

# WEEKLY WEATHER AND CROP BULLETIN

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

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

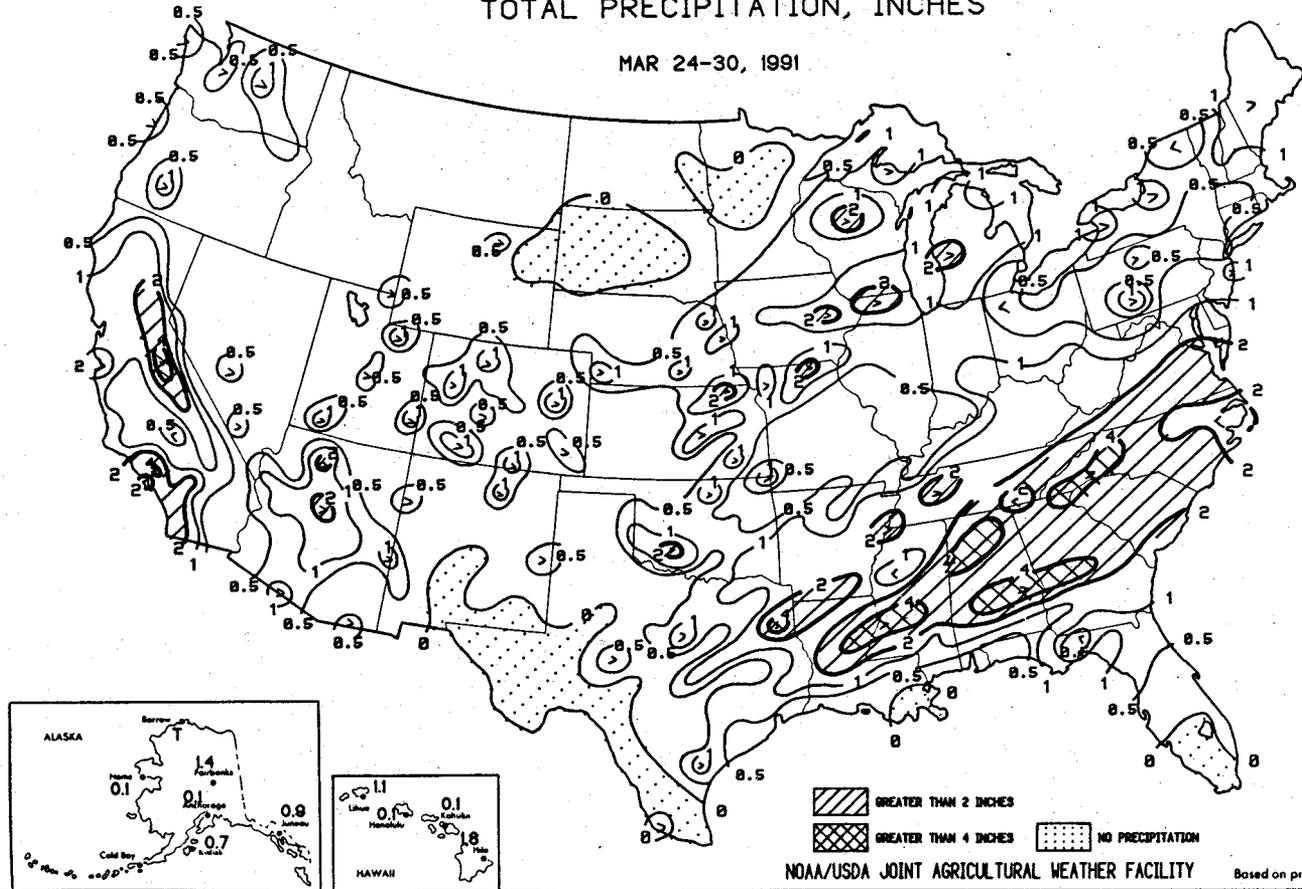
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April 2, 1991

## TOTAL PRECIPITATION, INCHES

MAR 24-30, 1991



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

## HIGHLIGHTS

March 24 - 30, 1991

For the third consecutive week, a series of spring cyclones marched across the Nation. Both coasts were stormy as the week commenced. A foot of snow blanketed central Maine and high winds buffeted the east coast. The wind whipped more than 300 fires covering 10,000 acres in the Carolinas. Meanwhile, rain, snow, and high wind besieged the West. Heavy rain pelted the lower elevations, and heavy snow piled up in most mountain locations. Snowfall included 44 inches at Kirkwood Ski Resort, CA, and about 2 feet at Mt. Charleston, NV, west of Las Vegas, and at Duck Creek Village, UT, near Cedar City. Winds frequently gusted to 50 mph or more from Idaho to New Mexico. Severe weather broke out in Kansas on Tuesday. Record warmth was rampant east of the storminess, as over 50 record highs were set from the central Plains eastward. On Wednesday, steady winds were

(Continued to back cover)

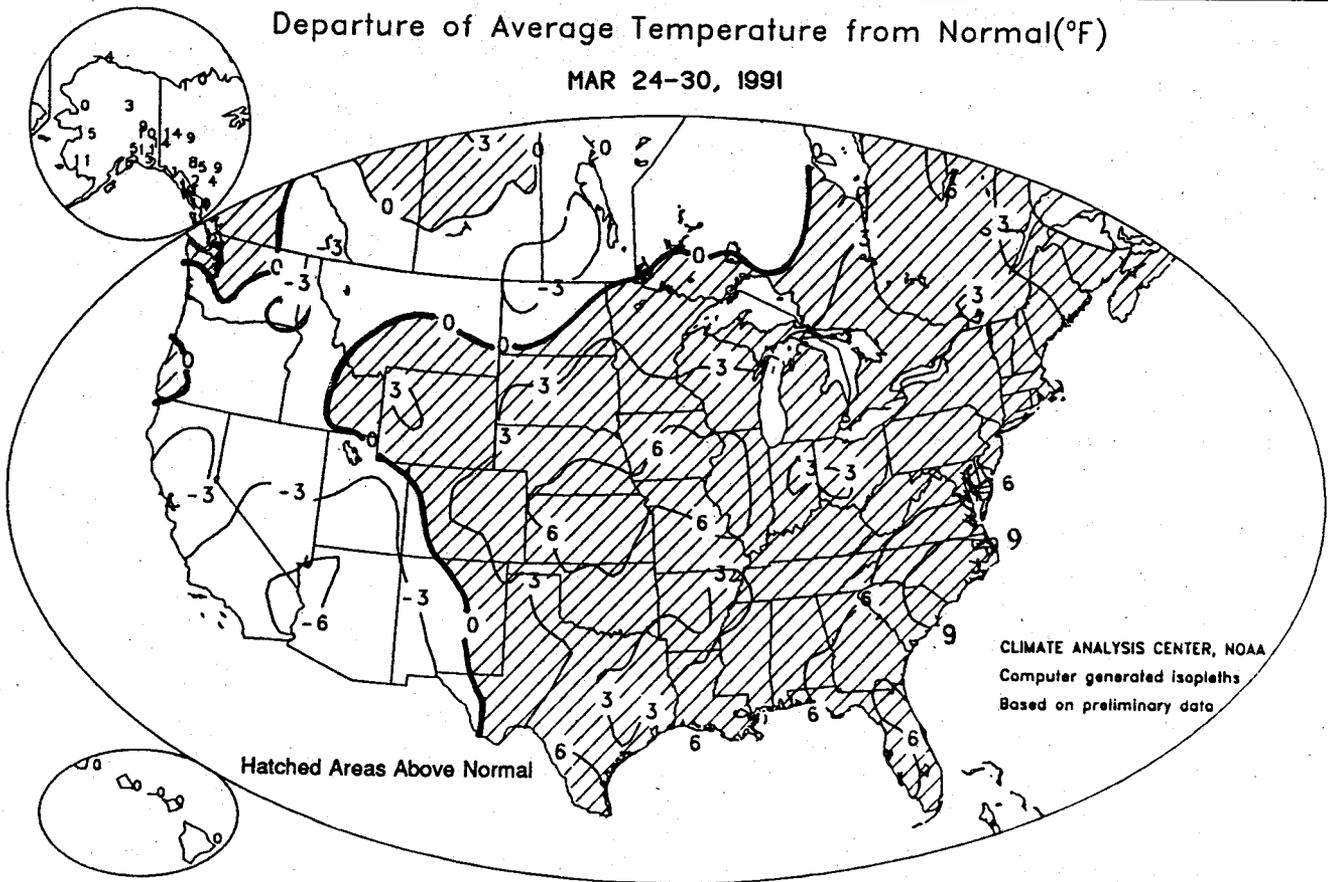
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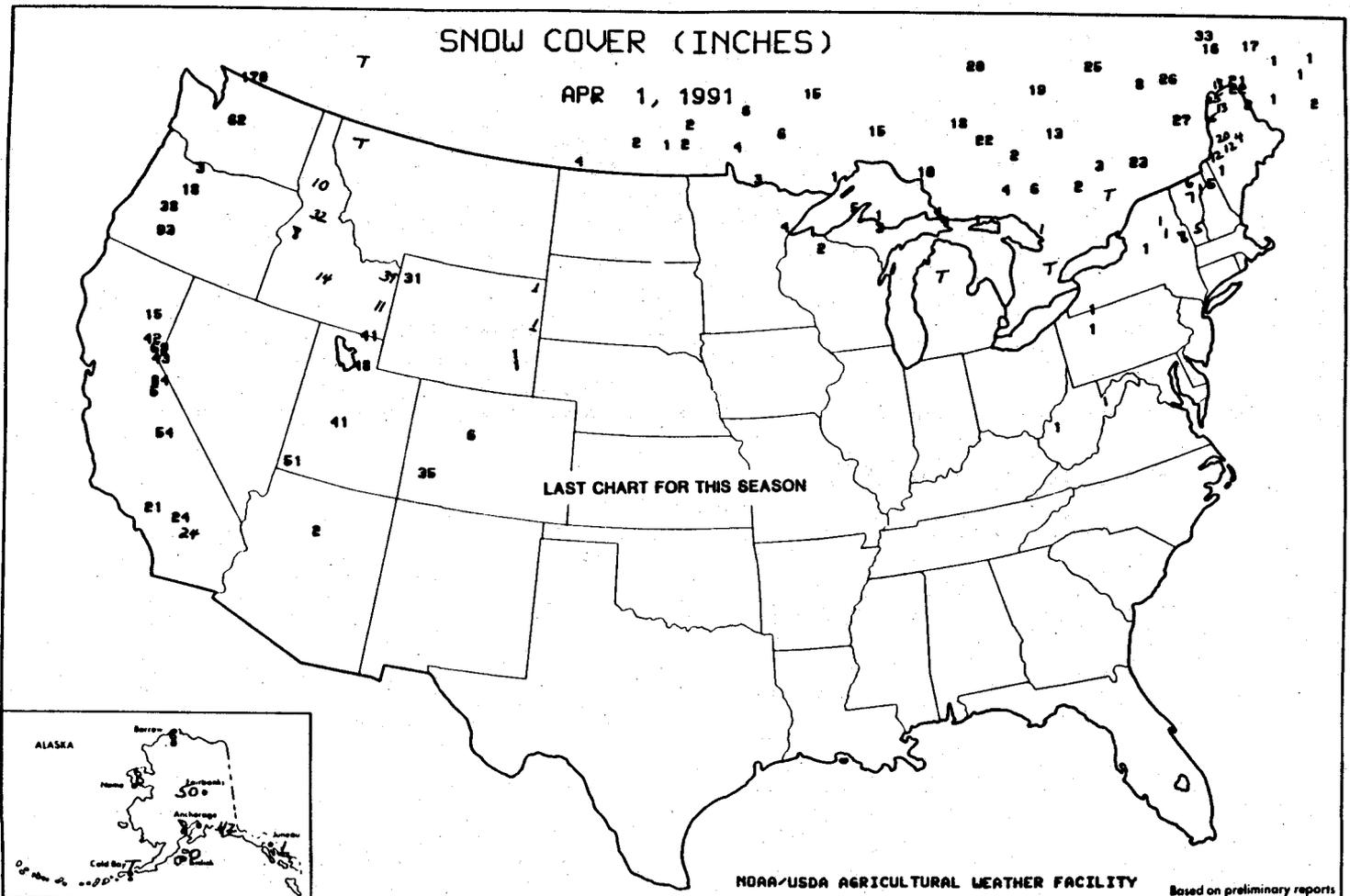
Departure of Average Temperature from Normal(°F)

MAR 24-30, 1991



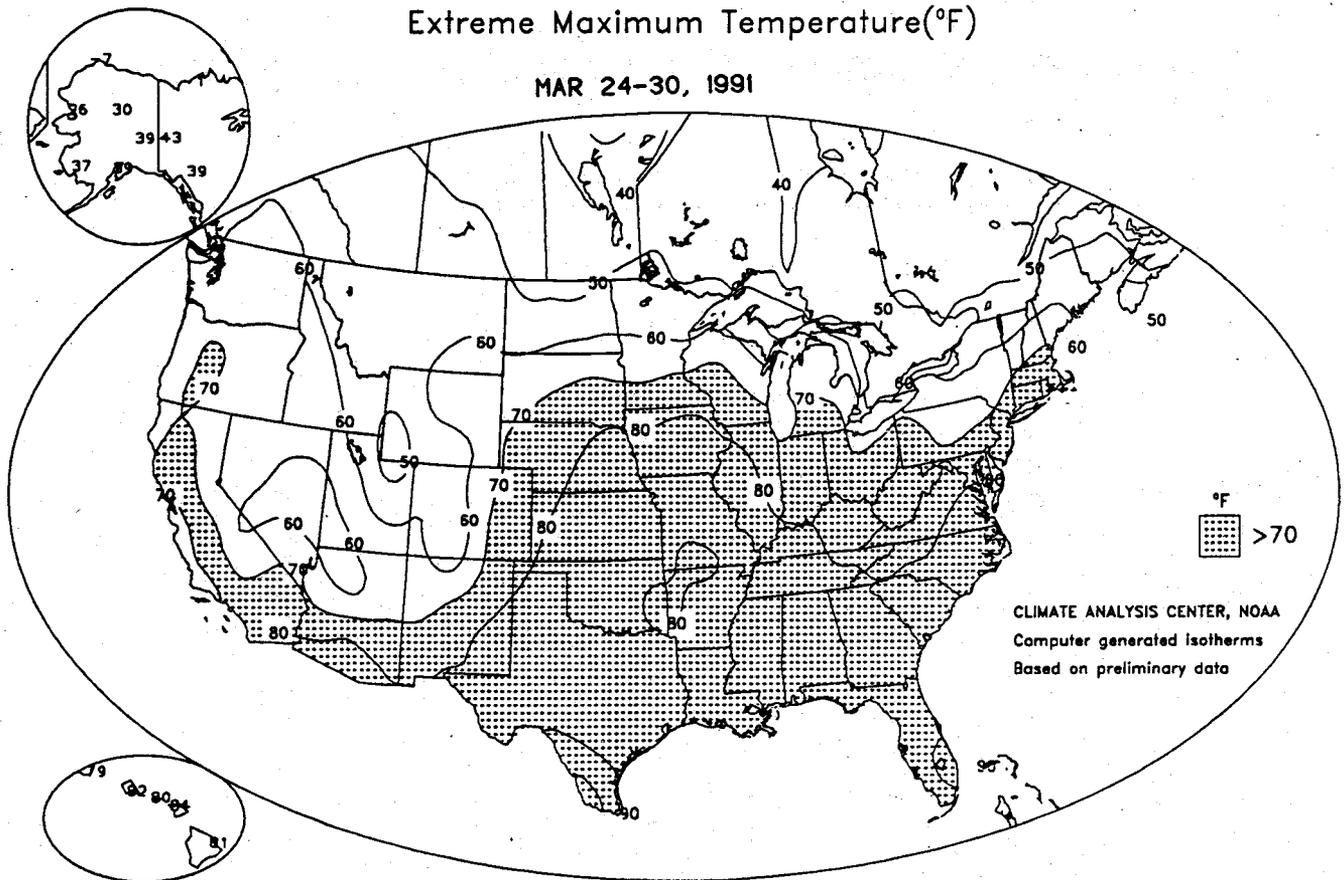
SNOW COVER (INCHES)

APR 1, 1991



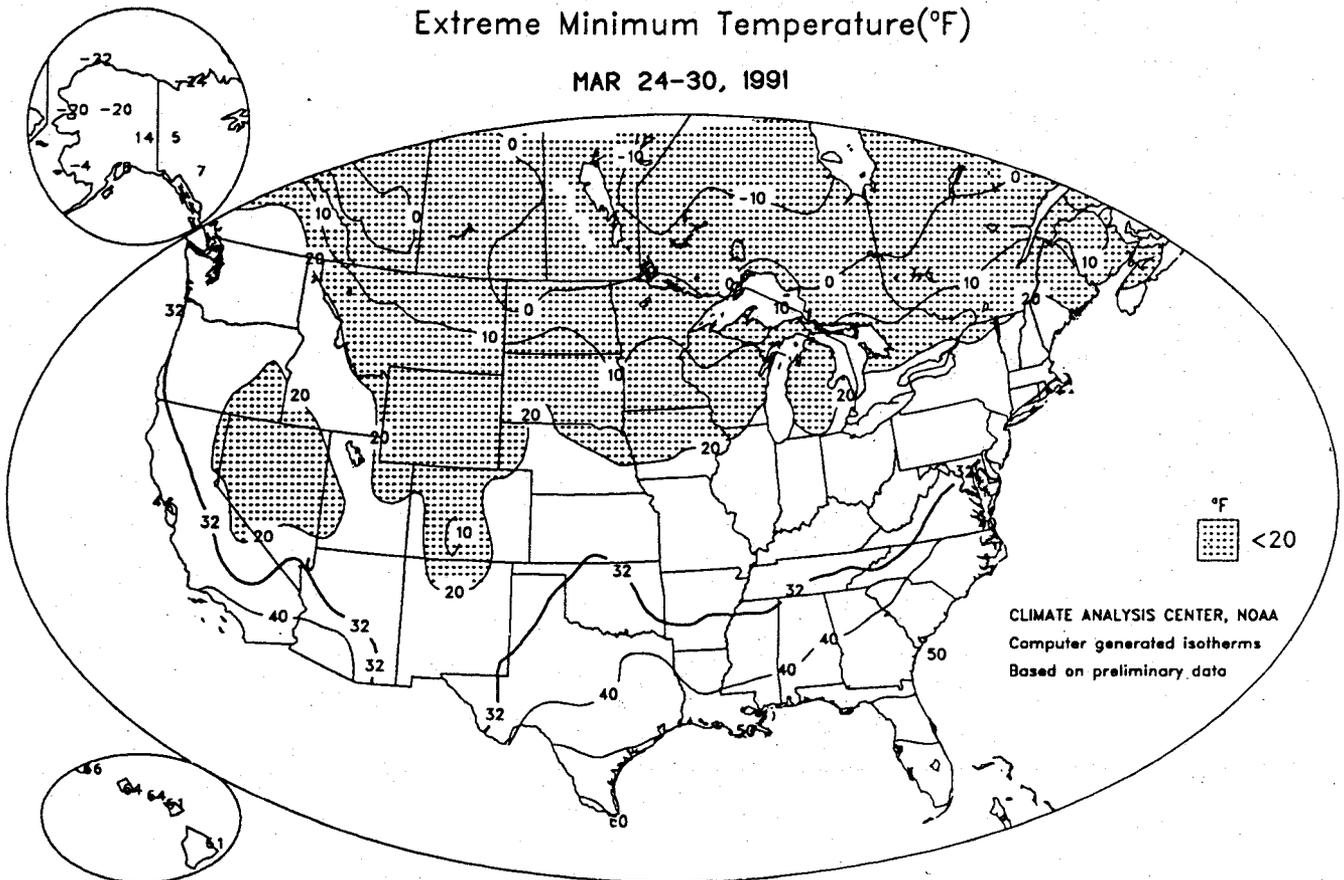
### Extreme Maximum Temperature(°F)

MAR 24-30, 1991



### Extreme Minimum Temperature(°F)

MAR 24-30, 1991



# National Weather Data for Selected Cities

Weather Data for the Week Ending March 30, 1991

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	.01 INCH OR MORE		.50 INCH OR MORE		
																		TEMP. °F	PRECIP.			
AL BIRMINGHAM	75	47	85	35	61	4	2.1	.6	1.2	5.4	84	13.0	80	86	39	0	0	2	2	0	0	
MOBILE	79	56	85	43	68	5	.1	-1.4	.1	4.8	77	24.3	154	90	42	0	0	1	1	0	0	
AK ANCHORAGE	79	50	85	42	64	4	4.0	2.7	3.7	8.4	146	19.5	135	91	39	0	0	2	2	0	0	
BARROW	38	28	42	20	33	6	.1	.0	.1	.7	103	1.7	75	99	67	0	0	7	7	0	0	
FAIRBANKS	-9	-25	-7	-32	-17	-5	T	T	T	T	17	.2	36	78	62	0	0	7	7	0	0	
JUNEAU	33	17	36	8	25	10	1.4	1.3	1.1	2.2	574	3.6	261	95	74	0	0	7	7	0	0	
KODIAK	42	31	45	22	36	3	.9	.2	.5	3.9	122	15.4	145	96	63	0	0	2	2	3	3	
NOME	45	29	53	21	37	4	.7	-1.2	.6	.7	17	21.5	147	92	51	0	0	6	6	2	2	
NOME	22	8	31	-5	15	5	.1	.0	.1	.6	106	2.1	118	90	69	0	0	7	7	0	0	
AZ PHOENIX	70	48	80	41	59	-4	1.0	.8	.5	2.1	259	3.2	156	77	29	0	0	0	0	2	2	
PRESCOTT	51	27	63	24	39	-6	1.2	.9	1.0	4.0	271	6.2	130	85	39	0	0	6	6	2	2	
TUCSON	67	41	82	35	54	-5	.3	.2	.2	1.4	209	3.5	166	83	27	0	0	0	0	3	3	
YUMA	73	51	80	45	62	-4	.2	.2	.2	.7	460	1.8	230	64	23	0	0	0	0	1	1	
AR FORT SMITH	71	45	83	29	58	4	.8	-1.1	.5	3.9	104	6.9	86	88	30	0	0	0	0	2	2	
LITTLE ROCK	68	51	83	32	60	4	1.2	.0	.6	2.8	62	11.0	90	69	42	0	0	1	1	3	3	
CA BAKERSFIELD	64	43	80	39	53	-5	.8	.6	.4	3.8	452	4.5	157	91	40	0	0	0	0	3	3	
EUREKA	55	42	62	38	48	0	.5	-6.6	.2	6.9	141	11.3	66	91	69	0	0	0	0	0	0	
FRESNO	62	45	78	40	53	-3	1.0	.7	.5	7.3	468	8.4	155	92	51	0	0	0	0	3	3	
LOS ANGELES	60	47	66	44	54	-5	1.6	1.2	.6	4.2	246	8.1	112	91	57	0	0	0	0	3	3	
REDDING	61	39	75	32	50	-6	1.4	.4	.8	9.7	201	14.6	75	91	46	0	0	1	1	3	3	
SACRAMENTO	62	41	73	34	51	-3	1.5	1.1	.9	6.2	313	9.6	109	98	55	0	0	0	0	3	3	
SAN DIEGO	62	50	75	48	56	-3	2.6	2.2	1.0	7.2	429	10.4	193	98	57	0	0	0	0	3	3	
SAN FRANCISCO	59	44	67	41	52	-2	1.1	.6	.5	6.1	238	10.1	97	92	61	0	0	0	0	3	3	
CO DENVER	58	30	70	24	44	4	.4	.1	.2	.8	66	1.6	69	69	20	0	0	6	6	0	0	
GRAND JUNCTION	54	32	65	27	43	-2	.3	.1	.3	.7	101	1.8	95	83	28	0	0	4	4	0	0	
PUEBLO	63	30	74	19	46	3	T	T	T	.7	111	.8	70	72	19	0	0	5	5	0	0	
CT BRIDGEPORT	53	40	76	34	46	5	.7	-3.3	.3	4.1	109	8.8	88	94	54	0	0	0	0	1	1	
HARTFORD	54	35	78	30	44	4	.4	-6.6	.2	4.4	111	8.6	81	93	50	0	0	1	1	3	3	
DC WASHINGTON	63	45	79	35	54	5	1.0	.3	.9	4.4	132	8.2	94	86	40	0	0	0	0	3	3	
FL APALACHICOLA	78	60	81	51	69	6	1.0	.1	1.0	11.4	289	35.5	320	96	63	0	0	0	0	1	1	
DAYTONA BEACH	83	61	90	52	72	6	.5	-2.2	.5	7.2	247	11.1	132	97	44	1	0	0	0	1	1	
JACKSONVILLE	83	59	89	46	71	6	.9	.2	.9	7.1	216	18.9	192	93	38	0	0	0	0	1	1	
KEY WEST	83	74	86	69	79	3	.0	-3.3	.0	2.8	233	5.3	108	87	65	0	0	0	0	0	0	
MIAMI	85	71	89	68	78	5	T	-5.5	T	1.8	101	5.4	93	86	52	0	0	0	0	0	0	
ORLANDO	85	64	90	58	74	6	.3	-3.3	.3	5.9	186	9.3	110	98	49	1	0	0	0	0	0	
TALLAHASSEE	82	56	89	44	69	6	.5	-7.7	.5	12.6	232	32.4	215	94	41	0	0	0	0	1	1	
TAMPA	84	66	87	60	75	7	.3	-4.4	.3	4.3	129	7.1	84	97	55	0	0	0	0	1	1	
WEST PALM BEACH	85	70	91	64	77	6	T	-6.6	T	T	T	T	84	71	0	0	0	0	1	1	0	0
GA ATLANTA	74	50	85	38	62	7	3.8	2.5	2.0	7.0	140	18.4	233	90	57	1	0	0	0	2	2	
AUGUSTA	80	52	85	39	66	8	2.1	1.0	2.1	7.0	122	14.7	98	76	37	0	0	0	0	2	2	
MACON	81	52	86	42	66	6	4.3	3.2	4.3	10.0	199	22.6	165	87	36	0	0	0	0	1	1	
SAVANNAH	81	58	85	47	69	8	1.1	.3	1.1	5.5	147	14.7	147	87	37	0	0	0	0	2	2	
HI HILO	79	65	81	61	72	0	1.8	-1.3	.8	33.4	255	46.5	129	96	64	0	0	0	0	5	2	
HONOLULU	81	68	82	64	75	0	.1	-7.7	.1	6.3	185	9.1	92	81	54	0	0	0	0	1	0	
KAHULUI	81	65	84	61	73	0	.1	-4.4	.1	2.2	82	7.1	74	90	55	0	0	0	0	1	0	
LIHUE	77	68	79	66	72	0	1.1	.1	.8	8.5	194	10.7	75	90	71	0	0	0	0	5	1	
ID BOISE	53	31	63	21	42	-2	.1	-2.2	.1	.5	50	1.9	53	81	30	0	0	3	2	0	0	
LEWISTON	54	35	66	29	45	0	.1	-1.1	.1	.9	87	1.3	40	66	37	0	0	1	3	0	0	
POCATELLO	51	26	57	21	38	4	T	-2.2	T	2.3	257	3.2	115	77	30	0	0	7	2	0	0	
IL CHICAGO	57	34	75	22	45	4	1.5	.7	1.1	4.8	186	6.9	128	87	42	0	0	3	2	1	1	
MOLINE	61	34	84	21	47	7	1.0	-2.2	.9	6.3	241	7.9	144	81	38	0	0	3	2	1	1	
PEORIA	62	35	82	23	49	7	.5	-2.2	.4	3.7	133	5.4	94	83	35	0	0	3	2	0	0	
QUINCY	64	41	82	23	52	9	.1	-7.7	.1	2.7	89	3.6	61	73	31	0	0	3	3	0	0	
ROCKFORD	57	33	78	22	45	6	2.2	1.5	1.9	4.6	187	6.2	124	83	41	0	0	3	3	1	1	
SPRINGFIELD	63	37	81	24	50	6	.2	-6.6	.1	2.6	89	4.6	75	84	36	0	0	3	2	0	0	
IN EVANSVILLE	63	40	80	28	52	3	.1	-1.0	.1	4.3	97	10.3	99	89	42	0	0	2	1	0	0	
FORT WAYNE	54	35	71	23	44	3	.7	.0	.5	2.6	92	5.7	83	86	54	0	0	3	3	0	0	
INDIANAPOLIS	58	35	72	24	46	2	1.0	.1	1.0	6.4	184	9.9	116	89	47	0	0	2	2	1	0	
SOUTH BEND	54	33	74	22	44	4	.9	.1	.5	2.8	96	6.2	85	88	46	0	0	3	3	0	0	
IA DES MOINES	63	34	87	20	49	9	.4	-2.2	.3	4.0	189	5.1	122	84	29	0	0	4	2	0	0	
SIoux CITY	57	29	81	20	43	4	1.0	.5	.9	2.0	123	2.9	90	92	41	0	0	5	2	1	0	
WATERLOO	56	30	84	18	43	6	.7	.0	.7	3.9	182	4.9	128	92	45	0	0	4	1	1	0	
KS CONCORDIA	67	36	82	23	52	8	.4	.0	.4	2.1	120	2.9	89	77	27	0	0	3	2	0	0	
DODGE CITY	67	37	85	27	52	7	.1	-3.3	.1	1.1	79	1.4	61	64	23	0	0	2	1	0	0	
GOODLAND	62	33	76	25	48	7	.4	-2.2	.3	1.1	110	1.4	85	76	30	0	0	3	2	0	0	
TOPERA	68	38	85	25	53	7	1.6	1.0	1.5	3.0	142	3.8	93	82	29	0	0	4	2	1	0	
WICHITA	68	42	81	29	55	7	.1	-5.5	.1	.7	35	1.7	49	78	28	0	0	1	1	0	0	
KY BOWLING GREEN	66	43	82	28	54	4	1.1	-2.2	.5	4.6	86	15.2	109	90	51	0	0	2	3	1	1	
LEXINGTON	62	42	74	26	52	4	1.3	-2.2	1.0	5.8	124	12.3	107	85	45	0	0	2	3	1	0	
LOUISVILLE	66	43	81	29	55	5	.2	-9.9	.2	4.8	105	11.9	106	78	38	0	0	1	3	0	0	
LA ALEXANDRIA	77	55	83	38	66	5	3.6	2.4	2.8	6.9	144	20.8	150	94	51	0	0	2	2	0	0	
BATON ROUGE	80	58	86	44	69	6	.4	-7.7	.4	3.2	72	20.7	148	90	47	0	0	0	1	0	0	
LAKE CHARLES	75	60	81	43	68	4	.3	-4.4	.3	2.4	78	19.2	175	96	56	0	0	0	0	1	0	
NEW ORLEANS	79	59	84	48	69	5	T	-1.0	T	6.3	137	30.9	210	90	50	0	0	0	0	0	0	

Based on 1951-80 normals

Weather Data for the Week Ending March 30, 1991

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.	
																			90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
SHREVEPORT	73	51	84	39	62	2	1.5	-.6	1.3	2.9	79	15.7	141	89	39	0	0	0	0	3	1		
ME CARIBOU	41	22	50	10	32	3	1.2	-.6	.6	4.7	202	7.9	116	84	48	0	0	0	0	4	1		
PORTLAND	49	32	69	27	41	5	1.0	-.1	.7	6.2	162	11.0	98	86	50	0	0	0	4	4	1		
MD BALTIMORE	61	42	77	32	51	4	1.0	-.1	.6	5.6	155	9.9	104	90	40	0	0	0	1	3	1		
SALISBURY	65	42	80	30	54	6	2.1	1.2	1.8	6.5	164	13.4	125	94	45	0	0	0	2	3	1		
MA BOSTON	52	39	79	32	45	4	.5	-.4	.3	4.3	109	9.1	79	94	52	0	0	0	1	5	0		
CHATHAM	47	37	54	31	42	3	.7	-.2	.4	4.6	118	10.0	80	95	69	0	0	0	2	5	0		
MI ALPENA	45	28	68	15	37	5	.7	-.2	.6	3.0	165	4.4	91	90	55	0	0	0	5	3	1		
DETROIT	53	36	71	22	45	5	.2	-.5	.1	1.3	54	3.7	63	83	43	0	0	0	2	4	0		
FLINT	49	33	70	19	41	4	1.6	1.1	1.4	2.9	140	5.0	100	87	54	0	0	0	3	3	1		
GRAND RAPIDS	51	31	71	19	41	3	1.5	-.8	1.0	3.5	140	5.4	91	90	54	0	0	0	5	4	1		
HOUGHTON LAKE	44	30	65	15	37	5	1.1	-.7	.8	3.3	183	5.2	112	89	57	0	0	0	4	4	1		
LANSING	50	32	69	19	41	3	1.2	-.6	1.0	3.7	158	5.7	108	93	57	0	0	0	4	4	1		
MARQUETTE	38	19	53	4	28	1	1.3	-.6	.9	3.7	136	6.4	97	92	49	0	0	0	6	5	1		
MUSKEGON	49	30	68	16	39	2	2.4	1.7	1.9	4.2	173	6.3	98	91	54	0	0	0	5	3	1		
SAULT ST. MARIE	37	24	46	6	31	2	.9	-.4	.5	3.6	184	5.7	98	93	67	0	0	0	6	5	1		
MN ALEXANDRIA	43	23	63	12	33	3	.7	-.3	.6	5.2	2.1	77	89	49	0	0	0	6	0	0	0		
DULUTH	39	20	51	7	29	1	.7	-.4	.4	1.2	69	2.3	60	87	46	0	0	0	7	2	0		
INT'L FALLS	39	17	50	4	28	1	-.1	-.2	-.1	1.1	104	2.8	108	91	42	0	0	0	6	3	0		
MINNEAPOLIS	50	26	74	17	38	3	.5	-.1	.4	2.3	140	3.8	117	83	42	0	0	0	5	2	0		
ROCHESTER	48	27	73	13	37	3	.6	-.1	.5	2.9	170	4.0	124	89	57	0	0	0	6	4	0		
MS GREENWOOD	73	49	86	34	61	3	.9	-.6	.6	3.9	64	16.8	107	91	45	0	0	0	0	3	1		
JACKSON	78	51	87	36	64	5	4.8	3.5	3.8	7.5	139	17.8	122	94	47	0	0	0	0	3	2		
MERIDIAN	78	51	87	37	65	6	2.4	-.9	1.7	6.5	101	19.7	123	90	42	0	0	0	0	2	2		
MO CAPE GIRARDEAU	66	44	81	29	55	1	-.1	-1.1	.1	3.2	65	9.3	86	81	35	0	0	0	1	1	0		
COLUMBIA	66	39	84	22	52	6	.2	-.7	.2	2.1	67	3.8	56	73	28	0	0	0	3	1	0		
KANSAS CITY	66	37	85	22	52	5	.5	-.2	.5	2.4	93	3.9	79	77	29	0	0	0	4	2	0		
SAINT LOUIS	68	43	87	28	56	8	.7	-.8	.7	3.2	102	5.7	82	66	26	0	0	0	2	1	0		
SPRINGFIELD	66	38	79	22	52	4	.1	-.7	-.1	1.1	34	5.1	72	76	29	0	0	0	3	1	0		
MT BILLINGS	49	28	58	18	39	2	-.1	-.2	-.1	.6	64	1.9	74	77	36	0	0	0	6	2	0		
GLASGOW	41	20	57	2	31	-2	-.4	-.3	-.2	.6	197	1.1	117	92	57	0	0	0	7	5	0		
GREAT FALLS	43	22	58	10	33	-2	-.3	-.0	-.1	1.2	141	2.1	81	87	48	0	0	0	7	4	0		
HAYDEN	43	22	60	2	32	-1	-.1	-.1	-.0	.3	61	.8	52	90	53	0	0	0	7	2	0		
HELENA	43	24	59	14	34	-1	-.4	-.2	-.2	.9	130	1.2	66	84	45	0	0	0	6	3	0		
KALISPELL	42	25	52	19	34	-2	-.2	-.2	-.2	.8	98	3.0	86	88	47	0	0	0	7	1	0		
MILES CITY	47	26	61	14	37	1	.1	-.2	-.1	1	23	1.1	65	91	45	0	0	0	6	2	0		
MISSOULA	44	26	57	18	35	-2	-.2	-.0	-.1	1.2	156	2.1	69	86	45	0	0	0	6	3	0		
NE GRAND ISLAND	62	30	81	23	46	6	.5	-.1	.5	1.8	122	2.4	86	85	34	0	0	0	5	2	1		
LINCOLN	65	31	85	19	48	7	.6	-.1	.3	2.6	139	3.6	103	88	33	0	0	0	5	2	0		
NORFOLK	59	27	83	19	43	5	.6	-.2	.6	1.9	133	3.3	119	91	38	0	0	0	5	2	1		
NORTH PLATTE	61	27	78	22	44	4	.3	-.0	.1	.9	84	1.4	73	93	28	0	0	0	6	3	0		
OMAHA	51	33	83	21	47	5	.9	-.4	.6	4.2	234	5.6	164	78	45	0	0	0	4	2	1		
SCOTTSBLUFF	59	23	74	11	41	4	.1	-.1	-.1	.5	49	1.3	74	84	21	0	0	0	7	2	0		
VALENTINE	58	25	75	19	41	4	-.1	-.2	-.1	1.7	211	2.4	153	89	28	0	0	0	7	1	0		
NV ELY	47	21	57	15	34	-2	-.2	-.1	-.1	1.7	198	2.0	88	87	37	0	0	0	7	2	0		
LAS VEGAS	64	43	72	36	53	-5	-.4	-.3	.4	1.0	259	1.8	135	70	23	0	0	0	0	1	0		
RENO	52	28	65	21	40	-2	.2	-.0	-.1	1.4	203	1.6	57	86	32	0	0	0	6	3	0		
WINNEMUCCA	53	24	63	17	39	-2	.1	-.1	-.1	1.1	182	1.8	85	82	26	0	0	0	5	1	0		
NH CONCORD	48	30	69	26	39	3	.6	-.1	.3	2.9	103	6.2	77	96	52	0	0	0	6	4	0		
NJ ATLANTIC CITY	60	38	79	26	49	4	.7	-.2	.5	5.5	141	11.9	111	96	50	0	0	0	2	4	0		
NM ALBUQUERQUE	61	34	72	24	48	-2	-.1	-.0	-.1	.7	147	1.4	111	62	18	0	0	0	3	4	0		
CLOVIS	66	39	80	29	52	3	.4	-.3	.3	.4	81	1.1	77	71	30	0	0	0	1	2	0		
ROSWELL	70	40	82	32	55	1	.7	-.1	.7	.5	.6	.6	48	16	0	0	0	2	1	0	0		
NY ALBANY	51	34	66	27	43	5	.4	-.3	.2	2.5	88	6.4	85	90	52	0	0	0	2	4	0		
BINGHAMTON	47	32	61	19	40	4	.7	-.0	.4	3.4	122	7.7	101	91	55	0	0	0	2	4	0		
BUFFALO	52	35	70	26	44	6	1.6	-.9	1.0	6.0	209	10.1	123	88	52	0	0	0	2	4	1		
NEW YORK	56	41	75	34	49	4	.4	-.5	.2	3.7	94	8.7	86	92	45	0	0	0	0	4	0		
ROCHESTER	49	36	63	25	43	5	.8	-.2	.6	3.9	159	6.7	95	88	54	0	0	0	2	4	1		
SYRACUSE	50	35	64	24	43	5	1.2	-.5	.7	4.1	135	8.0	98	86	52	0	0	0	2	4	1		
NC ASHEVILLE	67	45	76	32	56	6	4.0	2.9	3.7	6.2	134	11.1	101	85	41	0	0	0	1	2	1		
CHARLOTTE	74	52	82	41	63	9	2.3	1.2	2.2	7.2	154	14.6	119	78	38	0	0	0	0	2	1		
GREENSBORO	72	50	79	36	61	9	3.7	2.8	3.6	7.8	207	13.4	127	77	39	0	0	0	0	2	1		
HATTERAS	70	57	75	48	64	10	1.5	-.6	1.3	6.6	172	20.1	158	89	59	0	0	0	0	2	1		
NEW BERN	77	55	82	45	66	10	.4	-.4	.3	3.2	90	12.4	108	92	46	0	0	0	0	2	0		
RALEIGH	76	52	84	43	64	11	1.2	-.4	1.2	4.6	129	9.4	90	85	38	0	0	0	0	1	1		
WILMINGTON	77	56	83	46	66	9	2.7	1.9	2.0	6.5	166	18.4	167	94	48	0	0	0	0	3	2		
ND BISMARCK	43	20	58	13	32	0	-.1	-.1	-.0	.6	95	1.0	65	92	47	0	0	0	7	3	0		
FARGO	46	20	58	8	33	3	.7	-.3	.7	1.0	126	2.5	149	84	43	0	0	0	7	0	0		
GRAND FORKS	43	20	57	7	31	3	.7	-.2	.7	.4	53	1.5	74	86	39	0	0	0	7	2	0		
WILLISTON	39	18	56	-4	29	-2	-.2	-.1	-.1	.4	85	1.0	67	91	57	0	0	0	6	3	0		
OH AKRON-CANTON	55	38	72	26	47	6	.3	-.5	-.1	2.5	78	6.9	88	82	46	0	0	0	2	3	0		
CINCINNATI	59	39	71	28	49	3	1.2	-.3	1.0	6.2	163	13.0	135	84	44	0	0	0	1	2	1		
CLEVELAND	53	38	75	25	45	5	.8	-.1	.6	3.6	126	8.1	108	81	49	0	0	0	2	3	1		
COLUMBUS	56	39	72	26	48	3	.5	-.2	.4	4.0	128	8.2	103	83	46	0	0	0	2	3	0		

Based on 1951-80 normals

Weather Data for the Week Ending March 30, 1991

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.	
																		.01 INCH OR MORE	.50 INCH OR MORE	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	55	37	71	25	46	2	.9	.1	.5	5.2	177	10.3	136	85	52	0	2	2	3	1	0
TOLEDO	53	35	72	21	44	4	.3	-.3	1.4	56	4.2	67	83	46	0	3	3	2	4	0	0
YOUNGSTOWN	54	35	74	22	44	5	.3	-.6	2.5	79	6.1	76	86	50	0	4	4	0	0	0	0
OK OKLAHOMA CITY	70	48	79	35	59	6	.6	-.0	1.6	80	2.5	59	79	34	0	0	0	0	0	0	0
TULSA	72	47	82	32	59	6	.3	-.5	1.0	34	2.9	47	78	29	0	0	0	0	0	0	0
OR ASTORIA	52	33	63	29	43	2	1.1	-1.5	0.0	81	21.0	82	97	61	0	0	0	0	0	0	0
BURNS	49	26	60	22	37	1	1.1	-.1	.7	79	1.8	51	88	40	0	0	0	0	0	0	0
MEDFORD	61	35	78	31	48	1	1.1	-.3	2.4	136	5.7	78	91	37	0	0	0	0	0	0	0
PENDLETON	59	33	69	29	43	3	2.2	-.0	1.0	97	2.6	67	82	40	0	0	0	0	0	0	0
PORTLAND	53	37	71	34	48	1	1.1	-.5	4.7	134	10.9	80	89	41	0	0	0	0	0	0	0
SALEM	58	34	68	30	46	0	1.3	-.6	5.2	124	11.3	72	94	45	0	0	0	0	0	0	0
PA ALLENTOWN	54	36	72	29	45	3	1.6	-.3	3.8	101	7.7	76	96	51	0	0	0	0	0	0	0
ERIE	52	35	76	25	43	6	1.9	-.2	3.3	120	7.1	98	89	53	0	0	0	0	0	0	0
HARRISBURG	55	39	71	29	47	2	1.6	-.2	3.5	103	7.4	82	90	47	0	0	0	0	0	0	0
PHILADELPHIA	59	42	77	33	51	5	1.8	-.1	4.2	111	9.0	93	91	45	0	0	0	0	0	0	0
PITTSBURGH	57	37	75	26	47	4	1.3	-.6	2.9	85	7.4	85	86	41	0	0	0	0	0	0	0
SCRANTON	53	37	66	27	45	5	1.4	-.2	2.9	115	5.8	85	87	48	0	0	0	0	0	0	0
RI PROVIDENCE	53	37	79	33	45	4	1.8	-.2	4.1	6.6	161	12.4	104	97	52	0	0	0	0	0	0
SC CHARLESTON	78	58	83	49	68	9	1.4	.5	4.7	110	13.4	123	94	47	0	0	0	0	0	0	0
COLUMBIA	79	53	86	41	66	8	3.4	2.3	3.2	7.6	151	14.9	112	88	34	0	0	0	0	0	0
FLORENCE	78	56	84	46	67	9	2.5	1.6	2.5	6.2	154	12.8	117	81	35	0	0	0	0	0	0
GREENVILLE	71	48	81	38	60	5	2.6	1.3	2.3	5.9	101	12.8	89	80	41	0	0	0	0	0	0
SD ABERDEEN	50	24	68	14	37	4	1.1	-.2	1.1	.7	76	1.5	75	83	37	0	0	0	0	0	0
HURON	54	24	74	14	39	4	1.1	-.3	.6	53	1.6	71	81	31	0	0	0	0	0	0	0
RAPID CITY	56	26	67	21	41	5	1.1	-.3	.6	66	1.7	88	80	30	0	0	0	0	0	0	0
SIoux FALLS	54	25	77	12	39	4	1.2	-.3	.8	51	1.4	46	91	34	0	0	0	0	0	0	0
TN CHATTANOOGA	72	46	84	37	59	6	1.5	-.1	1.0	6.6	108	17.4	109	89	36	0	0	0	0	0	0
KNOXVILLE	68	46	81	32	57	4	2.6	1.4	1.7	6.4	120	15.9	113	80	38	0	0	0	0	0	0
MEMPHIS	69	48	83	31	58	3	2.1	-.8	1.1	3.7	71	13.1	93	82	43	0	0	0	0	0	0
NASHVILLE	69	46	85	30	57	5	1.9	-.7	1.2	4.3	79	12.6	91	82	40	0	0	0	0	0	0
TX ABILENE	73	51	85	36	62	3	1.1	-.3	1.1	.5	49	3.4	112	75	31	0	0	0	0	0	0
AMARILLO	66	39	86	29	52	3	1.3	-.1	2.2	4	51	1.3	69	66	25	0	0	0	0	0	0
AUSTIN	76	57	81	44	67	3	1.2	-.3	2.2	.9	56	13.1	232	85	37	0	0	0	0	0	0
BEAUMONT	77	61	83	46	69	6	1.2	-.5	2.2	2.4	83	21.8	194	96	55	0	0	0	0	0	0
BROWNSVILLE	85	68	90	55	77	6	1.1	-.1	1.1	4	3.0	94	91	48	1	0	0	0	0	0	0
CORPUS CHRISTI	82	64	90	55	73	4	1.2	-.0	2.2	1.6	209	5.4	140	93	53	1	0	0	0	0	0
DEL RIO	83	59	88	49	71	5	1.1	-.2	1.1	5	1.4	68	57	23	0	0	0	0	0	0	0
EL PASO	70	40	81	29	55	-3	1.0	-.1	0.0	1.1	33	1.6	142	57	18	0	0	0	0	0	0
FORT WORTH	72	52	83	39	62	3	1.9	-.3	1.3	59	6.7	114	85	40	0	0	0	0	0	0	0
GALVESTON	73	63	79	52	68	4	1.1	-.4	1.1	1.2	60	18.3	248	93	62	0	0	0	0	0	0
HOUSTON	77	58	84	47	68	3	1.7	-.1	1.8	69	17.3	186	95	46	0	0	0	0	0	0	0
LUBBOCK	71	42	86	32	57	3	1.1	-.2	1.0	1	9	1.8	101	69	21	0	0	0	0	0	0
MIDLAND	73	44	87	33	59	1	1.6	-.1	1.1	0	2.0	143	69	20	0	0	0	0	0	0	0
SAN ANGELO	75	49	86	37	62	1	1.4	-.4	1.4	.6	85	3.0	135	77	31	0	0	0	0	0	0
SAN ANTONIO	80	57	86	43	69	4	1.3	-.0	1.1	84	8.5	184	84	36	0	0	0	0	0	0	0
VICTORIA	79	60	85	49	70	3	1.3	-.0	1.3	3.1	245	14.0	260	93	53	0	0	0	0	0	0
WACO	73	52	83	38	62	1	1.2	-.3	1.1	.9	49	5.5	99	89	41	0	0	0	0	0	0
WICHITA FALLS	73	47	83	36	60	3	1.1	-.4	1.1	.7	40	3.4	93	85	31	0	0	0	0	0	0
UT CEDAR CITY	47	26	57	21	36	-5	1.1	-.4	1.1	.6	58	1.7	69	85	39	0	0	0	0	0	0
SALT LAKE CITY	53	33	60	28	43	0	1.4	-.1	1.2	.6	58	1.7	69	85	39	0	0	0	0	0	0
VT BURLINGTON	45	32	58	20	38	4	1.4	-.2	1.1	1.1	68	2.8	66	77	32	0	0	0	0	0	0
VA NORFOLK	72	51	85	41	62	10	2.0	1.2	2.0	4.7	127	10.3	96	83	44	0	0	0	0	0	0
RICHMOND	70	45	83	34	57	6	2.9	2.2	2.8	5.9	170	10.6	108	94	48	0	0	0	0	0	0
ROANOKE	66	45	75	29	55	6	2.5	1.7	1.7	7.6	212	13.2	138	83	34	0	0	0	0	0	0
WA QUILLAYUTE	52	35	62	30	44	0	.5	-1.9	.3	6.9	59	36.2	95	96	56	0	0	0	0	0	0
SEATTLE-TACOMA	53	38	65	32	46	0	.4	-.4	.4	4.7	136	13.9	101	89	49	0	0	0	0	0	0
SPOKANE	49	29	60	25	39	-1	1.2	-.1	1.1	2.3	176	4.9	91	89	43	0	0	0	0	0	0
YAKIMA	54	31	67	25	43	-1	1.2	-.1	1.2	1.2	197	1.7	64	91	45	0	0	0	0	0	0
WV BECKLEY	59	40	73	19	49	5	1.8	-.9	1.0	6.6	171	13.2	127	81	37	0	0	0	0	0	0
CHARLESTON	62	41	83	26	52	3	1.5	-.6	1.1	6.0	156	11.6	112	75	35	0	0	0	0	0	0
HUNTINGTON	62	43	81	28	52	3	1.7	-.8	1.0	7.7	198	13.4	135	79	37	0	0	0	0	0	0
PARKERSBURG	60	41	77	28	50	3	1.1	-.3	.4	4.8	138	10.2	115	82	40	0	0	0	0	0	0
WI GREEN BAY	48	28	66	16	38	4	1.6	-.1	1.6	2.8	157	3.8	95	88	50	0	0	0	0	0	0
LACROSSE	51	31	77	18	41	5	1.4	-.1	1.2	2.2	123	3.6	100	82	43	0	0	0	0	0	0
MADISON	54	29	73	15	42	5	1.5	1.0	1.1	4.2	206	5.8	140	89	43	0	0	0	0	0	0
MILWAUKEE	52	32	70	23	42	6	1.9	1.2	.9	4.0	161	5.9	109	90	48	0	0	0	0	0	0
WAUSAU	47	24	69	13	36	3	2.2	1.7	1.0	4.3	236	5.6	151	96	52	0	0	0	0	0	0
WY CASPER	51	23	62	17	37	2	1.1	-.2	1.1	.5	48	1.4	70	78	22	0	0	0	0	0	0
CHEYENNE	51	24	64	18	38	3	1.1	-.2	1.0	.4	46	.9	54	69	21	0	0	0	0	0	0
LANDER	52	27	57	23	39	4	1.2	-.2	1.1	.4	42	1.6	73	71	21	0	0	0	0	0	0
SHERIDAN	49	24	61	14	37	2	1.2	-.1	1.0	101	2.5	98	90	41	0	0	0	0	0	0	0

Based on 1951-80 normals

## National Agricultural Summary

March 25 - 31, 1991

**HIGHLIGHTS:** Wet weather continued to dominate the **West Coast** and the **States east of the Mississippi River**. Spring field preparation and planting were slowed in these areas due to the wet conditions and cool weather. **The Plains** and **Mountain States** remained mostly dry. The winter wheat crop was in mostly good to fair condition. Winter wheat began greening as far north as **Montana** and **North Dakota**. Winter wheat continued to head in **Arizona** and began to head in **Texas**.

**SMALL GRAINS:** Winter wheat in Alabama was 15 percent (%) headed, 3 points behind the 5-year average. Kansas winter wheat was in mostly good to fair condition. Jointing began in the south and central areas. In Arkansas, septoria leaf spot was reported in some wheat fields. Texas winter wheat was 2% headed, 2 points behind normal. Washington wheat was in mostly very poor to poor condition. Montana winter wheat was green and growing, but eastern counties were critically dry. Winter wheat in Nebraska was in mostly fair condition. Army cutworms and crown rot affected some fields. Arizona small grains were in good to excellent condition with 22% headed, 29 points behind normal. Oklahoma winter wheat was in mostly fair condition, with light to moderate insect activity.

**OTHER FIELD CROPS:** Corn in Alabama was 44% planted, 1 point behind normal. Georgia corn was 49% planted, 8 points behind normal. Tobacco was 30% transplanted, 10 points behind normal. Cotton planting in Texas was 7% complete, 2 points behind normal. Rice planting continued in areas of Arkansas. Kentucky had considerable soil erosion from heavy winter rains. Tobacco beds were 60% seeded, 10 points behind normal. Tennessee tobacco was 80% seeded, 1 point behind normal, with 24% of the crop emerged. South Carolina tobacco was in fair to good condition, with 3% planted, 3 points behind normal. Corn was fair to good, with 25% planted. Colorado sugarbeets were 35% planted. Sugarbeet planting began in Nebraska. New England and New York maple sap production was good. Arizona cotton was 6% planted, 24 points behind normal. Cool weather and rain showers delayed cotton planting. Virginia potato planting continued and corn planting began. Mississippi corn was 22% emerged, 12 points ahead of last year. Idaho potatoes were 1% planted, 1 point ahead of normal. Louisiana rice and corn planting continued, with 7% and 33% emerged, respectively. Blackbirds continued to be a problem, causing some rice fields to be replanted. Top soil moisture in North Dakota was short to very short. Seeding of corn and cotton in California were delayed due to wet weather.

**FRUIT AND NUTS:** Freeze damage was reported in some peach and pear orchards in Arkansas. Florida citrus trees were in very good condition. Tangelo and tangerine harvests were about complete. Georgia apples and peaches were in mostly good to excellent condition with 34% and 89% of the trees blooming, respectively. Eight percent of the Tennessee apple trees were blooming, 13 points behind normal. Arizona Valencia orange and grapefruit harvests continued. Virginia apple and peach crops were in mostly good condition. Washington fruit and cranberry trees were beginning to bloom. California citrus picking was active in the southern areas. Grapevines, kiwifruit, and walnut trees began budding.

**VEGETABLES:** The Irish potato crop in North Carolina was in mostly good condition with 82% planted. Seventy percent of the cabbage crop was transplanted. Harvest and shipping of cauliflower, head, romaine, spring, and leaf lettuce continued in Arizona. California asparagus harvest and most vegetable planting were slowed due to rain and cool weather. Broccoli and cauliflower were in light supply and variable quality. Iceberg lettuce harvest began. Florida winter vegetable crop harvests continued. Spring vegetable planting was almost finished. New Mexico lettuce and onions were in generally fair to good condition. Texas Rio Grande Valley onion and cole crops harvests continued, with high yield expectations. The San Antonio Winter Garden asparagus harvest continued as market conditions improved.

**PASTURES AND LIVESTOCK:** Pastures and livestock were in mostly good to fair condition. Pastures on the west coast and the East continue to benefit from frequent moisture. Some pastures in California had water erosion due to lack of grass. However, pastures in eastern Montana and North Dakota were extremely dry. Calving, lambing, and sheep shearing continued in most States.

## State Summaries of Weather and Agriculture

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

**ALABAMA:** Warm, dry weather occurred through mid week. Late week rainfall 2.00 to 5.00 in., 3.00 to 6.00 in. isolated areas, 1.00 in. or less south. Temperatures 1 to 3° above normal, 3 to 5° above normal south. Days suitable for fieldwork 5.3. Soil moisture 5% short, 58% adequate, 37% surplus. Acreage intended for spring planting 52% prepared, 35% 1990, 46% avg. Fieldwork progress 23% behind, 75% on schedule, 2 percent ahead. Corn 44% planted, 43% 1990, 45% avg. Winter wheat 15% headed, 29% 1990, 18% avg.; 12% fair, 88% good. Feed supplies from pastures 29% short, 68% adequate, 3% surplus. Pastures 7% poor, 30% fair, 58% good, 5% excellent. Livestock 21% fair, 76% good, 3% excellent. Primary activities: Land preparation; planting corn, spring vegetables; applying fertilizer, lime, herbicides; marketing livestock; stocking ponds; general care of livestock, poultry, catfish.

**ARIZONA:** Warming trend 24th; colder, rainy 25th to 28th; rain deserts, snow higher elevations; sunny, warmer 29th, 30th. Temperatures 4 to 9° below normal. Extremes 35°; 82° deserts, 13°; 79° higher elevations. Rainfall 0.09 in. southeast to 2.28 in. north. Cotton 6% planted, 26% 1990, 30% avg.; cool weather, rain showers statewide delayed planting; final seedbed preparation, pre irrigation, planting continued. Small grains progressed slow due to colder, wetter weather; jointing 82%, 98% 1990, 95% avg.; heading 22%, 46% 1990, 51% avg.; small grains 80% good, 20% excellent. Alfalfa condition good; weed infestations light to moderate; alfalfa weevils, aphids active, damage moderate to heavy; harvest light to moderate; first cutting progress slow. Valencia oranges, grapefruit harvested west, central. Harvest, shipping of head, romaine, leaf lettuce, cauliflower, spring lettuce continued; mixed vegetables harvested west, central. Cattle, calves fair to good; northern stockwater supplies, soil moisture adequate, cold soils limited spring grass growth; soil moisture, stockwater adequate, ranges supplying below average to average feed central; ranges supplying average to above average feed, soil moisture, stockwater supplies mostly adequate southeast; insect damage minimal statewide.

**ARKANSAS:** Temperatures near normal. Scattered showers middle of week, heaviest south. Extremes 20°; 85°. Rainfall 0.09 to 2.82 in. Field preparation for rice, cotton nearing completion, rice planting in some areas. Freeze damage reported to peach, pear orchards, some areas reported substantial damage. Septoria leaf spot in some wheat fields across State. Soil borne virus northeast. Pastures improving. Livestock good.

**CALIFORNIA:** Rain continued from prior week. Cool temperatures prevailed over much State, resulting from persistent cold low pressure trough. Between storm systems, light frost many valley locations. Los Angeles basin, central valleys several reports funnel clouds, few small tornadoes, small hail. By weekend, high pressure began building, bringing warm drying conditions. Rain, wet soils delayed field activities. Small grain growth good, slow due cool weather. Low areas yellowing, excessive moisture. Weed

controls as conditions allowed. Seeding cotton, corn, other crops delayed central, northern areas. Cotton seeding continued southern areas. Alfalfa weed, weevil controls applied, weather permitting. Alfalfa harvest continued desert, spotty other southern areas. Newly seeded sugarbeet germination good. Overwintered sugarbeet harvest interrupted. Wet conditions slowed cultural activities. Scattered hail damage, uprooted trees in central valley almonds, stonefruit. Cool, wet weather hampered bee activity in prunes, plums. Grapes, kiwifruit, walnuts began budding. Fungicide spraying, weed control continued. Citrus picking active, southern California. Asparagus harvest continued slow, due rain, cool temperatures. Broccoli, cauliflower light supply, variable quality. Horseradish harvest Tulelake area. Iceberg lettuce harvest began Kern area. Winter potato harvest continued Hemet San Jacinto area. Harvest most areas slowed by rain. Planting most vegetables delayed, wet conditions. Recent precipitation improved pastures statewide. Conditions fair to good most areas, poor to fair condition southern areas. Water supplies improved. Ponds, reservoirs filling due to runoff. Some water caused erosion lower foothills due lack of grass.

**COLORADO:** Snow in the mountains late 25th, little moisture at lower elevations. Storms on 27th, 29th brought 6.00 to 12.0 in. of snow to the mountains 0.10 in. to 0.50 in. of moisture to lower elevations. Temperatures 3 to 6° above normal in the east, near to a little above west of the Continental Divide. Days suitable for fieldwork 3.7. Soil moisture 13% very short, 47% short, 37% adequate, 3% surplus. Barley is 24% seeded while oats are 25% seeded. Spring wheat is 5% seeded. Onions are 30% planted while sugarbeets are 35% planted. Winter wheat 1% very poor, 14% poor, 41% fair, 40% good, 4% excellent. Pasture, range feed conditions mostly fair. Calving, lambing remain active, 66%, 74% complete, respectively.

**FLORIDA:** Temperatures 3 to 5° above normal. Extremes 38°; 91°. Rainfall mostly 1.00 in. or less. Greatest weekly total 4.59 in., Canal Point. Rain fell 2 to 3 days, most locations. Soil moisture adequate to surplus Panhandle, northern Peninsula; short to adequate central Peninsula; mostly adequate southern Peninsula. Farmers making preparation for planting spring crops. Tobacco transplanting active. Peanut planting underway. Corn planting winding down. Sugarcane harvest completed. Winter wheat, sugarcane made good progress. Panhandle, northern Peninsula pastures fair to excellent. Central Peninsula pastures remain fair to good. Southern Peninsula pastures good. Statewide pasture conditions 5% poor, 20% fair, 65% good, 10% excellent. Panhandle, northern Peninsula cattle good to excellent. Central Peninsula cattle improving to good. Southern Peninsula cattle remain good. Citrus groves very good to excellent condition; rain most areas. Surface moisture generally adequate. Bloom progressing, some trees finished. Valencia harvest active, grapefruit movement limited primarily to east coast. Temple harvest slowing. Caretakers cutting cover crops, spraying, cleaning irrigation ditches. Warmer temperatures over major vegetable producing areas interrupted by late week cold front. Rain, strong

winds accompanying system buffeted crops. Spring crop planting slowing. Harvest winter crops active. Volume leaders: Tomatoes, potatoes, peppers, cabbage, strawberries, squash, celery. Also available snap beans, carrots, sweet corn, cucumbers, eggplant, escarole, lettuce, radishes. Planting Everglades celery complete.

**GEORGIA:** Week of contrasting weather. Summer time warmth, dry weather through mid week. Heavy showers to thunderstorms late week followed by colder weather 30th, 31st. Rain 2.00 to 5.00 in. common northern half, 0.50 to 2.00 in. south. Warmest temperatures upper 70s, low 80s mountains, mid to upper 80s elsewhere. Freezing temperatures mountains over weekend. Lowest temperatures mid 30s to low 40s, except mid to upper 40s along coast. Temperatures 2 to 4° above normal north, 4 to 7° above normal south.

Days suitable for fieldwork 5.3. Soil moisture 15% short, 63% adequate, 22% surplus. Corn 28% fair, 70% good, 2% excellent; 49% planted, 67% 1990, 57% avg. Peanut planting underway, 1% planted. Tobacco 50% fair, 46% good, 4% excellent; 30% transplanted, 54% 1990, 40% avg. Watermelons 51% fair, 45% good, 4% excellent; 43% planted, 72% 1990, 62% avg. Wheat 2% poor, 23% fair, 74% good, 1% excellent; 93% jointing, 93% 1990, 88% avg.; 52% boot, 53% 1990, 44% avg.; 13% headed, 18% 1990, 15% avg. Rye, other small grains fair to mostly good. Apples mostly good; 34% blooming, 46% 1990, 29% avg. Peaches good to excellent; 89% blooming, 100% 1990, 98% avg. Onions 13% fair, 87% good; disease problems drying up. Pasture 2% poor, 23% fair, 66% good, 9% excellent. Cattle, hogs mostly good. Activities: Fertilizing, spraying pastures, soil preparation for soybeans, cotton, peanuts.

**HAWAII:** Weather conditions varied Statewide during week. Rain showers decreased in intensity due to weakened low pressure system. Sunshine welcomed many areas which experienced wet, cloudy weather helping to dry muddy fields. Field activities returned to normal schedule. Trade winds blowing approximately 15 to 25 mph. Temperatures low 60s to low 80s. Rainfall none to 4.40 in. Days suitable for fieldwork 7.0. Oahu fields remained muddy. Fruit, vegetable supplies are light. Disease problems.

**IDAHO:** Temperatures 1 to 5° below normal. Lows below freezing. All locations received precipitation, below normal levels. Days suitable for fieldwork 4.0. Soil moisture 16% very short, 27% short, 49% adequate, 8% surplus. Winter wheat 4% very poor, 13% poor, 43% fair, 35% good, 5% excellent. Spring wheat 10% planted, 12% 1990, 12% avg. Spring barley 9% planted, 8% 1990, 7% avg. Potatoes 1% planted, 2% 1990, 0% avg. Sugarbeets 20% planted, 26% 1990, 17% avg. Onions 69% planted, 60% 1990, 35% avg. Fieldwork southern areas. Too wet north. Heavy winds south central, east. Winterkill winter wheat north, southwest. Seed potatoes cut, sorted, shipped, east. Planting oats southwest. Fruit trees bud stage southwest, dormant elsewhere. Apricots blooming few locations. Calving 79% complete. Lambing 86% complete. Scours several areas. Other activities: Branding, feeding, fixing fence, general spring care. Rangeland, pasture condition 71% normal. Hay, roughage supplies 13% short, 68% adequate, 19% surplus.

**ILLINOIS:** Temperatures 1 to 7° above normal. Precipitation above normal 0.50 to 1.50 below normal by 0.50 to 1.00 in. central, south. Soil moisture adequate to surplus. Winter wheat fair to good.

**INDIANA:** Temperatures 1 to 3° above normal. Lows in 30s, highs mid 50s to low 60s. Precipitation 0.50 to 1.00 in. Excessive rainfall limited fieldwork. Other activities: Plowing, discing, top dressing wheat, applying fertilizer, moving grain, hauling manure, mending fences, machinery maintenance, purchasing supplies, care of livestock. Hay supplies mostly adequate. Livestock condition good. Wheat fair to good condition. Pasture greening. Strong winds, tornadoes blasted through State mid week.

**IOWA:** Temperatures 4 to 8° above normal. Extremes 15 to 87°. Precipitation 0.17 to 2.66 in.; average 0.80 in. Days suitable for fieldwork 0.8. Topsoil moisture 2% short, 58% adequate, 40% surplus; Subsoil moisture 13% short, 76% adequate, 11% surplus. Winter wheat 3% poor, 25% fair, 69% good, 3% excellent. Pasture mostly good. Oats 3% sown, 10% 1990, 11% avg. Seeded preparation 45% completed, 50% 1990, 35% avg. Fertilizer application 38% completed, 42% 1990, 29% avg. Livestock in mostly good condition. Calving is in full swing. Rain, snow limiting field activities.

**KANSAS:** Temperatures 9° above normal over the State. Precipitation high of 0.62 in. east central, northeast to a low of 0.02 west central. Days suitable for fieldwork 5.0. Surface moisture 61% short, 39% adequate. Sub surface moisture 73% short, 27% adequate. Wheat 13% excellent, 46% good, 23% fair, 18% poor. Jointing started central, southern areas as green up continues. Recent rains very beneficial, more needed soon. Oat, barley seeding nearing completion; good stands emerging. Some early corn planted southern counties. Feedlots current. Lambing, calving good progress; few problems. Feed grain, forage, range, pasture adequate.

**KENTUCKY:** Temperature 50°, 3 to 6° above season mean. Mean highs around 65°, 5° above normal, mean lows around 42°, 3° above normal. Precipitation 0.98 in. Days suitable fieldwork 2.3. Activities limited by wet fields. Soil moisture 31% adequate, 69% surplus. Considerable soil erosion from heavy winter rains. Winter damage to wheat, barley, alfalfa light to moderate, some drowned out areas. Tobacco beds 60% seeded, 76% 1990, 70% avg. Ample carryover hay, about 1/3 current roughage requirements from pasture. Wheat condition fair to mostly good. Pasture conditions near normal for date.

**LOUISIANA:** Temperatures 2.5° to 5.7° above normal. Extremes 33°; 86°. Rainfall 0.19 in. southeast to 2.57 in. northeast. Days suitable for fieldwork 5.7. Soil moisture supplies 100% adequate. Spring plowing 44%, 35% 1990, 40% avg. Corn planted 74%, 55% 1990, 37% avg.; emerged 33%, 21% 1990, 21% avg. Rice planted 16%, 16% 1990, 14% avg.; emerged 7%, 8% 1990, 8% avg. Blackbird problem continued in newly planted fields, south, in some cases replanting was necessary. Sorghum planted 15%, 0% 1990, 2% avg.; emerged 3%, 0% 1990, 0% avg. Wheat 53% fair, 47% good; headed 34%, 50% 1990, 25% avg. Sugarcane 17% fair, 75% good, 8% excellent. Spraying, fertilizing, active. Vegetables 7% poor, 55% fair, 38% good. Pasture 3% poor, 47% fair, 50% good. Livestock 3% poor, 38% fair, 59% good.

**MARYLAND & DELAWARE:** **MARYLAND:** Precipitation 1.00 in. Temperature 54.7°, normal 47.1°. Extremes 28°; 81°. Activities for the week: Repairing fence; hauling manure; spreading fertilizer; planting vegetables; pruning fruit trees; maintaining machinery; tax preparation; caring for livestock.

**DELAWARE:** Precipitation 1.48 in. Temperature 53.1°, normal 47.4°. Extremes 32°; 78°. Activities for the week: Repairing fence; hauling manure; spreading fertilizer; planting vegetables; pruning fruit trees; maintaining machinery; tax preparation; caring for livestock.

**MICHIGAN:** Temperatures 1 to 6° above normal. Extremes 4°; 74°. Precipitation 0.20 to 2.53 in. across State. Above average temperatures earlier in the week were replaced by colder temperatures, snow, violent storms. Most of the State received strong winds, excessive precipitation. Some areas received golf ball size hail. Conditions stalled field activity. Fields in the south are muddy with standing water while parts of the north are ice covered. Seed, fertilizer purchases are starting with some activity in farm program enrollments. Livestock are in good shape as more calves, lambs were born this week. Feed supplies are in good shape, there is some movement in corn, hay supplies. Winter wheat looks good. Major activities included: Purchasing seed, fertilizer, spreading manure, repairing fences, equipment, looking after newborn, clearing brush from orchards.

**MINNESOTA:** Record breaking warm temperatures on 26th were followed by cooler than normal weather for the remainder of the week. Temperatures 0 to 5° above normal. Extremes 1° Hallock; 78° Winona. Precipitation was light in most areas of the State, areas in the east, south central districts received above normal precipitation. Waseca 1.22 in. during the week while most reporting stations in the northwest received no measurable precipitation. November through March precipitation 3.50 in. below normal at Duluth to 2.10 in. above normal at Montevideo. Most locations were 1.00 to 2.00 in. below normal.

**MISSISSIPPI:** Above normal temperatures including a few record highs, flooding, damaging winds, even snow flurries. Early part of week temperatures well above normal. Record highs set at Stoneville on 25th, Tupelo on 26th. A strong low pressure moved in to the area during the afternoon of the 28th, brought damaging winds to some central counties. It also produced wide spread rainfall which caused flooding of some rivers. Rainfall was well above normal except over coastal, south central areas. Extremes 30°; 88°. Days suitable for fieldwork 3.9. Soil moisture 65% adequate, 28% surplus, 7% excessive. Hay supply 62% short, 38% adequate, while feed grains 38% short, 62% adequate. Wheat 57% jointing. Wheat heading 1%. Wheat 16% poor, 57% fair, 27% good. Watermelons 29% planted. Livestock 39% fair, 59% good, 2% excellent. Corn 38% planted. Corn emerged 22%. Sorghum 5% planted. Main farm activities: Land preparation, fertilization, planting corn.

**MISSOURI:** Temperatures 6° above normal. Precipitation up to 1.00 in. northwest, north central, mostly light central, south. Days suitable for fieldwork 3.6. Topsoil 22% short, 70% adequate, 8% surplus. Subsoil moisture 23% short, 73% adequate, 4% surplus. Ground worked at least once for spring crops 53%, 48% 1990, 46% avg. Oats sown 55%, 28% 1990, 50% avg. Corn planted 1%, 0% 1990, 1% avg. Wheat 2% very poor, 6% poor, 40% fair, 50% good, 2% excellent. Supply of hay 10% short, 70% adequate, 20% surplus.

**MONTANA:** Temperatures near normal statewide. Precipitation amounts generally less than 0.25 in. Least amount in southeast, most in northeast, north central. Winter wheat green, growing. Eastern counties critically dry.

Fieldwork underway. Livestock receiving supplemental feed. Grazing open.

**NEBRASKA:** Temperatures 2° above normal northwest to 6° above normal east central. Precipitation mild week with 0.10 in. Panhandle to 1.00 in. northeast. Days suitable for fieldwork 3.6. Topsoil moisture 28% short, 63% adequate, 9% surplus. Subsoil moisture 70% short, 29% adequate, 1% surplus. Wheat condition 6% poor, 54% fair, 38% good, 2% excellent. Army cutworms, crown rot affecting some wheat fields. Oats 15% seeded, 16% 1990, 10% avg. Sugarbeet planting beginning. Pasture, range 75% normal. Calving 60% complete, 65% 1990. Calf losses below average to average.

**NEVADA:** Temperatures slightly below normal. Extremes 7°; 75°. Precipitation 0.05 in. to 0.73 in. Fieldwork making progress all areas. Winter grains showing growth. Much concern about irrigation water supplies. Calving, lambing continue; livestock condition generally good.

**NEW ENGLAND:** Precipitation 0.25 to 1.20 in. temperatures 30° northern Maine, mid 30s to low 40s elsewhere north, high 30s to mid 40s south. Maximum temperatures low 50s north to high 70s south; minimum temperatures 3° north to 30° south. Major farm activities: General repairs, maintenance, tending livestock, moving crops from storage. Maple sugaring, good sap runs during week.

**NEW JERSEY:** Temperatures near normal, 19°; 81°. Rainfall 0.45 in. north, 1.00 in. central, 1.10 in. south. Heaviest 24 hour total 1.15 in. on 29th, 30th. Estimated soil moisture percent field capacity, averaged 98% north, 97% central, 99% south. Four inch soil temperature 44° north, 47° central, 49° south. Frequent rain delayed soil preparation, planting. Some snow, sleet occurred on 30th. Buds continued to swell. Pastures greening. Warmer, dryer weather would be beneficial.

**NEW MEXICO:** Temperatures generally near normal across most of the State, except 3 to 5° below normal across south western mountains, southern desert, 2 to 4° above normal over north eastern plains. Precipitation heavy northern mountains south eastward through north eastern plains, also over southern half of north eastern plateau. Days suitable for fieldwork 5.8. Soil moisture 67% short, 33% adequate. Irrigated wheat 8% poor, 46% fair, 46% good. Dryland wheat 14% very poor, 72% poor, 24% fair. Lettuce, onion conditions generally fair to good. Cattle, sheep conditions listed as poor to good. Range conditions 43% poor, 48% fair, 9% good.

**NEW YORK:** Temperatures varied widely from place to place, day to day. Started cool with readings in the Upper 30s to 40s. Weather warmed during mid week, readings in upper 50s to 80s. Weekend cool with readings back to 30s to 40s. Extremes 6°; 75°. Precipitation variable, under 0.50 in. at eastern locations to nearly 1.50 in. western areas. Maple producers busy collecting sap, making syrup. Weather conducive to good sap flows. Caring for livestock, spreading manure, preparing for upcoming season primary activities.

**NORTH CAROLINA:** Temperatures 10° above normal across the State. Precipitation 0.36 to 4.30 in. Days suitable for fieldwork 5.2. Soil moisture 4% short, 92% adequate, 4% surplus. Pasture 6% poor, 21% fair, 65% good, 8% excellent. Crop condition: Wheat 10% fair, 83% good, 7% excellent; oats 12% fair, 80% good, 8% excellent; barley 14% fair, 80% good, 6% excellent; rye 13% fair, 80% good, 7%

excellent; Irish potatoes 12% fair, 85% good, 3% excellent; tobacco plant beds 2% poor, 14% fair, 75% good, 9% excellent. Irish potatoes planted 82%; cabbage transplanted 70%. Hay, roughage supplies 3% very short, 10% short, 84% adequate, 3% surplus. Feed grain supplies 3% very short, 5% short, 89% adequate, 3% surplus. Activities: Tending livestock; planting corn; tending tobacco plantbeds; pruning trees; equipment repair; top dressing small grains, pastures; land preparation; planting irish potatoes, cabbage; general farm maintenance.

**NORTH DAKOTA:** Temperatures averaged 10 below normal east central to 10° below normal southwest. Extremes -4° northwest; 61° southeast. Precipitation averaged below normal, 0.01 in. central to 0.36 in. northwest. Soil moisture supplies remained well below average. Topsoil moisture 40% very short, 55% short, 5% adequate. Subsoil moisture 62% very short, 38% short. Average expected starting date for spring fieldwork is the 12th. Winter wheat 4% very poor, 16% poor, 78% fair, 2% good; 93% dormant, 7% green. Winter kill 84% normal, 16% more than normal. Livestock mostly good; calving 51% complete, lambing 67%, shearing 78%. All range livestock receiving supplemental feed. Hay, roughage supplies mostly adequate. Pastures 30% very poor, 53% poor, 17% fair; 98% dormant; 71% open for grazing.

**OHIO:** Drier than normal weather prevailed for the period, with the exception of 27th low pressure system bringing thunderstorms to northern areas. High temperatures mid to upper 50s; 1 to 4° above normal. Lows, low 30s to mid 40s; 1 to 4° above normal. An isolated cold reading of mid 20 was reported in southern areas which may have adverse effects on the apple, peach crop. Cool, windy weather dominated as the period ended. Precipitation as water equivalent 0.25 to 0.70 in. north, 0.50 to 1.25 in. in the central, south. The far south had more precipitation while central, south remained 0.20 to 0.50 in. below normal. Soil temperatures mid to upper 40s. Spring fieldwork is off to a good start aided by mild weather, little precipitation. Spring plowing is the primary activity, will soon be replaced by planting operations.

**OKLAHOMA:** Temperatures normal south central to 3° above normal central, east central. Precipitation 0.30 in. southeast to 1.32 in. west central. Days suitable for fieldwork 6.2. Topsoil 60% short, 40% adequate. Subsoil 65% short, 35% adequate. Wheat 5% poor, 70% fair, 25% good; 45% jointing, 55% 1990, 35% avg. Wheat fair. Additional moisture needed. Insect activity light to moderate. Corn 85% seedbed prepared, 45% 1990, 75% avg. Sorghum 30% seedbed prepared, 35% 1990, 30% avg. Soybeans 35% seedbed prepared, 25% 1990, 25% avg. Peanuts 20% seedbed prepared, 15% 1990, 35% avg. Cotton 55% seedbed prepared, 35% 1990, 25% avg. Pasture 65%. Cattle good; marketings average, prices mixed.

**OREGON:** Week began with below normal temperatures, significant precipitation; ended dry with well above normal temperatures. Precipitation over 1.00 in. to near 0.10 in. west. Rainfall recorded all locations east. Several eastern locations had above normal precipitation for March, their first above normal month since May, July or August 1990. Soil moisture adequate to surplus west, short to adequate east. Wrapping up fertilizing, weed spraying in grain, grass seed fields west. Most spring seeding finished Columbia Basin. Alfalfa

breaking dormancy Klamath Basin. Final fruit pruning underway west; some pesticides, fertilizer applied. Ground preparation, pea planting Willamette Valley. Livestock good. Range, pasture fair to good west; mostly poor to good east but improving. Calving continued Grant Co. Grass growth started Willamette Valley.

**PENNSYLVANIA:** Temperatures above normal except end of week, precipitation about half of normal. Temperature 44°, 4° above normal. Extremes 15°; 79°. Precipitation 0.44 in, 0.37 in. below normal. Activities: Hauling manure; maintaining machinery; caring for livestock; early spring activities.

**PUERTO RICO:** Island rainfall of 1.26 in. was 2.85 in. at Juana Diaz, 2.62 in. at Coamo, 2.58 in. at Dos Bocas. Highest 24 hour total 2.63 in. at Juana Diaz. Divisional temperatures 76° on the Coasts, 67 to 73° in the Interior with Mean Station temperature 60.2° at Pico Del Este Luquillo to 78.7° at Roosevelt Roads N.S. Extremes 53°; 94°.

**SOUTH CAROLINA:** Temperatures 3 to 6° above normal. Rainfall varied 1.30 in. southern to 4.10 in. in the mountain areas. Days suitable for fieldwork 5.1. Soil moisture 2% very short, 24% short, 69% adequate, 5% surplus. tobacco fair to good; 3% planted, 16% 1990, 6% avg. Corn fair to good; 25% planted, 45% 1990, 26% avg. Watermelons fair to good; 35% planted, 28% 1990, 33% avg. Cantaloupes fair to good; 25% planted, 11% 1990, 14% avg. Tomatoes good; 44% planted, 77% 1990, 55% avg. Cucumbers fair to good; 39% planted, 37% 1990, 29% avg. Snap beans fair to good; 18% planted, 24% 1990, 17% avg. Oats fair to good; 1% headed, 8% 1990, 3% avg. Wheat fair to good; 1% headed, 10% 1990, 6% avg. Grain hay fair to good; 1% harvested, 2% 1990, 2% avg. Pastures fair to good.

**SOUTH DAKOTA:** Temperatures 0 to 5° above normal. Extremes 7°; 81°. Precipitation spotty, light. All reporting stations below normal, except Sioux City. Heavy snow clipped extreme southeast. Sioux City received 6.00 in. For the year, precipitation generally below normal, except in the south central, Black Hills.

**TENNESSEE:** High pressure dominated early week. Complex system produced thunderstorms, snow 27th through 30th. High pressure returned weekend. Temperatures 3 to 5° above normal statewide. Precipitation 0.50 in. above normal statewide. Soil moisture mostly adequate to surplus. Corn 2% planted, 1% 1990, 4% avg. Tobacco 80% beds seeded, 78% 1990, 81% avg.; 24% plants up, 32% 1990, 31% avg. Wheat 14% jointed, 38% 1990, 20% avg. Apple trees 48% budding, 58% 1990, 55% avg.; 8% blooming, 25% 1990, 21% avg. Peach trees 80% budding, 74% 1990, 68% avg.; 54% blooming, 70% 1990, 59% avg. Top dressing wheat in full swing. Alfalfa weevils prevalent. Livestock good.

**TEXAS:** Two disturbances accounted for most of precipitation across State. One moved 26th night producing significant rains mostly northern areas. A stronger low pressure system moved across State 28th bringing severe weather, widespread rain to eastern half of State. Another storm pushed across Panhandle over weekend resulting in springtime snowfall and brief spell of cold temperatures. Rainfall amounts below normal across most of State. Exceptions were eastern areas, Panhandle, where above normal amounts were reported. Temperatures 3 to 4° below normal over west. Two to 3° above normal southern areas. Elsewhere, average temperatures were seasonal.

**Crops:** Small grains continued suffering from high winds, drought like conditions on Plains. Some wheat fields forced into booting by adverse

weather. Wheat stands in Blacklands remained thin, yield potential may be affected. Wheat producers in Cross Timbers reported fields outgrowing greenbug, rust problems as stands continued approaching heading stage. Elsewhere in State, stands continued slow progress while desperately needing moisture. Statewide wheat 62% of normal compared with 68% 1990. Wheat headed 2% 1991, 4% 1990, 4% avg. Corn planting slowly winding down in Blacklands, central areas, plant emergence off to good start. Cultivation practices common in some coastal, southern areas. Land preparations for spring planting continued on Plains, producers concerned with high evaporation of moisture on pre irrigated corn land. Corn planted 53% 1991, 48% 1990, 55% avg. Sorghum planting also winding down in Blacklands, central areas as producers await more moisture to promote emergence, activate herbicides. Some minor replanting occurred in Coastal Bend due earlier rain damage, remaining stands looked good. Cultivation active in coastal, southern areas. Producers would like to see more moisture added to quickly depleting soils. Sorghum planted: 40% 1991, 34% 1990, 42% avg. Cotton planting active central, southern areas. Pre planting operations in Trans Pecos, Blacklands winding down as producers prepared to start planting soon. Pre planting operations continued on Plains. Cotton planted 7% 1991, 9% 1990, 9% avg. Rice planting well underway in Upper Coast. Light, scattered showers, already damp fields limiting factor on some fields. Rice planted 16% 1991, 24% 1990, 28% avg. Soybean planting cranking up east, central areas. Upper Coastal producers to start soon. Land preparations for peanut planting active southern areas. Producers would like to see additional moisture before planting. State peach crop real promising. Many producers expect heavy crop, concerns of late frost still linger in minds of some growers. Other field crops: Sugarbeets 0% planted 1991, 5% 1990, 1% avg.

**Commercial Vegetables:** Rio Grande Valley, harvesting of onion, cole crops continued. Yield expectation remained high. Watermelon development remained steady, cultivation continued. San Antonio Winter Garden, most spring crops growing well, need more rain. Asparagus harvest resumed as market conditions improved. Watermelons continued emergence. Existing stands looked good. Onions continued steady progress. Eastern areas, most sweetpotato beds completed. Watermelon planting heavy as was planting, transplanting of other spring crops. Tomato sets progressing well. High Plains, potato planting very active. Onion sets making good progress. Spring vegetable planting begun on limited basis. Tomato sets slowly growing. Trans Pecos, onions making good growth. Chili planting continued. Some cabbage fields planted.

**Range and Livestock:** Northern rangelands remained dry last week. Fire, wind erosion continued major concern most producers. Livestock in those areas beginning to feel stressed from harsh weather. Lice, hornflies an increasing problem to Blacklands ranchers, posed no major threat. Fertilizer, timely rains really optimized pastures east, central areas forage availability increased. For most part, livestock conditions remained fair, average. Range, range 1% very poor; 11% poor, 55% fair, 27% good, 6% excellent.

**UTAH:** Temperatures about 2° below normal, except Dixie, which was 8° below normal. Precipitation light in north, light to moderate in south. Spring ground preparation in full swing. Seeding of spring grains underway in most areas. Calving, lambing progressing as normal. Irrigation water supplies continues to be a major

concern. Winter wheat crop in fair to good condition.

**VIRGINIA:** Temperatures well above normal. Extremes 18°; 85°. Precipitation was also above normal with most locations receiving 1 to 3 in.

Days suitable for fieldwork 3.5. Topsoil moisture 5% short, 81% adequate, 14% surplus. Pastures 4% poor, 26% fair, 65% good, 5% excellent. Alfalfa 2% poor, 17% fair, 79% good, 2% excellent. Wheat condition 29% fair, 63% good, 8% excellent. Barley 14% fair, 83% good, 3% excellent. Apple, peach condition mostly good. Peach blooming ahead of normal in some localities. Tobacco planted seeding approached 95% completed. Plantbed condition was 70% fair, 30% good. Potato planting continued, some early corn was planted in the southeast. Fertilizing, lime applications continued in preparation for spring planting. Overseeding pastures, hayland was also active.

**WASHINGTON:** Temperatures normal to 6° below normal east; 2° below to 1° above normal west. Precipitation 0.16 to 1.50 in. east; 0.10 to 0.99 in. west. Days suitable for fieldwork 3.6. Soil moisture 49% short, 35% adequate, 16% surplus. Range, pasture 9% very poor, 38% poor, 18% fair, 35% good. Hay, other roughage 11% short, 82% adequate, 7% surplus. Winter wheat 62% very poor, 24% poor, 12% fair, 2% good. Winter barley 70% very poor, 17% poor, 11% fair, 2% good. Potatoes planted 3%. Spring wheat planted 42%. Spring barley planted 21%. Dry peas planted 10%. Fruit trees, caneberries were starting to bloom. Farmers were spring seeding, cultivating, weeding, fertilizing, plowing between showers. Some areas need more moisture for pasture, range growth east of the Cascade Mountains.

**WEST VIRGINIA:** Temperature 48°. Extremes 8°; 84°. Precipitation avg. 1.14 in. Days suitable for fieldwork 1.6. Soil moisture 27% adequate, 73% surplus. Wheat, barley condition, good. Cattle, sheep condition, good. Calving 71% complete. Lambing 73% complete. Hay supplies 54% adequate, 46% surplus. Other feed 91% adequate, 9% surplus. Activities: Feeding livestock, calving, lambing, fieldwork preparation, seeding tobacco beds.

**WISCONSIN:** Temperature 40°. Extremes 7°; 80°. Entire State received beneficial rainfall. Most of the State received between 0.50 to 1.50 in. of rain by late night on the 27th. Some of these storms in southern areas produced large hail, damaging winds. In the northwest on the 27th, rain turned over to snow producing 1.00 to 3.00 in. snow. Scattered rain, snow showers on the 28th in the southern sections. Across the State 29th to 31th, scattered rain, snow showers.

**WYOMING:** Temperatures above normal. Rainfall mostly below normal. Days suitable for fieldwork 4.0. Topsoil moisture 74% short, 26% adequate. Subsoil moisture 62% short, 38% adequate. Spring wheat 10% planted, 5% 1990, 5% avg. Oats small amount planted, small amount 1990, small amount avg. Barley 35% planted, 20% 1990, 15% avg. Sugarbeets 5% planted, 0% 1990, small amount averaged. Winter wheat 10% poor, 55% fair, 35% good. Wind, freeze damage mostly light. Alfalfa prospects fair to good. Livestock mostly good. Spring calves born 45%, 50% 1990, 45% avg. Death losses light to normal. Farm flock: Ewes lambed 55%, 55% 1990, 55% avg.; shorn 55%, 55% 1990, 50% avg. Range flock: Ewes lambed 15%, 20% 1990, 20% avg.; shorn 20%, 30% 1990, 25% avg. Death losses light to normal. Ranges, pastures poor to mostly good.

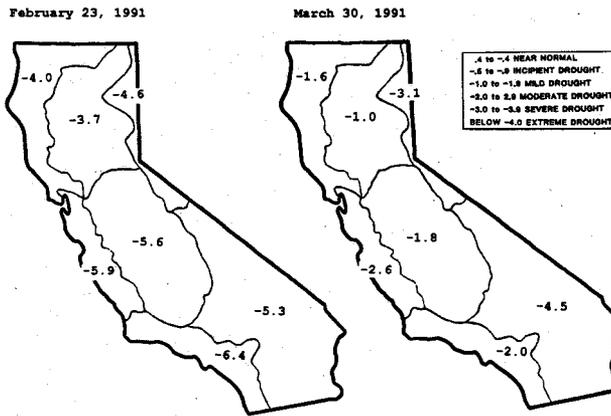
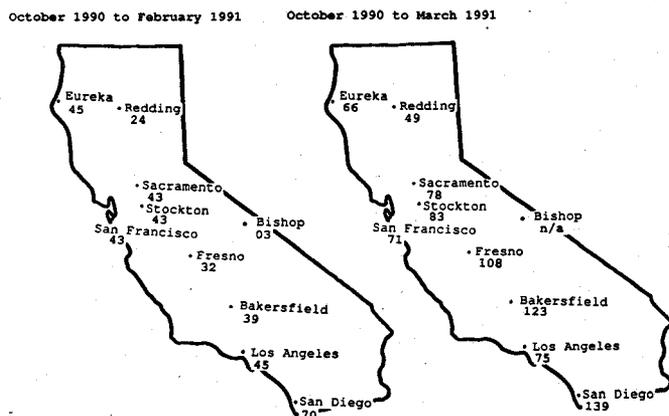
### Copious March Precipitation Graces California

Four substantial rounds of precipitation in March provided a dramatic easing of California's 5-year drought. Figures 1 and 2 show the impact of the storms on water year percentage of normal precipitation and Palmer drought indices. Monthly precipitation ranged from 150 to 550 percent of normal statewide, including a record-setting 12.33 inches in Santa Barbara (507 percent of normal) and 9.41 inches in Santa Maria (503 percent of normal). Snowpack in the Sierra Nevada soared from 14 percent of normal on February 27 to approximately 75 percent of normal by April 1. Alpine Meadows, CA, received more than 180 inches of snow for the month. The Sierra Nevada water equivalent precipitation was impressive: 8 to 28 inches. California's reservoir levels have improved to about 57 percent of normal, up from 48 percent of normal on March 1. Spring snowmelt will further boost reservoir holdings. The significant periods of rain and snow (February 27-March 4, and March 10-14, 17-20, and 23-27) have been likened to the storminess of the "miracle March" of 1978, when the State's last serious drought was vanquished.

--Brad Rippey

Figure 1 Percentage of Normal Precipitation

Figure 2 Palmer Drought Indices by Climatic Division



-4 to -4 NEAR NORMAL  
 -5 to -5 MODERATE DROUGHT  
 -1.0 to -1.8 MILD DROUGHT  
 -2.0 to -2.9 MODERATE DROUGHT  
 -3.0 to -3.9 SEVERE DROUGHT  
 BELOW -4.0 EXTREME DROUGHT

### International Weather and Crop Summary

#### HIGHLIGHTS

March 24-30, 1991

**WESTERN USSR** ... A cooling trend keeps winter grains dormant in most areas, except for the south, where crops are greening.

**NORTHWESTERN AFRICA** ... Moisture is adequate for winter grains in or nearing reproduction.

**EUROPE** ... Dry weather covers the northern portion of the continent. Beneficial rain covers winter grains in central and southeastern areas.

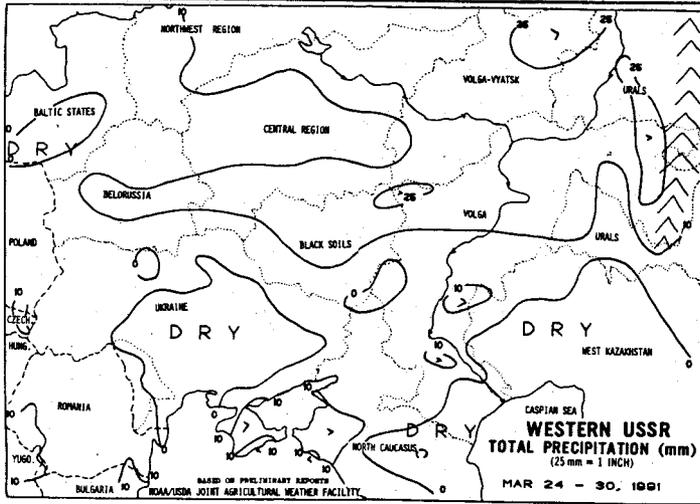
**EASTERN ASIA** ... Showers benefit China's vegetative wheat. Rice planting progresses along the southern coast.

**SOUTHEAST ASIA** ... Moderate to heavy showers cover Malaysia. Dry, warm weather continues over the Philippines.

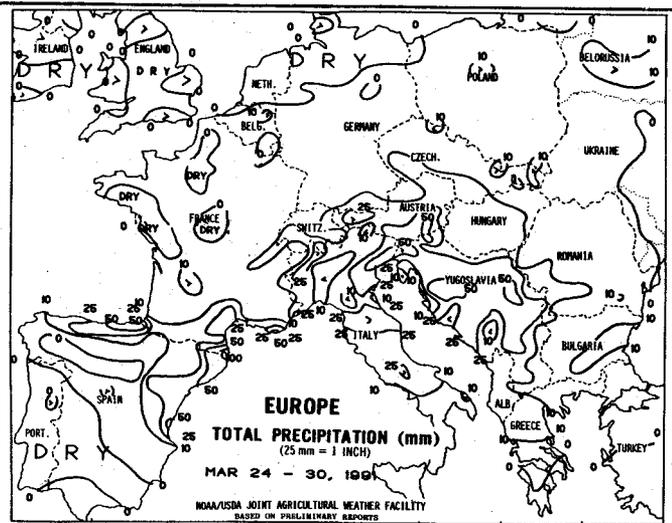
**SOUTH AFRICA** ... Light rain and seasonable temperatures favor growth of immature corn.

**SOUTH AMERICA** ... Dry weather favors early harvesting in Argentina and southern Brazil. Heavy showers delay harvesting in Brazil's far northern soybean areas.

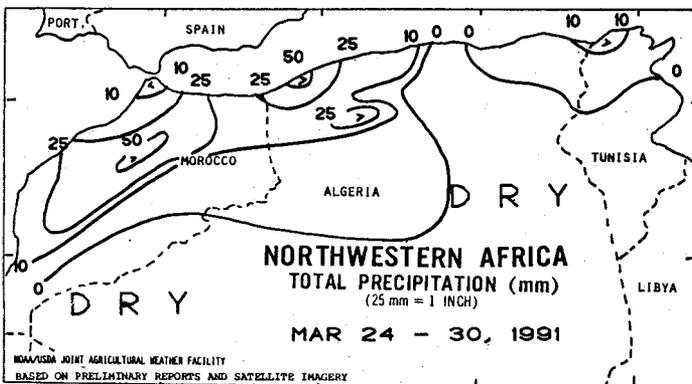
**AUSTRALIA** ... Warm, dry weather promotes summer crop harvesting.



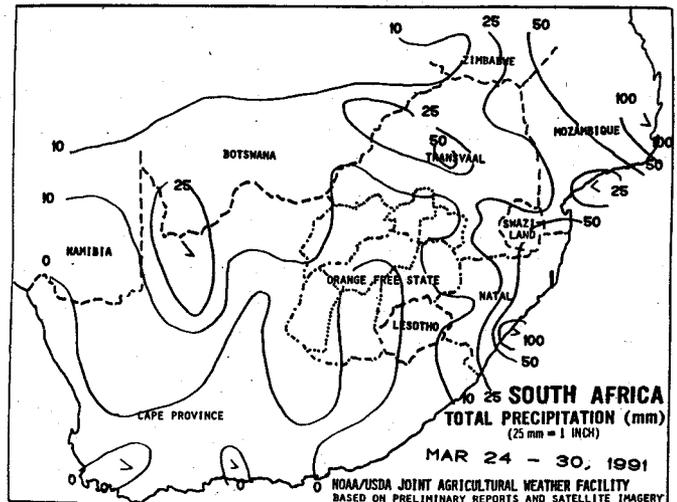
**WESTERN USSR** ... A cooling trend kept winter grains dormant in most areas, except for the south, where crops were greening at near-normal dates. Widespread precipitation covered northern winter grain areas, but amounts were generally light (5-20mm). Little, if any, precipitation covered the eastern two-thirds of the Ukraine and most of the North Caucasus, where preparations for early spring fieldwork were underway. A moderate to deep snow cover remained over winter grains in the eastern portions of the Central Region, the upper Volga, and the Volga Vyatsk.



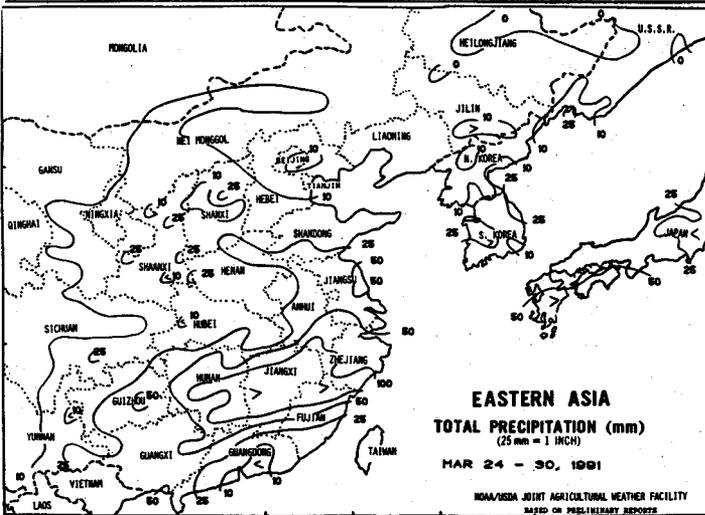
**EUROPE** ... Winter grains were in the early vegetative stage in the north and in or nearing reproduction in Mediterranean areas. High pressure kept most of the northern portion of the continent dry, except for a few light, scattered showers in Poland and Czechoslovakia (generally less than 10mm). Beneficial precipitation (10-30mm, with local amounts in excess of 40mm) fell eastward from northern Spain and southern France, through Italy and Austria, and into Hungary, eastern Yugoslavia, Greece, and Bulgaria. Although the rain that covered Romania helped to increase topsoil moisture, subsoil moisture remained limited. Substantial rain will be needed in upcoming weeks as the moisture demands of winter grains increase and summer crop planting progresses.



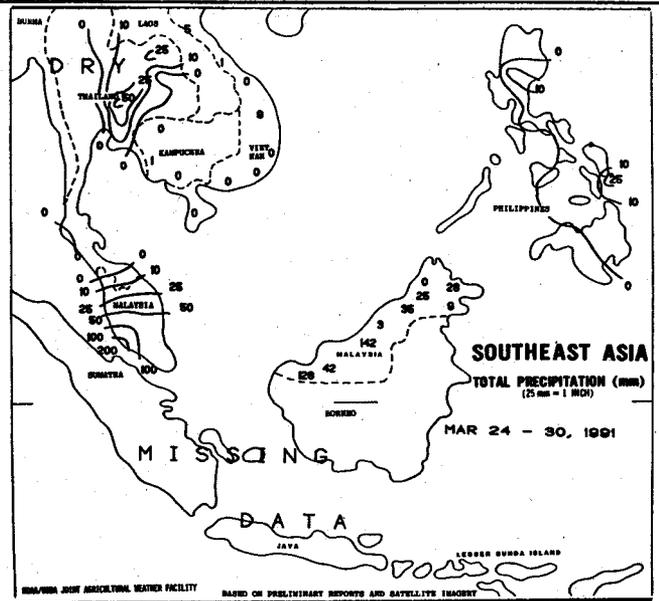
**NORTHWESTERN AFRICA** ... Winter grains were in or nearing the reproductive phase of development. Beneficial showers (10-50mm) continued over winter grains in Morocco and western Algeria. Although light, scattered showers over eastern Algeria and Tunisia were insufficient to meet the peak moisture demands of winter grains in the reproductive phase, adequate soil moisture reserves prevented the development of crop stress.



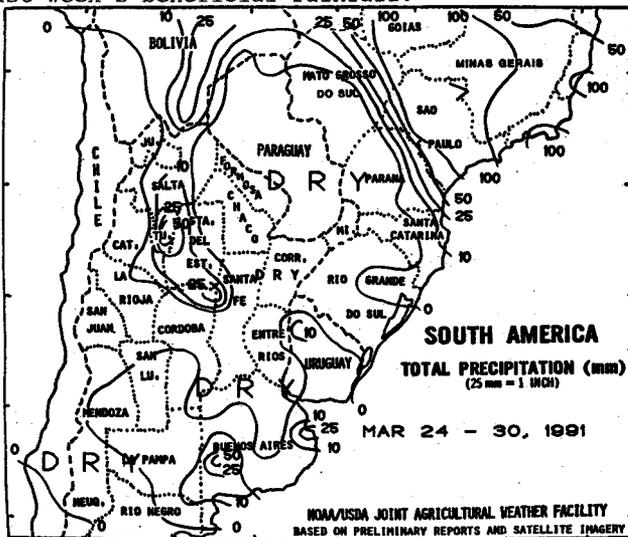
**SOUTH AFRICA** ... Scattered light to moderate showers accompanied seasonably warm temperatures across the Maize Triangle, favoring growth of immature corn. Daytime highs in the Maize Triangle generally ranged from the upper teens to low 20's C in the east, and in the middle 20's C in the west. Elsewhere, early-week heavy showers (50-170mm) covered Natal's coastal sugarcane areas, likely causing local flooding.



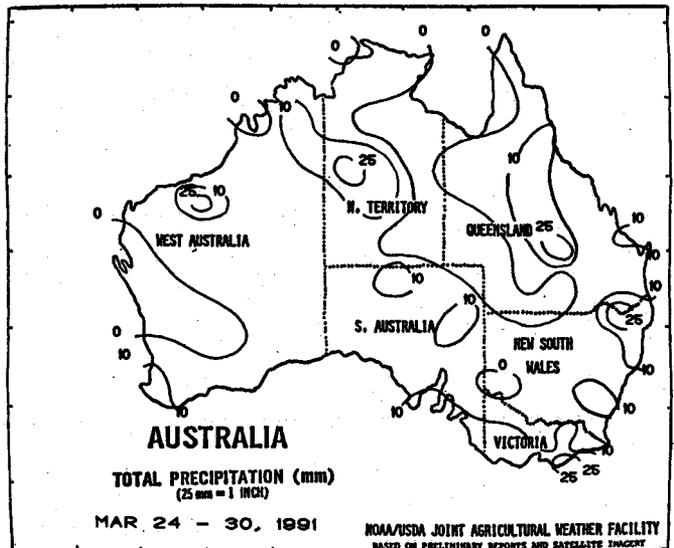
**EASTERN ASIA** ... Light to moderate showers (5-25mm) covered China's northern wheat areas, providing timely topsoil moisture for crops breaking dormancy. However, cooler weather accompanied the moisture, slowing crop growth. Moderate to heavy showers (15-56mm) from Henan to Jiangsu maintained generally favorable moisture levels for China's southern wheat, currently in the vegetative stage. Further south, widespread moderate to heavy rain (25-100mm or more) maintained adequate to abundant pre-planting moisture levels for most summer crops. Local flooding from very heavy rain (100-171mm) likely occurred along the middle Yangtze River. Mostly dry and warm weather returned to China's southern coast, favoring rice planting following last week's beneficial rainfall.



**SOUTHEAST ASIA** ... Showers continued over most palm oil areas of western Malaysia and, by week's end, spread eastward over primary crop regions of eastern Malaysia. Data were incomplete for Indonesia, but satellite imagery and late-week reports suggest continued scattered showers in the west and south. Further north, drier and warmer weather returned to plantation crop areas of peninsular Thailand. Late-week showers (10-50mm or more) brought some relief to rainfed grain areas of central and eastern Thailand, stricken by recent hot and dry weather. More rain and cooler temperatures are needed across Thailand before rice and corn planting can begin. In the Philippines, mostly dry, warm weather favored harvest of fall planted crops.



**SOUTH AMERICA** ... In south-central Brazil, warm and mostly dry weather prevailed from the major soybean producing state of Rio Grande do Sul northward to Parana and extending westward to Mato Grosso do Sul. Weather conditions favored maturing crops as well as early harvesting. However, the dryness in the south placed additional stress on immature grains and oilseeds suffering from the moisture shortage during the summer growing season. In contrast, locally heavy showers (100-150mm) in far northern soybean areas of Minas Gerais delayed harvesting. In Argentina, scattered showers caused little, if any, delay in crop harvesting throughout the major growing areas. The mostly dry weather maintained favorable conditions which have prevailed for grains and oilseeds throughout the growing season. The recent drier weather in northern cotton areas also promoted harvest activities.



**AUSTRALIA** ... Warm, dry weather prevailed during much of the week in eastern summer crop areas, comprising southeastern Queensland and northern New South Wales. The dryness favored sorghum and cotton harvesting. Late-week showers (28-37mm) caused some harvest interruption, but the accompanying cooler weather eased heat stress brought on by high temperatures in the middle to upper 30's C through midweek. Light showers in southern winter wheat areas brought some beneficial pre-season moisture for planting which begins in May.

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**U.S. DEPARTMENT OF COMMERCE**

National Oceanic and Atmospheric Administration  
National Weather Service/Climate Analysis Center  
Managing Editor . . . . . **Douglas Le Comte**  
Meteorologists . . . . . **Brad Rippey** (202) 382-1444  
**Vilhelm Bjerknes, Bob Stefanski, Wes Byrd and Eyad Atallah.**

Subscriptions (202) 447-7917 . . . **Joyce Houston**

**U.S. DEPARTMENT OF AGRICULTURE**

Economics Management Staff  
Editor . . . . . **Sharon Lee**  
National Agricultural Statistics Service  
Agricultural Statistician . . . **Dave Abbe** (202) 447-2157  
World Agricultural Outlook Board  
Agricultural Weather Analysts . . **Ray Motha** (202) 447-5716  
**Tom Puterbaugh, and Mark Brusberg.**

(Continued from front cover)  
clocked at more than 60 mph in **Dodge City, KS.** The high winds raised dust in the **central and southern Plains.** Snow and wind reduced visibilities to near zero from **Nebraska to Minnesota.** Tornadoes ripped through parts of the **Upper Great Lakes.** Tornadic destruction shifted southward by Friday, as twisters tore up a corridor from **Alabama to North Carolina.** Heavy rain produced localized flooding in the **Southeast.** In the hilly terrain of **western North Carolina,** as much as 5 inches of rain caused extensive flooding and broke an earthen dam. Cold air settled southward behind the storm, changing rain to snow from **Arkansas to New England.** An upper air disturbance dropped snow on the **High Plains and eastern Rockies.** By Saturday night, frost or freeze warnings were posted from the **mid-Atlantic region to northern Mississippi,** and westward to **west-central Texas.**

NOAA/USDA Joint Agricultural  
Weather Facility  
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