

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

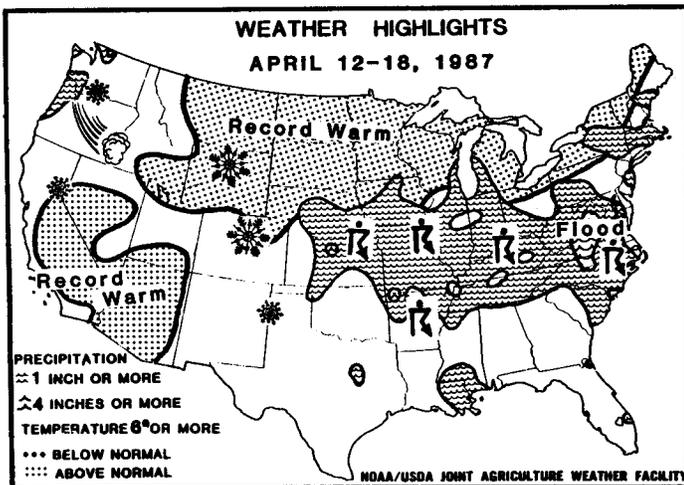
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Apr. 21, 1987

National Weather Summary

April 12 to 18, 1987



TUESDAY...The spring storm moved to the middle Mississippi River, spreading a wide area of showers from the eastern central Plains through the Great Lakes to western New York, the Mid-Atlantic States, and most of the Southeast. The heaviest showers and severe weather reached from the Tennessee Valley into the central Great Lakes region. Much warmer weather was spreading over the West.

WEDNESDAY...The complex spring storm redeveloped in eastern North Carolina and spread powerful thunderstorms from the Carolinas to western Virginia. The heavy rain combined with easterly winds and threatened severe flooding. Lighter showers and rain reached from the lower Missouri Valley to the Tennessee Valley, the Great Lakes, and from western New York to Florida. As temperatures rose past the century mark in southern California they were in the seventies and eighties in the Great Plains.

THURSDAY...Moderate to heavy rain and occasional thunderstorms continued in most of Virginia and northern and western North Carolina. Many streams rose out of their banks. Lighter showers reached from the Ohio and Tennessee Valleys to southern New England and Georgia. Temperatures soared into the eighties as far north as Nebraska.

FRIDAY...Light showers and rain continued in the East Coast States and the Appalachians. Some moderate amounts fell in western Virginia where severe flooding was occurring. Arizona, the Great Plains, and upper Mississippi Valley saw record-warm temperatures. A new storm spread showers over the Northwest.

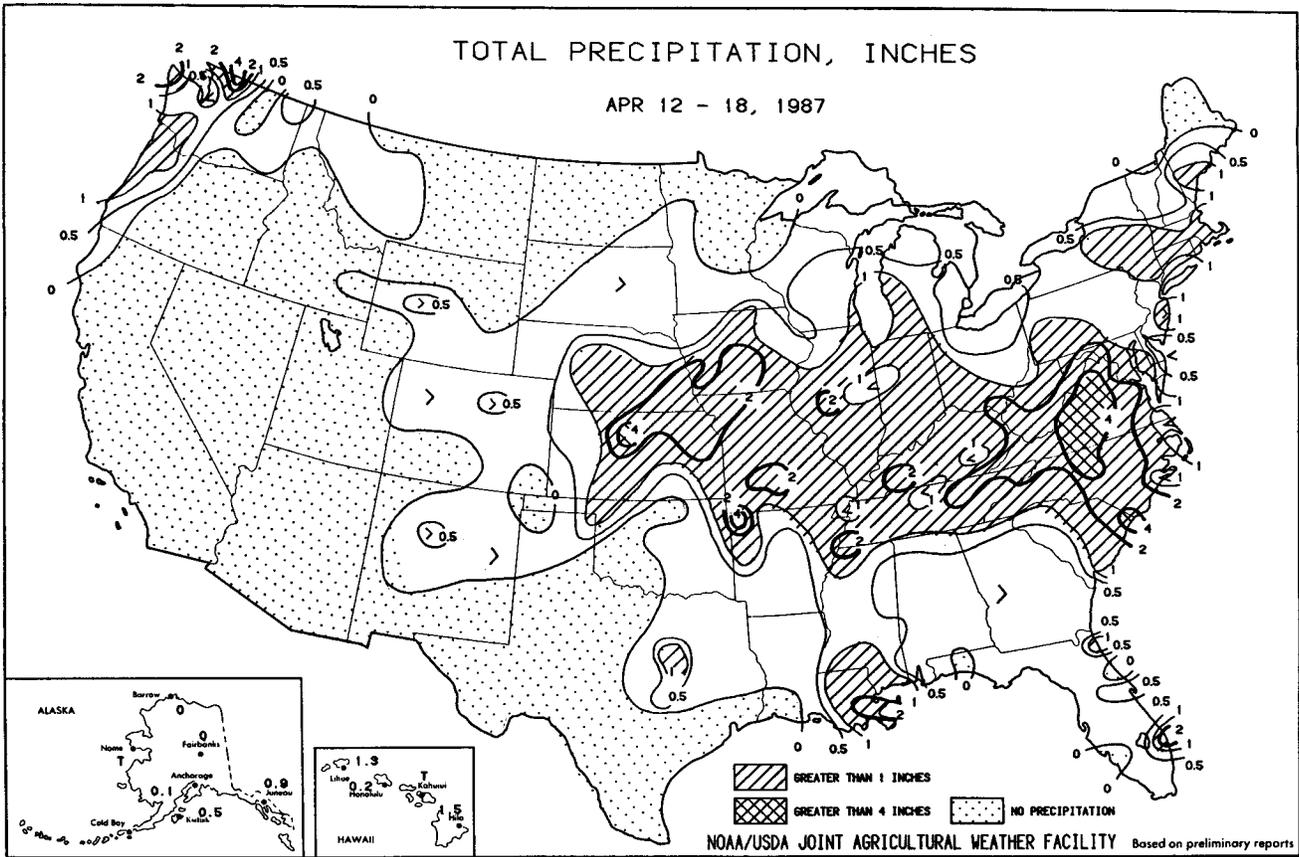
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HIGHLIGHTS: A slow-moving storm spread showers from the central Rockies and Great Plains to the east coast. Snow covered the central Rockies at the beginning of the week and cold rain fell over the central High Plains. Thunderstorms developed in the eastern part of the central Plains and moved with the storm through the Midwest, the lower Mississippi Valley, and the Mid-Atlantic States. Heavy rain covered parts of the central Plains and the Mid-Atlantic States. Much of Virginia had serious flooding. Unusually warm weather spread throughout the Plains as the storm moved to the Mid-Atlantic region. Temperatures rose to the nineties as far north as North Dakota. At week's end another storm spread showers over the Northwest and ushered in much cooler air on strong, gusty winds. Snow covered the mountains from Washington to northern California and the northern Rockies.

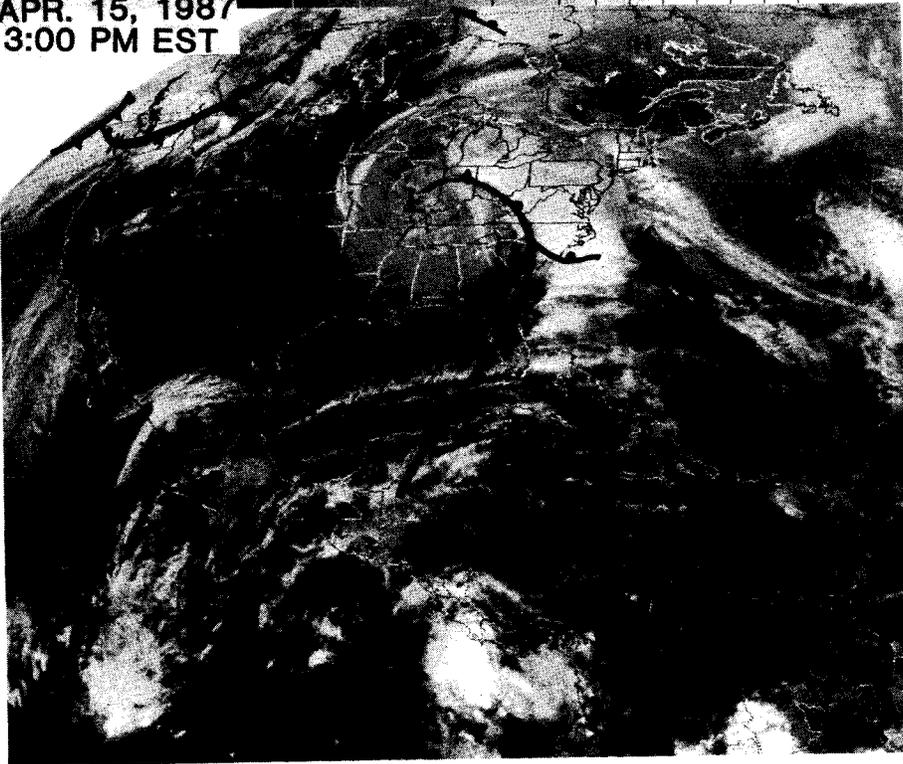
SUNDAY...Snow fell in the central Rockies and cold rain spread over the central High Plains. Moderate showers developed later in eastern Kansas, Nebraska, and the lower Missouri Valley. In the East, showers reached from the Tennessee Valley and Carolinas to the eastern Great Lakes and southern New England. Moderate to heavy showers and a few thunderstorms developed through southern New York and New England.

MONDAY...The developing storm in the central Great Plains spawned severe weather in the eastern portion of the central and southern Plains and spread through the Mississippi Valley. Heaviest showers were from Kansas and Nebraska to Illinois and the lower Mississippi Valley. Showers tapered-off in the Northeast but local flooding continued. Snow fell in the mountains of southern New England.

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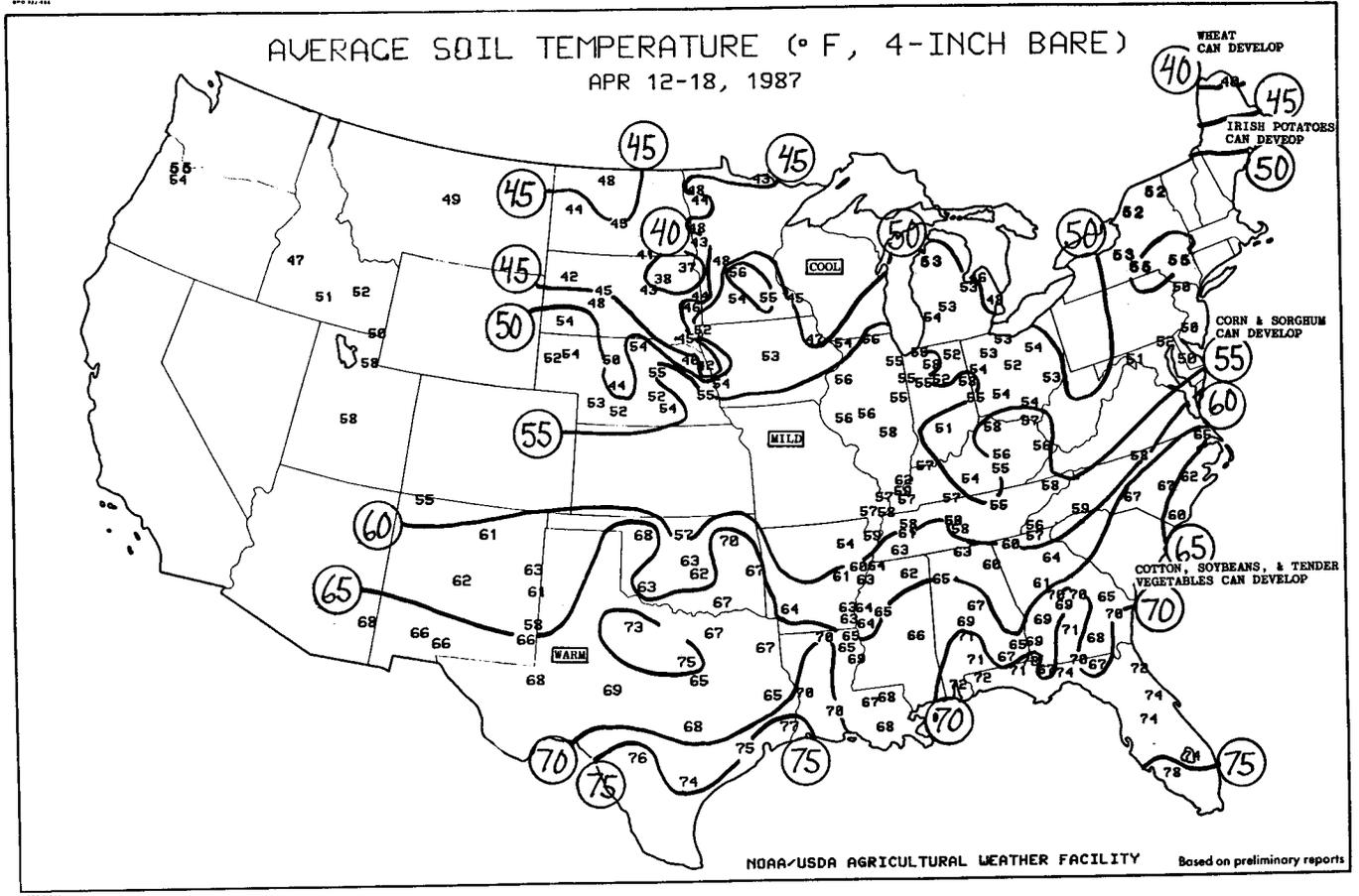
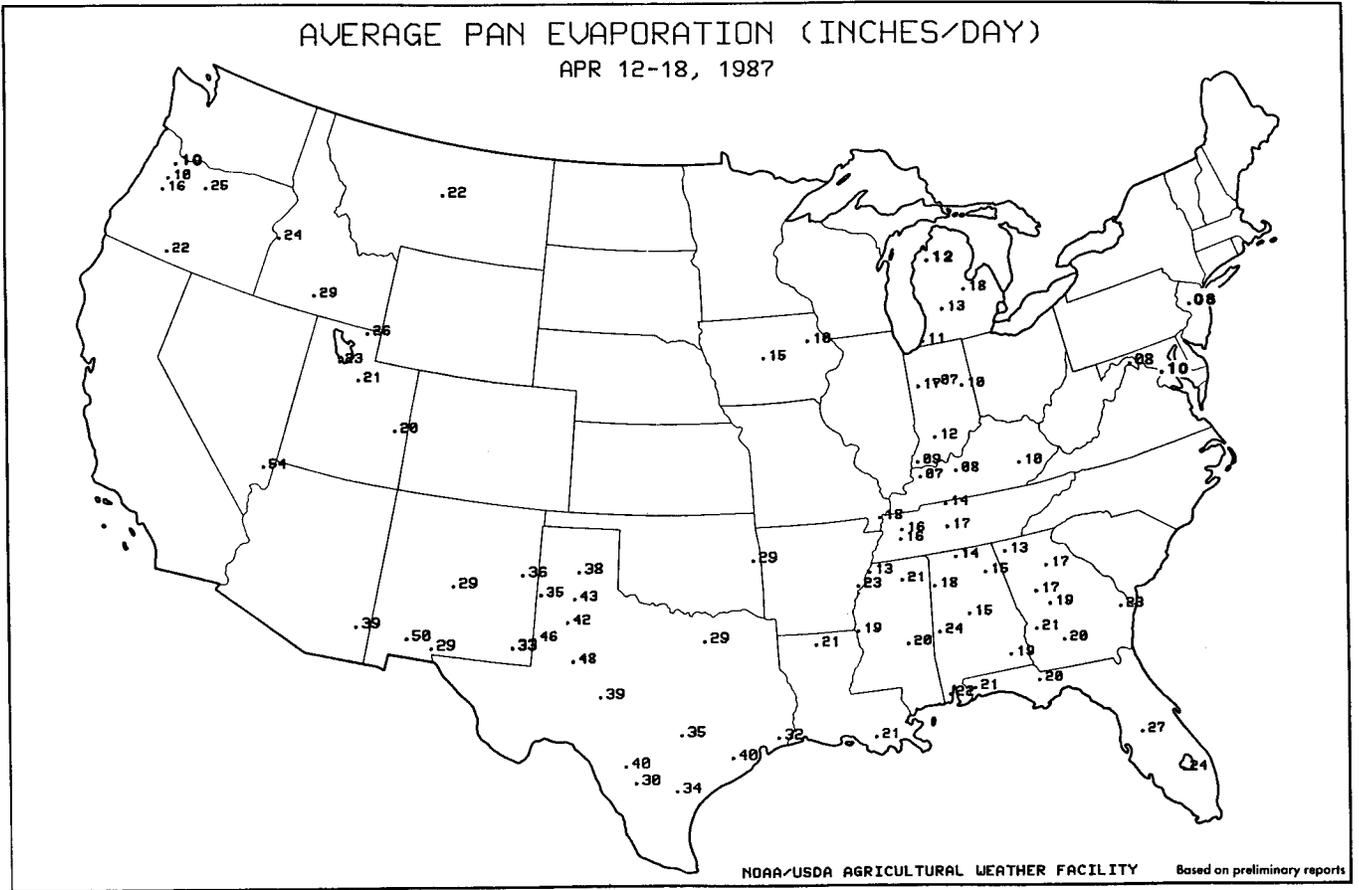


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APR. 15, 1987
3:00 PM EST



HEAVY RAIN FALLS OVER THE CAROLINAS AND VIRGINIA. LIGHTER RAIN FALLS OVER THE MIDWEST AS A SPRING STORM MOVES SLOWLY ACROSS THE EASTERN UNITED STATES. THE HEAVY RAIN CAUSED SEVERE FLOODING IN THE MID-ATLANTIC STATES.

A PACIFIC STORM BRINGS RAIN TO BRITISH COLUMBIA AND WASHINGTON.



The Drought Severity (Long-Term, Palmer) Index

Lyle M. Denny and Thomas R. Heddinghaus

The Drought Severity, or Palmer, Index is an index of meteorological drought (or moisture excess) and indicates prolonged abnormal conditions affecting water-sensitive economics. The index usually ranges from about -6 to +6, with negative values denoting dry spells and positive values, wet spells of weather (categories of values are given under the accompanying map). The equations for the index were derived from monthly average data and based on the concept of a balance between moisture supply and demand (Palmer, 1965). The equations have been modified to compute the index on a weekly basis for publication in the Bulletin. Input data consists of weekly temperature averages and precipitation totals for 350 climate divisions in the United States and Puerto Rico.

The index is a sum of the current moisture anomaly and a portion of the previous index to include the effect of the duration of the drought or wet spell. The moisture anomaly is the product of a climate weighting factor and the moisture departure. The weighting factor allows the index to have a reasonably comparable significance for different locations and time of year. An index value for a division in Florida would have the same local implication as a similar value in a more arid division in western Kansas. The moisture departure is the difference of water supply and demand. Supply is precipitation and stored soil moisture, and demand is the potential evapotranspiration, the amount needed to recharge the soil, and runoff needed to keep the rivers, lakes, and reservoirs at a normal level. The runoff and soil recharge and loss are computed by keeping a hydrologic accounting of moisture storage in two soil layers. The surface layer can store one inch, while the available capacity in the underlying layer depends on the soil characteristics of the division being measured. Potential evapotranspiration is derived from Thornthwaite's method (1948).

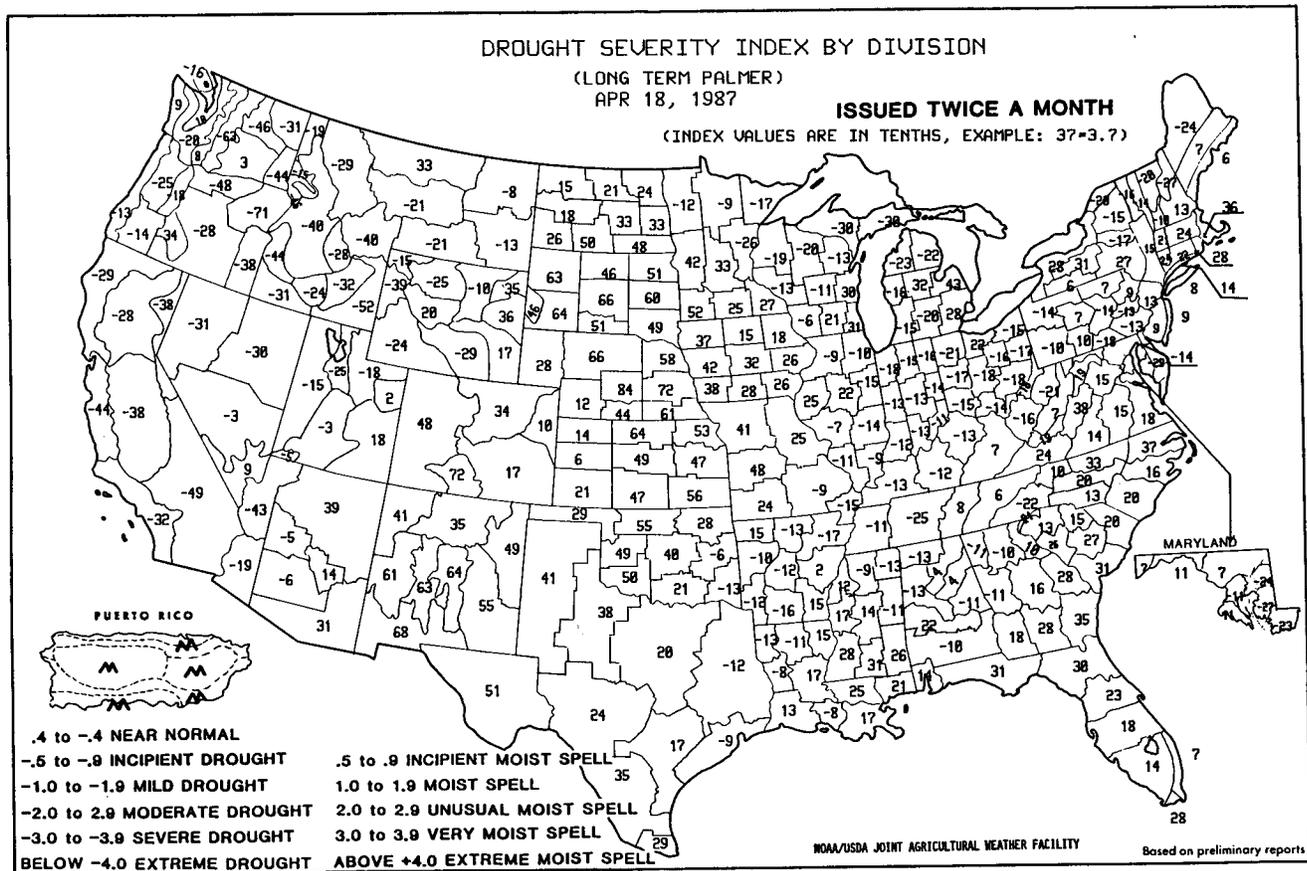
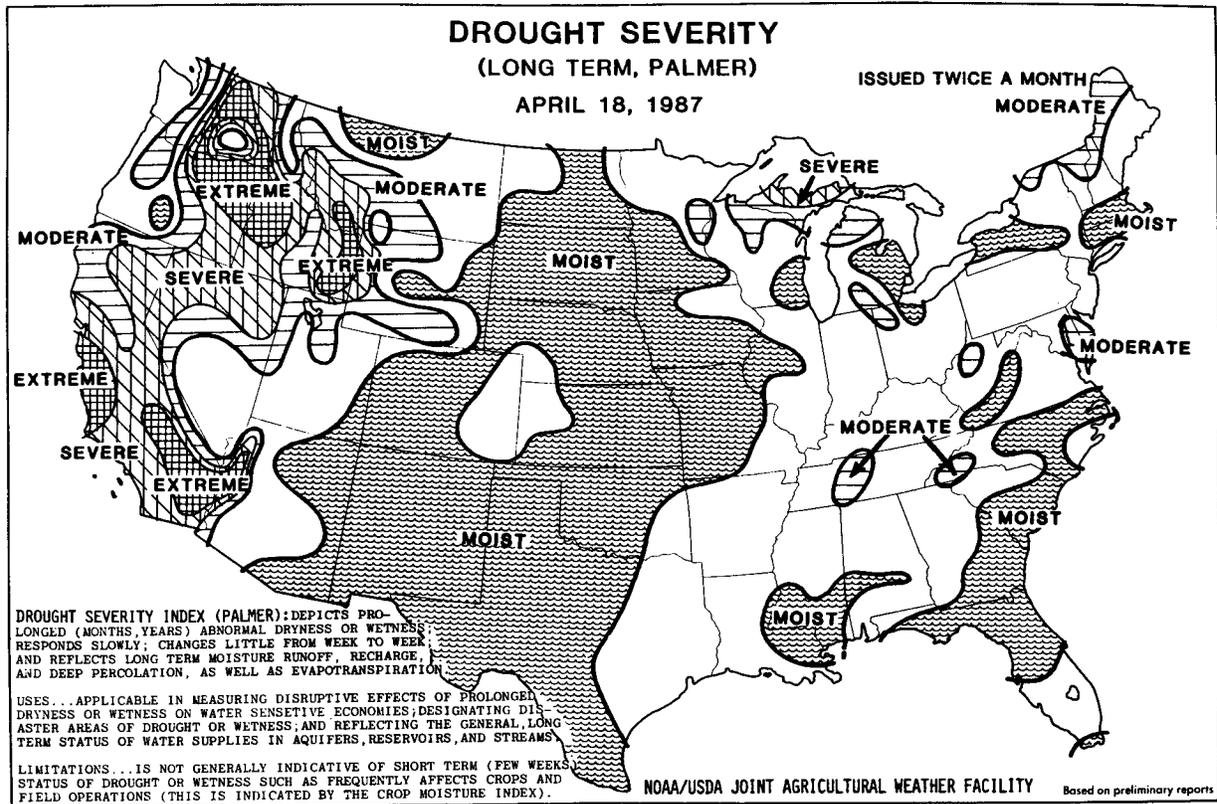
The index is measured from the start of a wet or dry spell and is sometimes ambiguous until a weather spell is established. A week of normal or better rainfall is welcome in an area that has experienced a long drought, but may be only a brief respite and not the end of the drought. Once the weather spell is established (by computing a 100 percent "probability" that an opposite spell has ended), the final value is assigned. To make the program have a real-time significance, a value is assigned based on a greater than 50 percent "probability" that the opposite weather spell has ended. This is not entirely satisfactory, but it does allow the index to have a value when there is a doubt that it should be positive or negative.

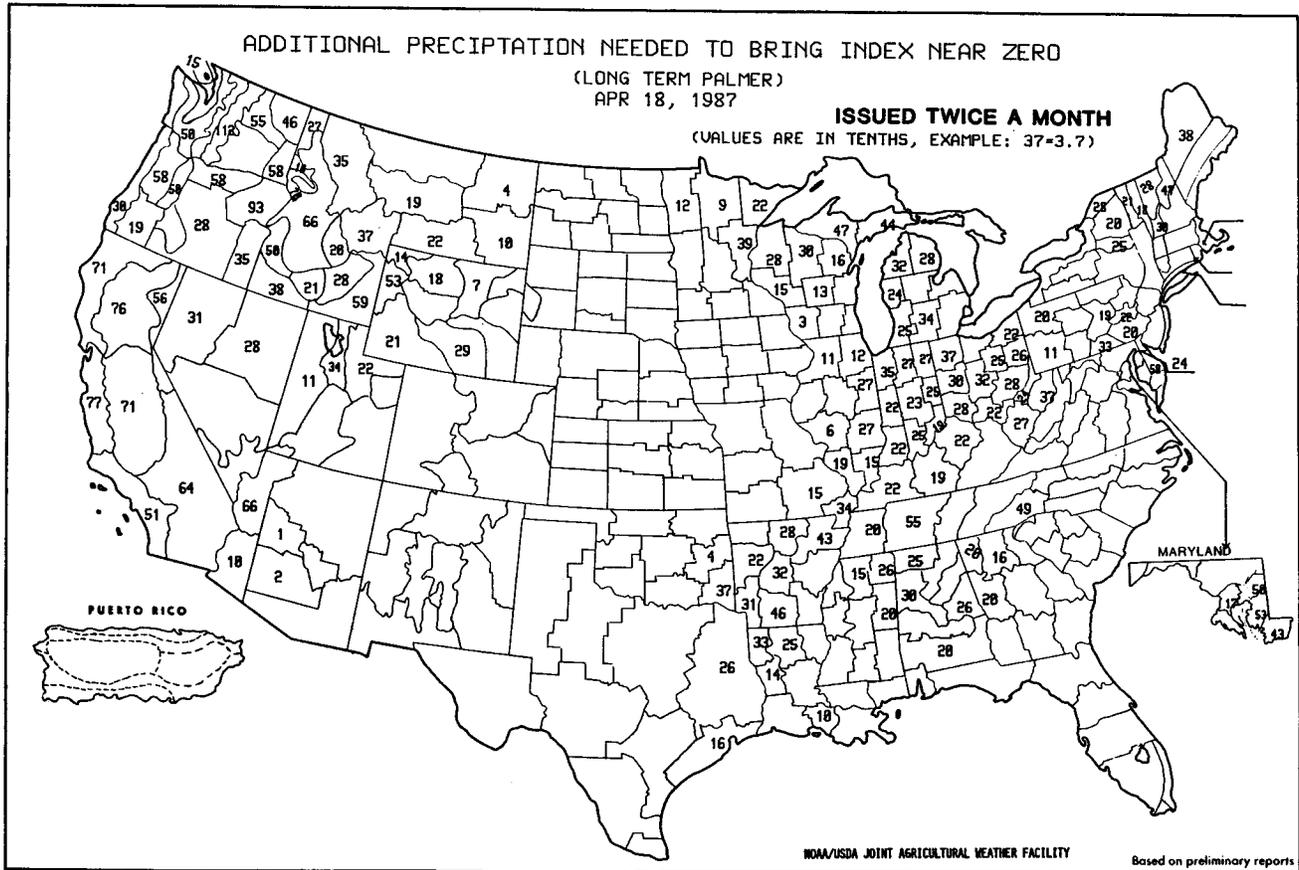
One aspect that should be noted is that the demand part of the computations includes three parameters--potential evapotranspiration, recharge of soil moisture, and runoff--any one of which may produce negative values. If only enough rain fell to satisfy the expected evapotranspiration but not enough to supply the recharge and runoff, then a negative index would result. If such an odd situation continued, agriculture would progress at a normal pace but a worsening drought would be indicated. Shallow wells and springs would dry and the levels of rivers, lakes, and reservoirs would fall. Serious economic stress to the livestock trade, industries, and cities would eventually result. 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 mid-1960's when New York City almost ran out of water.

A detailed explanation and examination of the index is given by Alley (1984). Both Alley and Karl (1983) address the sensitivity of the index and list some limitations.

References:

- Alley, W., 1984: "The Palmer Drought Severity Index: Limitations and Assumptions," Journal of Climate and Applied Meteorology, 23, 1100-1109.
- Karl, T.R., 1983: "Some Spatial Characteristics of Drought Duration in the United States," Journal of Climate and Applied Meteorology, 22, 1356-1366.
- Palmer, W.C., 1965: Meteorological Drought, Weather Bureau Research Paper No. 45, U.S. Dept. of Commerce, Washington, DC, 58pp.
- Thornthwaite, C.W., 1948: "An Approach Toward a Rational Classification of Climate," Geographical Review, 38, 55-94.



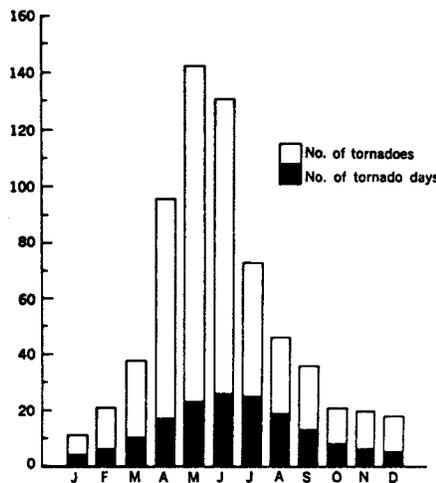


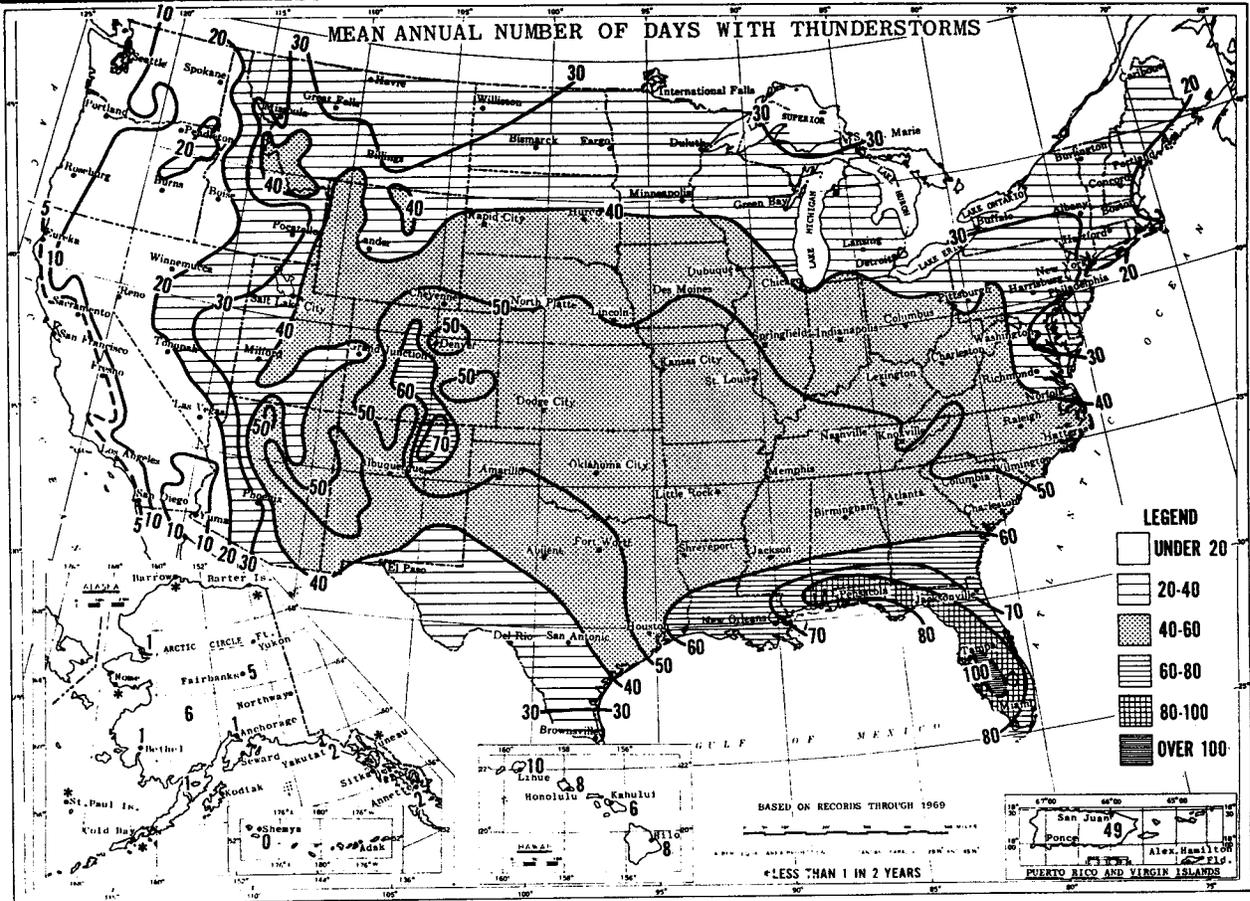
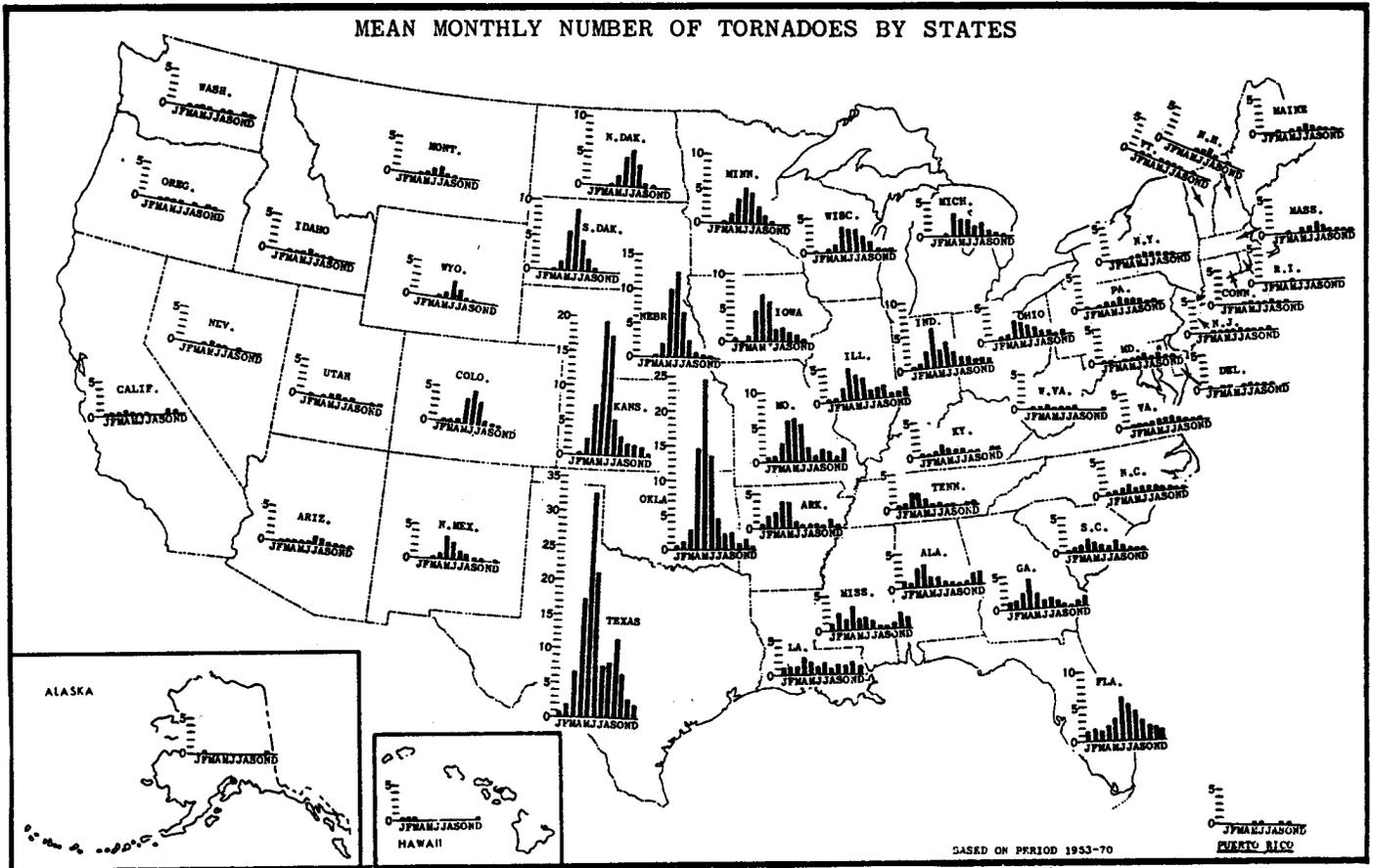
Additional Precipitation Needed to Bring the Drought Index to Near Zero

A parameter derived from the calculations of the Drought Severity Index is the additional precipitation in inches needed to bring the index to near zero. This parameter is computed for all values of the current week's index less than -0.5 (the upper limit of an incipient drought) and left blank for all values greater than or equal to -0.5 . The precipitation values are theoretically the additional

amounts required to end the drought defined by the index in each climatic division. In using this parameter to make projections, it must be realized that these values are instantaneous, valid only for the current week. To end the drought in a given climatic division for the oncoming week, the precipitation amount listed plus near-normal rainfall must occur.

AVERAGE MONTHLY NUMBER OF TORNADO DAYS IN THE UNITED STATES (1953 to 1971, 12,444 REPORTED)





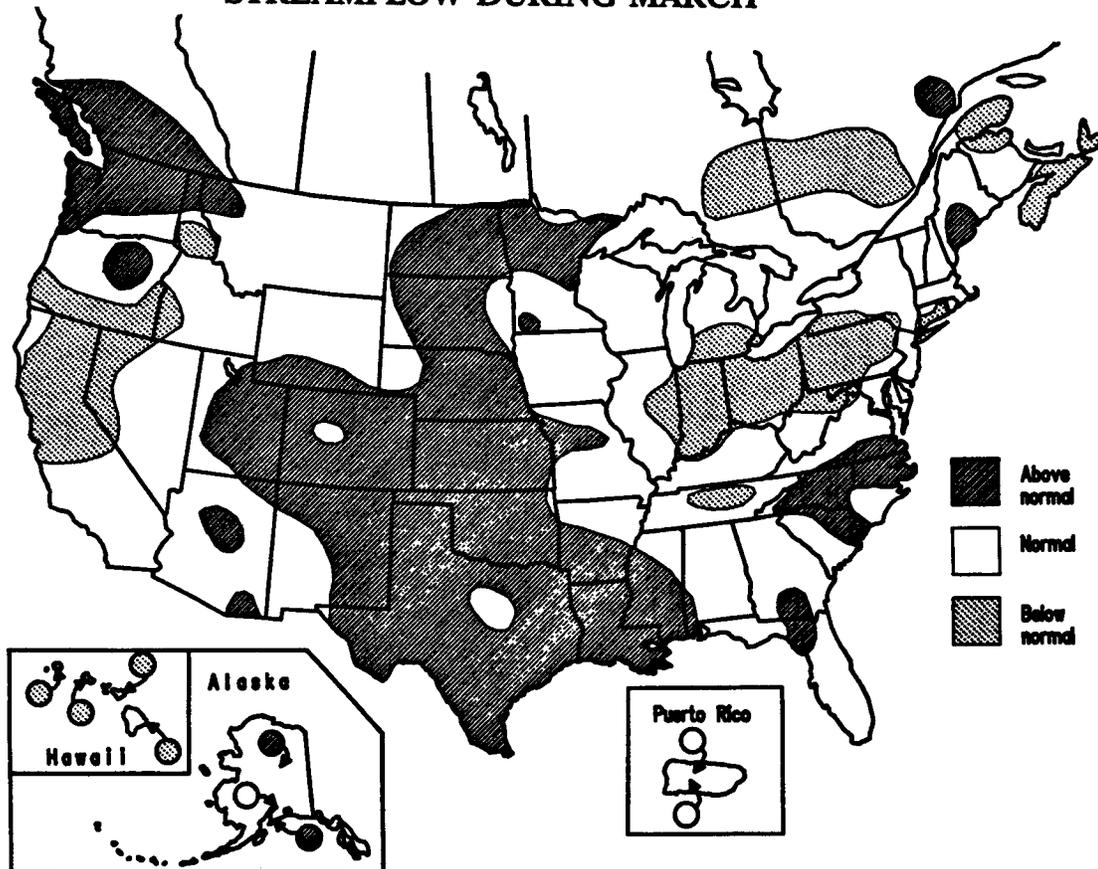
National Water Conditions

UNITED STATES
Department of the Interior
Geological Survey

CANADA
Department of the Environment
Water Resources Branch

MARCH 1987

STREAMFLOW DURING MARCH



March streamflow generally increased seasonally in the conterminous United States, changed variably in southern Canada, and decreased in Alaska, Hawaii, and Puerto Rico. Streams flowed normal to above-normal at about 66 percent of the 190 reporting index stations in southern Canada, the United States, and Puerto Rico, compared with the 72 percent in April. Nebraska had floods exceeding previous peaks of record at four stream-gaging stations but no damage was reported.

Average March elevations for the Great Lakes were lower than those for last month and last March, but continued to be above normal, according to provisional data from the National Ocean Service.

Utah's Great Salt Lake equaled last year's record-high, 4,211.85 feet above National Geodetic Vertical Datum (NGVD) of 1929, on March 31 after rising 0.20 foot during the month. The National Weather Service (NWS) predicts a maximum lake

elevation of 4,212.25 to 4,212.75 feet above NGVD of 1929 for late spring, given normal spring weather and an April 1 pump start-up for the West Desert Pumping Project.

March precipitation was highly variable in the United States, exceeding 200 percent of normal in most of Florida and several areas west of the Mississippi River, but less than 50 percent of normal in a fairly large contiguous area in the East and several smaller areas in the West, according to provisional data from the NWS.

Contents of 87 percent of reporting reservoirs were near or above average at the end of March, compared with 83 percent at the end of February.

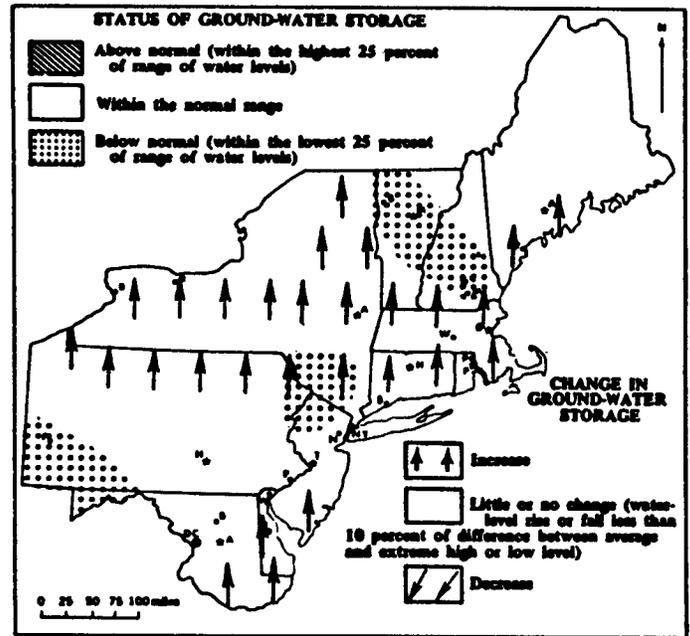
The combined flows of the three largest rivers in the lower 48 States -- Mississippi, St. Lawrence, and Columbia -- averaged 1,441,500 cubic feet per second during March, 22.1 percent above median, and 46.6 percent above last month's flow.

GROUND-WATER CONDITIONS DURING MARCH

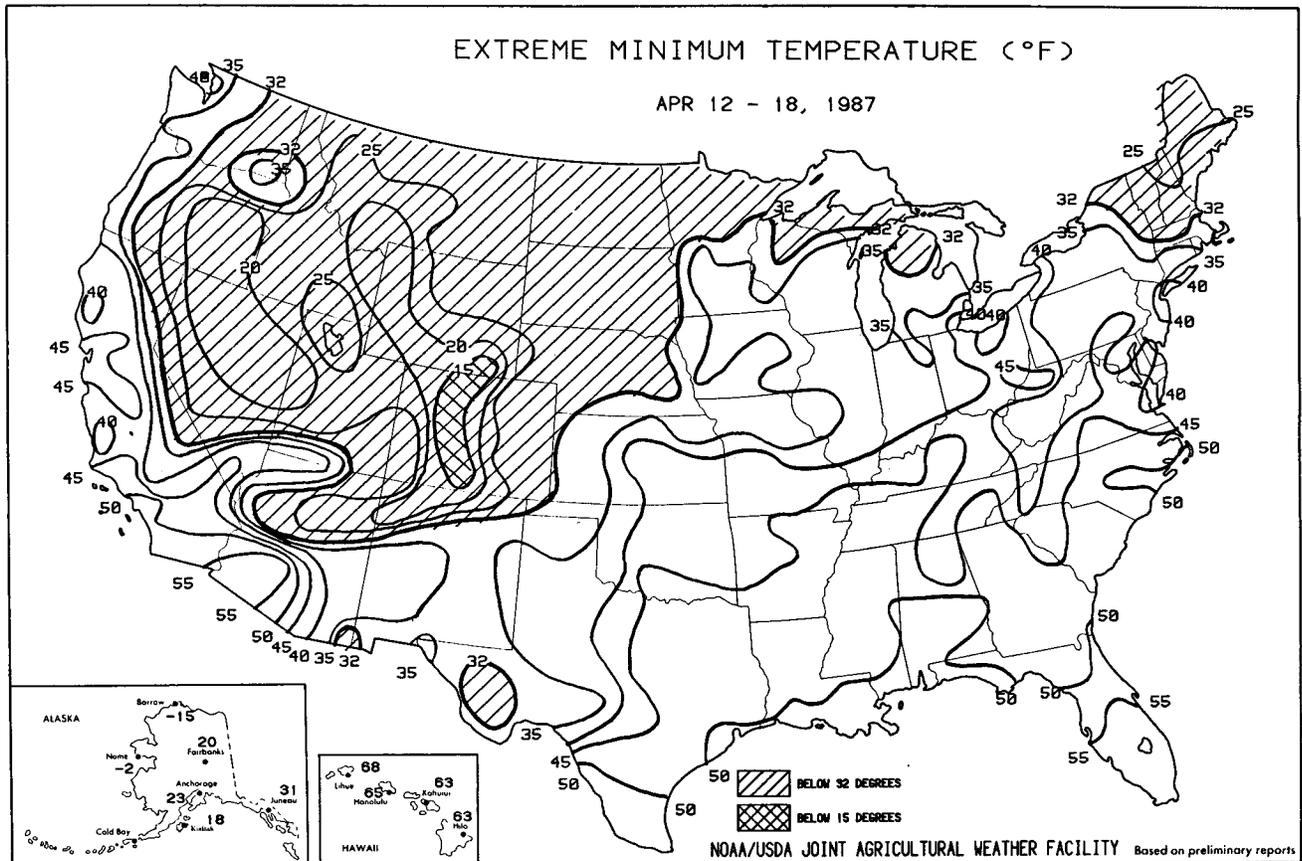
Ground-water rose in much of the region, especially in most of Connecticut, Massachusetts, Delaware, and New York. (See map). Levels declined, at least slightly, in scattered parts of Maryland, southern Pennsylvania, northern New Jersey, southern Rhode Island, northern Maine, New Hampshire, and Vermont. Ground-water at the end of March was generally the normal, but levels in three areas, encompassing parts of New Hampshire, Vermont, New York, New Jersey, Pennsylvania, and Maryland were below average.

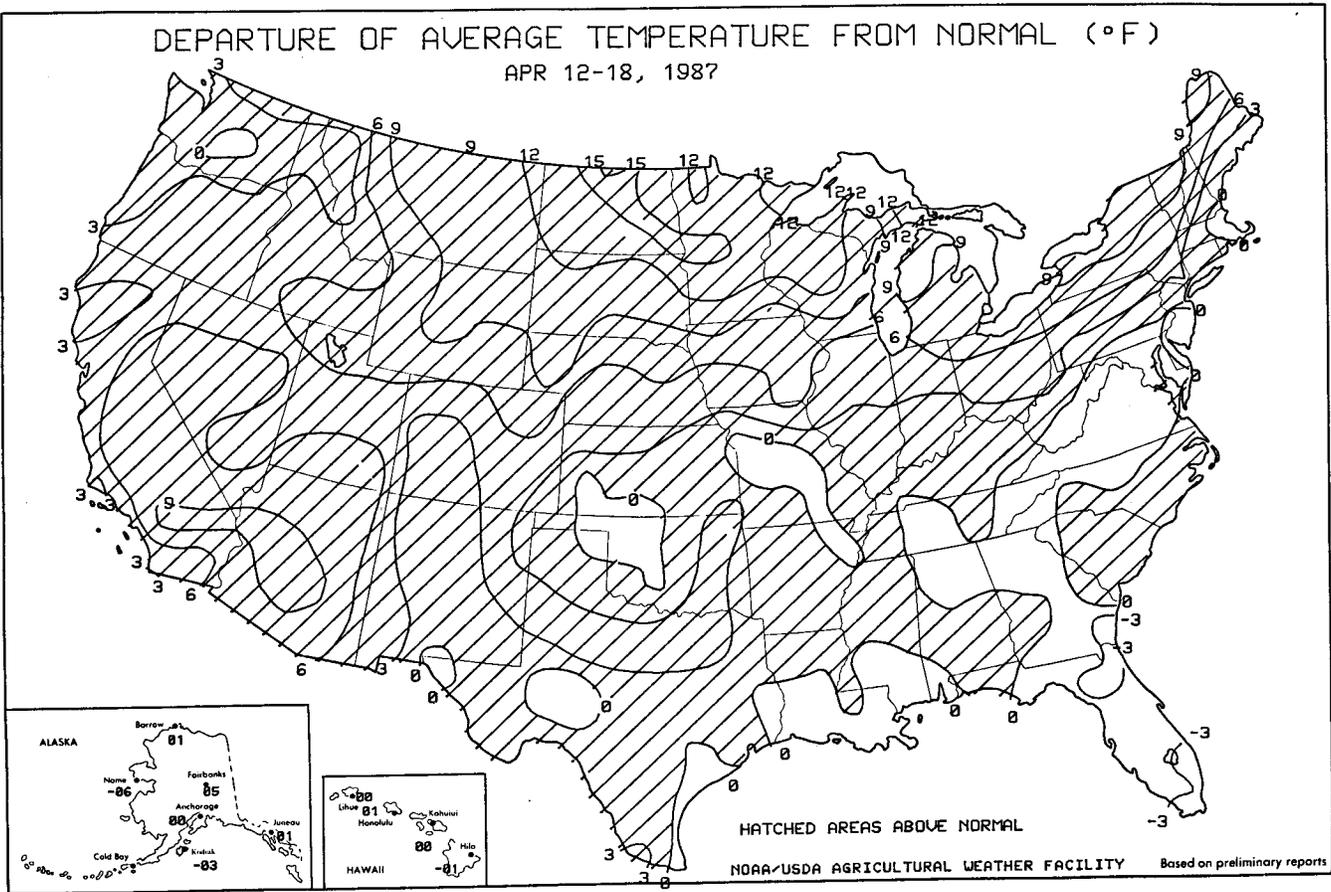
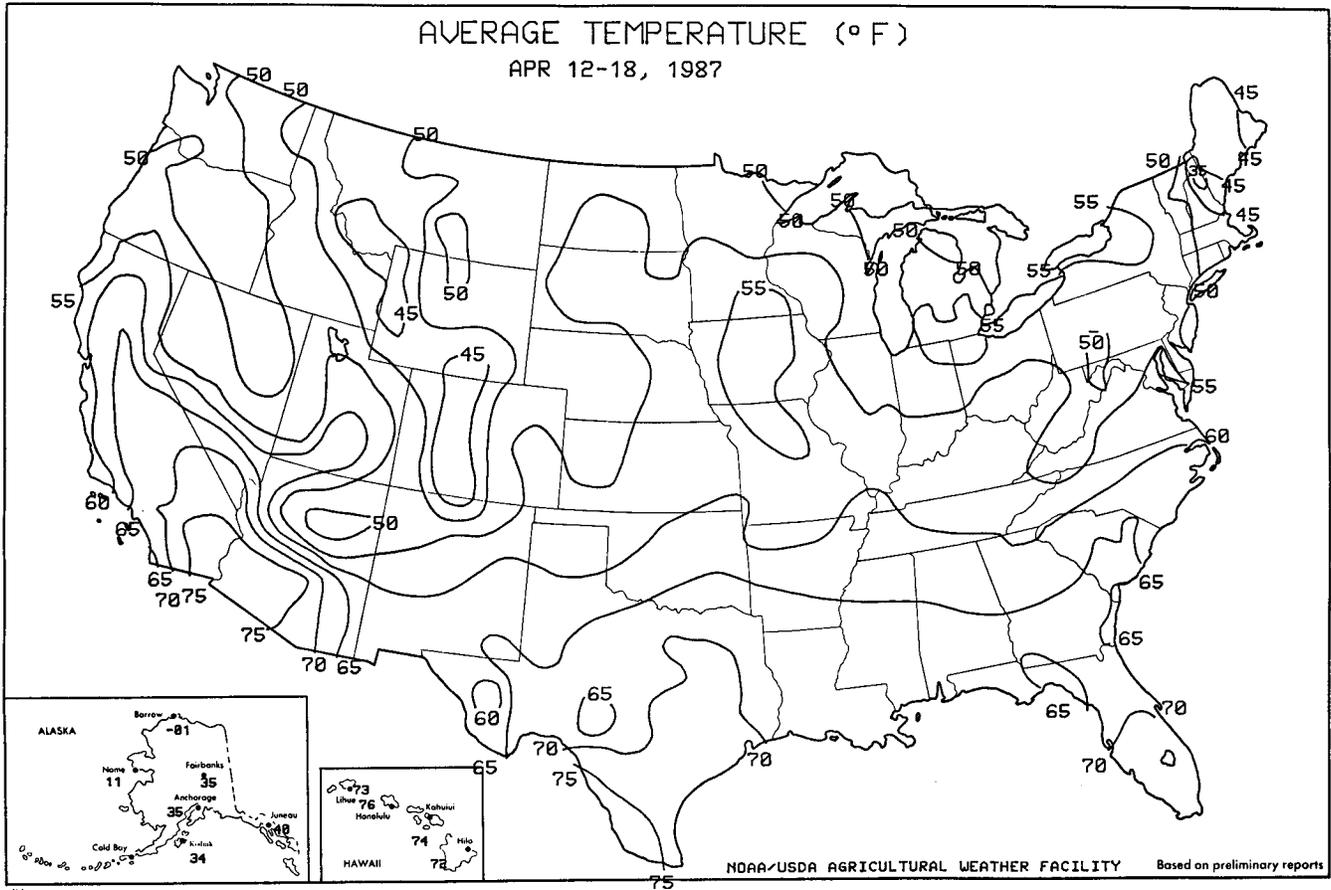
In the Southeastern States, ground-water levels rose in Arkansas and Mississippi. Net changes during March were mixed in West Virginia, Kentucky, Virginia, North Carolina, Louisiana, and Georgia. Water levels flowed above average in Kentucky, below average in Arkansas and Louisiana, and mixed in West Virginia, Virginia, and North Carolina. Despite net rises, new lows for March were established in key wells at Memphis, Tennessee, and at Stuttgart, Arkansas. In the Tennessee well, this is the latest in an extended series of new month-end low levels. The new low in Arkansas is the third consecutive month-end low level in the Stuttgart well.

In the central and western Great Lakes States, ground-water levels rose in Iowa and declined in Wisconsin and Indiana. Levels showed mixed changes in Minnesota, Michigan, and Ohio. Water levels were above average in Iowa, near or above average in Wisconsin, and below average in Michigan and Ohio. Levels were mixed in Minnesota.



Map showing ground-water storage near end of March and change in ground-water storage from end of February to end of March.





National Weather Data for Selected Cities

Weather Data for the Week Ending April 18, 1987

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. 1	PCT. NORMAL SINCE MAR. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	73	51	83	43	62	-1	.2	-.9	.1	5.7	58	17.5	89	94	46	0	0	3	0
MOBILE	78	55	87	50	66	-1	.3	-.9	.3	7.0	71	21.4	111	94	47	0	0	2	0
MONTCOMERY	77	55	84	50	66	-1	.1	-1.0	.3	5.5	64	22.5	130	90	42	0	0	1	0
AK ANCHORAGE	41	28	48	23	35	-1	.1	-.1	.1	.4	39	2.2	81	93	52	0	7	3	0
BARROW	6	-8	13	-15	-1	-1	.1	-.1	.1	.4	12	2.2	29	83	70	0	7	0	0
FAIRBANKS	44	26	52	20	35	5	.5	-.1	.1	.1	9	.8	53	78	37	0	7	0	0
JUNEAU	44	36	49	31	40	1	.9	-.2	.4	3.9	78	11.2	90	89	63	0	2	6	0
KODIAK	40	29	46	18	34	-3	.5	-.3	.4	7.7	128	22.6	135	82	54	0	4	5	0
NOME	18	4	22	-2	11	-7	.0	-.1	.0	.5	52	2.0	91	81	56	0	7	1	0
AZ PHOENIX	94	64	100	59	79	11	.0	-.1	.0	.3	31	3.0	130	27	13	5	0	0	0
PRESCOTT	77	40	83	28	58	9	.0	-.2	.0	.7	33	4.2	79	43	10	0	1	0	0
TUCSON	91	52	97	43	72	7	.0	-.1	.0	1.0	111	3.2	139	32	8	4	0	0	0
YUMA	95	63	103	60	79	8	.0	.0	.0	.4	50	.4	50	45	12	5	0	0	0
AR FORT SMITH	76	50	90	44	63	2	1.1	.2	.9	5.0	80	11.0	104	91	44	1	0	2	1
LITTLE ROCK	72	54	86	49	63	1	.2	-1.0	.2	3.8	48	12.0	77	77	50	0	0	2	0
CA BAKERSFIELD	85	52	92	45	69	6	.0	-.2	.0	1.1	85	3.6	109	74	22	4	0	0	0
EUREKA	59	48	60	42	53	4	.1	-.6	.1	6.8	97	16.7	87	86	68	0	0	2	0
FRESNO	85	51	93	45	68	8	.0	-.3	.0	2.4	103	5.7	92	85	21	3	0	0	0
LOS ANGELES	71	55	82	52	63	3	.0	-.2	.0	.9	39	2.9	37	96	58	0	0	0	0
REDDING	78	46	86	41	62	2	.0	-.7	.0	7.0	102	19.0	88	73	21	0	0	0	0
SACRAMENTO	78	48	88	44	63	5	.0	-.3	.0	3.2	108	8.6	88	80	29	0	0	0	0
SAN DIEGO	70	57	80	56	64	3	.0	-.2	.0	1.8	85	5.0	88	85	57	0	0	0	0
SAN FRANCISCO	71	48	81	45	60	5	.0	-.4	.0	2.0	55	8.3	72	93	41	0	0	3	0
CO DENVER	68	38	83	25	53	6	.5	.1	.5	2.0	94	4.0	121	67	23	0	3	1	0
GRAND JUNCTION	71	38	83	29	54	3	.2	-.1	.2	2.2	194	3.7	161	63	15	0	2	1	0
PUEBLO	75	37	88	27	56	5	.2	-.1	.2	.8	61	2.8	165	69	16	0	1	1	0
CT BRIDGEPORT	57	43	67	38	50	2	.8	-.1	.3	7.7	124	12.9	104	91	61	0	0	4	0
HARTFORD	60	41	73	35	50	2	1.8	.9	1.5	8.6	131	15.2	114	90	52	0	0	3	1
DC WASHINGTON	63	49	70	45	56	0	.9	.2	.5	3.4	65	10.4	99	94	61	0	0	4	0
FL APALACHICOLA	76	59	83	53	68	0	.1	-.7	.1	10.8	178	21.0	158	97	61	0	0	1	0
DAYTONA BEACH	79	58	83	52	69	-1	T	-.5	T	8.0	185	16.8	171	94	44	0	0	1	0
JACKSONVILLE	79	54	86	49	67	-2	T	-.7	T	6.4	124	17.0	145	95	42	0	0	1	0
KEY WEST	80	67	84	61	74	-4	.2	-.2	.1	9.9	499	11.3	198	88	60	0	0	2	0
MIAMI	82	64	83	57	73	-2	.3	-.4	.3	4.3	123	7.8	103	89	48	0	0	2	0
ORLANDO	80	59	86	55	70	-2	.8	-.3	.5	12.1	262	15.1	153	95	41	0	0	2	0
TALLAHASSEE	78	51	82	44	65	-2	.1	-.9	.1	9.8	121	22.4	127	97	43	0	0	2	0
TAMPA	79	60	84	54	69	-2	.2	-.2	.2	12.4	274	17.2	177	90	47	0	0	1	0
WEST PALM BEACH	81	62	83	55	71	-3	2.6	1.9	2.3	10.4	238	12.8	132	92	49	0	0	2	1
GA ATLANTA	71	54	80	48	62	1	.2	-.9	.1	6.5	75	18.2	101	93	44	0	0	3	0
AUGUSTA	76	52	86	42	64	1	.4	-.3	.3	5.0	72	21.2	142	94	44	0	0	3	0
MACON	77	53	86	47	65	0	.3	-.5	.2	4.9	66	18.8	117	96	42	0	0	3	0
SAVANNAH	78	56	87	49	67	1	.4	-.4	.1	5.8	102	18.9	158	91	42	0	0	4	0
HI HILO	78	66	80	63	72	-1	1.5	-1.6	.7	9.6	45	22.9	51	93	64	0	0	6	1
HONOLULU	84	69	85	65	76	1	.2	-.2	.2	.3	7	1.6	15	82	49	0	0	2	0
KAHULUI	82	67	85	63	74	1	T	-.2	T	.8	22	5.0	48	84	50	0	0	1	0
LIHUE	76	69	79	68	73	-1	1.3	-.5	.5	3.6	54	7.4	45	90	62	0	0	7	0
ID BOISE	69	38	80	23	53	5	T	-.3	T	2.1	122	4.1	93	67	21	0	2	1	0
LEWISTON	65	42	74	34	54	4	T	-.3	T	1.1	63	2.1	52	74	33	0	0	0	0
POCATELLO	68	34	79	25	51	6	.1	-.2	.0	.9	58	2.7	77	65	16	0	4	2	0
IL CHICAGO	63	44	77	39	54	5	1.2	-.2	1.0	3.5	70	6.2	79	100	66	0	0	5	1
MOLINE	66	44	78	36	55	5	.8	-.2	.6	3.4	68	5.2	66	98	54	0	0	2	1
PEORIA	67	45	75	37	56	5	1.5	-.6	1.3	3.6	70	5.9	73	93	52	0	0	3	1
QUINCY	67	46	75	33	57	4	1.7	-.8	1.6	3.2	60	5.4	66	94	50	0	0	2	1
ROCKFORD	64	44	77	39	54	6	.9	-.1	.5	2.9	58	4.7	62	96	56	0	0	3	0
SPRINGFIELD	66	45	74	32	56	2	2.2	1.2	1.6	4.5	82	6.7	77	94	55	0	1	3	2
IN EVANSVILLE	65	47	76	43	56	-1	1.5	-.6	.7	4.4	63	8.6	66	97	61	0	0	4	1
FORT WAYNE	64	46	75	34	55	5	1.2	.4	1.0	3.3	64	5.9	65	96	64	0	0	4	1
INDIANAPOLIS	62	46	74	39	54	2	1.8	.9	1.3	4.0	70	6.9	63	96	66	0	0	4	1
SOUTH BEND	64	44	75	37	54	6	1.4	.4	1.0	3.4	62	7.0	71	100	67	0	0	2	1
IA DES MOINES	66	44	81	34	55	5	2.5	1.8	2.1	5.6	140	7.4	121	92	54	0	0	4	1
SIoux CITY	70	44	85	33	57	7	.4	-.1	.2	6.4	217	7.0	156	91	42	0	0	3	0
WATERLOO	65	42	79	34	54	6	.5	-.3	.3	3.1	74	4.5	76	93	53	0	0	2	0
KS CONCORDIA	68	45	88	36	57	4	2.8	2.3	2.0	11.1	363	12.6	280	88	51	0	0	3	2
DODGE CITY	68	43	89	34	55	1	1.1	-.7	1.0	5.5	227	7.5	221	84	43	0	0	3	1
GOODLAND	68	38	91	32	53	4	.5	-.2	.3	3.0	189	4.3	187	81	29	1	3	2	0
TOPEKA	68	45	85	32	56	2	2.1	1.4	1.1	8.3	212	12.1	205	93	54	0	1	4	1
WICHITA	70	46	91	40	58	2	.4	-.1	.3	4.7	139	9.5	194	92	47	1	0	3	0
KY BOWLING GREEN	67	50	75	44	58	1	1.6	-.6	.7	4.2	52	11.0	66	96	57	0	0	5	2
LEXINGTON	65	48	75	45	57	2	1.5	-.6	1.4	5.1	70	10.0	71	96	51	0	0	4	3
LOUISVILLE	65	49	74	45	57	0	1.3	-.4	.3	5.1	71	10.4	75	96	59	0	0	4	1
LA ALEXANDRIA	80	55	91	49	67	0	.3	-1.0	.1	6.6	80	21.1	115	80	38	1	0	1	0
BATON ROUGE	81	57	89	52	69	0	1.1	-.3	1.1	7.4	93	22.4	128	94	42	0	0	1	0
LAKE CHARLES	82	55	88	51	69	0	.0	-.9	.0	5.0	95	17.5	133	91	35	0	0	1	0
NEW ORLEANS	79	57	91	51	68	-1	2.0	-.9	1.7	6.7	91	22.8	130	97	49	1	0	2	1

Based on 1951-80 normals.

Weather Data for the Week Ending April 18, 1987

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. 1	PCT. NORMAL SINCE MAR. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	81	53	92	45	67	1	.2	-.9	.2	1.9	30	12.0	86	89	38	2	0	1	0
ME CARIBOU	59	33	65	22	46	0	1.4	-.6	2.3	58	4.9	58	80	33	0	4	0	0	
PORTLAND	53	36	61	27	44	2	1.4	-.5	9.3	147	14.6	107	94	57	0	2	3	1	
MD BALTIMORE	62	46	68	39	54	0	0	0	2.6	44	10.6	91	91	59	0	0	2	1	
SALISBURY	63	45	71	35	54	0	0	-.1	4.4	73	13.8	108	96	58	0	0	2	0	
MA BOSTON	50	38	72	34	44	-4	1.3	.4	11.5	181	19.6	140	95	63	0	0	5	1	
CHATHAM	49	38	59	32	44	-1	3.0	2.1	10.8	168	21.0	141	95	78	0	1	4	1	
MI ALPENA	59	37	76	31	48	7	.4	-.2	.3	1.8	3.6	56	99	55	0	1	3	0	
DETROIT	63	47	73	40	55	8	0	-.2	.1	4.1	93	7.0	89	96	58	0	2	0	
FLINT	66	44	78	32	55	9	0	-.4	.2	2.9	73	4.5	65	99	59	0	1	4	
GRAND RAPIDS	65	44	77	35	55	9	1.5	.6	1.1	3.1	65	4.1	50	94	54	0	0	1	
HOUGHTON LAKE	64	42	80	31	53	11	.2	-.4	.1	1.2	35	2.8	45	98	50	0	1	3	
LANSING	65	43	77	33	54	9	.6	-.1	.4	2.3	56	3.7	52	97	54	0	0	3	
MARQUETTE	60	39	75	28	49	10	.3	-.3	.2	3.6	99	6.5	96	94	48	0	2	2	
MUSKEGON	63	43	68	33	53	8	1.8	1.0	1.5	3.7	83	5.9	70	97	56	0	4	1	
SAULT STE. MARIE	63	41	80	32	52	14	.3	-.3	.2	1.6	46	4.1	57	89	45	0	1	3	
MN ALEXANDRIA	71	45	87	39	58	16	T	-.5	T	1.4	59	2.7	69	75	27	0	0	0	
DULUTH	63	37	82	34	50	12	T	-.5	T	.6	22	1.6	32	81	38	0	1	0	
INT'L FALLS	68	35	88	29	52	13	T	-.4	T	1.0	53	1.8	51	83	26	0	3	0	
MINNEAPOLIS	71	45	87	37	58	12	T	-.4	T	.7	23	1.4	31	79	34	0	1	0	
ROCHESTER	66	41	82	34	54	9	.3	-.3	.2	1.6	51	2.5	53	90	43	0	3	0	
MS GREENWOOD	75	55	86	47	65	1	.8	-.5	.8	6.4	66	16.0	83	91	46	0	0	2	
JACKSON	78	52	87	45	65	0	.7	-.7	.5	6.6	73	21.5	118	96	43	0	0	2	
MERIDIAN	79	55	85	47	67	2	.5	-.7	.4	4.9	48	25.0	128	93	39	0	0	2	
MO CAPE GIRARDEAU	70	50	78	46	60	1	1.4	.4	.9	4.2	55	8.3	61	91	53	0	0	3	
COLUMBIA	65	45	81	32	55	0	1.4	.5	1.3	3.5	63	6.5	71	98	56	0	1	3	
KANSAS CITY	66	46	85	32	56	0	1.9	1.1	1.4	4.8	107	7.8	111	93	51	0	1	4	
SAINT LOUIS	67	47	78	35	57	1	1.3	.5	1.2	3.8	70	7.2	78	93	51	0	0	3	
SPRINGFIELD	67	48	85	42	57	2	2.0	1.1	1.8	6.1	105	13.4	140	91	54	0	0	3	
MT BILLINGS	70	40	84	29	55	11	0	-.5	0	1.6	78	2.1	57	58	18	0	2	0	
GLASGOW	69	40	77	28	54	11	0	-.2	0	1.4	214	1.6	123	70	24	0	2	0	
GREAT FALLS	63	41	72	27	52	9	.2	-.1	.2	2.0	120	2.3	68	59	26	0	2	2	
HAVRE	65	37	77	27	51	8	T	-.3	T	1.1	93	1.3	59	69	24	0	2	0	
HELENA	65	34	76	21	50	8	.3	.1	.3	1.5	122	1.5	63	79	24	0	3	1	
KALISPELL	56	36	64	25	46	3	.4	.2	.4	3.7	261	5.0	122	88	36	0	3	2	
MILES CITY	71	37	84	28	54	9	T	-.3	T	1.0	78	1.2	48	71	22	0	2	0	
MISSOULA	60	33	69	22	47	3	.1	-.1	.1	1.6	117	2.2	63	85	34	0	4	2	
NE GRAND ISLAND	68	42	86	32	55	5	1.4	.8	.7	8.0	270	8.8	210	90	42	0	1	2	
LINCOLN	69	44	85	31	56	5	2.7	2.0	1.5	9.2	263	9.8	188	91	51	0	1	3	
NORFOLK	69	42	84	31	56	7	.7	.2	.4	8.0	296	9.0	225	90	42	0	1	2	
NORTH PLATTE	69	35	88	27	52	4	1.0	.6	.8	2.7	132	4.4	152	92	32	0	1	2	
OMAHA	67	47	82	32	57	5	2.1	1.5	1.8	6.4	183	7.1	139	84	56	0	1	3	
SCOTTSDUFF	70	35	87	24	53	6	.3	-.1	.3	1.9	111	4.1	164	76	22	0	3	1	
VALENTINE	70	39	91	29	54	9	.4	0	.2	2.9	163	4.3	179	78	29	1	1	2	
NV ELY	69	27	77	17	48	7	0	-.2	0	1.1	80	2.5	89	72	14	0	6	0	
LAS VEGAS	85	55	93	48	70	7	0	-.1	0	.6	113	2.2	147	26	8	3	0	0	
RENO	73	35	83	28	54	7	T	-.1	T	1.1	107	2.3	74	65	13	0	2	0	
WINNEMUCCA	72	28	83	18	50	5	T	-.2	T	1.4	122	2.4	92	62	12	0	6	1	
NH CONCORD	58	36	73	26	47	3	.4	-.3	.2	6.8	142	9.8	98	90	49	0	2	5	
NJ ATLANTIC CITY	58	41	67	32	49	-1	1.4	.7	1.2	8.3	138	16.2	127	97	59	0	1	3	
NM ALBUQUERQUE	74	41	83	35	58	3	.5	.4	.5	1.1	149	2.3	153	49	12	0	0	1	
CLOVIS	80	44	93	39	62	2	.1	-.1	.1	.4	43	2.3	128	52	14	2	0	2	
ROSWELL	82	43	93	33	62	2	0	-.1	0	.4	68	2.7	193	57	11	2	0	0	
NY ALBANY	63	44	73	31	54	7	1.9	1.3	1.1	6.2	131	10.7	115	95	51	0	1	4	
BINGHAMTON	60	44	72	38	52	8	1.5	.8	1.0	5.4	113	9.1	96	93	55	0	0	4	
BUFFALO	65	46	74	42	55	10	.9	.2	.7	6.1	126	9.8	96	92	53	0	0	5	
NEW YORK	59	47	70	44	53	1	.9	0	.5	8.1	127	14.4	115	94	59	0	0	5	
ROCHESTER	64	45	70	38	55	9	.6	0	.5	4.3	105	6.7	77	91	50	0	0	2	
SYRACUSE	66	47	73	38	56	10	1.3	.5	.8	4.4	86	8.0	78	92	51	0	0	4	
NC ASHEVILLE	66	46	76	37	56	0	1.8	1.0	1.1	5.9	86	15.6	117	92	50	0	0	5	
CHARLOTTE	71	53	81	48	62	1	1.7	.9	1.4	5.5	80	15.5	108	92	47	0	0	4	
GREENSBORO	65	49	77	45	57	-1	5.2	4.5	3.9	8.9	153	17.4	138	93	61	0	0	4	
HATTERAS	68	55	72	51	62	2	.7	-.1	.4	11.8	201	26.7	182	93	62	0	0	4	
NEW BERN	74	53	83	49	63	2	1.6	1.0	1.1	5.9	110	17.0	128	92	44	0	0	3	
RALEIGH	68	51	80	46	59	0	3.6	2.9	2.5	6.9	127	18.9	152	94	56	0	0	5	
WILMINGTON	72	54	82	49	63	0	2.1	1.4	1.6	5.0	86	15.9	123	92	52	0	0	3	
ND BISMARCK	72	39	92	26	56	13	T	-.4	T	1.5	99	3.3	138	80	21	1	2	0	
FARGO	70	39	90	26	55	12	.1	-.4	.1	.6	33	1.7	61	78	29	1	2	1	
GRAND FORKS	70	38	89	29	54	13	0	-.3	0	.4	29	1.9	70	88	28	0	2	0	
WILLISTON	71	38	82	25	54	12	T	-.3	T	1.9	154	2.4	109	76	25	0	2	0	
OH AKRON-CANTON	62	46	73	42	54	6	.4	-.4	.3	5.3	100	7.5	75	93	56	0	0	4	
CINCINNATI	65	48	74	39	56	3	1.8	1.0	1.2	7.2	118	9.7	82	93	53	0	0	4	
CLEVELAND	62	46	69	39	54	6	.5	-.3	.4	6.2	125	8.7	91	91	59	0	0	4	
COLUMBUS	64	48	73	40	56	5	.7	-.1	.3	3.6	69	5.3	57	91	57	0	0	3	

Based on 1951-80 normals.

(Continued from p.1)
SATURDAY...Rain in the East tapered-off along the east coast and through New England. Showers spread through much of the West as strong wind

ushered-in cooler air. Snow covered the mountains from Washington to northern California and the northern Rockies. Record-warm weather covered the Plains.

Weather Data for the Week Ending April 18, 1987

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. 1	PCT. NORMAL SINCE MAR. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	TEMPERATURE °F		PRECIPITATION			
														AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	63	45	74	36	54	3	1.5	.7	.7	4.7	93	6.8	70	98	65	0	0	4	1
TOLEDO	64	46	72	39	55	7	1.3	.5	.2	3.3	74	5.7	70	97	58	0	0	3	0
YOUNGSTOWN	64	44	74	41	54	7	1.5	.3	.3	5.0	94	7.4	73	96	56	0	0	2	0
OK OKLAHOMA CITY	76	49	94	42	63	2	1.1	-.6	1.1	2.4	67	9.8	155	77	35	2	0	2	0
TULSA	77	50	94	43	64	3	1.2	-.8	1.2	2.6	47	9.6	113	82	39	2	0	1	0
OR ASTORIA	55	43	61	34	49	1	1.1	.7	.4	11.3	276	26.7	234	96	65	0	0	6	0
BURNS	64	30	76	19	47	4	0	-.2	0	1.7	114	3.9	89	85	26	0	0	1	0
MEDFORD	71	38	79	30	55	4	T	-.2	T	1.8	70	6.9	86	92	50	0	0	1	0
PENDLETON	62	41	71	34	52	1	0	-.2	0	1.4	88	3.6	80	78	41	0	0	0	0
PORTLAND	61	43	70	37	52	2	.8	.2	.6	6.5	129	16.1	107	92	50	0	0	2	1
SALEM	62	39	73	34	50	2	1.0	.4	.9	6.0	102	17.1	98	95	50	0	0	2	1
PA ALLENTOWN	59	44	67	37	51	1	.8	-.1	.6	5.7	91	10.6	84	95	56	0	0	5	0
BRIDGEWATER	60	45	69	40	52	7	4	-.5	.2	5.6	111	8.8	94	89	58	0	0	3	0
BRIDGEVILLE	60	45	66	41	53	0	0	-.8	0	4.0	74	9.3	84	91	57	0	0	4	0
HARRISBURG	60	45	66	41	53	0	.5	-.3	.4	3.7	62	9.5	80	91	56	0	0	2	0
PHILADELPHIA	60	45	72	43	53	3	1.1	.4	.7	5.7	102	8.6	80	83	49	0	0	4	1
PITTSBURGH	61	45	72	43	53	3	1.1	.4	.5	5.0	113	8.3	95	87	46	0	0	3	1
SCRANTON	61	44	68	38	53	4	.7	0	.5	5.0	113	8.3	95	87	46	0	0	5	2
RI PROVIDENCE	57	40	73	34	49	1	1.9	1.0	1.1	11.0	165	16.0	111	96	61	0	0	1	0
SC CHARLESTON	77	55	88	49	66	2	1.3	.7	1.1	6.9	116	18.7	148	95	47	0	0	4	1
COLUMBIA	76	53	86	43	65	1	.3	-.5	.2	5.8	78	19.5	123	93	41	0	0	3	0
FLORENCE	75	55	83	49	65	1	2.5	1.8	2.4	5.7	95	16.3	126	93	46	0	0	2	1
GREENVILLE	72	50	83	43	61	0	.6	-.4	.5	6.0	69	18.0	103	93	50	0	0	3	1
SD ABERDEEN	71	39	86	31	55	11	.3	-.1	.3	2.1	102	3.3	103	91	29	0	2	1	0
HURON	72	42	87	30	57	11	.2	-.2	.2	5.0	219	6.4	183	87	33	0	1	2	0
RAPID CITY	70	39	90	28	55	10	T	-.4	T	1.2	56	2.9	94	64	25	1	2	1	0
SIoux FALLS	71	42	85	30	56	10	.2	-.4	.1	3.5	123	3.9	91	84	35	0	1	2	0
TN CHATTANOOGA	69	52	81	47	61	1	1.3	-.2	1.0	6.8	74	20.3	106	93	53	0	0	3	1
KNOXVILLE	68	50	76	48	59	-1	1.2	.3	.4	5.2	65	14.5	87	95	58	0	0	5	0
MEMPHIS	68	51	82	49	63	0	3.3	1.9	2.8	7.1	79	14.6	82	93	56	0	0	4	1
NASHVILLE	72	54	82	47	69	4	.9	-.1	T	2.2	26	8.6	51	97	55	0	0	5	0
TX ABILENE	85	53	96	41	69	4	T	-.6	T	1.6	70	5.7	133	58	17	3	0	0	0
AMARILLO	76	40	93	33	58	2	.5	-.2	.3	1.5	108	3.6	150	72	21	1	0	2	0
AUSTIN	85	57	93	50	71	2	.3	-.4	.3	1.8	54	5.6	76	75	28	2	0	1	0
BEAUMONT	85	54	90	48	69	0	T	-.1	T	1.2	22	17.0	124	92	33	2	0	0	0
BROWNSVILLE	86	62	90	53	74	-1	T	-.4	T	2.0	151	6.7	163	94	39	1	0	0	0
CORPUS CHRISTI	87	57	95	45	72	-1	0	-.4	0	1.5	86	9.7	202	89	37	2	4	0	0
DEL RIO	88	55	96	46	72	0	0	-.4	0	1.0	60	4.6	153	78	31	4	0	0	0
EL PASO	83	43	91	36	63	-1	0	0	0	.5	114	1.0	83	39	10	2	0	1	0
FORT WORTH	83	54	95	47	68	3	T	-.9	T	1.8	30	6.7	82	79	30	2	0	1	0
GALVESTON	78	62	81	55	70	1	0	-.6	0	.7	20	9.4	106	87	44	0	0	0	0
HOUSTON	86	55	94	49	71	2	T	-.9	T	1.4	29	8.1	70	89	28	3	0	1	0
LUBBOCK	82	45	96	36	63	3	0	-.2	0	.5	32	2.5	109	59	14	3	0	0	0
MIDLAND	84	44	95	37	64	0	0	-.2	0	1.3	147	3.3	183	63	14	3	0	0	0
SAN ANGELO	86	46	96	37	66	-1	0	-.4	0	1.8	107	6.9	223	76	16	3	0	0	0
SAN ANTONIO	87	54	95	44	71	1	0	-.6	0	1.4	49	7.3	120	80	24	3	0	0	0
VICTORIA	87	56	95	46	71	0	0	-.6	0	.4	16	7.1	106	87	28	1	0	0	0
WACO	84	54	93	45	69	2	1.3	.4	1.3	3.3	82	7.3	95	87	33	2	0	1	1
WICHITA FALLS	81	48	96	41	65	1	T	-.7	T	1.9	56	7.9	149	78	28	2	0	0	0
UT BLANDING	71	38	79	30	55	7	0	-.2	0	2.1	173	4.6	131	56	19	0	3	0	0
CEDAR CITY	72	37	79	22	55	8	0	-.2	0	2.1	128	3.9	126	61	14	0	2	0	0
SALT LAKE CITY	71	40	85	29	55	7	0	-.5	0	1.7	54	4.6	81	54	17	0	2	0	0
VT BURLINGTON	67	42	75	29	54	12	.1	-.6	0	2.0	51	4.4	60	87	37	0	1	2	0
VA NORFOLK	67	50	80	44	58	0	1.1	.5	.6	3.8	69	16.9	135	94	51	0	0	3	1
RICHMOND	65	47	75	42	56	-2	3.4	2.7	2.8	5.6	105	13.7	118	97	53	0	0	3	2
ROANOKE	62	48	75	43	55	-1	5.6	4.9	3.8	10.8	194	19.8	172	90	63	0	0	4	2
WA COLVILLE	58	41	69	31	50	4	.5	.3	.4	4.3	240	6.5	118	82	54	0	1	2	0
QUILLAYUTE	56	41	61	35	48	3	2.7	1.0	1.0	19.8	118	42.1	97	99	60	0	0	7	2
SEATTLE-TACOMA	57	43	65	37	50	1	.4	-.1	.4	7.3	141	15.3	99	93	53	0	0	4	0
SPOKANE	56	39	65	31	48	2	.4	.2	.4	3.1	159	5.5	92	84	44	0	3	3	0
YAKIMA	63	36	73	27	49	1	.1	0	.1	1.6	171	3.3	110	83	34	0	2	1	0
WV BECKLEY	57	44	67	38	51	-1	2.3	1.5	1.0	5.6	92	12.5	98	94	59	0	0	5	2
CHARLESTON	65	48	73	38	56	1	1.2	.4	.5	4.4	72	10.9	86	93	51	0	0	5	1
HUNTINGTON	67	48	74	39	57	1	2.0	1.2	1.1	6.2	100	12.0	98	94	51	0	0	4	2
PARKERSBURG	65	49	74	45	57	3	.5	-.3	.2	3.9	69	6.9	63	91	49	0	0	3	0
WI GREEN BAY	64	43	82	35	53	10	.8	.2	.8	2.6	75	3.4	61	99	54	0	0	1	1
LA CROSSE	68	44	84	38	56	9	.5	-.2	.4	2.8	78	4.2	78	93	45	0	0	3	0
MADISON	65	44	79	34	55	9	.7	0	.5	2.7	70	4.0	67	97	57	0	0	2	1
MILWAUKEE	59	42	76	40	51	6	1.7	.9	1.5	3.7	81	6.2	83	98	67	0	0	3	0
WAUSAU	67	44	83	38	56	13	.5	-.1	.4	1.7	48	2.4	44	88	38	0	0	3	0
WY CASPER	66	37	79	25	51	9	T	-.3	T	1.5	87	4.4	157	62	20	0	3	1	0
CHEYENNE	63	36	78	24	50	8	.1	-.2	.1	1.6	96	2.6	108	64	28	0	3	1	0
LANDER	64	37	79	23	51	9	.9	.4	.9	3.3	140	5.9	174	64	21	0	3	1	1
SHERIDAN	70	38	82	27	54	11	T	-.5	T	1.6	72	2.8	76	72	21	0	3	0	0
PR SAN JUAN	84	74	91	73	79	1	2.0	1.2	1.0	10.3	253	12.7	140	95	81	1	0	4	2

Based on 1951-80 normals.

HEATING DEGREE DAY DATA WEEKLY SUMMARY
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
ASSESSMENT AND INFORMATION SERVICES CENTER-NESDIS-NOAA

LAST DATE OF DATA COLLECTION PERIOD IS 4-18-1987
ACCUMULATIONS ARE FROM JULY 1
** = NORMAL LESS THAN 100 OR RATIO INCALCULABLE

Table with columns: STATE CITY, CALL, WEEK TOTAL, WEEK DEV FROM NORM, WEEK DEV FROM L YR, CUM TOTAL, CUM DEV FROM NORM, CUM DEV FROM L YR, CUM DEV FROM NORM, CUM DEV FROM L YR. Lists cities from AL BIRMINGHAM to MT HELENA.

Table with columns: STATE CITY, CALL, WEEK TOTAL, WEEK DEV FROM NORM, WEEK DEV FROM L YR, CUM TOTAL, CUM DEV FROM NORM, CUM DEV FROM L YR, CUM DEV FROM NORM, CUM DEV FROM L YR. Lists cities from MT KALISPELL to WY SHERIDAN.

National Agricultural Summary

April 13 to 19, 1987

HIGHLIGHTS: Rain and wetness impeded land preparation and spring planting in the Corn Belt and central Great Plains. Soil moisture was mostly adequate. Fieldwork averaged 4-6 days but was restricted to 2 days or less in the Corn Belt, central Great Plains, Virginia, and Kentucky.

Winter wheat was mostly good. Wheat was 5 percent (%) headed, compared with 20% last year and the 7% 5-year average. Spring wheat was 15% seeded, 3 percentage points ahead of 1986 and the average. Nearly two-thirds of Idaho's acreage was seeded. Corn planting progressed slightly above normal. Seeding lagged behind normal in the Southeast and was just beginning in the Corn Belt. Cotton was 17% seeded, 1 point above normal. Seeding trailed normal in the Southeast and Delta. Sorghum seeding was slightly behind normal. Rice was 24% seeded, compared with 27% normally. Seeding was behind normal except in Arkansas. Peanuts were planted in the Southeast and Texas. Livestock was mostly good.

SMALL GRAINS: Winter wheat was mostly good. Adequate moisture and warmer weather promoted growth, but development lagged behind normal in most areas because of earlier low temperatures and snow. Wheat was 5% headed in the 20 major producing States. Heading was 2 points behind normal and trailed 15 points from 1986.

Kansas' wheat was recovering from the recent freeze except where jointing was well advanced. Wheat was mostly good despite some freeze damage. Wheat was greening in Nebraska but light winterkill was evident. There was minor leaf tip burn, Russian aphids, and mosaic disease. North Dakota's wheat was greening and 12% reached the stooling stage. Winter wheat was mostly good to excellent, with very little winter damage. Nearly 70% of Montana's wheat was growing.

Oklahoma's wheat was 5% headed, 50 points behind 1986 but 3 points ahead of the average. Warm weather aided weed and insect control. Texas' small grains had light to heavy freeze damage that reduced head weight in the Blacklands and central areas. Some heavily damaged fields were baled or grazed-out. Heading spread into the Low Plains. Wheat was turning color in southern Texas. Dryland wheat needed moisture in California. Eleven percent of Arizona's wheat acreage was turning color.

Spring wheat was 15% seeded compared with 12% in 1986 and the average. Planting was 26 and 27 points ahead of normal in Minnesota and Idaho. Wet weather hampered seeding in South Dakota. Seeding was slightly behind normal in North Dakota and South Dakota but lagged 8 points below average in Montana.

OTHER CROPS: Corn planting in the 17 major producing States reached 5% completion, equaling the average. Seeding was underway in all States except Iowa, Michigan, Nebraska, South Dakota, and Wisconsin. Planting just began in most Corn Belt States and was behind normal in the Southeast and Texas. Warm temperatures helped corn growth in Texas. The late March freeze caused some replanting.

Cotton was 17% seeded at week's end, 1 point behind 1986 and 1 point above normal. Cotton was

not planted in Mississippi, Missouri, New Mexico, and Oklahoma. Early planted cotton sustained minimal freeze damage in Texas. Planting neared completion at Coastal Bend and in the Rio Grande Valley. Fluctuating temperatures slowed cotton growth in Arizona where planting was brisk. Cotton was emerging in California.

Sorghum was 12% seeded in the 11 major producing States. Producers seeded 15% of their acreage last year and 14% normally. Planting was not underway in the central and northern Great Plains and Corn Belt. Sorghum was 16% seeded in Louisiana, 16 points below average. Seeding was just beginning in Oklahoma and Tennessee. Texas seeding increased in the Low Plains and at Cross Timbers. Freeze-damaged sorghum was replanted. Texas sorghum was 52% seeded, compared with 62% in 1986 and the 60% average.

Rice seeding also increased but remains 3 points below average. Seeding was behind normal in all States except Arkansas. Cool temperatures slowed emergence in Texas. California's rice fields were flooded in preparation for planting this week.

Georgia's tobacco acreage was 61% transplanted, 24 points below normal. Transplanting began in North Carolina. South Carolina's transplanting lagged 32 points below average. Peanuts were seeded in Alabama, Georgia, Mississippi, and Texas.

FRUIT AND NUTS: Peaches were fair to good in Georgia. Alabama producers sprayed and thinned peaches. Peaches were mostly good in the Carolinas. Heavy losses continued in Texas peach producing areas.

Florida's citrus was very good. Moisture was adequate but needed irrigation to combat dryness in some areas. Trees set fruit. Producers picked soft fruit to avoid loss, and grapefruit movement was good.

High winds damaged Texas' citrus. Pecans broke buds in most areas. Freeze damage ranged from light to heavy.

Valencia oranges and grapefruit were packed in Arizona. Table grapes developed well. Apples were in bloom. California's grapes grew vigorously. Kiwifruit flower buds swelled. Pistachios leafed-out. Freestone peach harvest began. Citrus bloom progressed. Walnuts bloomed heavily.

VEGETABLES: Strawberry picking continued along the south coast in California. Artichokes, asparagus, broccoli, celery, cauliflower, lettuce, and other mixed vegetables were harvested. Kern County planted its spring potatoes. Spring lettuce shipments slowed in Arizona's Salt River Valley. Lettuce grew well in Wilcox. East Texas replanted many vegetables. The cold weather damaged onions.

Florida vegetables were recovering from early April's frost. Watermelons were replanted in northern areas.

PASTURES AND LIVESTOCK: Livestock was mostly good. Cool air and wetness stressed Iowa livestock. Scours and respiratory problems were evident in Nebraska. Muddy feedlots limited weight gain. Pastures were mostly good.

CROP PROGRESS

FOR WEEK ENDING APRIL 19, 1987

	WINTER WHEAT % HEADED		
	1987	1986	AVG.
ARK	17	50	NA
CALIF	70	65	65
COLO	0	0	0
GA	28	59	58
IDAHO	0	0	0
ILL	0	0	0
IND	0	0	0
KANS	0	0	0
MICH	0	0	0
MO	1	4	1
MONT	0	0	0
NEBR	0	0	0
N MEX	0	0	NA
N C	2	10	NA
OHIO	0	0	0
OKLA	5	55	3
OREG	0	0	0
S DAK	0	0	0
TEX	17	55	26
WASH	0	0	0

20 STATES 5 20 NA

EXCL. STATES WITH NA 5 20 7

THESE 20 STATES PRODUCED 91% OF THE 1986 WINTER WHEAT CROP.

NA - NOT AVAILABLE.

	CORN % PLANTED		
	1987	1986	AVG.
COLO	1	2	4
GA	74	84	83
ILL	3	7	2
IND	2	3	0
IOWA	0	1	1
KANS	5	15	5
KY	14	31	12
MICH	0	0	0
MINN	1	0	0
MO	10	29	12
NEBR	0	0	0
N C	30	63	47
OHIO	3	4	2
PA	3	4	2
S DAK	0	0	0
TEX	67	86	69
WIS	0	0	0

17 STATES 5 8 5

THESE 17 STATES PRODUCED 94% OF THE 1986 CORN CROP.

	COTTON % PLANTED		
	1987	1986	AVG.
ALA	18	18	12
ARIZ	75	80	80
ARK	1	6	2
CALIF	65	60	54
GA	1	6	10
LA	1	20	7
MISS	0	7	6
MO	0	1	1
N MEX	0	0	0
N C	8	6	8
OKLA	0	0	0
S C	2	24	29
TENN	1	6	4
TEX	15	13	12

14 STATES 17 18 16

THESE 14 STATES PRODUCED 100% OF THE 1986 COTTON CROP.

	SPRING WHEAT % PLANTED		
	1987	1986	AVG.
IDAHO	65	53	38
MINN	31	2	5
MONT	15	35	23
N DAK	3	5	4
S DAK	23	7	26

5 STATES 15 12 12

THESE 5 STATES PRODUCED 94% OF THE 1986 SPRING WHEAT CROP.

	GRAIN SORGHUM % PLANTED		
	1987	1986	AVG.
ARK	15	14	NA
ILL	0	0	0
KANS	0	0	0
LA	16	44	32
MISS	8	25	NA
MO	0	2	1
NEBR	0	0	0
OKLA	1	3	2
S DAK	0	0	0
TENN	1	9	3
TEX	52	62	60

11 STATES 12 15 NA

EXCL. STATES WITH NA 12 15 14

THESE 11 STATES PRODUCED 96% OF THE 1986 GRAIN SORGHUM CROP.

NA - NOT AVAILABLE.

	RICE % PLANTED		
	1987	1986	AVG.
ARK	15	29	12
CALIF	0	0	2
LA	44	63	51
MISS	7	58	29
TEX	70	88	73

5 STATES 24 41 27

THESE 5 STATES PRODUCED 97% OF THE 1986 RICE CROP.

WEEKLY CROP CONDITION PERCENT REPORT

STATE	WINTER WHEAT				
	VP	P	F	G	EX
ARK	2	14	41	40	3
CALIF	0	0	10	85	5
COLO	1	4	24	53	18
GA	1	1	27	71	0
IDAHO	0	1	16	69	14
ILL	0	0	10	74	16
IND	0	3	33	60	4
KANS	2	6	28	44	20
MICH	5	20	40	30	5
MO	3	7	47	41	2
MONT	0	0	18	73	9
NEBR	0	0	21	71	8
N MEX	0	0	43	57	0
OHIO	0	4	23	58	15
OKLA	0	1	69	30	0
S DAK	0	4	18	46	32
TEX	0	11	43	46	0
WASH	0	0	10	80	10

VP=Very poor, P=Poor, F=Fair, G=Good, EX=Excellent

State Summaries of Weather and Agriculture

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

ALABAMA: Rainfall totals mostly 0.50 in. or less; 1.00 to 2.00 in. Tennessee Valley. Temperatures averaged 1 to 3° below normal.

Days suitable for fieldwork 5.0. Soil moisture 18% short, 75% adequate, 7% surplus. Continued dry, warm conditions promoted good progress all field activities; still slightly behind normal schedule. Corn 66% planted, 69% 1986, 58% avg. Cotton 18% planted, 18% 1986, 12% avg. Sorghum 11% planted, 9% 1986, 7% avg. Peanuts 8% planted, 10% 1986, 6% avg. Wheat 42% headed, 55% 1986, 41% avg.; 44% fair, 54% good, 2% excellent. Livestock, pastures fair to good. Pasture feed supply mostly adequate. Primary activities: Planting row crops, vegetables; land preparation; topdressing wheat; applying fertilizer to cropland, pastures; spraying orchards; thinning peaches; routine care livestock, poultry.

ARIZONA: High pressure aloft 13th to 14th produced abundant sunshine, dry air, strong warming. Temperatures peaked 16th, 17th with afternoon readings from middle 60s to middle 70s high country, 80s at 5,000 ft., 100 to 105° lower deserts. Some localities reported record, near record readings. Clouds, winds increased 18th in advance of strong system out of Pacific Northwest. Numerous showers over southeast; Tucson received 0.52 in. Average temperatures 2 to 11° above normals.

Cotton planting brisk in wake of more favorable weather conditions. Established stands growing fairly slow because of continued temperature extremes. Early plantings irrigated, showing first true leaves. Some replanting, but no more than normal. Land preparation widespread southeast. Alfalfa showing good regrowth between first, second cuttings, west. Alfalfa weevil caused some acreages to be sprayed. Corn good; stands to 10 in. No corn acreage planted as yet southeast. Wheat, barley 85% heading, 93% 1986; 11% turning color, 20% 1986. Potato harvest expected 20th. Onions advanced, digging anticipated early May. Melon crops made good progress. Land prepared for planting chilies southeast. Movement cool season vegetables virtually concluded Yuma. Spring lettuce shipments slow Salt River Valley; shipping expected 20th Aguila; Harquahala Valley crop largely concluded; harvest continued Marana-Eloy; Willcox lettuce growing well. Valencia oranges, grapefruit packed; all citrus groves good. Table grapes developing well. Apples in bloom.

ARKANSAS: Temperatures near, slightly above normal. Scattered, heavy rain for short periods. Temperature extremes 38°; 96°. Rainfall 0.05 to 4.38 in.

Cotton 1% planted. Rice planting 15% complete. Wheat mostly fair to good. Oats 13% poor, 31% fair, 56% good. Corn planting 72% complete. Fruit crop still suffering from severe freeze damage. Soybean land preparation.

CALIFORNIA: Temperatures statewide above normal. Rainfall well below normal, less than 0.10 in. north coast, Sacramento Valley; 16th, 17th warmest days.

Fieldwork progressed rapidly. Winter wheat heading. Dryland good, needs moisture. Rice fields prepared, flooded; planting this week. Cotton planting active. Early fields emerged. Overwintered sugarbeet harvest active. Spring planting sugarbeets, corn, safflower continued. Alfalfa cut for green-chop, hay. Thinning,

spraying, irrigating active. Avocado, citrus picking active. Grape growth vigorous. Kiwifruit flower buds swelling. Harvest desert nectarines, freestone peaches began. Citrus bloom progressed. Almond set good. Pistachios leafed out. Walnuts bloomed heavily. Artichokes heavy, good quality; Salinas, Santa Cruz-San Mateo Coast. Asparagus harvest continued Sacramento Valley, Delta, Firebaugh District, Los Angeles-Orange County; excellent quality. Harvest finished, desert. Strawberry picking continued, south coast. Broccoli fairly heavy, Salinas; moderate Santa Maria; good quality. Packing going well Oxnard, Westside. Carrot digging active, good quality, south coast, Perris-Hemet, Kern-Tulare. Cauliflower fairly light, Salinas; light Santa Maria; good quality. Harvest active, Fresno. Celery harvest active; Oxnard, Los Angeles-Orange County; good quality. Sweet corn harvest should start two weeks, Coachella Valley. Cucumbers picked, packed from hot houses, central valley. Lettuce packing heavy San Joaquin Valley; light Santa Maria; variable quality. Palo Verde Valley harvest completed, early fields just being harvested, Salinas. Cantaloup planting progressed, Westside, germination some early fields. Watermelon planting continued, Merced-Atwater. Desert crop progressed well into bloom stage. Pollenization early fields. Spring onions showed good growth, Westside. Light harvesting started Imperial Valley. Freezer pea fields, Gustine formed pods. Picking sugar peas active, Westside. Fall potato packing sheds, Tulake-Butte Valley, operating full time. Some fields planted, Shasta Valley. Spring potato planting continued, Kern County. Sweetpotato fields ready for planting, Merced-Atwater. Tomatoes processed, fresh market planted, transplanted, statewide. Hot house tomatoes packed, Westside. Cannery tomatoes fair desert. Dry ranges, pastures. Range feed continued mature foothill, valley areas. Supplemental feeding discontinued some areas. Moved cattle market. Stock water supplies below normal.

COLORADO: Temperatures ranged from slightly below normal to 2 to 6° above normal. Precipitation widespread. Light snow mountains; 0.15 to 1.14 in. moisture elsewhere.

Days suitable for fieldwork 4.5. Soil moisture adequate. Small grain seeding, emergence still behind normal. Winter wheat, livestock good. Calving, lambing over 75% done.

FLORIDA: Warmer, more seasonal temperatures statewide. Very warm weekend Panhandle. Showers, thunderstorms mainly nights of 14th, 15th, mostly less than 0.50 in., spots of over 1.00 in. near Atlantic Coast. Brisk, gusty winds latter half of week diminished by weekend.

Soil moisture adequate, except short supplies south, western Panhandle areas. Row crop planting active. Some tobacco transplanting continued. Winter wheat good progress. Early crops recovering from earlier freeze damage. Panhandle pastures mostly poor to fair; recent cool weather suppressed growth warm season grasses. Elsewhere, grazing mostly fair to good. Few areas extreme western Panhandle, southern Peninsula need rain to aid grass growth. Cattle fair to good. Citrus groves very good. Moisture adequate some areas, dry groves irrigated. Trees setting fruit following open bloom. Foliage abundant. Soft fruit being

picked to avoid loss. Grapefruit movement good. Caretakers sprayed, cultivated, pruned trees. Mild weather prevailed vegetable producing areas. Rainfall limited; winds light to moderate. Crops recovering from early April frost. Replanting watermelons active north central, northern areas. Harvest active many crops. Volume leaders; tomatoes, potatoes, cabbage, celery, cucumbers, sweet corn. Good supplies green peppers, lettuce, squash, snap beans, carrots, strawberries, radishes available. Light harvest watermelons underway.

GEORGIA: Temperatures 2 to 4° below normal. Most locations highest temperatures 80s, Jesup 90° on 13th. Coldest temperatures 40s with some upper 30s, mountains. Heaviest rains over northeast, 1.00 to 2.00 in. totals common. Central, south less than 0.50 in.

Days suitable for fieldwork 4.8. Soil moisture 7% short, 82% adequate, 11% surplus. Corn 1% poor, 58% fair, 40% good, 1% excellent; 74% planted, 84% 1986, 83% avg. Sorghum grain 2% planted, 11% 1986, 11% avg. Peanuts 3% planted, 7% 1986, 10% avg. Tobacco 3% poor, 44% fair, 53% good; 61% transplanted, 85% 1986, 85% avg. Watermelons poor to mostly fair; 82% planted, 86% 1986, 85% avg. Wheat 98% jointing, 97% 1986, 96% avg.; 72% boot, 85% 1986, 82% avg. Rye fair to mostly good. Other small grains fair to mostly good. Apples fair to mostly good; 42% blooming, 98% 1986, 88% avg. Peaches 9% very poor, 2% poor, 45% fair, 44% good; 97% blooming, 100% 1986, 100% avg. Pasture fair to mostly good. Cattle fair to mostly good. Hogs fair to mostly good. Main activities: Planting corn, tobacco, watermelons, other vegetables. Land preparation for cotton, sorghum, soybean plantings. Spraying, fertilizing crops.

HAWAII: Intermittent showers throughout week. Occasionally heavy down pours disrupted farming activities. Gusty winds bruised some exposed crops. No major damage to agriculture from rain or winds. Overall crop fair. Gusty trade winds 10 to 35 mph. Temperatures ranged mid 60s to low 80s. Rainfall ranged none to 6.00 in.

Days suitable for fieldwork 7.0. Banana production steady. Papaya production increased. Chinese cabbage harvesting remained active, some shipments to mainland. Light to moderate production for other vegetables.

IDAHO: Temperatures 1 to 6° above normal. Precipitation below normal.

Days suitable for fieldwork 6.0. Fieldwork active, seeding, cultivation progressed rapidly. Early seeded small grains emerging, developing good stands. Potato planting gaining momentum. Fruit trees reaching full bloom, some leafing. Hay, roughage supply mostly good. Range, pastures beginning to dry. Livestock good.

ILLINOIS: Temperatures averaged 3 to 7° above normal north, 1 to 3° above normal south. Precipitation averaged 0.75 to 1.00 in. north; 1.00 to 2.50 in. south.

Days suitable for fieldwork 1.5. Soil moisture 25% short, 69% adequate, 6% surplus. Corn 3% planted, 7% 1986, 2% avg. Winter wheat 10% fair, 74% good, 16% excellent. Oats 85% seeded, 88% 1986, 52% avg. Alfalfa 22% fair, 70% good, 8% excellent. Pasture 1% poor, 23% fair, 66% good, 10% excellent; supplying 45% livestock roughage requirements, 48% 1986, 33% avg.

INDIANA: Temperatures 1 to 7° above normal. Lows upper 30s, highs upper 70s to low 80s. Precipitation widespread. Totals exceeding 1.00 in. statewide.

Fieldwork averaged 1.0 day. Topsoil moisture 2% short, 38% adequate, 60% surplus. Subsoil moisture 18% short, 66% adequate, 16% surplus. Spring

cropland 84% tilled, 80% 1986, 67% avg. Wheat 7 in. high, 6 in. 1986, 6 in. avg. Wheat 14% jointed, 15% 1986, 16% avg. Oats 83% seeded, 75% 1986, 56% avg. Oats 2 in. high, 2 in. 1986, 1 in. avg. Clover 88% seeded, 82% 1986, 71% avg. Tobacco beds 90% seeded, 80% 1986. Pastures 7% poor, 53% fair, 38% good, 2% excellent.

IOWA: Cool, wet early week. Temperatures 80 above normal south, 120 northwest. Temperature extremes 330 on 16th; 900 on 19th.

Days suitable for fieldwork 2.6. Topsoil moisture 5% short, 85% adequate, 10% surplus; subsoil moisture 90% adequate, 10% surplus. Winter wheat mostly good. Hay good to excellent. Oats 55% sown, 73% 1986, 47% avg.; 20% emerged, 23% 1986, 18% avg. Seedbed preparation 55% completed; fertilizer application 50% completed, 44% 1986, 49% avg. Livestock good to excellent. Cool, wet conditions some stress on newborn animals.

KANSAS: Wet week averaging over 2.50 in. central, north central districts; 1.00 to 2.00 in. northwest, south central, east. Rest of State averaged 0.80 in. Several locations central areas 3.50 to 4.00 in. rainfall. Temperatures averaged 59 to 62°, 4 to 10° above normal.

Days suitable for fieldwork 1.5. Soil moisture 43% adequate, 57% surplus. Wheat good recovery from recent freeze damage with return warm weather except localities where jointing well advanced. Corn planting fair progress considering wet conditions. Range, pasture excellent for time of year, grazing adequate. Rounding up strayed livestock neared completion, heavy feeding, doctoring continued recent blizzard areas. Lambing, calving neared completion.

KENTUCKY: Temperatures below normal early week, but back to above normal weekend. Average lows 40s, highs 60s to lower 70s. 40s. Soil temperatures at 4 in., averaged 50s. Rainfall averaged 1.50 to 2.50 in.

Days suitable fieldwork 1.3. Soil moisture 2% short, 62% adequate, 36% surplus. Tobacco beds 68% emerged. Plants mostly good. Corn 14% planted, few fields emerged. Wheat, barley good, little freeze damage. Some virus disease appearing. Hay, pastures good, growing well. Alfalfa weevil population expanding. Some farmers spraying.

LOUISIANA: Temperature 1° below to 1° above normal. Temperature extremes 41°; 94°. Rainfall averaged 0.02 to 1.94 in.

Days suitable for fieldwork 5.0. Soil moisture 26% short, 60% adequate, 14% surplus. Spring plowing 62% complete, 89% 1986, 75% avg. Corn fair; 71% planted, 92% 1986, 79% avg.; 41% emerged, 86% 1986, 71% avg. Cotton 1% planted, 20% 1986, 7% avg.; none emerged, 9% 1986, 2% avg. Rice 44% planted, 63% 1986, 51% avg.; 31% emerged, 48% 1986, 37% avg. Sorghum 16% planted, 44% 1986, 32% avg.; 5% emerged, 25% 1986, 17% avg. Sweetpotatoes 4% planted, 12% 1986, 7% avg. Winter wheat fair; 70% headed, 88% 1986, 63% avg.; 4% turning color, 11% 1986, 7% avg. Hay first cutting 1%, 2% 1986, 2% avg. Sugarcane, vegetables fair; pastures, livestock fair to good. Main activities: Spring plowing; planting corn, rice, sorghum, vegetables, sweetpotatoes; applying fertilizer.

MARYLAND & DELAWARE: Maryland: Temperatures averaged 54°, 54° normal; lowest temperature 26° mountains; highest temperature 78°. Precipitation averaged 0.90 in., ranging from 0.23 in. Snow Hill to 1.93 in. Cumberland.

Days suitable for fieldwork 4.0. Topsoil moisture adequate. Subsoil moisture adequate. Acreage prepared for planting 50%. Wheat, barley, rye good to excellent. Peaches 75% bloomed, 75%

avg. Apples 15% bloomed, 40% avg. Field corn 5% planted. Tobacco beds 100% planted.

Delaware: Temperatures averaged 54°; 10° above normal over State; lowest temperature 33°; highest temperature 73°. Precipitation averaged 0.42 in., ranging from 0.20 in. Wilmington to 0.65 in. Dover.

Days suitable for fieldwork 5.0. Topsoil moisture adequate. Subsoil moisture adequate. Acreage prepared for planting 35%. Wheat, barley, rye good to excellent. Peaches 50% bloomed, 65% avg.

MICHIGAN: Temperatures ranged 7 to 12° above normal. Temperature extremes 28°; 82°. Precipitation ranged from 0.02 to 1.98 in. across State. Snow gone.

Winter wheat good. Activities: Fertilizing, working ground, sowing oats, alfalfa, barley; transplanting celery, sugarbeets 15% planted, spraying fruit trees, apricots full bloom, marketing grain, livestock, fruits, vegetables. Livestock excellent. Feed supplies adequate.

MINNESOTA: Temperatures averaged 10 to 17° above normal. Temperature extremes 24°; 91°. Precipitation averaged 0.31 to 0.51 in. below normal. Precipitation totals averaged 0.18 to 0.32 in. southwest, south central, southeast, zero to 0.12 in. elsewhere. Greatest weekly total 0.63 in.

Days suitable for fieldwork 5.0. Topsoil moisture 8% very short, 33% short, 57% adequate, 2% surplus. Spring wheat 31% planted, 2% 1986, 5% avg.; 1% emerged, none 1986, none avg. Oats 54% planted, 10% 1986, 9% avg.; 5% emerged, none 1986, 1% avg. Barley 15% planted, 1% 1986, 3% avg.; 1% emerged, none 1986, none avg. Corn 24% land prepared, 2% 1986, 2% avg.; 1% planted, none 1986, none avg. Soybeans 12% land prepared, 1% 1986, 1% avg.; none planted, none 1986, none avg. Sunflowers none planted, none 1986, none avg. Flax 1% planted, none 1986, none avg. Sugarbeets 9% planted, none 1986, none avg. Potatoes 4% planted, none 1986, none avg. Green peas 21% planted, 8% 1986, 8% avg. Sweet corn 1% planted, none 1986, none avg. Fall seeded small grains 8% acreage dormant; acreage greening 6% poor, 52% fair, 39% good, 3% excellent. Hay fields 13% acreage dormant; acreage greening 11% poor, 52% fair, 36% good, 1% excellent. Pasture 14% acreage dormant; acreage greening 13% poor, 51% fair, 33% good, 3% excellent.

MISSISSIPPI: Temperatures 10° below to 30° above normal; extremes 41°; 92°. Cold front passed thru on 13th, 14th bringing thunderstorms, high winds, heavy rain. Rainfall averaged 1.50 in. for State; greatest 24-hour total rainfall 2.24 in.

Days suitable for fieldwork 3.5, 5.9 1986, 3.7 avg. Soil moisture 65% adequate, 31% surplus, 4% excessive. Corn 1% very poor, 17% poor, 52% fair, 30% good; 45% planted, 78% 1986, 57% avg.; 22% emerged, 55% 1986, 36% avg. Wheat 4% poor, 35% fair, 55% good, 6% very good; 95% jointing, 98% 1986, 94% avg.; 27% heading, 72% 1986 42% avg. Watermelons 44% planted, 42% 1986, 43% avg. Peanuts 11% planted, 8% 1986, 7% avg. Sweetpotatoes 8% planted, 11% 1986. Rice 7% planted, 58% 1986, 29% avg. Sorghum 8% planted, 25% 1986. Hay, feed grain supplies adequate.

MISSOURI: Temperatures averaged 10° above normal, warm end of week. Rainfall general; over 1.00 in. southwest to 2.00 in. northwest, southeast.

Days suitable for fieldwork 0.9. Topsoil moisture 50% adequate, 50% surplus. Oats 84% sown, 90% 1986, 65% avg. Tillage for spring-planted crops 55%, 64% 1986, 50% avg. Pasture fair to good.

MONTANA: Temperatures 3 to 40° above normal west of divide, 6 to 110° above normal east of divide. Precipitation 0.10 to 0.50 in. west, dry remainder.

Days suitable for fieldwork 5.6. Topsoil moisture 21% short, 75% adequate, 4% surplus. Subsoil moisture 9% short, 83% adequate, 8% surplus. Winter wheat 18% fair, 73% good, 9% excellent. Winter wheat 31% greening, 69% growing. Field tillage 56% just started, 44% well underway. Spring wheat 15% planted, 35% 1986, 23% avg. Barley 20% planted, 43% 1986, 25% avg. Sugarbeets 14% planted, 28% 1986, 17% avg. Oats 9% planted, 28% 1986, 16% avg. Calving 80% complete, 80% 1986, 80% avg. Lambing 70% complete, 70% 1986, 75% avg.

NEBRASKA: Nearly 2.00 in. rain southeast. North received 0.50 in. while Panhandle, central received trace amounts. Temperatures averaged 9 to 10° above normal, extremes 22°; 92°.

Days suitable for fieldwork 2.0. Topsoil, subsoil moisture mostly adequate to surplus. Winter wheat 21% fair, 71% good, 8% excellent. Crop greening up, light winterkill evident. Isolated reports of mosaic, leaf tip burn, russian aphids. Wet fields slow spring fieldwork. Oats, barley, sugarbeet, alfalfa seeding continued. Grasses seeded on CRP acreage. Fertilizer, pesticides applied. Range, pasture feed supplies mostly adequate. Recent rains helped summer grasses green-up. Muddy fields hamper late calving. Scours, respiratory problems evident from recent snow storms. Muddy feedlots limiting weight gains.

NEVADA: High pressure system dominated for third consecutive week produced temperatures well above normal, dry conditions most areas. Winds strong enough to warrant high wind watches, warnings all areas. Light, scattered precipitation north, central, none reported extreme south. Cold front end of period brought freezing temperatures, gusty winds. Most fruit blossoms frozen. Temperature extremes 14°; 104°.

Planting 1987 fall potato crop off to slow start due high winds, freezing temperatures. Alfalfa hay harvest accelerated by above normal temperatures extreme south. Livestock movement to summer pastures on upswing.

NEW ENGLAND: Wet week. Precipitation averaged trace to 0.50 in. northern Maine, northern New Hampshire, Vermont, 0.50 to 1.00 in. coastal and southern interior Maine, southern New Hampshire, 1.00 to 1.50 in. central and coastal Massachusetts, 1.50 to 2.00 in. Connecticut, Rhode Island, western Massachusetts. Temperatures ranged from mid 40s near Canadian border to 50° south.

Major farm activities: Farmers plowing, spreading manure, preparing machinery for spring planting.

NEW JERSEY: Temperatures averaged near normal north; below normal central, south. Extremes 28°; 79°. Rainfall averaged 0.72 in. north, 1.11 in. central, 0.87 in. south. Heaviest 24-hour total 0.97 in. on 16th, 17th. Estimated soil moisture percent field capacity averaged 98% north, 94% central, 90% south. Four inch soil temperatures averaged 50° north, 51° central, 52° south.

Wet conditions again delayed fieldwork many areas. Vegetable harvest increased slightly; asparagus, broccoli, rabe, dandelions, green onions, kale, leeks, rape, spinach moved. Peach bloom continued. Spring vegetable planting continued as soil conditions permitted. Irish potato planting complete some areas. Oats, hay, new pasture planting continued but many fields remained too wet to support machinery.

NEW MEXICO: Weekly average temperatures 1 to 7° above normal entire State. Temperatures from 13°

western mountains to over 90° southern desert, southeastern plains. Precipitation none southeastern plains, southern desert to 0.30 in. northeastern plains.

Days suitable for fieldwork 6.2. Moisture 13% short, 68% adequate, 19% surplus. Wind damage 57% none, 43% light. Alfalfa 9% poor, 36% fair, 55% good; some wind burn southeastern plains. Cotton planting getting underway; less than 1% planted. Barley 29% fair, 71% good. Wheat 43% fair, 57% good; most fields jointing. Pecans 25% poor, 25% fair, 50% good; still too early to adequately assess freeze damage from 2 weeks ago. Lettuce, onions, chile mostly fair to good. Cattle 56% fair, 44% good. Sheep 47% fair, 53% good. Ranges 17% poor, 44% fair, 39% good; most acres need rainfall.

NEW YORK: Warm week, temperatures ranged from 5 to 10° above normal. Cool ocean flow held temperatures down southeastern area end of week. Southern half of State received ample rainfall. Over 1.00 in. rain received central sections around Syracuse, across Catskills, into Hudson Valley. As much as 3.00 in. Catskills. Northern area little or no rain.

Spring fieldwork progressed as weather permitted.

NORTH CAROLINA: Temperatures averaged near normal across State. Temperature extremes 37°; 85°. Precipitation ranged from 0.52 to 7.43 in. across State.

Days suitable for fieldwork 3.5. Soil moisture 42% adequate, 58% surplus. Small grains fair to mostly good. Irish potatoes 100% planted, 100% 1986, 94% avg.; 27% fair, 73% good. Pasture fair to good. Tobacco plantbeds 2% poor, 28% fair, 70% good. Peaches 13% poor, 31% fair, 50% good, 6% excellent. Tobacco plant supplies 12% short, 88% adequate. Flue-cured tobacco 3% planted, 8% 1986, 5% avg. Major farm activities: Planting corn; land preparation; tobacco plantbed care; bedding tobacco land; tending livestock; topdressing small grains, pastures; transplanting Christmas trees, ornamentals; machinery repair, maintenance; planting truck crops; spraying peaches; general farm maintenance.

NORTH DAKOTA: Warm, dry week. Temperatures averaged 13 to 15° above normal. Extremes 22°; 92°. Light, scattered precipitation 0.16 in. southeast.

Days suitable for fieldwork 5.1. Topsoil moisture remained above normal; 5% short, 91% adequate, 4% surplus. Planting getting started, near normal pace. Progress, hard red spring wheat 3%, 5% 1986, 4% avg.; durum 1%, 2% 1986, 1% avg.; barley 3%, 4% 1986, 4% avg.; oats 3%, 7% 1986, 4% avg. Winter wheat 85% green, 12% stooling. Sugarbeet planting underway. Calving 83% complete, lambing 91%, shearing 89%. Pastures mostly fair to good, 90% open.

OHIO: Average low temperatures mid to upper 40s. Average high temperatures mid to upper 60s, moving into 70s end of period. Temperatures 2 to 10° above normal. Precipitation 0.30 in. or less northwest; 0.30 to 1.50 in. elsewhere. Soil temperatures ranged 50s to 70s.

Days suitable for fieldwork 1.0. Soil moisture 4% short, 41% adequate, 55% surplus. Farm activities: Spreading manure, fertilizer; equipment repair. Corn planting slow, need dry soils. Oats 56% planted, 66% 1986, 33% avg.; March plantings emerged. Winter wheat growing fast; mostly good. Hay, pasture good. Apple bloom date 30th. Peach bloom date 27th. Fruit good. Planting fresh market vegetables for early market.

OKLAHOMA: Temperatures averaged 4° above normal southwest to 6° above normal northeast.

Precipitation averaged none west central, southwest to 0.48 in. southeast.

Days suitable for fieldwork 4.7. Topsoil moisture 15% short, 65% adequate, 20% surplus. Subsoil moisture 2% short, 98% adequate. Wheat 1% poor, 69% fair, 30% good; 90% jointing, 97% 1986, 75% avg.; 5% heading, 55% 1986, 3% avg. Warm weather aided weed, insect control. Wheat heading southern third. Sorghum 1% planted, 3% 1986, 2% avg. Cotton none planted, none 1986, none avg. Alfalfa first cutting underway. Pastures, livestock good. Cattle prices reached highest level of 1987, marketings stable.

OREGON: Temperatures near normal except extreme south 5 to 9° above normal. Greatest precipitation northwest, amounts ranged from 0.60 to 1.20 in. Remainder of State mostly dry.

Soil moisture 18% short, 82% adequate. Barley 88% seeded, 77% 1986, 89% 1985. Most field crops growing rapidly. Western grain, grass seed fields show some wet weather disease problems. Ground preparation, spring grain seeding continued higher eastern areas. Spring grains emerging lower areas, some crusting. Irrigation started mainly east. Sugarbeets 80% emerged Malheur County. Hop yard stringing began Willamette Valley. Tree fruits past full bloom all areas. Hood River orchardists fertilized, applied scab fungicides, planted trees, pollinated. Blossom sprays applied Willamette Valley. Some freeze damaged peaches west. Early strawberries, caneberries, blueberries bloomed Willamette Valley. Leafroller treatments applied to caneberries, filbert orchards. Cranberries entered vegetative stage. Storage potatoes 67% planted Hermiston-Boardman; early plantings began to emerge. Potato planting full swing Malheur County. Field preparation, vegetable crop planting continued on schedule west; harvest began for some early season crops. Onions 80% emerged Malheur County; started to emerge Jackson County. Sweet corn planting started both areas. Asparagus harvest full swing Hermiston, quality good. Livestock good to excellent. Branding continued eastern high country. Range, pastures mostly good; many eastern areas ahead of normal, drying out quickly. Irrigation started southwest, central areas.

PENNSYLVANIA: Week averaged above normal temperatures, exactly normal precipitation. Precipitation at beginning, end of week. Average temperature 52°, 4° above normal. Temperature extremes 31°; 78°. Average precipitation 0.82 in., normal 0.82 in.

Days suitable for fieldwork 3.0. Soil moisture 54% adequate, 46% surplus. Plowing 34% complete; 56% 1986; 31% avg. corn 3% planted, 4% 1986, 2% avg. Potatoes 24% planted, 12% 1986, 11% avg. Oats 45% planted, 53% 1986, 29% avg. Wheat 3% poor, 17% fair, 57% good, 23% excellent. Hay stands mostly good to fair. Feed from pastures mostly below average to average. Peaches 89% pre-pink stage, 67% 1986; 8% pink stage, 15% 1986; 3% full bloom or past stage, 18% 1986. Cherries 82% pre-pink stage, 53% 1986; 18% pink stage, 29% 1986; 18% full bloom or past stage. Apples 100% pre-pink stage, 86% 1986; 14% pink stage. Activities: Planting corn, potatoes, oats; spring plowing; fence repair; hauling manure; spreading fertilizer; machinery maintenance; caring for livestock.

PUERTO RICO: Island average rainfall 6.10 in., 5.02 in. above normal. Highest weekly total 17.95 in. Highest 24-hour total 9.0 in. Temperature averaged about 79° on coasts, 75° interior divisions. Mean station temperature ranged 67 to 80°. Extremes 63°; 91°. San Juan mean temperature 79°, 2° below normal. Total rainfall 8.53 in., 7.67 in. above normal.

SOUTH CAROLINA: Temperatures average 3 to 5° cooler than normal. Rain, heavy, precipitation 0.20 to 2.00 in.

Days suitable for fieldwork 4.2. Soil moisture 14% short, 78% adequate, 8% surplus. Favorable weather for fieldwork. Corn good; 62% planted, 86% 1986, 72% avg. Tobacco fair to good; 20% planted, 66% 1986, 52% avg. Watermelons fair to good; 75% planted, 78% 1986, 72% avg. Tomatoes good; 92% planted, 93% 1986, 93% avg. Small grains good, starting to head later than normal. Most apple trees full bloom. Peach prospects good.

SOUTH DAKOTA: Average temperatures ranged 5 to 12° above normal. Extremes 20°; 93°. Black Hills low 12°. Precipitation light.

Days suitable for fieldwork 2.3. Topsoil moisture surplus southeast, adequate elsewhere; 63% adequate, 37% surplus. Spring seeding started, hampered by wet weather. Feed, water supplies adequate to surplus. Range, pastures good to excellent. Winter wheat, rye mostly good to excellent, little problem with winterkill.

TENNESSEE: Average temperatures above normal west; slightly below normal middle, east. Early week thunderstorms. Rainfall generally exceeded 1.00 in. Extremes near 3.00 in. Some flooding. Extensive cloudiness midweek. Abundant sunshine, warm temperatures weekend.

Days suitable for fieldwork 2.3. Soil moisture 1% very short, 11% short, 61% adequate, 27% surplus. Corn 18% planted, 50% 1986, 22% avg. Tobacco 97% beds seeded, 96% 1986, 97% avg.; 65% plants up, 70% 1986. Wheat 60% jointed, 70% 1986; 2% headed, 5% 1986, 2% avg. Wheat 3% poor, 35% fair, 56% good, 6% excellent. Alfalfa 3% very poor, 16% poor, 48% fair, 32% good, 1% excellent. Cattle mostly good to fair. Pastures 1% very poor, 6% poor, 38% fair, 47% good, 8% excellent.

TEXAS: Week began with cold front pushing across State, heavy rains, server weather northern, central areas as cold air collided with moist Gulf air. Marble-size hail north central, south central. Dry air returned midweek. Temperatures rose rapidly during day, cooled quickly at night. Temperatures across most State at or above normal, except far south. Rainfall below normal all areas.

Crops: Corn growth increased many areas under warmer daytime temperatures. Most fields recovered from late March freeze; some replanting necessary. Planting full swing east, Low Plains, Cross-Timbers. Land preparations nearly complete High Plains, planting just getting underway. Grain sorghum planting increased same areas as corn. Planting preparations continued Plains. Some sorghum replanted because of freeze. Cultivation activities underway Blacklands, central. South, Lower Rio Grande Valley, growth steadily improved under warmer temperatures. Good rain needed many areas for continued growth. Cotton land preparations, planting activities. Coastal Bend, Rio Grande Valley most planting completed, crop good progress. Early planted fields sustained only minimal damage from freeze. Small grains continued to show damage from late freeze. All areas showing damage, varying from light to heavy. Plains fields damage leaves, stems. Many fields grazed out. Blackland, central fields heading suffer reduced head weights. Some producers baling heavily damaged fields. Greenbugs, rust increased, adding to declined condition. Fields south turning color. Heading spread into Low Plains. Rainfall could help conditions some areas. Turning color none, 4% 1986, 1% avg. Rice planting increased Upper Coast. Heavy flushing occurred. Emergence slow because cool spring temperatures. Rice 19% emerged, 60% 1986, 36% avg. Peanut land being prepared. Planting begin soon south. Many producers waiting for good rain to replenish soil moisture. Peanuts

2% planted, 1% 1986, 3% avg. Sugarbeet planting High Plains increased last week; planting remained behind schedule. Sugarbeets 19% planted, 91% 1986, 77% avg. Other field crops: Sunflowers none planted, 1% 1986, none avg.

Commercial Vegetables: Rio Grande Valley, harvest cabbage, carrots continued. Onion harvest increased last week. Melons recovering, fruit set began. Damage citrus from high winds significant some areas. San Antonio-Winter Garden most vegetables doing fine, except watermelons damaged by freeze, slow to recover. Start onion harvest later than normal. Trans-Pecos planting slowed because cooler temperatures. Germination chilies slow. Onions, lettuce being watered. East replanting many vegetables necessary. Watermelon planting continued. High Plains many acres onions replanted. Onions heavily damaged by cold snap. Winds drying plants. Peach producers continued to see heavy losses. Only well protected trees, some back yard trees will have any significant fruit. Pecans breaking buds more areas. Damage from freeze ranged from light to heavy.

Range and Pastures: Ranges, native pastures showed more growth with warmer temperatures. Some producers turning cattle onto damaged wheat, oats. Baling activities increased. Livestock small grains making good gains. Movement cattle to markets remained steady. Lambing continued. Good rain would increase forage availability.

UTAH: Precipitation none to light. Temperatures 3° to 5° above normal.

Days suitable for fieldwork 6.7. Topsoil moisture 30% short, 65% adequate, 5% surplus. Spring seeded grain progressed 7 to 13 days ahead of normal. Spring wheat 76% seeded, 50% 1986, 14% avg. Barley 78% seeded, 58% 1986, 28% avg. Oats 44% seeded, 39% 1986, 11% avg. Winter wheat 47% good, 47% fair, 6% poor. Freeze damage none to light. Bloom set well along apricots, peaches, sweet cherries, began tart cherries. Freeze damage early apricots south. Range, pasture growth started. Livestock feed adequate. Livestock good to excellent. Calving, lambing progressed normal with few disease problems. Shearing well along with progress normal. Major farm activities: Land preparation, seeding, fertilizer application, spraying fall seeded grain, alfalfa, ready irrigation systems, clean ditches, calving, lambing shearing.

VIRGINIA: Cool, very wet. Temperatures averaged 10° below normal, range 29 to 80°. Rain through period, heavy at end. Average rainfall 3.20 in., maximum 7.36 in. Small stream flooding, some major river flooding 18th, 19th.

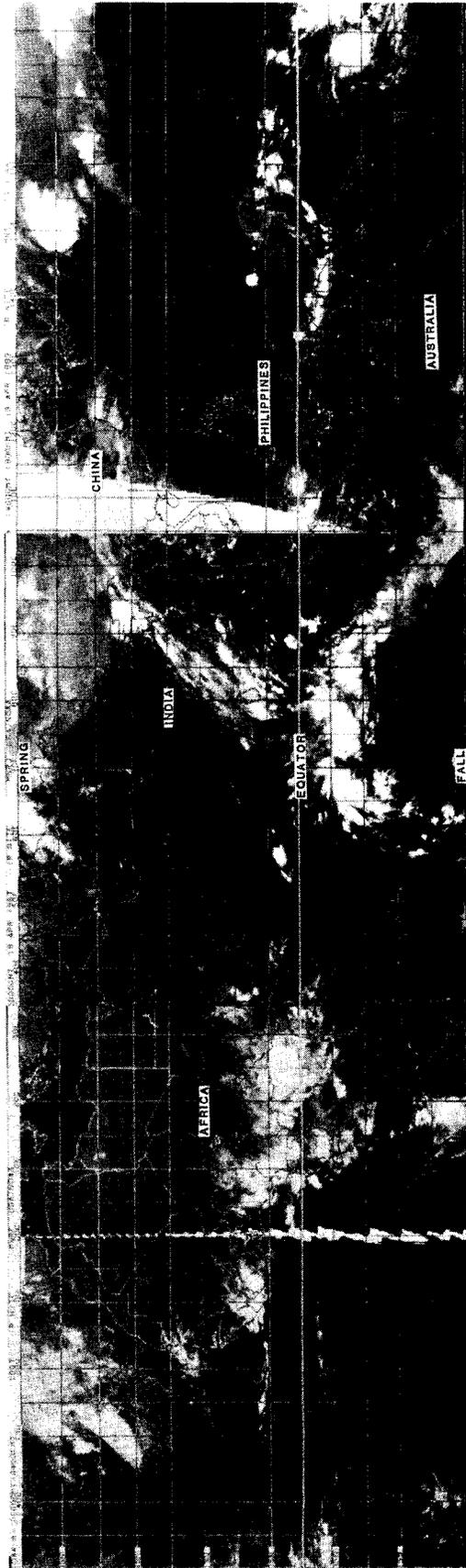
Days suitable for fieldwork 1.6. Topsoil moisture 10% adequate, 90% surplus. Fieldwork severely limited by heavy rain. Corn good; planting 16% complete, 28% 1986, 27% avg. Some oat, pasture, hay seeding. Limited plowing, fertilizing. Small grains, hay, pastures, fruit, tobacco plantbeds good to excellent. Fruit blooming good but behind normal. Vegetable planting became active. Marketed feeder cattle. Livestock feeding continued southwest.

WASHINGTON: Mild temperatures, rain. Low temperatures 30s; high temperatures 70s. Precipitation below normal. Drought conditions southeast.

Soil moisture 30% short, 60% adequate, 10% surplus. Winter wheat none headed, none 1986, none avg. Spring wheat 90% seeded, 50% emerged. Major activities; Spring planting, irrigation, weed control. Apples, pears, full bloom. Frost protection mostly unnecessary. Lambing season over. Livestock turned out to spring pasture.

GLOBAL WEATHER SATELLITE IMAGE

April 19, 1987



International Weather and Crop Summary

April 12-18, 1987

HIGHLIGHTS:

UNITED STATES ... Rain and wetness impedes land preparation and spring planting in the Corn Belt and central Great Plains. Winter wheat development lags slightly behind normal in most areas. Soil moisture is adequate.

WESTERN U.S.S.R. ... Cold, wet weather and an unusually late snow cover in major grain areas of the eastern Ukraine and North Caucasus delay fieldwork.

CANADA ... Light showers and mild weather promote early spring fieldwork across the Prairie grain belt.

EUROPE ... Mostly dry weather over northern Europe helps increase the spring planting pace.

SOUTH ASIA ... Dry, warm weather benefits maturing winter grains and promotes harvesting.

SOUTHEAST ASIA ... Showers improve preplanting moisture in Thailand's rainfed crop areas. Light to moderate rain covers the Philippines.

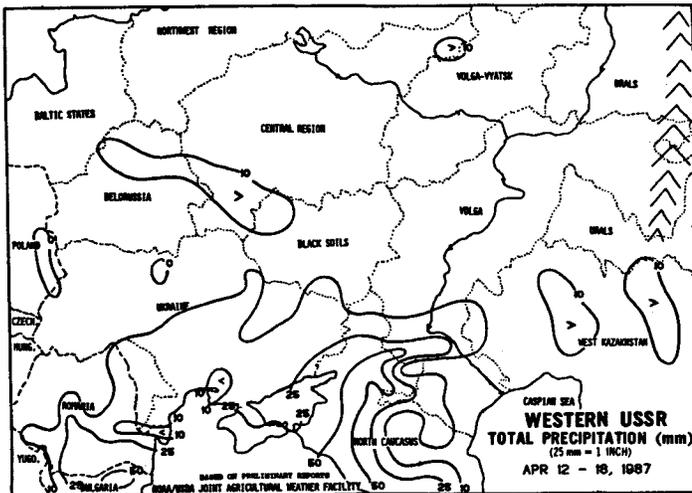
EASTERN ASIA ... Dry weather helps spring and summer crop planting in the North China Plain but stresses vegetative wheat growth.

SOUTH AMERICA ... Heavy showers again disrupt soybean harvesting in southern Brazil. Mostly dry weather favors fieldwork in Brazil's northern soybean and Argentina's primary summer crop areas.

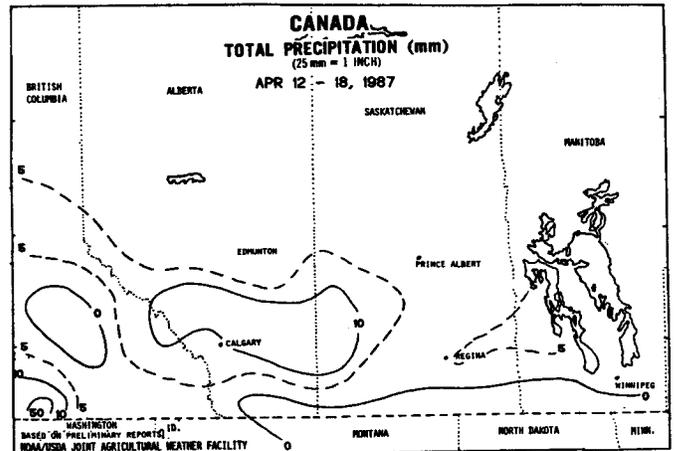
AUSTRALIA ... Dry, warm weather in eastern Australia benefits maturing summer crops.

SOUTH AFRICA ... Showers in the central and southern Maize Triangle likely delay corn harvesting. Mostly dry weather elsewhere benefits maturing corn.

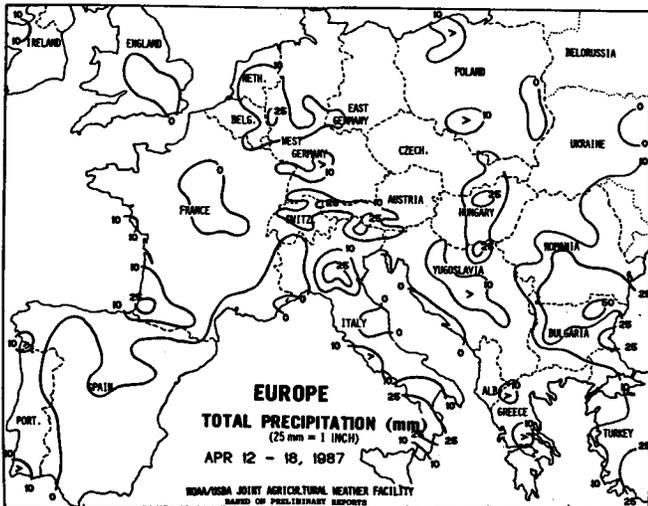
NORTHWESTERN AFRICA ... Hot, dry weather in Moroccan winter grain areas hastens crop maturity.



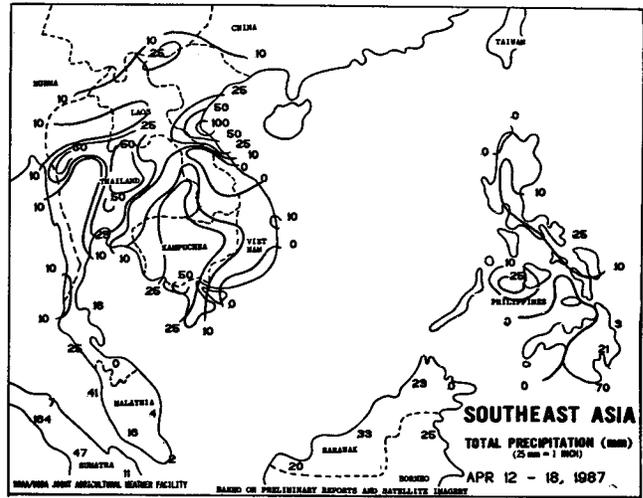
WESTERN U.S.S.R. ... Unseasonable cold weather continued over most crop areas. Heavy snow fell over parts of the eastern Ukraine and northern North Caucasus early in the week, maintaining a deep snow cover about 6 weeks later than usual for these areas. Moderate rain (25 to 50mm) fell over Krasnodar and the Crimean peninsula delaying spring planting. Spring barley is usually being planted in the Ukraine, North Caucasus, and lower Volga, while fieldwork in preparation for corn, sunflower, and sugarbeet planting takes place. Relatively dry weather in the western Baltics, western Belorussia, and the western Ukraine promoted fieldwork. But cold, wet weather and an unusually late snow cover allowed only minimal, if any, fieldwork in major grain areas in the eastern Ukraine, northern North Caucasus, and the lower Volga.



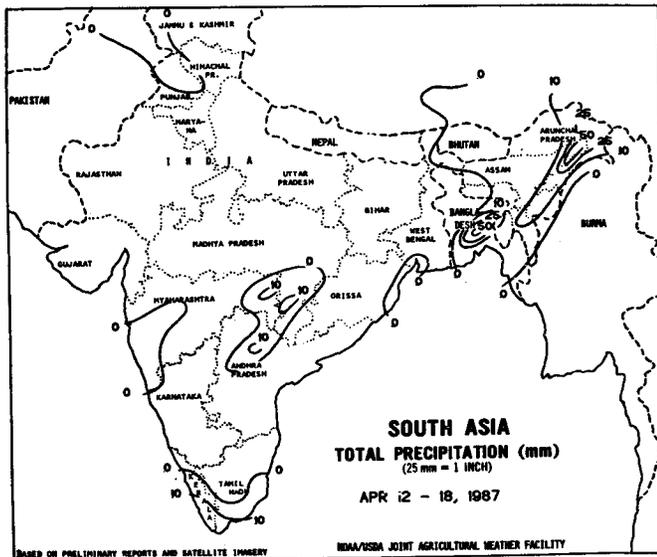
CANADA ... Light showers and mild weather prevailed over the Prairie grain belt. Weekly rainfall generally averaged 7mm or less over Manitoba, Saskatchewan and much of Alberta. Rainfall averaged 10 to 13mm in Alberta's central grain areas. The rain fell mostly late in the week. Weekly temperatures averaged above normal across the region, generally ranging from 5 to 9 degrees C above normal in the east and 3 to 5 degrees C above average in the west. The lowest minimum temperatures dropped only to -1 to -3 degrees C in the south while the highest maximum temperatures reached the upper teens in Alberta, the low 20's in Saskatchewan, and the mid- to upper 20's in some locations in southern Manitoba. The mild weather favored early spring fieldwork.



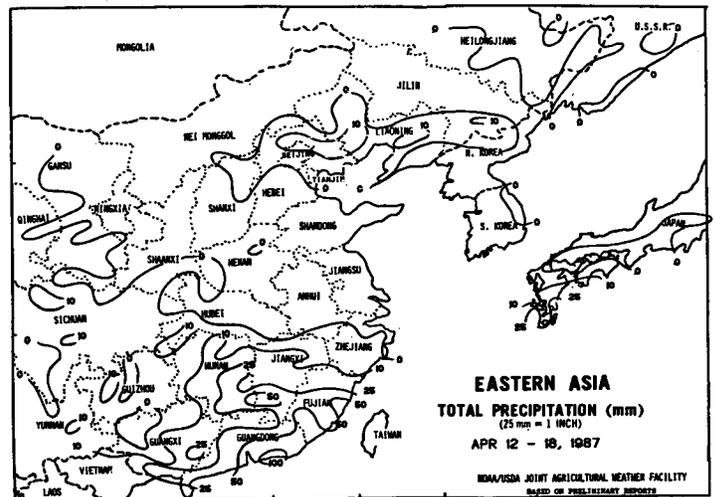
EUROPE ... Mostly dry weather covered England, northern France, West Germany, East Germany, Poland, and Czechoslovakia, increasing the spring planting pace. Topsoil moisture in these areas is adequate to abundant for summer crop emergence and vegetative winter grain growth. In southeastern Europe, soaking rains covered crop areas in southern Romania and northern Bulgaria, delaying spring and summer crop planting, but providing abundant moisture for vegetative winter grains. Mostly dry weather aided fieldwork in eastern Yugoslavia. Light showers in peninsular Italy and Greece favored winter grains approaching the heading stage. Dry weather in Spain covered most crop areas.



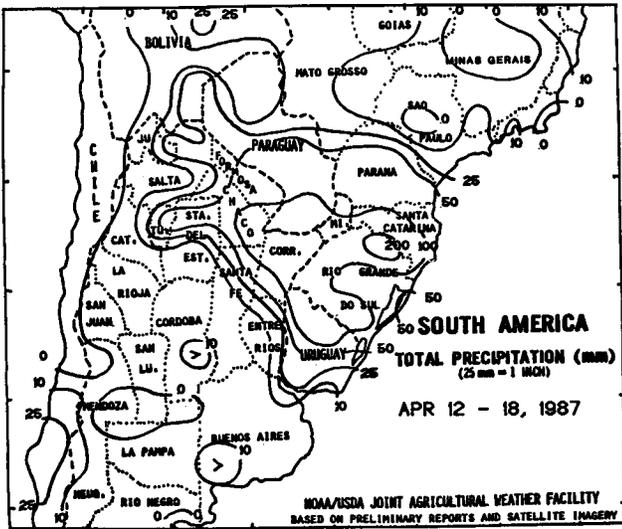
SOUTHEAST ASIA ... Beneficial showers (10 to more than 50mm) boosted moisture in Thailand's upland areas. Pockets of light rain (less than 10mm) persisted in eastern and northern Thailand. Corn planting in Thailand's rainfed crop areas usually begins by May. Light to moderate rain (3 to 36mm) covered the Philippines, with heaviest rainfall in southern Luzon and eastern Mindanao. Heavy tropical showers (more than 100mm) covered parts of western Indonesia. Mostly light to moderate showers fell elsewhere in Indonesia and Malaysia.



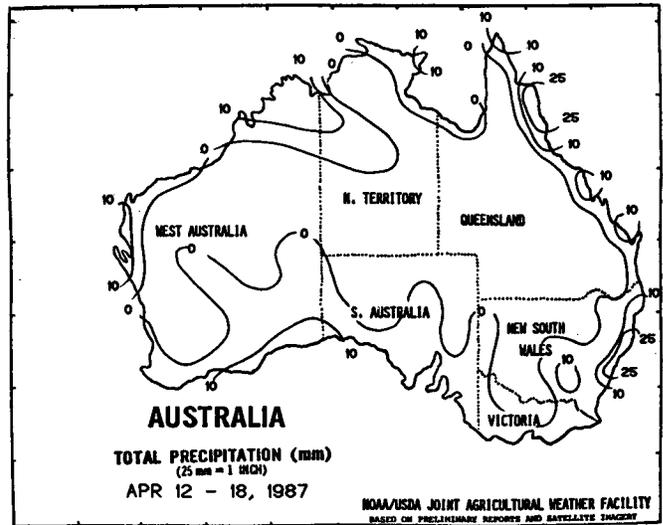
SOUTH ASIA ... Mostly dry, warm weather in northern Pakistan and northern India benefited maturing winter wheat. Harvesting progressed normally in central India. Scattered showers (4 to more than 50mm) continued in India's eastern states and Bangladesh, but mostly dry weather continued in southern India. Summer rice in southern India is normally heading to filling.



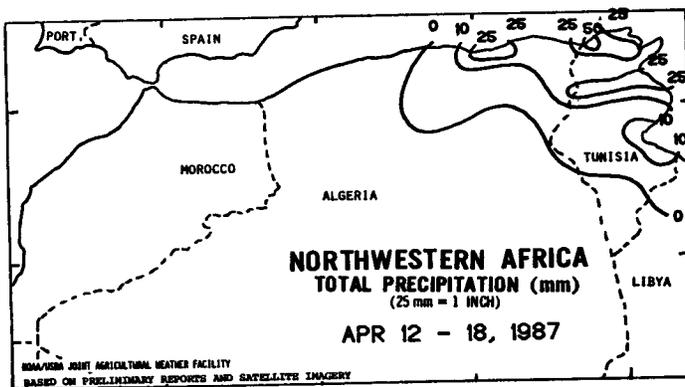
EASTERN ASIA ... Dry weather covered most crop areas north of the Yangtze Valley. Dry weather in Shandong, Jiangsu, Henan, Hubei, Hebei, Anhui, and Shanxi allowed early corn, soybean, and cotton planting to progress with minimal delays. Topsoil moisture for emergence and early growth of corn, soybeans, and cotton is adequate to abundant in Anhui, Hubei, and Jiangsu. Topsoil moisture is limited in Shandong, Henan, Shanxi, and Hebei. Winter grains in southern areas of the North China Plain are approaching the heading stage, while winter grains further north are jointing. In Sichuan, minimal rain fell over winter wheat in the filling stage. In Jilin, Liaoning, and Heilongjiang, seasonable warm and dry weather benefited spring wheat and soybean planting. In southeastern China, wet weather benefited early rice growth.



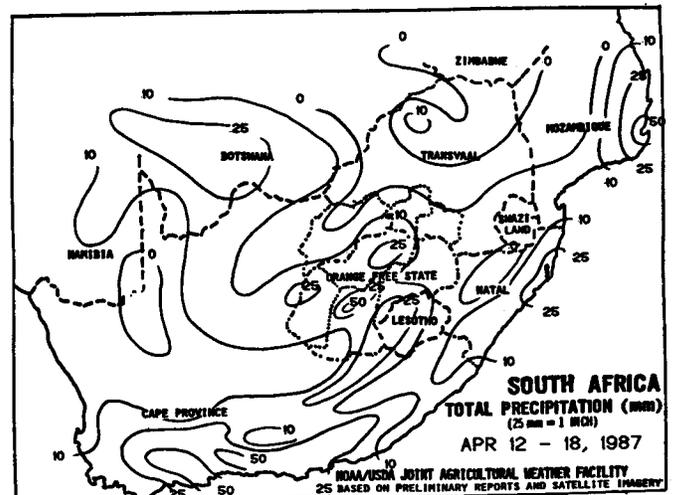
SOUTH AMERICA ... In Brazil, heavy showers and thunderstorms persisted over Rio Grande do Sul, producing 100 to 225mm in the western half of the state. The wetness and saturated soils continued delaying soybean harvesting and likely affected crop quality. Rain also covered Parana, generally producing 50 to 75mm. The moisture slowed crop harvesting but also improved soils for wheat planting, which normally occurs from April to mid-May. Further north, mostly dry weather prevailed over Brazil's northern soybean area. Sunny skies covered the entire region by the weekend. In Argentina, locally heavy rain (50 to 120mm) interfered with the northern cotton harvest. Scattered, mostly light showers (1 to 8mm) caused little, if any, delays in the summer crop harvests in Buenos Aires, Santa Fe, and Cordoba. Isolated showers produced 10 to 15mm in southeastern Cordoba and southwestern Buenos Aires. Weekly temperatures averaged above normal in south-central Brazil and near to somewhat below normal in Argentina.



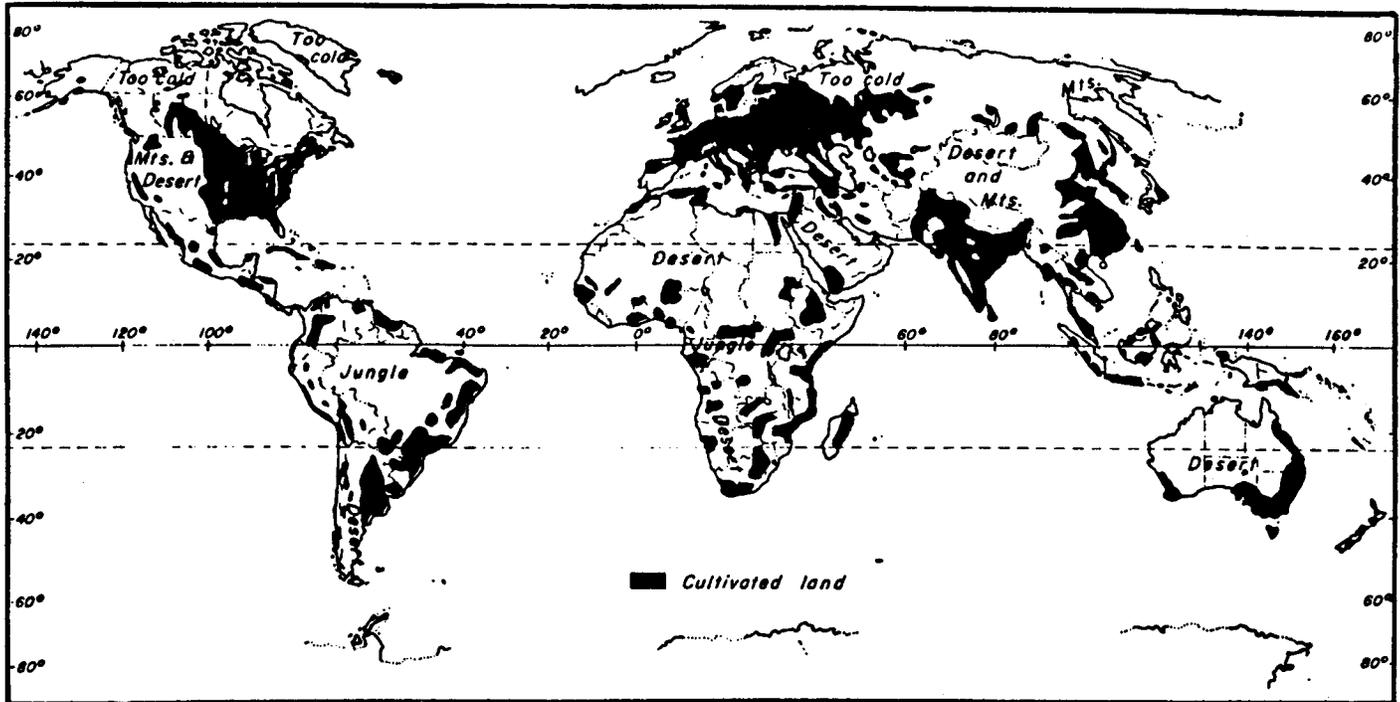
AUSTRALIA ... Dry, warm weather in eastern Australia's summer crop region benefited maturing cotton and grains. However, moisture is limited in Queensland and northern New South Wales for winter wheat plantings which normally begins by mid-April. Light rains (less than 4mm) in Western Australia, South Australia, and Victoria brought little improvement to preplanting moisture reserves. Planting throughout Australia normally lasts from mid-April to July. Scattered showers (4 to more than 40mm) benefited sugarcane along Queensland's coast. However, moisture is limited in some areas for the crop's normal development.



NORTHWESTERN AFRICA ... Hot, dry weather stressed Moroccan winter grains, hastening crop maturity. In Algeria, light showers favored grain filling in the east, while dry weather stressed crop growth in western and central areas. In Tunisia, showers continued favoring winter grains in the filling stage.



SOUTH AFRICA ... Moderate to heavy showers (10 to 50mm) likely delayed corn harvesting in the central and southern Maize Triangle. Light rain (less than 10 mm) with periods of dry weather in the Transvaal favored maturing corn. Temperatures were mild, averaging 16 to 20 degrees C in most grain areas. Corn was grain filling to maturing throughout South Africa. Harvesting normally lasts from April to July.



Approximate cultivated land area of the world. [Courtesy U. S. Department of Agriculture, Foreign Agricultural Service.]

(Continued from p. 21)

WEST VIRGINIA: Average temperature 54°, 10° below normal south, near normal northeast, 2 to 5° above elsewhere. Extremes 29° Gary; 86° Creston. Precipitation averaged 1.67 in.; 0.17 to 0.28 in. below normal northwest, north central; 0.71 to 2.58 in. above elsewhere.

Days suitable for fieldwork 1.6. Soil moisture 5% short, 39% adequate, 56% surplus. Feed supplies mostly adequate.

WISCONSIN: Temperatures averaged 55°, 10° above normal, low 28°; high 88°. Precipitation 0.10 to 1.90 in. Dry northwest, excess moisture southeast.

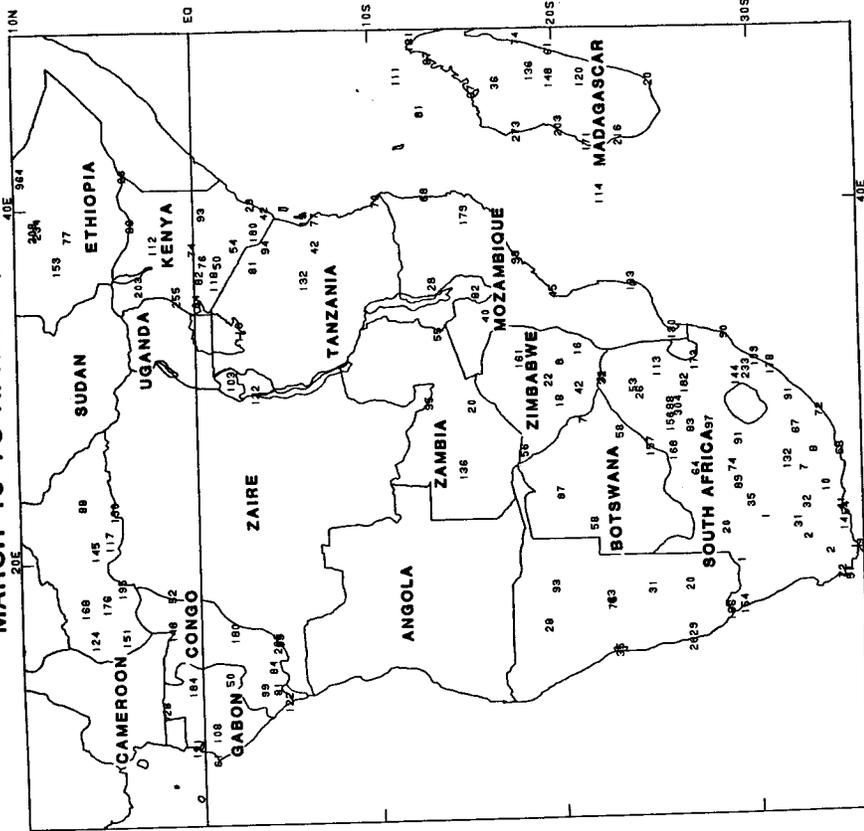
Days suitable for fieldwork 3.6. Soil moisture 13% short, 67% adequate, 20% surplus. Dry north, west central; wet southeast. Spring plowing 27% complete, 19% 1986, 12% avg. Oats 29% planted, 18% 1986, 12% avg.; most activity south. Potato planting underway. Tobacco bed preparation started. Other activities: Fertilizer spreading, manure hauling, corn stalk chopping.

WYOMING: Unseasonably warm. Temperatures above normal. Precipitation generally below normal.

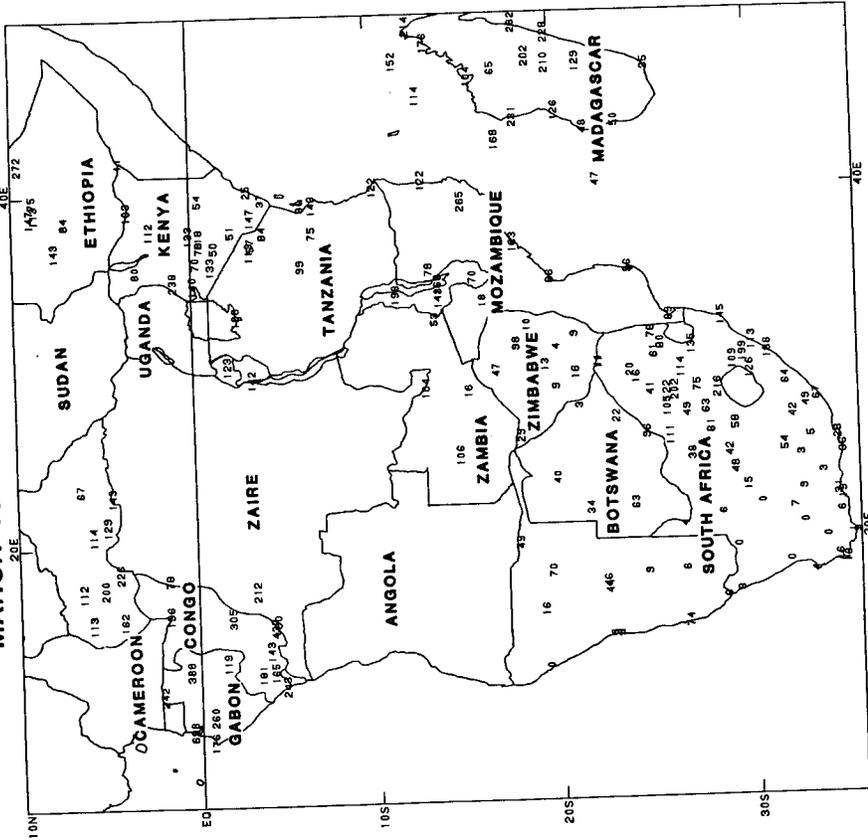
Days suitable for fieldwork 6.0. Topsoil moisture 12% short, 86% adequate, 2% surplus. Spring wheat 25% planted, 45% 1986, 35% avg.; 5% emerged, 20% 1986, 10% avg. Oats 25% planted, 40% 1986, 25% avg.; 5% emerged, 10% 1986, 5% avg. Barley 55% planted, 55% 1986, 50% avg.; 15% emerged, 25% 1986, 20% avg. Sugarbeets 35% planted, 50% 1986, 45% avg. Potatoes 5% planted, 5% 1986. Winter wheat mostly good. Light to moderate wind, freeze damage. Livestock good to excellent. Calves 70% born, 75% 1986, 75% avg. Death loss light to normal. Farm flock: Ewes 85% lambed, 80% 1986, 80% avg.; 80% shorn, 75% 1986, 70% avg. Range flock: Ewes 40% lambed, 45% 1986, 45% avg.; 50% shorn, 45% 1986, 45% avg. Death losses light to normal. Ranges, pastures 20% fair, 80% good.

AFRICAN AGRICULTURAL WEATHER SUMMARY

PERCENT OF NORMAL PRECIPITATION
MARCH 15 TO APRIL 11, 1987



TOTAL PRECIPITATION (mm)
MARCH 15 TO APRIL 11, 1987



In western Africa, early planting of corn, sorghum, and rice normally begins along the south coast. Periodic showers have increased over the region recently as the wet season slowly migrates northward. In eastern Africa, the rainy season is also normally just beginning. Above-average rainfall since mid-March provided adequate moisture for corn planting in the Lake Victoria region of Tanzania and Kenya. Rainfall in Ethiopia has been much above normal, promoting planting of secondary season crops. Planting of Ethiopia's main crop normally begins in June.

In southern Africa, corn normally advances through grain filling and nears maturity by mid-April. Hot, dry weather continued in southern Zambia, Zimbabwe, and southern/central Mozambique, stressing grain-filling corn and hastening maturity. Moisture availability has been poor throughout the filling stage in these areas. Rainfall continued near- to above-normal in the northern sections of Zimbabwe, Zambia, and Mozambique as the Intertropical Convergence Zone (ITCZ) began to advance northward. In Tanzania, scattered showers provided near- to above-normal rainfall in northern regions, but below-normal rainfall persisted in coastal areas.

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