

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

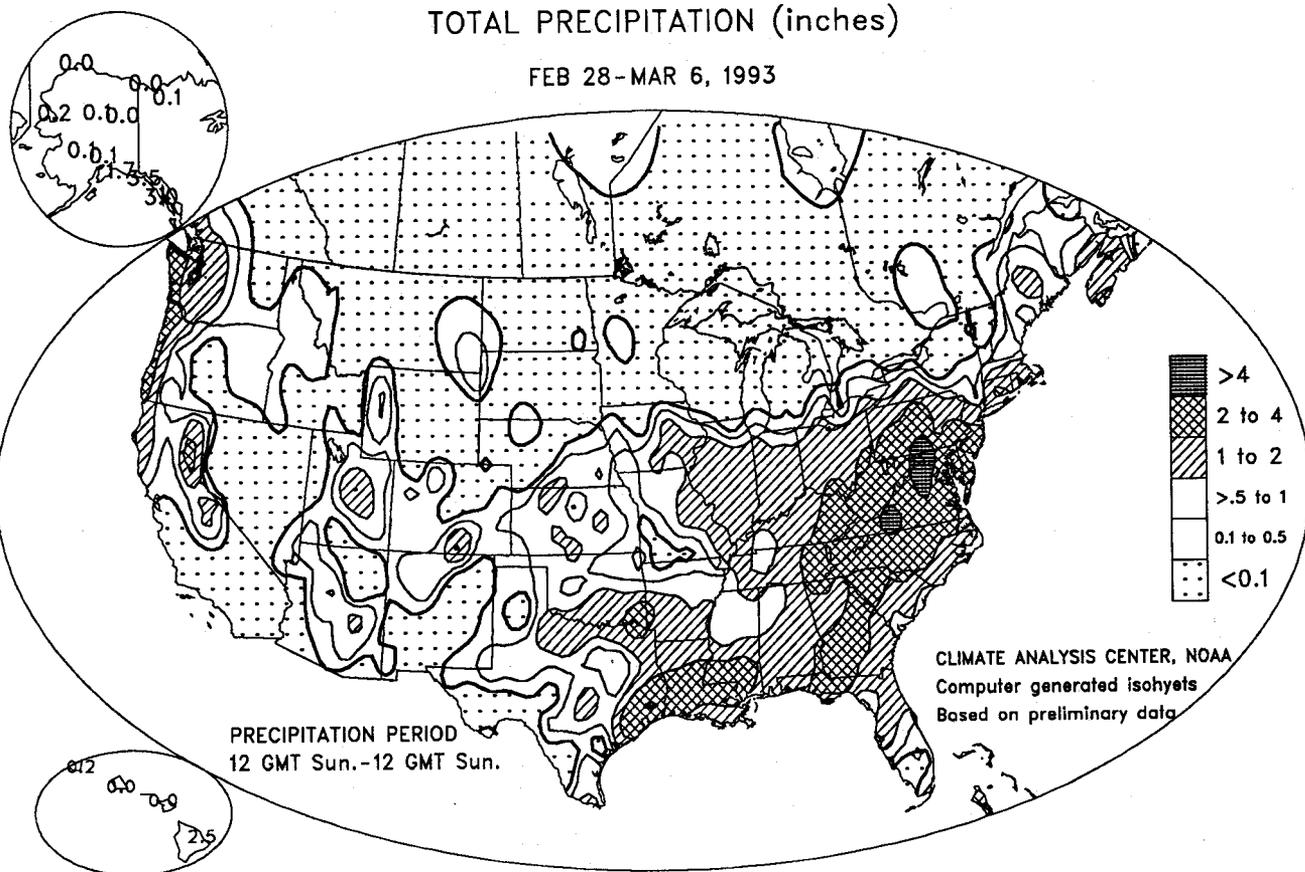
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Washington, D.C.

March 9, 1993

TOTAL PRECIPITATION (inches)

FEB 28-MAR 6, 1993



CLIMATE ANALYSIS CENTER, NOAA
Computer generated isohyets
Based on preliminary data

PRECIPITATION PERIOD
12 GMT Sun.-12 GMT Sun.

HIGHLIGHTS

February 28 - March 6, 1993

A ferocious winter storm struck the East for the second time in 3 months, and last week's bitter cold gave way to a spring thaw in the North Central States. Early in the week, cold air lingered east of the Rockies, while a slow-moving storm crossed the Four Corners region. Waterloo, IA, reported -6°F on Sunday, and Elkins, WV, recorded -1°F on Monday. Frigid air also retained its grip on western basins, where Burns, OR, registered -22°F, and Pocatello, ID, endured -17°F on the last day of February. In the Southwest, Arizona received generally light precipitation, but the Gila River remained above flood stage between Painted Rock Dam and Yuma. Snowfall by late Monday included 6 inches in Flagstaff, AZ, and up to 36 inches in Colorado's Sangre de Cristo Mountains. Also on Monday, snow spread into the central High Plains, while thunderstorms fired

(Continued to p. 14)

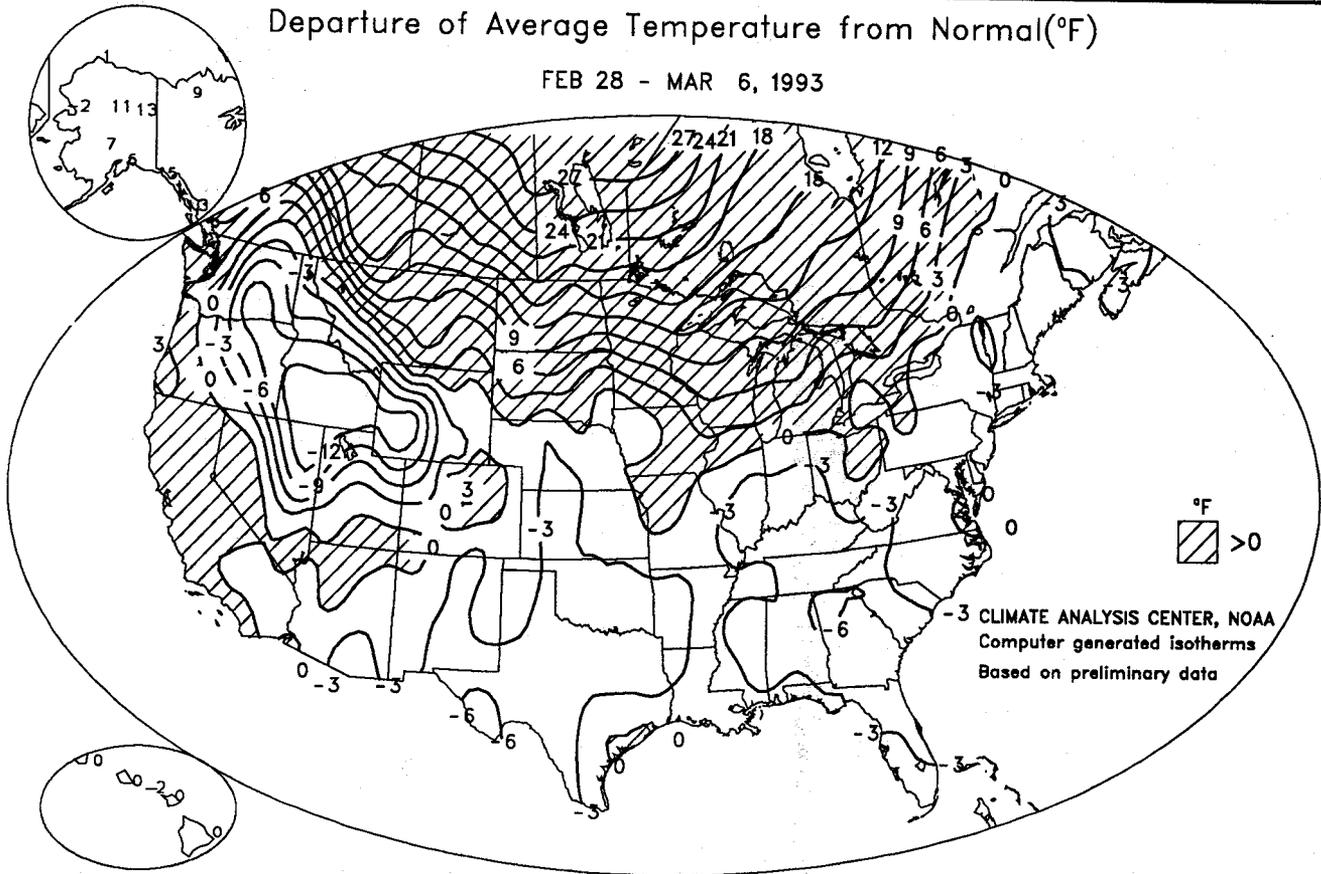
Contents

Page

Highlights & Total Precipitation Map	1
Temperature Departure & Extreme Minimum Temperature Maps	2
Mean Date of Last Spring Freeze	3
National Weather Data for Selected Cities	4
Weekly Heating Degree Day Table	7
February Weather and Crop Summary	8
February Precipitation and Temperature Maps ...	9
February Weather Data for Selected Cities	11
February Weather in Historical Perspective ...	12
February Heating Degree Day Table	13
National Agricultural Summary	14
State Summaries of Weather and Agriculture ...	15
International Weather and Crop Summary & February Temperature/Precipitation Table ...	19
Subscription and Mailing Permit Information & Snow Cover Map	24

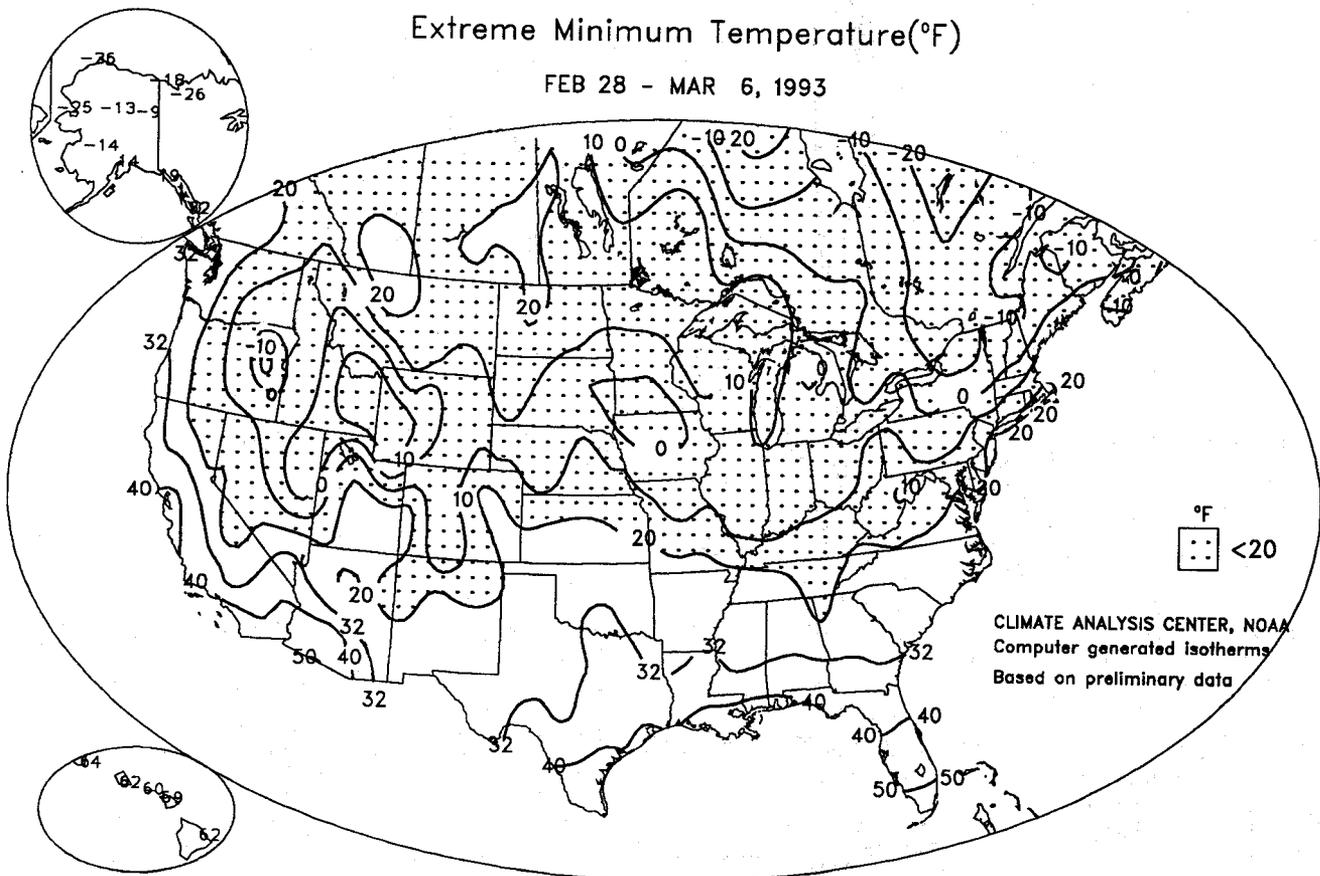
Departure of Average Temperature from Normal(°F)

FEB 28 - MAR 6, 1993



Extreme Minimum Temperature(°F)

FEB 28 - MAR 6, 1993



National Weather Data for Selected Cities

Weather Data for the Week Ending March 6, 1993

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	MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.		
																				.01 INCH OR MORE	.50 INCH OR MORE			
AL BIRMINGHAM	56	37	65	28	46	4	1.0	-3	.6	1.0	88	9.3	85	89	54	0	0	0	0	0	0	0	1	1
MOBILE	64	45	67	40	54	4	1.4	-1	1.1	1.4	107	13.9	121	87	53	0	0	0	0	0	0	0	1	1
MONTGOMERY	59	40	64	31	50	3	2.4	1.0	2.1	2.4	197	12.0	105	86	53	0	0	0	0	0	0	0	1	1
AK ANCHORAGE	34	22	38	14	28	6	.1	-1	.1	.1	79	2.2	131	91	68	0	0	0	0	0	0	0	0	0
BARROW	-9	-22	5	-37	-16	2	.4	.0	.0	.0	200	7.7	250	74	61	0	0	0	0	0	0	0	0	0
FAIRBANKS	22	-6	33	-12	8	4	.0	-1	.0	.0	0	2.7	277	84	61	0	0	0	0	0	0	0	0	0
JUNEAU	42	34	43	27	38	7	1.7	-9	.4	1.3	190	19.5	217	100	86	0	0	0	0	0	0	0	0	0
KODIAK	40	31	43	24	35	4	1.1	-1	.7	1.0	110	11.3	83	89	63	0	0	0	0	0	0	0	0	0
NOME	14	-6	18	-16	4	2	.4	-1	.4	.0	44	2.3	156	80	61	0	0	0	0	0	0	0	0	0
AZ PHOENIX	69	48	78	45	58	4	.4	-2	.4	.4	0	7.0	453	83	35	0	0	0	0	0	0	0	0	0
PRESCOTT	55	30	65	27	42	2	.2	-2	.4	.3	3	8.4	246	88	40	0	0	0	0	0	0	0	0	0
TUCSON	66	40	76	38	53	3	.3	-2	.3	.3	7	6.3	374	86	39	0	0	0	0	0	0	0	0	0
YUMA	76	52	83	45	64	1	.1	-1	.4	.0	0	2.9	477	53	22	0	0	0	0	0	0	0	0	0
AR FORT SMITH	50	37	61	26	43	4	.2	-2	.2	.2	27	7.3	141	91	70	0	0	0	0	0	0	0	0	0
LITTLE ROCK	53	39	61	34	46	3	.8	-3	.6	.8	85	7.8	103	80	54	0	0	0	0	0	0	0	0	0
CA BAKERSFIELD	67	44	79	40	55	0	.0	-3	.0	.0	0	4.4	204	70	43	0	0	0	0	0	0	0	0	0
EUREKA	57	46	62	39	52	2	.4	-8	.2	.4	38	13.5	114	86	70	0	0	0	0	0	0	0	0	0
FRESNO	67	43	78	35	55	2	.0	-4	.0	.4	0	7.6	185	93	49	0	0	0	0	0	0	0	0	0
LOS ANGELES	68	49	82	44	58	1	.0	-5	.0	.0	0	15.9	297	81	52	0	0	0	0	0	0	0	0	0
REDDING	66	41	78	30	54	2	.2	-1	.4	.4	2	17.9	157	90	36	0	0	0	0	0	0	0	0	0
SACRAMENTO	65	44	73	38	54	2	.1	-1	.1	.1	13	13.7	192	100	53	0	0	0	0	0	0	0	0	0
SAN DIEGO	67	50	78	47	59	0	.0	-4	.4	.4	3	13.8	372	80	51	0	0	0	0	0	0	0	0	0
SAN FRANCISCO	64	47	74	42	55	3	.1	-1	.1	.1	9	16.0	196	89	57	0	0	0	0	0	0	0	0	0
CO DENVER	52	27	57	22	39	3	.0	-2	.0	.0	0	1.3	103	80	26	0	0	0	0	0	0	0	0	0
GRAND JUNCTION	53	27	58	24	40	0	.0	-2	.0	.0	0	2.5	194	79	30	0	0	0	0	0	0	0	0	0
PUEBLO	53	23	61	15	38	0	.8	-7	.8	.8	675	1.4	191	85	36	0	0	0	0	0	0	0	0	0
CT BRIDGEPORT	40	26	46	20	33	2	1.3	.5	1.1	1.3	184	6.5	93	87	49	0	0	0	0	0	0	0	0	0
HARTFORD	40	23	50	15	32	2	1.2	.4	.9	1.2	178	6.7	92	89	45	0	0	0	0	0	0	0	0	0
DC WASHINGTON	49	32	61	22	41	1	1.5	.8	1.2	1.5	241	6.7	110	85	54	0	0	0	0	0	0	0	0	0
FL APALACHICOLA	64	47	67	43	56	2	2.5	1.5	1.8	2.5	289	12.8	150	98	42	0	0	0	0	0	0	0	0	0
DAYTONA BEACH	69	47	81	39	58	4	1.1	.4	1.1	1.1	180	8.4	130	98	42	0	0	0	0	0	0	0	0	0
JACKSONVILLE	69	44	76	35	56	3	1.0	-1	1.0	1.0	135	7.8	100	92	42	0	0	0	0	0	0	0	0	0
KEY WEST	76	64	82	61	70	1	.1	-3	.1	.1	34	8.4	201	80	57	0	0	0	0	0	0	0	0	0
MIAMI	78	60	81	53	69	1	.2	-4	.2	.2	33	7.3	162	83	45	0	0	0	0	0	0	0	0	0
ORLANDO	74	50	83	44	62	2	.7	-1	.7	.7	99	7.1	118	87	37	0	0	0	0	0	0	0	0	0
TALLAHASSEE	68	41	70	34	55	3	2.8	1.3	2.0	2.8	220	16.9	146	92	46	0	0	0	0	0	0	0	0	0
TAMPA	74	51	80	42	63	2	1.2	.4	1.2	1.2	184	7.1	125	89	48	0	0	0	0	0	0	0	0	0
WEST PALM BEACH	77	56	82	50	66	2	.7	-7	.7	.7	5	10.1	169	88	48	0	0	0	0	0	0	0	0	0
GA ATLANTA	54	38	63	29	46	4	1.3	.0	.8	1.3	118	9.7	91	89	52	0	0	0	0	0	0	0	0	0
AUGUSTA	61	38	66	26	49	3	1.3	.2	1.1	1.3	135	10.4	113	87	52	0	0	0	0	0	0	0	0	0
MACON	58	38	64	29	48	2	2.6	1.4	2.0	2.6	266	12.3	119	88	51	0	0	0	0	0	0	0	0	0
SAVANNAH	62	41	68	31	52	4	1.1	.3	1.0	1.1	151	10.0	132	87	47	0	0	0	0	0	0	0	0	0
HI HILO	78	64	80	62	71	1	2.5	-3	1.0	2.5	105	7.4	33	90	61	0	0	0	0	0	0	0	0	0
HONOLULU	82	67	84	62	74	1	.4	-5	.4	.4	0	1.1	18	80	46	0	0	0	0	0	0	0	0	0
KABULUI	80	64	84	59	72	0	.4	-6	.4	.4	0	2.4	32	85	54	0	0	0	0	0	0	0	0	0
LIHUE	77	67	79	64	72	0	.2	-7	.1	.2	28	1.4	14	82	59	0	0	0	0	0	0	0	0	0
ID BOISE	34	22	40	11	28	-12	.4	-3	.4	.4	12	2.7	97	94	71	0	0	0	0	0	0	0	0	0
LEWISTON	50	30	60	18	40	-2	.1	-1	.1	.1	42	1.5	65	85	49	0	0	0	0	0	0	0	0	0
POCATELLO	29	6	37	-17	17	-16	.4	-2	.4	.4	13	4.4	199	88	65	0	0	0	0	0	0	0	0	0
IL CHICAGO	41	26	48	9	34	2	1.4	.0	.3	.4	107	5.1	154	90	62	0	0	0	0	0	0	0	0	0
MOLINE	41	25	47	3	33	1	1.6	1.1	.8	1.6	358	4.5	141	90	57	0	0	0	0	0	0	0	0	0
FLORIDA	41	25	48	8	33	0	1.3	.8	.5	1.3	282	6.5	191	95	69	0	0	0	0	0	0	0	0	0
QUINCY	40	27	50	9	34	-1	.5	-1	.3	.5	88	3.8	113	93	70	0	0	0	0	0	0	0	0	0
ROCKFORD	40	25	44	2	32	3	.1	-3	.1	.1	39	3.5	124	93	62	0	0	0	0	0	0	0	0	0
SPRINGFIELD	42	28	50	9	35	0	1.3	.6	.8	1.3	236	6.7	175	93	73	0	0	0	0	0	0	0	0	0
IN EVANSVILLE	46	25	53	4	35	-7	.8	-2	.6	.8	92	7.0	96	93	68	0	0	0	0	0	0	0	0	0
FORT WAYNE	38	21	45	1	29	-3	.6	.0	.5	.6	120	7.7	179	90	65	0	0	0	0	0	0	0	0	0
INDIANAPOLIS	41	24	48	2	32	-4	1.5	.7	.8	1.5	222	7.1	131	92	73	0	0	0	0	0	0	0	0	0
SOUTH BEND	40	24	48	7	32	0	.3	-3	.3	.3	54	5.8	125	88	57	0	0	0	0	0	0	0	0	0
IA DES MOINES	40	26	46	6	33	1	.9	.6	.5	.9	297	4.0	176	96	72	0	0	0	0	0	0	0	0	0
SIOUX CITY	36	18	41	5	27	-3	.1	-3	.0	.1	20	2.9	184	98	65	0	0	0	0	0	0	0	0	0
WATERLOO	37	22	39	-6	30	2	1.0	.6	.8	1.0	283	2.9	129	97	75	0	0	0	0	0	0	0	0	0
KS CONCORDIA	41	29	47	17	35	-2	.6	.2	.5	.6	171	3.2	189	95	80	0	0	0	0	0	0	0	0	0
DODGE CITY	43	30	51	28	36	-3	.8	.5	.8	.8	325	4.6	341	92	72	0	0	0	0	0	0	0	0	0
GOODLAND	42	25	50	16	34	-2	.3	.0	.3	.3	137	1.7	173	89	58	0	0	0	0	0	0	0	0	0
TOPEKA	47	28	54	10	38	-1	.6	.1	.3	.6	145	4.1	171	97	71	0	0	0	0	0	0	0	0	0
WICHITA	45	32	51	28	39	-3	.6	.1	.3	.6	143	3.4	139	95	72	0	0	0	0	0	0	0	0	0
KY BOWLING GREEN	48	30	55	20	39	-4	1.0	-1	.6	1.0	106	6.8	77	94	64	0	0	0	0	0	0	0	0	0
LEXINGTON	45	29	53	11	37	-4	1.1</																	

Weather Data for the Week Ending March 6, 1993

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
ME CARIBOU	28	6	36	-11	17	-2	.3	-.2	.3	.3	70	4.6	96	86	46	0	7	1	0	
PORTLAND	36	17	44	10	27	-2	.5	-.3	.4	.5	78	7.1	95	90	46	0	7	2	0	
MD BALTIMORE	45	28	57	15	36	-3	2.1	1.4	1.7	2.1	324	7.7	112	90	56	0	4	3	1	
SALISBURY	49	29	58	14	39	-2	2.5	1.6	2.2	2.5	312	9.0	114	93	54	0	4	4	1	
MA BOSTON	41	26	48	19	33	-1	.9	.1	.9	.9	132	8.1	102	81	43	0	5	3	1	
CHATHAM	38	29	43	26	33	0	1.0	.2	.8	1.0	139	7.1	84	88	47	0	6	3	1	
MI ALPENA	39	14	49	-2	26	3	.1	-.4	.1	.1	17	2.2	67	96	51	0	7	1	0	
DETROIT	40	24	48	6	32	1	.7	-.2	.7	.7	158	5.9	150	87	54	0	6	1	1	
FLINT	38	21	45	-3	29	1	.1	-.3	.1	.1	41	4.1	137	92	61	0	7	1	0	
GRAND RAPIDS	39	25	44	14	32	3	.1	-.4	.1	.1	12	5.4	147	93	64	0	7	1	0	
HOUGHTON LAKE	41	18	54	-6	30	7	.0	-.4	.0	.0	0	2.6	87	94	56	0	7	0	0	
LANSING	40	20	47	-1	30	3	.2	-.2	.2	.2	59	4.6	152	90	57	0	7	2	0	
MARQUETTE	40	18	53	12	29	10	.0	-.6	.0	.0	0	3.1	70	87	56	0	7	0	0	
MUSKEGON	41	25	47	8	33	4	.0	-.5	.0	.0	0	3.4	81	89	51	0	6	0	0	
SAULT ST. MARIE	40	18	44	7	29	10	.0	-.5	.0	.0	0	2.4	53	80	44	0	7	0	0	
MN ALEXANDRIA	40	19	48	9	29	9	.0	-.2	.0	.0	0	1.0	57	94	69	0	7	0	0	
DULUTH	43	22	51	14	33	14	.0	-.3	.0	.0	0	2.2	95	87	46	0	7	0	0	
INT'L FALLS	44	21	51	18	32	17	.0	-.2	.0	.0	12	.8	48	88	46	0	7	1	0	
MINNEAPOLIS	41	20	44	4	31	6	.0	-.4	.0	.0	0	1.7	77	91	53	0	7	0	0	
ROCHESTER	35	18	41	0	26	2	.0	-.3	.0	.0	0	2.0	111	92	58	0	7	0	0	
MS GREENWOOD	58	39	66	29	48	-3	.4	.8	.3	.4	39	6.1	59	95	54	0	1	2	0	
JACKSON	61	40	66	31	50	-2	.8	.5	.5	.8	69	8.9	78	88	52	0	1	2	0	
MERIDIAN	60	40	63	31	50	-3	1.4	-.1	1.3	1.4	109	15.9	134	87	49	0	1	2	1	
MO CAPE GIRARDEAU	47	30	55	15	39	-3	1.0	-.1	.8	1.0	109	9.7	135	95	67	0	3	3	1	
COLUMBIA	44	28	55	6	36	-1	.7	-.2	.3	.7	145	5.1	134	93	72	0	5	3	0	
KANSAS CITY	45	30	56	15	37	0	.5	.0	.2	.5	120	3.7	144	94	71	0	4	3	0	
SAINT LOUIS	46	30	55	14	38	-2	1.2	.4	.6	1.2	187	7.5	164	92	66	0	4	3	1	
SPRINGFIELD	47	33	58	21	40	-1	.3	-.4	.2	.3	48	5.8	135	95	74	0	3	4	0	
MT BILLINGS	51	30	62	21	41	9	.0	-.2	.0	.0	0	0	8	45	67	29	0	5	0	
GLASGOW	41	17	47	10	29	5	.0	-.1	.0	.0	14	.6	80	89	51	0	7	1	0	
GREAT FALLS	49	32	55	25	40	10	.0	-.2	.0	.0	0	1.9	113	69	43	0	3	0	0	
HAVRE	45	27	55	22	36	10	.0	-.1	.0	.0	0	.6	65	83	46	0	6	0	0	
HELENA	39	15	49	5	27	-3	.0	-.1	.0	.0	0	1.8	156	80	51	0	6	0	0	
KALISPELL	41	17	49	-1	29	-1	.1	-.2	.0	.1	35	2.4	83	89	49	0	6	3	0	
MILES CITY	43	21	50	13	32	3	.1	-.0	.1	.1	111	1.0	94	94	65	0	7	1	0	
MISSOULA	43	17	55	-3	30	-3	.0	-.2	.0	.0	5	1.5	69	87	44	0	5	1	0	
NE GRAND ISLAND	37	24	39	18	31	-2	.5	-.2	.4	.5	172	3.2	211	95	68	0	7	2	0	
LINCOLN	39	25	45	6	32	-1	.8	.5	.4	.8	271	2.1	132	97	75	0	7	3	0	
NORFOLK	40	20	43	7	30	-1	.0	-.3	.0	.0	3	3.0	191	93	63	0	7	1	0	
NORTH PLATTE	41	18	44	1	30	-2	.0	-.2	.0	.0	6	2.1	217	90	58	0	7	1	0	
OMAHA	38	27	44	16	33	0	.5	.5	.4	.5	142	2.3	132	94	75	0	7	3	0	
SCOTTSBLUFF	39	16	45	0	27	-6	.0	-.2	.0	.0	0	2.1	188	92	61	0	6	0	0	
VALENTINE	40	17	45	0	28	-3	.3	-.1	.0	.3	125	1.4	117	89	60	0	7	3	0	
NV ELY	35	4	47	-8	20	-12	.1	-.1	.1	.3	47	3.6	230	90	50	0	7	1	0	
LAS VEGAS	65	43	73	37	54	0	.0	-.1	.0	.0	0	4.1	405	71	35	0	0	1	0	
RENO	56	28	63	23	42	2	.2	-.2	.2	.2	107	2.7	177	90	48	0	5	2	0	
WINNEMUCCA	51	26	60	11	38	0	.0	-.2	.0	.0	0	3.7	164	85	36	0	6	0	0	
NE CONCORD	37	13	43	-7	25	-3	.2	-.1	.1	.2	107	2.7	177	90	48	0	5	2	0	
NJ ATLANTIC CITY	45	27	55	18	36	-1	2.9	2.1	2.5	2.9	427	7.9	110	90	54	0	6	2	1	
NM ALBUQUERQUE	54	31	61	27	42	-2	.8	.7	.8	.8	22	2.8	270	75	34	0	5	2	1	
CLOVIS	56	32	60	24	44	0	.0	-.1	.1	.1	42	.9	94	90	33	0	3	2	0	
ROSWELL	60	32	67	24	46	-3	.3	.1	.2	.1	29	.9	107	74	27	0	2	2	0	
NY ALBANY	37	19	43	-1	28	-1	.1	-.6	.1	.1	11	5.0	97	84	47	0	7	1	0	
BINGHAMTON	33	20	41	6	27	-1	.4	-.2	.3	.4	71	5.2	99	93	55	0	7	3	0	
BUFFALO	35	23	43	2	29	0	.6	.0	.4	.6	120	6.9	124	92	65	0	7	3	0	
NEW YORK	41	29	49	22	35	-3	1.1	.4	1.0	1.1	175	7.5	114	82	54	0	5	2	1	
ROCHESTER	35	22	40	-2	28	-1	.4	-.1	.3	.4	102	4.3	93	94	64	0	7	2	0	
SYRACUSE	35	20	42	-2	28	-2	.1	-.5	.0	.1	10	5.6	112	89	50	0	7	2	0	
NC ASHEVILLE	49	32	57	23	41	-4	.9	-.7	.5	.9	81	6.7	71	87	51	0	4	3	1	
CHARLOTTE	55	37	61	26	46	-1	1.7	.4	1.2	1.7	191	10.6	126	81	42	0	3	2	2	
GREENSBORO	52	34	58	23	43	-2	2.4	1.6	1.6	2.4	330	9.5	131	81	47	0	4	2	2	
HATTERAS	54	40	63	31	47	-2	1.1	-.2	.6	1.1	134	12.2	118	83	51	0	2	2	2	
NEW BERN	57	37	67	24	47	-3	1.3	.4	.8	1.3	164	10.2	110	87	35	0	2	2	2	
RALEIGH	55	35	65	22	45	-1	2.8	1.9	1.5	2.8	360	9.5	120	89	50	0	3	3	2	
WILMINGTON	61	37	68	26	49	0	1.4	.3	.9	1.4	150	10.1	102	91	38	0	2	2	1	
ND BISMARCK	46	20	52	13	33	11	.0	-.1	.0	.0	0	.6	62	90	47	0	6	0	0	
FARGO	38	19	41	10	28	9	.0	-.2	.0	.0	0	1.0	76	91	56	0	7	0	0	
GRAND FORKS	43	24	47	12	34	16	.0	-.2	.0	.0	0	.4	29	95	65	0	7	0	0	
WILLISTON	44	21	52	13	33	10	.0	-.1	.0	.0	0	.5	43	90	47	0	7	0	0	
OH AKRON-CANTON	39	27	48	13	33	0	1.3	.6	1.1	1.3	220	7.2	145	92	64	0	5	2	1	
CINCINNATI	42	26	46	8	34	-4	1.3	-.4	.8	1.3	167	8.5	142	95	68	0	5	4	1	
CLEVELAND	40	25	48	7	32	0	1.2	.6	1.1	1.2	233	8.3	174	91	62	0	6	2	1	
COLUMBUS	41	26	50	5	34	0	1.0	.3	.8	1.0	173	6.9	147	91	70	0	4	3	1	
DAYTON	40	24	46	3	32	-3	1.5	.8	1.3	1.5	247	8.1	166	90	68	0	5	4	1	

Based on 1961-90 normals.

Weather Data for the Week Ending March 6, 1993

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.			
TOLEDO	39	23	44	2	31	0	1.0	.5	1.0	1.0	222	5.9	150	93	63									
YOUNGSTOWN	39	25	47	10	32	1	1.6	.9	1.4	1.6	284	7.2	153	92	62	0	6	6	1	1	1	1	1	1
OK OKLAHOMA CITY	48	34	59	32	41	-5	1.4	.2	.3	1.2	60	4.8	153	90	71	0	0	2	2	2	0	0	0	0
TULSA	50	36	61	30	43	-3	1.2	.2	.1	1.2	31	5.1	125	88	64	0	0	2	2	3	3	0	0	0
OR ASTORIA	53	42	56	28	47	2	1.6	.1	.7	1.6	110	9.2	48	97	70	0	0	1	1	1	1	1	1	1
BURNS	28	4	36	-22	16	-18	.3	.0	.3	.3	137	2.7	136	95	62	0	0	7	7	5	5	0	0	0
MEDFORD	60	35	75	25	48	3	1.1	.4	.1	1.1	13	4.1	81	94	48	0	0	2	2	1	1	1	1	1
PENDLETON	38	20	58	1	29	-14	.1	.1	.1	.1	170	3.0	104	93	60	0	0	6	6	1	1	1	1	1
PORTLAND	51	35	65	27	43	-3	1.0	.4	.2	1.0	137	4.8	48	90	60	0	0	3	3	4	4	0	0	0
SALEM	56	37	64	22	46	2	.7	.3	.4	.7	85	7.1	63	87	61	0	0	2	2	6	6	0	0	0
PA ALLENTOWN	41	25	49	11	33	-2	1.3	.6	1.1	1.3	218	6.1	91	89	54	0	0	6	6	4	4	1	1	1
ERIE	36	24	42	7	30	-2	1.3	.8	1.1	1.3	142	6.1	122	97	71	0	0	7	7	3	3	1	1	1
HARRISBURG	41	29	50	12	35	-2	1.1	.7	.5	.8	142	6.1	122	97	71	0	0	7	7	3	3	1	1	1
PHILADELPHIA	45	31	54	22	38	1	1.7	1.0	1.6	1.7	267	6.7	93	78	49	0	0	4	4	4	4	1	1	1
PITTSBURGH	41	29	53	16	35	0	1.2	.4	.9	1.2	189	7.1	127	94	67	0	0	4	4	3	3	1	1	1
SCRANTON	39	23	50	6	31	-1	1.8	.2	.6	1.8	167	3.8	80	92	55	0	0	4	4	3	3	1	1	1
RI PROVIDENCE	40	24	47	20	32	-2	1.0	.2	.6	1.0	125	8.5	103	88	47	0	0	7	7	2	2	1	1	1
SC CHARLESTON	61	40	69	30	51	-4	1.3	.3	.9	1.3	147	13.3	175	88	44	0	0	1	1	2	2	1	1	1
COLUMBIA	59	36	65	24	47	-4	1.3	.2	1.1	1.3	136	12.1	127	91	47	0	0	3	3	2	2	1	1	1
FLORENCE	61	39	70	28	50	-2	1.2	.3	.6	1.2	149	10.3	136	85	37	0	0	2	2	2	2	2	2	2
GREENVILLE	53	33	59	23	43	-5	2.3	1.1	1.8	2.3	218	13.0	136	87	47	0	0	4	4	3	3	1	1	1
SD ABERDEEN	39	15	44	0	27	4	T	T	T	T	0	1.1	80	93	60	0	0	6	6	0	0	0	0	0
HURON	40	14	44	-1	27	1	1.0	.3	.0	1.0	0	.9	65	92	61	0	0	7	7	0	0	0	0	0
RAPID CITY	42	25	51	17	34	3	T	T	T	T	20	1.3	128	83	53	0	0	5	5	1	1	0	0	0
SIoux FALLS	37	13	39	-4	25	-2	T	T	T	T	0	1.5	110	93	62	0	0	7	7	0	0	0	0	0
TN CHATTANOOGA	52	35	62	24	44	-3	1.5	.2	.9	1.5	129	10.4	95	92	60	0	0	3	3	4	4	2	2	2
KNOXVILLE	48	32	57	21	40	-5	1.2	.1	.6	1.2	121	7.5	81	93	59	0	0	3	3	4	4	1	1	1
MEMPHIS	55	39	62	29	47	-2	.8	.4	.7	.8	78	6.8	75	92	56	0	0	2	2	3	3	1	1	1
NASHVILLE	50	33	58	20	42	-4	1.4	.3	1.0	1.4	152	7.2	87	90	57	0	0	3	3	4	4	1	1	1
TX ABILENE	60	37	66	32	48	-4	.5	.3	.4	.4	171	2.5	105	79	36	0	0	1	1	2	2	0	0	0
AMARILLO	53	29	58	21	41	-1	.2	.0	.2	.2	129	1.4	106	88	42	0	0	6	6	1	1	0	0	0
AUSTIN	67	46	75	36	56	-1	.7	.2	.6	1.1	19	6.6	156	83	43	0	0	0	0	2	2	1	1	1
BEAUMONT	68	48	73	36	58	0	1.5	.8	1.0	1.5	233	15.5	177	93	45	0	0	0	0	3	3	2	2	2
BROWNSVILLE	74	55	83	49	65	-1	.8	.7	.3	.5	540	5.2	191	93	59	0	0	0	0	4	4	0	0	0
CORPUS CHRISTI	70	50	79	40	60	-2	.7	.4	.4	.4	182	2.5	65	91	59	0	0	0	0	3	3	0	0	0
DEL RIO	70	45	77	39	57	-1	.1	-.2	.1	T	11	1.4	51	70	28	0	0	0	0	3	3	0	0	0
EL PASO	62	36	70	31	49	-3	.1	.0	.1	.0	0	1.7	188	62	26	0	0	2	2	1	1	0	0	0
FORT WORTH	58	42	68	36	50	-2	.6	-.1	.5	.5	87	8.0	167	84	51	0	0	0	0	2	2	0	0	0
GALVESTON	66	54	70	47	60	1	1.1	.6	.9	1.1	244	14.1	236	79	52	0	0	0	0	2	2	1	1	1
HOUSTON	68	47	72	39	58	0	3.6	2.8	3.3	3.5	547	12.0	149	88	46	0	0	0	0	3	3	1	1	1
LUBBOCK	58	31	64	24	45	-3	.2	.0	.1	.1	41	1.5	121	83	35	0	0	3	3	2	2	0	0	0
MIDLAND	62	36	72	27	49	-4	.4	.3	.2	.2	244	2.3	206	81	33	0	0	2	2	2	2	0	0	0
SAN ANGELO	64	37	75	32	51	-3	.3	.1	.2	.1	47	1.8	90	82	34	0	0	2	2	2	2	0	0	0
SAN ANTONIO	68	44	75	35	56	-2	.7	.4	.5	.2	61	5.2	136	87	40	0	0	0	0	2	2	1	1	1
VICTORIA	71	49	77	40	60	1	.2	-.4	.1	.2	33	7.0	105	90	48	0	0	0	0	3	3	0	0	0
WACO	61	41	73	32	51	-3	.5	.0	.4	.2	40	6.5	156	91	51	0	0	1	1	2	2	0	0	0
WICHITA FALLS	55	36	63	31	46	-4	1.7	1.1	1.3	1.3	302	5.9	157	91	56	0	0	2	2	1	1	0	0	0
UT CEDAR CITY	47	23	53	18	35	-2	T	-.3	T	T	0	4.3	238	92	44	0	0	7	7	1	1	0	0	0
SALT LAKE CITY	41	26	45	20	33	-5	T	-.4	T	T	0	4.6	170	87	59	0	0	6	6	0	0	0	0	0
VT BURLINGTON	32	11	41	-10	22	-3	.1	-.4	.1	.1	21	4.2	109	91	50	0	0	7	7	3	3	0	0	0
VA NORFOLK	55	37	68	27	46	1	2.0	1.2	1.6	2.0	277	9.3	116	82	43	0	0	2	2	2	2	1	1	1
RICHMOND	55	33	65	20	44	0	2.4	1.6	1.8	2.4	341	9.7	137	85	53	0	0	3	3	3	3	2	2	2
ROANOKE	48	34	55	24	41	-2	2.8	2.0	2.1	2.8	421	10.0	158	75	49	0	0	3	3	3	3	2	2	2
WA QUILLAYUTE	52	40	59	27	46	4	4.1	1.3	2.1	4.1	172	12.9	44	96	68	0	0	1	1	5	5	2	2	2
SEATTLE-TACOMA	56	41	61	30	49	4	1.1	.2	.5	1.1	142	5.5	54	92	52	0	0	1	1	4	4	1	1	1
SPOKANE	40	21	50	3	31	-6	.1	-.3	.1	.1	29	2.4	63	95	49	0	0	5	5	3	3	0	0	0
YAKIMA	37	21	51	10	29	-11	.3	.1	.2	.3	214	1.9	90	93	58	0	0	7	7	3	3	0	0	0
WV BECKLEY	41	28	48	15	35	-3	1.6	.9	1.1	1.6	255	6.1	93	89	60	0	0	4	4	4	4	1	1	1
CHARLESTON	47	30	58	17	39	-3	1.8	1.0	1.4	1.8	267	6.7	101	86	56	0	0	4	4	3	3	1	1	1
HUNTINGTON	46	30	51	16	38	-1	1.3	.5	1.0	1.3	197	7.2	107	91	63	0	0	4	4	4	4	1	1	1
PARKERSBURG	45	29	55	10	37	-1	1.8	1.0	1.4	1.8	259	6.3	93	89	59	0	0	4	4	3	3	1	1	1
WI GREEN BAY	41	21	49	7	31	7	.0	-.4	.0	.0	0	1.8	70	88	54	0	0	7	7	0	0	0	0	0
LACROSSE	41	24	48	11	33	6	.0	-.3	.0	.0	0	2.4	112	88	54	0	0	6	6	0	0	0	0	0
MADISON	40	23	45	6	32	4	T	-.4	T	T	3	2.8	111	86	51	0	0	6	6	1	1	0	0	0
MILWAUKEE	41	27	48	12	34	5	.0	-.5	.0	.0	0	3.6	104	86	56	0	0	6	6	0	0	0	0	0
WAUSAU	44	19	53	10	32	9	.0	-.3	.0	.0	0	1.8	87	95	50	0	0	7	7	0	0	0	0	0
WY CASPER	40	22	48	16	31	1	T	-.2	T	T	0	1.7	134	84	52	0	0	6	6	0	0	0	0	0
CHEYENNE	46	26	50	21	36	5	T	-.1	T	T	25	1.2	129	75	35	0	0	6	6	1	1	0	0	0
LANDER	28	2	50	-9	15	-15	T																	

February Weather and Crop Summary

Weather

Precipitation continued to accumulate at the highest rate in a decade in California, and the coldest airmasses since February and December 1989 covered much of the northern two-thirds of the Nation. However, storms preceded the coldest outbreaks, blanketing winter grains with protective snow cover.

Temperatures averaged more than 10°F below normal over parts of New England, the northern and central Plains, the northern and central Rockies, and the Harney Basin of Oregon. Above-normal readings were confined to the southern tier States and the western Great Lakes. Storm systems tended to bring their warmth and sub-tropical moisture to the Southwest before over-running the cold air east of the Rockies. As a result, heavy precipitation was observed in California and the Southwest, and significant snowfalls occurred from the central Plains eastward. But the cold air also suppressed storms from reaching the northern tier States, resulting in drier-than-normal conditions in many areas from Washington eastward to northern Wisconsin.

In California, snowstorms continued in the Sierra Nevada at a relentless pace. The moisture content of the Sierra snowpack stood at 180 percent of normal on March 1, based on actual measurements and the observations of dozens of automated sensors. By month's end, snowmelt and runoff at lower elevations boosted the State's reservoir holdings to 21.3 million acre feet (6.94 trillion gallons), or 85 percent of normal. Those figures represent an increase from 16.0 million acre feet (5.21 trillion gallons), or 64 percent of normal on March 1, 1992.

But farther north, the Northwest region (Washington, Oregon, and Idaho) concluded its 15th driest February and its 17th driest winter since 1895. Washington was especially dry, notching its second driest February, and its seventh driest winter. Winter (December 1992 to February 1993) precipitation in the Northwest was only about 80 percent of normal, representing the 10th consecutive winter of normal to below-normal precipitation. Nevertheless, spring snowmelt prospects are better than last year because persistent cold weather allowed most of the precipitation to fall in the form of snow.

February's anomalous weather pattern in the West provided the opportunity for some remarkable comparisons. For example, Yuma, AZ (normal annual rainfall of about 3 inches), received a monthly total rainfall of 1.22 inches, which topped the total of 0.87 inches in Quillayute, WA (normal annual rainfall of more than 100 inches). Since this pattern existed throughout most of the winter, seasonal rainfall totals in locations such as Los Angeles, CA (20 inches), and Phoenix, AZ (nearly 10 inches), exceeded those in Portland, OR (9 inches), and Seattle, WA (nearly 9 inches). In Las Vegas, NV, year-to-date rainfall through the end of February (4.15 inches) already surpassed the normal annual value (4.13 inches).

Farther east, a steady progression of storms produced several significant snowfall events. Evansville, IN (16 inches), Columbia, MO (20 inches), and Cleveland, OH (39 inches),

were among the cities to set February snowfall records. Dodge City, KS, will remember 1992-93 as the snowiest winter on record. Through March 1, more than 58 inches had fallen. But farther north, Sault Sainte Marie, MI, had its sunniest, driest February on record. Conditions were not nearly as pleasant in Caribou, ME, which had its coldest February, averaging 4.2°F.

Arctic air originated over Alaska early in the month and soon infiltrated New England. After mid-month, cold air poured into the Plains and the Midwest. On February 2, Anchorage (-22°F) and Fairbanks, AK (-58°F), set February low temperature marks. By February 7, readings of -14°F in Albany, NY, and -16°F in Portland, ME, were the coldest readings in 6 and 9 years, respectively. Temperatures fell to as low as -44°F in northern Vermont. A week later, temperatures briefly soared in southern Texas in advance of an arctic front. McAllen, TX, attained 95°F on February 15. But by February 17 and 18, the coldest air of the winter was in place across the central Plains and the Midwest. The reading of -15°F in Springfield, IL, was the coldest since December 1989. Northern Florida experienced its first hard freeze of the winter on February 18, as Jacksonville registered 26°F. Meanwhile in Alaska, temperatures rebounded to above-normal levels. Late in the month, a renewed surge of cold air dropped temperatures to -28°F in Bismarck, ND, -24°F in Webster City, IA, and -22°F in Burns, OR.

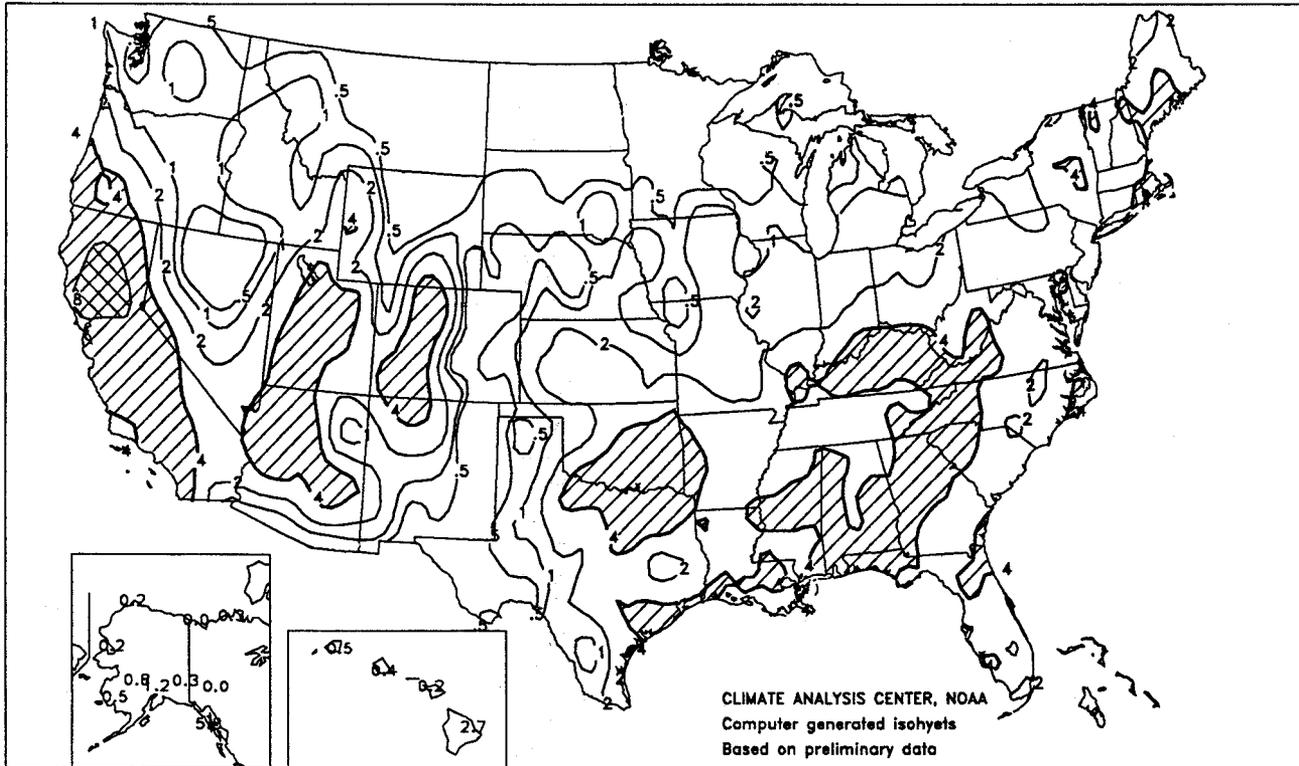
Toward month's end, Arizona's Gila River was continuing to absorb unprecedented levels of runoff from earlier rains and mountain snowmelt. As a result, major flooding developed below the Painted Rock Dam and extended to the river's junction at the Colorado River near Yuma. In contrast, little rain has fallen on the Hawaiian island chain since late December. The sub-tropical fetch of moisture that has been fueling heavy rainfall in the Southwest was positioned over Hawaii during December 1992, but has since shifted southward, causing the 2-month dry spell.

Crop Progress

February began with winter wheat in fair to good condition across the Nation. The crop enjoyed adequate snow cover across the North and ample to surplus moisture in the South. Some Texas fields had insect and disease problems, and other fields in the South had stress due to too much moisture. Although warm, dry weather early in the month melted some Northern snow cover, it allowed Southern fields to improve. Continued precipitation the later half of the month extended the snow cover in the North and caused moisture-related problems to recur in the South. The citrus harvest advanced across Florida, Arizona, and California during February. Although storms at the middle of the month hampered harvest activities in California, the orange harvest remained steady. Low temperatures at mid-month in Florida retarded citrus growth. However, favorable weather returned and brought good harvest conditions to Florida by the end of the month.

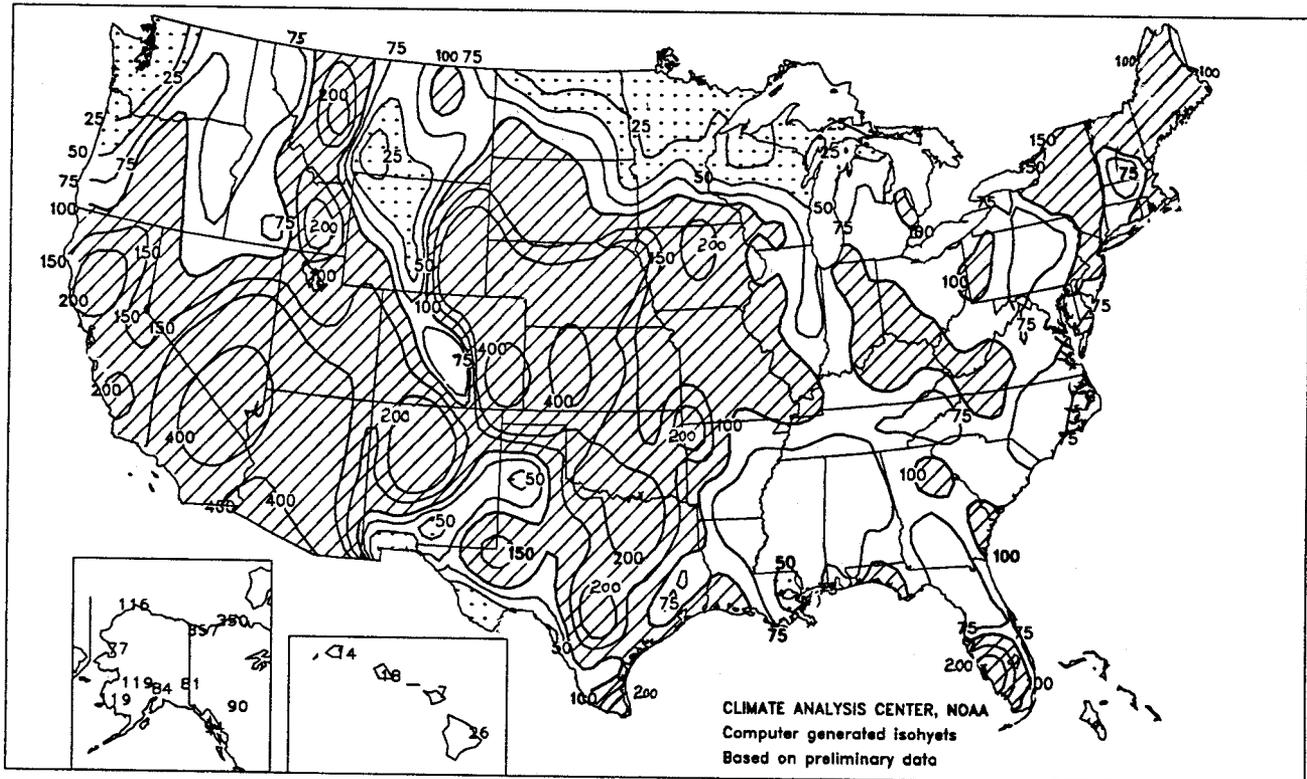
TOTAL PRECIPITATION (inches)

FEB 1993



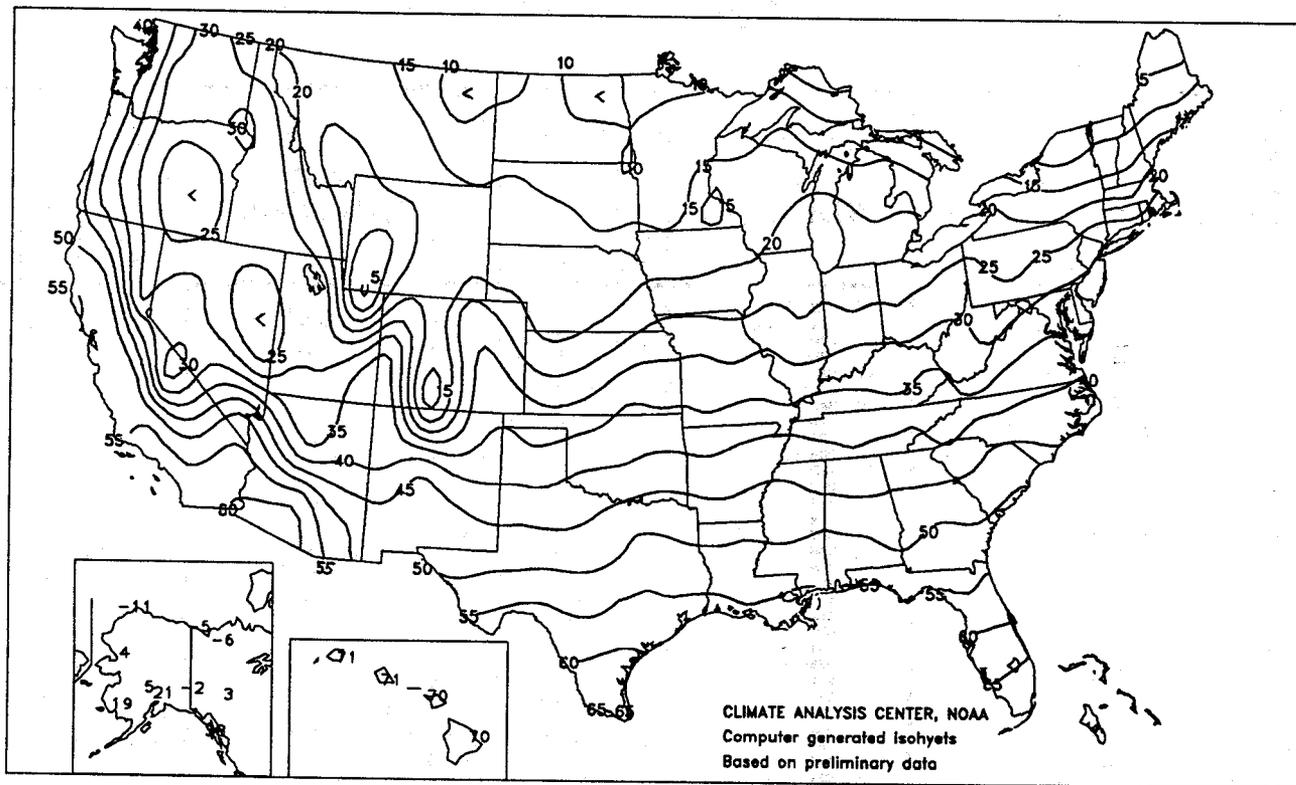
PERCENT OF NORMAL PRECIPITATION

FEB 1993



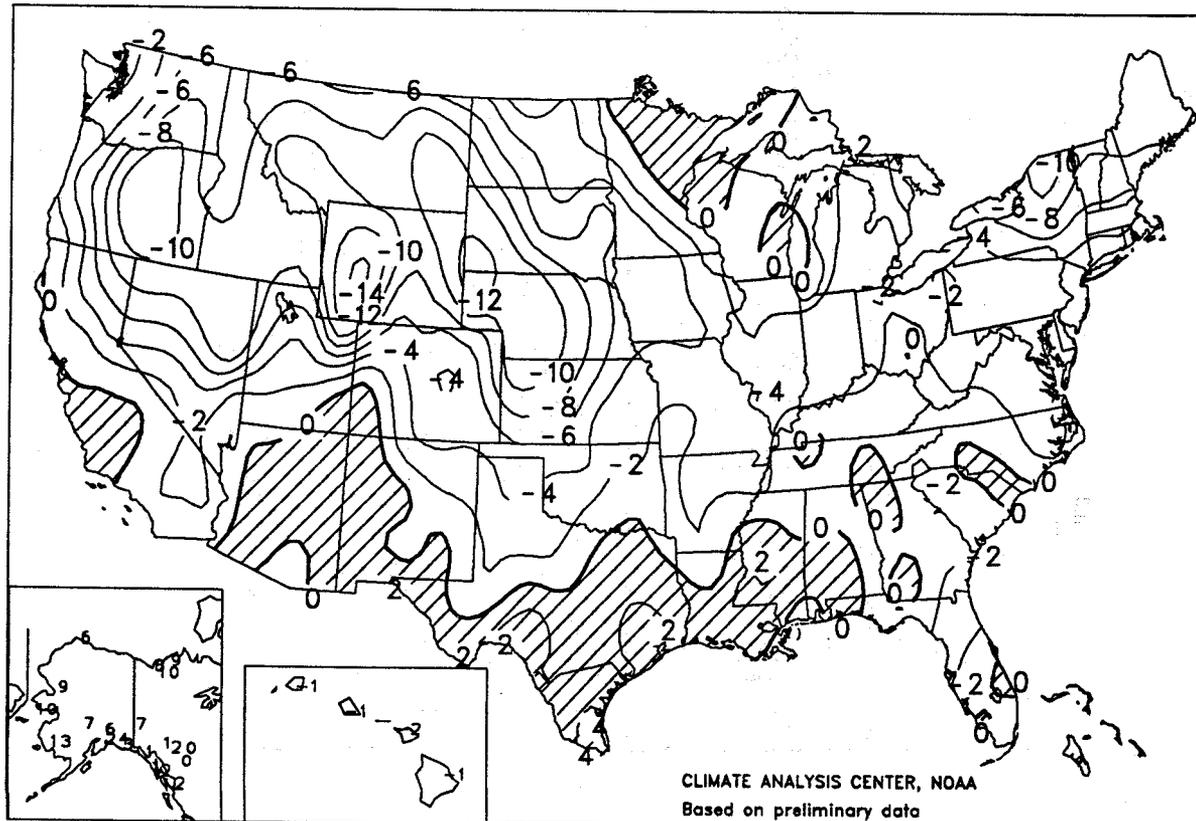
AVERAGE TEMPERATURE(°F)

FEB 1993



Departure of Average Temperature from Normal(°F)

FEB 1993



TEMPERATURE AND PRECIPITATION SUMMARY February 1993

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	45	-1	2.2	-2.5	LA BATON ROUGE	54	1	2.8	-2.7	OK YOUNGSTOWN	24	-1	1.9	-0.1
AL HUNTSVILLE	42	-2	4.8	0.0	LA LAKE CHARLES	55	1	4.3	0.7	OK OKLAHOMA CITY	39	-2	2.8	1.2
AL MOBILE	53	-1	4.5	-1.0	LA NEW ORLEANS	55	0	2.3	-3.7	OK TULSA	38	-2	2.6	0.7
AL MONTGOMERY	49	1	4.4	-0.9	ME SHREVEPORT	49	0	4.8	0.9	OR ASTORIA	42	-2	1.4	-6.2
AK ANCHORAGE	21	2	1.2	0.4	ME CARIBOU	4	-8	2.1	0.2	OR BURNS	19	-11	1.2	0.2
AK BARRON	-11	2	0.2	0.0	ME PORTLAND	17	-7	3.8	0.5	ME MEDFORD	42	-1	1.4	-0.6
AK FAIRBANKS	2	6	0.3	-0.1	MD BALTIMORE	31	-4	2.8	-0.3	ME PENDLETON	28	-11	0.8	-0.3
AK JUNEAU	31	2	8.1	4.4	MD SALISBURY	33	-3	2.4	-1.1	ME PORTLAND	40	-3	0.7	-3.1
AK KODIAK	31	0	7.3	2.0	MA BOSTON	37	-4	4.9	1.3	ME SALEM	39	-3	1.6	-2.9
AK NOME	15	11	1.2	0.6	MA CHATHAM	28	-2	4.2	0.2	PA ALLENTOWN	27	-3	2.8	-0.1
AZ FLAGSTAFF	33	2	10.1	8.0	MI ALPENA	16	-2	0.8	-0.5	PA ERIE	24	-2	2.0	-0.2
AZ PHOENIX	58	1	1.7	1.0	MI DETROIT	24	-1	1.3	-0.5	PA HARRISBURG	29	-3	2.3	-0.6
AZ PRESCOTT	40	1	3.7	2.2	MI FLINT	20	-3	1.2	-0.1	PA PHILADELPHIA	32	-1	3.0	0.2
AZ TUCSON	54	0	1.5	0.8	MI GRAND RAPIDS	22	-2	1.1	-0.3	PA PITTSBURGH	28	-1	2.9	0.5
AZ WINSLOW	40	2	0.6	0.1	MI HOUGHTON LAKE	16	-2	0.9	-0.3	PA SCRANTON	24	-3	1.0	-1.1
AZ YUMA	61	1	1.2	1.0	MI LANSING	21	-1	1.2	0.0	PA WILLIAMSPORT	25	-3	1.3	-1.5
AR FORT SMITH	40	-2	3.1	0.5	MI MARQUETTE	14	0	0.7	-1.0	RI PROVIDENCE	26	-3	5.1	1.4
AR LITTLE ROCK	43	-1	2.8	-0.8	MI MUSKOGEE	23	-1	0.8	-0.7	SC CHARLESTON	50	-1	3.1	-0.2
CA BAKERSFIELD	54	1	2.0	1.0	MI SAULT ST. MARIE	12	-2	0.2	-1.5	SC COLUMBIA	45	-2	3.3	-0.8
CA BISHOP	38	-4	2.6	1.6	MN ALEXANDRIA	13	-1	0.2	-0.5	SC FLORENCE	47	0	2.3	-0.9
CA EUREKA	49	0	5.9	1.2	MN DULUTH	15	2	0.4	-0.4	SC GREENVILLE	42	-2	3.6	-0.8
CA FRESNO	52	1	2.4	0.6	MN INT'L FALLS	9	1	0.1	-0.5	SD ABERDEEN	12	-4	0.5	-0.1
CA LOS ANGELES	57	0	5.5	3.0	MN MINNEAPOLIS	17	-1	0.4	-0.5	SD HURON	14	-5	0.6	-0.1
CA REDDING	47	-3	7.5	3.1	MI ROCHESTER	15	-3	0.8	0.1	SD RAPID CITY	15	-12	0.6	0.1
CA SACRAMENTO	49	-1	5.0	2.1	MI ST. CLOUD	14	-3	0.3	-0.4	SD SIOUX FALLS	15	-5	0.8	0.2
CA SAN DIEGO	58	-1	4.7	3.2	MS GREENWOOD	47	0	2.5	-2.0	TN BRISTOL	37	-1	2.1	-1.3
CA SAN FRANCISCO	53	0	4.7	1.5	MS JACKSON	49	2	3.4	-1.4	TN CHATTANOOGA	43	1	3.7	-1.1
CA STOCKTON	--	--	--	--	MS MERIDIAN	49	0	3.1	-2.3	TN KNOXVILLE	40	-1	2.2	-1.9
CO ALAMOSA	19	-4	0.4	0.1	MS TUPELO	44	-1	3.2	-1.5	TX MEMPHIS	43	-2	2.5	-1.9
CO CO. SPRINGS	29	-4	0.2	-0.1	MO CAPE GIRARDEAU	34	-2	3.5	0.2	TX NASHVILLE	39	-1	3.1	-0.7
CO DENVER	29	-4	0.2	-0.1	MO COLUMBIA	29	-1	2.0	0.2	TX ABILENE	47	-1	1.2	0.1
CO GRAND JUNCTION	36	0	1.1	0.5	MO KANSAS CITY	29	-3	1.3	0.2	TX AMARILLO	36	-3	0.4	-0.3
CO PUEBLO	31	-4	0.2	-0.1	MO SAINT LOUIS	32	-2	2.8	0.6	TX AUSTIN	55	2	3.1	1.0
CT BRIDGEPORT	28	-3	2.6	-0.4	MT SPRINGFIELD	34	-1	2.7	0.7	VT BRAUMONT	56	2	4.1	0.7
CT HARTFORD	24	-4	2.9	-0.3	MT BILLINGS	22	-7	0.3	-0.3	VT BROWNVILLE	66	3	2.9	1.8
DC WASHINGTON	34	-4	2.3	-0.4	MT GLASGOW	8	-10	0.3	0.1	VT CORPUS CHRISTI	62	3	1.7	-0.3
FL APALACHICOLA	55	0	3.9	-0.3	MT GREAT FALLS	19	-8	0.7	0.1	VT DEL RIO	57	4	0.8	-0.6
FL DAYTONA BEACH	58	-2	3.0	-0.1	MT HAVRE	12	-10	0.0	-0.4	VT EL PASO	51	3	0.3	-0.1
FL FT. MYERS	60	-4	2.3	0.1	MT HELENA	15	-11	1.0	0.6	VT FORT WORTH	49	2	5.8	3.4
FL JACKSONVILLE	53	-3	2.9	-1.0	MT KALISPELL	19	-8	0.6	-0.5	VT GALVESTON	58	3	3.8	1.5
FL KEY WEST	71	0	0.3	-1.5	MT MILES CITY	12	-12	0.3	-0.1	VT HOUSTON	57	3	2.7	-1.0
FL MIAMI	69	0	2.1	0.1	MT MISSOULA	18	-11	0.7	-0.1	VT LAREDO	--	--	--	--
FL ORLANDO	61	-1	1.5	-1.5	NE GRAND ISLAND	19	-9	1.5	0.8	VT LUBBOCK	42	-1	0.4	-0.3
FL TALLAHASSEE	53	0	4.5	-1.1	NE LINCOLN	21	-6	0.5	-0.2	VT MIDLAND	47	-1	0.8	0.3
FL TAMPA	60	-1	2.3	-0.8	NE NORFOLK	18	-6	1.7	0.9	VT SAN ANGELO	49	1	0.8	-0.3
FL WEST PALM BEACH	66	-1	2.1	-0.8	NE NORTH PLATTE	18	-10	1.4	0.9	VT SAN ANTONIO	56	2	3.7	1.9
GA ATHENS	44	-1	5.6	1.4	NE OMAHA	21	-5	0.8	0.0	VT VICTORIA	58	3	3.6	0.8
GA ATLANTA	45	0	4.4	-0.4	NE SCOTTSDALE	18	-12	1.6	1.2	VT WACO	50	1	3.8	1.8
GA AUGUSTA	46	-1	3.2	-1.0	NV VALENTINE	17	-11	0.7	0.2	VT WICHITA FALLS	43	-1	3.4	1.4
GA MACON	47	-1	4.2	-0.5	NV ELKO	21	-10	0.9	0.1	UT BLANDING	--	--	--	--
GA SAVANNAH	50	-2	3.4	0.1	NV ELY	19	-10	1.4	0.8	UT CEDAR CITY	33	-2	2.0	1.1
HI HILO	70	-1	2.7	-7.6	LA LAS VEGAS	50	-1	2.5	2.0	VT SALT LAKE CITY	29	-5	1.4	0.1
HI HONOLULU	71	-2	0.4	-1.8	LA RENO	34	-4	1.3	0.3	VT BURLINGTON	10	-8	1.9	0.3
HI KAHULUI	70	-2	0.1	-2.8	LA WINNEMUCCA	29	-6	0.5	-0.1	VA LYNCHBURG	36	-1	3.6	0.7
HI LIHUE	71	-1	0.5	-2.9	NH CONCORD	16	-6	1.6	-0.9	VA NORFOLK	39	-2	2.4	-1.1
ID BOISE	29	-7	1.0	-0.1	NJ ATLANTIC CITY	31	-3	2.4	-0.7	VA RICHMOND	38	-1	2.9	-0.3
ID LEWISTON	33	-6	0.5	-0.4	NM ALBUQUERQUE	42	3	1.8	1.4	VA ROANOKE	36	-1	3.4	0.4
ID POCATELLO	21	-8	2.0	1.1	NV CLOVIS	40	-1	0.4	-0.2	WA COLVILLE	25	-6	0.9	-0.6
IL CAIRO	--	--	--	--	NY ROSWELL	46	1	0.2	-0.3	WA QUILLAYUTE	41	-1	0.9	-11.7
IL CHICAGO	24	-1	0.8	-0.5	NY ALBANY	18	-5	2.9	0.6	WA SEATTLE-TACOMA	42	-1	0.4	-3.6
IL MOLINE	24	-1	0.9	-0.3	NY BINGHAMTON	18	-5	2.7	0.4	WA SPOKANE	26	-8	0.9	-0.6
IL PEORIA	25	-1	1.7	0.3	NY BUFFALO	20	-4	1.9	-0.4	WA WALLA WALLA	--	--	--	--
IL QUINCY	26	-3	1.1	-0.4	NY NEW YORK	30	-3	3.2	0.4	WA YAKIMA	29	-7	0.7	-0.1
IL ROCKFORD	22	0	0.9	-0.3	NY ROCHESTER	19	-6	1.5	-0.6	WV BECKLEY	31	-1	2.8	-0.1
IL SPRINGFIELD	28	-1	1.5	-0.3	NY SYRACUSE	17	-7	2.4	0.3	WV CHARLESTON	34	-2	3.0	-0.1
IN EVANSVILLE	33	-4	2.6	-0.8	NC ASHEVILLE	38	-2	2.0	-2.4	WV ELKINS	28	-2	2.9	-0.1
IN FORT WAYNE	24	-2	1.8	-0.1	NC CHARLOTTE	43	0	2.7	-1.1	WV HUNTINGTON	34	0	3.7	0.6
IN INDIANAPOLIS	27	-3	2.3	-0.2	NC GREENSBORO	38	-2	3.4	0.1	WV PARKERSBURG	30	-3	2.1	-0.7
IN SOUTH BEND	24	-2	2.1	0.2	NC HATTERAS	44	-1	5.2	1.0	WI GREEN BAY	19	1	0.3	-0.7
IA DES MOINES	22	-3	1.5	0.5	NC NEW BERN	44	-2	3.1	-1.2	WI LACROSSE	19	-1	1.2	0.3
IA DUBUQUE	20	-1	1.0	-0.3	NC RALEIGH	41	-1	2.2	-1.5	WI MADISON	21	1	1.2	0.1
IA SIOUX CITY	18	-5	2.1	1.4	ND WILMINGTON	46	0	3.0	-1.4	WI MILWAUKEE	24	1	1.0	-0.5
IA WATERLOO	20	0	1.3	0.2	ND BISMARCK	11	-5	0.3	-0.1	WI WAUSAU	17	0	0.2	-0.6
KS CONCORDIA	24	-7	1.2	0.4	ND FARGO	10	-2	0.2	-0.3	WI CASPER	20	-7	1.0	0.4
KS DODGE CITY	29	-7	2.8	2.2	ND GRAND FORKS	10	0	0.1	-0.4	WI CHEYENNE	25	-4	0.8	0.4
KS GOODLAND	22	-10	1.1	0.7	ND WILLISTON	10	-7	0.2	-0.2	WI LANDER	11	-14	0.3	-0.2
KS TOPEKA	30	-2	1.3	0.3	OH AKRON-CANTON	25	-3	1.9	-0.3	WI SHERIDAN	18	-9	0.3	-0.3
KS WICHITA	33	-4	1.9	0.8	OH CINCINNATI	29	-3	3.4	0.7	PR SAN JUAN	78	1	0.5	-1.6
KY BOWLING GREEN	36	-1	3.0	-1.1	OH CLEVELAND	25	-2	2.6	0.4					
KY JACKSON	35	2	3.5	-0.2	OH COLUMBUS	28	0	1.8	-0.4					
KY LEXINGTON	33	-2	4.2	0.9	OH DAYTON	26	-3	2.8	0.6					
KY LOUISVILLE	34	-2	4.2	0.9	OH MANSFIELD	24	-3	2.0	0.0					
KY PADUCAH	37	0	4.0	0.1	OH TOLEDO	25	-1	1.7	0.0					

Based on 1961-90 normals.

February Weather in Historical Perspective

February 1993 was a cold month with near-normal precipitation. The Nation's average temperature of 31°F was about 3°F below normal (fig. 1). It was the coldest February since 1989, and the 18th coldest since 1895. The national normalized precipitation index (fig. 2) indicated February 1993 to be the 41st wettest (59th driest) February in the past 99 years (table 1).

Temperatures averaged below normal to near-normal in all nine climatic divisions (table 1). The Northwest region experienced its seventh coldest February, and within that region, Oregon had its fourth coldest February. Drier-than-normal weather also covered the Northwest, which had its 15th driest February.

Near- to below-normal precipitation prevailed in all other regions except the West and Southwest, which were very wet. Flash flooding and river flooding remained a problem in the Southwest, where an eighth wettest December and a sixth wettest January were followed by a fourth wettest February. The West had its 20th wettest February.

The past 3 months in California were the wettest since January-March 1983 (fig. 3). The Golden State had its 16th wettest February to conclude its fifth wettest winter on record. Statewide precipitation was nearly 6 inches in February, pushing the seasonal total to more than 20 inches, nearly twice the normal.

Figure 1

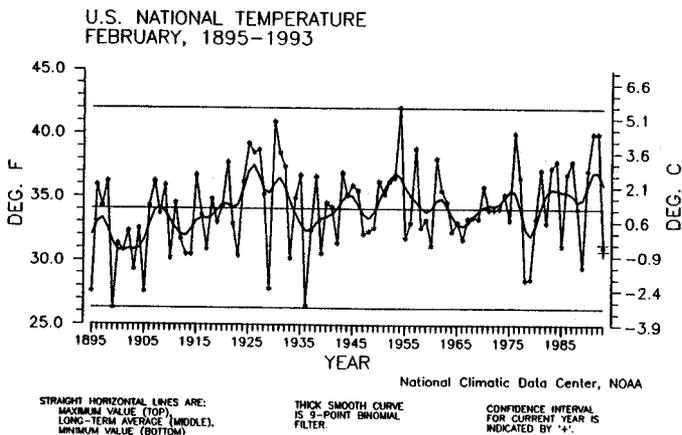


TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR FEBRUARY 1993, BASED ON THE PERIOD 1895-1993. 1 = DRIEST/COLDEST, 99 = WETTEST/HOTTEST.

REGION	PRECIPITATION	TEMPERATURE
NORTHEAST	50	13
EAST NORTH CENTRAL	35	42
CENTRAL	43	32
SOUTHEAST	29	34
WEST NORTH CENTRAL	39	11
SOUTH	45	41
SOUTHWEST	96	35
NORTHWEST	15	7
WEST	80	22
NATIONAL	59	18

Figure 2

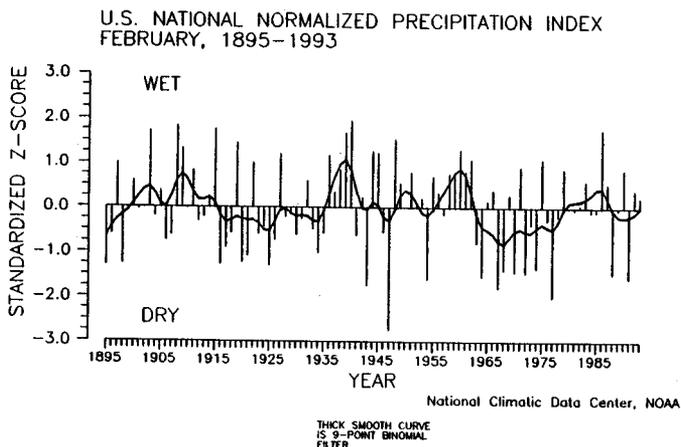
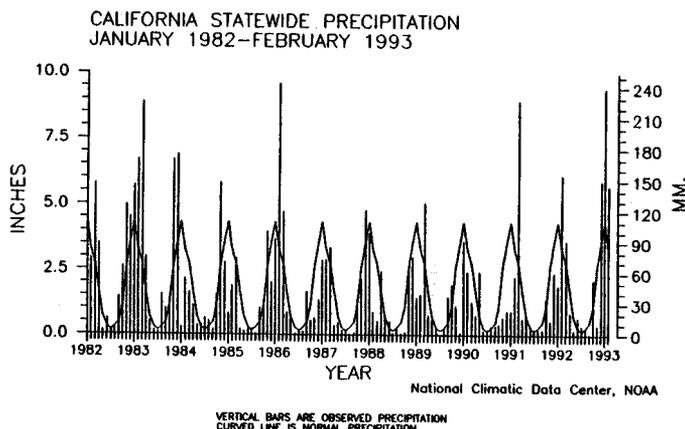


Figure 3



HEATING DEGREE DAYS (Base 65° F) February 1993

STATES AND STATIONS	TOTAL	DEP. FROM NORMAL	STATES AND STATIONS	TOTAL	DEP. FROM NORMAL	STATES AND STATIONS	TOTAL	DEP. FROM NORMAL
AL BIRMINGHAM	559	27	SHREVEPORT	435	-13	DAYTON	1076	85
MOBILE	340	-2	ME CARIBOU	1699	243	TOLEDO	1123	25
MONTGOMERY	453	14	PORTLAND	1344	168	YOUNGSTOWN	1123	28
AK ANCHORAGE	1219	-100	MD BALTIMORE	934	86	OK OKLAHOMA CITY	725	47
BARROW	2130	-239	SALISBURY	882	87	TULSA	755	75
FAIRBANKS	1751	-181	MA BOSTON	1056	96	OR ASTORIA	641	50
JUNEAU	965	-77	CHATHAM	1020	71	BURNS	1290	408
KODIAK	951	-46	MI ALPENA	1362	46	MEDFORD	643	10
NOME	1404	-324	DETROIT	1138	40	PENDLETON	1025	308
AZ FLAGSTAFF	899	-61	FLINT	1238	70	PORTLAND	692	82
PHOENIX	184	-85	GRAND RAPIDS	1203	47	SALEM	711	87
FRESCOTT	683	-39	HOUGHTON LAKE	1358	42	PA ALLENTOWN	1060	60
TUCSON	299	-27	LANSING	1231	63	ERIE	1137	17
WINSLOW	686	-59	MARQUETTE	1424	4	HARRISBURG	1005	67
YUMA	131	-45	MUSKEGON	1152	7	PHILADELPHIA	920	27
AR FORT SMITH	683	50	SAULT ST MARIE	1482	62	PITTSBURGH	1037	23
LITTLE ROCK	619	34	MN ALEXANDRIA	1459	-19	SCRANTON	1150	80
CA BAKERSFIELD	301	-34	DULUTH	1408	-76	RI PROVIDENCE	1077	77
EUREKA	433	-23	INT'L FALLS	1560	-53	SC CHARLESTON	421	-13
FRESNO	359	-47	MINNEAPOLIS	1335	5	COLUMBIA	543	35
LOS ANGELES	216	-17	ROCHESTER	1407	63	FLORENCE	484	-22
REDDING	493	84	SAINTE CLOUD	1425	-11	GREENVILLE	640	41
SACRAMENTO	425	13	MS GREENWOOD	508	-1	SD ABERDEEN	1481	101
SAN DIEGO	191	-5	JACKSON	437	-25	HURON	1421	108
SAN FRANCISCO	346	-29	MERIDIAN	441	-23	RAPID CITY	1390	298
STOCKTON	400	-12	MO CAPE GIRARDEAU	855	57	SIOUX FALLS	1397	112
CO DENVER	992	113	COLUMBIA	995	85	TN CHATTANOOGA	612	-32
GRAND JCT.	799	-83	KANSAS CITY	1011	90	KNOXVILLE	708	50
PUEBLO	959	125	SAINT LOUIS	927	53	MEMPHIS	617	15
CT BRIDGEPORT	1036	73	SPRINGFIELD	867	61	NASHVILLE	713	24
HARTFORD	1153	106	MT BILLINGS	1210	185	TX ABILENE	509	30
DE WILMINGTON	946	56	GLASGOW	1610	235	AMARILLO	808	97
DC WASHINGTON	855	85	GREAT FALLS	1274	202	AUSTIN	296	-51
FL APALACHICOLA	276	-35	HAVRE	1478	207	BEAUMONT	238	-68
DAYTONA BEACH	210	-4	HELENA	1397	305	BROWNSVILLE	58	-77
FORT MYERS	137	17	KALISPELL	1275	191	CORPUS CHRISTI	132	-77
JACKSONVILLE	323	21	MILES CITY	1495	294	DEL RIO	218	-64
KEY WEST	5	-32	MISSOULA	1298	265	EL PASO	373	-92
MIAMI	7	-55	NE GRAND ISLAND	1288	230	FORT WORTH	445	0
ORLANDO	131	-41	LINCOLN	1233	155	GALVESTON	186	-96
TALLAHASSEE	315	-26	NORFOLK	1308	154	HOUSTON	235	-79
TAMPA	137	-49	NORTH PLATTE	1311	255	LUBBOCK	632	5
W. PALM BEACH	28	-58	OMAHA	1220	162	MIDLAND-ODESSA	494	10
GA ATLANTA	549	-31	SCOTTSDUFF	1323	346	SAN ANGELO	436	8
AUGUSTA	518	23	VALENTINE	1404	262	SAN ANTONIO	269	-50
MACON	487	35	NV ELY	1247	233	VICTORIA	206	-62
SAVANNAH	406	19	LAS VEGAS	410	-7	WACO	405	-10
ID BOISE	1004	195	RENO	853	80	WICHITA FALLS	597	45
LEWISTON	894	152	WINNEMUCCA	992	172	UT BLANDING	806	-90
POCATELLO	1240	246	NH CONCORD	1372	174	CEDAR CITY	892	30
IL CHICAGO	1133	41	NJ ATLANTIC CITY	961	71	SALT LAKE CITY	986	121
MOLINE	1156	39	NM ALBUQUERQUE	624	-93	VT BURLINGTON	1517	204
PEORIA	1110	40	CLOVIS	699	19	VA LYNCHBURG	796	23
QUINCY	1094	86	ROSWELL	534	-1	NORFOLK	722	53
ROCKFORD	1183	18	NY ALBANY	1300	135	RICHMOND	757	26
SPRINGFIELD	1041	47	BINGHAMTON	1311	118	ROANOKE	807	48
IN EVANSVILLE	892	49	BUFFALO	1235	101	WA COLVILLE	1102	150
FORT WAYNE	1141	60	NEW YORK	964	76	QUILLAYUTE	667	15
INDIANAPOLIS	1046	63	ROCHESTER	1289	152	SEATTLE-TACOMA	629	7
SOUTH BEND	1135	54	SYRACUSE	1337	189	SPOKANE	1102	189
IA DES MOINES	1210	76	NC ASHEVILLE	751	26	YAKIMA	1005	196
DUBUQUE	1246	22	CAPE HATTERAS	570	27	WV BECKLEY	932	16
SIOUX CITY	1297	127	CHARLOTTE	610	-9	CHARLESTON	862	39
WATERLOO	1260	3	GREENSBORO	746	43	HUNTINGTON	871	53
KS CONCORDIA	1142	187	NEW BERN	594	40	PARKERSBURG	975	104
DODGE CITY	1013	173	RALEIGH-DURHAM	670	15	WI GREEN BAY	1281	-41
GOODLAND	1187	260	WILMINGTON	530	32	LA CROSSE	1295	27
TOPEKA	984	74	ND BISMARCK	1513	99	MADISON	1220	-26
WICHITA	913	76	FARGO	1542	30	MILWAUKEE	1132	-44
KY BOWLING GREEN	801	28	GRAND FORKS	1529	-31	WAUSAU	1350	-25
LEXINGTON	884	33	WILLISTON	1551	140	WY CASPER	1266	199
LOUISVILLE	859	44	OH AKRON-CANTON	1116	58	CHEYENNE	1118	118
LA BATON ROUGE	299	-43	CLEVELAND	1097	44	LANDER	1509	409
LAKE CHARLES	282	-42	COLUMBUS	1034	48	SHERIDAN	1317	228
NEW ORLEANS	285	-33	CINCINNATI	997	76			

Based on 1961-90 normals.

National Agricultural Summary

March 1 - 7, 1993

HIGHLIGHTS: Above-normal temperatures in the northern Plains reduced the snow cover. Elsewhere, below-normal temperatures continued to hamper crop progress. A strong storm with heavy rains, snow, and high winds battered the eastern third of the Nation at midweek. The storm limited fieldwork in the Southeast. Flooding from previous rainstorms and snow melt hindered the vegetable harvest in western Arizona.

SMALL GRAINS: Snow cover across the northern Plains diminished or completely disappeared as temperatures averaged 3 to 15 degrees above normal. Wheat condition in the Southeast and Northwest was mostly fair to good. The Kansas crop rated 88 percent (%) good to excellent, with minimal disease and winterkill problems. The condition of the crop in Texas rated 82% of normal, compared with 86% last year. Small grains in the South and Southeast could use more sunshine and dry weather. Favorable conditions helped small grains in Texas to grow rapidly. Muddy field conditions halted planting of any spring grains across the central part of the Nation.

COTTON: Cotton field preparations continued in Arizona and California. Planting continued in southwestern Arizona, and increased in south Texas and the Rio Grande Valley. Cool and wet conditions delayed cotton planting in other portions of Texas.

OTHER FIELD CROPS: Alfalfa conditions were good in Arizona and California. The application of weed and insect controls continued. Fields were greening in Nevada. Harvest had increased in Arizona and had begun in California. The sugarcane harvest remained active in Florida. Established sugar beet fields showed excellent growth in California, while new fields were hand weeded. The Georgia onion condition rated fair due to disease problems. Onion harvesting occurred in Texas and California. Texas onion and potato plantings advanced. Potato harvest remained active in Florida. Tobacco plantbeds were mostly fair to good in the Southeast, and good in Texas. Corn and sorghum planting continued across southern and central Texas, and in the South where conditions permitted. Some northern California safflower fields showed damage from excessive moisture.

FRUIT AND NUTS: Favorable conditions aided the citrus harvest in Florida and allowed citrus groves to continue in good condition.

Drier conditions in California permitted seasonal cultural practices to continue as orchards dried. Lemon, grapefruit, tangerine, and sweet and Valencia orange harvests continued in central and western Arizona. Valencia orange and tangerine harvests remained active in Florida. Additional labor allowed the Florida grapefruit harvest to increase. The Valencia and navel orange harvests advanced in California. Grower concern about disease problems with the navel oranges remained. The California lemon and grapefruit harvests remained active. Almonds and stone fruit were in bloom in California. Peaches were in full bloom in central and upper coastal areas of Texas. Early blooming peaches and blueberries in Georgia showed damage from previous cold weather. California grape growers were pruning their vineyards.

VEGETABLES: The Arizona vegetable harvest advanced, except in the flooded western areas. Gusty winds in Florida caused minor problems with plants, but dried fields, and permitted fieldwork. Planting and harvesting remained active in California and Texas. However, wet conditions delayed planting activities in the westside area of California. Lettuce harvests advanced in central and western Arizona, and the Palo Verde and Coachella Valleys of California. The broccoli harvest remained moderate and the cauliflower harvest continued light in the Salinas-Watsonville and Santa Maria areas. Watermelon planting began in Texas, while previous planted melons progressed well.

PASTURES AND LIVESTOCK: The above-normal temperatures reduced stress on livestock in the northern Plains. The warm weather also brought mud to feedyards in the central Plains, which caused stress on livestock. Local feed shortages occurred in Indiana, Oregon, South Dakota, Texas, Washington, and Wyoming. Weather conditions caused high calving losses in Kansas, and respiratory problems in calves in Indiana. Lambing and calving increased in Texas and had advanced under poor conditions in Washington.

(Continued from front cover)

along the **Gulf coast**. Storm-total snowfall reached 5 inches at **Grand Island, NE**, and 3 inches in **Dodge City, KS**. Flash flooding occurred along the **Gulf coast** from **Houston, TX**, to the **Florida Panhandle**, as local rainfall exceeded 5 inches. Meanwhile, warmth spread into the **North Central States**, eroding snow cover and inducing fog formation. On Tuesday, **International Falls, MN**, attained a daily record high of 51°F. By midweek, heavy rain spread northward into the **East**, while beneficial moisture arrived in the **Pacific Northwest**. **Forks, WA**, which received less than 10 percent (less than 1 inch) of its normal rainfall during February, received more than 4 inches after midweek. Meanwhile, sub-tropical moisture wrapped into the slow-moving **Plains** storm, resulting in a major **Middle Atlantic coast** storm reminiscent of the December 10-13, 1992, "nor'easter." On Thursday, widespread flooding and high winds battered **Middle**

Atlantic piedmont and coastal areas, while heavy snow blanketed the **central Appalachians** and **New England**. Snow also spread westward into the **Midwest**. Extensive flash flooding and river flooding forced the closure of many roads in **Virginia**, eastern **West Virginia**, and surrounding areas, as rainfall commonly topped 4 inches. Winds were clocked at 65 mph sustained, with gusts to 75 mph, at the **Ambrose Light Station** near **New York City, NY**. Even inland, a wind gust to 67 mph was measured in **Kingwood, WV**. Snowfall west of the **Appalachians** included 2 inches at **Champaign, IL**, 7 inches in **Detroit, MI**, and 9 inches in **Toledo, OH**. Farther east, totals locally topped 1 foot from **northern West Virginia** to **southern Maine**. **East Hampton, CT**, recorded 15 inches of new snow. Late in the week, cool air slipped into the **Southeast** in the wake of the storm, while the **West** warmed rapidly. **Medford, OR**, reached 75°F, and was one of six stations to report a daily record high on Saturday.

State Summaries of Weather and Agriculture

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

ALABAMA: Rainfall 0.24 to 1.50 in. north; 0.52 to 2.50 in. central; 1.31 in. to 2.27 in. south. Temperatures 7° below normal to 1° above north; 1 to 6° below normal central; 1 to 5° below normal south. Lows 22 to 34° north; 23 to 34° central; 30 to 37° south. Highs 59 to 66° north; 63 to 70° central; 67 to 71° south.

Primary activities: Soil testing; purchasing supplies; harvesting timber; land preparation for spring planting; applying fertilizer; marketing cattle; maintaining farm records, land-use planning, management, repairing machinery, fences; general care of livestock, poultry, catfish.

ARIZONA: Rain showers statewide, snow higher elevations 27th, 28th. Snow higher eastern elevations, 21st; sunny 2nd; statewide. Scattered showers 3rd; north, central. Light showers 4th far southeast; Sunny skies 5th, 6th. Temperatures 4° below to 1° above normal. Extremes 10°; 72° higher elevations, 30°; 83° deserts.

Cotton field preparations continued; planting continued southwest, 1%, 1% 1992. Alfalfa condition good. Harvest activities increasing, all areas. Weed infestations moderate; insects, disease light. Small grains jointing 47%, 50% 1992, 62% avg. Fields in good condition. Vegetable harvest active except western flooded areas. Bok choy, broccoli, cauliflower, lettuce, cilantro, kale, parsley, napa, spinach, available western, central areas. Also available west: artichokes, celery, escarole, endive. Leeks, beets, cabbage, dill, kohlrabi, radishes, rapini, mixed greens, green onions, turnips available, central. Citrus harvest continued central, western areas. Sweet orange harvest near complete; valencia orange harvest continued. Lemons, grapefruit, tangerines, tangelos available both areas. Tomatoes, pecans harvested eastern areas.

ARKANSAS: Temperatures near normal. Scattered showers first of week; lightest showers occurring in northwestern areas. Extremes 20°; 80°. Rainfall 0.14 to 1.38 in.

Soil moisture supplies adequate to surplus. Wheat fair to good, needs sunshine, dry weather. Some wheat fields saturated. Field activities remained halted. Fuel needed to heat poultry houses at normal levels. Livestock good. Producers feeding hay, supplies adequate. Pastures good.

CALIFORNIA: Started cool, but warmed above normal by 5th. Most areas reported little or no precipitation. A few central areas received over a tenth of an inch of rain.

Progress field activities greatly improved; drier conditions most areas. Small grains, seedling alfalfa, sugarbeets excellent growth. Will reseed some small grains corn, safflower; excessive moisture northern counties. Small grains treated aerially, broadleaf weeds. New sugarbeets hand weeded. Established alfalfa sprayed weeds, weevils. Preparing cotton fields planting; preplant herbicides applied. Alfalfa hay harvest underway southern counties. Seasonal cultural practices continued as orchard floors dried out. Grape growers pruning, tying vines, treating for mealy bug. Grape bud swelling began. Almonds, stonefruit in bloom. Fungicide, pest control active. Over one-half of navel oranges picked; growers concerned about puff. Valencia orange picking continued desert. Lemons over one-half picked south coast; winding down other areas. Desert grapefruit harvest continued. Broccoli harvest Salinas-Watsonville, Santa Maria, moderate, variable quality. Broccoli harvested, Modesto, Westside, Palo Verde, Coachella

Valley. Westside lettuce thinned sprayed. Head lettuce, cabbage harvest continued Palo Verde Valley. Romaine, leaf lettuce harvested Coachella Valley. Asparagus harvest continued Westside, good quality. Cauliflower harvest, light, variable quality, Santa Maria, Salinas-Watsonville. Cauliflower harvest continued Coachella Valley. Tomato transplants planted some areas Westside, wet soil conditions hampered most vegetable plantings. Other crops harvested include turnips, carrots and onions. Recent rains benefit rangeland and pasture. conditions varied from good to excellent. Warmer weather increased feed growth, supplemental feeding tapered off. Livestock excellent. Sheep moved from alfalfa fields, lambs going to market.

COLORADO: Strong winter storm moved through the southeast on the 1st. Heavy snow fell in the southeast foothills with the highest reported snow accumulation of 36.0 in. at Cuchara. Across the rest of southeast, precipitation 0.50 to 1.00 in. of water equivalent. On the 3rd, a disturbance moved over the east, caused between 0.5 to 2.0 in. of snowfall. Another disturbance moved over the east on the 5th, bringing light snow to the eastern plains, areas of snow to the northern, central mountains through the 6th. Sunshine dominated the State most of the 6th, 7th. Temperatures were near normal to slightly above normal all week over the western slope. Mountain temperatures varied little, remaining near normal through the week. In the eastern plains, temperatures were near normal 2nd, 5th cooler on 1st, 3rd. The east had a warming trend at the end of the week, with warmer than normal temperatures 6th, 7th.

Calving, lambing along with equipment repair, preparation for spring fieldwork were the main producer activities.

FLORIDA: Temperatures 3 to 5° below normal north, 1 to 3° below normal elsewhere, except 1 to 2° above normal southeast coast. Highs; low 70s north, middle 80s south. Lows; low, middle 30s interior Panhandle, Big Bend, middle 40s central, interior south. Rain; 2 days Panhandle, Big Bend, 1 day northeast, 1 to 2 days Peninsula. Rain amounts 1.00 to 2.00 in. north, generally under 0.75 in. central, under 0.25 in. south.

Sugarcane harvest active. Tobacco growers starting transplanting. Corn planting started. Citrus groves very good condition, bloom progressing, some full open, some no bloom. Weather ideal for harvest, rain most areas. Early-mid harvest slowing, Valencia movement increasing. Grapefruit harvest increasing with additional labor. Temple-Honey tangerine harvest still active. Tangelo harvest almost complete. Caretakers cutting cover crops, removing dirt banks from young trees. Major vegetable growing areas in south, southwest, west central experienced gusty winds which caused minor problems with plants but dried fields permitting fieldwork. Rainfall up to 1.50 in. west central. Corn planting begun north. Volume leaders: Tomatoes, cabbage, peppers, celery, potatoes. Also available: Snap beans, carrots, chine cabbage, sweet corn, cucumbers, eggplant, escarole, romaine, specialty lettuces, radishes, squash, strawberries, cherry tomatoes. State's pastures fair to good. Pasture 50% fair, 50% good. Moisture levels mostly adequate. State's cattle herds mostly good.

GEORGIA: Cool week, temperatures 2 to 6° below normal. Extreme highs around 60° in northeast mountains to middle 60s central, low to middle 70s extreme south. Coldest lows lower 20s in

mountains to lower 30s central, low to middle 30s south. Rain 2 to 5 days north, 2 to 3 days elsewhere. Amounts 1.00 to 2.00 in. typical few spots southwest closer to 3.00 in.

Soil moisture surplus, wet fields continue to delay field activities. Small grain topdressing the most active in west central, some progress most regions, completion approaching 75% or greater most areas except only 10% north. Land preparation 35 to 50% complete southern 2/3 of State, around 5% north. Corn planting at standstill, emerged fields good. Tobacco plants good. Onions plagued by disease, now fair. Early blooming peaches, blueberry in extreme southern areas suffered bloom damage February 18th to 20th. Crop potential for affected early peach varieties thought to be 50% or greater, blueberries higher. Small grains mostly fair. Pastures poor to fair. Cattle fair to good. Hogs good.

HAWAII: Weather statewide sunny, dry with variable showers, some gusts. Evenings, early mornings still chilly. More showers fell over windward areas, higher elevations, other areas still dry. Temperatures low 60s to mid 80s. Rainfall none to 6.20 in.

Most field operations were normal. Sunshine, longer day length helpful to orchard crops. Soil moisture levels increased, crop conditions improved with added showers. Irrigation still essential for dry areas. Banana, papaya production at normal levels.

IDAHO: Temperatures 17° below normal to 1° above normal. Scattered precipitation was reported in the north, southwest.

Soil moisture adequate across the State. Activities: Planning spring field activities, plowing snow, repairing farm machinery, attending meetings. Hay, roughage supplies adequate. Livestock activities: Calving, lambing still in progress. Livestock fair to good.

ILLINOIS: Wetter than normal conditions occurred as low pressure brought rain, snow, much of which melted by week's end. Highs low 40s; upper 40s. Lows upper 20s; upper 30s. Precipitation, water equivalent 0.50 to 1.50 in.

Farm activities continue at a slow pace due to prevailing muddy conditions, while livestock conditions improved with warmer temperatures.

INDIANA: Temperatures 0 to 5° above normal with a few locations in central, southern areas cooler than normal. Highs in the upper 30s to upper 40s. Lows mid 20s to mid 30s. Precipitation, liquid equivalent, 0.50 to 0.75 in. across northern areas, 0.60 to 1.75 in. across the central, south.

The latest thaw has removed much of the snow, has allowed farming activities to increase. Manure hauling is getting much attention since most open feedlots are a mess. Lambs and calves born during the past cold snap are having problems, especially with respiratory diseases. Many seeding, pest control plans are being completed for the upcoming crop season. Wheat fair to good. Hay, straw supplies are tight with good demand.

IOWA: Temperatures 3 to 7° above normal. Extremes -12° Sheldon (northwest) 2nd; 54° Ottumwa (southeast) 7th. Precipitation, mainly rain, varied from none extreme northeast to 1.61 in. southeast; average 0.53 in. (normal 0.33 in.). Some flooding, mostly minor, from snow melt, ice jams, midweek rain.

Snowcover gone south one-half of State; frost out of soil across parts of east one-third of State. Warm temperature has thawed most of the snow, ice causing feed lots to be very muddy. No fieldwork due to extremely soft surfaces.

KANSAS: Temperatures 2 to 4° below normal over State. Significant precipitation received all districts.

No days suitable for fieldwork, fields excessively muddy. For State, topsoil moisture 10% adequate, 90% surplus. Subsurface moisture 32% adequate, 68% surplus. Soil moisture adequate or surplus all districts. Wheat good shape. Condition 88% rated good to excellent, 7% fair, 5% good. Wheat still dormant. Good snowcover most winter, wheat winter kill should be minimal. Wheat disease problems minimal. Planting oats, spring barley delayed; sloppy field conditions. Stockmen busy fighting mud to tend livestock. Because wet weather, mud, livestock stress, sickness increased. Weather stress resulted in very high calving losses, limited rates of gain.

KENTUCKY: High temperatures upper 50s with overnight lows low, mid teens. Temperatures around 40°, a few degrees below normal. Rain almost every day; totals 1.00 in. west to around 3.00 in. east.

No fieldwork. Soils saturated. Wheat satisfactory condition. Only five burley markets remain open; plan one or more cleanup sales. Wet weather stressed livestock, supplemental feeding continued.

LOUISIANA: Temperatures 1.1° to 3.4° below normal. Extremes 28°; 87°. Rainfall 0.94 in. northeast to 2.48 in. central.

Days suitable for fieldwork 1.6. Soil moisture 24% adequate, 76% surplus. Rains halted most field activities throughout the State. Corn 3% planted, 3% 1992, 1% avg.; 0% emerged, 0% 1992, 0% avg. Rice 0% planted, 1% 1992, 1% avg. Water leveling of rice fields was active. Wheat 13% poor, 72% fair, 15% good; 0% headed, 1% 1992, 1% avg. Spring plowing 17% plowed, 10% 1992, 8% avg. Sugarcane 2% poor, 83% fair, 15% good. Field activities such as off-barring, shaving, busting stubble were beginning before rains started. Livestock 2% poor, 65% fair, 30% good, 3% excellent. Marketing of spring calves active. Pastures 3% very poor, 33% poor, 13% fair, 51% good. Topdressing pastures continued. Vegetables 4% very poor, 24% poor, 68% fair, 4% good. Crawfishing slow due to cooler temperatures.

MARYLAND & DELAWARE: **MARYLAND:** Precipitation 2.35 in. Temperature 36.5°, normal 39.7°. Extremes 8°; 61°.

Hay supplies adequate. Cutting firewood, feeding hay, caring for livestock. Small grains good. Tax preparation. Making plans for spring planting. Tobacco growers in final stages of stripping tobacco. Preparing, delivering bales to markets.

DELAWARE: Precipitation 2.10 in. Temperature 36.8°, normal 40.1°. Extremes 15°; 56°.

Hay supplies adequate. Pastures, livestock in mostly excellent condition. Small grains good condition. Tax preparation. Making plans for spring planting.

MICHIGAN: Temperatures 4 to 9° above normal. Extremes -9°; 55°. Precipitation 0.04 to 1.02 in. across the State.

Corn harvested was unchanged at 95%. Most livestock good condition. Feed supplies remained adequate to short. Major activities included caring for livestock, hauling manure, marketing crops, preparing tax returns, repairing machinery.

MINNESOTA: Temperatures 3 to 16° above normal for the State. Extremes -2°; 59°. Precipitation none to 0.05 in., 0.15 to 0.35 in. below normal.

Greatest weekly total was 0.09 in. Snowfall 1 in. north central, northeast, a trace elsewhere. Snow depth at weekend 3 to 9 in. for the State. Sunshine, seasonably mild temperatures, melting snow were common throughout the week. Livestock producers are dealing with muddy feed lots. Farmers are busy ordering supplies, getting equipment ready to go.

MISSISSIPPI: Temperature 49°, 2.6 below normal. Extremes 24°; 69°. Rainfall was below normal in the northern two-thirds of the State, above normal in the southern third of the State. State avg.; 1.13 in., 0.23 below normal. Soil temperature 50°.

Days suitable for fieldwork .8, 3.0 1992, 2.0 avg. Soil moisture 12% adequate, 61% surplus, 27% excessive. Corn 1% planted, 6% 1992, NA avg. Wheat 9% jointing, 30% 1992, 25% avg.; 17% poor, 68% fair, 15% good. Hay supply 3% very short, 16% short, 76% adequate, 5% surplus. Feed Grain 8% short, 87% adequate 5% surplus. Livestock 1% poor, 37% fair, 56% good, 6% excellent. Pasture 88% or normal. Activities: Shop work, preparing equipment.

MISSOURI: Temperatures slightly below normal east central, southeast, to near normal northwest, west central. Precipitation averaged 0.64 in., ranging from around 0.30 in. western districts to nearly 1.00 in. eastern districts.

Rain, warmer temperatures thawed frozen ground, most areas have surplus moisture. Farmers getting ready for fieldwork. Wheat showing signs of growth.

MONTANA: Temperatures well above normal statewide. Light precipitation northwest, southeast.

Snowcover for winter wheat has diminished. Most livestock receiving supplemental feed. Calving, lambing progressing under milder conditions.

NEBRASKA: Temperatures near normal across the State. Precipitation occurred midweek in the form of rain, snow. Rainfall 0.10 in. west up to over an inch in the central section of the State.

NEVADA: Skies cleared over State beginning of period but weak cold front pushed inland the 3rd spreading rain, snow over northern, central areas, some cloudiness south. Latter part of week, high pressure returned bringing warmer temperatures, clear skies over most of State. Temperatures slightly above normal all areas except northeast. Extremes -13°; 76°.

Early fieldwork in progress where dry enough. Alfalfa fields greening up. Major farm/ranch activities: Cleaning irrigation ditches, preparing for spring planting, care, feeding of livestock.

NEW ENGLAND: Precipitation 0.73 to 1.30 in. Connecticut, Rhode Island; 0.56 to 1.16 in. Massachusetts; none to 0.79 in. north. Temperatures high teens to low 30s. Maximum temperatures high 30s to low 50s. Minimum temperatures minus 15 to 10° north, minus 1 to 20° south.

Major farm activities: Tending livestock, cutting firewood, making general repairs.

NEW JERSEY: Temperatures slightly below normal. Extremes 1°; 57°. Rainfall 1.35 in. north, 2.10 in. central, 2.20 in. south. Heaviest 24 hour total 2.48 in. on 4th, 5th. Estimated soil moisture in percent field capacity averaged 100% north, 100% central, 100% south. Four inch soil temperatures 32° north, 32° central, 36° south.

Farmers caring for livestock; repairing equipment; preparing for spring planting.

NEW MEXICO: A winter storm brought wet, unseasonably cold weather to State at the beginning of the week, warm, dry conditions returned as the week progressed. Overall, temperatures averaged within a few degrees of normal statewide. Extremes 8° north; 78° south. Precipitation that fell early in the week was heaviest in the north with higher totals near 1.00 in.

Days suitable for fieldwork 6.4. Soil moisture 39% short, 54% adequate, 7% surplus. Alfalfa 58% fair, 42% good with growth starting in the south; still dormant in north. Irrigated wheat 41% fair, 59% good with cattle being pulled off some land. Dryland wheat 14% very poor, 43% poor, 29% fair, 14% good with most needing moisture. Onions 80% fair, 20% good with transplanting continuing. Lettuce, chile planting underway. Cattle, sheep fair to excellent condition. Range, pasture 84% of normal.

NEW YORK: Temperature slightly below seasonal normals. Week began cold; highs in 20s over interior; low to mid 30s from Hudson Valley to Long Island. Lows 10 to 20° below zero north of Mohawk, Hudson Valleys. By midweek, temperatures recovered with highs in the 30s, lower 40s. Lows were in the teens, 20s. Rainfall exceeded 1.00 in. lower Hudson Valley to Long Island while over one foot of snow fell in the Catskills. Less than 0.25 in. of precipitation fell from Mohawk, Upper Hudson Valleys north to Canadian Border.

Major activities: Caring for livestock, collecting maple sap, cutting firewood, attending meetings, maintenance work. Coldness, snow made outside chores difficult.

NORTH CAROLINA: Temperatures normal to 4° below normal. Precipitation 3.89 in. at Eden to 0.15 in. at Rougemont.

Crop condition: Winter wheat 3% poor, 35% fair, 62% good. Oats 38% fair, 62% good. Barley 39% fair, 61% good. Rye 36% fair, 64% good. Pasture 9% poor, 50% fair, 41% good. Tobacco plant beds 42% fair, 58% good. Hay, roughage supplies 3% short, 91% adequate, 6% surplus. Feed grain supplies 3% short, 94% adequate, 3% surplus. Major activities included: Topdressing small grains, tobacco plant bed maintenance, preparing land for planting. Other activities included: Planting potatoes, cabbage; tending livestock; equipment repair; general farm maintenance.

NORTH DAKOTA: Temperatures 5° above normal in the southeast to 15° above normal northwest. Extremes -8° north central; 56° north central. No significant precipitation was reported.

Snowcover diminished due to above normal temperatures. Livestock good, calving well underway. Warm weather was favorable for calving, lambing with few problems reported. Supplemental feed supplies were adequate. Grain marketing normal. Farmers were busy cleaning seed, planning for planting season.

OHIO: Warmer weather at the beginning of the week significantly reduced the State's snowcover. Mercuries zoomed into the 40s to near 50° South. Temperatures near to above normal. Mean daytime highs the upper 30s to upper 40s while average lows stretched between the mid to upper 20s to mid 30s. Mean temperatures for the week varied from near 32° north to around 40° south. Precipitation was heavier than normal with totals ranging between 0.75 in. to 1.60 in. with greatest amounts to the south, west. Snowfall 2 to 5 in. fell as a result of a storm that started on the 4th.

OKLAHOMA: Temperatures 3° below normal south central, southeast to 1° above normal Panhandle. Precipitation 0.19 in. southwest to 0.59 in. southeast.

Days suitable for fieldwork 2.0. Topsoil moisture 14% adequate, 86% surplus. Subsoil moisture 100% adequate. Wheat 2% very poor, 10% poor, 69% fair, 19% good; 4% jointing, 27% 1992, 7% avg. Oats 7% jointing, 12% 1992, 5% avg. Barley 1% jointing, 12% 1992, 4% avg. Corn 4% seedbed prepared, 38% 1992, 33% avg. Peanuts 1% seedbed prepared, 4% 1992, 11% avg. Pastures 91% of normal. Livestock 72% fair, 28% good. Prices last week for feeder steers over 600 lbs. steady to \$1.00 per cwt. higher. Feeder heifers over 600 lbs. steady. Marketings were average.

OREGON: Temperatures 4° above normal west, 10 to 19° below normal east (Burns 19° below normal). Precipitation 0.10 south central, northeast, southeast areas to 2.20 coast, northern Cascades.

Soil moisture mostly adequate, statewide. Snow packs normal to above normal. Winter wheat showing growth western areas, snow cover eastern areas. Fruit, nut orchard activities continue, nurseries busy digging, bailing trees, shrubs for retail sale, strawberries crowning, Willamette Valley. Livestock good. Lambing, calving continues. Hay supply short due to heavy snow, eastern areas.

PENNSYLVANIA: Well above normal temperatures, precipitation. Temperature 35°, 6° above normal. Extremes -6°; 54°. Precipitation 1.47 in., 0.80 in. above normal.

Activities: Hauling manure; fixing fence; caring for livestock.

PUERTO RICO: Rainfall 0.26 in. was 0.28 in. below normal. Highest rainfall 1.13 in. Guayama, 0.96 in. at Yauco, 0.91 in. at Pico Del Este. Island temperatures 74 to 75° on the Coasts, 66 to 67° in the Interior with mean station temperature 60.4° at Pico del Este to 76.6° at San Juan WSFO. Extremes 40°; 93°.

SOUTH CAROLINA: Temperatures near normal. Rainfall 1.40 in.

Farm activities: Land preparation for corn, other crops increased; wheat condition improved; tobacco beds sprayed for insects; pastures average; livestock condition fair to good.

SOUTH DAKOTA: Temperatures were near normal; slightly above normal in the north, slightly below normal in the south. Extremes -8°; 57°. There was no measurable precipitation in the east; light amounts were reported in the west. Mild weather melted much of the snow over the State. Only 3 to 7 in. remained over the far east, snowcover was spotty in the west.

Topsoil 5% short, 79% adequate, 16% surplus. Subsoil 19% short, 74% adequate, 7% surplus. Rye 88% good, 12% excellent. Winter wheat 3% fair, 90% good, 7% excellent. Most areas reported that the snowcover was adequate for the winter, should have a good start for the growing season. Livestock 93% good, 7% excellent. Feed supplies 4% short, 92% adequate, 4% surplus. Mild weather has caused roads, feedlots to become soft, muddy. Lambing, calving were in full swing across the State. Some producers were concerned about not having enough feed till spring. The warmer weather has relieved stress on livestock.

TENNESSEE: Temperatures were cooler than normal in middle, east, near normal in west. Highs were in the 50s. Precipitation was recorded somewhere each day except on the 6th. Rainfall averaged around 1.50 in. over the middle, east, slightly less than 1.00 in. west. Total amounts were above normal in middle, east, a little below normal in the west.

Over half of the wheat has been fertilized, is in mostly good condition. Cold temperatures have held the crop back some. No row crop planting has begun yet as many areas have been too wet for fieldwork. Other activities include machinery preparation, maintenance, livestock chores.

TEXAS: State remained under stable airmass during week. Warming trend improved drying rates most areas, helped waterlogged soils dry in East Texas. West, far South Texas, growers getting some field work completed with open conditions. Southeast corner State remained wet. All areas State showed behind normal rain totals, except East Texas, Upper Coast.

Crops: Corn, sorghum planting full swing South Texas, Rio Grande Valley, as conditions remained dry. Central Texas areas not hit by heavy rains, planting activities well underway. Blacklands, East Texas, planting early fields delayed by wet. Most other areas prepared to plant as fields dry, soils warm. Cotton planting full stride South Texas, Rio Grande Valley, delayed elsewhere by wet conditions, cool temperatures. Small grains growing rapidly most areas with increased moisture, warmer temperatures, late week sunshine. Fields Blacklands suffered excess moisture, some insect problems. Several wheat fields topdressed with fertilizer. Fields South Texas beginning to joint. Wheat 73% normal, 86% 1992.

Commercial Vegetables: Rio Grande Valley, cabbage, onions, greens were harvested. Squash, melons progressing well. High Plains, land preparation activities continued. East Texas, onion,

potato, cabbage planting continued. Watermelon planting began. Trans-Pecos, potatoes were planted, land preparation other vegetable planting continued. Peaches in full bloom Central Texas, along Upper Coast. Producers most areas concerned about lack chill hours resulting from relatively mild winter.

Range and Livestock: Supplemental feeding continued most areas. Hay supplies short most places. Winter pastures improved with warmer weather, grazing conditions improved by windy conditions which dried out pastures. Lice infestations a problem Low Plains, while black flies stressed livestock East Texas. Spring shearing Angora goats began Hill Country. Overall livestock condition remained fair, good.

UTAH: Temperatures 5° below normal. No precipitation was reported in the north central, Uinta Basin divisions; precipitation was moderate in the southwestern corner and very light elsewhere.

Major farm, ranch activities: Machinery repair, building maintenance, calving, lambing, planning for this year's crops.

VIRGINIA: Temperatures 1 to 2° below normal. Extreme high was 68° at Norfolk. Precipitation was well above normal 1.00 to 4.00 in.

Days suitable for fieldwork 1.3. Topsoil moisture 32% adequate, 68% surplus. Pasture 22% poor, 48% fair, 24% good, 6% excellent. Wheat 10% poor, 58% fair, 28% good, 4% excellent. Barley 3% poor, 42% fair, 49% good, 6% excellent. Oats 13% poor, 65% fair, 13% good, 9% excellent. Alfalfa 11% poor, 67% fair, 22% good. Peach 10% poor, 40% fair, 50% good. Tobacco plantbed 33% poor, 8% fair, 59% good. Tobacco plantbeds 42% seeded. Fieldwork limited by rain, snow. Calving, lambing, pruning fruit trees, seeding tobacco plantbeds, topdressing small grains, fertilizing, liming land, attending production meetings, soil sampling, preparing for taxes. Maple syrup production in Highland County continued.

WASHINGTON: Temperatures 4° above normal to 4° below normal west; 6° below normal to 15° below normal east. Precipitation 0.08 to 1.80 in. west; 0.09 to 0.55 in. east.

Days suitable for fieldwork 3.6. Soil moisture 11% short, 89% adequate. Hay, other roughage 9% very short, 22% short, 61% adequate, 8% surplus. Range, pasture 32% very poor, 34% poor, 28% fair, 6% good. Winter wheat dryland 60% fair, 40% good; irrigated 15% fair, 85% good. Barley dryland 70% fair, 30% good; irrigated 5% fair, 95% good. Near normal temperatures, precipitation returned to west while cold continued east. Field preparations further delayed east as snow continues to fall. Crop producers hoping for wet spring to help make up for dry winter. Winter injury to cereal grains, fruit appears minor to date despite persistent cold. Calving, lambing advanced under mostly poor conditions; long winter creating feed shortages in east.

WEST VIRGINIA: Temperature 37°. Extremes -1°; 60°. Precipitation 1.94 in.

Hay feed supplies adequate. Other feed supplies adequate. Cattle good. Sheep good. Wheat condition good. Farm activities: General maintenance, feeding livestock, calving, lambing, bookkeeping.

WISCONSIN: Temperature 33°. Extremes 3°; 55°. Only light snow, rain fell. Light precipitation in the northern, central areas on the 6th to 7th. Far northern areas received a few inches of snow. Precipitation, although light, was seen more often in the southern districts.

Mid-March statewide frost depth 19.3 in., 7.7 in. 1992, 15.9 in. avg. This is the first time all winter that the frost has been deeper than average. Snow depth 5.7 in., 1.5 in. 1992, 7.4 in. avg. Data on frost, snow depths relate to 5th.

WYOMING: Temperatures below normal, except far east near normal. Coldest valleys in the west had readings of 13 to 20° below normal. Precipitation was below normal. Trace amounts fell in the west central, northeast parts of the State.

1993 Winter wheat crop fair to good. Continued cold weather is a stress on livestock. Supplemental feeding continuing. Hay supplies are short in several regions. Farm, ranch activities include feeding, caring for livestock, routine maintenance. Producers are calving, lambing. Some farm flocks in the southeast are already done lambing. The extremely cold weather is causing higher than normal calving losses in some areas.

February 1993
MONTHLY DATA FROM SELECTED FOREIGN CITIES
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
 *** = DATA NOT AVAILABLE

International Weather and Crop Summary
HIGHLIGHTS

February 28 - March 6, 1993

FSU-WESTERN: Unseasonably cold, calm weather covered dormant winter grains. Snow cover provided adequate protection from extreme cold.

EUROPE: Rain benefited winter grains in Italy, but cold, dry weather persisted in Spain.

NORTHWESTERN AFRICA: Moderate to heavy precipitation eased drought conditions in northern Morocco and western Algeria. Unseasonably cold weather prevailed over most of the region.

SOUTH AFRICA: Showers benefited filling corn, especially in northern and eastern sections of the corn belt.

SOUTH ASIA: Unseasonable rain helped reservoirs but hampered winter grain and oilseed harvests.

SOUTHEAST ASIA: Rainfall intensified over Malaysia, Indonesia, and the central Philippines, increasing moisture for secondary crops.

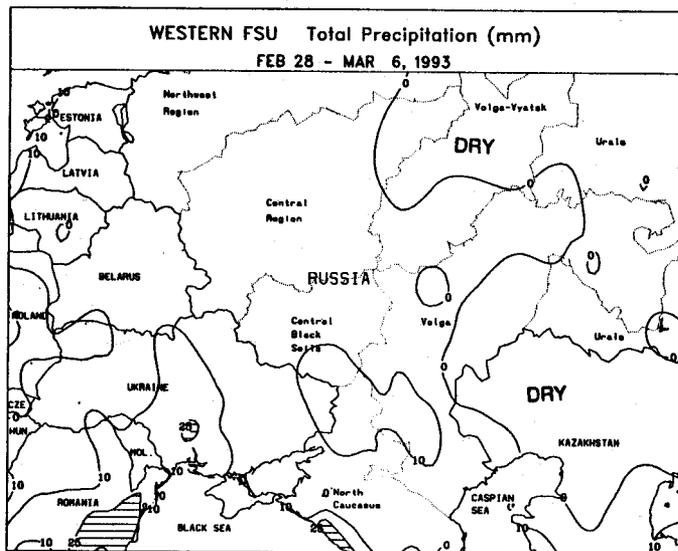
EASTERN ASIA: Warm weather returned to the North China Plain, prompting continued greening of winter wheat.

AUSTRALIA: Light rain brought little relief to drought-stressed summer crops.

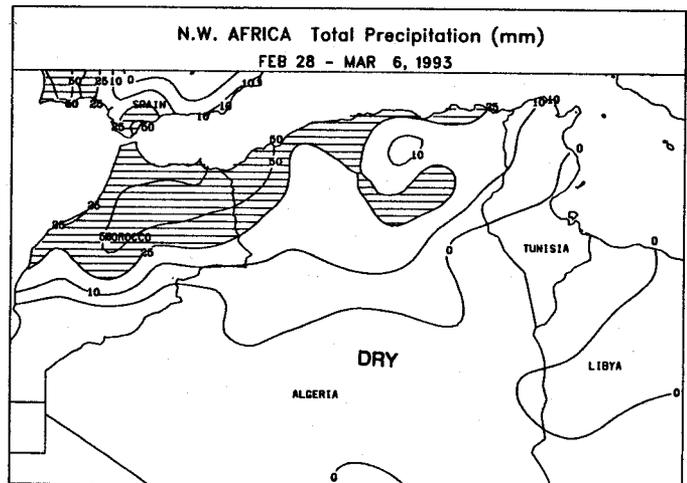
SOUTH AMERICA: Rain benefited soybeans in Argentina. Across southern Brazil, widespread showers favored filling soybeans, but delayed early harvesting.

COUNTRY	CITY	TEMPERATURE (C)					PRECIPITATION (MM)		
		AVG MAX	AVG MIN	HI	LO	DPART F/NRM	TOTAL	DPART F/NRM	
NORWAY	OSLO	1	-6	11	-17	-2	4.7	45	-3
SWEDEN	STOCKHOLM	2	-2	10	-11	0	2.6	40	13
FINLND	HELSINKI	-1	-5	8	-19	-3	3.8	18	-13
U KING	GLASGOW	9	4	12	-5	6	2.1	16	-72
	EDINBURGH	9	4	13	-3	6	2.8	3	-39
	BIRMINGHAM	7	3	12	-4	5	1.3	8	-41
	LONDON	7	3	10	-2	5	0.6	8	-43
IRELND	DUBLIN	9	5	12	-1	7	2.2	19	-31
ICELND	REYKJAVIK	3	-1	8	-11	1	0.7	101	29
DENMRK	COPENHAGEN	3	-1	7	-9	1	1.4	21	-18
LUXEMB	LUXEMBOURG	1	-3	7	-9	-1	-2.0	14	-55
SWITZL	ZURICH	3	-2	11	-10	0	-0.7	23	-50
	GENEVA	4	-2	8	-7	1	-1.2	7	-75
FRANCE	PARIS/ORLY	5	1	10	-4	3	***	21	**
	STRASBOURG	3	-1	10	-9	1	-1.3	8	-25
	BOURGES	6	-1	13	-5	3	-1.4	6	-51
	BORDEAUX	12	2	16	-5	7	0.0	3	-77
	TOULOUSE	10	3	15	-6	7	0.0	13	-37
	MARSEILLE	12	3	16	-5	8	0.3	18	-36
SPAIN	VALLADOLID	11	1	14	-8	6	-0.1	3	-37
	MADRID	13	2	19	-5	8	1.0	21	-29
	SEVILLE	19	7	23	4	13	0.8	16	-47
PORTUG	LISBON	16	9	20	6	12	0.4	47	-53
GERMNY	HAMBURG	3	-1	9	-8	1	-0.1	38	-3
	BERLIN	3	-1	8	-8	1	-0.2	32	-3
	DUSSELDORF	4	-1	8	-8	2	-0.8	30	-23
	LEIPZIG	2	-3	5	-11	-1	-0.8	11	-21
	DRESDEN	3	-3	8	-10	0	0.4	23	-13
	STUTTGART	2	-4	7	-14	-1	-1.4	19	-28
	NURNBERG	2	-4	6	-12	-1	-1.5	17	-23
	MUNICH	2	-3	12	-12	-1	0.2	21	-30
AUSTRI	VIENNA	2	-5	7	-17	-2	-2.1	25	-5
	INNSBRUCK	6	-5	13	-13	1	0.1	58	16
CZECH	PRAGUE	0	-6	5	-19	-3	-2.5	18	-4
POLAND	WARSAW	1	-4	5	-12	-2	0.3	18	-4
	LODZ	1	-4	5	-16	-2	0.0	33	2
	KATOWICE	2	-6	8	-14	-2	0.2	37	1
	PRZEMYSL	1	-4	8	-13	-2	0.2	26	-3
HUNGAR	BUDAPEST	2	-5	8	-15	-1	-2.5	4	-28
F YUGO	BELGRADE	3	-4	8	-9	-1	-3.3	29	-15
ROMANI	BUCHAREST	4	-7	13	-17	-1	-0.8	20	-17
BULGAR	SOFIA	3	-6	13	-13	-2	-2.8	24	-13
ITALY	MILAN	10	-1	16	-6	4	0.6	10	-51
	VERONA	11	-1	17	-5	5	0.5	1	-47
	VENICE	10	-1	17	-4	5	-0.1	2	-50
	GENOA	13	6	17	0	9	0.7	22	-69
	ROME	14	1	17	-3	7	-1.5	12	-61
	NAPLES	13	4	20	-2	8	-0.6	28	-69
GREECE	THESSALONIKA	9	0	18	-5	5	-2.1	11	-30
	LARISSA	9	-2	19	-8	4	-3.1	29	-10
	ATHENS	11	5	19	1	8	-2.9	48	14
TURKEY	ISTANBUL	6	1	13	-5	3	-2.1	69	-1
	ANKARA	2	-5	11	-15	-2	-2.5	36	6
CYPRUS	LARNACA	15	6	19	-1	10	-1.9	37	-24
ESTONI	TALLINN	1	-3	6	-13	-1	4.2	28	-1
FSU	LENINGRAD	-1	-5	5	-13	-3	4.0	28	-2
LITHUA	KAUNAS	0	-4	4	-14	-2	2.4	26	-1
FSU	MINSK	-1	-5	5	-15	-3	3.0	26	-7
	KAZAN	-9	-15	1	-28	-12	-0.7	38	10
	MOSCOW	-3	-8	4	-22	-5	2.3	55	20
	SVERDLOVSK	-9	-18	-2	-31	-14	-1.4	21	2
	QMSK	-10	-18	3	-30	-14	2.3	30	15
	KUSTANAY	-10	-19	2	-32	-15	0.5	17	4
	KRASNOYARSK	-5	-12	3	-19	-9	6.3	15	2
	NOVOSIBIRSK	-9	-15	-2	-24	-12	5.7	7	-8
	BARNAUL	-7	-14	0	-21	-10	4.5	14	-10
	KHABAROVSK	-8	-18	-1	-25	-13	4.2	8	-4
	VLADIVOSTOK	-3	-9	4	-15	-6	4.4	10	-9
	KIEV	0	-5	7	-14	-3	1.5	45	-2
	LVOV	0	-6	8	-16	-3	0.2	37	-8

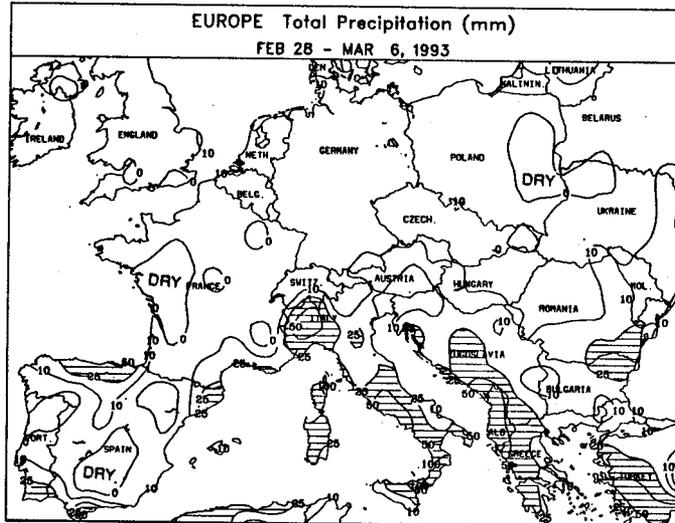
Based on Preliminary Reports



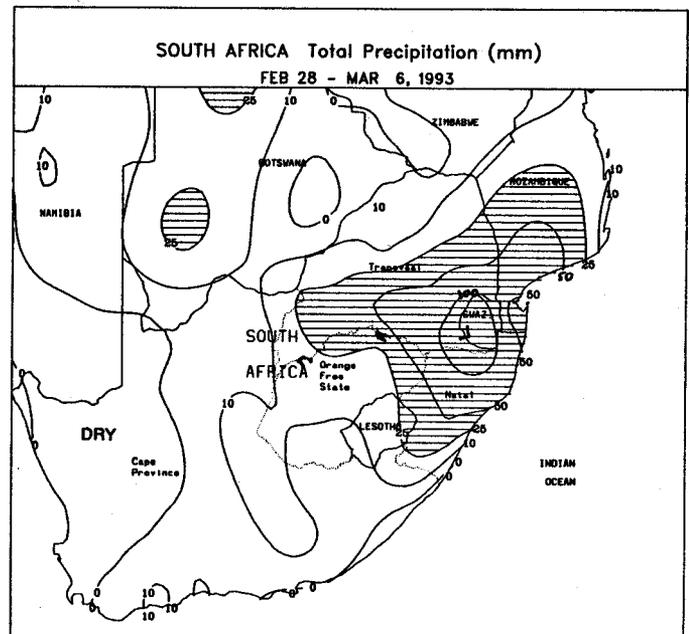
FSU-WESTERN: High pressure dominated the weather during the week, with cold, calm weather prevailing over most winter grain areas. As a result, precipitation was light (less than 10 mm), falling mainly as snow. In the extreme south, storm systems moving eastward across Mediterranean areas produced light to moderate precipitation (10-28 mm) over Moldova and southern Ukraine as they crossed the Black Sea and Trans Caucasus. Average weekly temperatures ranged from -3 to -12 degrees Celsius (3-5 degrees C below normal) over most areas except the North Caucasus, where average temperatures ranged from 0 to 2 degrees C (1-2 degrees C above normal). Coldest weather during the week covered winter grain areas north of a line that stretched eastward from the central Ukraine, through southern Black Soils Region, into the middle Volga Valley. Snow cover in these areas was sufficient to protect winter grains from extreme cold.



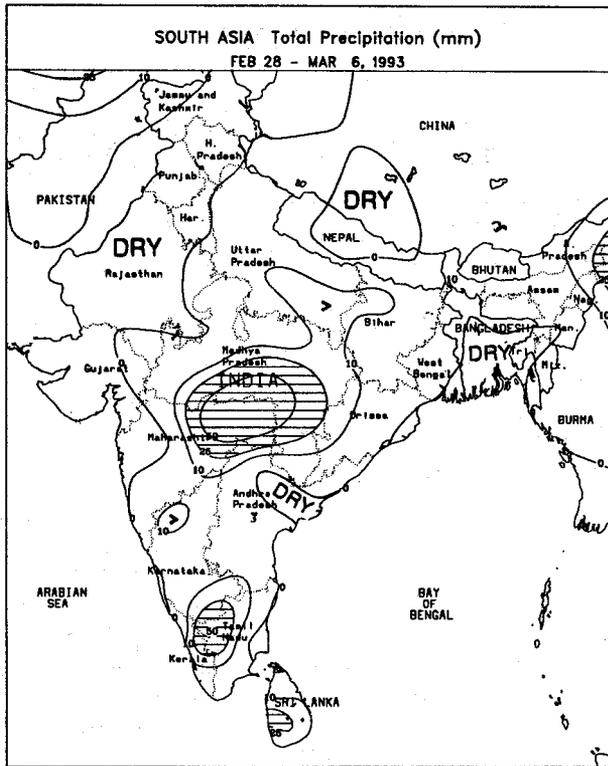
NORTHWESTERN AFRICA: Widespread moderate to heavy precipitation (25-50 mm, with local amounts in excess of 75 mm) covered winter grains in northern Morocco and western Algeria, easing drought conditions. Drought-stricken crops in southern Morocco received lesser amounts of moisture (10-25 mm). Further east, moderate showers (25-40 mm) covered coastal areas of central and eastern Algeria, and Tunisia, with lesser amounts of moisture (5-20 mm) falling over interior winter grain areas. Unseasonably cold weather covered the region. Snow was reported over northern Morocco, and sub-freezing temperatures (-1 to -3 degrees C) covered interior crop areas of Algeria and Tunisia. Although the cold weather may have burned tender vegetative growth in some areas, temperatures did not fall low enough to cause significant damage to winter grains.



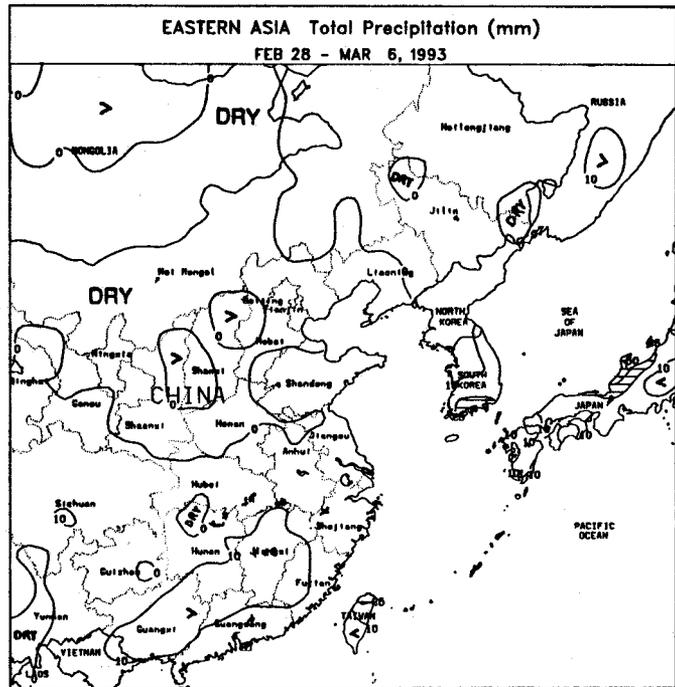
EUROPE: Beneficial rain (10-50 mm, with scattered heavier amounts) fell over Italy and southeastern Europe from southern Romania to Greece. However, only scattered, mostly light showers fell over the Iberian Peninsula, where drought conditions have deteriorated for early growth of winter grains and spring planting. Low irrigation reserves have also created unfavorable crop prospects for the summer growing season. Elsewhere, mostly dry weather prevailed across northern Europe, where dormant winter grains have adequate soil moisture. Temperatures averaged below normal throughout Europe, with departures ranging from -3 to -7 degrees C below normal. The cold weather across the south delayed early-season emergence of spring growth. However, the cold weather also slowed moisture loss in the drought-stricken Iberian Peninsula.



SOUTH AFRICA: Moderate to heavy rain (25-97 mm) covered primary grain regions of Transvaal and Natal, benefiting filling corn. Rainfall was light (25 mm or less) over most of Orange Free State, eastern Cape Province, and Natal's southern sugarcane areas. Temperatures averaged near normal across the region, with highs averaging in the low to mid 20's C. During March, seasonal drying and cooling typically begin across the region as the southern hemisphere enters its autumn season. Corn harvests usually begin in April and last through July, with field preparations for winter wheat planting usually occurring in April or May.

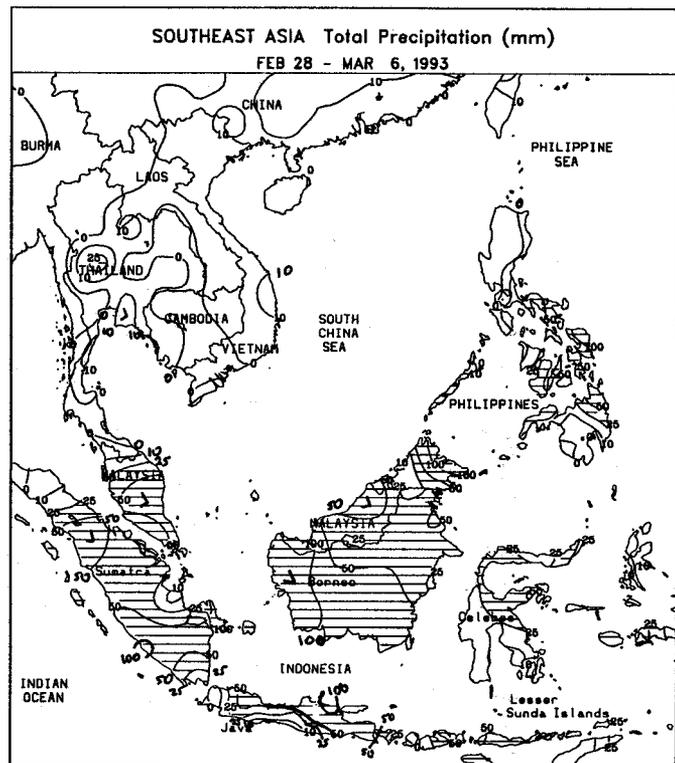


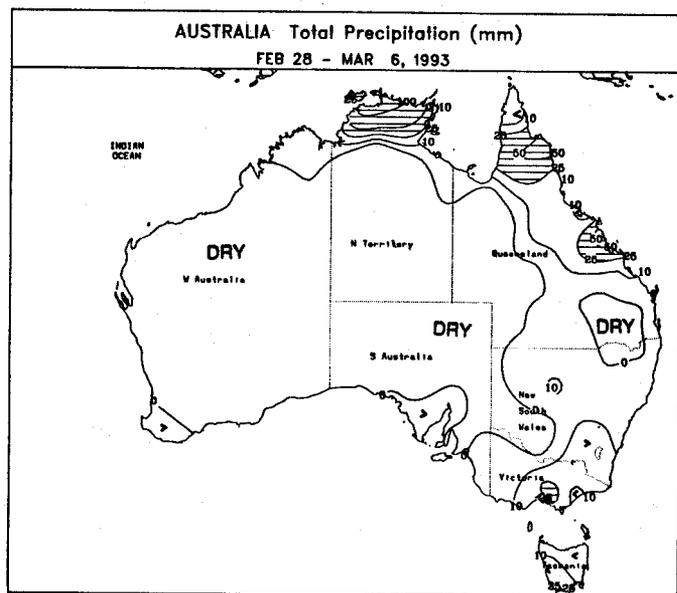
SOUTH ASIA: Unseasonably moderate to heavy showers (23-87 mm) from central to northeastern India benefited reservoirs but caused some delays in winter grain and oilseed harvests. Drier weather returned to winter crop regions of northwestern India and Pakistan following last week's beneficial rain. Elsewhere, rainfall was scattered and mostly light, with only a few locations reporting more than 25 mm.



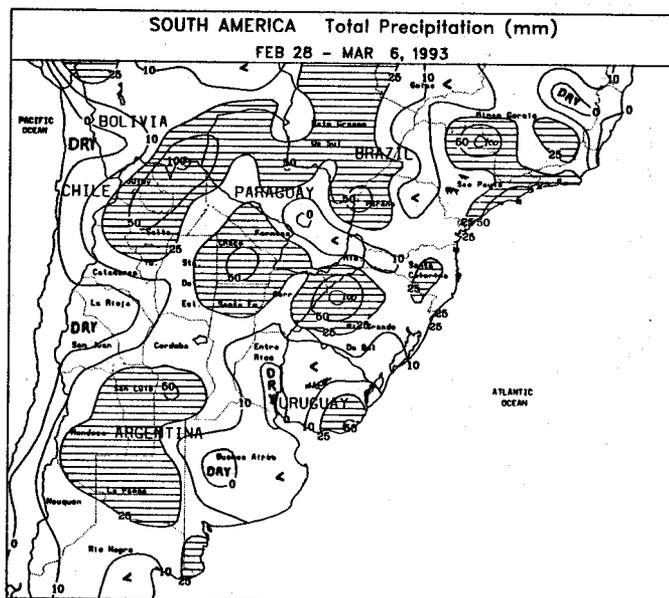
EASTERN ASIA: Drier weather returned to central and southern China, with rainfall ranging from 5 to 20 mm. Little or no rain fell across the North China Plain, where maximum temperatures ranged from 15 to 20 degrees C (2-3 degrees C above normal). These higher temperatures prompted continued greening of winter wheat, following last week's cooler weather. Corn planting and rice seedbed preparation should be in full swing across southern China.

SOUTHEAST ASIA: Rainfall increased over Malaysia and Indonesia, with most rice and oil palm areas receiving 25-50 mm or more. With the main rainy season winding down over Java, moisture remains adequate to abundant for secondary rice, although flooding is still a problem at some locations. In the Philippines, moderate to heavy showers (31-116 mm) covered most crop areas from southern Luzon to Mindanao. Following a late start to the fall rainy season, moisture has been favorable in the eastern Philippines for secondary rice and other crops.





AUSTRALIA: Scattered light rain (2-14 mm) fell across southern Queensland and northern New South Wales, bringing little relief to stressed sorghum and cotton. While temperatures remained below normal (2-4 degrees C), yield prospects continued to decline due to the lack of significant moisture. The majority of summer crops are nearing maturation. Coastal northeastern Queensland received scattered tropical showers (17-75 mm), favoring sugarcane.



SOUTH AMERICA: Early-week light to moderate rain (10-25 mm) fell across southern Santa Fe and southern Buenos Aires, aiding soil moisture for reproductive to pod-filling soybeans. Mostly dry weather followed for the remainder of the week, benefiting early maturing corn. Maximum temperatures ranged from 24 to 28 degrees C (1-3 degrees C below normal), reducing crop water use. Further west, scattered heavier rainfall (amounts up to 75 mm) was reported in Cordoba and La Pampa, favoring late-developing sorghum but delaying sunflowerseed harvesting. Wet weather (25-30 mm) possibly caused flooding across northern Argentina's cotton areas. Across southern Brazil, widespread variable showers (10-80 mm) aided soybeans but delayed early corn and soybean harvesting. Isolated heavy rain (greater than 100 mm) was reported in western Rio Grande do Sul, possibly causing local flooding. With soil moisture levels adequate across Brazil's main soybean regions, drier weather is now needed for maturation and harvesting. Temperatures averaged near normal across southern Brazil.

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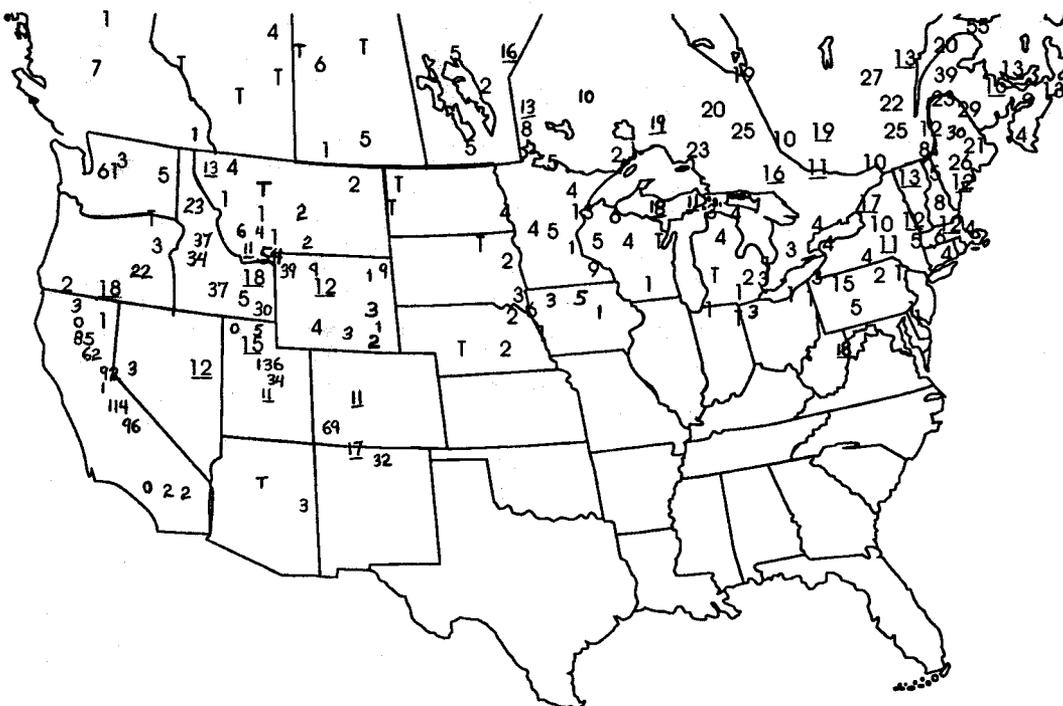
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Total Snow Cover (Inches)

March 8, 1993



Note: Beginning with this issue, U.S. and international normals are based on 1961-1990 data, replacing 1951-1980 normals. This week's February maps and tables also incorporate the new normals.

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