN U.S.



National Agricultural Summary

March 16-22, 1981



HIGHLIGHTS: Light precipitation and mild weather in the Great Plains encouraged rapid growth of winter wheat and improved prospects for the crop. Cold weather plunged into the Southeast causing light frost damage to peaches and some vegetable crops. Up to 6 days of the past week were suitable for fieldwork in many areas. As a result, land preparation and planting moved ahead rapidly. Soil moisture supplies were short to adequate across the Nation. Winter wheat rated fair to good, except in Texas and Kansas where conditions varied from poor to excellent. Greening extended into Montana. Corn planting became more widespread. Cotton planting advanced rapidly in Arizona, but was slowed by wet fields in parts of Texas. Sorghum planting was well advanced in Texas. Rice planting was underway in the Delta States and Texas. Peach trees were blooming as far north as South Carolina. Livestock were in fair to good condition. Calving and lambing continued with minimal losses.

SMALL GRAINS: Winter wheat rated fair to mostly good in all major producing States except Texas and Kansas, where conditions varied from poor to excellent. The crop was greening as far north as Montana and was jointing in the Southern States. Stands on the Great Plains needed more moisture to sustain optimum growth. Wind damage and winterkill appeared light as plants began greening. Growers fertilized and sprayed fields as conditions permitted.

Kansas winter wheat conditions ranged from poor in the southwest, north central, and south central areas to good to excellent elsewhere. Wind damage was generally light.

Texas wheat fields began to joint in the Panhandle area. High winds and blowing dust across the Plains damaged some fields. Extensive spraying operations for greenbugs and aphids were underway on the Low Plains. Wheat conditions varied from poor to excellent across the State. Most fields showed good growth following recent showers, although some areas need additional moisture.

Oklahoma wheat made good growth with about 20% of the fields in the jointing stage. Some wind damage was reported in the Panhandle and southwest. Wheat conditions rated good in all areas except the Panhandle where the condition was fair.

Montana wheat was in fair condition and greening. Snowcover was scattered and light. Wind damage was also light. Army cutworm infestations were severe in some areas.

Pacific Northwest winter wheat rated good.

Weed and disease control activities continued as conditions permitted.

OTHER CROPS: Corn planting was more widespread last week, reaching as far north as Virginia and West Virginia. Planting reached 42% complete in Georgia, well ahead of last year's 12% and the 21% average. In other States, planting ranged from 20% to 36% completed.

Land preparations and cotton planting progressed rapidly in Arizona. Earliest plantings were emerging. Planting in southern Texas continued, although wet fields delayed seeding in a few areas. Some newly planted fields in the Rio Grande Valley were damaged by rains. In the Coastal Bend area, some fields were replanted because of cold soil temperatures and wet fields.

Texas rice seeding was 11% finished, slightly behind last year and the average progress. Seeding got underway in Arkansas and was 12% complete in Louisiana.

Sorghum planting in Texas was 38% finished, 2 points behind the average progress. Wet fields and high winds slowed planting.

Tobacco plantbeds rated fair to mostly good. Transplanting was underway in Georgia and South Carolina.

FRUITS AND NUTS: Deciduous fruit tree pruning was almost complete in most areas. Peach trees bloomed as far north as South Carolina. Low temperatures caused minimal frost damage to Georgia peaches. South Carolina trees also were damaged, but the extent is not yet known.

Florida's late variety orange harvest was slow; many growers were waiting for better maturity. The condition of citrus trees varied. Wood damage from the January freeze was evident in the north and north central areas while new growth was abundant in south central areas and along the east coast.

Arizona's Valencia orange harvest was in full swing in the Yuma area while the grapefruit and lemon harvest was nearing completion. Late varieties of grapes were starting to bloom. Deciduous fruits showed favorable development.

The California citrus harvest continued with the Desert Valencia orange harvest underway. Orchard and vineyard pruning was still active in northern areas. Early cherry varieties were blooming. Harvesting of Bacon variety avocados remained active.

In the Rio Grande Valley of Texas, the citrus harvest of grapefruit and late oranges continued. On the High Plains, peach trees were in full bloom while pecan trees were still budding.

VEGETABLES: Cool, windy weather and scattered showers dominated in Florida's vegetable growing areas. Scattered frost hit the central interior to Belle Glade-Immokalee area on the 21st. Total shipments were 4% above the previous week. Supplies of sweet corn, cucumbers, okra, squash, and strawberries increased substantially, but peppers and tomatoes were down sharply. The strawberry harvest remained active in the Manatee-Hillsborough area. Watermelon growth and condition was adversely affected by the windy, cool weather.

Lettuce harvest in the Yuma area of Arizona was in full swing; harvesting gained momentum in other regions. Cantaloups and watermelon planting progressed rapidly.

Rain halted the asparagus harvest in northern California, but growers continued cutting in southern areas. Lettuce harvesting decreased in the Palo Verde area, but increased in the Kern, Huron, and Santa Maria areas. Strawberry

supplies increased on the South Coast. The spinach harvest continued in the San Joaquin Valley. Tomato planting gained momentum. Hotcaps were removed from fresh tomatoes in the Cutler-Orosi area.

Lettuce, cabbage, and carrots were harvested in the Rio Grande Valley in Texas. In South Texas, some early summer vegetables were hurt by freezing temperatures and were being replanted. In the San Antonio-Winter Garden area, carrot harvesting continued while potatoes and summer onions planting got underway. Some early planted vegetables in North Texas were hurt by near

freezing temperatures. On the High Plains, preplanting activities continued as onion and potato seedbed preparation neared completion.

PASTURE AND LIVESTOCK: Grasslands rated fair to good across the South. Pastures greened but grew slowly due to cool temperatures. California ranges improved as well-timed spring rains encouraged growth. Feed supplies were adequate except for hay in the northern Plains. Livestock were in fair to good condition. Mild temperatures held calving and lambing losses to a minimum.

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 ESS State offices in cooperation with the National Weather Service.

ALABAMA: Temperatures 5° subnormal. Morning lows below freezing most areas 17th and 20th. Rain 18th, 22nd; 1.00 to 2.00 in. total.

Fieldwork on schedule, 3.8 days suitable. Soil moisture mostly adequate. Plowing 69% complete. Corn planted 36%, 9% 1980. Feed supply from pasture, stored feed supply short. Condition: Wheat good; livestock fair; pastures mostly fair. Activities: Plowing, corn planting, lime, fertilizer, herbicide application, orchard maintenance, care of livestock and poultry, routine farm chores.

ARIZONA: Storm 19th, 20th produced rain and snow. Rainfall between 0.10 to 0.50 in., local amounts over 0.75 in. Snow level around 5,000 ft., 1.00 to 6.00 in. Mogollon Rim, White Mountains. Temperatures 1° below normal to 5° above.

Land preparations, planting cotton progressing rapidly; earliest plantings emerging. Small grains excellent progress; heading, flowering, seed setting increasing. Sugarbeets making excellent growth; top, tap root development well ahead normal. Rains latter part week damaged cut, windrowed alfalfa hay. Safflower good progress. Corn, sorghum planting progressing; some earliest planted corn breaking ground. Lettuce harvest full swing Yuma, gaining momentum central areas. Mixed vegetables, seasonal progress. Cantaloup, watermelon planting good progress. Valencia orange harvest full swing Yuma, limited Salt River Valley. Grapefruit, lemon harvest mostly complete Yuma. Grapefruit harvest seasonally slow Salt River Valley. Most lemons going products plants. New growth, bloom well advanced. Early variety grapes full bud-break, later varieties starting to bud. Deciduous fruits developing well. Ranges poor to fair. Livestock fair to good, water short to adequate.

ARKANSAS: Rain received Statewide by week's end. Highest temperature 78°, lowest 19°. Departures from normal ranged from -2 to -7°. Most rainfall 2.03 in., least trace.

Wheat excellent condition. Nitrogen fertilization virtually complete, except in northern areas. General land preparation well ahead of normal. Southern areas just starting dry seeding of rice. Fruit crops good condition despite cooler weather. Average 5.0 days suitable for fieldwork. Pastures rated adequate but needing additional moisture. Soil moisture supplies short. Livestock fair to good condition.

CALIFORNIA: Temperatures were below normal except in the South Coast and Deserts. Sacramento Valley was 3° below normal with great amounts of precipitation. Lowest temperatures were on 17th. South Coast received about 1.50 in. precipitation.

Light rains, mild temperatures beneficial small grains. Applying broadleaf weed control. First cutting alfalfa continues; spraying for

weevils. Early planted sugarbeets thinned, sprayed for aphids. Cotton pre-irrigated. Orchard and vineyard pruning continued North Coast district. Early cherry varieties blooming. Citrus harvest continued. Desert Valencia orange harvest began. Bacon variety avocado harvest continued. Artichokes good supply. Asparagus cutting halted by rain north; harvest continues south. Broccoli, cauliflower harvest continue active. Carrots active from Desert. Celery active from Oxnard. Lettuce decreasing Palo Verde; increasing Kern, Huron, and Santa Maria. Strawberries increasing South Coast, Santa Maria. Spinach harvest continues San Joaquin Valley. Tomato ground preparation, planting active. Fresh tomato hotcaps removed Cutler-Orosi. Ranges improving with well-timed spring rains. Supplemental feeding on decline. Lambs fare well in mild weather.

COLORADO: One-tenth to two-tenths precipitation 17th and 18th over northwest and Platte River Basin but little elsewhere. Widespread precipitation 21st east of Continental Divide except for San Luis Valley, averaging between 0.20 and 0.40 in. Temperatures averaged 2 to 4° above normal.

Winter wheat condition fair to good; little winter wheat being pastured. Livestock in good condition. Wet most of week, little fieldwork completed.

FLORIDA: Rainfall averaged 1.00 to 2.00 in. except only 0.50 in. south. Temperatures averaged 5° below normal with scattered frost north 15th, 20th and general frost north, scattered frost into central, northern portions of south morning of 21st. Soil moisture was short over much of State but improved with timely, late week rains. Some hail occurred northwestern areas. Frost occurred in some colder locations.

High winds, blowing sand damaged young corn, tobacco plants in fields and plantbeds. Cold temperatures also slowed growth of corn and tobacco. Peanut planting underway. Corn planting remains active. Pastures poor to fair. Much needed rain occurred late week over most of State. Cattle mostly fair. Citrus tree condition varies; wood damage from January freezes showing in north and north central part of citrus belt, new growth in abundance with bloom, south central and east coast. Late orange harvest slow; waiting for better maturity. Cold fronts brought windy conditions and scattered showers to vegetable areas. Temperatures averaged 5° below normal. Scattered frost central interior to Belle Glade-Imokalee areas occurred on 21st. Rainfall generally 1.00 in. central and 0.50 in. south. Total shipments 4% above previous week. Shipments up considerably for sweet corn, cucumbers, okra, squash and strawberries; snap beans, cauliflower, Chinese cabbage, lettuce and radishes also increased. Carrots, eggplant, parsley and potatoes held steady. Supplies down considerably for peppers

and tomatoes; cabbage and celery also decreased. Strawberry harvest continues active Manatee-Hillsborough area. Watermelon condition and progress reduced by windy, cool weather.

GEORGIA: Two separate cold fronts produced substantial shower activity 14th to 20th. Rainfall heaviest across central sections, ranging from near 0.75 in. to 1.50 in. to around 0.50 in. north and less than 0.25 in. in the extreme south. Temperatures 5° below normal. Rains over 21st and 22d totaled 1.25 in. to 1.50 in. over southern counties, but tapered off gradually to north. Amounts over the northern third averaged 0.25 in., but were little more than 0.10 in. extreme northeast. Temperatures most sections well below normal.

Soil moisture short to adequate. Four days suitable for fieldwork. Corn 42% planted, last year 12%, average 21%. Condition of emerged fields fair to good. Tobacco 10% transplanted, 5% last year, average 12%. Condition mostly fair to good. Some light wind damage. Frost damage to peaches minimal and scattered. Some fruit tree pruning. No cotton, peanuts, soybean plantings. Few scattered fields of grain sorghum plantings reported. Small grains fair to good. Nitrogen topdressing and weed sprays applied. Pastures fair to good, as are cattle and hogs.

HAWAII: Weather cool but favorable. More periods of sunshine keeping plantings in fair to good condition. Showers were beneficial adding soil moisture where needed. Spraying frequent to minimize insect and disease infestations. Vegetables-supplies of all cabbage and lettuce crops heavy. All other crops light to moderate. Bananas-brazilian and Cavendish type active harvest. Showers beneficial. Papayas-supplies light to moderate. Picking declining. Spraying frequent. Pineapples-harvesting light. Sugar-field activities up because of the favorable weather. Pastures-showers beneficial. Some pastures making gradual recovery from the past drought.

IDAHO: Temperatures near normal to slightly above. Precipitation moderate to heavy, rain in the lower elevations, snow above 6,000 ft. Amounts ranged from a trace at Porthill to 1.60 inches at Boise.

Rain showers off and on during the week interrupted early planting and tilling, but also brought some relief to critical moisture supplies. Machine repair and seeding preparations very active. Calving and lambing progress varies as to location. Sheep shearing beginning in some areas. Feed supplies remain adequate.

ILLINOIS: Temperatures 4 to 9° below normal northeast and south, 1 to 2° below normal elsewhere. Precipitation trace to 0.10 in.

Winter wheat 5% excellent, 60% good, 35% fair. Oats planting 35% complete, none 1980, 7% average. Plowing corn and soybeans ground 83% complete, 69% 1980, 65% average. Soil moisture 87% short, 13% adequate. Livestock mostly good condition. Activities: Field tillage, applying fertilizer, oats seeding, livestock feeding, manure hauling, general farmwork.

INDIANA: Another dry week. Temperatures averaged 4° below normal and ranged from 16 to 66°. Precipitation; only trace north to 0.10 in. south but caused early morning snow and ice on roads on 19th. Sunshine 58% of possible. Soil temperatures in 30's.

Soils becoming tillable. Limited acreage left to till after record pace set last fall. Oats seeding underway and some tobacco plant beds being prepared. Grass and legume seeding continue. Spreading lime, fertilizer and manure. Fertilizer and seed being delivered. Cleaning out fences and fence rows. Ready equipment

for 1981 season. Caring for livestock and usual chores.

IOWA: Continued dry and mild. Moderate rain fell the 21st over some southwest and south central counties; elsewhere, precipitation was negligible to none. Temperatures averaged 2 to 4° above normal excepting near normal eastern-most areas.

KANSAS: Temperatures 3 to 6° above normal. Light rain, snow and spring thunderstorms brought moisture most sections. Heaviest amounts south central, southeast and east central, up to 0.75 in.

Barley seeding 65% complete. Oat seeding 80% complete. Wheat condition poor southwest, north central, and south central, good to excellent elsewhere. Surface and subsoil moisture short. Generally light wind damage to wheat. Light to moderate infestations of greenbugs. Fieldwork: 5.5 days suitable.

KENTUCKY: Rainfall amounts of 0.25 to 0.75 in. fell over the northwest with 0.75 to 1.00 in. over the southeast. Temperatures averaged 5 to 8° below normal.

Wheat green and looking generally good. Growers concerned over garlic onion and market price. Field activity has picked up. Weather and firm soil has been favorable for topdressing small grains. Many tobacco beds prepared and quite a few seeded. Livestock generally good condition, many newborn calves. Supplemental feeds have been adequate for this mild and open winter.

LOUISIANA: Rainfall light. Temperatures 3 to 4° below normal. Extremes: 30 and 81°.

Soil moisture short. Fieldwork: 6.0 days suitable. Spring plowing 53% complete, 31% 1980. Corn planted 32%, 22% 1980, 17% average. Rice planted 12%, 11% 1980, 12% average. Vegetables fair. Wheat condition good. Pastures, livestock fair to good. Supplemental feeding continued.

MARYLAND AND DELAWARE: Temperatures averaged 7° below normal. Highs ranged from the low 50's to the upper 80's. Lows ranged from the teens to the upper 20's. Precipitation was extremely minimal. No stations reported over 0.50 in.

MICHIGAN: Winter returned. Temperatures and precipitation generally below normal. Temperatures averaged near normal to 3° below Upper and 2 to 7° below Lower. Moisture supply adequate all areas. Precipitation has been limited the last several weeks.

MINNESOTA: Temperatures averaged near normal in the northeast district and 4 to 6° above normal elsewhere. Extremes: 64° at Browns Valley and Pipestone and 10° at International Falls. Precipitation averaged up to 0.20 in. below normal northwest district, up to 0.30 in. below normal west central, north central and northeast districts, up to 0.40 in. below normal elsewhere. Precipitation totals were trace or less at all stations except International Falls which reported 0.04 in. and snowfall there was 1.00 in. Snow-depth zero except locally in the extreme northern districts.

MISSISSIPPI: Temperatures continued below normal. Extremes: 25 and 80°. Light rain in northern sections early in week. Widespread rains over weekend with 1.50 to 2.00 in. at numerous locations.

Soil moisture adequate to short. Fieldwork: 4.8 days suitable. Land preparation for spring planting main farm activity. Plowing 58% completed. Corn 20% planted. Winter wheat 35% jointing; good to fair condition. Watermelons 30% planted. Pasture condition fair. Livestock condition fair to good.

MISSOURI: Temperatures near normal. Precipita-

tion averaged less than 0.25 in. in the north while the south averaged nearly 0.50 in. Monthly totals averaged about 1.00 in. below normal.

MONTANA: Significant precipitation fell over most of southwest, northcentral and central early in week. Some areas in Plains received an inch or more precipitation. Some mountain areas received 2 to 3 in. Snowfall over plains ranged from an inch to 18 in. The northeast and southeast remained very dry. Temperatures were well above seasonal first of week, falling to near or a little below normal towards end of week. The northeast and southeast had temperatures that averaged 9° above normal. Highest 70° at Glendive, and lowest 1° at Cut Bank.

Winter wheat generally fair and greening up. Severe army cutworm infestation in southcentral and eastcentral counties. Snowcover light to none, wind damage light. Planting started some areas, well underway southcentral. Topsoil moisture short in eastern third of State, short to adequate elsewhere. Subsoil short to adequate; adequate in northwest. Days suitable fieldwork: 4.0. Range grass greening up in some areas. Cattle and sheep condition good. Calving and lambing 40%, shearing 45% complete. Stockwater short eastern third of State, short to adequate elsewhere.

NEBRASKA: Temperatures 2 to 7° above normal. Precipitation widespread at end of week with southern half receiving up to 0.50 in. of moisture.

NEVADA: Snow widespread first half of week followed by gusty winds. Temperatures below normal early in period, moderating end of week.

Inclement weather not favorable fieldwork. Limited progress this period. Calving and lambing progressing.

NEW ENGLAND: Above normal temperatures beginning and end of week with below normal temperatures in between. Precipitation ranged from 0.10 to 0.30 in. over the region, except for northern Maine, which received up to 1.25 in.

Weather conditions continue to be favorable for maple syrup production. Reports of syrup quality remains excellent.

NEW JERSEY: Temperatures averaged 8 to 10° below normal. Extremes: 5° at Newton on 18th and 55° at Cape May Court House on 16th. Rainfall averaged 0.03 in. north, 0.06 in. central and 0.18 in. south.

Soil moisture, in percent of field capacity, averaged: 100 north, 99 central and 100 south. Four inch soil temperature averaged: 33° north, 39° central and 39° south.

Soil preparation for early crops continues. Planting of early vegetables and Irish potatoes underway where soil conditions permit. Fruit pruning continues. Seasonally warmer weather would be beneficial.

NEW MEXICO: Light showers occurred in mountain sections late in week. Temperatures averaged near normal.

Soil moisture in short supply. High winds drying soil and causing blowing sand. No extensive, direct crop damage yet. Irrigated wheat and barley mostly good condition with the dryland crop in poor to fair condition. Alfalfa fields in southern areas in good condition. Seeding of chile getting underway in the Roswell area. Lettuce and onions in good condition. Ranges in fair condition. Livestock in fair to good condition. Calving and lambing continuing. Cattle continuing to be moved off of grain fields.

NEW YORK: Quite cool, with a moderating trend over the weekend. Temperatures averaged 7 to 9° below normal. Subzero readings in the Adirondacks. Periods of snow or flurries almost daily in Up-

state sections. Light accumulation in some areas. Precipitation water content 0.25 in. or more in the Great Lake sections and western Adirondacks. Elsewhere amounts were generally quite light.

NORTH CAROLINA: Temperatures ranged from a high of 71 to a low of 3° at Mt. Mitchell. Precipitation ranged from zero to 0.83 in.

Soil moisture: 16% very short, 65% short, 19% adequate. Fieldwork: 5.3 days suitable. Conditions: Wheat, oats, barley, rye, pastures, and tobacco beds fair to mostly good; Irish potatoes mostly fair to good. Plantings: Spring potatoes 70%, spring cabbage progressing, some corn in central coastal. Supplies: Hay, roughage, and feed grains mostly adequate. Major activities: Preparing land for spring planting, topdressing small grains and pastures, applying lime, caring for tobacco plant beds, planting gardens and general farm maintenance.

NORTH DAKOTA: Dry and mild. No sub-zero readings. Temperature extremes: 70 and 9°. No station reported more than a trace of precipitation.

Fieldwork began during midweek in the southeast corner of the State. Field operations mostly limited to surface tillage and fertilizer spreading including application of anhydrous ammonia. A few wheat fields seeded in southern locations but frost is still in the ground at about the 6 in. level at most locations. Fieldwork expected to start April 2 in the north central portion of the State where fields are currently muddy. Calving and lambing increasing with few losses. Hay supply outlook keeps improving with continued mild weather but a few operations are out of hay or are feeding poor quality roughages. Winter wheat greening in southwest corner.

OHIO: Average of daily highs were from 10 to 14° below normal. Highs were for the most part in the 40's. Average daily lows were from 4 to 8° below normal. Light snow fell over much of the State as a low pressure system moved eastward through the Gulf Coast States. Precipitation, however, was under 0.25 in. at most stations.

Soil temperatures seldom climbed out of the 30's. Frost penetration was limited to the top few inches in most areas. Plowing for spring planted crops continues. Wheat in west central and central areas is green and healthy.

OKLAHOMA: Temperatures averaged near normal southern one-third to 3° above normal northern two-thirds. East received only significant rainfall averaging 0.40 in. Central and western divisions received less than 0.10 in.

Wheat making good progress. About 20% in jointing stage compared to 15 last year and 10 average. A late hard freeze could be damaging to the crop. Fields with poor stands being reseeded to spring oats. Some wind damage from high winds midweek reported Panhandle and southwest. Wheat good condition all areas except Panhandle where condition fair. Pastures and ranges remain in fair to poor condition. Most cattle now removed from wheat pasture and gains reported good. Runoff needed to replenish low stock ponds. Days suitable fieldwork: 4.2.

OREGON: Temperatures slightly above normal. Rainfall averaged 1.00 in. along the coast with Brookings reporting almost 2.00 in. The rest of the State received from 0.50 in. to 1.00 in. except for the north central and northeastern sections, which received an average of 0.20 in.

Soil moisture supplies adequate. Winter wheat condition good; weed and disease control continuing as conditions permit. Early potatoes going in. Apricots in bloom in Wasco County; cherries about two weeks away from bloom. Weather and moisture have been ideal for ranges and pastures.

PENNSYLVANIA: Typical March weather with cold blustery winds and frequent snow squalls. Prevailing strong northwest winds with gusts to 60 miles per hour kept temperatures 9 to 13° below normal for coldest week since early February. Maxima mostly 20's to 30's and minima teens and 20's with below zero readings northwest and north central mountains 18th. Extremes: -4 and 52°. Snow flurries and snow squalls brought 2 to 10 in. new snow central and northern mountains with precipitation measuring 0.20 to 0.90 in. Elsewhere, 0.10 to 0.30 in. common.

PUERTO RICO: Island average rainfall 0.39 in. or 0.10 in. below normal. Temperatures averaged about 79° on Coasts and 74° Interior Divisions. Extremes: 94 and 54°.

SOUTH CAROLINA: Temperatures well below normal. Several mornings below freezing. The first part of the week was extremely windy. General rains fell during mid and latter part of week bringing some relief to very dry conditions.

Corn planting 32% complete. Peaches blooming, experienced some frost damage, extent not fully known. Coastal vegetables also suffered some damage from cold and high winds. Tobacco beds mostly good condition, early transplanting underway.

SOUTH DAKOTA: Mild days, cool nights and continued dry was the weather story for most of the State again. A storm system moving out of the northern Rockies produced some precipitation in the southwestern corner of the State but amounts were generally light. Average temperatures ranged from the low 30's in the extreme east to near 40° in the southwest and were from 1 to 9° above normal. The highest reported temperature was 75° at Wood, while the coldest was 5° at Martin. Light rain and snow fell over the southwest. Oelrichs reported the greatest amount with 0.35 in., while Milesville reported 0.17 in. and Murdo 0.15 in. No measurable precipitation was reported over the remainder of the State.

TENNESSEE: Three consecutive low pressure systems moved rapidly through bringing light to moderate precipitation. Colder air followed each storm, causing below normal temperatures especially in northeast. Rainfall was generally 0.50 to 1.00 in. This is still somewhat below normal for this time of year.

Fieldwork: 5.1 days suitable. Soil moisture short. Spring plowing 56% complete, 30% in 1980, average 35%. Tobacco plant beds 78% seeded, 1980 37%, average 27%. Pastures 51% poor and 49% fair. Livestock fair condition. Wheat and oats fair to good condition. Farm activities include small grains topdressing, pasture renovation and fertilization, spring plowing, garden preparation and orchard pruning and spraying.

TEXAS: Weather: Two Pacific cold fronts moved eastward across State producing scattered thunderstorms eastern half State. Temperatures 3° above normal Edwards Plateau, 2 to 4° below normal Northeast, East, Lower Valley, South Central; near normal elsewhere. Precipitation below normal.

Range and livestock: Ranges, pastures continued to improve. Improved moisture conditions have promoted growth. Livestock generally good condition. Supplemental feeding continued at reduced level.

Commercial vegetables: Rio Grande Valley harvest of lettuce, cabbage, carrots. Onions doing well, some blight appearing. Watermelons progressing well. Citrus harvest continues, grapefruit, late oranges being picked. South Texas, early summer vegetables hurt by freeze, being replanted. San Antonio-Winter Garden area, carrot harvest continued. Potato, summer onion planting beginning. Early onions progressing well. East

Texas, watermelon, potato planting continued. Soil temperature remains cool. North Texas, some early planted vegetables hurt by near freezing temperatures. Trans-Pecos region onions progressing well, harvest expected early April. Potato planting underway. High Plains, preplant activities continued. Onion, potato seed bed preparation nearing completion. Peach trees in full bloom. Pecan trees continue to bud.

Crops: High winds blowing dust High Plains depleted soil moisture, caused severe wind erosion. Land preparation spring crops underway High, Low Plains; seeding active southern part of State. Cotton planting continued southern part State; wet field conditions delayed seeding some areas. Lower Valley water standing some fields. Some newly planted fields in Valley damaging rains, be replanted. Coastal Bend fields replanted because cold soil temperatures, wet fields. Pre-plant irrigation, land preparation High, Low Plains. Sorghum planting full swing Blacklands. Wet field conditions, high winds slowing planting operations. Late seeded fields replanted because weather damage. Corn fields good stand South, South Central Texas. Wet field conditions slowed planting activities; water standing some fields Lower Valley. Coastal Bend, high winds problem newly emerged fields. Small grain fields good progress following recent showers; dryland wheat Northern High Plains needs additional moisture. High winds, blowing dust across High, Low Plains damaged some wheat fields. Extensive spraying operations for greenbugs, aphids underway Low Plains. Wheat beginning to joint Panhandle; oat fields beginning to head Blacklands. Wheat condition 11% excellent; 41% good; 34% fair; and 14% poor. Sugarcane harvest resumed Lower Valley following recent showers. Cotton planted 6%, 8% 1980, 7% average. Rice planted 11%, 17% 1980, 14% average. Sorghum planted 38%, 47% 1980, 36% average. Corn planted 29%, 29% 1980, 19% average.

UTAH: Recurring periods of light rain or snow in most sections. Accumulated amounts variable but generally light to moderate. Average temperature range from 3° below normal to 6° above.

Soil moisture improved a little but continues serious in most lower elevation ranges and dryland farms. Winter wheat greening up, mostly good condition. Fruit tree buds beginning to swell. Orchard pruning virtually complete. Field preparation in progress in extreme south. Livestock generally good condition. Calving and lambing nearing completion.

VIRGINIA: Average temperatures 5 to 10° below normal. Extremes: Low 60's to the mid teens. Precipitation quite varied. Rainfall of 0.50 in. coastal sections and to 6.00 in. of snow extreme western mountains 19th. Elsewhere, precipitation generally light.

Topsoil moisture continuing short to adequate. Fieldwork: 4.1 days available. Pasture and oats condition rated fair. Barley, wheat, alfalfa and peach condition good to excellent. Tobacco plant beds 68% seeded, virtually complete south and southeast. Some corn planted southeast. Farmers active plowing and disking; liming and fertilizing; overseeding pastures and hay fields; feeding and caring for livestock; topdressing and spraying for weeds in small grains; seeding alfalfa and oats central region; potato planting Eastern Shore; making maple syrup; and ordering supplies.

WASHINGTON: West: Temperatures averaged 1° above normal in the San Juan region to 4° above elsewhere. Precipitation ranged from 0.30 in. below normal in the San Juan region to 1.70 in. below in the coastal areas. Field activities continued to flourish for a second week under excellent spring conditions. Seed bed preparation continued. Strawberry rows being cut back,

while berry planting and replanting progressed. Pastures making good progress with some new grass seedings being planted. Christmas tree planting and fertilizing continuing. Cattle being put on pasture.

East: Temperatures ranged from 5° above in the Palouse-Blue Mountains to 7° above normal elsewhere. Precipitation averaged 0.10 to 0.20 in. below normal throughout region. Excellent spring conditions have left soil moisture good and planting of potatoes and small grains ahead of normal. Winter wheat continues to look excellent, however foot rot and striped rust evident. Fruit development continues to make excellent progress, well ahead of last year. Calving and lambing continued. Hay supplies remain plentiful. Live-stock in good shape, with cattle being put out on range.

WEST VIRGINIA: Temperatures averaged 7 to 10° below normal. High 66°, low 6°. Precipitation averaged slightly below normal. Rain and snow late in week affected most areas.

Soil moisture adequate to short. Days suitable for fieldwork: 1.6. Major activities: Calving, plowing, general maintenance. Hay, grain and other feed supplies adequate.

WISCONSIN: Temperatures averaged near normal. Highs 30's and 40's beginning week; dropped to 20's and 30's midweek, increased to 50's weekend. Lows in teens and 20's. Extremes: 57 and 5°. Precipitation continued light. Snow 1 to 2 in. along eastern areas 18th, 19th, heavier Lake Superior snowbelt. Snow melted and currently no snowcover.

(Continued on page 24)

International Weather and Crop Summary

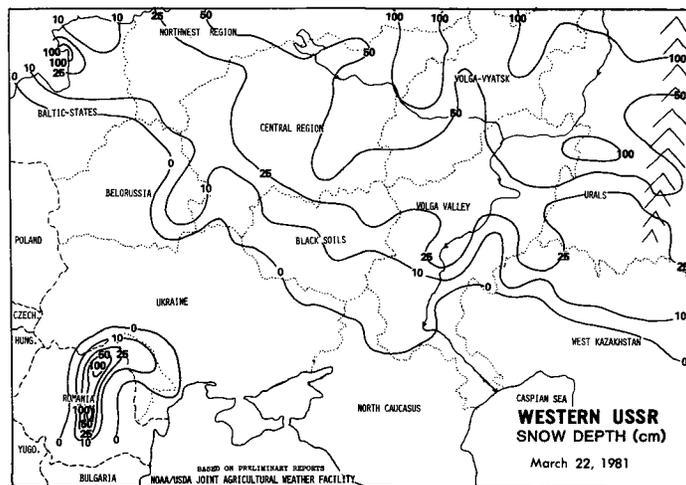
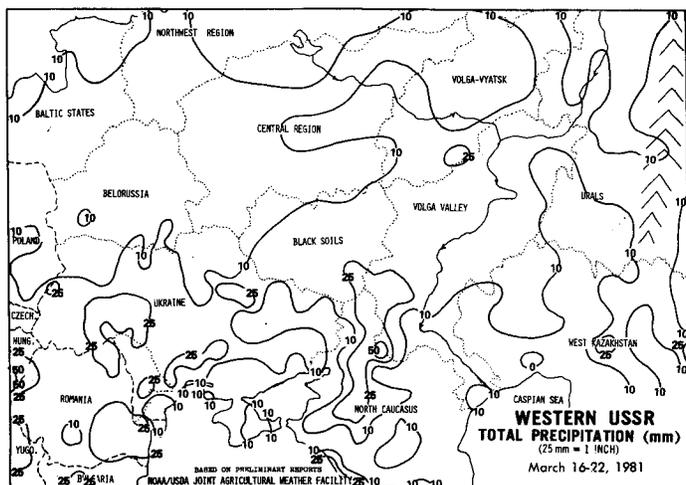
MARCH 16 - 22, 1981

HIGHLIGHTS

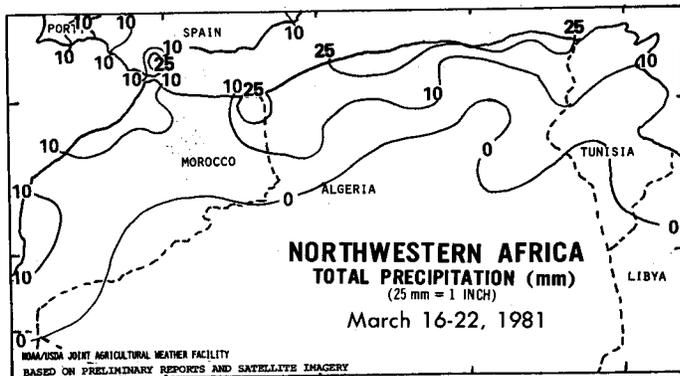
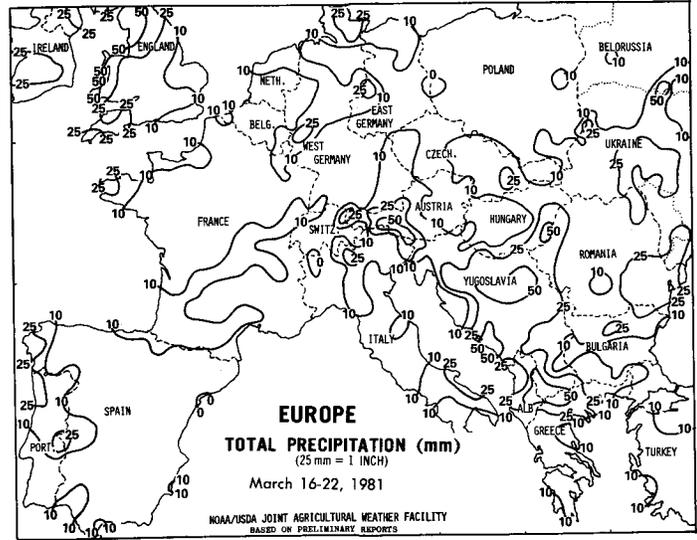
- WESTERN USSR:** Wet weather continued in many winter grain areas. Above-normal temperatures permitted some greening-up across the South.
- EUROPE:** Dry conditions persisted in Spain, southern Portugal, and much of northern Italy. Temperatures remained warm enough for winter grain growth in most areas.
- NORTHWESTERN AFRICA:** Light rain in western Algeria improved winter grain prospects, with conditions very good to the East and very bad to the West in Morocco.
- SOUTH AFRICA:** Showers were confined mostly to northern portions of the Maize Triangle. Weather conditions remain favorable for the corn crop which is approaching maturity.
- INDIA:** Heavier rainfall in northern winter grain areas interfered with maturation.
- CHINA:** Winter grains were generally in good condition, but warm, dry weather in northern areas put additional stress on plants. Wet conditions prevailed in the South, with transplanting of early rice in progress.
- SOUTH AMERICA:** Scattered showers produced locally heavy rain in Minas Gerias; elsewhere, relatively dry weather aided maturation. Yield prospects remain bright.
- MEXICO:** Sunny, warm weather favored harvesting of west coast vegetables as well as planting and early growth of northeastern corn and grain sorghum.

WESTERN USSR: Warmer weather caused more snowmelt in the winter grain belt. Only minor areas in the lower Volga Valley, the Black Soils, and the Central Region had any snow cover by the week's end. Above-normal temperatures in the Ukraine and North Caucasus permitted winter grain growth across southern portions of the belt, and in-

creased spring planting activity was reported. Above-normal rainfall over much of the Ukraine and North Caucasus kept fields wet, and in some areas, conditions were probably a little too wet for fieldwork despite the previous week's drier weather.

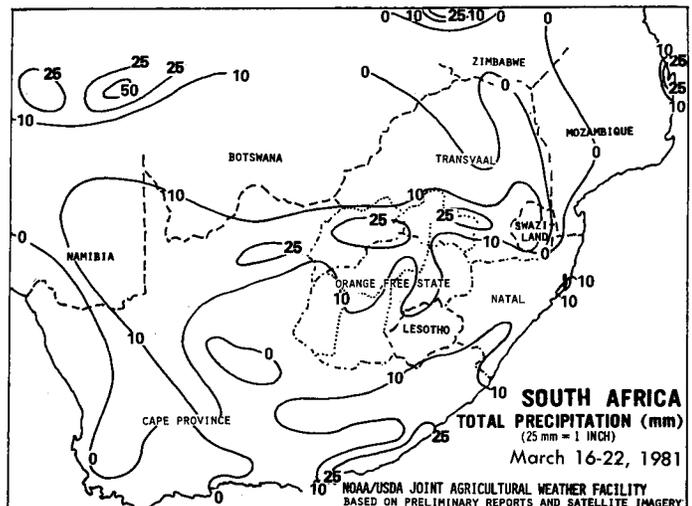


EUROPE: Temperatures decreased to near normal in most southwestern countries, but only in Poland were conditions too cold for winter grain growth. All areas received at least some precipitation, with heaviest totals occurring in the Balkans. Portions of the Po Valley in northern Italy had some beneficial light rainfall, but much greater amounts will be needed to prevent further deterioration of winter grain prospects as temperatures rise. On the Iberian Peninsula, substantial precipitation was limited mainly to northern Portugal. Nearly all of Spain did not receive enough moisture to prevent crops from drying out further. In northern portions of Europe, soil moisture remained in good supply.

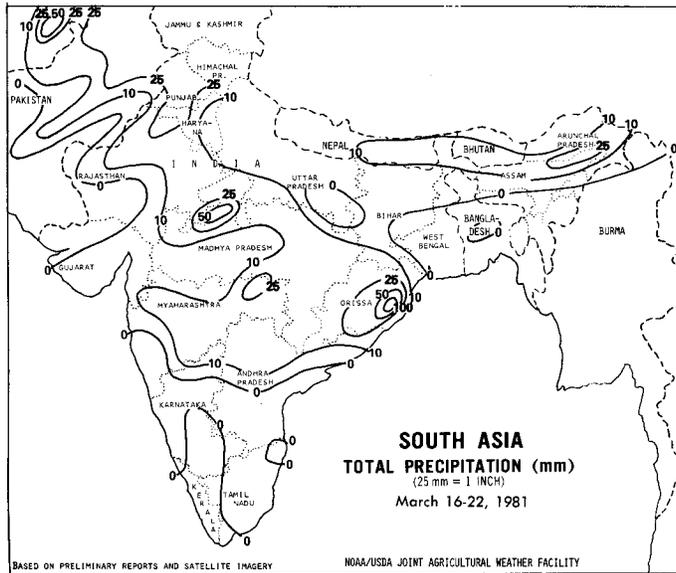
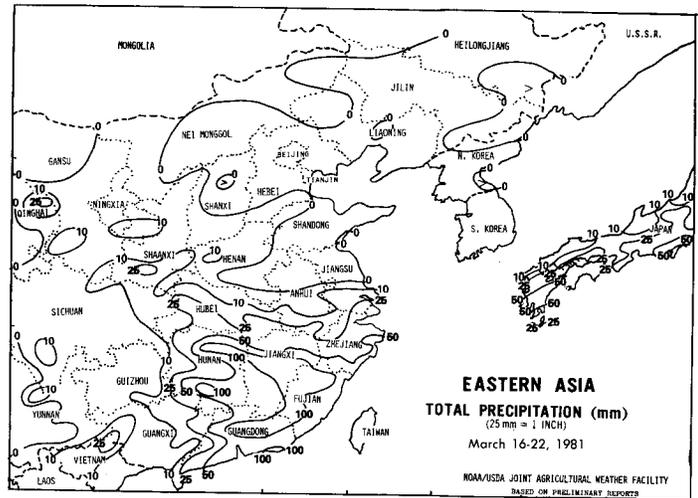


NORTHWESTERN AFRICA: A low-pressure system developed over Algeria early in the week and spread above-normal rainfall across winter grain areas of Algeria and Tunisia. Rainfall amounts were lightest in western Algeria where conditions had become a little too dry for grains in the heading stage. Nevertheless, this timely moisture alleviated the dryness somewhat and brightened the area's crop prospects. Soil moisture conditions in Tunisia and eastern Algeria remained good. Light rain in Morocco may have temporarily halted potential yield declines in the north, but more moisture will be needed over the next several weeks to prevent further decreases. Winter grains in southern Morocco were probably too far gone to benefit from any amount of rainfall.

SOUTH AFRICA: The rainy season is showing signs of tapering off (just slightly ahead of the long-term average) with only scattered showers occurring throughout South Africa's major corn-producing area. Highest weekly rainfall amounts (20 to 30 mm) were found in the northern portion of the Maize Triangle. Long periods of sunshine, as indicated by satellite photos, continued to provide good growth conditions during the grain-filling and ripening stages. Soil moisture supplies are sufficient and temperatures have been favorable for corn development. Harvesting of early season corn (planted in October and early November) should be underway within the next 2 weeks.

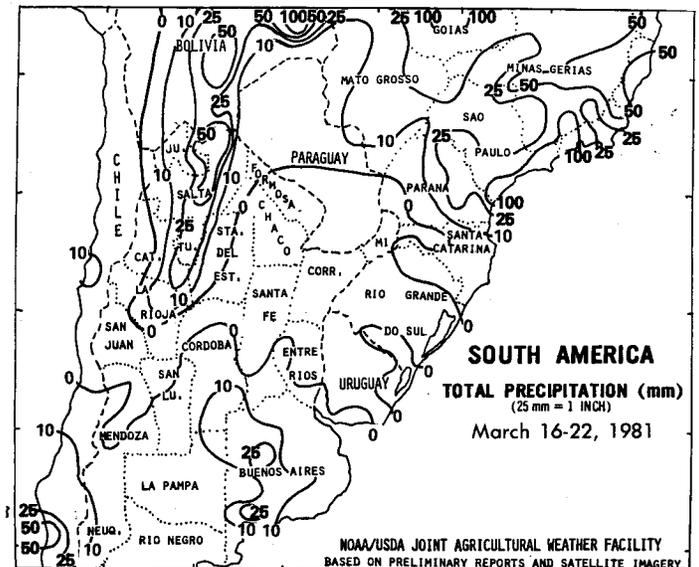


EASTERN ASIA: Some light rainfall along the Yellow River on the North China Plain gave slight relief to parched winter grains. Just to the north, most of Hebei remained dry, and temperatures ranging much above normal put additional stress on plants. Southern portions of the belt should still have adequate moisture for continued growth. Rainfall south of the Yangtze River increased further and spread to cover a larger area. Although conditions are probably too wet in some areas for newly planted crops, conditions are not nearly as wet as last year at this time. In South Korea, no precipitation occurred, but soil moisture should remain adequate for winter grain growth in spite of warmer than normal weather.



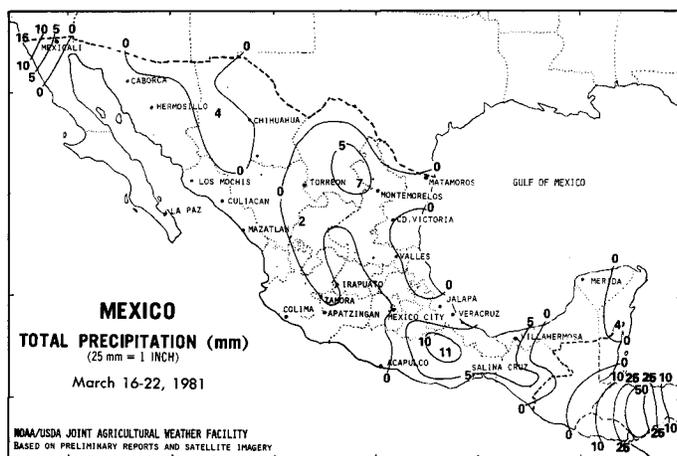
SOUTH ASIA: A frontal system moving in from the west dumped above-normal rainfall over extensive areas of India and Pakistan. In central parts of India, the moisture helped replenish soil moisture supplies, although much will be lost in the hot weather of April and May before the monsoon begins. The moisture in northern India and Pakistan was probably somewhat detrimental to maturing winter grains. However, apparently no excessive winds accompanied the front, so damage should be minimal if fields dry out fairly rapidly. Temperatures for the week averaged just below normal, with highs ranging into the low 30's.

SOUTH AMERICA: Weekly rainfall was widely scattered with highest amounts (75 mm or more) confined to coastal areas, east of the major crop areas of Sao Paulo and Minas Gerais. Northern corn areas in Minas Gerais received 50 to 70 mm of rain; but most other crop areas in Brazil and Argentina had relatively light rainfall (less than 15 mm). Average temperatures were slightly below normal in all regions. In general, the weather continued to cooperate with crop development and harvest activities in both countries. The heavy showers during mid-week in Minas Gerais may have slowed harvesting somewhat but caused no major delays. Elsewhere, the dry weather aided the ripening process. Harvesting should begin in southern crop areas of Brazil and Argentina very soon.





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MEXICO: Sunny, warm conditions dominated most of the country. A few showers dotting the east and extreme northwest were too light to improve soil moisture nor interfere with field activities. Harvesting of West Coast vegetables and planting and early growth of corn and grain sorghum in the northeast should be progressing well.

STATE SUMMARIES (Continued from p.21)

Frost depths continuing to recede. Soil moisture adequate.

WYOMING: Temperatures continued above normal. Lower Platte Drainage highest with 68° while Snake Drainage lowest with 7°. All stations with few exceptions reported below normal precipitation.

Winter wheat mostly good condition, additional moisture needed all areas. Farmers preparing for spring planting. Few fields barley planted. Livestock mostly good condition. Calving, lambing and shearing underway.

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