

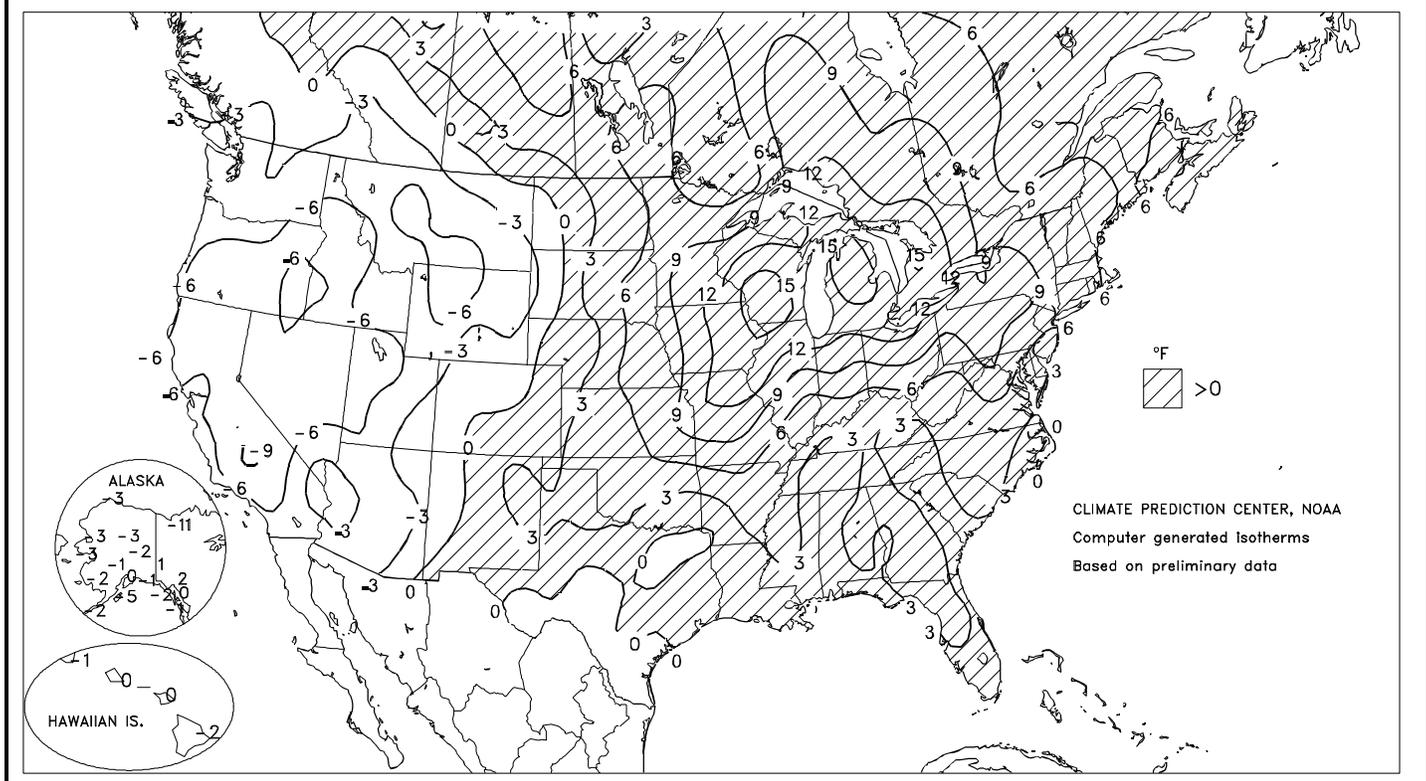
# WEEKLY WEATHER AND CROP BULLETIN

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

Departure of Average Temperature from Normal (°F)

MAR 28 - APR 3, 1999



## HIGHLIGHTS

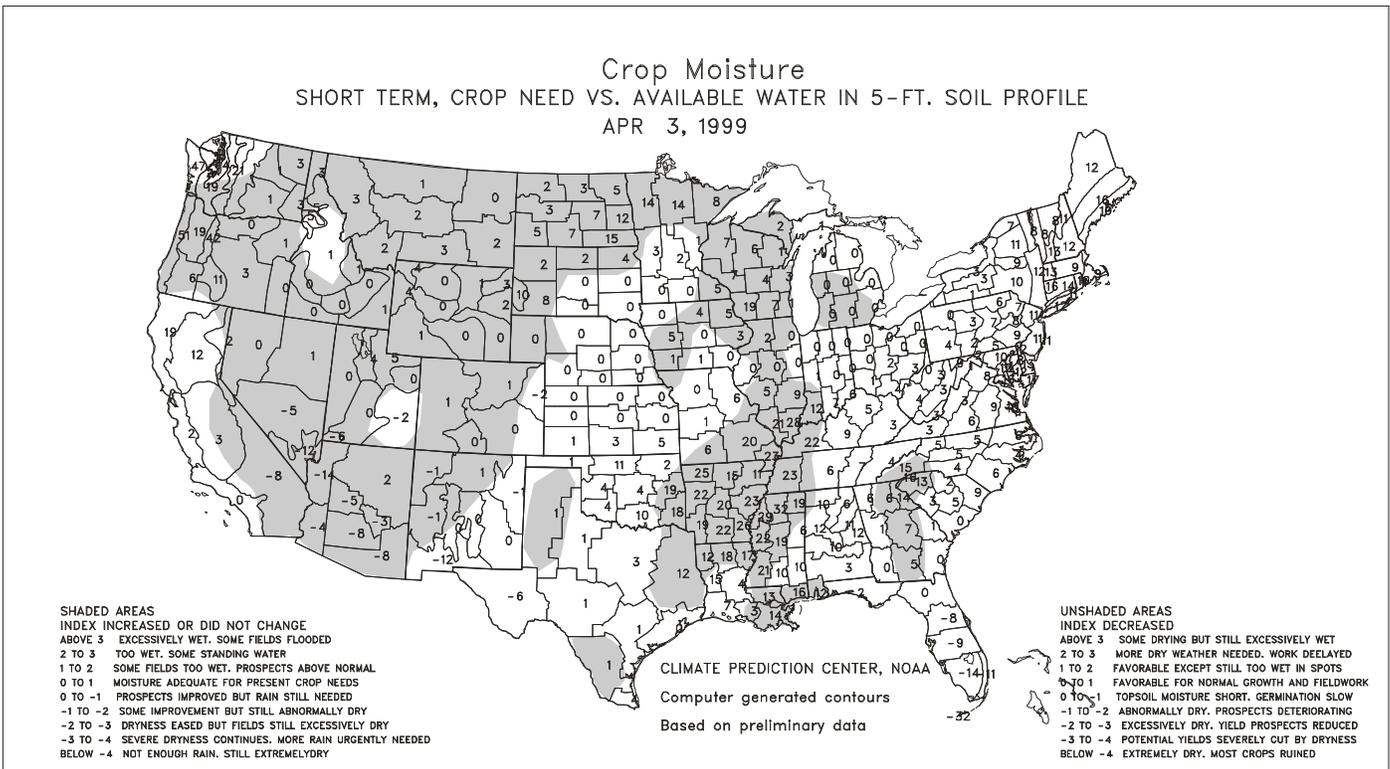
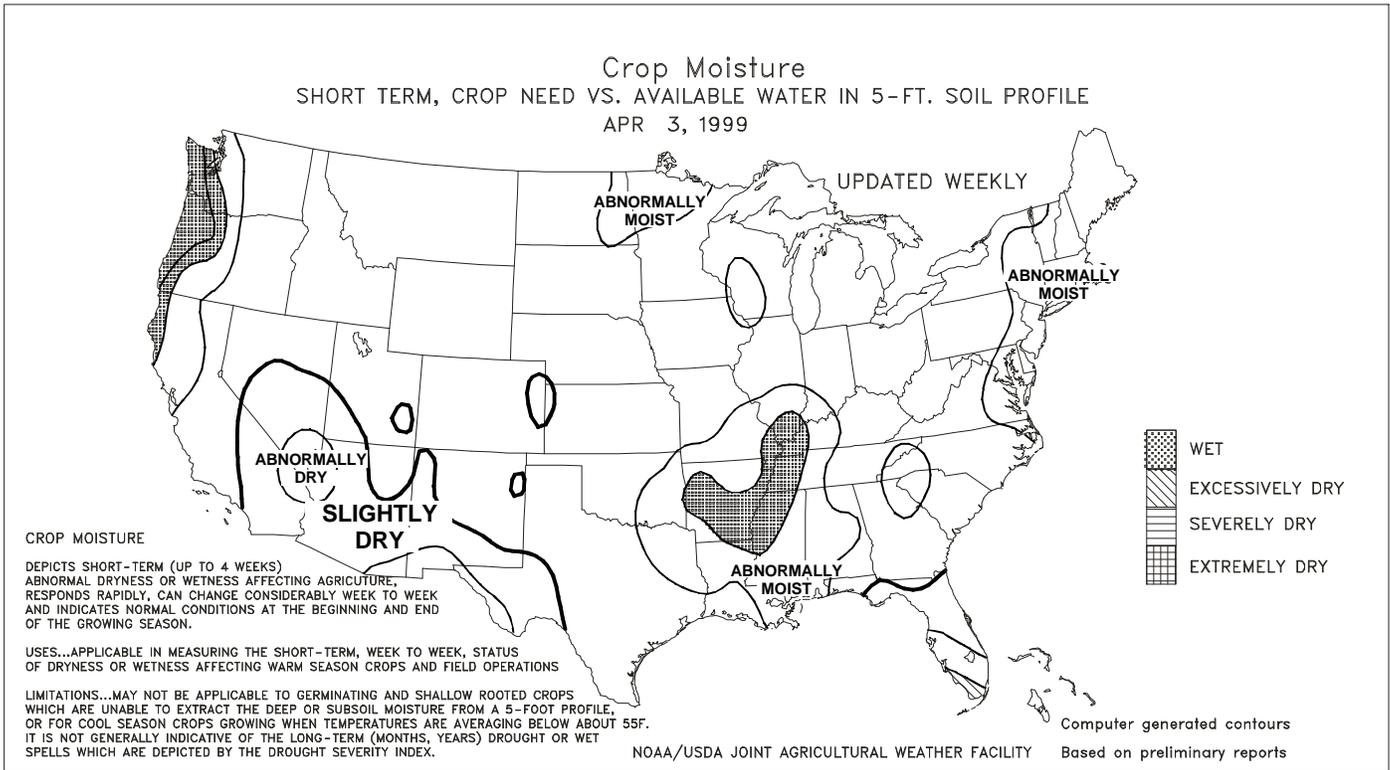
March 28 - April 3, 1999

**B**eneficial precipitation, accompanied by sharply cooler weather, overspread the **Southwest**, improving topsoil moisture and spring runoff prospects, but slowing crop development. Weekly temperatures ranged from 2 to 4°F below normal in **Arizona** and averaged as much as 10°F below normal in **California**. Widespread snow fell after midweek from the mountains of **southern California** and **Arizona** northeastward to the **northern Plains**. In contrast, warm, mostly dry conditions prevailed across **Peninsular Florida**, further reducing soil moisture and increasing irrigation demands. Above-normal temperatures dominated the **eastern half of the Nation**, promoting rapid development of winter grains and spring-sown crops. Temperature departures ranged from +4 to +16°F from the **Great Lakes and Midwestern States** into the **Northeast**, favoring spring fieldwork. Late-week showers and

*(Continued on page 4)*

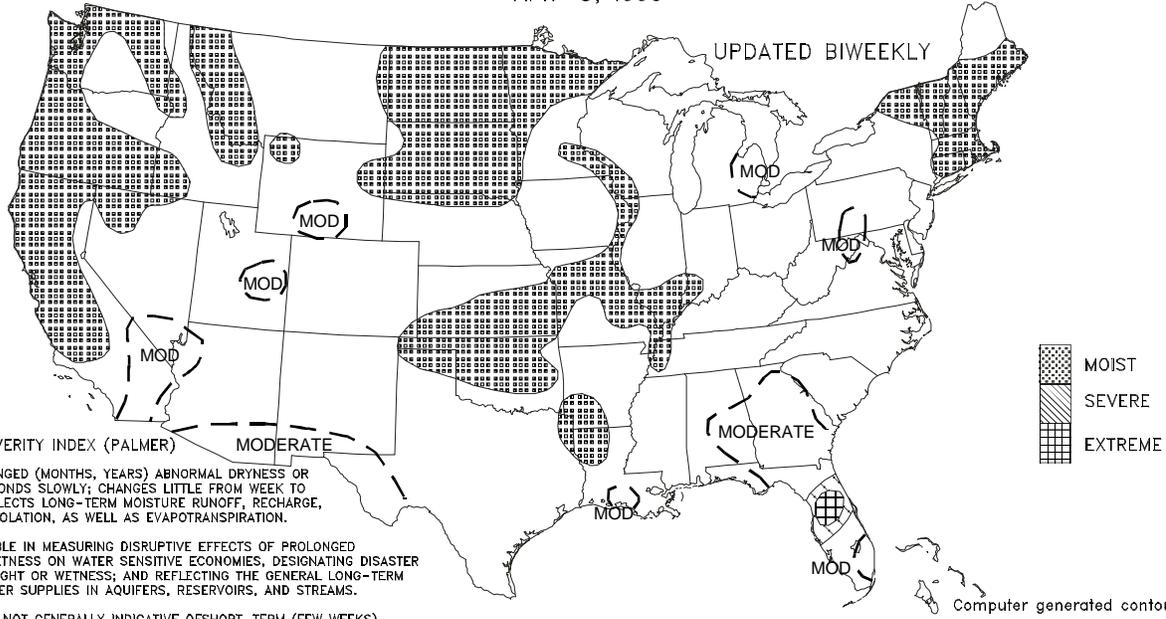
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DROUGHT SEVERITY  
LONG TERM PALMER  
APR 3, 1999

UPDATED BIWEEKLY



DROUGHT SEVERITY INDEX (PALMER)

DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS; RESPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION, AS WELL AS EVAPOTRANSPIRATION.

USES...APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES, DESIGNATING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS, AND STREAMS.

LIMITATIONS...IS NOT GENERALLY INDICATIVE OF SHORT-TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Computer generated contours

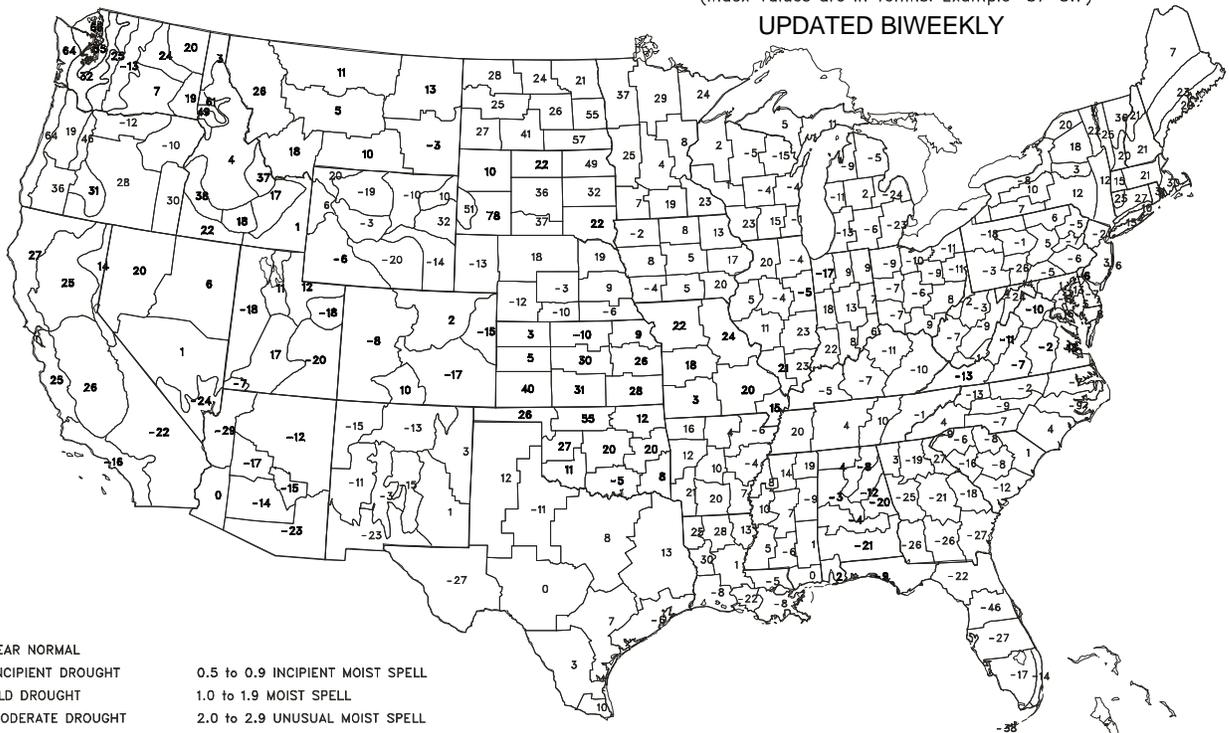
Based on preliminary reports

Drought Severity Index by Division  
3 APR 1999

(Long Term Palmer)

(Index Values are in Tenths. Example 37=3.7)

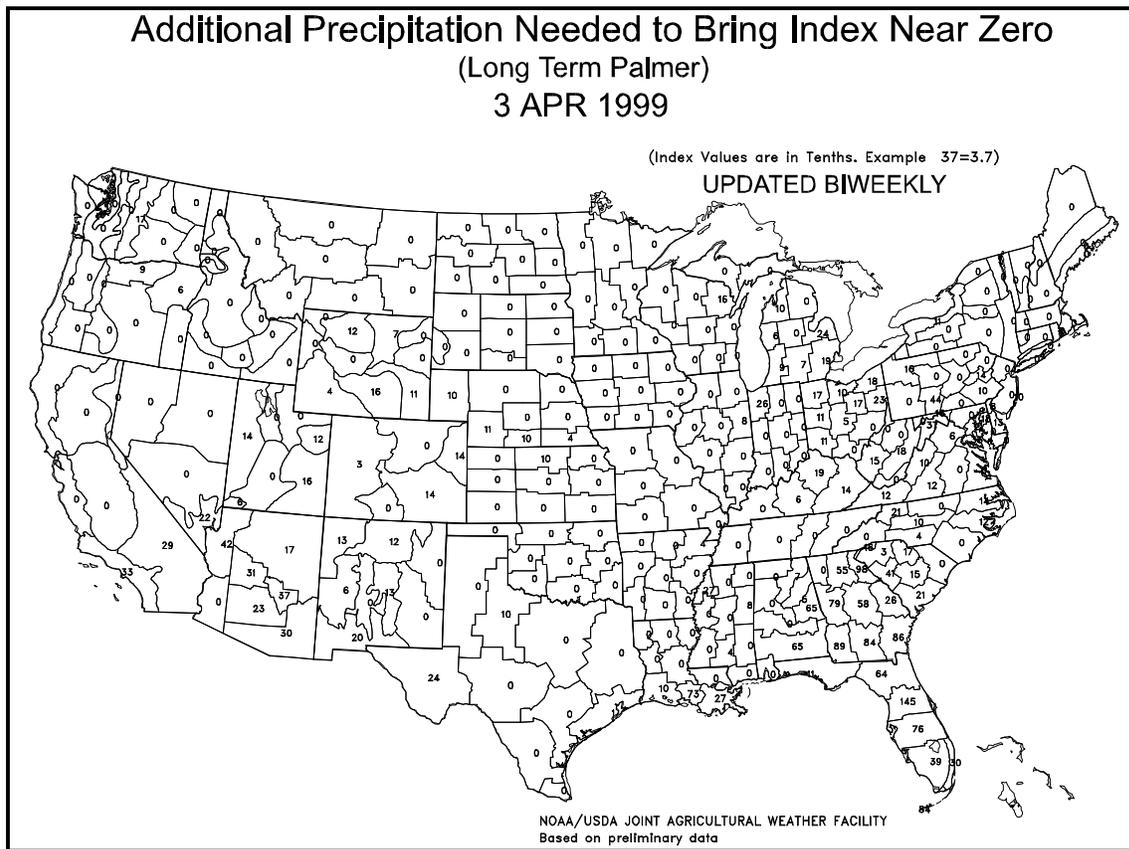
UPDATED BIWEEKLY



- 0.4 to -0.4 NEAR NORMAL
- 0.5 to -0.9 INCIPIENT DROUGHT
- 1.0 to -1.9 MILD DROUGHT
- 2.0 to -2.9 MODERATE DROUGHT
- 3.0 to -3.9 SEVERE DROUGHT
- BELOW -4.0 EXTREME DROUGHT

- 0.5 to 0.9 INCIPIENT MOIST SPELL
- 1.0 to 1.9 MOIST SPELL
- 2.0 to 2.9 UNUSUAL MOIST SPELL
- 3.0 to 3.9 VERY MOIST SPELL
- ABOVE 4.0 EXTREME MOIST SPELL

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY  
Based on preliminary data  
Bolded values are RFC/CADB derived



(Continued from front cover)

thunderstorms, some locally severe, halted fieldwork and spring planting from the **Mississippi Valley** southwestward into the **eastern portions of Oklahoma and Texas**.

Early in the week, warm weather prevailed across the **Southwest**. On Tuesday, **Safford, AZ** logged a daily-record high of 87°F. By midweek, however, warmth shifted eastward as a series of disturbances carved out a stormy pattern in the **West**. High winds swept across the **Southwest** on Wednesday in conjunction with the first storm. In **eastern Arizona**, gusts were clocked to 104 mph in **St. Johns** and 93 mph in **Winslow**. Farther north, snowfall on March 31 included 8.1 inches, a daily-record total, in **Great Falls, MT** and 5.1 inches in **Boise, ID**. As snow expanded throughout the **West** and portions of the **Plains**, April 1-3 totals reached 28.4 inches in **Lander, WY**, 12.7 inches in **Bismarck, ND**, and 9.2 inches in **Colorado Springs, CO**. Freezing rain glazed **eastern North Dakota** and adjacent areas. Weekly snowfall in **Flagstaff, AZ**, 28.0 inches, accounted for nearly 49 percent of their season-to-date total. By week's end, snow depths reached 7 inches in **Red River, NM**; 12 inches on **southern California's Mt. Laguna**; and 48 inches on **Mt. Lemmon, near Tucson, AZ**.

**Tucson** netted 1.17 inches of rain on Thursday, their wettest April day on record and greatest single-day total since October 26, 1996, when 1.61 inches fell. The wet weather in **Tucson** also ended a 115-day period (December 7 to March 31), during which measurable rain fell only once (0.01 inch on January 26). Meanwhile in the **Great Lakes region**, rain finally returned to **Green Bay, WI** and **Grand Rapids, MI** on Saturday, after 24 days (March 10 - April 2) without measurable precipitation. **Green Bay's** previous longest March dry spell was 18 days in 1949; **Grand Rapids** last had more consecutive dry days (32, from August 30 to September 30) in 1979.

Along the **Red River**, precipitation and runoff pushed water levels significantly higher. Between March 29 and April 5, the **Red River**

at **Pembina, ND** rose 10.4 feet, to 2.7 feet above flood stage. The river is forecast to rise another 5 to 6 feet in **Pembina** before cresting on April 18 more than 4 feet below the record set on April 26, 1997. In **East Grand Forks, MN**, an area submerged by the record-setting 1997 flood, the **Red River** stood at 14.8 feet above flood stage on April 5, but was 11.6 feet below the high-water mark.

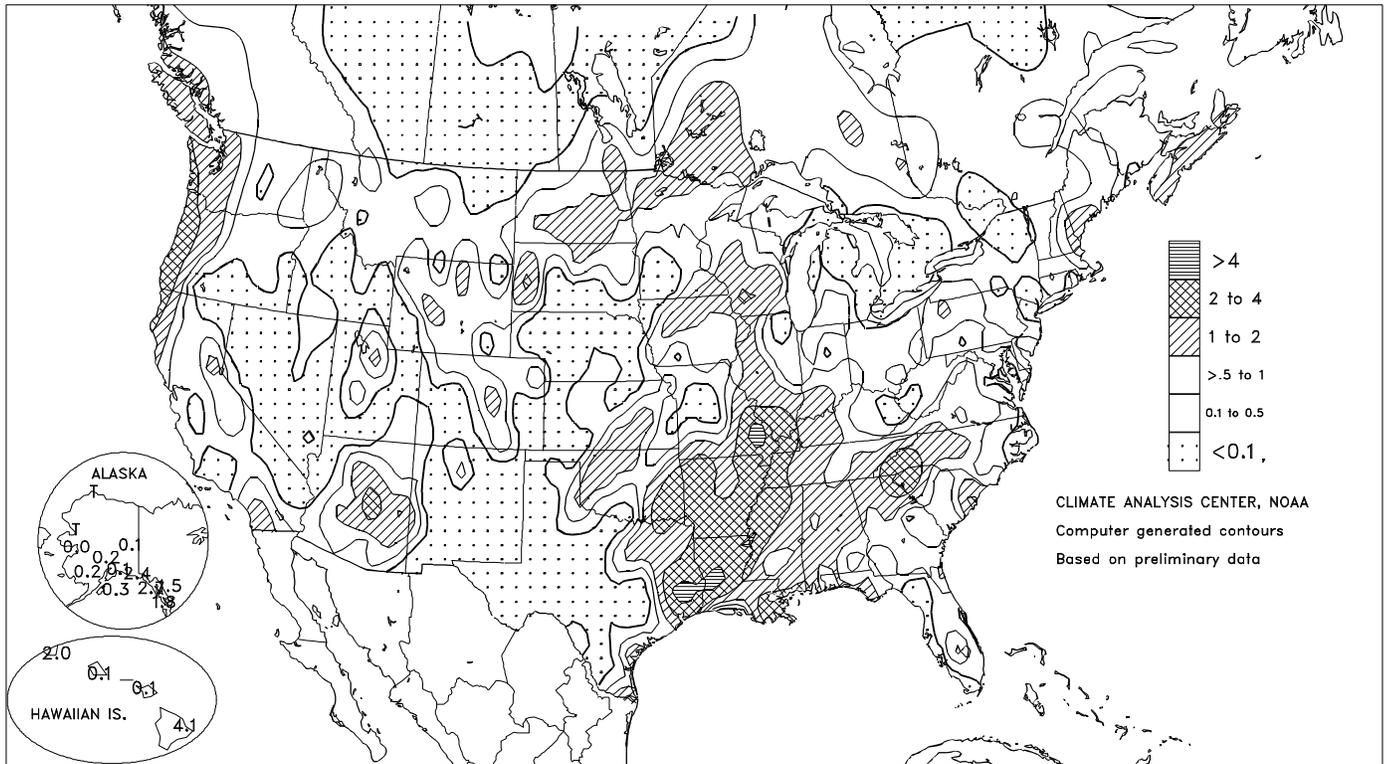
Despite late-week rain, very mild weather prevailed across the **Central and Eastern States**. On Wednesday, **Green Bay's** maximum of 73°F was their fifth-highest March temperature on record. A day earlier, highs topped 70°F for the first time this year in locations such as **LaCrosse, WI** and **Des Moines, IA**. Daily-record highs were established in nearly two dozen locations on Saturday, including **Grand Rapids (80°F)**, **Chattanooga, TN (88°F)**, and **Tampa, FL (90°F)**. Farther west, late-week thunderstorms swept from the **eastern Plains** to the **Mississippi Valley**, producing localized damage. A tornado struck **Benton, LA** on Saturday, resulting in six fatalities. **Paducah, KY** received 3.40 inches of rain, a daily-record total. Farther east, weekly rainfall totaled an inch or more in only a few locations, including **southern Maine** and the **southern Appalachians**, despite frequent showers.

In **California's Sacramento and San Joaquin Valleys**, below-normal temperatures and scattered frost slowed crop development. **Bakersfield** experienced their lowest March average temperature (52.6°F, 4.8°F below normal) since 1952 and notched three daily-record lows (36°F on March 28, 36°F on April 1, and 35°F on April 2) during the week. Farther north, **Redding, CA** posted daily-record lows (32 and 30°F) on the last 2 days of March.

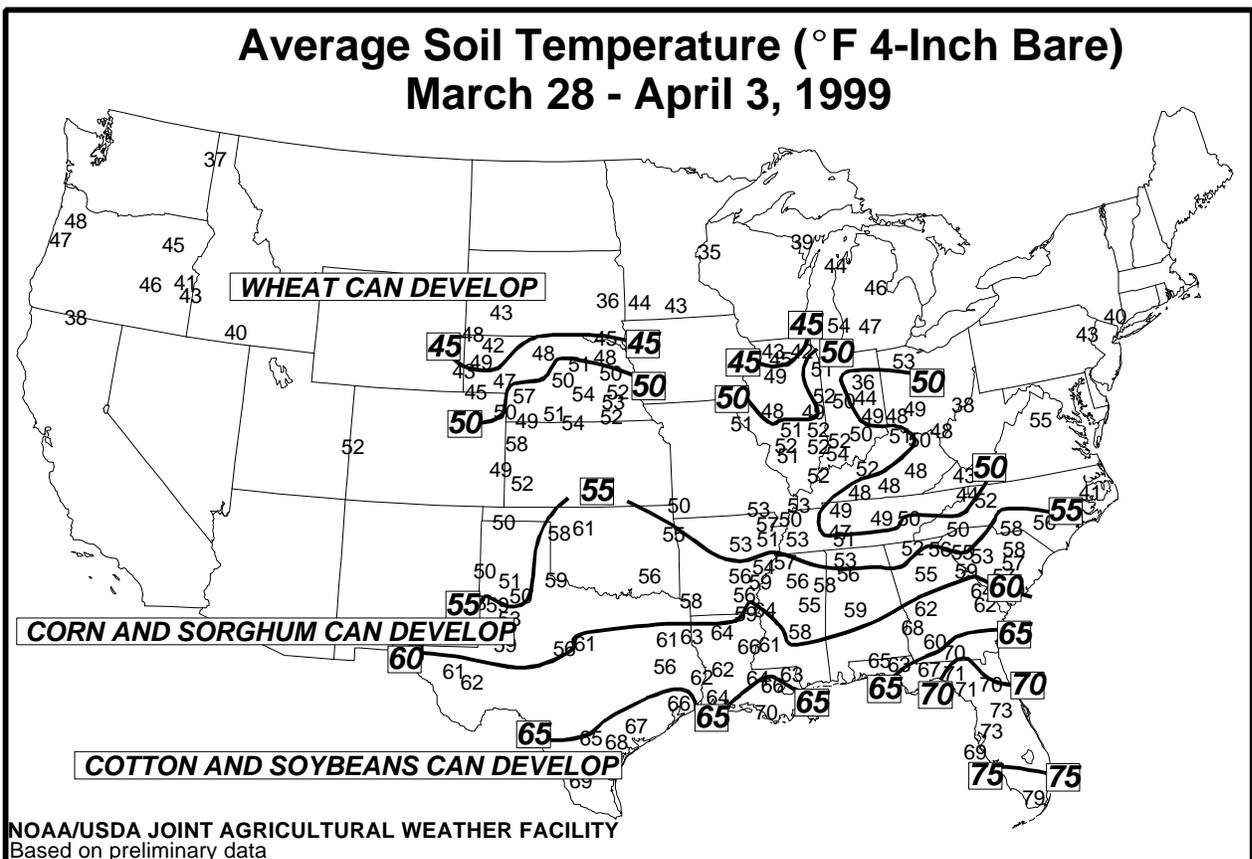
Although bitterly cold weather gripped **northern Alaska** in late March, weekly temperatures were only 0 to 5°F below normal statewide. **Umiat** noted consecutive daily-record lows (-47 and -45°F) on March 28 and 29. With a maximum of -32°F on Monday, **Prudhoe Bay** experienced their latest high temperature on record at or below -30°F (formerly set on March 25, 1969).

Total Precipitation (Inches)

MAR 28 - APR 3, 1999

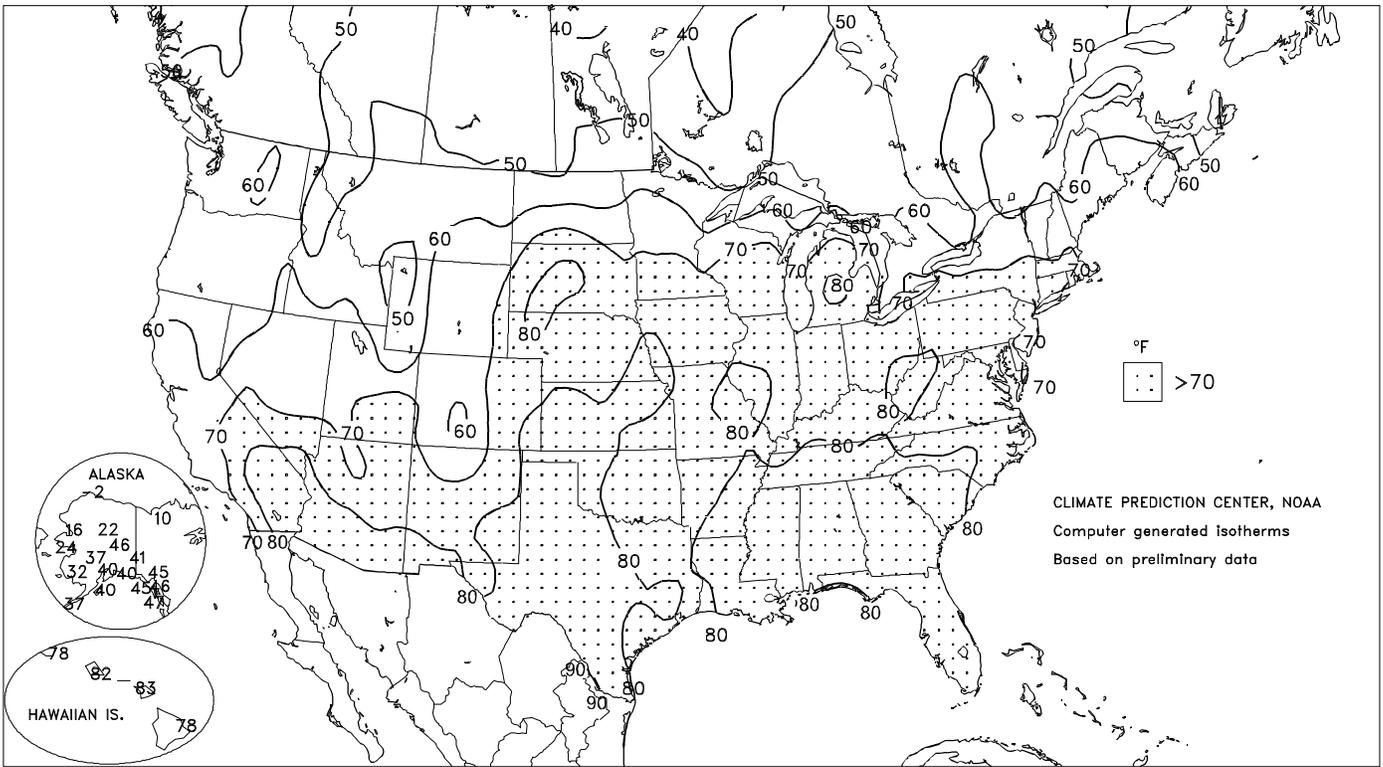


Average Soil Temperature (°F 4-Inch Bare)  
March 28 - April 3, 1999



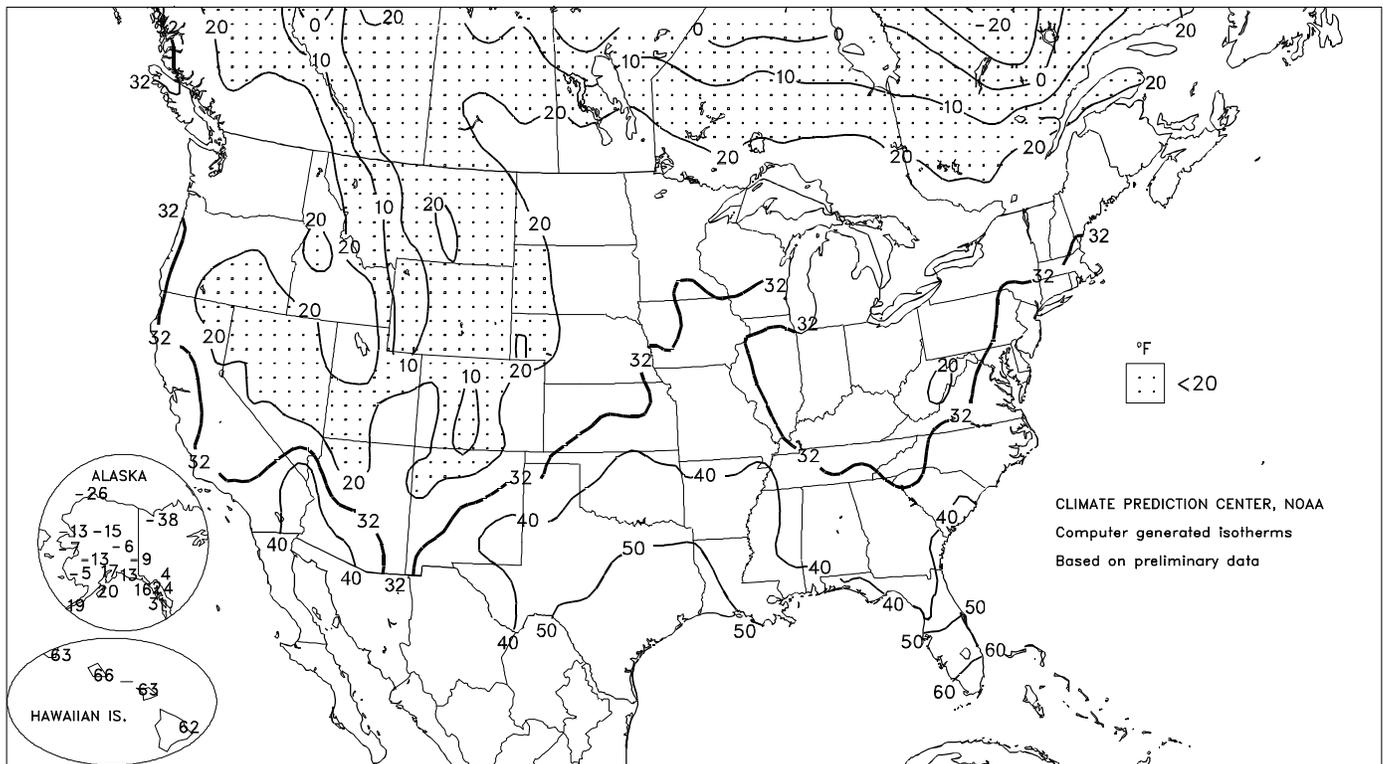
Extreme Maximum Temperature (°F)

MAR 28 - APR 3, 1999



Extreme Minimum Temperature (°F)

MAR 28 - APR 3, 1999



National Weather Data for Selected Cities

Weather Data for the Week Ending April 3, 1999

Data Provided by Climate Prediction Center (301-763-8000 EXT. 7503)

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	TEMP. °F		PRECIP.	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	73	51	87	37	62	4	1.58	0.25	1.27	6.70	99	17.60	106	88	46	0	0	3	1
AL HUNTSVILLE	70	48	88	34	59	3	0.98	-0.40	0.37	5.19	72	17.18	100	97	44	0	0	4	0
AL MOBILE	74	55	82	43	65	1	2.35	1.10	1.65	9.44	137	15.73	92	10	61	0	0	2	2
AL MONTGOMERY	75	52	87	36	63	2	0.84	-0.43	0.80	7.39	109	12.26	72	92	42	0	0	4	1
AK ANCHORAGE	36	24	40	17	30	0	0.08	-0.07	0.05	0.75	97	1.39	60	93	56	0	7	2	0
AK BARROW	-9	-19	-2	-26	-14	-3	0.01	-0.05	0.00	0.19	119	0.35	90	77	69	0	7	1	0
AK FAIRBANKS	31	5	46	-6	18	-2	0.10	0.02	0.06	0.31	78	0.76	58	82	39	0	7	2	0
AK JUNEAU	42	30	46	24	36	0	1.51	0.83	1.22	4.04	113	14.77	125	96	57	0	4	4	1
AK KODIAK	37	24	40	20	30	-5	0.29	-0.68	0.17	3.28	65	14.95	84	86	52	0	7	3	0
AK NOME	15	2	24	-7	8	-3	0.00	-0.15	0.00	0.14	24	2.30	116	79	61	0	7	0	0
AZ FLAGSTAFF	46	23	63	21	35	-4	1.25	0.75	0.62	1.73	63	2.49	36	82	32	0	6	4	1
AZ PHOENIX	73	50	86	40	62	-4	0.80	0.66	0.59	0.91	97	1.09	47	62	19	0	0	2	1
AZ TUCSON	72	46	86	35	59	-3	1.27	1.14	1.12	1.27	169	1.28	56	58	15	0	0	2	1
AZ YUMA	73	56	86	45	65	-3	0.93	0.87	0.63	0.98	363	1.58	190	57	21	0	0	2	1
AR FORT SMITH	68	52	76	42	60	4	3.00	2.09	2.02	6.80	157	10.09	114	95	58	0	0	3	2
AR LITTLE ROCK	68	54	79	44	61	3	1.60	0.38	0.47	5.50	101	14.32	115	94	63	0	0	3	1
CA BAKERSFIELD	61	38	67	36	50	-10	0.05	-0.15	0.02	0.24	21	4.62	152	85	31	0	0	2	0
CA EUREKA	52	37	56	32	44	-5	2.11	1.10	0.78	9.15	160	23.84	145	85	58	0	1	6	3
CA FRESNO	62	40	69	36	51	-7	0.23	-0.12	0.13	0.90	45	4.91	85	87	30	0	0	2	0
CA LOS ANGELES	62	49	67	43	56	-3	0.10	-0.21	0.09	1.33	63	3.74	53	83	50	0	0	2	0
CA REDDING	59	36	67	30	48	-7	0.17	-0.61	0.08	3.46	74	14.23	94	77	29	0	4	4	0
CA SACRAMENTO	61	39	65	36	50	-5	0.07	-0.39	0.06	1.46	53	8.86	95	86	34	0	0	2	0
CA SAN DIEGO	63	53	67	45	58	-3	0.67	0.35	0.59	1.76	94	4.00	76	79	56	0	0	2	1
CA SAN FRANCISCO	55	43	62	40	49	-5	0.26	-0.29	0.16	2.82	86	10.40	96	83	48	0	0	3	0
CO ALAMOSA	53	23	65	12	38	1	0.17	0.06	0.14	0.38	76	0.45	43	69	19	0	5	3	0
CO CO SPRINGS	55	30	72	22	43	1	0.20	-0.04	0.10	0.61	59	0.78	45	71	27	0	5	2	0
CO DENVER	56	27	77	19	42	-2	0.30	-0.03	0.20	0.51	36	1.06	43	74	26	0	5	2	0
CO GRAND JUNCTION	56	33	71	24	45	-3	0.40	0.19	0.28	0.42	42	0.79	38	60	24	0	5	4	0
CO PUEBLO	65	32	81	26	49	2	0.60	0.41	0.59	1.16	135	1.28	86	71	17	0	5	2	1
CT BRIDGEPORT	57	42	67	36	49	6	0.24	-0.64	0.21	3.25	79	13.69	132	90	40	0	0	3	0
CT HARTFORD	60	41	74	38	50	7	0.66	-0.21	0.52	4.39	109	13.15	123	70	24	0	0	3	1
DC WASHINGTON	68	47	72	42	58	6	0.29	-0.38	0.25	4.12	120	12.08	136	83	33	0	0	2	0
DE WILMINGTON	62	45	71	41	54	6	0.32	-0.47	0.31	4.27	113	13.20	136	79	30	0	0	2	0
FL DAYTONA BEACH	79	59	87	44	69	3	0.00	-0.56	0.00	1.01	32	7.64	85	92	46	0	0	0	0
FL JACKSONVILLE	79	55	84	36	67	3	1.35	0.63	1.35	1.75	44	7.88	70	96	42	0	0	1	1
FL KEY WEST	81	73	83	64	77	2	0.00	-0.35	0.00	0.71	38	4.79	84	86	70	0	0	0	0
FL MIAMI	80	69	83	66	75	1	0.00	-0.54	0.00	0.25	10	3.50	52	85	57	0	0	0	0
FL ORLANDO	84	59	88	48	72	3	0.00	-0.56	0.00	0.56	16	3.82	44	93	35	0	0	0	0
FL PENSACOLA	73	57	80	46	65	1	0.00	-1.09	0.00	4.90	81	11.53	71	98	59	0	0	0	0
FL TALLAHASSEE	79	54	86	33	67	3	0.41	-0.74	0.36	3.60	54	9.52	56	94	42	0	0	3	0
FL TAMPA	82	63	89	52	72	4	0.00	-0.44	0.00	0.72	23	4.05	49	89	53	0	0	0	0
GA WEST PALM	81	67	84	61	74	2	0.14	-0.57	0.00	0.69	18	9.11	97	81	51	0	0	1	0
GA ATHENS	73	50	85	36	61	4	1.88	0.77	1.28	3.32	56	11.47	77	96	41	0	0	3	2
GA ATLANTA	71	51	84	39	61	3	0.71	-0.47	0.47	3.40	54	10.70	68	90	35	0	0	4	0
GA AUGUSTA	77	47	88	33	62	3	0.48	-0.44	0.35	3.07	61	11.16	84	10	35	0	0	2	0
GA COLUMBUS	75	53	87	38	64	3	0.25	-0.94	0.16	3.31	53	9.15	58	90	38	0	0	2	0
GA MACON	76	50	85	36	63	2	0.67	-0.28	0.45	3.31	64	11.49	79	10	43	0	0	3	0
GA SAVANNAH	78	53	85	38	65	3	0.22	-0.56	0.13	1.40	34	9.47	87	96	38	0	0	3	0
HI HILO	76	64	78	62	70	-2	4.10	0.55	1.18	13.63	88	49.78	140	94	66	0	0	7	4
HI HONOLULU	81	70	82	66	75	0	0.11	-0.33	0.01	0.46	19	3.32	41	79	49	0	0	4	0
HI KAHULUI	81	67	83	63	74	0	0.07	-0.49	0.00	1.24	42	5.37	54	85	51	0	0	2	0
HI LIHUE	78	67	78	63	72	-1	1.98	1.06	1.31	2.97	65	8.64	63	90	64	0	0	7	1
ID BOISE	48	33	59	27	41	-5	0.30	0.00	0.20	0.79	55	4.15	106	80	28	0	4	3	0
ID LEWISTON	49	32	56	29	41	-6	0.53	0.28	0.30	1.10	93	2.99	89	90	34	0	4	5	0
ID POCATELLO	45	27	61	21	36	-5	0.20	-0.09	0.20	0.75	54	3.40	101	74	28	0	6	1	0
IL CHICAGO/O'HARE	67	44	75	31	56	13	0.00	-0.76	0.00	1.73	57	7.84	132	84	41	0	1	0	0
IL MOLINE	70	45	76	30	58	14	1.03	0.21	0.83	2.39	71	6.44	105	84	42	0	1	2	1
IL PEORIA	67	44	77	32	56	10	0.47	-0.33	0.31	1.26	39	5.49	88	95	45	0	1	2	0
IL ROCKFORD	68	41	76	30	55	13	0.16	-0.58	0.08	1.22	44	5.50	105	90	42	0	2	2	0
IL SPRINGFIELD	68	46	81	27	57	10	0.86	0.03	0.81	1.78	49	5.87	85	89	40	0	1	2	1
IN EVANSVILLE	66	44	77	30	55	4	1.47	0.45	1.13	5.44	106	13.39	123	94	48	0	1	3	1
IN FORT WAYNE	66	41	73	26	53	10	0.16	-0.58	0.09	1.26	39	6.57	94	87	44	0	2	3	0
IN INDIANAPOLIS	65	46	71	31	55	8	0.31	-0.58	0.14	1.89	45	11.81	132	91	51	0	1	4	0
IN SOUTH BEND	67	45	74	30	56	13	0.10	-0.74	0.08	1.28	37	5.98	79	80	40	0	1	2	0
IA BURLINGTON	73	49	81	35	61	15	0.55	-0.21	0.33	1.72	54	6.45	116	79	38	0	0	2	0
IA CEDAR RAPIDS	68	43	73	32	56	13	1.36	0.71	0.93	2.46	95	6.33	137	82	43	0	2	2	1
IA DES MOINES	67	44	75	37	56	12	0.25	-0.42	0.20	1.27	48	3.49	74	81	39	0	0	2	0
IA DUBUQUE	66	45	73	32	56	15	0.71	-0.07	0.63	1.54	48	4.66	80	81	41	0	1	2	1
IA SIOUX CITY	64	37	79	23	50	8	0.02	-0.47	0.01	0.90	42	2.04	60	85	34	0	3	2	0
IA WATERLOO	67	44	74	35	56	14	0.61	-0.04	0.41	1.16	45	3.36	75	83	38	0	0	2	0
KS CONCORDIA	65	41	82	32	53	6	0.10	-0.42	0.05	0.93	39	1.70	46	89	38	0	1	3	0
KS DODGE CITY	67	40	83	32	54	5	0.50	0.09	0.36	3.27	189	5.24	185	91	31	0	1	2	0
KS GOODLAND	60	31	79	25	46	2	0.08	-0.16	0.07	0.97	78	1.54	77	85	30	0	5	2	0
KS TOPEKA	70	44	80	34	57	7	0.46	-0.18	0.30	1.31	48	3.43	73	92	40	0	0	3	0

Based on 1961-90 normals

Weather Data for the Week Ending April 3, 1999

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	TEMP. °F		PRECIP.	
																90 AND ABOVE	32 AND BELOW	0.1 INCH OR MORE	5.0 INCH OR MORE
KY WICHITA	67	46	77	36	56	5	1.04	0.48	1.00	2.91	110	4.65	105	97	49	0	0	3	1
KY JACKSON	65	48	78	35	57	4	0.48	-0.53	0.24	3.52	68	13.13	103	76	40	0	0	3	0
KY LEXINGTON	65	43	72	28	54	4	0.43	-0.53	0.20	4.03	84	12.52	115	88	45	0	1	4	0
KY LOUISVILLE	67	48	74	33	57	6	0.49	-0.56	0.21	4.11	81	13.73	122	92	46	0	0	5	0
LA PADUCAH	67	48	80	32	58	5	3.64	2.48	3.39	6.54	120	14.91	118	96	48	0	1	3	1
LA BATON ROUGE	75	57	86	43	66	0	0.91	-0.24	0.50	5.39	101	12.36	78	99	66	0	0	3	1
LA LAKE CHARLES	73	61	81	53	67	2	0.72	0.03	0.40	3.73	104	10.48	90	10	82	0	0	4	0
LA NEW ORLEANS	74	59	83	49	67	2	2.27	1.23	2.24	4.60	86	8.72	53	97	68	0	0	3	1
LA SHREVEPORT	70	57	82	51	63	2	1.78	0.98	1.06	6.16	156	19.54	166	98	69	0	0	4	1
ME CARIBOU	44	27	62	20	35	4	0.53	-0.04	0.47	2.77	104	7.74	110	82	34	0	6	2	0
ME PORTLAND	52	34	64	30	43	5	1.69	0.78	1.64	4.56	112	14.58	133	76	39	0	3	3	1
MD BALTIMORE	65	42	70	34	54	5	0.55	-0.18	0.41	3.87	105	11.22	113	82	34	0	0	2	0
MA BOSTON	54	41	71	38	48	5	0.71	-0.13	0.71	2.52	63	11.72	104	77	37	0	0	1	1
MA WORCESTER	56	40	69	34	48	9	0.45	-0.46	0.42	4.09	94	13.48	117	68	25	0	0	2	0
MI ALPENA	62	34	71	21	48	14	0.48	-0.03	0.47	1.21	52	4.96	94	88	37	0	2	2	0
MI GRAND RAPIDS	67	43	78	29	55	15	0.92	0.20	0.92	1.88	64	6.91	111	80	33	0	2	1	1
MI HOUGHTON LAKE	63	38	77	23	51	16	0.01	-0.49	0.01	0.41	18	3.56	73	85	35	0	3	1	0
MI LANSING	67	42	78	22	55	15	0.24	-0.38	0.24	1.17	45	4.48	83	83	43	0	2	1	0
MI MARQUETTE	51	33	65	27	42	12	0.15	-0.50	0.13	1.19	39	9.27	133	80	46	0	4	1	0
MI MUSKOGON	64	42	76	26	53	15	0.10	-0.55	0.03	0.65	23	4.36	66	89	44	0	3	3	0
MN DULUTH	44	31	56	28	38	6	0.58	0.09	0.51	1.70	81	3.21	78	97	63	0	5	5	1
MN INT'L FALLS	40	28	52	24	34	4	1.42	1.12	0.75	2.58	217	3.16	117	94	67	0	6	5	1
MN MINNEAPOLIS	60	41	73	31	51	12	0.76	0.26	0.41	2.20	102	5.28	133	84	46	0	1	2	0
MN ROCHESTER	58	40	69	32	49	12	1.53	1.00	1.14	2.04	101	5.11	144	95	54	0	1	3	1
MN ST. CLOUD	54	36	70	28	45	10	0.81	0.38	0.63	1.61	100	2.52	85	91	52	0	2	3	1
MS JACKSON	72	56	86	39	64	3	0.59	-0.76	0.54	4.66	73	15.17	93	96	58	0	0	3	1
MS MERIDIAN	73	51	84	35	62	2	0.63	-0.83	0.45	6.13	83	13.93	78	98	51	0	0	4	0
MO TUPELO	70	52	83	35	61	3	1.79	0.47	0.83	9.13	138	23.60	145	93	53	0	0	6	2
MO COLUMBIA	72	49	81	39	60	11	0.77	-0.03	0.47	3.04	87	7.64	112	91	39	0	0	3	0
MO KANSAS CITY	70	47	79	38	59	10	0.36	-0.27	0.20	1.65	59	5.71	115	87	43	0	0	3	0
MO SAINT LOUIS	69	49	83	38	59	8	1.34	0.50	1.18	3.58	91	12.20	155	85	37	0	0	2	1
MO SPRINGFIELD	69	46	79	35	58	7	0.69	-0.27	0.63	3.67	85	9.52	115	93	43	0	0	2	1
MT BILLINGS	42	26	63	23	34	-6	0.46	0.13	0.24	0.77	59	1.84	64	80	43	0	7	4	0
MT BUTTE	39	19	53	13	29	-4	0.19	0.01	0.00	0.70	84	1.61	91	81	34	0	7	5	0
MT GLASGOW	45	25	56	18	35	-2	0.10	0.00	0.08	0.36	80	1.75	164	80	32	0	7	2	0
MT GREAT FALLS	37	19	53	5	28	-9	0.40	0.13	0.34	0.56	47	1.24	46	83	44	0	7	2	0
MT KALISPELL	44	23	49	17	34	-4	0.19	-0.03	0.07	0.74	69	3.31	89	86	35	0	7	4	0
MT MILES CITY	46	27	64	17	36	-3	0.46	0.26	0.17	0.57	79	1.19	70	83	41	0	7	4	0
MT MISSOULA	45	22	52	17	34	-6	0.21	0.00	0.12	0.46	43	2.51	81	89	36	0	7	3	0
NE GRAND ISLAND	63	38	76	31	51	6	0.20	-0.30	0.20	1.00	48	1.64	50	87	38	0	1	1	0
NE LINCOLN	65	38	82	29	52	6	0.09	-0.47	0.07	1.60	69	3.23	90	88	36	0	2	3	0
NE NORFOLK	62	37	74	27	50	7	0.02	-0.45	0.02	0.68	33	1.53	46	88	41	0	2	1	0
NE NORTH PLATTE	58	30	74	22	44	2	0.03	-0.32	0.02	0.67	50	1.27	59	93	41	0	5	2	0
NE OMAHA	65	41	82	32	53	8	1.82	1.30	1.59	3.08	137	5.07	134	88	37	0	1	3	1
NE SCOTTSBLUFF	54	26	79	21	40	-1	0.11	-0.18	0.09	1.13	93	1.42	66	87	30	0	6	3	0
NE VALENTINE	56	30	76	22	43	4	0.12	-0.16	0.03	0.54	47	1.41	77	90	39	0	5	3	0
NV ELY	43	19	61	13	31	-6	0.24	0.02	0.12	0.35	34	1.17	48	74	34	0	7	4	0
NV LAS VEGAS	67	47	83	38	57	-2	0.02	-0.05	0.02	0.02	4	0.10	7	39	14	0	0	1	0
NV RENO	48	28	61	24	38	-7	0.19	0.08	0.05	0.27	36	2.28	80	67	23	0	6	3	0
NV WINNEMUCCA	48	25	60	11	37	-6	0.12	-0.07	0.10	0.21	24	2.26	101	81	24	0	6	3	0
NH CONCORD	56	33	69	27	45	7	0.53	-0.12	0.48	2.85	95	11.07	137	79	31	0	4	3	0
NJ NEWARK	63	46	74	40	54	7	0.22	-0.68	0.17	3.68	86	13.66	128	70	30	0	0	2	0
NM ALBUQUERQUE	64	40	74	30	52	1	0.05	-0.07	0.05	1.15	205	1.27	85	53	13	0	2	1	0
NY ALBANY	59	40	72	32	49	9	0.14	-0.55	0.14	4.15	128	10.52	134	72	36	0	1	1	0
NY BINGHAMTON	58	42	69	33	50	12	0.07	-0.62	0.05	2.62	84	8.93	114	77	38	0	0	2	0
NY BUFFALO	60	41	75	28	50	11	0.13	-0.52	0.12	2.56	86	9.44	118	85	42	0	1	2	0
NY ROCHESTER	60	38	70	25	49	9	0.16	-0.40	0.08	3.44	136	8.05	120	78	34	0	1	2	0
NY SYRACUSE	61	39	72	27	50	10	0.25	-0.46	0.16	4.04	131	10.80	142	78	35	0	2	2	0
NC ASHEVILLE	65	41	79	25	53	2	2.13	1.22	1.40	3.47	70	13.14	108	90	35	0	1	4	2
NC CHARLOTTE	70	47	80	32	58	3	0.97	0.16	0.59	1.90	40	8.09	66	85	33	0	1	3	1
NC GREENSBORO	70	47	77	36	58	5	0.79	0.05	0.64	2.60	65	9.49	90	82	36	0	0	2	1
NC HATTERAS	63	46	66	39	55	0	0.00	-0.90	0.00	5.58	119	11.77	84	88	56	0	0	0	0
NC RALEIGH	72	47	78	32	59	5	0.87	0.16	0.87	4.56	112	12.29	109	94	37	0	1	1	1
NC WILMINGTON	71	50	77	36	61	3	0.65	-0.10	0.65	3.72	89	10.52	90	87	43	0	0	1	1
ND BISMARCK	47	28	70	22	37	2	1.07	0.80	0.76	1.32	147	2.84	158	89	50	0	6	3	1
ND DICKINSON	44	26	67	21	35	-1	1.17	0.89	0.84	1.19	142	2.43	156	85	47	0	7	4	1
ND FARGO	48	33	66	29	40	6	0.75	0.42	0.51	2.58	213	3.93	167	91	65	0	3	3	1
ND GRAND FORKS	44	31	57	28	38	5	0.42	0.16	0.16	1.46	139	2.68	120	96	72	0	5	2	0
ND JAMESTOWN	46	30	64	26	38	4	1.16	0.88	0.98	1.42	141	3.05	147	92	61	0	4	5	1
ND WILLISTON	43	25	54	20	34	-2	0.19	-0.02	0.14	0.54	69	2.83	161	88	43	0	7	2	0
OH AKRON-CANTON	65	43	76	27	54	11	0.24	-0.52	0.12	2.39	66	8.69	108	79	34	0	1	2	0
OH CINCINNATI	64	43	69	27	54	6	0.48	-0.47	0.31	2.33	50	10.76	109	85	44	0	2	3	0
OH CLEVELAND	66	44	78	22	55	12	0.21	-0.49	0.13	1.86	58	7.57	102	85	39	0	1	2	0
OH COLUMBUS	67	43	77	30	55	9	0.31	-0.45	0.19	2.19	61	7.82	98	89	37	0	2	2	0
OH DAYTON	65	43	72	28	54	8	0.44	-0.37	0.21	2.03	54	9.93	123	82	41	0	1	3	0
OH MANSFIELD	65	43	77	26	54	11	0.19	-0.62	0.10	1.73	48	8.03	105	80	33	0	1	4	0

Based on 1961-90 normals

Weather Data for the Week Ending April 3, 1999

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	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																		04 INCH OR MORE	50 INCH OR MORE	04 INCH OR MORE	50 INCH OR MORE
OK	68	43	77	26	55	14	0.24	-0.43	0.18	1.63	55	6.45	100	81	34	0	2	3	0	0	
OK	64	41	76	26	53	11	0.52	-0.21	0.28	2.69	78	10.10	133	79	32	0	2	2	0	0	
OK	69	50	79	40	59	4	0.37	-0.23	0.33	3.80	129	6.81	121	96	58	0	0	3	0	0	
OK	69	53	75	44	61	5	0.28	-0.53	0.22	3.78	100	8.05	110	93	53	0	0	2	0	0	
OR	49	35	54	31	42	-4	1.93	0.55	1.20	9.89	129	41.95	166	99	61	0	3	6	1	1	
OR	42	24	51	18	33	-6	0.39	0.20	0.28	0.83	76	4.42	155	90	35	0	7	3	0	0	
OR	50	35	58	31	42	-6	2.23	1.19	0.97	5.05	85	22.74	117	96	58	0	1	5	2	2	
OR	51	33	58	26	42	-7	0.23	-0.12	0.09	0.90	46	8.87	135	89	38	0	2	4	0	0	
OR	51	31	56	26	41	-6	0.55	0.30	0.20	1.13	88	3.16	80	87	32	0	3	3	0	0	
OR	51	37	59	33	44	-5	1.02	0.32	0.38	4.20	109	19.55	150	96	53	0	0	5	0	0	
OR	50	35	56	29	42	-5	1.88	1.10	0.92	5.15	115	26.16	175	96	56	0	2	6	1	1	
PA	63	41	72	32	52	7	0.37	-0.40	0.24	3.20	88	11.29	116	80	33	0	1	3	0	0	
PA	63	40	79	24	52	11	0.46	-0.27	0.33	2.31	70	9.11	117	84	32	0	2	2	0	0	
PA	66	44	73	36	55	9	0.39	-0.34	0.29	2.84	79	9.68	103	80	30	0	0	2	0	0	
PA	64	44	71	41	54	7	0.23	-0.60	0.21	4.23	111	12.07	123	91	38	0	0	2	0	0	
PA	66	40	77	31	53	8	0.21	-0.57	0.10	1.45	39	8.73	101	74	26	0	3	2	0	0	
PA	62	43	70	36	52	10	0.27	-0.35	0.17	2.91	103	9.17	129	76	35	0	0	3	0	0	
PA	64	40	74	29	52	9	0.26	-0.48	0.25	3.72	106	10.59	120	82	31	0	1	2	0	0	
RI	59	42	72	37	50	8	0.41	-0.54	0.37	3.35	75	15.50	130	73	31	0	0	3	0	0	
SC	75	54	83	43	65	2	0.27	-0.54	0.14	1.53	34	6.47	57	96	46	0	0	2	0	0	
SC	76	54	85	42	65	3	0.37	-0.44	0.20	2.35	51	9.32	82	93	39	0	0	2	0	0	
SC	74	50	85	34	62	3	0.58	-0.38	0.36	2.72	52	9.01	65	95	38	0	0	3	0	0	
SC	70	48	84	32	59	3	2.65	1.56	1.57	3.37	58	10.05	70	91	36	0	1	3	2	2	
SD	52	31	73	23	41	4	0.79	0.40	0.31	1.51	100	2.34	100	94	54	0	5	3	0	0	
SD	57	34	77	24	46	7	0.27	-0.17	0.19	0.44	24	1.08	37	90	50	0	3	2	0	0	
SD	48	26	78	13	37	-2	0.67	0.34	0.47	1.56	131	1.81	87	83	41	0	5	3	0	0	
SD	59	34	73	24	47	7	0.16	-0.32	0.08	1.23	66	1.86	62	89	41	0	4	2	0	0	
TN	67	38	80	25	53	1	0.44	-0.35	0.32	2.73	68	10.63	99	93	35	0	2	3	0	0	
TN	71	47	89	35	59	4	0.77	-0.45	0.61	4.00	61	17.56	108	98	38	0	0	3	1	1	
TN	66	44	82	31	55	2	0.84	-0.20	0.59	5.04	91	14.57	106	97	44	0	1	4	1	1	
TN	71	54	82	44	62	4	3.28	2.00	2.28	8.87	149	17.11	122	90	51	0	0	4	1	1	
TX	69	46	85	31	57	3	0.74	-0.33	0.46	4.11	78	15.67	123	93	40	0	1	4	0	0	
TX	69	53	83	48	61	0	0.00	-0.35	0.00	2.92	193	4.85	131	93	55	0	0	0	0	0	
TX	69	42	81	32	56	4	0.00	-0.20	0.00	1.35	131	4.02	188	86	27	0	1	0	0	0	
TX	72	59	81	55	66	0	0.29	-0.15	0.12	4.26	207	4.50	76	98	70	0	0	4	0	0	
TX	72	63	78	59	67	2	1.67	0.95	1.34	3.45	97	7.67	65	99	80	0	0	3	1	1	
TX	79	63	84	55	71	-1	2.90	2.71	2.51	3.01	478	4.77	146	97	67	0	0	4	1	1	
TX	75	63	80	54	69	-1	2.14	1.91	2.13	2.20	210	2.98	63	97	78	0	0	2	1	1	
TX	74	58	84	52	66	-1	0.00	-0.28	0.00	1.89	228	1.93	82	98	59	0	0	0	0	0	
TX	74	48	81	40	61	3	0.00	-0.06	0.00	0.04	13	0.14	12	54	16	0	0	0	0	0	
TX	68	56	80	50	62	1	0.97	0.28	0.94	3.80	124	5.72	81	92	67	0	0	4	1	1	
TX	71	64	76	60	68	2	1.05	0.54	0.65	1.87	77	5.23	66	96	81	0	0	2	1	1	
TX	75	62	82	57	68	4	1.79	1.14	0.72	4.03	126	6.95	74	98	73	0	0	5	2	2	
TX	70	48	83	42	59	3	0.00	-0.18	0.00	1.03	111	2.38	120	82	33	0	0	0	0	0	
TX	72	50	86	45	61	1	0.10	-0.03	0.08	1.32	200	1.65	99	93	33	0	0	1	0	0	
TX	70	53	85	46	62	-1	0.00	-0.25	0.00	2.32	227	2.94	102	94	54	0	0	0	0	0	
TX	74	60	85	55	67	1	0.42	0.02	0.37	3.53	208	3.62	69	94	63	0	0	4	0	0	
TX	73	59	77	52	66	-1	1.76	1.37	1.69	3.41	198	5.98	102	10	79	0	0	2	1	1	
TX	68	56	79	51	62	0	0.68	0.09	0.61	3.79	146	6.16	97	99	72	0	0	4	1	1	
TX	70	54	81	46	62	4	0.16	-0.43	0.16	6.46	263	9.02	182	95	58	0	0	1	0	0	
UT	49	31	68	27	40	-6	0.90	0.42	0.53	1.17	55	3.42	76	74	31	0	5	4	1	1	
VT	56	34	63	25	45	8	0.40	-0.18	0.35	2.62	106	7.26	123	81	35	0	3	3	0	0	
VA	68	42	76	32	55	4	0.83	0.08	0.82	3.54	93	10.72	111	83	32	0	1	2	1	1	
VA	65	45	73	38	55	2	0.26	-0.51	0.24	3.83	88	9.37	83	93	48	0	0	2	0	0	
VA	69	47	74	40	58	6	0.35	-0.40	0.35	4.39	112	10.56	102	80	31	0	0	1	0	0	
VA	67	45	77	34	56	5	0.48	-0.28	0.46	3.23	85	9.07	96	69	30	0	0	2	0	0	
VA	67	42	72	29	54	6	0.40	-0.30	0.39	3.83	111	11.83	132	80	32	0	1	2	0	0	
WA	51	32	58	26	42	-4	0.97	0.00	0.53	6.77	127	34.53	180	97	52	0	3	4	1	1	
WA	48	31	58	23	39	-5	2.29	0.07	1.13	15.57	126	56.91	145	97	57	0	5	6	2	2	
WA	49	35	54	32	42	-5	0.86	0.17	0.23	3.98	104	17.77	135	93	44	0	1	5	0	0	
WA	45	28	53	24	37	-5	0.56	0.26	0.21	0.99	61	6.11	120	88	35	0	6	5	0	0	
WA	54	29	62	25	42	-4	0.13	-0.01	0.09	0.16	22	2.87	107	82	28	0	5	3	0	0	
WV	64	39	79	29	52	5	0.41	-0.36	0.26	3.46	93	11.76	123	81	35	0	3	3	0	0	
WV	70	40	83	29	55	4	0.13	-0.67	0.09	3.75	95	11.23	113	89	33	0	3	3	0	0	
WV	65	30	80	17	47	3	0.27	-0.63	0.17	3.92	93	12.69	123	99	29	0	4	2	0	0	
WV	69	41	81	29	55	4	0.44	-0.37	0.23	3.63	90	10.68	110	83	29	0	2	4	0	0	
WI	60	41	72	26	51	13	0.89	0.37	0.52	1.24	64	3.95	108	89	41	0	1	4	1	1	
WI	64	38	77	29	51	14	0.76	0.24	0.74	0.89	39	3.37	76	83	38	0	3	2	1	1	
WI	67	46	75	33	57	17	0.66	0.08	0.47	1.34	60	4.96	121	72	37	0	0	3	0	0	
WI	65	44	75	31	55	16	1.01	0.42	0.96	1.43	59	4.43	97	79	39	0	1	2	1	1	
WI	65	42	74	33	53	14	0.05	-0.71	0.02	1.37	45	6.73	111	75	36	0	0	2	0	0	
WY	43	23	69	13	33	-5	0.48	0.20	0.16	0.77	72	1.30	59	78	40	0	6	4	0	0	
WY	47	22	70	16	35	-3	0.34	0.08	0.31	0.80	70	1.28	67	80	29	0	7	2	0	0	
WY	41	21	62	13	31	-7	1.92	1.55	0.92	1.88	142	2.62	110	77	41	0	6	4	2	2	
WY	43	23	63	18	33	-6	0.66	0.36	0.31	0.96	87	1.56	62	84	48	0	7	4	0	0	

## March Weather and Crop Summary

### Weather

In a sharp departure from February, below-normal temperatures prevailed across much of the South due to a storm track that carried storms southward along the West Coast, then northeastward across the central and southern Plains and into the East. Monthly temperatures averaged as much as 3°F below normal in Oklahoma and as much as 6°F below normal in the Ohio Valley. Despite cooler-than-normal weather in the Southeast, the region's winter grains and fruit tree blooms were not exposed to damaging cold, escaping with only occasional scattered frost. Meanwhile, cooler-than-normal conditions (as much as 5°F below normal) persisted in California, perpetuating a long-term trend. In contrast, warmer-than-normal weather dominated northern New England, and areas from the Four Corners region to the northern Plains and upper Midwest. Monthly departures reached +8°F in southeastern Montana.

The storm track shift provided much-needed moisture from the central and southern Plains into the East, including several episodes of heavy snowfall. Toward month's end, rain reached the parched Rio Grande Valley, significantly improving topsoil moisture for spring-sown crops. Most of the precipitation bypassed the Southwest and Peninsular Florida, however, leaving soils unfavorably dry and increasing the threat of wildfires. Farther north, mostly dry weather in the northern Plains and the Midwest promoted spring fieldwork. In the Pacific Northwest, slightly drier weather eased the risk of spring flooding following an exceptionally wet winter.

Following a virtually snow-free February in the Plains, Midwest, and Northeast, several early- to mid-March storms temporarily whitened the landscape. Separate storms buried Rochester, NY with 24.3 inches of snow on March 3-4 and 18.4 inches on March 6, leaving their snow depth at an all-time-record 36 inches. On March 8-9, heavy snow fell in a narrow band from the upper Midwest to the Mid-Atlantic region. In Minneapolis, MN, all of the month's snow (16.0 inches) fell on March 8. A day later, 8.4 inches blanketed Washington, DC, accounting for 72 percent (%) of their 1998-99 seasonal snowfall. On March 12-14, a major snow storm unfolded across parts of the central and southern Plains. The largest storm total in Oklahoma, 19 inches at Medford, ranked as the fourth-highest peak snowfall for any storm in the State. Dodge City, KS netted 17.4 inches. As the storm drifted eastward, Springfield, MO recorded their second-heaviest 24-hour March snowfall (14.0 inches on March 13-14). Heavy snow shifted into the East on March 14-15, accumulating 1 foot or more in parts of the central and northern Appalachians.

Heavy snowfall became less frequent during the second half of the month, but another Plains storm dropped up to 10 inches of

snow in northwesternmost Texas on March 18-19. As the storm churned into the East on March 21-22, as much as 1 to 2 feet of snow fell in central and northern New York. On March 26, a storm spun through the southern Appalachians, leaving up to 10 inches of snow in the Great Smoky Mountains. At month's end, snow and sharply colder weather overspread the northern Plains and Intermountain West. On the 31<sup>st</sup>, snowfall totaled 12.0 inches in Lander, WY, 8.1 inches in Great Falls, MT, and 6.2 inches in Bellemont, AZ. As a result of the procession of storms, a significant portion of the season-to-date snowfall occurred in March at numerous locations, including 53% (10.6 inches) in Harrisburg, PA; 57% (41.6 inches) in Elkins, WV; 60% (19.0 inches) in Dodge City; 66% (4.2 inches) in Asheville, NC; and 67% (6.2 inches) in Tulsa, OK. In New York, monthly snowfall reached 45.0 inches in Rochester and 33.8 inches in Binghamton.

In contrast, March 1-30 snowfall totaled only 5.4 inches in Flagstaff, AZ, raising their seasonal total to 29.7 inches (31% of normal). Last year, an El Niño winter, Flagstaff's October-March total was 120.1 inches. Meanwhile in the Sierra Nevada, the snow pack's water equivalent closed the month at 30 inches (104% of normal), up slightly from 29 inches (115%) on March 1, according to the California Department of Water Resources. Farther north, Olympia, WA noted above-normal rainfall (6.95 inches, or 140% of normal), but received less than 10 inches for the first time since October. Despite the somewhat drier weather, October-March precipitation remained far above normal in locations such as Astoria, OR (84.63 inches, or 166% of normal) and Olympia (66.05 inches, or 168%). Before quieter weather arrived in the Northwest, a powerful storm struck coastal areas on March 2-3. At the Stonewall Bank Buoy, moored about 15 miles west of Newport, OR, seas reached 46 feet late on March 2. A day later, winds gusted to 92 mph in Tillamook, OR. Meanwhile in the Washington Cascades, ridgetop winds near White Pass were clocked to 129 mph.

During the first 3 months of 1999, wildfires scorched nearly 205,000 acres (about 320 square miles) in the United States, according to the National Interagency Fire Center. Nearly 80% of that acreage burned in the Southern Region, which is comprised of all or parts of 13 States from Oklahoma and Texas to the southern Atlantic Coast. Another 17% burned in the Southwest, which includes Arizona, New Mexico, and western Texas. In Tucson, AZ, measurable rain fell only once (0.01 inch on January 26) during the 115-day period from December 7 to March 31. Through March, year-to-date rainfall stood at 0.08 inch (6% of normal) in Las Vegas, NV and 0.29 inch (13%) in Phoenix, AZ. In Grand Junction, CO, the 5-month precipitation of 1.08 inches was their second-lowest November-March total on record, behind only 0.98 inch in 1976-77. Farther east, February-March rainfall in Miami, FL measured

just 0.52 inch (12% of normal). Miami's monthly rainfall, 0.25 inch, was their lowest March total since 1976. Elsewhere in Peninsular Florida, only 0.56 inch (17% of normal) dampened Orlando during March, while 0.55 inch (15%) fell in West Palm Beach.

After receiving only 0.09 inch (3% of normal) during January and February, San Antonio, TX collected 3.48 inches (229%) in March. Similarly, March totals of 1.10 inches (204% of normal) in Albuquerque, NM, 1.89 inches (274%) in Del Rio, TX, and 4.09 inches (219%) in Austin, TX accounted for more than 90% of their respective year-to-date totals. Wichita Falls, TX, pelted by 6.29 inches (285% of normal) during the month, observed a 24-hour rainfall of 3.15 inches on March 11-12. In Brownsville, TX, 2.53 inches of rain fell on the 28<sup>th</sup>, their wettest March day since March 10, 1981.

Farther north, however, short-term dryness developed across the northern Plains and upper Midwest. In Michigan, Muskegon experienced their fourth-driest March (0.60 inches) on record, while Grand Rapids posted their longest streak without measurable precipitation (24 days, from March 10 to April 2) since August-September 1979. Green Bay, WI noted their driest March on record (0.15 inch) and driest month since only 0.06 inch fell in May 1988. Elsewhere in Wisconsin, LaCrosse's 18-day dry spell (March 10-27) was their longest since April 1980.

While significant warmth cloaked the northern Plains and Rocky Mountain States, temperatures averaged only slightly above normal across the upper Midwest. Nevertheless, Milwaukee, WI (1.3°F above normal in March) marked a 16<sup>th</sup> consecutive warmer-than-normal month, matching their record set from December 1937 to March 1939. Farther south, however, the early-month end of long-term warmth halted a 10-month streak in Wichita, KS. Meanwhile, chronically cool weather continued in California, where Bakersfield (4.8°F below normal) experienced below-normal temperatures for the 13th time in 14 months and noted their coolest March since 1952. In the Northeastern and Great Lakes States, early-month snowfall helped to suppress temperatures, contributing to the lowest March temperature (-7°F on March 8) in Rochester, NY since 1885.

Nationally, more than six dozen daily-record highs were set or tied during March. On March 2, Corpus Christi, TX registered 98°F. The majority of the records were established from the Plains westward from March 14-21 and 24-26. Valentine, NE posted a high of 81°F on March 16. Nine days later, Miles City, MT tallied 76°F. Late in the month, the last of several frosts occurred in the Southeast. On March 27, lows dipped to 30°F in Meridian, MS and 32°F in Evergreen, AL. A day later, Tallahassee, FL also recorded 32°F.

Monthly temperatures ranged from 0 to 5°F below normal in

Alaska, accompanied by heavy snow across parts of the south. In the Aleutians, 44.5 inches of snow blanketed Cold Bay, breaking their March record set in 1985. Anchorage received 21.7 inches (238% of normal), most of which fell from March 11-19. Meanwhile in Hawaii, drier-than-normal weather prevailed, allowing long-term drought to persist in some areas. Through March, year-to-date rainfall in Honolulu stood at 3.32 inches (42% of normal). During the last 15 months, Honolulu's rainfall was only 7.84 inches (26% of normal).

## Fieldwork

March began with dry, windy conditions in the Great Plains that depleted soil moisture reserves and hindered winter wheat development. The dry weather aided field preparations, and planting was active in southern and eastern Texas and across the Gulf Coast States. Some early-planted corn and cotton fields emerged along the western Gulf Coast despite soil moisture shortages. Wet, cool weather arrived across the South and East during the second week of the month and prevailed thereafter. The wet weather aided crop emergence, but periodically halted fieldwork in the southern Plains, lower Mississippi Valley, and adjacent areas of the Southeast. The rain also boosted winter wheat development in most areas of the southern Great Plains, but vegetative growth was limited by below-normal temperatures. In Oklahoma and the central Great Plains, mid-month snowfall rejuvenated soil moisture levels and curbed insect activity. In the northern Great Plains, dry conditions persisted, but winter wheat was aided by mild temperatures and wind, disease, and insect damage remained light. Warm, dry weather aided tillage and fertilizing activities in the western and central Corn Belt. Fieldwork was less active in the eastern and southern Corn Belt during the first half of the month due to muddy field conditions. In the Great Plains and western Corn Belt, small grain seeding progressed well due to mostly dry conditions. Temperatures averaged below normal in most of the Southeast and fell below freezing as far south as northern Florida early in the month. Frost damage to fruit and vegetable crops was limited due to the short duration of sub-freezing temperatures. Fieldwork in the Atlantic Coastal Plains was aided by mostly dry weather, while a mixture of heavy rain, freezing rain, and snow saturated soils in parts of the Ohio and Tennessee River Valleys and Appalachians. In the eastern Corn Belt and Northeast, most precipitation came as snow. Coastal areas of the Pacific Northwest and northern California remained rainy. In inland areas of California, where drier conditions prevailed, field preparations and planting were active. Gradual warming promoted growth of small grains, winter forages, and sugar beets. A few cotton fields were planted in the northern valleys, but warmer soil temperatures were needed. In southern areas of the State, small grains were irrigated to sustain growth. By the end of the month, winter wheat was heading and cotton was developing squares in the Imperial and San Joaquin Valleys.



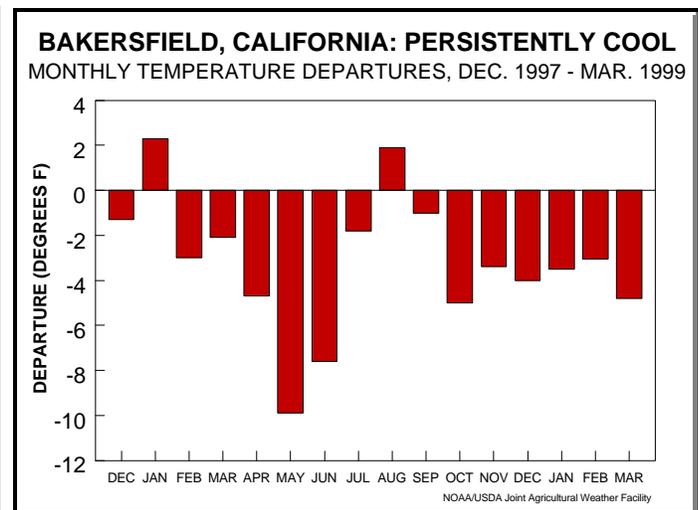
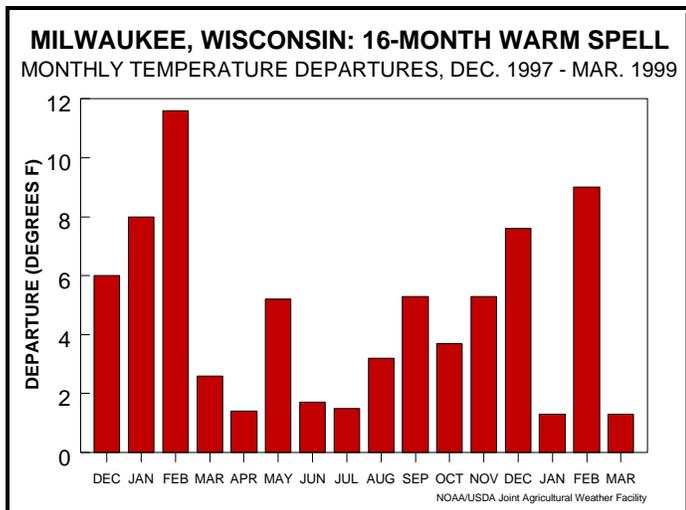
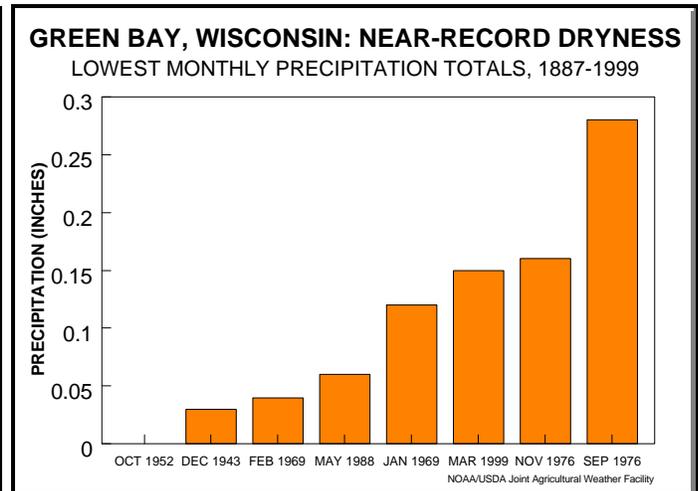
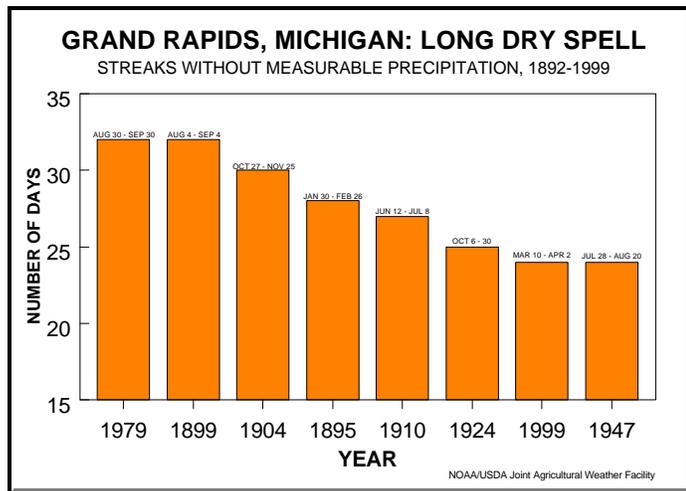
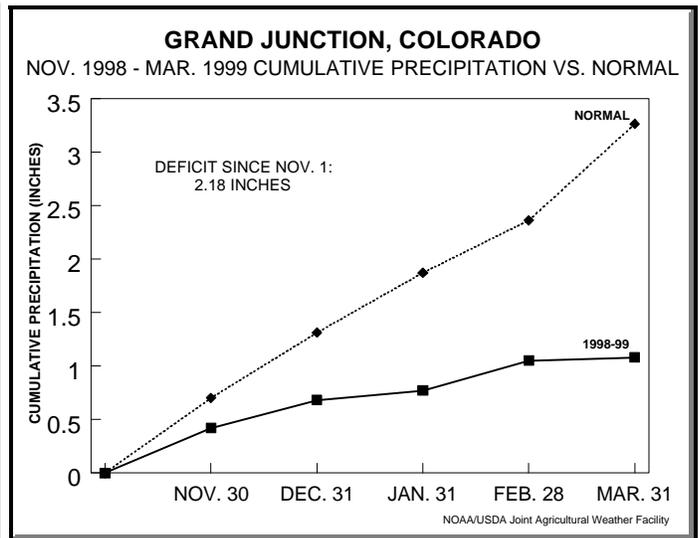
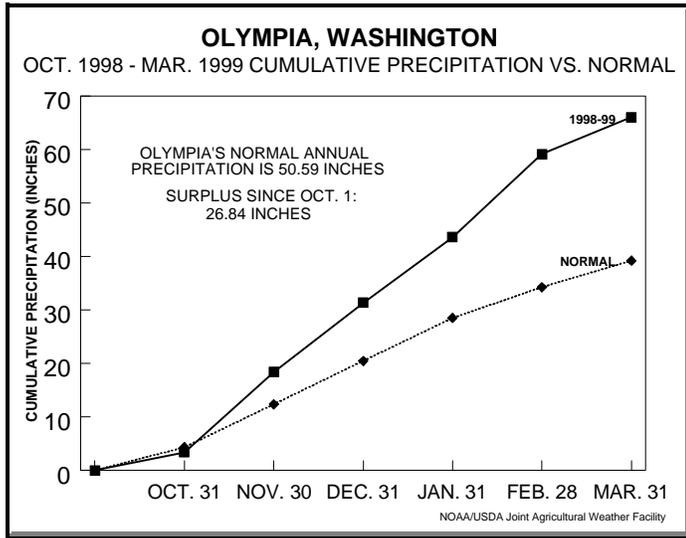
# TEMPERATURE AND PRECIPITATION SUMMARY

## March 1999

STATES AND STATIONS	TEMP, °F		PRECIP.		STATES AND STATIONS	TEMP, °F		PRECIP.		STATES AND STATIONS	TEMP, °F		PRECIP.	
	AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE
AL BIRMINGHAM	51	-2	6.70	0.50	ME CARIBOU	30	5	2.30	-0.14	RI WILKES-BARRE	35	-2	2.73	0.18
AL HUNTSVILLE	48	-3	5.14	-1.49	ME PORTLAND	35	2	4.52	0.85	RI WILLIAMSPORT	36	-2	3.46	0.26
AL MOBILE	58	-2	9.44	3.04	MD BALTIMORE	41	-3	3.46	0.07	RI PROVIDENCE	39	2	3.33	-0.72
AL MONTGOMERY	55	-2	7.38	1.12	MA BOSTON	39	0	2.52	-1.14	RI SC BEAUFORT	55	-4	1.40	-2.73
AK ANCHORAGE	24	-1	0.72	0.02	MA WORCESTER	36	2	4.09	0.14	RI SC CHARLESTON	54	-4	2.15	-2.18
AK BARROW	-16	-1	0.19	0.05	MI ALPENA	29	1	0.73	-1.38	RI SC COLUMBIA	51	-4	2.36	-2.47
AK FAIRBANKS	8	-3	0.27	-0.10	MI GRAND RAPIDS	33	-2	0.96	-1.67	RI SC GREENVILLE	49	-3	2.33	-3.06
AK JUNEAU	33	0	2.58	-0.70	MI HOUGHTON LAKE	29	0	0.40	-1.62	SD ABERDEEN	35	5	0.92	-0.41
AK KODIAK	28	-5	3.16	-1.47	MI LANSING	31	-3	0.93	-1.38	SD HURON	37	5	0.25	-1.41
AK NOME	5	-4	0.14	-0.38	MI MARQUETTE	27	2	1.04	-1.74	SD RAPID CITY	36	2	0.93	-0.11
AZ FLAGSTAFF	38	3	0.80	-1.75	MI MUSKEGON	32	-1	0.60	-1.91	SD SIOUX FALLS	34	1	1.15	-0.49
AZ PHOENIX	65	3	0.11	-0.79	MN DULUTH	28	3	1.64	-0.27	TN BRISTOL	42	-5	2.40	-1.31
AZ TUCSON	61	2	0.00	-0.70	MN INT'L FALLS	27	5	2.04	0.98	TN CHATTANOOGA	48	-2	3.99	-2.05
AZ YUMA	65	0	0.05	-0.19	MN MINNEAPOLIS	34	3	1.86	-0.08	TN KNOXVILLE	45	-4	4.85	-0.25
AR FORT SMITH	51	-1	4.78	0.82	MO ROCHESTER	33	3	0.81	-0.97	TN MEMPHIS	51	-3	6.59	1.18
AR LITTLE ROCK	51	-3	4.71	-0.20	MO ST. CLOUD	32	4	0.94	-0.47	TN NASHVILLE	45	-5	4.09	-0.76
CA BAKERSFIELD	53	-5	0.21	-0.83	MS JACKSON	54	-2	4.66	-1.16	TX ABILENE	55	-1	2.92	1.57
CA EUREKA	47	-3	8.94	3.62	MS MERIDIAN	54	-3	6.12	-0.62	TX AMARILLO	46	-1	1.35	0.39
CA FRESNO	53	-2	0.80	-1.07	MO TUPELO	50	-4	8.29	2.21	TX AUSTIN	62	1	4.09	2.22
CA LOS ANGELES	55	-3	1.24	-0.74	MO COLUMBIA	42	-2	2.49	-0.68	TX BEAUMONT	63	1	3.45	0.17
CA REDDING	49	-3	3.44	-0.95	MO KANSAS CITY	43	0	1.49	-1.03	TX BROWNSVILLE	71	2	3.01	2.47
CA SACRAMENTO	51	-3	1.46	-1.11	MO SAINT LOUIS	43	-2	2.40	-1.18	TX CORPUS CHRISTI	68	3	2.20	1.26
CA SAN DIEGO	58	-1	1.09	-0.67	MO SPRINGFIELD	43	-3	3.04	-0.85	TX DEL RIO	65	2	1.89	1.21
CA SAN FRANCISCO	51	-3	2.80	-0.26	MT BILLINGS	39	4	0.43	-0.73	TX EL PASO	58	3	0.04	-0.25
CO ALAMOS	37	5	0.22	-0.24	MT BUTTE	32	3	0.59	-0.17	TX FORT WORTH	56	0	2.84	0.06
CO CO SPRINGS	42	5	0.41	-0.53	MT GLASGOW	35	6	0.28	-0.13	TX GALVESTON	65	3	1.87	-0.35
CO DENVER	44	4	0.21	-1.07	MT GREAT FALLS	38	5	0.50	-0.59	TX HOUSTON	64	3	3.44	0.51
CO GRAND JUNCTION	48	5	0.03	-0.89	MT KALISPELL	37	3	0.74	-0.24	TX LUBBOCK	50	-1	1.03	0.18
CO PUEBLO	45	3	0.56	-0.22	MT MILES CITY	41	8	0.13	-0.49	TX MIDLAND	56	0	1.22	0.61
CT BRIDGEPORT	39	1	3.24	-0.52	MT MISSOULA	38	2	0.46	-0.51	TX SAN ANGELO	57	-1	2.32	1.41
CT HARTFORD	38	0	4.28	0.65	NE GRAND ISLAND	39	1	0.79	-1.10	TX SAN ANTONIO	63	1	3.48	1.96
DC WASHINGTON	44	-3	3.87	0.72	NE LINCOLN	39	0	1.52	-0.57	TX VICTORIA	64	1	3.41	1.87
DE WILMINGTON	42	-1	3.96	0.52	NE NORFOLK	38	3	0.68	-1.18	TX WACO	57	-1	3.16	0.83
FL DAYTONA BEACH	62	-2	1.01	-1.89	NE NORTH PLATTE	38	2	0.64	-0.56	TX WICHITA FALLS	52	-1	6.29	4.08
FL JACKSONVILLE	58	-4	0.40	-3.28	NE OMAHA	39	1	1.31	-0.73	UT SALT LAKE CITY	44	3	0.80	-1.11
FL KEY WEST	72	-2	0.71	-0.99	NE SCOTTSBLUFF	40	4	1.03	-0.06	VT BURLINGTON	31	0	2.22	-0.01
FL MIAMI	70	-2	0.25	-2.15	NE VALENTINE	39	5	0.43	-0.61	VA LYNCHBURG	43	-4	2.71	-0.77
FL ORLANDO	64	-2	0.56	-2.66	NV ELY	37	3	0.23	-0.71	VA NORFOLK	47	-1	3.29	-0.41
FL PENSACOLA	60	-1	4.90	-0.74	NV LAS VEGAS	60	4	0.00	-0.43	VA RICHMOND	45	-3	4.04	0.43
FL TALLAHASSEE	58	-3	3.23	-2.99	NV RENO	44	1	0.13	-0.58	VA ROANOKE	44	-3	2.77	-0.72
FL TAMPA	65	-2	0.72	-2.29	NV WINNEMUCCA	39	-1	0.10	-0.69	VA WASH/DULLES	41	-2	3.44	0.28
GA WEST PALM	68	-2	0.55	-3.12	NH CONCORD	34	2	2.82	0.09	WA OLYMPIA	43	-1	6.76	1.81
GA ATHENS	50	-3	2.73	-2.74	NJ NEWARK	43	0	3.63	-0.25	WA QUILLAYUTE	41	-2	15.18	3.70
GA ATLANTA	50	-3	3.32	-2.45	NM ALBUQUERQUE	51	3	1.10	0.60	WA SEATTLE-TACOMA	44	-1	3.66	0.12
GA AUGUSTA	52	-4	2.73	-1.92	NY ALBANY	34	0	4.15	1.22	WA SPOKANE	40	1	0.72	-0.78
GA COLUMBUS	55	-2	3.31	-2.46	NY BINGHAMTON	30	-2	2.57	-0.25	WA YAKIMA	42	-1	0.15	-0.53
GA MACON	53	-3	3.11	-1.67	NY BUFFALO	31	-3	2.43	-0.26	WV BECKLEY	36	-6	3.11	-0.28
GA SAVANNAH	55	-4	1.26	-2.52	NY ROCHESTER	31	-4	3.28	1.00	WV CHARLESTON	40	-6	3.63	0.00
HI HILO	70	-2	12.19	-1.74	NY SYRACUSE	31	-3	3.79	1.02	WV ELKINS	31	-8	3.65	-0.18
HI HONOLULU	75	0	0.46	-1.74	NC ASHEVILLE	43	-5	2.82	-1.81	WV HUNTINGTON	40	-6	3.28	-0.41
HI KAHULUI	72	-1	1.24	-1.48	NC CHARLOTTE	48	-3	1.31	-3.12	WV EAU CLAIRE	34	4	0.65	-1.05
HI LIHUE	72	0	1.54	-2.63	NC GREENSBORO	45	-3	1.96	-1.74	WI GREEN BAY	34	4	0.15	-1.90
ID BOISE	44	1	0.75	-0.55	NC HATTERAS	49	-3	5.58	1.28	WI LACROSSE	33	4	0.81	-1.17
ID LEWISTON	43	-1	1.02	-0.05	NC RALEIGH	47	-3	3.69	-0.09	WI MADISON	34	1	0.47	-1.70
ID POCATELLO	39	3	0.55	-0.73	NC WILMINGTON	51	-3	3.07	-0.80	WI MILWAUKEE	35	1	1.35	-1.32
IL CHICAGO/O'HARE	36	-2	1.73	-0.96	ND BISMARCK	36	7	0.25	-0.52	WY CASPER	37	4	0.45	-0.50
IL MOLINE	37	-1	1.56	-1.43	ND DICKINSON	37	7	0.05	-0.65	WY CHEYENNE	38	3	0.46	-0.57
IL PEORIA	38	-1	0.94	-1.98	ND FARGO	31	5	1.84	0.78	WY LANDER	38	5	0.71	-0.44
IL ROCKFORD	35	0	1.14	-1.32	ND GRAND FORKS	26	2	1.04	0.10	WY SHERIDAN	37	3	0.61	-0.36
IL SPRINGFIELD	39	-2	0.97	-2.27	ND JAMESTOWN	31	4	0.30	-0.58					
IN EVANSVILLE	42	-4	4.30	-0.42	ND WILLISTON	32	4	0.40	-0.29					
IN FORT WAYNE	33	-5	1.19	-1.71	OH AKRON-CANTON	34	-4	2.15	-1.16					
IN INDIANAPOLIS	38	-3	1.71	-2.09	OH CINCINNATI	38	-5	1.89	-2.35					
IN SOUTH BEND	33	-4	1.18	-1.92	OH CLEVELAND	34	-3	1.65	-1.25					
IA BURLINGTON	41	2	1.38	-1.47	OH COLUMBUS	37	-4	1.88	-1.40					
IA CEDAR RAPIDS	35	0	1.29	-1.02	OH DAYTON	35	-5	1.61	-1.82					
IA DES MOINES	39	1	1.22	-1.11	OH MANSFIELD	33	-5	1.56	-1.74					
IA DUBUQUE	34	0	0.91	-1.98	OH TOLEDO	34	-2	1.42	-1.24					
IA SIOUX CITY	37	1	0.89	-1.07	OH YOUNGSTOWN	33	-4	2.18	-0.94					
IA WATERLOO	36	2	0.96	-1.34	OK OKLAHOMA CITY	50	-1	3.45	0.75					
KS CONCORDIA	42	1	0.88	-1.33	OK TULSA	49	-2	3.55	0.09					
KS DODGE CITY	42	-1	2.89	1.33	OR ASTORIA	44	-1	9.57	2.50					
KS GOODLAND	40	1	0.89	-0.27	OR BURNS	34	-2	0.72	-0.30					
KS TOPEKA	43	0	0.99	-1.47	OR EUGENE	44	-3	4.97	-0.55					
KS WICHITA	45	-1	1.89	-0.54	OR MEDFORD	46	-1	0.81	-1.02					
KY JACKSON	42	-6	3.17	-1.61	OR PENDLETON	44	-1	0.74	-0.44					
KY LEXINGTON	40	-5	3.80	-0.61	OR PORTLAND	45	-2	4.03	0.47					
KY LOUISVILLE	43	-3	3.84	-0.81	OR SALEM	45	-1	5.06	0.89					
KY PADUCAH	44	-4	3.09	-1.84	PA ALLENTOWN	38	-2	3.07	-0.22					
LA BATON ROUGE	59	-2	5.39	0.58	PA ERIE	33	-3	1.86	-1.14					
LA LAKE CHARLES	61	0	3.72	0.43	PA MIDDLETOWN	41	0	2.55	-0.73					
LA NEW ORLEANS	62	0	4.60	-0.31	PA PHILADELPHIA	42	0	4.02	0.56					
LA SHREVEPORT	56	-1	5.10	1.51	PA PITTSBURGH	35	-5	1.24	-2.18					

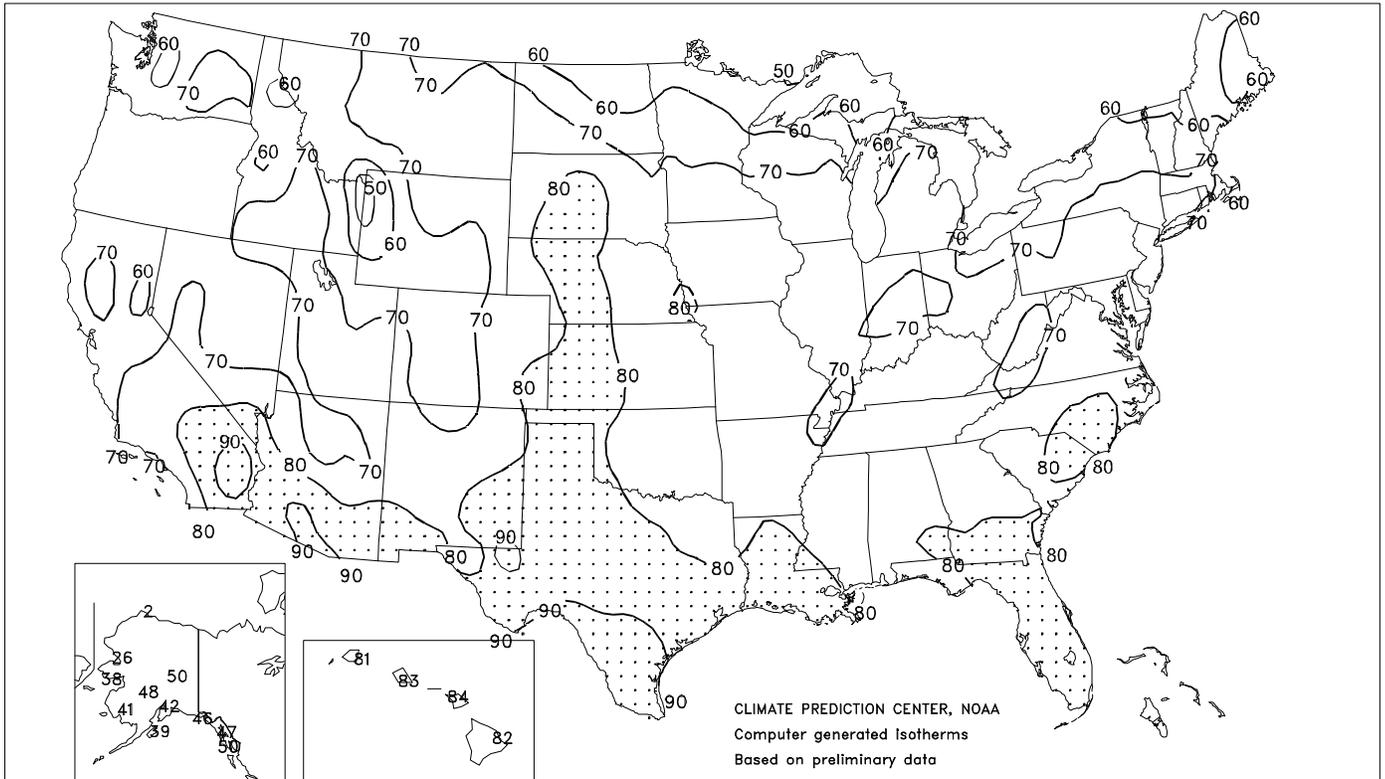
Based on 1961-90 normals.

## March Weather: Selected Graphs



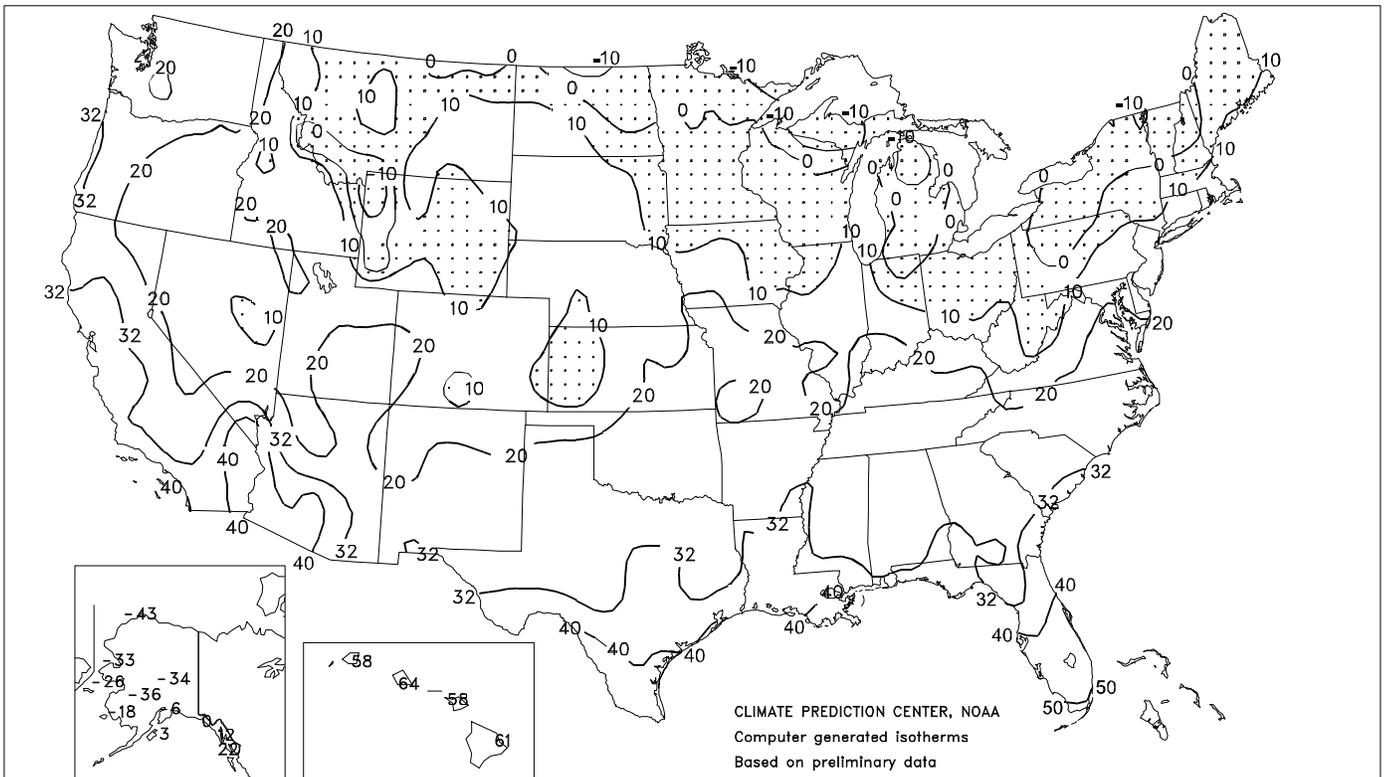
Extreme Maximum Temperature (°F)

March 1999



Extreme Minimum Temperature (°F)

March 1999



# Crop Progress and Condition

Week Ending April 4, 1999

Winter Wheat Percent Headed				
	Apr 4 1998	Prev Week	Prev Year	5-Yr Avg
AR	1	NA	7	5
CA	30	NA	26	21
CO	0	NA	0	0
GA	22	NA	7	17
ID	0	NA	0	0
IL	0	NA	0	0
IN	0	NA	0	0
KS	0	NA	0	0
MI	0	NA	0	0
MO	0	NA	0	0
MT	0	NA	0	0
NE	0	NA	0	0
NC	15	NA	6	4
OH	0	NA	0	0
OK	1	NA	0	1
OR	0	NA	0	0
SD	0	NA	0	0
TX	7	NA	7	7
WA	0	NA	0	0
ALL	2	NA	2	2

These 19 States planted 91% of last year's winter wheat acreage.

Corn Percent Planted				
	Apr 4 1998	Prev Week	Prev Year	5-Yr Avg
CO	0	NA	0	0
GA	74	NA	54	63
IL	1	NA	0	0
IN	0	NA	0	0
IA	0	NA	0	0
KS	1	NA	0	1
KY	1	NA	0	1
MI	0	NA	0	0
MN	0	NA	0	0
MO	4	NA	4	5
NE	0	NA	0	0
NC	12	NA	11	10
OH	0	NA	0	0
PA	0	NA	0	0
SD	0	NA	0	0
TX	51	NA	40	44
WI	0	NA	0	0
ALL	3	NA	2	2

These 17 States planted 90% of last year's corn acreage.

Cotton Percent Planted				
	Apr 4 1998	Prev Week	Prev Year	5-Yr Avg
AL	1	NA	1	1
AZ	10	NA	14	24
AR	0	NA	0	0
CA	2	NA	4	9
GA	1	NA	1	1
LA	0	NA	0	0
MS	0	NA	0	0
MO	0	NA	0	0
NM	0	NA	0	1
NC	0	NA	1	0
OK	0	NA	0	0
SC	0	NA	0	0
TN	0	NA	0	0
TX	9	NA	9	10
ALL	4	NA	5	6

These 14 States planted 98% of last year's cotton acreage.

Sorghum Percent Planted				
	Apr 4 1998	Prev Week	Prev Year	5-Yr Avg
AR	3	NA	0	5
CO	0	NA	0	0
IL	0	NA	0	0
KS	0	NA	0	0
LA	1	NA	1	3
MS	0	NA	0	0
MO	0	NA	0	0
NE	0	NA	0	0
NM	0	NA	0	0
OK	0	NA	0	0
SD	0	NA	0	0
TX	35	NA	37	40
ALL	13	NA	14	15

These 12 States planted 99% of last year's sorghum acreage.

Oats Percent Planted				
	Apr 4 1998	Prev Week	Prev Year	5-Yr Avg
IA	57	NA	1	20
MI	0	NA	0	0
MN	0	NA	0	0
NE	0	NA	0	0
ND	0	NA	0	0
OH	23	NA	16	11
PA	9	NA	17	10
SD	0	NA	0	0
WI	14	NA	1	1
ALL	9	NA	2	3

These 9 States planted 57% of last year's oat acreage.

Barley Percent Planted				
	Apr 4 1998	Prev Week	Prev Year	5-Yr Avg
ID	0	NA	0	0
MN	0	NA	0	0
MT	5	NA	2	1
ND	0	NA	0	0
SD	0	NA	0	0
WA	30	NA	50	20
ALL	4	NA	6	2

These 6 States planted 83% of last year's barley acreage.

Spring Wheat Percent Planted				
	Apr 4 1998	Prev Week	Prev Year	5-Yr Avg
ID	20	NA	20	24
MN	0	NA	0	0
MT	2	NA	1	1
ND	0	NA	0	0
SD	17	NA	3	1
ALL	3	NA	1	1

These 5 States planted 96% of last year's spring wheat acreage.

Rice Percent Planted				
	Apr 4 1998	Prev Week	Prev Year	5-Yr Avg
AR	0	NA	0	0
CA	0	NA	0	0
LA	46	NA	37	32
MS	0	NA	0	0
TX	30	NA	31	25
ALL	12	NA	10	8

These 5 States planted 96% of last year's rice acreage.

(Continued on page 17)

# National Agricultural Summary

March 29 - April 4, 1999

## HIGHLIGHTS

**Heavy rains halted fieldwork and eroded hillsides in the lower Mississippi Valley and adjacent areas of the southern Great Plains and middle Mississippi Valley. Light rainfall moistened soils and temporarily delayed spring tillage and fertilizing in parts of the Southeast, lower Ohio Valley, Corn Belt, and Southwest. The rain in the Southwest and several inches of snow in the northern Great Plains improved soil moisture levels,**

**but soils remained abnormally dry in many areas of both regions. Below-normal temperatures hindered crop development in the central and northern High Plains and California. Coastal areas of the Pacific Northwest remained cold and rainy, hindering crop conditions and promoting diseases. Wildfires began to spread in Florida due to abnormally hot, dry weather.**

**Winter Wheat:** Two percent of the Nation's winter wheat was headed, equal to the average for this date. Above-normal temperatures promoted rapid development in the Great Plains, Corn Belt, and Southeast. In the lower Mississippi Valley, rain and cloud cover hindered development, while wheat fields in the southern Great Plains benefited from light rainfall and sunnier skies. In the northern Great Plains, crop development benefited from light showers, but continued to be hindered by abnormally dry soils. In the northern Rocky Mountains, mild temperatures and lack of snow cover promoted higher vole populations, but crop damage was not severe.

**Other crops:** Rice planted, at 12 percent, was 3 percentage points ahead of normal due to rapid progress along the western Gulf Coast. Inland areas of the Mississippi Delta were too wet, and weather in California was too cold to plant rice. Thirteen percent of the sorghum acreage was planted, 2 percentage points behind normal. Planting was delayed by dry soils in the southern High Plains and wet weather in the Mississippi Delta.

**Corn:** Nationally, 3 percent of the corn acreage was planted, 1 percent ahead of the 5-year average. Progress was aided by dry weather in the Atlantic Coastal Plains and northern Texas. Rain briefly delayed planting in parts of southern and eastern Texas, but stimulated emergence and growth of planted fields. Dry weather aided field preparation across most of the Corn Belt, but planting was limited to areas along the southern Ohio and middle Mississippi River Valleys and in the central Great Plains. Elsewhere in the Corn Belt, growers waited for the risk of a killing freeze to diminish.

**Cotton:** Planting advanced to 4 percent, slightly behind the normal pace of 6 percent. Cool weather delayed planting in the Southwest, where progress was well behind the normal pace for the second consecutive year. Growers made normal planting progress in the southern Great Plains, despite temporary rain delays in eastern and southern Texas. Rain in the lower Mississippi Valley halted field preparations, but aided emergence and growth of planted fields in eastern and southern Texas. Dry conditions stimulated field preparations along the eastern Gulf Coast and in the Atlantic Coastal Plains, but dry soils discouraged planting.

**Small grains:** Oats planted was 13 percent, ahead of the 5-percent normal pace, due to rapid progress in the Corn Belt, where dry conditions prevailed. Barley planted was 5 percent, compared with 2 percent normally planted by this date. Progress was aided by dry weather in the barley-producing region of the northern Rocky Mountains. Spring wheat planting advanced to 3 percent, slightly ahead of the average due to dry conditions in the northern Great Plains.

*(Continued from page 16)*

Winter Wheat Crop Condition by Percent					
	VP	P	F	G	EX
AR	0	1	13	62	24
CA	0	0	0	100	0
CO	2	8	29	51	10
GA	1	7	32	52	8
ID	0	2	12	66	20
IL	1	2	29	61	7
IN	0	3	23	55	19
KS	0	4	24	51	21
MI	1	4	33	52	10
MO	1	5	31	54	9
MT	2	15	45	36	2
NE	0	3	30	62	5
NC	0	3	18	72	7
OH	1	2	14	56	27
OK	0	0	16	73	11
OR	0	21	45	33	1
SD	0	3	17	55	25
TX	5	11	34	45	5
WA	2	5	51	39	3
ALL	1	5	26	55	13
Prev Wk	NA	NA	NA	NA	NA
Prev Yr	0	4	20	57	19

VP - Very Poor  
 P - Poor  
 F - Fair  
 G - Good  
 EX - Excellent

## State Agricultural Summaries

*These summaries, issued weekly through the summer growing season, 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. The crop weather reports are also available on the Internet through the NASS Home Page on the World Wide Web at <http://www.usda.gov/nass/> or from JAWF at <http://www.usda.gov/oc/waob/jawf>.*

**ALABAMA:** Days suitable for fieldwork 5.0. Topsoil 35% short, 65% adequate. Showers across the State slowed land preparation, planting; however, field preparation continues to be ahead of schedule. Wheat crop remain good to excellent. Corn planted 25%, 4% 1998, 33% avg. Cotton planted 1%, 1% 1998, 1% avg.

**ARIZONA:** Cotton planting is behind schedule. As of April 4, 10% cotton planted, 14% 1998, 24% avg. Small grains progressed last week. As of April 4, 36% durum wheat, 29% other wheat, 36% barley, 10% other small grains had headed. Alfalfa harvest activity was reported as 56% not being harvested, 11% light, 11% moderate, 22% active. Some fields are being green chopped. Sheepling off of alfalfa fields held steady last week but is almost finished for the year. Alfalfa condition was reported as 4% poor, 24% fair, 63% good, 9% excellent. Range, pasture feed 7% very poor, 25% poor, 52% fair, 16% good. As of March 28, 6% of the cotton was planted, 10% 1998, 15% avg. Small grains rapidly progressed last week. As of March 28, 31% durum wheat, 29% other wheat, 32% barley, 1% other small grains had headed. Alfalfa harvest activity 58% not being harvested, 9% light, 13% moderate, 20% active. Some fields are being green chopped. Sheepling off of alfalfa fields held steady last week but is almost finished for the year. Alfalfa condition 6% poor, 26% fair, 60% good, 8% excellent. Central area producers shipped artichokes, broccoli, cabbage, Chinese cabbage, carrots, green onions, kale, leeks, mixed greens, napa, parsley, spinach, turnips last week. Lettuce shipments included head lettuce, red and green leaf, romaine. A light volume of beets, bok choy, cauliflower, cilantro, dandelion, dill, endive, escarole, flowering kale, kohlrabi, parsley, strawberries, Swiss chard were also shipped by central Arizona producers. Eastern area producers shipped greenhouse tomatoes. Western producers harvested anise, bok choy, broccoflower, broccoli, cabbage, cauliflower, celery, endive, escarole, flowering kale, kale, mixed greens, napa, radicchio, salad savoy, specialty leaf, spinach, Swiss chard. Lettuce shipments included Boston, head, leaf, romaine. Central, western areas citrus groves harvested grapefruit, lemons, Valencia oranges last week.

**ARKANSAS:** Days suitable for fieldwork 4. Topsoil moisture 2% short, 59% adequate, 39% surplus. Temperatures were normal for the week, with storms over the weekend bringing some areas above-normal rainfall. Livestock are reported in good condition. Cattle on wheat pasture are making good gains. Main farm activities: Planting preparation, planting of row crops, fertilizing pastures, wheat. Other activities: Planting of tomatoes, scouting wheat fields for disease, spraying of pastures for weeds, spraying of peach orchards for diseases.

**CALIFORNIA:** Field activities progressed normally in most areas, despite scattered light rain. Cool weather slowed the growth of developing wheat, barley fields in the central valleys. Wheat, barley, oat fields were aerially fertilized, treated for broadleaf weeds. Alfalfa hay growers in Siskiyou County applied strychnine to stop gopher, vole damage. Corn planting was active in the San Joaquin Valley. Cotton planting made limited progress in the San Joaquin Valley due to cool soil temperatures. Harvest of old crop sugar beets was underway, planting of new crop fields began. Developing sugar beets were cultivated, irrigated, hand weeded. Seedbed preparation for planting corn, cotton, dry beans, rice was ongoing in the San Joaquin, Sacramento Valleys. Rice stubble was burned in the Sacramento Valley where conditions permitted. Weevil treatments in alfalfa hay fields were winding down. A few fields of new alfalfa were still being planted. Seed alfalfa was mowed, irrigated in the central San Joaquin Valley. Alfalfa, small grains, winter forages were cut for hay or green chopped. Fruit growers were conducting extensive weed control, were irrigating vineyards, orchards last week. Growers were also actively thinning the early stone fruit varieties. Mid-season varieties were in petal fall stage. Olive trees were pushing bloom buds. Cherries were in full bloom. Fig, walnut trees were leafing out. Picking of the remaining freeze damaged, salvageable navel oranges in the San Joaquin Valley was nearly over. Citrus was also picked in southern California. New crop Valencia oranges were being picked in the desert

areas. Strawberries in the Central Valley were blooming, small berries were forming. Some frost damage was reported in Merced County. Cool temperatures throughout State vegetable-producing regions continued to slow plant growth. Imperial Valley spring cantaloupe, honeydew and watermelon harvesting was expected to be delayed by slow vine growth. Frost was reported on some vegetable fields in the Sacramento, San Joaquin Valleys. Harvest of fresh market tomatoes was expected to begin about 10 days later than normal. Fresh market tomatoes were planted in the Sacramento, northern San Joaquin Valleys. Honeydew, watermelon, sweet corn were planted in the Sacramento Valley. Spring lettuce harvest began this week in the southern San Joaquin Valley. Melons, sweet corn and tomatoes were treated for weeds. Harvest of winter vegetables in the Imperial Valley was coming to a close. Other crops harvested last week included spinach, asparagus, carrots, cabbage, turnips and various greens. Rangeland pastures were in fair to good condition. Below-normal temperatures slowed grass growth. More rain was needed in some south central California counties; grass was short and only a few cattle have been shipped to market. Limited supplemental feeding continued in central counties. Cold weather in the northern California mountains has extended the period of feeding hay to cattle. Feeder type hay supplies were ample statewide.

**COLORADO:** Days suitable for fieldwork 4.7. Topsoil 13% very short, 37% short, 49% adequate, 1% surplus. Subsoil moisture 12% very short, 44% short, 44% adequate. Eastern Plains, Front Range received additional moisture from snow, rain. Storm began on 1st, continued throughout the weekend. Western slope experienced temperatures in the 20's which caused a small amount of bud thinning on peach trees. Winter wheat 12% pastured, 7% 1998, 5% avg. Spring wheat 42% planted, 19% 1998, 15% avg. Spring barley 47% seeded, 39% 1998, 28% avg. Oats 46% seeded, 31% 1998, 29% avg. Dry onions 55% planted, 53% 1998, 49% avg.; condition 2% poor, 22% fair, 67% good, 9% excellent. Sugar beets 31% planted, 8% 1998, 19% avg. Livestock in mostly fair to good condition.

**DELAWARE:** Days suitable for fieldwork 4.5. Topsoil 100% adequate. Subsoil 100% adequate. Winter wheat 100% good. Barley 100% good. Potatoes 30% planted. Green peas 30% planted. Sweet corn 5% planted, 1% 1998, 2% avg. Apples 10% bloomed, 30% 1998, 7% avg. Hay supplies 50% short and 50% adequate. Pasture 100% good. Activities: Farmers dealing with excess manure, nutrient management, continued pea, potato planting, continued soil preparations. Small grains in good condition overall due to mild winter, much-needed precipitation.

**FLORIDA:** Topsoil moisture throughout Panhandle short to adequate. Peninsula moisture very short to short. Tobacco growers actively planting tobacco. Corn planting active. Peanut planting starting. Spring planted crop land preparations active. Sugarcane harvest winding down. Another week of mostly dry weather. Scattered rains dropped from traces to about 0.50 in. over some Peninsula localities about mid-week. Jacksonville received about 1.33 in. Tallahassee, about 0.50 in. Several areas received no measurable rain. Temperatures 1 to 4° above normal at major stations. Most high temperatures 70s, 80°s F. Most lows 50s, 60°s F, with several Peninsula localities recording at least one low in 40°s F. Western Panhandle, northern areas recorded at least one daily low in 30°s F. Dry weather continues to increase need for irrigation in vegetable areas. Some tomato growers not making third picks due to low market. Major crops shipped: Snap beans, cabbage, cucumbers, sweet corn, eggplant, endive, escarole, lettuce, parsley, peppers, pickles, radishes, squash, tomatoes. Varying amounts of rain Thursday night most citrus areas. Rainfall from a trace to over 1 inch. Irrigation continues in most areas. Bloom is past its peak in most groves. Valencia oranges, grapefruit harvest active in all areas. Movement of Honey tangerines, Temples is slowing. Caretakers cutting cover crops, spraying, hedging, topping continues, along with some resetting. Pasture feed very poor 15%, poor 65%, fair 20%. Cattle poor 50%, fair 45%, good 5%. Panhandle pasture, range in good condition where rain fell. Cool

temperatures delayed pasture/hay growth. However, pasture in rest of State very poor to fair condition. Grass not growing due to dry conditions. Central; grass short, hay feeding active, hay of low quality. West central; range grass in poor to fair condition due to dry conditions, growth almost stopped. Ranchers haying. Southwest; ranchers not doing annual pasture burning due to very dry conditions. State cattle, calves mostly in fair condition.

**GEORGIA:** Days suitable for fieldwork 5.3. Recent warmer weather aided major planting. Some counties reported slow progress due to dry conditions. Corn planting occurred at a quick pace, ahead of 1998, avg. Corn emerged well ahead of last year. Corn looked good, with 73% of the crop above fair condition. Wheat headed was slightly ahead of the average, week ahead of 1998. Condition was mostly fair to good. Tobacco transplanting was slightly ahead of the 5-year average, well ahead of last year's pace, condition was mostly fair to good. Peach bloom was behind last year and the 5-year average, condition was fair to excellent. Watermelon planting was occurring ahead of the 5-year average, over a week ahead of last year. Condition was mostly fair to good. Onions were in good condition. Other activities included applying chemicals, removal of cover crops, routine care of livestock, poultry.

**HAWAII:** Fair weather conditions were generally beneficial for agriculture during March. Days were mostly sunny, with mild spring-like temperatures. Rainfall was generally light, with some periods of moderate showers. Banana orchards continued to be in fair to good condition. Harvesting remained active on the major islands. Papaya orchards ranged from good to poor condition. Harvesting was active in most areas. Disease remained a serious problem in the Puna district of Hawaii island. Head cabbage harvesting continued very active. Crop quality and condition were good. Dry onion harvesting increased. Harvesting is expected from new areas. Harvesting of 1999/2000 ginger root crop continued. Shipments to the United States mainland were moderate.

**IDAHO:** Days suitable for fieldwork 2.5. Topsoil 2% short, 56% adequate, 42% surplus. Cool weather, rain, snow across much of State slow progress. Southcentral, eastern areas experienced vole damage to winter wheat fields. Calving is 84% complete, lambing 86%. Hay, roughage supplies 4% short, 58% adequate, 38% surplus. Irrigation supply 61% excellent, 37% good, 2% fair. Dry peas planted 13%, 9% 1998, 5% avg. Onions planted 52%, 47% 1998, 58% avg. Potatoes planted 1%, 2% 1998, 1% avg. Barley emerged 2%, 3% 1998, 3% avg. Spring wheat emerged 2%, 5% 1998, 5% avg. Sugar beets planted 15%, 23% 1998, 28% avg.; emerged 1%, 4% 1998, 2% avg. Activities: Planting spring wheat, barley, potatoes, onions, dry peas, oats, sugar beets, feeding, caring for livestock, equipment maintenance, field preparation, hauling seed potatoes, applying fertilizer.

**ILLINOIS:** Days suitable for fieldwork 5.7. Topsoil 4% very short, 30% short, 59% adequate, 7% surplus. Farmers are planting oats at a record pace. In addition, many are preparing equipment, tilling soil, anxious to plant corn, with some farmers ahead of schedule due to dry soils from a lack of precipitation prior to the weekend. Other activities for the first week of April included hauling grain, spreading fertilizer, continuing to apply anhydrous ammonia, herbicide. Oats planted 67%, 17% 1998, 25% avg. Alfalfa 1% very poor, 3% poor, 28% fair, 61% good, 7% excellent.

**INDIANA:** Days suitable for fieldwork 5.2. Topsoil 6% very short, 23% short, 65% adequate, 6% surplus. Subsoil 5% very short, 19% short, 71% adequate, 5% surplus. Winter wheat 7% jointed, 25% 1998, 7% avg. Wheat survived the winter in mostly good condition. Cool weather during March slowed growth, development of hay, forage crops. March temperatures were the third coldest in the last 18 years. Field activities gained momentum this past week, aided by warmer weather, drier soil conditions. Tillage of soils made good progress. Fertilizer application occurred on many fields. Pastures greening up. Range, pasture feed 3% very poor, 13% poor, 38% fair, 41% good, 5% excellent. Hay supplies adequate to surplus. Activities: Moving grain to market, spreading fertilizer, anhydrous ammonia, hauling manure, calving, repairing machinery, ditching, feeding and caring for livestock.

**IOWA:** Days suitable for fieldwork 6.3. Very favorable, warm, dry weather, fieldwork running ahead of schedule. Topsoil 7% very short, 46% short, 46% adequate, 1% surplus. Subsoil 2% very short, 22% short, 74% adequate, 2% surplus. Corn planted 0%, some farmers have fields ready, but waiting

for more appropriate date to plant. Oats planted 57%, 0% 1998, 20% avg. Winter wheat 29% fair, 66% good, 5% excellent. Percentage crop lost to winter kill, wheat 2%, red clover hay 4%, alfalfa hay 6%. Fertilizer applied (including fall applications) 64%. Seedbed preparation (including fall preparation) 69%. Good conditions for calving & lambing. Cattle condition reported good to excellent.

**KANSAS:** Days suitable for fieldwork 5.5. Topsoil 15% short, 78% adequate, 7% surplus. Subsoil moisture 7% short, 86% adequate, 7% surplus. Progress of wheat across the State is well ahead of normal as a result of mild weather, adequate moisture. Wheat jointing 36%, 17% 1998, 25% avg. Wheat freeze damage 1% moderate, 10% light, 89% no damage. Wheat wind damage 1% moderate, 5% light, 94% no damage. Spring oats seeding 94%, 65% 1998, 88% average. Insect infestations remain a concern across the State, with several reports of army cutworms. Disease infestation remains light to moderate, with a few reports of wheat streak mosaic, speckled leaf blotch, wheat spindle streak. In a few areas, nitrogen deficiency is appearing in some wheat fields. Major field activities included top-dressing wheat, spraying for army cutworms, alfalfa weevils, tilling fields for spring planting, applying fertilizer, herbicides, planting corn. Pasture feed 6% poor, 25% fair, 60% good, 9% excellent. Major livestock activities included calving, lambing, repairing fences. Producers continue to move cattle off wheat fields. In some areas, cattle are being turned out on grass. Pasture burning continues in the eastern half of the State as weather conditions permit.

**KENTUCKY:** Days suitable for fieldwork 3.7. Topsoil 10% short, 71% adequate, 19% surplus. Subsoil 10% short, 72% adequate, 18% surplus. Pasture feed 2% very poor, 14% poor, 38% fair, 38% good, 8% excellent. Above-average temperatures, felt throughout the State for the first week of April. Land was being prepared for corn planting, tobacco beds were being seeded. About 72% of tobacco for transplants were seeded, corn planting began in the western part of the State. Kentucky gross sales through March totaled 638.6 million pounds, averaged \$190.25 per hundred pounds. Producers reported 2% loss in winter wheat, 1% in barley acreage due to winter kill.

**LOUISIANA:** Days suitable for fieldwork 2.3. Soil moisture 1% short, 53% adequate, 46% surplus. Corn 55% planted, 95% 1998, 84% avg.; 28% emerged, 66% 1998, 59% avg. In the north, corn planting made little progress due to wet conditions. Rice 15% emerged, 19% 1998, 15% avg. Rice producers were very busy with planting, water leveling, fertilizing. Spring plowing 63% plowing, 68% 1998, 63% avg. Sugarcane 3% poor, 23% fair, 50% good, 24% excellent. Sugarcane producers continued, with off-barring, fertilizing, applying herbicides. Wheat 1% very poor, 4% poor 29% fair, 58% good, 8% excellent; 45% headed, 69% 1998, 40% avg. Wheat growers continue to fertilize as wheat continues to head. Livestock 8% poor, 30% fair, 53% good, 9% excellent. Calving is coming to an end. Vegetables 1% very poor, 6% poor, 33% fair, 54% good, 6% excellent. Pastures 1% very poor, 7% poor, 42% fair, 41% good, 9% excellent. Pasture conditions improved, providing much-needed forage for livestock producers.

**MARYLAND:** Days suitable for fieldwork 4.5. Subsoil moisture 14% short, 85% adequate, 1% surplus. Topsoil 10% short, 82% adequate, and 8% surplus. Winter wheat 4% poor, 18% fair, 63% good, 15% excellent. Barley 5% poor, 13% fair, 56% good, 26% excellent. Rye 1% very poor, 5% poor, 14% fair, 68% good, 12% excellent. Potatoes 25% planted, 18% 1998, 26% avg. Green peas 40% planted, 23% 1998, 25% avg. Snap beans 5% planted, 0% 1998, 0% avg. Tobacco beds 80% planted, 77% 1998, 47% avg. Peaches 25% bloomed, 27% 1998, 19% avg. Apples 10% bloomed, 12% 1998, 6% avg. Strawberries 15% bloomed, 7% 1998, 6% avg. Pasture feed 1% very poor, 4% poor, 15% fair, 69% good, 11% excellent. Hay supplies 1% very short, 28% short, 69% adequate, 2% surplus. Activities: Continued pea, potato planting, spreading of manure from storage facilities.

**MICHIGAN:** Mild weather continued, with temperatures well above normal. Temperatures 11° above normal in the Upper Peninsula 17° above normal in the central Lower Peninsula. The mild weather benefited the fall planted crops. Rainfall, which ranged from 0.41 in. east-central to 0.94 in. eastern areas, helped to relieve the soil moisture deficit. Wheat, alfalfa were greening up nicely. Fruit development was about normal. Warm weather has advanced most fruit crops to bud swell. Peach and wine grapes have

suffered damage from the January 5 freeze in extreme southern areas. Peach buds were severely damaged, grapes to a lesser extent. Spring fieldwork was active, with sugar beet, potato planting getting underway. Other activities included tillage, top dressing fertilizer, spreading manure, pruning fruit trees, repairing field tile, soil sampling, preparing equipment and supplies for spring planting. Calving was winding down throughout the State, with favorable conditions.

**MINNESOTA:** Statewide precipitation was above normal for the second consecutive week; however, the southwestern part of the State received very little rainfall during the week. Temperatures continued to be warmer than normal. Some farmers were able to begin fieldwork before the precipitation arrived during the latter part of the week.

**MISSISSIPPI:** Soil moisture 1% short, 33% adequate, 66% surplus. Corn 49% planted, 48% 1998, 46% avg.; 19% emerged, 17% 1998, 18% avg. Rice 3% planted, 4% 1998, 7% avg. Watermelons 18% planted, 16% 1998, 21% avg. Wheat 83% jointing, 72% 1998, 79% avg.; 7% heading, 9% 1998, 8% avg; 1% very poor, 5% poor, 35% fair, 58% good, 1% excellent. Blueberries 13% poor, 10% fair, 59% good, 18% excellent. Cattle 5% poor, 25% fair, 52% good, 18% excellent. Pasture feed 1% very poor, 6% poor, 29% fair, 44% good, 20% excellent. Rain has slowed fieldwork in some areas of the State.

**MISSOURI:** Days suitable for fieldwork 5.2. Topsoil 11% short, 80% adequate, 9% surplus. Corn planting just getting started over most of State except the bootheel with 12% planted. Winter wheat 1% very poor, 5% poor, 31% fair, 54% good, 9% excellent. Ground worked at least once for spring crops 44%. Temperatures 4 to 12° above normal. Pasture feed 3% very poor, 4% poor, 37% fair, 51% good, 5% excellent. Precipitation 1.05 in.

**MONTANA:** Days suitable for fieldwork 2.9. Topsoil 7% very short, 38% short, 52% adequate, 3% surplus. Subsoil 7% very short, 35% short, 56% adequate, 2% surplus. Many producers were unable to get into their fields as a lot of areas of the State received some good amounts precipitation, fields were too wet to work. Fieldwork in progress was rated 61% none, 27% just started, 12% well underway. Winter wheat emergence was 5% still dormant, 57% greening, 38% green and growing. Wind damage to winter wheat 47% none, 29% light, 21% moderate, 3% heavy. Freeze, drought damage to the winter wheat crop is minimal 52% none, 41% light, 7% moderate. Sugar beets planted 5%, 1% 1998, 1% avg. The mild temperatures have resulted in livestock being in good condition as feed supplies remain adequate. Calving, lambing is making good progress as few problems have occurred, death losses are down. Calving completed 59%, 62% 1998, 67% avg. Lambing completed 34%, 42% 1998, 48% avg. Even though grazing is predominantly open, producers are continuing to feed livestock as drought last summer and fall reduced winter pastures. At the end of the month, 98% of the cattle and calves, 99% of the sheep and lambs were receiving supplemental feed.

**NEBRASKA:** Topsoil 8% very short, 37% short, 53% adequate, 2% surplus. Subsoil 2% very short, 17% short, 78% adequate, 3% surplus. Temperatures near normal in the west, up to 8° F over the remainder of the State. Wheat 3% poor, 30% fair, 62% good, 5% excellent. Oats 30% seeded, 14% 1998, 22% avg.; 3% emerged, 4% 1998, 3% avg. Calving 67% complete, compared with 76% 1998. Favorable weather conditions have been good for the calving season. Pasture, range feed 1% very poor, 5% poor, 32% fair, 59% good, 3% excellent. Producer activities; oat, spring wheat seeding, equipment preparations for row crop planting, livestock care.

**NEVADA:** Below-normal temperatures were predominant throughout the State. A storm that entered the State on 30th brought as much as 0.2 in. of precipitation to the northern portions of the State; most of which fell in the form of snow. This cold weather has hampered forage growth, limited crop growth. Crop conditions have remained in the good-to-excellent range. Irrigation water remains adequate in the majority of the State. Calving, lambing are in full force, shearing is underway. Branding, vaccinating has begun, weather has postponed many farm, ranch activities. Main farm, ranch activities: Field preparation, planting, ditch burning, lambing, calving, shearing, branding, vaccinating.

**NEW ENGLAND:** Temperatures above average for the week. Maple sugaring activities were winding down throughout the region. Cool nights, warm days have provided excellent sugaring conditions for this season's maple crop. Farmers tending livestock, repairing machinery, bringing tractors, trucks, implements out of storage in preparation of the spring planting season. Manure spreading by dairy farmers continues. Garden centers gearing up for spring.

**NEW JERSEY:** Days suitable for fieldwork 5. Soil preparation activities such as plowing, fertilizing for hay, grains are underway, on schedule for most crops. Temperature much above normal. Extremes 26°; 79° F. Rainfall 0.05 in. north, 0.19 in. central, 0.49 in. south. Heaviest 24-hour total 0.38 in. at Atlantic City Marina on the 1st to the 2nd. Estimated soil moisture 87% north, 81% central, 75% south. Four inch soil temperatures 48° F north, 49° central, 53° south. Spinach, lettuce, peas, potatoes, sweet corn planting has already started in south, central areas. Cabbage is being transplanted, harvesting of broccoli rabe, leeks is occurring in southern areas. Fruits growers are pruning their trees, some flowering has occurred in peach trees.

**NEW MEXICO:** Days suitable for fieldwork 5.7. Wind, rainfall, below-normal temperatures were prevalent throughout much of last week. In the South, farmers continued planting chile. Across the State, producers remained busy with field preparations for spring planting, irrigating, fertilizing. Cotton, corn planting was expected to start by mid-month, while potato planting was already underway. Although the winds were strong last week, the damage to crops remained light. There were no reports of major damage to any of the crops. Precipitation that was received pushed the soil moisture rating to mostly adequate. Main ranch activities were calving, lambing, supplemental feeding of livestock.

**NEW YORK:** Maple syrup season continued under ideal conditions. Producers report good sap runs, high-quality syrup being made. Plowing began on well-drained fields. Machinery being readied for upcoming season. Other major activities included tending livestock, spreading manure, spring clean-up, normal chores.

**NORTH CAROLINA:** Days suitable for fieldwork 4.6. Soil moisture levels are mostly adequate 4% short, 83% adequate, 13% surplus. An overall dry week with seasonable temperatures prevailed last week in the State. Western half of the State, especially the Mountain region, received some good rainfall. Dry weather dominated the rest of the State as farmers made progress in field preparation. Potato plantings are all but finished, ahead of schedule. However, it was a slow week for cabbage planting, which remain ahead of the 5-year average. Land preparation was the major activity for the week as farmers get ready for corn, cotton, tobacco plantings. Other activities included fertilizing, preparing planting equipment, top dressing small grains, applying burn down, tending livestock, pasture maintenance.

**NORTH DAKOTA:** Topsoil 1% short, 73% adequate, 26% surplus. Subsoil 3% short, 78% adequate, 19% surplus. Major winter storm blanketed most of the State, increased livestock stress, closed roads, made feed difficult to access. On average Statewide, 5.4 in. of snow cover, compared with 0.4 in. last week, 12.2 in 1997. No planting was reported, same as 1998 and avg. The statewide average starting date for fieldwork is expected to be April 21. This compares with April 18 1998, April 26 average. Livestock feed, hay supplies remain adequate this winter as mild conditions have kept usage at a minimum. Ninety-seven percent of the cattle, 98% of sheep received supplemental feed. Calving 54% complete while lambing, 61% shearing, 66% complete. Cattle 1% poor, 25% fair, 68% good, 6% excellent; calf 2% poor, 23% fair, 66% good, 9% excellent; sheep 1% poor, 14% fair, 76% good, 9% excellent; lamb 1% poor, 15% fair, 72% good, 12% excellent. Pasture still 98% dormant, 28% open for grazing.

**OHIO:** Days suitable for fieldwork 5.2. Topsoil 5% very short, 27% short, 63% adequate, 5% surplus. Corn is less than 1% planted, on schedule with last year. Winter wheat jointed is 5% complete, 9 days behind 1998, 4 days ahead of avg. Oats 23% planted, 2 days ahead of 1998, 5 days ahead of avg. Tobacco beds are 33% seeded, with 8% having visible growth. This is about on schedule with 1998. Potatoes are 4% planted, 4 days ahead of 1998, 7 days ahead avg. Pasture feed 1% very poor, 11% poor, 32% fair, 50% good, 6% excellent. Winter wheat 3% poor, 16% fair, 63% good, 18%

excellent. Activities: Applying anhydrous ammonia, fertilizer, lime; hauling manure; plowing, chiseling, discing; applying pre-emergence herbicides; burning brush; fence row clearing, maintenance; equipment maintenance, preparation, early garden planting; installing tile; moving grain; sowing oats, alfalfa seedlings, other grasses, legumes; planting trees on CRP ground; buying seed. There was one report of a farmer planting 100 acres of soybeans on March 30. Soil conditions, temperatures in the Northwest have allowed vegetable producers to begin planting of cabbage, sweet corn, carrots, red beets, sugar beets. Livestock producers are continuing to feed hay as most pastures are short. Pastures in the northeastern part of the State are poor as soils are unusually dry and firm for this time of year. One reporter mentioned grass fires are easily started due to dry, brown grass.

**OKLAHOMA:** Days suitable for fieldwork 4.1. Subsoil 1% very short, 7% short, 85% adequate, 7% surplus. Topsoil 3% short, 83% adequate, 14% surplus. Rain, above-normal temperatures accelerate pasture, small grain growth, seedbed preparation, planting. Wheat 16% fair, 73% good, 11% excellent; 86% jointing, 78% 1998, 67% avg.; corn 67% seedbed prepared, 55% 1998, 73% avg.; 15% planted, 13% 1998, 13% avg. Sorghum 32% seedbed prepared, 21% 1998, 27% avg. Soybeans 32% seedbed prepared, 26% 1998, 31% avg.; 0% planted, 1% 1998, 2% avg. Oats 55% jointing, 28% 1998, 31% avg. Peanuts 39% seedbed prepared, 17% 1998, 32% avg. Cotton 55% seedbed prepared, 34% 1998, 43% avg. Pasture feed 1% very poor, 16% poor, 36% fair, 43% good, 4% excellent. Livestock 1% very poor, 9% poor, 25% fair, 62% good, 3% excellent. Cattle marketings average, feeder steer prices down \$2.00 per cwt. from last month.

**OREGON:** Days suitable for fieldwork 3.6. Topsoil 2% very short, 11% short, 68% adequate, 19% surplus. Subsoil 20% short, 63% adequate, 17% surplus. Barley planted 55%, 58% 1998, 49% avg. Spring wheat planted 26%. Winter wheat 21% poor, 45% fair, 33% good, 1% excellent. Range, pasture feed 28% poor, 32% fair, 33% good, 7% excellent. Activities: Weather prevented most field work statewide. Some fertilizer spreading, grain planting started on east side of State. At lower elevations, alfalfa growing, canola blooming. On westside of State, fertilizer, herbicide applications continued on grass seed fields as permitted. Clover, alfalfa leafing out and grass for seed growing well. Greenhouse supplies of bedding plants moving to retail nurseries. Field digging of balled, burlapped continued, bareroot digging winding down. South coast some injury to early growth of field-grown Eastern Lilies. Cool weather slowed potato planting in the Mid-Columbia Basin. Willamette Valley berry crops started to leaf out. Peaches, prunes, plums blooming, pears, cherries nearing bloom, apples, hazelnuts leafing out. No apparent freeze damage. Rogue River Valley fruit trees blooming and raspberries leafing out. South coast cranberries breaking bud. Hood River Valley pears started to bud in lower valley. Wasco County sweet cherries started to bud. Range and pasture growth minimal statewide due to continued winter weather. Cows on pasture in north coastal lowlands, other areas livestock on supplemental feed. Calving season winding down.

**PENNSYLVANIA:** Days suitable for fieldwork 4.8. Soil moisture 3% very short, 17% short, 75% adequate, 5% surplus. Plowing 19% complete, 20% 1998, 11% avg. Tobacco beds planted 75% complete, 81% 1998, 46% avg. Wheat 1% poor, 23% fair, 70% good, 6% excellent. Alfalfa and alfalfa mixtures stand 1% very poor, 5% poor, 31% fair, 56% good, 7% excellent. Timothy clover stand 4% poor, 27% fair, 66% good, 3% excellent. Activities: Spring plowing; planting oats and tobacco; machinery maintenance; fixing fences; spreading lime and manure; caring for livestock; installing tile drains; culling ewes; pruning fruit trees; spraying insecticides; planting alfalfa.

**SOUTH CAROLINA:** Soil moisture 2% very short, 30% short, 63% adequate, 5% surplus. Cantaloupes 20% planted, 15% 1998, 19% avg. Corn 50% planted, 51% 1998, 51% avg.; 25% fair, 75% good. Cucumbers 50% planted, 46% 1998, 32% avg. Hay 10% harvested, 9% 1998, 8% avg. Oats 20% headed, 9% 1998, 16% avg.; 29% fair, 68% good, 3% excellent. Rye 30% headed, 23% 1998, 15% avg.; 1% poor, 39% fair, 56% good, 4% excellent. Sorghum 7% planted, 5% 1998, 1% avg. Snap beans 30% planted, 38% 1998, 36% avg. Tobacco 7% transplanted, 10% 1998, 7% avg. Tomatoes 30% planted, 41% avg. Watermelons 50% planted, 44% 1998, 41% avg. Winter wheat 20% headed, 6% 1998, 10% avg.; 30% fair, 69% good, 1% excellent. Livestock 8% poor, 29% fair, 68% good, 3% excellent.

**SOUTH DAKOTA:** Days suitable for fieldwork 3.3. Subsoil 8% short, 70% adequate, 22% surplus. Topsoil 2% very short, 15% short, 66% adequate, 17% surplus. Late-week snowstorm brought significant snowfall to the western, northwest, north-central areas of the State, with the remaining areas receiving rain. Producers report the average date fieldwork started is March 31. Winter rye 10% excellent, 54% good, 34% fair, 2% poor. Range, pasture feed 16% excellent, 56% good, 22% fair, 5% poor, 1% very poor. Winter wheat breaking dormancy 88%. Winter rye breaking dormancy 46%. Oats planted 12%, 2% 1998, 1% avg. Barley planted 10%, 1% 1998. Cattle 26% excellent, 66% good, 8% fair. Sheep 28% excellent, 63% good, 8% fair, 1% poor. Calving 38% completed. Lambing 52% completed. Newborn calf death losses 40% below normal, 59% normal, 1% above-normal. Newborn lamb death losses 35% below normal, 64% normal, 1% above normal. Feed supplies 5% short, 78% adequate, 17% surplus. Stock water supplies 2% short, 75% adequate, 23% surplus.

**TENNESSEE:** Days suitable for fieldwork 4. Topsoil 6% short, 63% adequate, 31% surplus. Subsoil 4% short, 66% adequate, 30% surplus. Corn 3% planted, 11% 1998, 10% avg. Tobacco 74% seeded, 77% 1998, 79% avg.; 57% plants up, 51% 1998, 41% avg. Wheat 5% poor, 20% fair, 55% good, 20% excellent; 40% jointed, 82% 1998, 47% avg.; 90% top-dressed, 90% 1998. Apples 58% budding or beyond, 79% 1998, 70% avg.; 24% blooming or beyond, 51% 1998, 31% avg. Peaches 94% budding or beyond, 96% 1998, 86% avg.; 78% blooming or beyond, 81% 1998, 67% avg. Pasture feed 3% very poor, 19% poor, 34% fair, 38% good, 6% excellent. Cattle 1% very poor, 8% poor, 33% fair, 51% good, 7% excellent. Corn planting started on a limited scale last week. A majority of the counties report that planting is being delayed due to cool weather, wet fields. Other field activities include the fertilizing of pastures, top-dressing of wheat. Wheat earlier damaged by frost is responding well to top-dressing, growing out of frost damage conditions. Greenhouse growers are beginning to move tobacco plants to outdoor beds, with very limited numbers of disease outbreaks reported. Cattle are in mostly fair to good condition.

**TEXAS:** Warm temperatures continued across State during week. Early-week rainfall beneficial, but slowed field activities across much of State. Overcast conditions slowed emergence in newly planted fields in some areas. With recent rainfall in all areas, a return to open, sunny weather will boost planted crops. Native range, pasture conditions continued to improve during week. Livestock conditions remained good in most areas. South could use additional rain to improve grazing, cattle conditions. Stockers continued shipped off small grain fields to be harvested.

**Crops:** Small Grains: Fields in High Plains made very good progress over past several weeks with rain, last week's warmer temperatures. Fields continued head out Blacklands, Central. Grain prospects have improved also in these areas. Rust continued to show up in scattered fields. Fields in South continued slowly to turn color. Corn: fields across Central, South made good progress last week. Recent rains, warm temperatures increased emergence newly planted fields. Most land prepared in Plains, producers will begin planting next few weeks. Corn 77% normal, 87% 1998. Cotton: Wet conditions in the early week kept planting progress to a minimum in the Rio Grande Valley, Coastal Bend, along Upper Coast. However, additional moisture improved planting conditions late week, aided newly planted fields. Warm temperatures need to continue also. Land preparations continued in the Plains, a few additional fields planted Blacklands late week. Rice: Planting slowly continued late week along Upper Coast. Early planted fields emerging to good stands; however, growth slowed by cloudy, cool temperatures through midweek. Sorghum: Planting continued as conditions allowed. Emergence slowed by cloudy conditions in many areas. Progress good on early-planted fields in Coastal Bend, Rio Grande Valley. Land preparations continued late week in Plains where planting will begin soon. Sorghum 74% normal compared with 85% in 1998. Soybeans: Planting continued late week in a few fields in Northern Blacklands. Along Upper Coast, planting slowed by wet fields early in the week.

**Commercial Vegetables:** Rio Grande Valley, cabbage, carrot harvest continued with some delays due wet conditions. Onion harvest also halted part of the week. Grapefruit, late orange harvest continued. San Antonio-Winter Garden, most melon planting completed with early fields emerging. Onion harvest slowly continued. In the east, producers continued to bed out sweet potatoes. Other vegetable planting slowly continued. High Plains, land preparations continued, planting will begin soon. Trans Pecos, production of greenhouse tomatoes continued good. Peaches: Early varieties continued to size, later varieties blooming. The Hill Country crop continued to show erratic progress. Pecans: Producers continued apply zinc many

groves. The additional rainfall early week will benefit trees as they continued to bud, leaf out across State.

**Range and Livestock:** Range, pasture grasses continued to green with additional rainfall, warmer temperatures. Small grains continued to supply adequate grazing in most areas. Livestock conditions remained good in most areas; however, the south was in need of more rain to improve pastures. Livestock body conditions were good in all areas except the south. A good lamb crop has been reported in the Hill Country. Supplemental feeding slowed.

**UTAH:** Days suitable for fieldwork 4. Topsoil 5% very short, 8% short, 74% adequate, 13% surplus. Subsoil 1% very short, 10% short, 77% adequate, 12% surplus. Winter wheat 33% fair, 62% good, 5% excellent; freeze damage 96% none, 4% light. Fall barley 1% very poor, 3% poor, 16% fair, 70% good, 10% excellent; freeze damage 87% none, 9% light, 3% moderate, 1% severe. Pasture, range feed 4% very poor, 9% poor, 56% fair, 30% good, 1% excellent. Spring wheat planted 47%. Barley planted 42%. Oats planted 23%. Apricots full bloom or past 96%. Cows calved 59%, 63% 1998, 56% avg. Ewes lambled: on farm 60%, 54% 1998, 56% avg.; on range 24%, 18% 1998, 23% avg. Sheep sheared: on farm 49%, 34% 1998, 42% avg.; on range 25%, 13% 1998, 24% avg. Major farm, ranch activities were spring planting, spring tillage, spraying fruit, pruning fruit, shearing sheep, lambing, calving.

**VIRGINIA:** Days suitable for fieldwork 4.9. Topsoil 1% very short, 13% short, 74% adequate, 12% surplus. Subsoil 2% very short, 13% short, 75% adequate, 10% surplus. Range, pasture feed 5% very poor, 15% poor, 30% fair, 48% good, 2% excellent. Livestock 1% very poor, 6% poor, 30% fair, 52% good, 11% excellent. Small grain, winter grazing crops 1% very poor, 8% poor, 30% fair, 49% good, 12% excellent. Hay, other 10% very poor, 15% poor, 30% fair, 40% good, 5% excellent. Hay, alfalfa 5% poor, 40% fair, 50% good, 5% excellent. Corn for grain 6% planted, 6% 1998, 3% avg. Winter wheat 3% very poor, 6% poor, 26% fair, 50% good, 15% excellent. Barley 2% very poor, 6% poor, 26% fair, 52% good, 14% excellent. Tobacco, greenhouse 98% planted, 98% 1998, 99% avg.; 1% poor, 5% fair, 38% good, 56% excellent. Tobacco, Plantbeds 96% planted, 96% 1998, 95% avg.; 10% poor, 21% fair, 69% good. Potatoes summer 80% planted, 86% 1998, 74% avg. Apples all 25% fair, 75% good. Peaches 5% poor, 20% fair, 75% good. Rain showers were scattered across most of the Commonwealth last week; however, actual precipitation levels lagged slightly behind normal levels. Temperatures 5 to 10° F above normal for most localities. Soil moisture mostly adequate, allowing 4.9 of fieldwork in most areas. Weather was favorable for improving the condition of pastures as well as improving prospects for hay acreage. More than 90% of small grain acres were reported to be in fair or better condition. Wheat producers reported only limited problems with disease, insects to date. Apples and peaches are both in good to excellent condition. Corn planting has commenced in some areas and is expected to get in full swing during the coming week. Virtually all tobacco greenhouses, plantbeds have been seeded, with a few isolated areas beginning to clip plants. Other farm activities for the week included over seeding of pasture, hay acres, fumigating peanut acres, preparing land for cotton, maple syrup production, laying plastic for tomatoes, applying lime, fertilizer, nitrogen, spraying fruit trees.

**WASHINGTON:** Days suitable for fieldwork 5.4. Topsoil 26% short, 66% adequate, 8% surplus. Subsoil 12% short, 84% adequate 4% surplus. Winter wheat, dryland 2% very poor, 6% poor, 56% fair, 33% good, 3% excellent; irrigated 100% good. Overall crop was looking good, warmer days would be beneficial for crop development. Spring wheat, dryland 100% fair; irrigated 100% good. Planted 30%, 35% 1998; 5% emerged, 15% 1998. The inconsistent weather slowed spring planting, emergence in both spring wheat, barley. Barley, dryland 98% fair, 2% good; irrigated, 100% good. Planted 30%, 30% 1998; 5% emerged, 10% 1998. Hay, other roughage 40% adequate, 60% surplus. Range, pasture feed 25% fair, 75% good. Livestock being turned out onto the ranges. Soft fruits were blooming. Cooler weather slowed the development to the tree fruit flowers. Growers are watching forecasts closely, significant damage from frost has not been reported in the tree fruits at this time. Potato, corn, dry pea planting continued.

**WEST VIRGINIA:** Days suitable for fieldwork 5.1. Topsoil 23% short, 76% adequate, 1% surplus. Open weather conditions allowed producers to make good progress in planting, preparing fields for planting. Wheat 80% fair,

20% good. Hay 10% poor, 41% fair, 46% good, 3% excellent. Intended acreage prepared for spring planting 27%, 27% 1998, 26% avg. Corn planted 0%, 1% 1998, 1% avg. Oats planted 12%, 15% 1998, 16% avg. Oats emerged 0%, 0% 1998, 2% avg. Tobacco beds seeded 61%, 51% 1998, 63% avg. Tobacco beds emerged 7%, 7% 1998, 15% avg. Cattle 4% poor, 23% fair, 69% good, 4% excellent; 80% calved. Sheep 16% fair, 67% good, 17% excellent; 73% lambled. Feed grain supplies 4% short, 93% adequate, 3% surplus. Hay, roughage supplies 16% short, 81% adequate, 3% surplus. Activities: Field preparation, planting, calving, lambing, general maintenance.

**WISCONSIN:** Days suitable for fieldwork 6.0. Soil moisture 28% very short, 38% short, 34% adequate. Spring tillage completed 10% 1999, 1% 1998, 2% avg. 1999 growing season has started, with all regions of the State reporting relatively dry conditions, the need for rain. Even with the melting snow, frost, March was very dry compared with normal. March is usually characterized by a State rainfall of 1.74 in.; this past March only had 0.40 in. Fortunately, the first 4 days of April brought much-needed rain to all regions of the State. Some patches of frost, snow still remain, especially in the northern part of the State; they are gone for the most part. Most of the fieldwork that has occurred has been in the southern two-thirds of the State. Oats planted, at 14% complete, are also well ahead of the 5-year average of none planted. Winter wheat, hay were generally reported to be free of winter damage, were starting to turn green. Comments on maple syrup production were mixed. Production was reported to be better than last year in Marathon, Waupaca Counties. The syrup season was wrapping up, with good flow, favorable yields in Wood County. Some other counties reported average seasons; Oconto County reported a below-average season.

**WYOMING:** Days suitable for fieldwork 2.8. Topsoil 28% short, 13% 1998, 14% avg.; 59% adequate, 57% 1998, 66% avg.; 13% surplus, 30% 1998, 17% avg. Winter wheat 16% fair, 70% good, 14% excellent. Barley seeded 60%, 25% 1998, 35% avg. Oats seeded 19%, 7% 1998, 8% avg. Spring wheat seeded 28%, 12% 1998, 12% avg. Calf losses 42% light, 58% normal. Spring calving 63%, 63% 1998, 63% avg. Lamb losses 33% light, 67% normal. Farm flock ewes lambled 68%, 78% 1998, 75% avg. Farm flock sheep shorn 75%, 79% 1998, 78% avg. Range flock lambled 10%, 10% 1998, 10% avg. Range flock sheep shorn 34%, 25% 1998, 32% avg. Range, pasture feed 48% fair, 49% good, 3% excellent. Cattle feed 7% fair, 88% good, 5% excellent. Calf 9% fair, 82% good, 9% excellent. Sheep 15% fair, 81% good, 4% excellent. Lamb 15% fair, 79% good, 6% excellent. Hay, roughage 1% very short, 9% short, 54% adequate, 36% surplus. Much of the State received some precipitation. Temperatures in the southeast were generally above normal, with the remainder of the State below normal.

## International Weather and Crop Summary

March 28 - April 3, 1999

### HIGHLIGHTS

**FSU-WESTERN:** Mild weather continued to melt snow cover in northern Russia, while winter grains continued to break dormancy in Ukraine and southern Russia.

**EUROPE:** Mild weather and several days of dryness favored spring fieldwork.

**NORTHWESTERN AFRICA:** Showers benefited winter grains in Algeria and Tunisia, while dry weather continued over crop areas in Morocco.

**AUSTRALIA:** Scattered showers caused local delays in sorghum and cotton harvesting.

**SOUTH AFRICA:** Dry, warm weather favored maturation and dry down of corn and other summer crops.

**SOUTHEAST ASIA:** Showers favored rice development in Thailand and Vietnam, while drier weather aided main-season rice harvesting in Java, Indonesia.

**EASTERN ASIA:** Widespread showers aided early rice transplanting across the southern half of China.

**SOUTH AMERICA:** Continued dryness stressed filling soybeans in Rio Grande do Sul, Brazil. Showers, sometimes heavy, slowed summer crop harvesting in central Argentina.

## March 1999

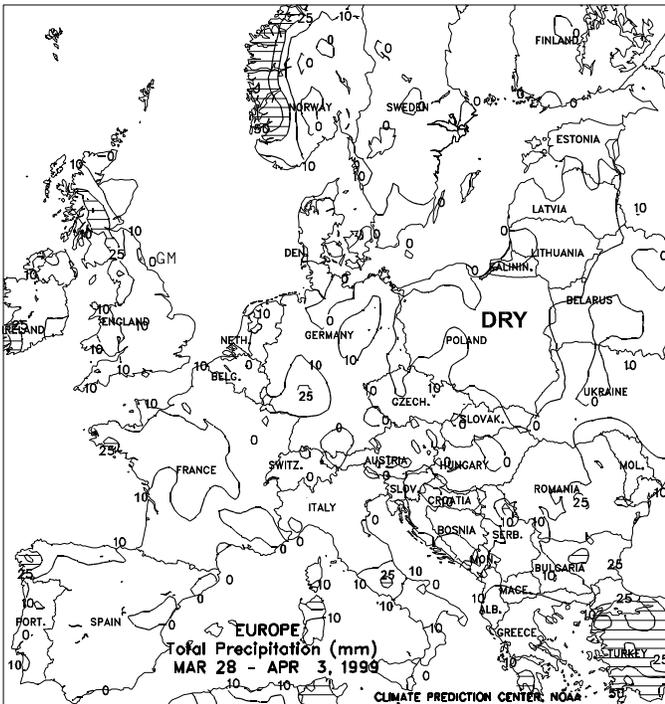
### MONTHLY DATA FROM SELECTED FOREIGN CITIES CLIMATE PREDICTION CENTER-NCEP-NWS-NOAA

\*\*\* DATA NOT AVAILABLE

COUNTR	CITY	TEMPERATURE (C)					PRECIPITATION (MM)		
		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DPART F/NRM	TOTAL	DPART F/NRM
NORWAY	OSLO	2	-3	9	-13	-1	1.3	139	87
SWEDEN	STOCKHOLM	4	-1	13	-10	2	1.4	0	-26
FINLAND	HELSINKI	1	-4	8	-14	-2	1.3	27	-7
UKINGDO	GLASGOW	10	3	14	-4	7	0.6	100	29
	EDINBURGH	10	3	14	-5	7	1.3	41	-11
IRELAND	DUBLIN	11	4	17	-2	7	0.9	36	-17
ICELAND	REYKJAVIK	2	-3	7	-9	0	-0.9	14	-68
DENMAR	COPENHAGEN	6	1	13	-5	3	1.1	33	1
LUXEMB	LUXEMBOURG	10	3	18	-2	6	2.1	63	-6
SWITZER	ZURICH	10	3	18	-2	7	2.2	57	-16
	GENEVA	11	3	17	-2	7	2.1	76	-3
FRANCE	PARIS/ORLY	13	5	19	0	9	***	41	**
	STRASBOURG	11	4	19	-1	8	1.9	76	39
	BOURGES	13	4	21	0	9	2.1	72	12
	BORDEAUX	16	6	24	0	11	2.7	56	-20
	TOULOUSE	14	6	21	0	10	1.6	39	-18
	MARSEILLE	17	7	24	2	12	1.7	124	80
SPAIN	VALLADOLID	15	3	22	-2	9	1.0	13	-21
	MADRID	16	4	23	0	10	0.4	18	-29
	SEVILLE	22	10	27	6	16	1.0	14	-79
PORTUG	LISBON	18	11	24	6	14	0.8	82	-16
GERMAN	HAMBURG	10	3	18	-1	6	2.7	51	-6
	BERLIN	10	2	20	-2	6	1.6	49	12
	DUSSELDORF	12	5	19	-2	8	2.1	92	51
	LEIPZIG	10	3	20	-2	6	2.5	38	4
	DRESDEN	9	2	19	-3	6	2.5	28	-9
	STUTTGART	10	3	19	-3	6	1.9	45	4
	NURNBERG	10	2	17	-5	6	2.1	38	-8
AUSTRIA	VIENNA	11	3	21	-6	7	2.2	22	-9
	INNSBRUCK	12	1	19	-5	7	2.0	43	-5
CZECHRE	PRAGUE	9	1	19	-4	5	2.0	20	-9
POLAND	WARSAW	9	1	20	-4	5	2.7	23	-5
	LODZ	9	1	21	-4	5	2.8	34	-2
	KATOWICE	9	1	21	-4	5	2.6	33	-5
	PRZEMYSL	9	1	20	-6	5	2.8	10	-23
HUNGAR	BUDAPEST	12	3	20	-2	7	1.8	25	-3
YUGOSLA	BELGRADE	13	6	22	0	9	2.3	17	-35
ROMANIA	BUCHAREST	13	1	20	-3	7	3.1	23	-9
BULGARI	SOFIA	11	2	17	-4	6	1.5	41	0
ITALY	MILAN	15	5	22	-1	10	1.9	65	-13
	VERONA	13	5	19	0	9	0.9	65	8
	VENICE	13	5	20	-1	9	1.2	19	-38
	GENOA	16	10	20	6	13	1.1	128	41
	ROME	16	6	22	2	11	0.0	57	-7
	NAPLES	16	7	21	2	12	1.0	44	-40
GREECE	THESSALONIKA	15	6	20	2	10	0.7	38	-8
	LARISSA	16	5	21	-1	10	0.5	78	40
	ATHENS	16	9	20	6	13	0.2	143	109
TURKEY	ISTANBUL	13	6	20	1	10	3.0	59	-4
	ANKARA	12	-2	19	-9	5	0.0	51	24
CYPRUS	LARNACA	20	9	26	6	15	1.4	26	-13
ESTONIA	TALLINN	3	-2	14	-10	0	2.4	20	-8
LITHUANI	KAUNAS	6	-1	18	-7	2	2.6	41	9
BELARUS	MINSK	5	-5	21	-72	0	1.6	72	32
RUSSIA	KAZAN	-3	-11	9	-25	-7	-1.6	8	-18
	MOSCOW	3	-5	16	-14	-1	1.8	37	4
	YEKATERINBURG	-5	-12	7	-25	-9	-4.6	20	5
	OMSK	-10	-20	5	-31	-15	-6.9	7	-7
	NOVOSIBIRSK	-10	-19	0	-29	-15	-3.2	23	8
	BARNAUL	-9	-21	3	-34	-15	-7.3	18	-1
	KHABAROVSK	-6	-16	9	-27	-11	-4.3	11	-7
	VLADIVOSTOK	-2	-7	6	-15	-5	-2.3	38	14
	SARATOV	0	-6	10	-17	-3	1.0	13	-7
	VOLGOGRAD	5	-2	17	-10	2	4.5	3	-28
	ASTRAKHAN	10	-1	17	-5	4	2.8	1	-15
	KRASNODAR	13	4	23	0	8	4.8	21	-35
	ORENBURG	-5	-15	5	-26	-10	-3.9	46	24
KAZAKHS	TSELINOGRAD	-10	-20	1	-35	-15	-6.7	135	121
	KARAGANDA	-9	-18	2	-33	-14	-7.1	16	-2
GEORGIA	TBILISI	12	4	22	-1	8	0.9	88	59

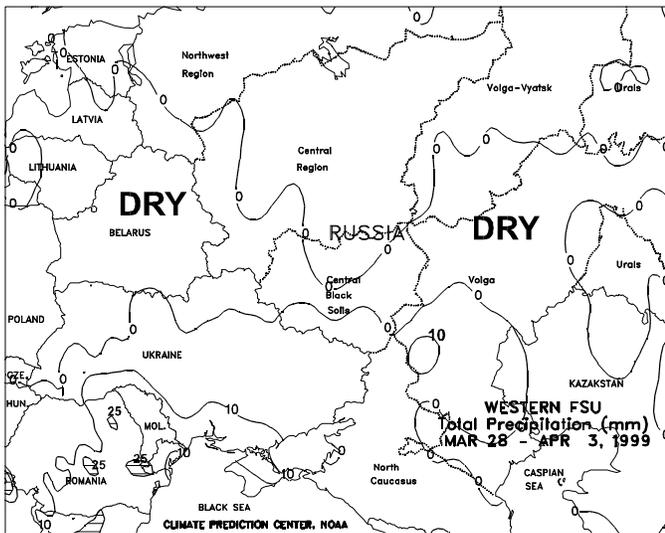
Based on Preliminary Reports





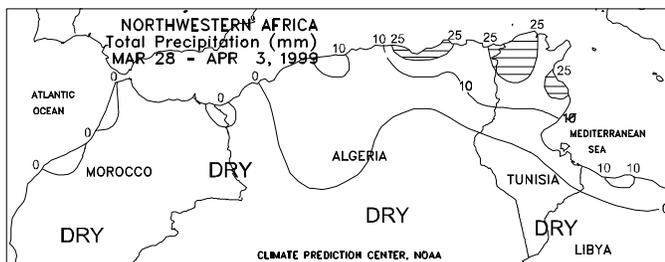
**EUROPE**

Winter grains were in the vegetative stage in northern Europe, and were in or nearing reproduction in Mediterranean areas. Unseasonably warm weather continued over most of the continent, spurring winter grain growth and raising soil temperatures for spring and summer crop planting. Several days of dry weather in England, France, Germany, and northern Italy allowed rapid fieldwork for spring grain planting, although scattered showers (25 mm or less) covered those areas later in the week. Mostly dry weather returned to southern Spain, where soils remained unfavorably dry for winter grains and newly emerging summer crops. In eastern Europe, generally dry weather in Poland, the Czech Republic, Slovakia, and Hungary favored early-spring fieldwork. Farther south, although light showers (5-25 mm) in the Balkans provided topsoil moisture for early-winter grain growth, the precipitation may have caused some interruptions in spring fieldwork. Heavier rain (25-50 mm) fell in the far east from eastern Romania southward through Greece. Weekly temperatures averaged 1 to 3 degrees C above normal across southern Europe (Spain and southern France eastward through the Balkans) and 3 to 5 degrees C above normal across most of the north. In Poland, temperatures averaged 4 to 8 degrees C above normal.



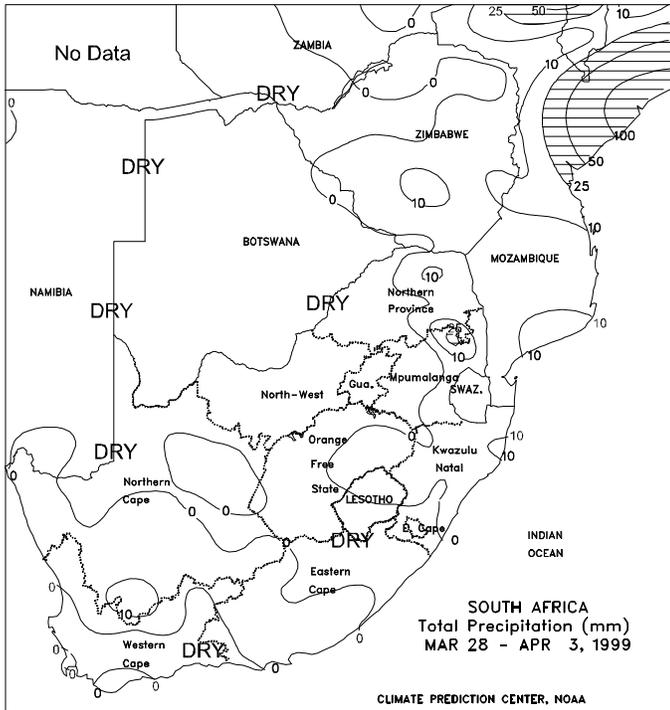
**FSU-WESTERN**

Unseasonably mild weather prevailed over Russia, Ukraine, Belarus, and the Baltics. Weekly temperatures in these areas ranged from 4 to 7 degrees C above normal. The mild weather continued to melt the deep snow cover in northern Russia. The combination of mild weather, along with several days of dryness, favored fieldwork for spring grain planting in Ukraine and parts of southern Russia (North Caucasus and lower Volga Valley). Winter grains continued to break dormancy and were greening throughout Ukraine, western Belarus, and the North Caucasus region in Russia. Extreme maximum temperatures in these areas ranged from 15 to 20 degrees C. Typically, most winter grains break dormancy in Ukraine and southern Russia in early April. Showers (15 mm or less) swept across southern crop areas from Ukraine to the lower Volga Valley, but were patchy elsewhere. At present, soil moisture conditions in Ukraine and southern Russia are adequate for early-winter grain growth and for spring grain planting.



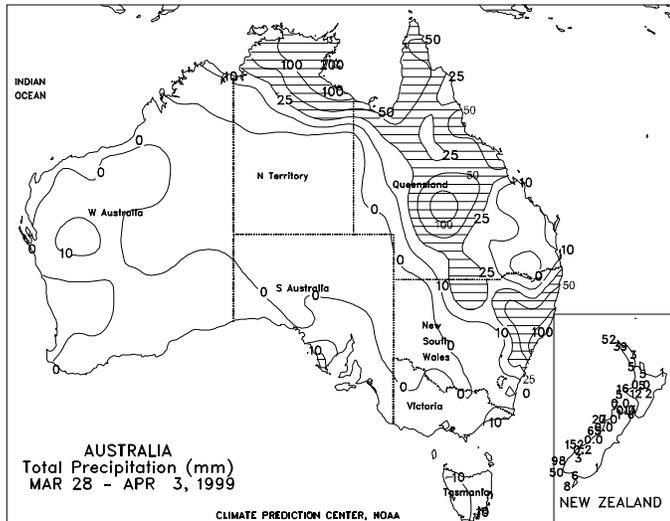
**NORTHWESTERN AFRICA**

Winter grains were likely advancing through the reproductive phase of development in Morocco, Algeria, and Tunisia. Highly beneficial rain (25-50 mm, with local amounts in excess of 50 mm) fell in Tunisia, boosting yield prospects for winter grains. Light showers (5-25 mm or more) provided favorable moisture for winter grains in central and eastern Algeria. Mostly dry weather prevailed over crop areas in Morocco and western Algeria, where additional rain is needed to prevent a decline in crop conditions. Weekly temperatures averaged near to above normal in Morocco and western Algeria and 1 to 3 degrees C below normal over Tunisia and eastern Algeria.



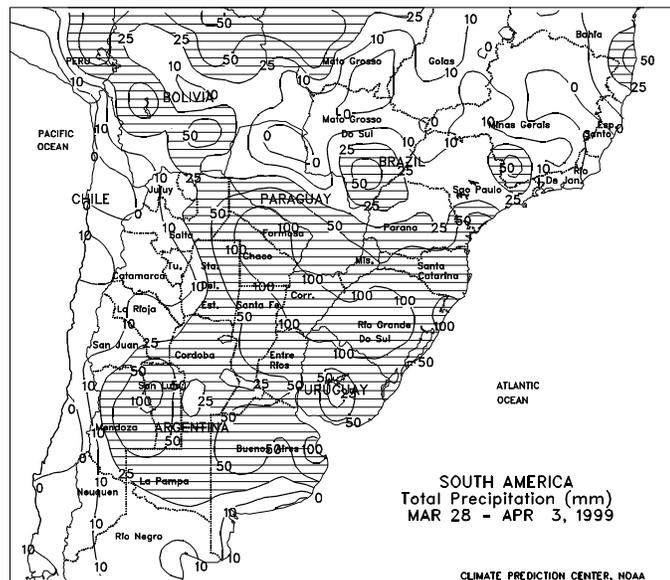
**SOUTH AFRICA**

Dry, warm weather dominated the region, aiding maturation and dry down of corn and other summer crops. At this late stage in the growing season, additional rainfall would improve wheat prospects but be of little benefit to summer crops. The dryness extended eastward through the sugarcane fields of KwaZulu-Natal, as preparations for early harvests were underway. Fieldwork in the South African sugarcane areas generally lasts from April to September. Farther south, unseasonably warm, dry weather continued over Western Cape. Highs in the middle and upper 30's degrees C maintained elevated irrigation requirements in orchards and vineyards.



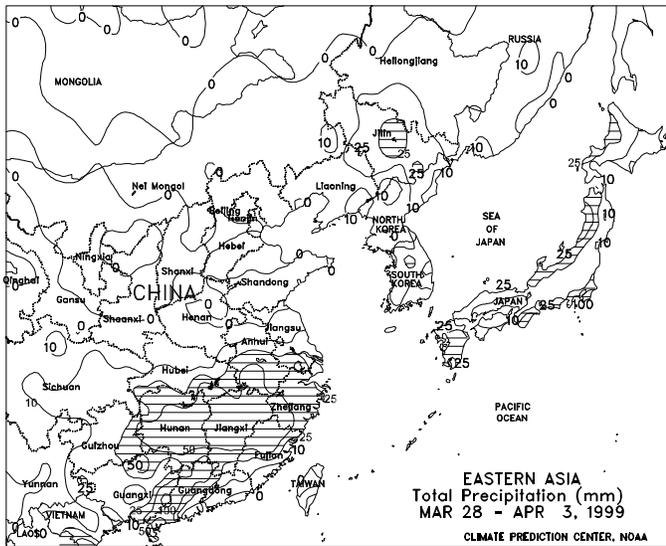
**AUSTRALIA**

Scattered showers disrupted harvesting in the cotton and sorghum areas of Queensland and New South Wales. Rainfall totaled 5 to 25 mm or greater in Queensland's northern and western crop areas, but fieldwork likely made good progress in the Darling Downs region. Heavier rainfall (25-50 mm) in the outlying summer crop areas of New South Wales delayed harvesting but boosted long-term moisture reserves for winter wheat and barley. Elsewhere in the east, heavy rain (50-100 mm or more) lingered in northern sugarcane areas, but dryness dominated Queensland's southern region. Cool, dry weather returned to the western and southeastern winter grain belts following last week's beneficial rainfall. Drier weather also returned to the main pasture and grain areas of New Zealand.



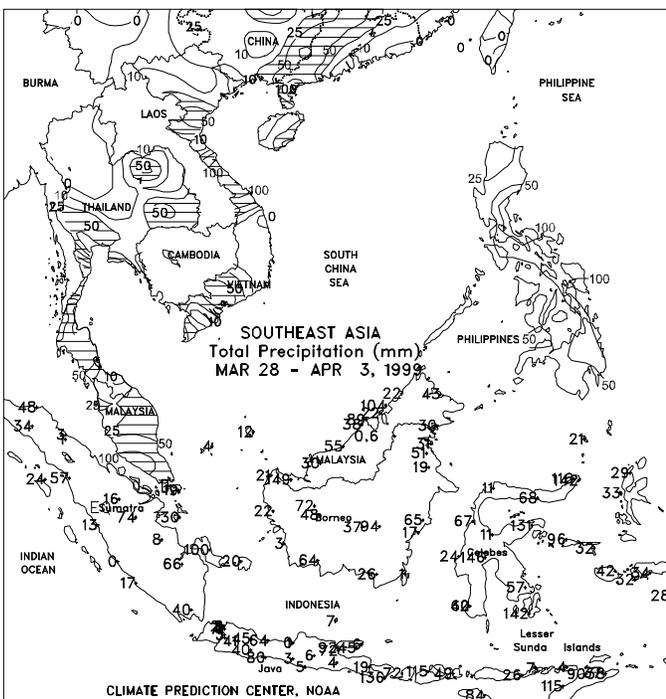
**SOUTH AMERICA**

In southern Brazil, moderate showers (30-70 mm) alleviated dryness for filling to maturing soybeans in Rio Grande do Sul. The rain also increased soil moisture for winter wheat planting, which should start in the next 4 to 5 weeks. Seasonably light showers (10-30 mm) favored soybean harvesting elsewhere in southern Brazil. In central Argentina, widespread showers (30-80 mm) continued to favor second-crop soybeans, but slowed corn and sunflower harvesting. Heavy showers (80-140 mm) delayed cotton harvesting in northern Argentina. According to reports as of March 26, corn was 16 percent harvested, compared with 22 percent last year, sunflower was 67 percent harvested, compared with 71 percent last year, and soybeans were 2 percent harvested, compared with 5 percent last year. Temperatures averaged 2 to 4 degrees C above normal in southern Brazil and 1 to 3 degrees C below normal in central Argentina.



**EASTERN ASIA**

Seasonably dry weather prevailed across the North China Plain, where vegetative winter wheat continues to develop. More moisture is needed for rainfed wheat. Temperatures averaged near normal, with minimum temperatures ranging from 0 to 4 degrees C across the region. Widespread showers (20-75 mm) covered the southern half of China, aiding early rice transplanting and reproductive oilseeds. The cloudy weather caused temperatures to average 2 to 4 degrees C below normal across interior southern China.



**SOUTHEAST ASIA**

Variable showers (10-60 mm) continued to favor second-crop rice across southern and eastern Thailand. Showers (20-64 mm) also benefited winter-spring rice in the main rice-growing regions of northern and southern Vietnam. Heavy showers (100-400 mm) delayed second-crop grain harvesting and caused flooding in the eastern Philippines, especially in eastern Luzon. Unseasonable showers (25-100 mm) boosted moisture supplies across the western Philippines. Moderate showers (25-130 mm) favored oil palm in peninsular Malaysia. In Java, Indonesia, drier weather (10-40 mm) favored main-season rice harvesting.

The *Weekly Weather and Crop Bulletin* (ISSN 0043-1974) is published weekly and jointly prepared by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Agriculture (USDA). Publication began in 1872 as the *Weekly Weather Chronicle*. It is issued under general authority of the Act of January 12, 1895 (44-USC 213), 53rd Congress, 3rd Session. NOAA is responsible for managing, printing, and distributing the bulletin. The contents may be reprinted freely, with proper credit.

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**Weather Data for Selected Locations in the Delta**

**Weather Data for the Week Ending April 3, 1999**

Data provided by the Mississippi State Delta Research and Extension Center and compiled by USDA/OCE/WAOB's Stoneville Field Office

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION								4-INCH SOIL TEMP, °F		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	TEMP. °F		PRECIP.		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
MS INDIANOLA 1S	70	55	83	41	63	--	1.79	--	1.00	6.01	--	17.46	--	62	57	0	0	5	2	
INVERNESS 5E	71	56	85	63	64	--	2.26	--	1.34	5.24	--	--	--	65	59	0	0	5	2	
LYON	70	54	84	41	62	--	1.91	--	1.10	6.29	--	17.00	--	--	--	0	0	3	1	
ONWARD	71	56	83	42	64	--	1.78	--	0.95	7.66	--	17.96	--	60	58	0	0	4	2	
SIDON	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
STONEVILLE *	65	49	75	35	57	-2	0.77	-0.42	0.47	4.01	65	19.11	125	63	54	0	0	4	0	

\* Based on 1964-93 normals.

**Weather and Crop Summary:** Seasonably warm weather prevailed over most of the Mississippi Delta. As a result, soil temperatures continued to rise as rice farmers prepared for planting. By week's end, a strong frontal system brought much-needed rainfall to the Delta, improving soil moisture for corn and winter wheat.

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