

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

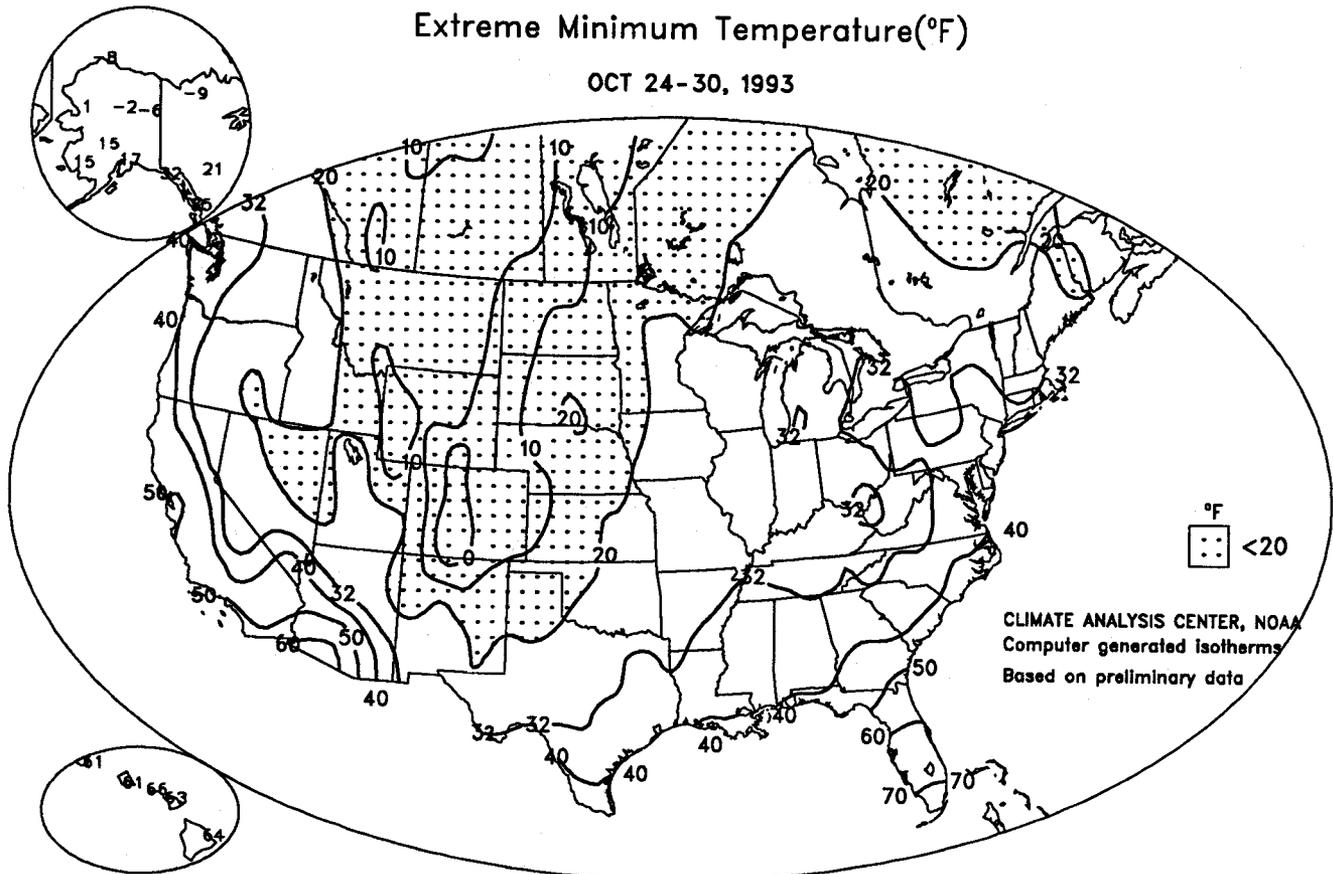
Volume 80, No. 44

Washington, D.C.

November 2, 1993

Extreme Minimum Temperature(°F)

OCT 24-30, 1993



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

HIGHLIGHTS

October 24 - 30, 1993

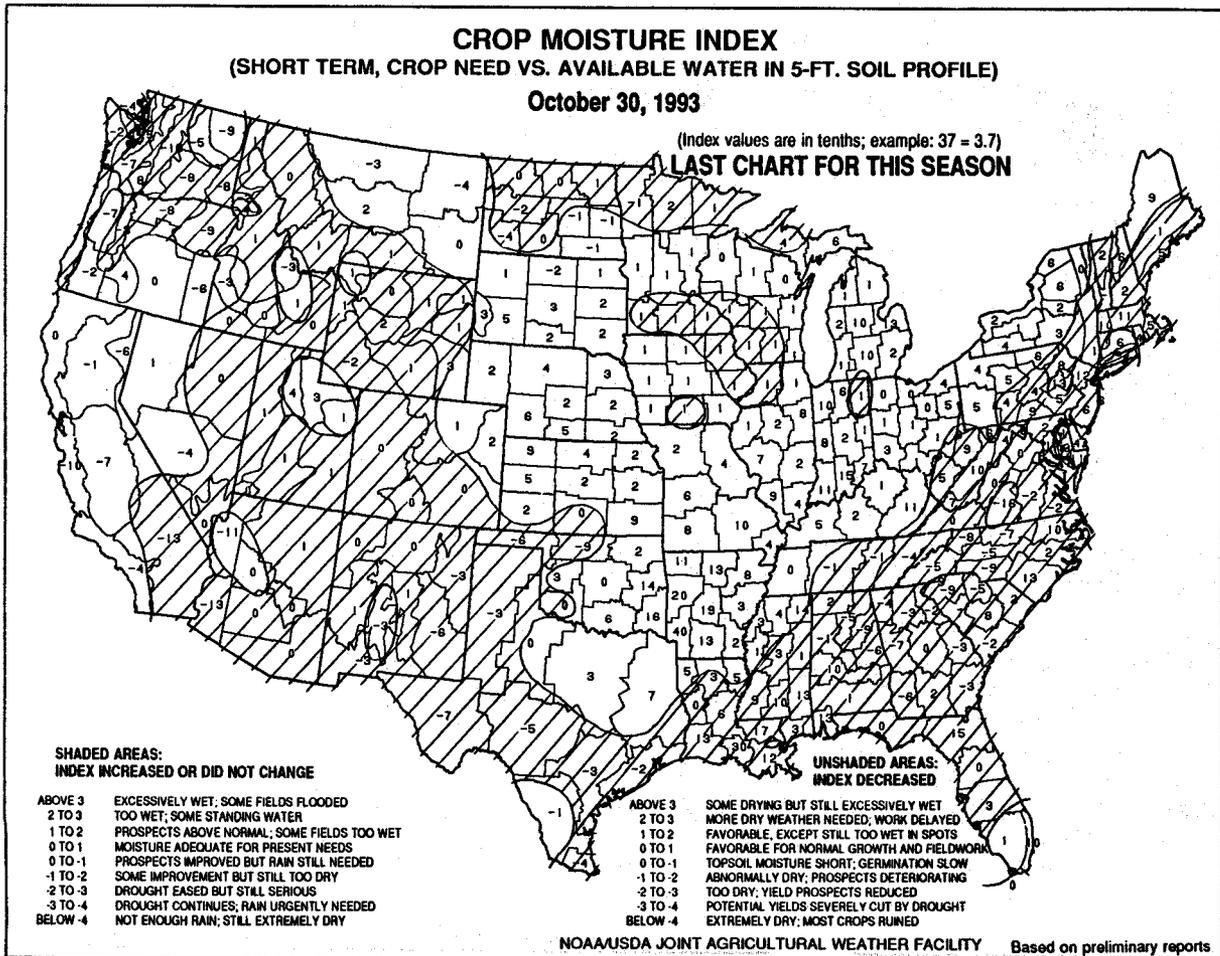
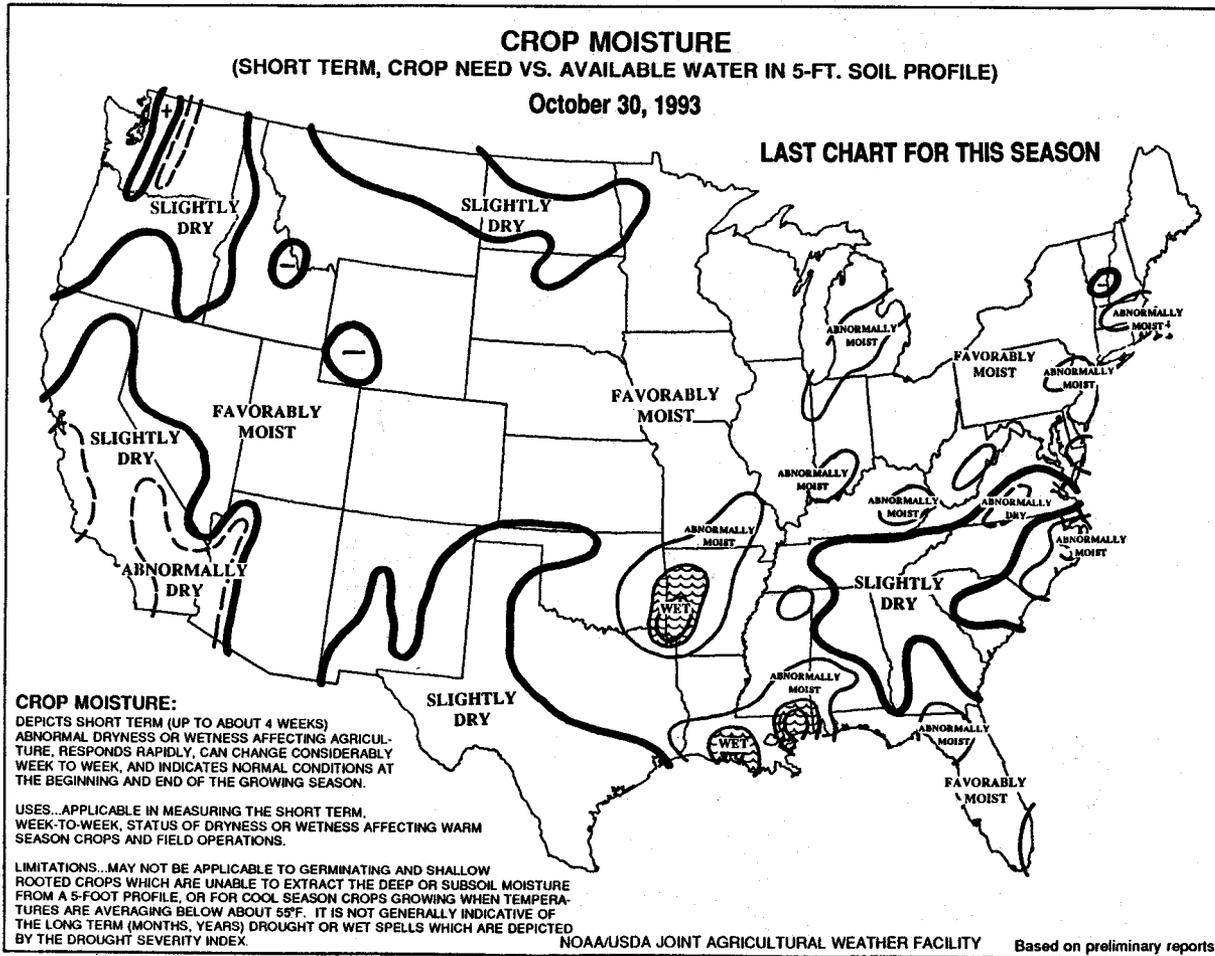
Early-week weather events—a Plains cold front and an Atlantic Seaboard storm—merely served as a backdrop for a severe Santa Ana wind episode and a major early-season snowstorm and cold snap. Southern California's Santa Ana winds were a local effect of a broad offshore wind flow that brought record warmth to the West Coast States. In Oregon, Brookings netted four daily record highs in 5 days, including a 90-degree reading on Tuesday. Also on October 26, Eureka, CA reached 87°F to establish an all-time record for that location. Meanwhile on the east coast, a slow-moving storm delivered strong winds and more than 2 inches of rain to locations such as Cape Hatteras, NC and Salisbury, MD. But at midweek, attention shifted to southern California, where an intensifying pressure gradient forced air westward through San Gabriel mountain passes at speeds up to 60 miles per

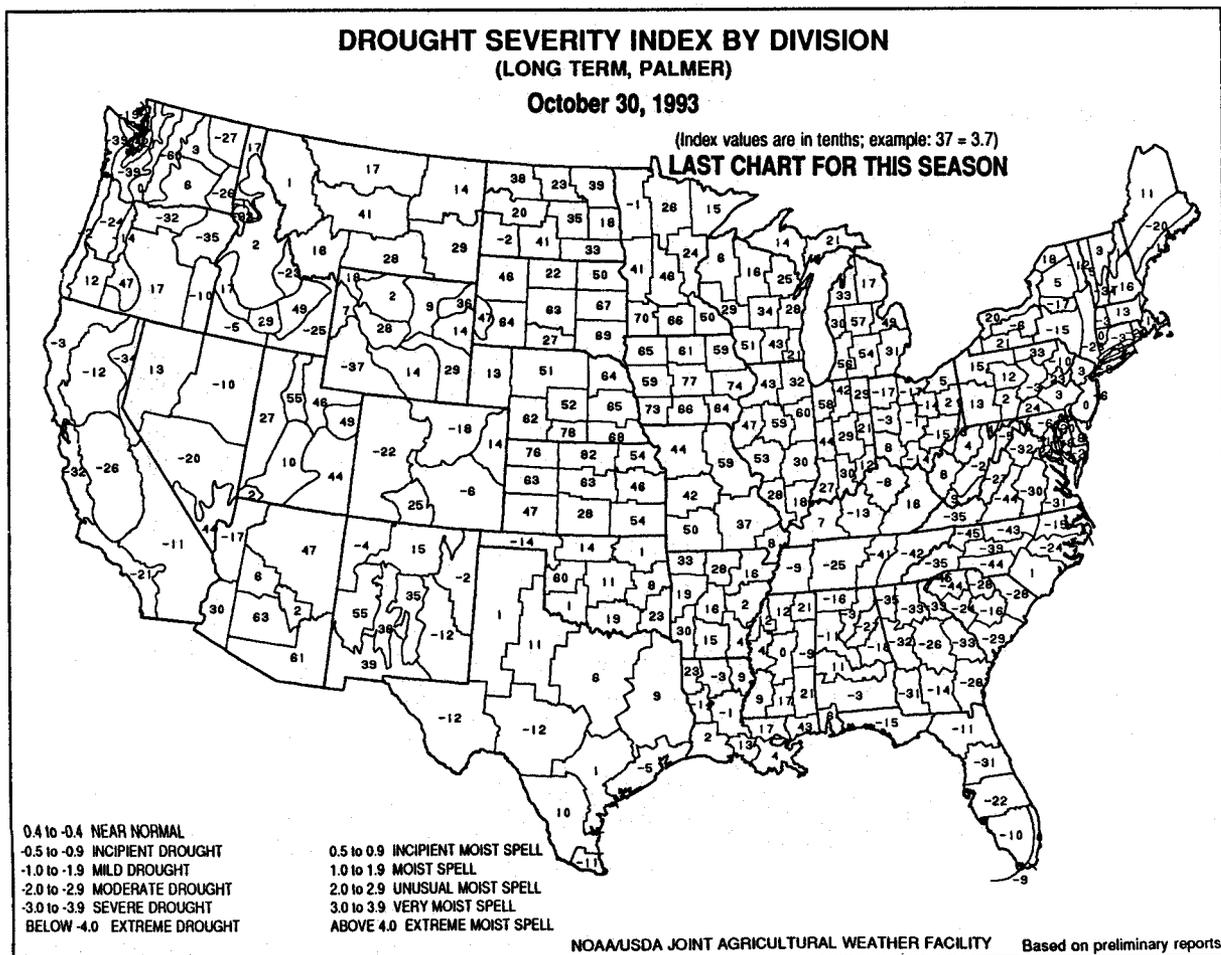
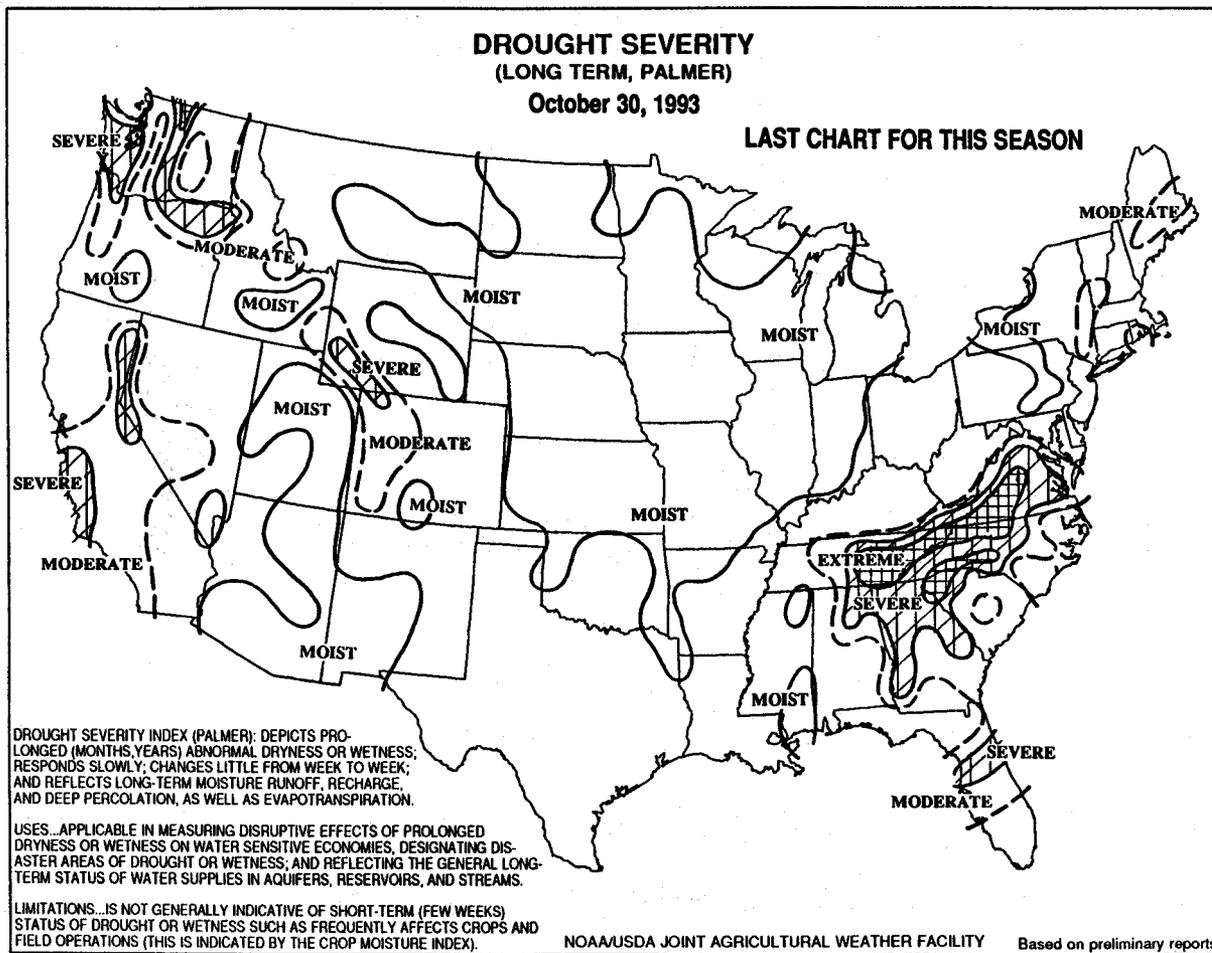
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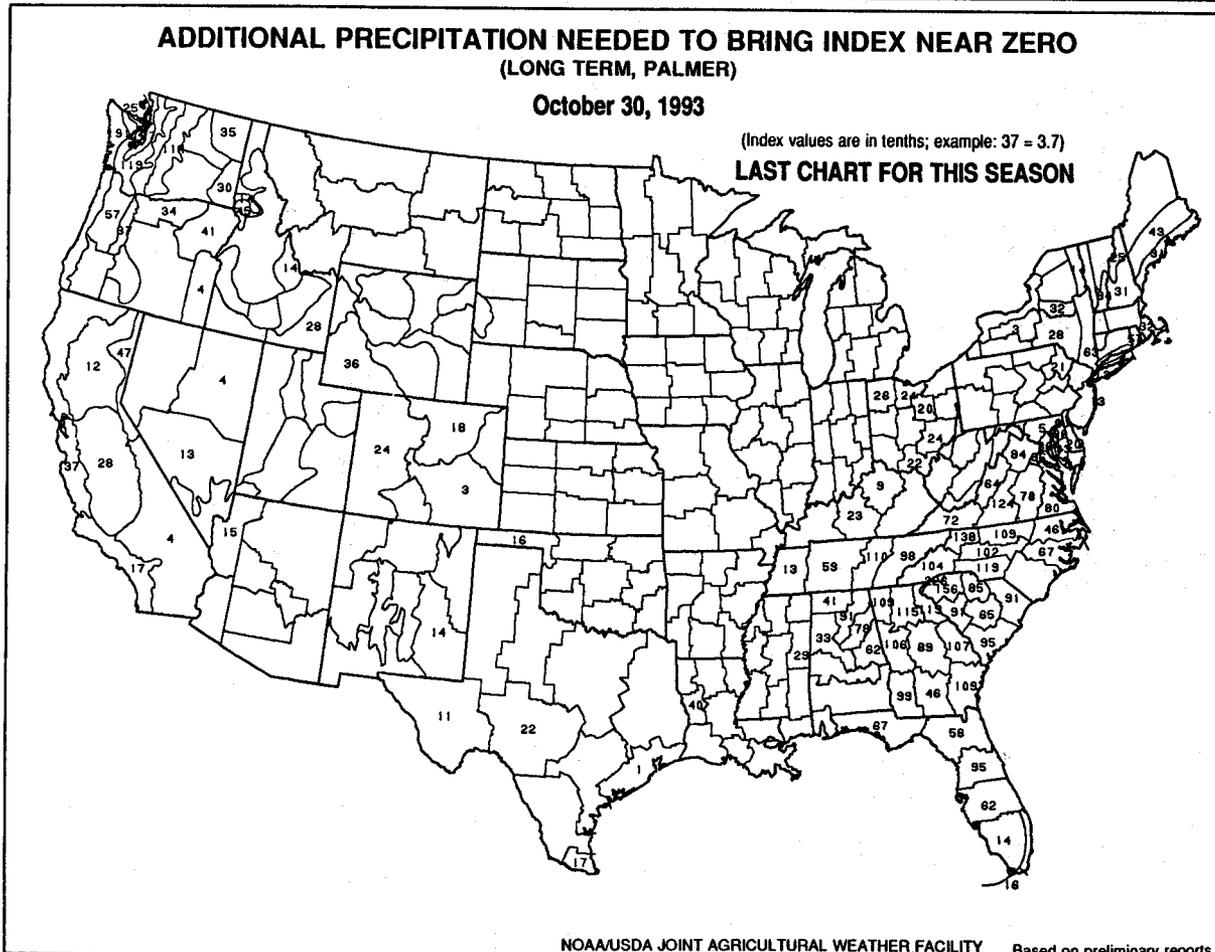


**ADDITIONAL PRECIPITATION NEEDED TO BRING INDEX NEAR ZERO
(LONG TERM, PALMER)**

October 30, 1993

(Index values are in tenths; example: 37 = 3.7)

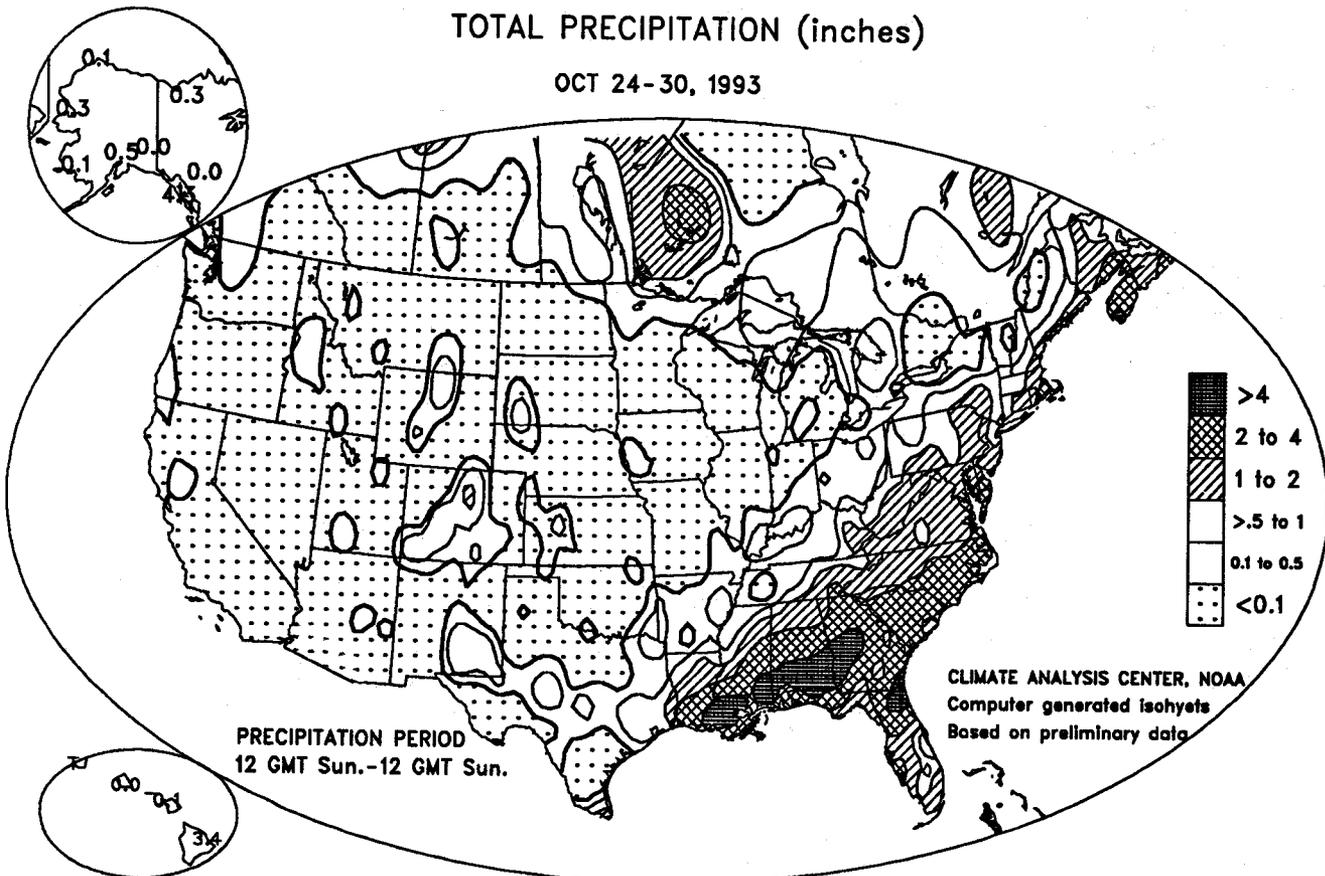
LAST CHART FOR THIS SEASON



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY Based on preliminary reports

TOTAL PRECIPITATION (inches)

OCT 24-30, 1993



PRECIPITATION PERIOD
12 GMT Sun.-12 GMT Sun.

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

Santa Ana Winds Savage Southern California

Urban wildfires, the most damaging in California since the late-October 1991 Oakland hillside blazes, swept through several Los Angeles suburbs last week. Ingredients for the fires included: (1) fuel from chaparral and dried grasses; (2) a slow start to the 1993-94 rainy season, with autumn precipitation below normal in most areas west of the Rocky Divide (fig. 1); and (3) a synoptic weather pattern that produced a furious, dry, downslope wind, known locally as the Santa Ana. The drought of 1986-87 to 1990-91 rendered southern California's chaparral especially flammable, and abundant precipitation during the winter of 1992-93 allowed grasses to flourish, only to be browned by a typically dry summer.

Santa Ana winds are a common feature of southern California's autumns, resulting when strong high pressure systems drop southeastward into the Great Basin from over the North Pacific Ocean or western Canada. If a low pressure center is already in place across northwestern Mexico, as it was last week (fig. 2),

air is squeezed westward between it and the approaching high. As the air crosses the San Gabriel Mountains, the last barrier east of the Los Angeles basin, its velocity is magnified by the downward pull of gravity. The air is also warmed by compression during its plunge from the San Gabriel highlands, lowering its relative humidity. Santa Ana wind speeds can easily approach hurricane force, as they did on October 27, especially when the air is forced through mountain passes.

Fifteen major fires scoured hillsides in areas between Thousand Oaks, in Ventura County, to near Escondido, in San Diego County. Many of the fires were contained only after the pressure gradient relaxed toward week's end. According to press reports, the fires scorched 167,000 acres (about 260 square miles) and damaged or destroyed 731 buildings. Fires that swept through residential areas of Altadena, in Los Angeles County, and Laguna Beach, in Orange County, were particularly destructive.

--Brad Rippey

Figure 1

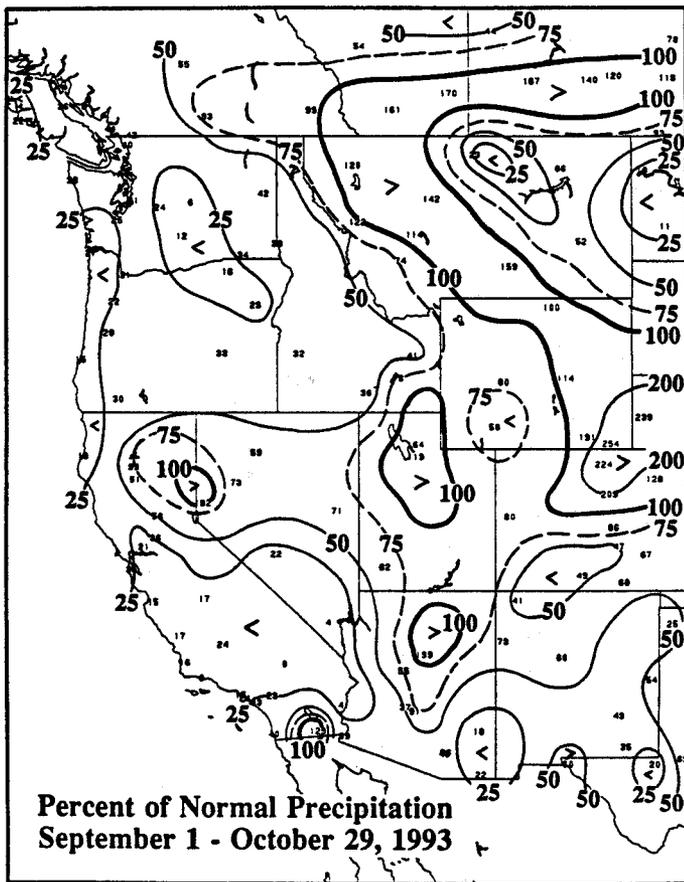
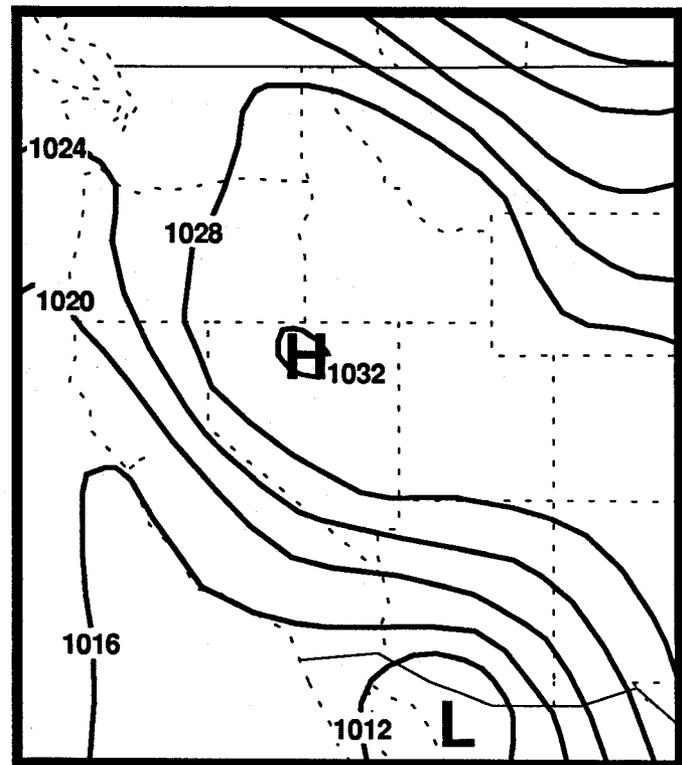


Figure 2

SURFACE PRESSURE* (millibars)
October 27, 1993

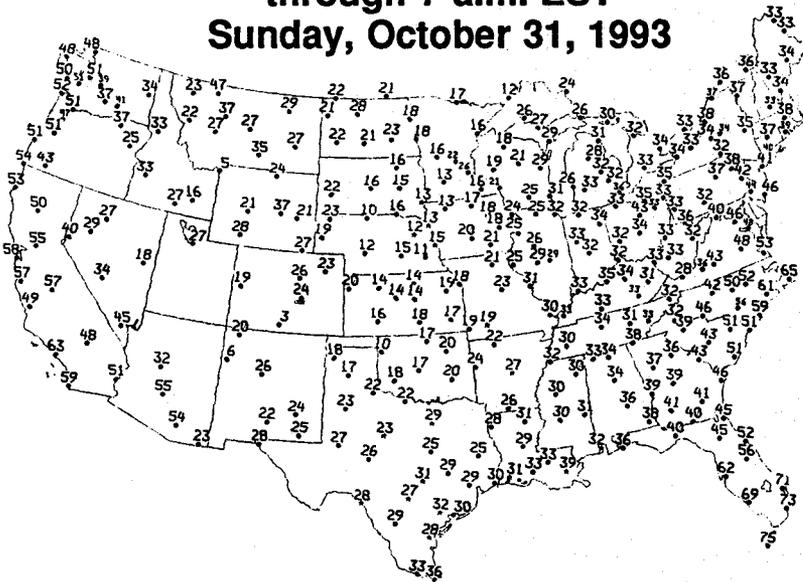


* Pressures adjusted to sea level

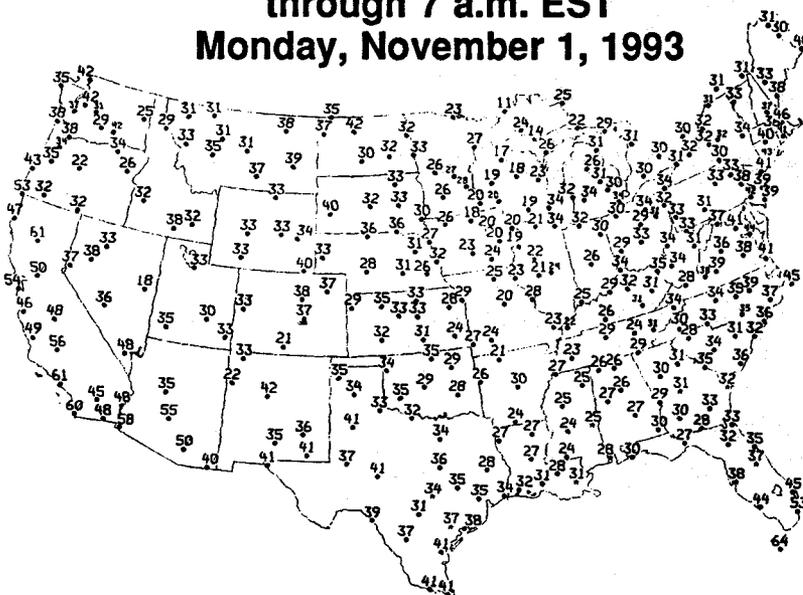
The Halloween '93 Arctic Outbreak

Summarized with Maps and Tables

Minimum Temperatures (°F) through 7 a.m. EST Sunday, October 31, 1993



Minimum Temperatures (°F) through 7 a.m. EST Monday, November 1, 1993



NOTE: In some cases, actual minimum temperatures may have been slightly lower due to additional cooling after 7 a.m. EST.

Selected Records

Lowest October Temperature (°F)

Location	New Record	Former Record
Laramie, WY	-18 on 10/30	-15 on 10/13/69
Amarillo, TX	12 on 10/30	15 on 10/31/91
Lubbock, TX	18 on 10/30	18 on 10/30/17
Midland, TX	25 on 10/30	26 on 10/31/91
Abilene, TX	23 on 10/31	23 on 10/30/17
Jackson, MS	26 on 10/31	26 on 10/31/17
L. Rock, AR	27 on 10/31	27 on 10/30/17
C. Christi, TX	28 on 10/31	above freezing
Laredo, TX	28 on 10/31	not available
Austin, TX	30 on 10/31	32 on 10/28/57
S. Antonio, TX	31 on 10/31	32 on 10/30/17
Victoria, TX	31 on 10/31	32 on 10/31/17
L. Charles, LA	32 on 10/31	32 on 10/30/89
Mobile, AL	32 on 10/31	32 on 10/28/57
Brownsv'le, TX	35 on 10/31	38 on 10/30/99

*Also occurred on earlier dates.

Total October Snowfall (inches)

Location	New Record	Former Record
Binghamton, NY	11.6	4.9 in 1988
Mansfield, OH	10.3	3.1 in 1989
Pittsburgh, PA	8.4	4.9 in 1925
Beckley, WV	6.5	3.2 in 1973
Cincinnati, OH	6.2	5.9 in 1989
Midland, TX	0.6	T
L. Rock, AR	0.2	T in 1925
Montgomery, AL	T	none observed

Note: "T" denotes a trace.

Earliest Measurable Snowfall

Location	New Record	Former Record
Midland, TX	10/30 (0.6")	11/08/55 (0.4")
L. Rock, AR	10/29 (0.2")	11/02/51 (0.4")

Earliest Trace of Snow Observed

Location	Date	Former Record
Wichita Falls, TX	10/29	10/30/67
Abilene, TX	10/30	unavailable
San Antonio, TX	10/30	unavailable
Montgomery, AL	10/31	11/02/66

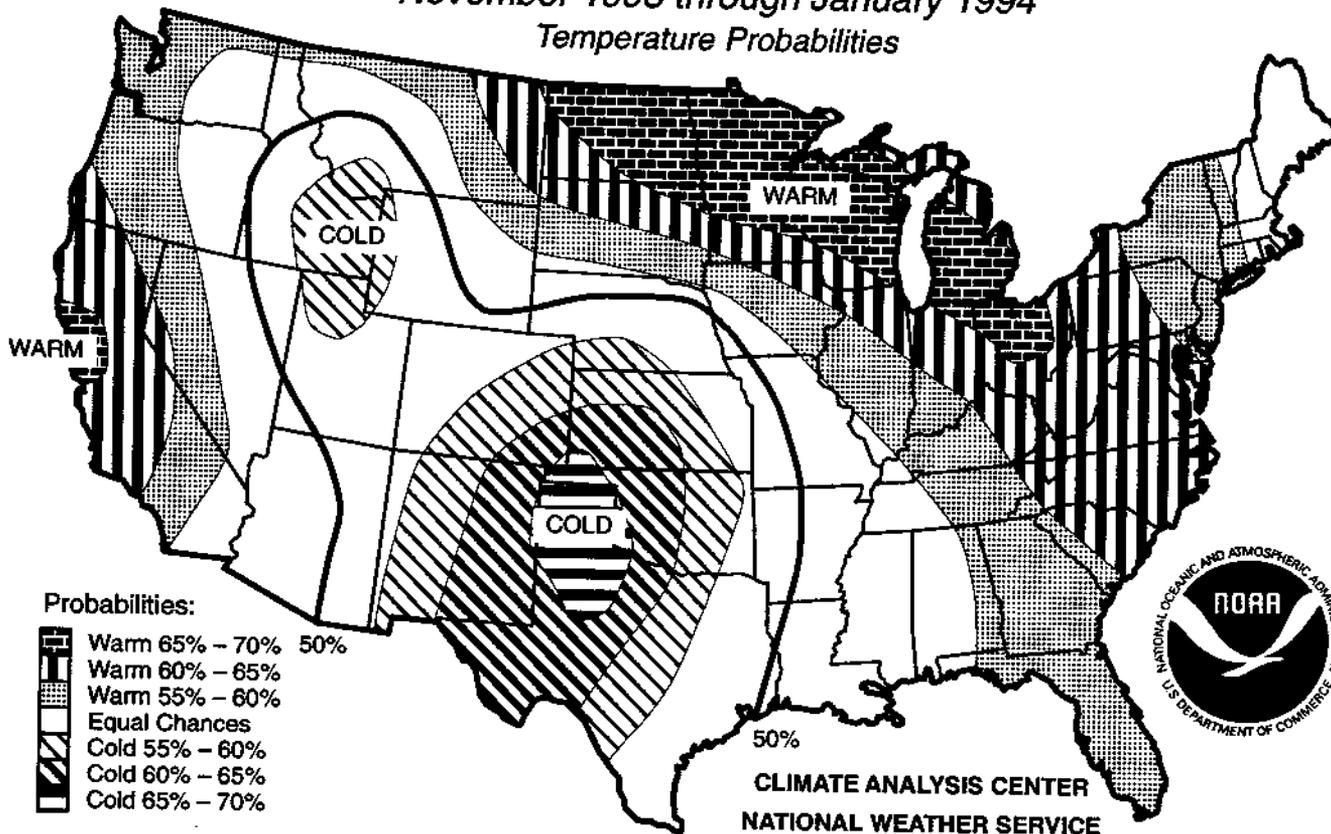
Daily Record Low Broken by 8°F or More

Location	New Record	Former Record
October 30:		
Laramie, WY	-18	-3 in 1991
October 31:		
Apalach., FL	33	43 in 1930
Concordia, KS	14	23 in 1991
C. Christi, TX	28	41 in 1980
November 1:		
Hollywood, FL	49	62 in 1963
Huntsville, AL	24	32 in 1954
Melbourne, FL	37	52 in 1976
Mena, AR	20	28 in 1906
W Palm Bch, FL	45	55 in 1954

THREE-MONTHLY WEATHER OUTLOOK

November 1993 through January 1994

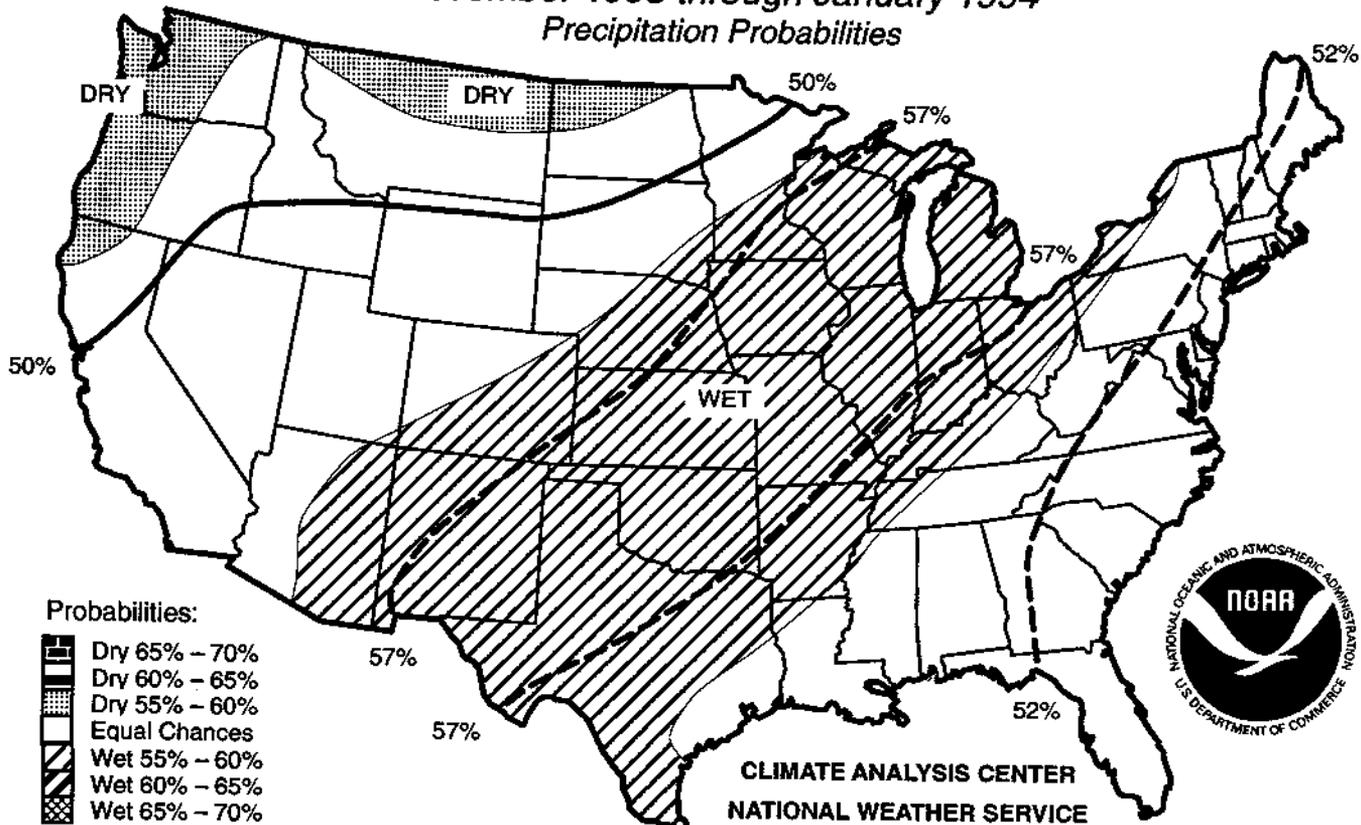
Temperature Probabilities



THREE-MONTHLY WEATHER OUTLOOK

November 1993 through January 1994

Precipitation Probabilities



National Weather Data for Selected Cities

Weather Data for the Week Ending **October 30, 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 Sept 1	PCT. NORMAL SINCE Sept 1	TOTAL, IN., SINCE Jan 1		PCT. NORMAL SINCE Jan 1	TEMP. °F		PRECIP.		
													90 AND ABOVE		32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE		
AL BIRMINGHAM	67	47	78	34	57	-1	1.4	.8	1.3	7.5	113	32.5	72	85	52	0	0	2	1
MOBILE	75	53	81	38	64	-1	4.6	4.0	4.5	8.7	99	53.8	99	91	62	0	0	2	1
MONTGOMERY	71	49	81	38	60	-1	3.6	3.0	3.1	6.6	105	41.5	90	88	53	0	0	2	2
AK ANCHORAGE	37	30	46	17	33	4	.4	.1	.2	6.3	136	14.8	108	94	79	0	6	6	0
BARROW	18	4	27	-8	11	3	T	.1	T	2.0	197	5.0	126	86	77	0	7	3	0
FAIRBANKS	27	13	33	3	20	3	.1	.1	.1	3.2	182	10.0	108	89	81	0	7	2	0
JUNEAU	48	42	52	40	45	7	3.1	1.5	1.2	15.1	105	46.7	104	99	86	0	0	5	2
KODIAK	44	33	49	28	38	1	3.3	1.8	2.4	15.2	109	61.3	112	91	72	0	3	4	2
NOME	28	17	36	9	22	-1	T	.2	T	5.8	155	14.9	115	88	71	0	7	2	0
AZ PHOENIX	84	63	91	59	73	3	T	.1	T	1.3	89	10.6	175	47	16	1	0	0	0
PRESCOTT	68	39	75	35	53	2	T	.3	T	1.7	55	15.2	92	59	22	1	0	0	0
TUCSON	83	54	90	48	68	2	T	.2	T	1.3	47	13.9	135	58	21	1	0	0	0
YUMA	89	65	94	61	77	5	.0	.0	.2	.2	39	3.7	151	38	11	3	0	0	0
AR FORT SMITH	61	37	72	29	49	-9	T	.9	T	11.0	161	40.4	120	86	43	0	1	0	0
LITTLE ROCK	62	42	73	31	52	-7	.5	.4	.5	6.7	81	36.5	92	82	43	0	1	1	0
CA BAKERSFIELD	86	52	91	47	69	5	.0	.1	.1	.1	23	6.7	153	44	23	1	0	0	0
EUREKA	73	51	87	47	62	8	.0	.0	.6	.6	18	30.9	124	81	48	0	0	0	0
FRESNO	83	50	85	48	67	6	.0	.2	.0	.1	16	11.6	150	78	25	0	0	0	0
LOS ANGELES	78	58	85	56	68	3	.0	.2	.0	.1	14	18.5	217	88	49	0	0	0	0
REDDING	84	55	86	44	69	10	.0	.7	.0	2.9	95	39.2	174	60	19	0	0	0	0
SACRAMENTO	83	49	88	46	66	5	.0	.4	.0	.5	34	19.6	160	82	22	0	0	0	0
SAN DIEGO	75	57	85	55	66	0	.0	.2	.0	.2	39	15.7	229	81	51	0	0	0	0
SAN FRANCISCO	81	55	86	52	68	9	.0	.4	.0	.5	33	19.8	145	76	33	0	0	0	0
CO DENVER	52	28	75	9	40	-7	.5	.3	.4	4.6	207	13.0	94	83	33	0	5	2	0
GRAND JUNCTION	56	31	68	20	44	-8	.0	.3	.0	1.7	78	10.7	123	82	26	0	4	0	0
PUEBLO	54	22	75	5	38	-11	T	.1	T	.7	46	12.9	126	88	35	0	6	0	0
CT BRIDGEPORT	60	44	69	36	52	0	.6	.1	.5	10.3	170	30.9	90	85	52	0	0	3	0
HARTFORD	59	37	69	31	48	0	.7	.1	.6	9.0	125	37.3	103	87	47	0	2	3	1
DC WASHINGTON	64	45	76	40	55	-1	.9	.2	.7	6.2	99	32.2	100	95	55	0	0	3	1
FL APALACHICOLA	79	57	82	45	68	1	2.3	1.7	2.3	9.5	88	43.8	92	100	65	0	0	2	1
DAYTONA BEACH	80	63	85	56	71	1	1.2	.4	.7	8.2	79	31.9	75	100	65	0	0	3	1
JACKSONVILLE	74	58	79	53	66	-3	4.9	4.3	4.0	16.5	153	42.5	96	98	74	0	0	5	2
KEY WEST	87	76	89	73	82	3	1.3	.4	.9	11.7	115	33.5	97	90	69	0	0	3	1
MIAMI	88	74	90	72	81	4	.3	.7	.3	19.6	149	54.2	106	87	62	1	0	2	0
ORLANDO	81	66	87	62	74	1	.4	.0	.4	9.9	118	43.5	100	94	74	0	0	2	0
TALLAHASSEE	79	53	83	44	66	1	2.7	2.1	2.6	7.1	84	47.4	83	86	58	0	0	2	1
TAMPA	83	67	86	64	75	3	.8	.5	.7	10.4	131	35.6	89	91	62	0	0	2	1
WEST PALM BEACH	86	71	89	68	79	2	1.3	.2	1.1	18.4	126	57.3	108	98	69	0	0	3	2
CA ATLANTA	67	49	78	37	58	-1	3.0	2.3	2.1	7.9	124	41.7	98	84	48	0	0	3	1
AUGUSTA	74	49	81	35	61	1	3.6	3.0	2.4	7.7	133	34.0	88	89	50	0	0	4	2
MACON	71	48	80	39	59	-2	5.1	4.6	2.5	7.7	157	43.7	116	85	50	0	0	3	2
SAVANNAH	72	55	78	46	64	0	2.2	1.8	1.5	9.4	139	40.6	92	92	59	0	0	4	1
HI HILO	81	69	86	65	75	0	2.1	.4	1.4	17.2	97	87.0	85	85	70	0	0	5	1
HONOLULU	84	69	88	61	76	-2	1.3	.7	.8	1.5	51	4.9	33	84	56	0	0	3	1
KAHULUI	83	68	85	63	76	-2	.5	.1	.4	1.4	93	8.9	59	84	59	0	0	3	0
LIHUE	80	69	84	61	75	-2	.8	.3	.5	5.3	81	15.6	48	82	66	0	0	6	0
ID BOISE	61	32	66	28	47	-1	T	.2	T	.5	31	11.4	123	83	27	0	4	0	0
LEWISTON	59	36	63	32	48	-1	.1	.1	.1	.6	36	11.4	113	78	38	0	1	1	0
POCATELLO	56	24	65	12	40	-4	T	.2	T	1.3	75	16.7	170	84	28	0	7	1	0
IL CHICAGO	54	38	70	30	46	-2	.1	.5	.1	6.7	108	42.4	140	82	45	0	2	1	0
MOLINE	55	38	73	31	47	-2	T	.6	T	4.4	65	48.1	141	75	46	0	2	0	0
PEORIA	55	37	71	31	46	-4	T	.6	T	10.0	155	50.7	163	82	45	0	2	0	0
QUINCY	54	37	70	29	46	-5	T	.7	T	8.5	107	33.9	99	73	42	0	2	0	0
ROCKFORD	54	35	72	29	44	-2	T	.6	T	4.4	67	39.4	125	79	45	0	2	0	0
SPRINGFIELD	56	37	70	30	47	-4	T	.5	T	8.9	152	43.4	145	81	43	0	2	1	0
IN EVANSVILLE	59	36	74	31	48	-7	.3	.4	.3	9.3	155	36.5	97	90	45	0	3	2	0
FORT WAYNE	57	36	71	29	46	-2	.1	.5	.1	6.0	119	36.5	126	88	47	0	2	1	0
INDIANAPOLIS	56	36	70	31	46	-4	.2	.4	.2	8.0	147	40.4	121	92	49	0	3	1	0
SOUTH BEND	56	39	71	33	48	-1	T	.7	T	11.9	180	42.8	132	82	48	0	0	0	0
IA DES MOINES	53	36	72	24	45	-4	T	.5	T	7.5	114	54.0	175	75	46	0	2	1	0
SIoux CITY	52	32	74	16	42	-5	T	.4	T	3.1	64	30.8	129	78	40	0	3	0	0
WATERLOO	54	36	75	22	45	-1	T	.5	T	4.7	77	51.3	168	76	38	0	2	0	0
KS CONCORDIA	57	34	76	21	45	-6	T	.4	T	3.9	78	42.7	160	78	41	0	3	0	0
DODGE CITY	56	29	74	14	43	-10	.1	.2	.1	1.9	60	24.9	125	87	40	0	4	1	0
GOODLAND	52	26	77	7	39	-8	.2	.0	.2	2.3	93	19.3	114	86	42	0	5	1	0
TOPEKA	57	34	76	23	46	-6	.0	.6	.0	8.4	123	45.2	142	87	44	0	3	0	0
WICHITA	59	34	74	21	46	-8	T	.6	T	3.4	51	30.9	99	84	41	0	3	0	0
KY BOWLING GREEN	61	38	75	30	49	-4	.3	.4	.2	6.5	99	29.1	70	97	57	0	2	2	0
LEXINGTON	59	40	73	32	50	-3	.3	.3	.3	6.0	106	35.7	96	87	52	0	1	1	0
LOUISVILLE	60	38	75	32	49	-4	.4	.3	.4	8.0	138	41.6	113	94	48	0	2	2	0
LA BATON ROUGE	71	52	80	36	61	-4	4.5	3.7	4.5	6.9	83	53.8	106	98	55	0	0	1	1
LAKE CHARLES	72	52	82	38	62	-4	2.1	1.3	2.1	5.1	53	50.0	110	90	57	0	0	1	1
NEW ORLEANS	75	57	81	41	66	0	2.9	2.2	2.6	6.2	73	47.4	92	94	68	0	0	3	1
SREVEPORT	68	43	76	30	56	-6	.5	.4	.5	7.9	105	50.9	126	95	53	0	1	2	0

Based on 1961-90 normals.

Weather Data for the Week Ending October 30, 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 Sept 1	PCT. NORMAL SINCE Sept 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM		AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	PRECIP.	
															.01 INCH OR MORE				.50 INCH OR MORE	
ME CARIBOU	42	29	48	21	36	-3	.3	-.5	.1	9.4	146	33.0	111	88	61	0	5	3	0	
PORTLAND	54	32	67	28	43	-2	.9	-.1	.6	7.7	113	34.3	99	88	49	0	5	3	1	
MD BALTIMORE	62	42	74	37	52	0	1.0	-.1	.8	6.9	109	34.7	102	93	48	0	5	3	3	
SALISBURY	65	40	76	30	53	-1	3.0	2.2	1.1	7.7	110	41.4	108	98	53	0	1	1	3	
MA BOSTON	57	43	66	37	50	-1	1.3	.5	1.0	7.8	125	33.3	100	86	55	0	0	2	1	
CRATHAM	56	45	64	39	50	0	1.9	1.0	1.2	8.0	106	31.2	86	88	69	0	0	2	0	
MI ALPENA	50	35	67	33	43	0	1.4	-.4	T	3.4	66	22.9	93	91	55	0	0	3	0	
DETROIT	58	40	74	33	49	2	2.2	-.3	.2	6.4	129	28.1	104	86	50	0	0	1	0	
FLINT	55	35	68	27	45	-1	1.1	-.4	.0	6.8	120	29.2	115	88	51	0	2	2	0	
GRAND RAPIDS	54	38	69	33	46	1	1.1	-.6	.0	12.5	180	42.9	144	89	53	0	0	0	0	
ROUGHTON LAKE	50	38	65	31	44	1	1.1	-.4	.0	3.9	71	24.4	102	82	55	0	1	2	0	
LANSING	56	36	69	28	46	1	T	-.5	T	7.8	120	33.4	125	90	48	0	2	1	0	
MARQUETTE	43	31	58	22	37	-2	-.6	-.2	.4	7.6	100	28.7	97	93	62	0	4	3	0	
MUSKEGON	53	39	67	29	46	-1	1.1	-.6	.0	6.2	95	33.1	126	97	62	0	1	2	0	
SAULT ST. MARIE	44	34	56	28	39	-2	-.6	-.1	.4	8.9	130	28.9	104	88	67	0	2	3	0	
MN ALEXANDRIA	45	30	68	17	38	-3	T	-.4	T	2.2	46	24.6	104	88	49	0	4	0	0	
DULUTH	43	30	58	19	37	-2	1.1	-.4	.1	2.4	38	28.5	106	81	54	0	4	2	0	
INT'L FALLS	42	27	61	16	35	-2	.4	-.1	.2	2.8	54	20.3	91	91	58	0	6	4	0	
MINNEAPOLIS	50	36	72	28	43	0	T	-.5	T	2.8	58	30.2	118	78	46	0	3	0	0	
ROCHESTER	49	33	73	20	41	-2	T	-.5	T	3.6	63	36.8	136	82	47	0	3	0	0	
MS GREENWOOD	68	45	81	35	56	-4	.4	-.5	.3	7.2	105	37.1	85	97	53	0	0	2	0	
JACKSON	66	46	76	34	56	-4	1.9	1.1	1.9	6.1	99	39.8	91	99	62	0	0	2	1	
MERIDIAN	71	49	80	36	60	0	2.8	2.0	2.8	8.0	123	46.7	101	92	56	0	0	2	1	
MO CAPE GIRARDEAU	59	36	71	30	47	-7	.3	.5	.2	10.6	165	41.5	110	96	45	0	3	2	0	
COLUMBIA	56	35	70	27	46	-6	T	.7	T	14.1	197	56.8	174	87	48	0	3	0	0	
KANSAS CITY	56	36	73	21	46	-6	T	-.6	T	9.4	117	48.3	142	82	44	0	2	0	0	
SAINT LOUIS	58	42	70	34	50	-4	T	-.6	T	11.8	206	48.4	156	74	41	0	0	0	0	
SPRINGFIELD	56	35	69	24	45	-8	1.1	-.7	.1	18.9	226	50.2	136	89	50	0	2	2	0	
MT BILLINGS	54	33	74	22	43	-1	1.1	-.2	.1	3.9	156	15.3	113	69	32	0	3	1	0	
GLASGOW	52	28	71	16	40	-1	1.1	-.1	.1	1.0	65	15.6	151	80	40	0	4	0	0	
GREAT FALLS	52	28	61	12	40	-3	1.1	-.0	.1	2.8	140	21.8	159	75	36	0	4	1	0	
HAVRE	54	28	66	18	41	0	T	-.1	T	.4	23	12.8	125	74	34	0	5	0	0	
HELENA	52	25	62	15	39	-2	.2	.0	.2	2.0	113	18.3	174	87	38	0	6	1	0	
KALISPELL	52	26	58	20	39	1	1.1	-.1	.1	2.5	118	20.5	153	92	46	0	6	1	0	
MILES CITY	52	27	71	16	40	-3	T	-.2	T	1.1	51	18.1	141	85	34	0	6	0	0	
MISSOULA	51	26	59	20	38	-2	.3	.2	.3	2.2	121	13.1	114	92	51	0	6	1	0	
NE GRAND ISLAND	54	29	77	17	41	-6	T	-.2	T	2.9	71	31.7	137	81	37	0	4	0	0	
LINCOLN	54	31	73	15	42	-6	T	-.4	T	5.1	92	24.8	95	80	39	0	4	0	0	
NORFOLK	54	28	81	14	41	-5	T	-.3	T	4.6	114	33.1	142	83	40	0	5	0	0	
NORTH PLATTE	54	24	77	10	39	-7	T	-.2	T	2.3	91	24.7	136	83	30	0	5	0	0	
OMAHA	52	33	73	20	43	-6	T	-.4	T	5.1	84	40.7	150	79	44	0	3	0	0	
SCOTTSBLUFF	52	22	75	9	37	-8	T	-.2	T	4.5	241	22.0	157	83	27	0	7	1	0	
VALENTINE	53	25	80	18	39	-8	T	-.2	T	2.4	69	18.8	90	73	29	0	5	0	0	
NV ELY	60	22	68	13	41	-1	.0	-.2	.0	1.3	69	9.4	106	85	20	0	7	0	0	
LAS VEGAS	77	52	86	46	65	1	.0	-.1	.0	T	4	4.7	143	35	10	0	0	0	0	
RENO	69	36	73	32	52	5	.0	-.1	.0	1.4	199	6.3	112	83	27	0	2	0	0	
WINNEMUCCA	66	25	72	19	45	1	.0	-.2	.0	.6	59	6.8	106	84	20	0	6	0	0	
NH CONCORD	55	28	69	22	41	-3	.6	-.2	.5	7.4	125	24.3	82	95	46	0	5	2	1	
NJ ATLANTIC CITY	62	39	72	31	51	-1	1.2	.6	.5	6.3	112	33.2	100	97	54	0	3	4	0	
NM ALBUQUERQUE	59	34	74	25	47	-6	T	-.2	T	1.1	60	7.8	99	70	26	0	3	0	0	
CLOVIS	61	33	77	17	47	-7	.2	-.1	.1	1.9	53	13.7	84	76	28	0	2	2	0	
ROSWELL	63	32	82	16	48	-11	.4	-.2	.2	1.4	46	9.8	84	88	35	0	3	3	0	
NY ALBANY	57	37	73	33	47	0	.4	-.2	.3	5.7	101	33.6	112	88	52	0	0	2	0	
BINGHAMTON	52	39	66	32	45	0	.5	-.1	.4	6.7	110	34.9	114	84	56	0	1	3	0	
BUFFALO	56	41	68	32	48	1	.2	-.5	.2	8.8	135	33.1	107	78	46	0	1	2	0	
NEW YORK	63	48	72	45	56	2	.9	-.1	.8	8.9	141	37.0	106	76	47	0	0	2	1	
ROCHESTER	56	38	68	32	47	0	.1	-.5	.1	6.7	125	23.4	89	87	50	0	1	2	0	
SYRACUSE	55	38	71	33	46	-1	.3	-.4	.2	11.9	172	42.3	133	91	55	0	0	3	0	
NC ASHVILLE	65	34	73	28	50	-3	1.0	.0	.7	2.7	31	31.0	66	91	41	0	3	2	1	
CHARLOTTE	68	46	76	37	57	-1	1.7	1.0	1.7	3.0	45	29.6	82	84	43	0	0	2	1	
GREENSBORO	65	41	74	31	53	-2	.9	.2	.8	4.1	58	36.4	101	91	47	0	1	3	1	
HATTERAS	72	57	78	46	65	3	3.7	2.6	2.9	14.4	143	50.9	110	91	57	0	0	5	2	
NEW BERN	72	52	77	42	62	2	2.1	1.5	1.3	8.2	102	41.3	87	96	56	0	0	3	2	
RALEIGH	66	45	73	35	56	-1	2.0	1.4	1.4	6.4	108	31.7	90	94	52	0	0	4	2	
WILMINGTON	73	53	79	42	63	3	4.8	4.2	3.6	16.1	160	56.2	114	97	60	0	0	4	2	
ND BISMARCK	49	24	75	15	37	-4	T	-.2	T	.3	12	25.2	174	89	44	0	6	1	0	
FARGO	49	29	70	19	39	-1	T	-.3	T	.7	18	19.1	105	80	48	0	4	2	0	
GRAND FORKS	47	29	65	18	38	-1	T	-.2	T	1.0	29	20.0	118	84	52	0	5	0	0	
WILLISTON	48	20	72	6	34	-5	T	-.1	T	.4	18	17.6	140	85	43	0	7	1	0	
OH AKRON-CANTON	56	37	69	31	47	-2	.3	-.2	.3	7.7	138	31.9	104	87	48	0	1	1	0	
CINCINNATI	57	38	72	31	48	-3	.5	-.2	.5	5.2	93	31.8	92	87	45	0	2	1	1	
CLEVELAND	57	39	70	35	48	-1	.6	-.1	.5	8.3	140	33.2	110	83	45	0	0	3	0	
COLUMBUS	58	37	73	33	48	0	.4	-.2	.4	4.5	83	30.9	98	91	48	0	0	1	0	
DAYTON	56	37	70	31	47	-3	.4	-.2	.4	7.7	156	43.2	142	87	48	0	2	1	0	

Based on 1961-90 normals.

Weather Data for the Week Ending October 30, 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 Sept 1	PCT. NORMAL SINCE Sept 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE		.50 INCH OR MORE	
																			90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
TOLEDO	56	37	69	33	47	0	.1	-.3	.1	6.0	122	25.9	95	86	47	0	0	0	1	0		
YOUNGSTOWN	57	38	70	33	47	0	.3	-.3	.3	5.8	97	28.8	92	86	45	0	0	1	1	0		
OK OKLAHOMA CITY	61	35	75	23	48	-10	-.4	-.6	-.4	3.8	55	30.3	101	88	41	0	2	2	1	0		
TULSA	60	35	70	24	47	-11	-.1	-.7	-.1	8.1	98	35.7	102	91	43	0	1	1	1	0		
OR ASTORIA	64	45	68	39	54	4	.4	-.6	-.4	2.2	26	36.5	80	93	58	0	0	0	0	0		
BURNS	59	24	63	19	41	0	0	0	0	.4	31	8.4	111	84	28	0	7	0	0	0		
MEDFORD	76	37	83	35	57	6	0	0	0	.7	29	13.5	110	91	26	0	0	0	0	0		
PENDLETON	60	37	62	32	49	0	0	0	0	.2	16	12.0	136	95	43	0	1	1	1	0		
PORTLAND	67	42	72	39	55	3	.1	-.8	-.1	1.3	30	23.6	96	97	45	0	0	0	0	0		
SALEM	70	39	75	36	55	5	0	0	0	.9	21	26.3	101	86	37	0	0	0	0	0		
PA ALLENTOWN	60	39	72	31	50	1	1.0	1.0	1.0	12.3	182	44.4	123	92	55	0	2	2	1	0		
ERIE	56	42	70	35	49	0	.8	-.3	-.3	7.8	97	30.0	89	75	40	0	0	0	3	0		
HARRISBURG	62	43	73	36	52	2	1.0	1.0	1.0	10.4	163	40.0	119	89	47	0	0	0	1	1		
PHILADELPHIA	64	47	76	42	56	5	.7	-.7	-.7	9.1	125	36.0	94	89	52	0	0	0	4	1		
PITTSBURGH	59	40	73	33	50	0	1.1	1.1	1.1	5.8	110	31.0	100	85	41	0	0	0	1	0		
SCRANTON	58	40	68	33	49	0	1.3	1.3	1.3	9.8	163	32.5	106	87	47	0	0	0	1	1		
RI PROVIDENCE	59	39	71	31	49	-1	1.1	1.1	1.1	7.2	102	32.7	89	90	51	0	2	2	2	0		
SC CHARLESTON	73	53	77	41	63	0	2.0	1.4	1.6	8.1	107	46.8	102	92	59	0	0	0	4	4		
COLUMBIA	71	48	77	35	59	0	3.1	2.5	2.5	8.2	124	34.7	80	88	53	0	0	0	2	2		
FLORENCE	73	50	77	39	61	1	1.9	1.3	1.4	5.8	97	30.2	79	94	56	0	0	0	4	4		
GREENVILLE	68	44	76	40	56	0	1.6	1.3	1.3	3.8	48	32.6	75	85	42	0	0	0	3	1		
SD ABERDEEN	51	27	75	16	39	3	1.6	1.3	1.3	1.6	47	25.7	130	85	41	0	5	5	0	0		
BURON	52	26	76	16	39	5	1.4	1.3	1.3	2.4	75	27.5	146	83	41	0	5	5	0	0		
RAPID CITY	55	26	82	8	40	0	1.4	1.3	1.3	2.4	102	18.6	120	85	34	0	5	5	2	0		
SIOUX FALLS	50	30	76	14	40	0	1.3	1.3	1.3	2.5	53	34.3	156	80	45	0	4	4	0	0		
TN CHATTANOOGA	68	42	79	33	55	-1	1.0	.6	.6	3.5	48	31.5	72	96	48	0	0	0	3	1		
KNOXVILLE	64	40	74	34	52	-2	1.1	.6	.6	6.9	119	34.6	89	97	48	0	0	2	1	0		
MEMPHIS	63	44	76	34	54	-3	.3	-.4	-.4	2.6	87	34.2	83	87	48	0	0	0	2	0		
NASHVILLE	63	41	77	31	52	-5	.2	-.4	-.4	5.1	85	34.9	91	87	45	0	1	2	0	0		
TX ABILENE	65	39	78	27	52	-11	-.2	-.3	-.2	5.6	99	17.5	80	80	37	0	2	2	1	0		
AMARILLO	59	29	78	12	44	-10	-.2	-.3	-.2	1.5	44	16.8	91	87	32	0	3	3	1	0		
AUSTIN	71	47	80	36	59	-8	.4	-.4	-.4	2.8	41	24.4	89	73	38	0	0	0	1	0		
BEAUMONT	72	52	83	36	62	-4	.8	-.1	-.3	8.3	79	59.8	126	94	58	0	0	0	1	1		
BROWNSVILLE	76	54	83	39	65	-8	.4	-.1	-.8	6.7	76	23.7	100	87	56	0	0	0	2	0		
CORPUS CHRISTI	75	52	83	41	63	-8	.1	-.4	-.1	3.0	35	32.0	118	80	42	0	0	0	1	0		
DEL RIO	72	46	82	32	59	-7	.1	-.4	-.1	1.4	25	14.1	63	77	35	0	1	2	0	0		
EL PASO	67	37	81	30	52	-8	.1	0	0	1.5	61	8.4	107	81	35	0	2	4	0	0		
FORT WORTH	65	42	76	32	54	-8	.1	-.7	-.1	8.4	97	28.7	88	90	44	0	1	1	0	0		
GALVESTON	71	57	79	43	64	-6	.9	-.3	-.9	10.0	116	40.7	115	83	56	0	0	0	1	1		
HOUSTON	72	49	81	34	60	-6	.6	-.5	-.6	6.4	64	52.1	119	89	51	0	0	0	1	1		
LUBBOCK	63	35	79	18	49	-8	-.3	-.3	-.3	.7	15	12.0	69	81	26	0	2	2	1	0		
MIDLAND	65	37	80	24	51	-10	.3	.1	.2	3.2	70	16.0	115	84	39	0	2	3	0	0		
SAN ANGELO	67	38	79	30	53	-10	.8	-.4	-.8	3.1	53	14.9	80	84	37	0	1	1	1	0		
SAN ANTONIO	72	43	82	35	58	-9	.1	-.6	-.1	3.6	55	30.9	115	80	34	0	0	0	1	0		
VICTORIA	73	48	82	35	61	-7	.1	-.8	-.1	4.3	40	46.2	120	83	41	0	0	0	1	0		
WACO	66	39	75	29	53	-12	.3	-.4	-.3	8.7	128	28.1	102	90	45	0	1	1	0	0		
WICHITA FALLS	62	37	76	24	50	-10	-.2	-.6	-.2	5.2	71	26.1	91	86	41	0	2	2	1	0		
UT CEDAR CITY	61	29	71	17	45	-2	0	0	0	1.2	61	9.1	93	72	20	0	5	5	0	0		
SALT LAKE CITY	58	35	69	27	46	-3	-.3	-.3	-.3	3.0	111	17.5	129	86	40	0	2	2	0	0		
VT BURLINGTON	54	35	69	28	45	1	.2	-.4	-.2	6.2	101	28.9	100	85	50	0	3	3	1	0		
VA NORFOLK	67	49	69	40	58	1	2.0	1.4	1.0	7.2	104	31.5	82	95	59	0	0	0	4	2		
RICHMOND	67	43	76	34	55	0	1.4	.6	.9	5.1	75	35.1	96	94	46	0	0	0	4	1		
ROANOKE	63	37	72	29	50	-3	1.0	.1	.9	6.7	93	31.8	91	91	46	0	3	3	3	1		
WA QUILLAYUTE	61	42	66	37	51	3	.1	-.2	-.1	5.7	38	50.4	68	98	72	0	0	0	2	0		
SEATTLE-TACOMA	59	45	62	41	52	2	-.2	-.9	-.2	1.5	30	22.1	87	96	67	0	0	0	1	0		
SPOKANE	56	32	59	24	44	1	-.3	-.3	-.3	.7	42	11.2	94	88	44	0	5	5	0	0		
YAKIMA	60	31	64	25	45	0	-.1	-.1	-.1	.1	12	4.7	86	88	44	0	4	4	0	0		
WV BECKLEY	59	38	69	32	49	0	.8	.1	.7	6.7	109	32.4	93	83	44	0	1	2	1	0		
CHARLESTON	64	40	76	33	52	0	.6	-.1	-.6	9.1	151	34.1	96	89	42	0	0	0	1	1		
HUNTINGTON	63	40	76	33	51	1	.4	-.3	-.4	7.6	125	34.9	97	88	41	0	0	0	1	0		
PARKERSBURG	62	39	75	31	50	-1	.5	-.2	-.5	6.0	108	32.7	94	89	41	0	1	1	0	0		
WI GREEN BAY	52	36	67	27	44	1	-.4	-.4	-.4	5.1	90	31.8	127	81	47	0	2	2	1	0		
LACROSSE	52	38	73	25	45	-1	-.4	-.4	-.4	1.8	30	38.5	140	80	45	0	2	2	0	0		
MADISON	54	36	71	25	45	-1	-.5	-.5	-.5	4.6	76	41.5	147	74	44	0	2	2	1	0		
MILWAUKEE	57	40	74	31	48	2	-.5	-.5	-.5	4.3	76	34.2	122	77	48	0	1	1	0	0		
WAUSAU	49	35	69	26	42	-1	-.5	-.5	-.5	6.4	92	34.0	116	78	47	0	3	3	0	0		
WY CASPER	51	25	74	13	38	-3	-.2	-.2	-.2	2.1	112	14.3	130	81	34	0	5	5	1	0		
CHEYENNE	47	20	69	0	34	-9	-.2	-.2	-.2	5.0	251	17.4	130	82	36	0	6	6	2	0		
LANDER	50	26	69	11	38	-4	-.3	-.3	-.3	1.7	79	14.5	125	79	30	0	5	5	1	0		
SHERIDAN	53	25	67	11	39	-3	.1	-.1	-.1	2.5	99	16.4	127	85	34	0	5	5	1	0		

Based on 1961-90 normals.

HEATING DEGREE DAYS (Base 65° F) October 24 - 30, 1993

(Cumulative totals and departures from normal are for the period July 1 - October 30, 1993)

STATES AND STATIONS	WEEKLY		CUMULATIVE			STATES AND STATIONS	WEEKLY		CUMULATIVE			STATES AND STATIONS	WEEKLY		CUMULATIVE		
	TOTAL	DEPARTURE	TOTAL	DEPARTURE	DEP from 92		TOTAL	DEPARTURE	TOTAL	DEPARTURE	DEP from 92		TOTAL	DEPARTURE	TOTAL	DEPARTURE	DEP from 92
AL BIRMINGHAM	51	0	136	-11	16	LA BATON ROUGE	33	13	59	15	53	TULSA	122	71	301	146	139
HUNTSVILLE	73	14	180	3	22	LAKE CHARLES	30	13	39	7	37	OR ASTORIA	75	-27	863	-5	-11
MOBILE	17	-3	38	-10	20	NEW ORLEANS	14	-2	20	-7	18	EUGENE	83	-15	461	-46	47
MONTGOMERY	38	5	79	-7	20	SHREVEPORT	64	37	111	52	76	MEDFORD	58	-41	316	-100	70
AK ANCHORAGE	221	-31	1535	-342	-595	ME BANGOR	172	26	872	79	-36	NORTH BEND	48	-34	786	-39	91
BARROW	377	-27	3638	-571	-658	PORTLAND	153	13	770	40	-36	PENDLETON	114	-2	467	-89	12
BETHEL	264	-23	2034	-306	-468	MD BALTIMORE	88	2	331	39	-37	PORTLAND	70	-26	318	-158	-49
COLD BAY	176	-19	1890	-257	-334	MA BOSTON	101	6	469	85	-57	REDMOND	120	-22	1004	69	186
FAIRBANKS	314	-27	1949	-211	-672	MI ALPENA	155	1	1051	153	-112	SALEM	71	-37	413	-176	-8
JUNEAU	135	-50	1371	-365	-412	DETROIT	108	-18	545	11	-105	PA ALLENTOWN	103	-6	518	72	-76
KING SALMON	240	-21	1720	-450	-548	FLINT	138	5	816	195	44	BRADFORD	145	-9	925	-45	-100
KOTzebue	331	-10	2490	-214	-499	GRAND RAPIDS	130	-9	783	162	08	ERIE	111	3	565	111	20
MCCRATH	301	-38	2032	-335	-643	LANSING	134	-4	802	155	-67	PHILADELPHIA	64	-23	243	-58	-100
NOME	297	3	2446	-215	-561	MUSKOGON	132	1	759	155	08	PITTSBURGH	107	-8	499	3	-80
ST PAUL ISLAND	185	-20	2140	-407	-446	TRAVERSE CITY	139	-2	810	76	-81	SCRANTON	112	-9	623	98	00
YAKUTAT	148	-46	1598	-343	-539	MN DULUTH	195	14	1331	197	-27	WILLIAMSPORT	113	-5	580	75	-6
AZ FLAGSTAFF	152	0	788	-72	92	INT'L FALLS	209	14	1426	236	22	RI PROVIDENCE	109	5	495	54	-12
PHOENIX	0	-8	0	-15	00	MINNEAPOLIS	148	-1	856	177	72	SC CHARLESTON	15	-13	39	-30	-35
TUCSON	2	-14	5	-19	05	ROCHESTER	165	11	945	207	-16	COLUMBIA	37	-8	107	-29	-48
AR FORT SMITH	109	60	194	53	84	MS JACKSON	62	25	139	35	93	GROENVILLE	64	7	186	13	-59
LITTLE ROCK	90	44	171	42	81	MERIDIAN	39	-1	98	-24	48	SD ABERDEEN	181	19	881	119	-35
CA FRESNO	0	-34	11	-75	01	MO COLUMBIA	134	44	460	137	107	HURON	183	31	862	169	41
LOS ANGELES	1	-11	3	-53	02	KANSAS CITY	130	39	449	123	105	PIERRE	166	24	767	152	86
SACRAMENTO	0	-32	34	-54	17	SAINT LOUIS	104	27	321	76	79	RAPID CITY	171	25	816	74	78
SAN DIEGO	1	-7	4	-27	04	SPRINGFIELD	135	55	376	97	106	SIOUX FALLS	173	23	798	117	64
SAN FRANCISCO	0	-42	175	-192	36	MT BILLINGS	149	7	903	132	143	TN BRISTOL	107	22	330	19	-40
COLORADO SPRINGS	189	53	733	98	218	GLASGOW	176	7	1077	161	111	CHATTANOOGA	67	6	150	-39	-66
DENVER	173	46	632	79	215	GREAT FALLS	172	20	1294	348	240	KNOXVILLE	89	14	248	4	02
GRAND JUNCTION	147	40	435	65	207	HAVELE	165	-5	1199	247	104	MEMPHIS	76	30	151	18	51
CT HARTFORD	116	1	590	109	-40	HELENA	182	12	1227	216	248	NASHVILLE	91	27	226	20	21
DE WILMINGTON	80	-9	323	14	-81	KALISPELL	182	-8	1342	63	139	TX AMARILLO	145	69	348	109	162
DC WASHINGTON	71	7	236	37	-78	MISSOULA	184	9	1104	37	119	AUSTIN	40	30	49	34	49
FL DAYTONA BEACH	0	0	0	0	00	NE GRAND ISLAND	165	43	606	112	81	BROWNSVILLE	19	19	20	20	20
FORT MYERS	0	0	0	0	00	NORTH PLATTE	183	41	728	107	94	CORPUS CHRISTI	20	20	22	22	22
JACKSONVILLE	0	-14	4	-25	-15	OMAHA	166	42	590	144	126	DALLAS FT WORTH	79	54	122	75	108
KEY WEST	0	0	0	0	00	SCOTTSBLUFF	190	50	798	159	178	EL PASO	90	53	126	45	105
MIAMI	0	0	0	0	00	NV ELKO	166	16	1086	278	223	HOUSTON	39	23	54	26	53
ORLANDO	0	0	0	0	00	ELY	165	3	1099	179	348	LUBBOCK	109	55	219	57	130
PENSACOLA	9	-7	10	-26	03	LAS VEGAS	12	-15	22	-35	15	LUFKIN	58	36	89	45	75
TALLAHASSEE	6	-13	21	-24	-19	RENO	87	-39	407	-225	80	MIDLAND ODESSA	96	54	178	70	145
TAMPA	0	0	0	0	00	WINNEBUCCA	135	-7	664	-56	76	SAN ANGELO	86	58	147	75	120
WEST PALM BEACH	0	0	0	0	00	NH CONCORD	163	16	833	74	-48	SAN ANTONIO	51	36	66	39	66
GA ATHENS	57	9	126	-6	-23	NJ ATLANTIC CITY	98	3	427	65	-41	VICTORIA	32	22	42	29	42
ATLANTA	49	1	107	-34	-15	NEWARK	70	-9	300	35	-20	WACO	83	64	129	95	121
AUGUSTA	28	-16	78	-44	-36	NM ALBUQUERQUE	127	38	270	7	154	WICHITA FALLS	103	61	199	96	151
MACON	41	5	90	-15	-6	NY ALBANY	126	-3	679	87	-84	UT CEDAR CITY	137	13	515	-16	159
SAVANNAH	14	-8	34	-25	-14	BINGHAMTON	138	-2	840	128	-103	SALT LAKE CITY	130	17	465	2	137
ID BOISE	127	6	556	-25	75	BUFFALO	115	-9	683	119	-37	VT BURLINGTON	140	-7	790	45	-69
POCATELLO	175	27	926	166	280	MASSENA	139	-15	805	-19	-181	VA LYNCHBURG	90	8	284	-5	-25
IL CHICAGO	132	14	637	161	29	NEW YORK	65	-14	293	25	-34	NORFOLK	45	-7	139	-28	-47
MOLINE	127	11	554	116	-10	ROCHESTER	123	-1	719	128	-70	RICHMOND	68	-3	218	-27	-85
PEORIA	130	21	512	119	32	SYRACUSE	130	4	696	95	-57	ROANOK	104	19	331	22	-13
ROCKFORD	143	15	680	159	-4	NC ASHEVILLE	105	18	326	-24	-32	WA OLIMPIA	102	-25	703	-172	23
SPRINGFIELD	126	28	467	117	98	CAPE HATTERAS	14	-19	20	-65	-75	QUILLAYUTE	94	-26	974	-89	03
IN EVANSVILLE	118	34	324	38	51	CHARLOTTE	55	3	137	-22	-45	SEATTLE TACOMA	89	-17	551	-90	49
FORT WAYNE	131	17	552	91	-22	GREENSBORO	83	13	240	9	-55	SPOKANE	146	-10	861	27	95
INDIANAPOLIS	131	28	521	141	78	RALEIGH DURHAM	65	5	202	14	-44	YAKIMA	137	3	674	1	59
SOUTH BEND	118	1	636	145	59	WILMINGTON	18	-16	51	-46	-82	WV BECKLEY	111	-2	454	-75	-44
IA DES MOINES	141	27	611	175	107	ND BISMARK	197	25	1086	169	37	CHARLESTON	89	1	347	18	-46
MASON CITY	159	13	832	173	21	FARGO	180	6	983	106	-6	HUNTINGTON	93	4	341	2	-23
SIOUX CITY	162	34	685	173	68	MINOT	204	28	1168	193	82	WI EAU CLAIRE	157	1	941	187	83
WATERLOO	141	2	648	35	-46	WILLISTON	216	36	1241	247	140	GREEN BAY	146	-4	864	111	-8
KS CONCORDIA	137	41	468	141	71	OH AKRON CANTON	126	11	600	103	-75	MADISON	139	-5	759	64	03
DODGE CITY	156	70	461	183	143	CLEVELAND	116	4	538	58	-64	MILWAUKEE	115	-18	561	-38	-97
GOODLAND	181	57	658	159	162	COLUMBUS	120	13	435	-2	-77	WY CASPER	185	22	793	-55	148
RUSSELL	147	54	448	137	123	CINCINNATI	121	23	447	84	-6	CHEYENNE	216	61	1034	174	277
TOPEKA	133	40	434	110	99	DAYTON	127	22	512	95	08	LANDER	187	23	895	64	223
WICHITA	129	50	347	110	123	TOLEDO	127	1	593	51	-43	ROCK SPRINGS	215	38	1213	208	355
KY LEXINGTON	106	19	360	40	09	YOUNGSTOWN	121	-3	654	79	-86	SHERIDAN	179	20	1089	187	235
LOUISVILLE	108	27	318	41	65	OK OKLAHOMA CITY	120	68	265	122	143						

Based on 1961-90 normals.

National Agricultural Summary

October 25 - 31, 1993

HIGHLIGHTS: Dry, mild conditions dominated the Nation's weather the early part of the week, providing good conditions for livestock and harvesting. A cold Arctic air mass plunged across the central and eastern parts of the country, bringing freezing temperatures as far south as southern Texas and the Mississippi Delta, with rain and snow across the Appalachian Mountains to the Atlantic Seaboard. The low temperatures behind the cold front froze muddy fields and aided harvest across the Plains and central Corn Belt. The rain and snow in the South and East delayed and stopped field work.

SMALL GRAINS: Winter wheat seeding in the 19 major producing States advanced to 90 percent (%) complete, compared with 90% at this time in 1992 and a 91% average. Planting progress was behind average in the middle and lower Mississippi Valley, Texas, Idaho, and Montana. Winter wheat emerged was at 77%, compared with 73% last year and a 77% average. In Kansas, emergence and early growth was good. In Texas, recent rains allowed existing stands to make good progress. Oats, barley, and rye seedings continued in the South and Southeast. Progress across the region was mixed, with Georgia behind average, South Carolina and Alabama ahead of average, and Virginia about average. Some small grain producers in Texas were still waiting for more moisture before planting.

CORN: Corn harvest in the 17 major producing States reached 50% complete, compared with 42% last year and a 75% average. The dry, cold conditions allowed rapid progress in the western and central Corn Belt, and good progress in the eastern Corn Belt. Harvest progress in Ohio was delayed in some areas due to the lack of elevator space.

SOYBEANS: The soybean harvest advanced well from Kansas to Kentucky, and in Michigan and South Dakota. Rains hampered the harvest in the Southeast, where progress lagged average. In the 19 major producing States, soybean harvest moved to 80%, compared with 83% a year ago and average. Lack of elevator space slowed harvest progress in some areas of Ohio.

COTTON: Cotton harvest in the 14 producing States advanced to 67%, compared with 59% last year and a 59% average. Harvest was behind average in the Mississippi Delta region, Alabama, and California. In Texas, harvest advanced until stopped by cold, wet weather at the end of the week.

SORGHUM: In the 12 major producing States, harvest reached 72%, compared with 63% last year and an 81% average. Dry, cool conditions allowed the harvest to advance rapidly across much of the central and northern Great Plains. Cold, wet weather at the end of the week stopped the harvest in Texas.

RICE: Harvest progress reached 95% complete, compared with 99% last year and a 98% average. The California harvest progressed to near completion while harvest was completed in Louisiana.

OTHER FIELD CROPS: The peanut harvest was behind average in the Southeast, but ahead of average in Oklahoma. In Texas, the harvest

was hampered by showers and cold weather. The dry bean harvest neared completion in the northern and central Great Plains, but progress was behind average. The cranberry harvest advanced nationally. The cool, dry weather allowed the tobacco harvest to make good progress in Tennessee, but was poor for stripping and grading tobacco. The potato harvest was completed in Maine and neared completion in Idaho. The sugar beet harvest was ahead of average in Michigan, but behind average in Idaho and Wyoming. The sunflower harvest in the northern Great Plains was behind last year and average.

FRUITS AND NUTS: Conditions in the Florida citrus groves continued good with adequate moisture available. New growth was slowed by cool conditions. The harvest of early citrus crops advanced in Florida and California. The Fuji and Granny Smith apple harvests were active in California. The California raisin, table grape, and wine grape harvests neared completion. In Washington, the grape harvest advanced slowly, and frost caused some harvest losses. The pecan crop was rated mostly good in Georgia and New Mexico. In Mississippi, the crop was rated mostly fair. The harvest was active in the South, with progress behind average in Georgia and Louisiana, but ahead of average in Mississippi. Harvest continued in Texas with some harvest delays caused by cold, damp, and windy conditions. The almond and pistachio harvests remained active in California.

VEGETABLES: High winds caused limited damage to vegetables growing in central and western Florida. Heavy rains at mid-week slowed field activities in southern and southwestern Florida. The sweetpotato harvest resumed in east Texas, but some of the crop was hurt from the previous week's rain. In California, the broccoli harvest advanced with quality generally good. The California lettuce and cauliflower harvests continued with quality rated mostly variable. Ideal growing conditions continued for vegetables growing in Tulare County, California. Field preparations and planting continued in Arizona, California, and Florida.

PASTURE AND LIVESTOCK: Pasture feed conditions continued generally fair to good across the Nation, although some poor pasture feed conditions were reported in the Southeast and in central and southern California. Pasture feed improvements as a result of this week's moisture were offset by the cool conditions. Cattle were moved to corn stubble in the Midwest. Above-normal temperatures benefited livestock in the West. Some livestock in the northern Great Plains were stressed by the cool, dry conditions. Nationally, livestock remained in generally good condition. Supplemental feeding occurred where needed. Hay shortages were reported in some areas of Texas.

(Continued from front cover)

hour. By week's end, more than a dozen major blazes had charred more than 260 square miles in six counties, according to press reports. The Los Angeles basin communities of Laguna Beach and Altadena were among the hardest hit areas, accounting for over half of the more than 700 buildings damaged or destroyed by flames. Late in the week, a powerful cold front nosed southward through the Plains, temporarily easing southern California's winds, but delivering harsh conditions to areas east of the Rockies. A multitude of October temperature and snowfall records were demolished. Laramie, WY (-18°F), Amarillo, TX (12°F), and Midland, TX (25°F) were among the stations to record all-time monthly record lows on October 30. Several Texas cities, including Wichita Falls, Abilene, and San Antonio, observed snow flurries earlier than ever before. Heavy snow began to fall across the

Ohio Valley on Saturday, evoking comparisons to the 1991 Halloween storm, which left similarly cold weather along with a stripe of heavy snow from northern Texas to Minnesota. The cold front kicked eastward across the Gulf Coast States on Saturday, accompanied by strong thunderstorms, and followed by severe cold. Rainfall topped 4 inches in a broad area from southern Louisiana to central Georgia. Although rainfall eliminated topsoil dryness in the Southeast, totals were often excessive, such as the 5 inches that fell in little more than a day in Macon, GA. In southwestern Georgia, a pre-dawn tornado caused three fatalities when it ripped through Leesburg. Several other tornadoes tore across northern Florida. By Saturday night, areas from Texas to northern Florida braced for sub-freezing temperatures and record cold for so early in the season (see page 6 for additional details).

Crop Progress

for the Week Ending October 31, 1993

RICE (Percent Harvested)

	Current	Last Wk	1992	Avg.
AR	94	89	99	97
CA	90	75	98	94
LA	100	99	100	100
MS	94	86	100	98
TX	100	100	100	100
5 States	95	90	99	98

These 5 States produced 97% of the 1992 rice crop.

SORGHUM (Percent Harvested)

	Current	Last Wk	1992	Avg.
AR	96	92	99	97
CO	25	17	31	49
IL	56	38	73	76
KS	60	35	35	80
LA	100	99	100	99
MS	98	95	100	99
MO	69	56	78	84
NE	54	15	41	83
NM	28	21	48	36
OK	41	34	39	38
SD	63	32	66	92
TX	90	86	84	83
12 States	72	56	63	81

These 12 States produced 99% of the 1992 grain sorghum crop.

COTTON (Percent Harvested)

	Current	Last Wk	1992	Avg.
AL	69	68	56	74
AZ	74	68	74	56
AR	70	57	69	74
CA	75	55	95	77
GA	74	65	41	56
LA	88	78	94	90
MS	75	65	81	84
MO	80	72	68	80
NM	39	24	24	20
NC	61	55	31	48
OK	35	30	21	19
SC	68	60	35	55
TN	80	61	64	72
TX	54	48	35	33
14 States	67	57	59	59

These 14 States produced 99% of the 1992 cotton crop.

CORN (Percent Harvested)

	Current	Last Wk	1992	Avg.
CO	37	21	52	53
GA	99	98	98	98
IL	67	37	59	83
IN	44	28	34	62
IA	45	22	36	81
KS	80	70	80	95
KY	84	77	80	79
MI	20	15	10	45
MN	28	16	33	79
MO	66	50	65	86
NE	46	23	36	78
NC	94	90	92	91
OH	52	34	22	45
PA	38	25	17	33
SD	30	9	27	79
TX	100	99	99	99
WI	26	10	17	56
17 States	50	31	42	75

These 17 States produced 94% of the 1992 corn crop.

WINTER WHEAT (Percent Planted)

	Current	Last Wk	1992	Avg.
AR	44	24	58	49
CA	15	7	10	13
CO	100	100	100	100
GA	12	7	12	12
ID	94	88	98	98
IL	76	61	92	92
IN	80	72	87	87
KS	98	96	97	98
MI	95	90	85	95
MO	64	43	73	78
MT	92	85	100	100
NE	100	100	100	100
NC	37	24	33	33
OH	94	88	88	86
OK	98	95	90	95
OR	93	88	89	87
SD	100	100	100	100
TX	85	81	82	86
WA	98	96	100	96
19 States	90	86	90	91

These 19 States produced 90% of the 1992 winter wheat crop.

Crop Condition (Percent)

for the Week Ending Oct. 31, 1993

SOYBEANS (Percent Harvested)

	Current	Last Wk	1992	Avg.
AL	52	44	42	47
AR	43	25	65	49
GA	22	17	26	29
IL	93	82	94	96
IN	85	78	86	85
IA	96	85	99	100
KS	80	60	85	90
KY	51	27	56	54
LA	82	69	75	71
MI	80	55	55	70
MN	95	90	98	99
MS	58	42	66	58
MO	66	46	84	81
NE	96	90	97	98
NC	14	7	10	15
OH	93	85	87	80
SC	12	7	10	15
SD	95	73	95	99
TN	43	24	44	45
19 States	80	68	83	83

These 19 States produced 95% of the 1992 soybean crop.

WINTER WHEAT (Percent Emerged)

	Current	Last Wk	1992	Avg.
AR	31	16	32	31
CA	5	3	3	2
CO	96	95	95	94
GA	7	5	8	8
ID	64	54	84	77
IL	53	30	73	70
IN	56	45	62	65
KS	90	80	85	85
MI	70	60	65	80
MO	38	25	52	57
MT	67	52	87	88
NE	100	98	100	100
NC	21	10	19	21
OH	75	60	63	60
OK	83	78	59	75
OR	68	59	73	59
SD	99	97	93	96
TX	71	65	59	70
WA	84	79	93	87
19 States	77	69	73	77

These 19 States produced 90% of the 1992 winter wheat crop.

WINTER WHEAT

State	VP	P	F	G	EX
AR	0	8	35	54	3
CA	0	0	10	85	5
CO	0	3	14	61	22
GA	5	25	40	30	0
ID	1	0	11	83	5
IL	0	9	35	54	2
IN	0	4	32	55	9
KS	0	0	10	52	38
MI	1	4	30	45	20
MO	0	1	42	54	3
MT	0	2	19	57	22
NE	0	1	6	81	12
NC	0	14	76	10	0
OH	1	5	25	54	15
OK	0	0	34	66	0
OR	0	0	23	66	11
SD	0	0	8	75	17
TX	1	6	53	36	4
WA	0	0	22	77	1
19 State	0	2	25	58	15
Prev Week*	0	3	23	56	18
Prev Year	2	8	36	40	14

* 18 State Average

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

State Summaries of Weather and Agriculture

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

ALABAMA: Rainfall 0.49 to 2.81 in. north; 1.20 to 3.66 in. central; 3.25 to 5.48 in. south. Temperatures 5 to 11° below normal north; 5 to 9° below normal central; 3 to 6° below normal south. Lows 19 to 30° north; 20 to 27° central; 21 to 30° south. Highs 73 to 80° north; 74 to 81° central; 80 to 82° south.

Days suitable for fieldwork 6.4. Soil moisture 80% short, 20% adequate. Sorghum harvested 61%, 88% 1992, 90% avg. Peanuts dug 95%, 98% 1992, 99% avg.; combined 92%, 95% 1992, 97% avg. Wheat seeded 44%, 49% 1992, 45% avg. Pasture feed 6% very poor, 37% poor, 46% fair, 11% good. Primary activities: Harvesting sorghum, cotton, soybeans, land preparation for seeding small grains, general care of livestock, poultry, catfish.

ARIZONA: Cloudy statewide most of the period with occasional scattered showers, gusty winds central, southeast, 25th to 27th. Temperatures varied from normal to 3° above normal. Extremes 30°; 91° higher elevations; 44°; 108° deserts.

Cotton harvest continued active; 100% bolls open, 100% 1992, 100% avg.; 74% harvested, 74% 1992, 56% avg. Weeds, insects light. Defoliation complete west, moderate central, active east. Alfalfa good. Harvest light to moderate all areas. Weeds light to moderate, insects light to moderate; disease light. Rain damage light all areas. Lemons, grapefruits harvested western areas. Central areas, cantaloupe, watermelons, honeydews, broccoli, mixed greens, parsley, green onions, radishes, sweet corn, navel oranges, pecans harvested. Apples, sweet corn, chilies, lettuce, squash, watermelons, cabbage, pumpkins, tomatoes harvested eastern production areas. Cattle, calves fair to good north, poor to fair central, good southeast. Soil moisture mostly short, north; mostly short to adequate, central, southeast; Stockwater mostly adequate, north; adequate, central; adequate southeast. Range, feed supplies below average to average north; average central; average southeast. Insect damage light, central, southeast; mostly light, north.

ARKANSAS: Cool week, temperatures averaging below normal. Mild, dry first part of week, hard freeze and frozen precipitation weekend. Extremes 18°; 78°. Rainfall none to 0.63 in.

Days suitable for fieldwork 6. Moderate rate of crop growth. Soil moisture 89% adequate, 11% surplus. Main farming activities: Defoliating cotton; wheat, oats seedbed preparation; shredding cotton stalks; harvesting corn, cotton, rice, soybean, sorghum, peanuts, hay; planting, fertilizing fall forages; working cattle. Cotton gins running full time. Cotton classing office reported 635,561 bales had been classed as of October 28, 1993, compared to 673,759 as of October 29, 1992. Cotton yields reported average. Corn harvest 100%, 100% 1992, 100% avg. Oats planted 77%, 62% 1992, 65% avg. Fruit, vegetable crops good condition. Pastures supplied average feed to herds for the week. Fertilizer applied to pastures. Livestock good condition.

CALIFORNIA: Persistent ridge of high pressure resulted in continued above normal temperatures.

Hot, dry weather prevailed; 90s common Central Valley, southern areas. Dry, windy conditions worsened already extreme fire danger. Planting winter wheat progressed. Field preparation, herbicide application fall, winter planted small grains continued. Rice harvest winding down. Producers burned straw, stubble permitted regions. Excellent yields, good quality most areas. Harvest cotton crop continued. Corn silage chopped, corn for grain harvest winding down. Alfalfa hay harvested good yields, quality. Sugarbeets harvested. Dry beans windrowed, combined. Planting 1994 sugarbeets crop continued. Table, raisin, wine grape harvests near end. Fuji, Granny Smith apple picking active. Almond, pistachio harvests progressed. Date, persimmon picking active. Early season Navel orange harvest continued. Broccoli harvest underway central valley. Broccoli harvest Salinas active, good quality; Santa Maria

slower, good quality. Cabbage fields harvested central valley. Cauliflower harvest underway San Joaquin Valley. Movement cauliflower fairly heavy Salinas, variable quality; Santa Maria moderate, variable quality. Tulare County crops flourishing under ideal growing conditions. Celery fields treated aphids Fresno County. Celery harvest Santa Maria moderate, good quality; fairly heavy, good quality Salinas. Sweet corn harvest drawing to close central valley; just started Coachella Valley. Lettuce harvest Salinas seasonally declining, variable quality; Santa Maria moderate, variable quality. Treatment worms lettuce fields continued Riverside County. San Joaquin Valley melon harvest winding down. Fall potato harvest Tulelake-Butte completed. Harvest sweet potatoes continued Merced County. Fresh green tomato harvest winding down Tulare County. Fresh market tomatoes harvested San Joaquin Valley. Ground work for crops underway around State. Other crops harvested: eggplant, cucumbers, cabbage, snap beans, peppers, pumpkins, squash. Recent rains started grass germination northern districts. Rangeland beginning to green up a little. Supplemental feeding still needed. Conditions central, southern areas remain dry. Additional rainfall needed to start winter growth. Livestock good condition. Sheep moved to alfalfa fields Imperial Valley, west side district.

COLORADO: Cold front moved through the State on the 25th, left widely scattered rain, light snow on the 25th, 26th. Major precipitation event of the week occurred on the 28th, 29th, as cold Canadian air moved across the State producing 0.10 to 0.20 in. moisture over major River Basins with 3 to 5 in. of snow in some eastern areas. Maximum temperatures dropped 15 to 30° with this system, it stayed cool until the 31st. Temperatures mostly 2 to 4° below normal for the period except near normal in extreme eastern areas. San Luis Valley was 5 to 7° below normal.

Days suitable for fieldwork 5.1. Soil moisture 1% very short, 33% short, 63% adequate, 3% surplus. Winter wheat emerged 96%, 95% 1992, 94% avg. Corn harvested 37%, 52% 1992, 53% avg. Sorghum mature 93%, 88% 1992, 94% avg; harvested 25%, 31% 1992, 49% avg. Sugarbeets harvested 90%, 100% 1992, 80% avg. Corn 2% very poor, 6% poor, 26% fair, 57% good, 9% excellent. Winter wheat 3% poor, 14% fair, 61% good, 22% excellent. Livestock mostly good to excellent. Pasture, range feed condition mostly fair to good.

FLORIDA: Temperatures normal to 6° below normal. Highs; lower 80s north, mid to upper 80s central, lower 90s south. Lows; upper 20s Panhandle, Big Bend, low 30s northeast, mid to upper 30s interior Peninsula, near 40 interior south. Rain occurred on 2 to 4 days. Two to 4.00 in. common north, with locally over 5.00 in. One to 2.00 in. typical central, generally under 1.00 in. south.

Soil moisture short to adequate with scattered areas surplus. Peanut harvesting virtually complete. Cotton, soybean harvest active. Small grain, sugarcane planting active. Sugarcane harvest gaining momentum. Hay making active where plant growth adequate. Citrus groves very good condition. Moisture adequate. Low temperatures slowing new growth. Natural on-tree fruit coloring progressing. Harvest of early citrus types increasing all areas. Caretakers cutting cover crops, banking young trees, placing heaters. Weekend freezing temperatures north. Limited wind damage central, west central. Heavy rain midweek south, southeast slowed field activity. Harvesting north complete. Specialty lettuce, leaf harvest increasing central. Planting activity increasing south. Available; snap beans, sweet corn, cucumbers, eggplant, specialty lettuce, peppers, radishes, squash, tomatoes, cherry tomatoes, watermelons. Pasture feed poor to excellent. Planting small grain pastures where moisture adequate. Pasture feed 15% poor, 35% fair, 45% good, 5% excellent. Cattle herds fair to good condition.

GEORGIA: Temperatures 3 to 8° below normal. Warmest highs 70s north, upper 70s to low 80s central, south. Coolest lows

November 1, mid to upper 20s north, upper 20s to low 30s central, south. Most stations rain 2 to 4 days. Rain generally 1.00 to 4.00 in., 3.00 to 6.32 in. west central.

Days suitable for fieldwork 5.9. Soil moisture 31% very short, 46% short, 23% adequate. Corn harvest near completion. Cotton 2% very poor, 22% poor, 49% fair, 27% good; 98% bolls open, 92% 1992, 94% avg.; harvest active, nearly two weeks ahead of normal. Sorghum 10% very poor, 14% poor, 52% fair, 24% good; 89% harvested for grain, 78% 1992, 81% avg.; harvest slows. Peanuts 98% dug, 100% 1992, 99% avg.; 93% threshed, 97% 1992, 95% avg. Soybeans 34% very poor, 39% poor, 18% fair, 9% good; 98% dropping leaves, 100% 1992, 97% avg.; harvest slows. Rye 56% planted, 69% 1992, 61% avg. Other small grains 8% very poor, 18% poor, 47% fair, 27% good; 38% planted, 52% 1992, 41% avg. Onions 8% planted, 13% 1992, 13% avg. Other vegetables 7% very poor, 8% poor, 47% fair, 36% good, 2% excellent. Apples 84% harvested, 93% 1992, 94% avg. Pecans 1% very poor, 6% fair, 89% good, 4% excellent; 12% harvested, 20% 1992, 20% avg. Pasture feed slight improvement, supplemental feeding increasing. Cattle fair to good, continued sales due to feed shortages. Hogs fair to good, mostly good.

HAWAII: First winter storm passed through the State bringing heavy rains, chilly air. Some road closures, flooding also occurred. Temperatures dipped to record low 61° on Oahu, Kauai. Temperatures low 60s to mid 80s. Rainfall none to 4.10 in.

Heavy localized rains caused flooding, silting to occur, causing some minor crop damage. Normal field activities delayed, interrupted due to rains. Added soil moisture supplies beneficial to orchards, areas previously experiencing dry weather. Banana output increasing. Ginger root harvesting slowed due to wet conditions, disease a problem.

IDAHO: Temperatures 5° above to 2° below normal. Precipitation none to 0.44 in. north, none southwest, none south central, none to 0.03 in. east. Aberdeen reached a low of temperature 9°.

Days suitable for fieldwork 7. Soil moisture 12% short, 84% adequate, 4% surplus. Potatoes turning or turned 2%, harvested 98%; 4% poor, 32% fair, 58% good, 6% excellent. Alfalfa third cutting 98%, 100% 1992, 100% avg. Apples harvested 89%, 100% 1992, 97% avg. Dry beans harvested 97%, 100% 1992, 100% avg. Field corn silage harvested 91%, 99% 1992, 99% avg. Field corn grain harvested 45%, 54% 1992, 42% avg. Sugarbeets harvested 73%, 88% 1992, 81% avg. Irrigation water supplies 15% fair, 70% good, 15% excellent. Activities: Winding down harvest, planting fall grain, winter ground preparation. Disease problems in early planted Oneida county winter wheat. Pasture, range feed 96% of normal. Livestock good to excellent.

ILLINOIS: Unseasonably cold, dry weather was the norm last week with some precipitation south, some snowfall. Temperatures 5 to 8° below normal. Highs in the 50s. Lows in the 30s.

Days suitable for fieldwork 6.75. Corn harvesting made great progress last week. Soybean harvesting kept right on track with last year, average. Winter wheat 9% poor, 35% fair, 54% good, 2% excellent. Soil moisture decreased to 59% adequate, 41% surplus. Other farm activities included: Harvesting sorghum, seeding wheat, fall tillage, fertilizer applications, hauling grain, machinery repair, tending livestock. Pasture feed 95% of normal.

INDIANA: High temperatures lower 50s north to the low to mid 50s south. High readings 4 to 7° below normal in the north, 6 to 10° below normal over the central, south. Lows averaged in the low to mid 30s. Rainfall water equivalent, averaged around 0.15 in. or less over the north, 0.10 to 0.50 in. over the south. Four inches of snow was reported in southern parts of the State over the weekend.

Days suitable for fieldwork 5. Harvesting again made good progress. Pastures feed 89% of normal, 91% last week. Topsoil 2% short, 60% adequate, 38% surplus. Subsoil moisture 1% short, 67% adequate, 32% surplus. Wheat acreage tilled 85%, 89% 1992, 92% avg. Moisture content of harvested corn 21%, soybeans 13%. Tobacco processed for sale 18%.

IOWA: Temperatures 6 to 8° below normal. Extremes 12°; 75°. Precipitation very light; flurries, light snow showers at weekend. Precipitation trace to 0.03 in., average trace (normal 0.42 in.).

Days suitable for fieldwork 6.9. Topsoil 87% adequate, 13% surplus. Subsoil 38% adequate, 62% surplus. Field corn average moisture content 25%. Field corn moisture content now being harvested 23%. Winter wheat seeded 94%, 94% 1992, 98% normal. 1994 Row crop acreage fall tilled 20%, 14% 1992, 32% normal. 1994 row acreage fall fertilizer 15%, 11% 1992, 25% normal. Pasture feed 3% very poor, 10% poor, 40% fair, 43% good, 4% excellent. Corn 5% very poor, 30% poor, 57% fair, 8% good. Livestock continue to be in mostly good condition. Some cattle are being moved to stalk fields as corn harvest is completed.

KANSAS: Temperatures 4° below normal south; elsewhere, temperatures ranged from normal to 3° below normal. Precipitation very light, greatest in western districts.

Days suitable for fieldwork 6.0. Topsoil 19% short to very short, 81% adequate. Subsurface moisture 5% short to very short, 87% adequate, 8% surplus. Cold weather covered most of State, farmers made good progress harvesting corn, sorghum, soybeans. Wheat seeding nearing completion; emergence good; early growth satisfactory. Disease, insect problems light. Cattle moving into corn, sorghum stubble as harvest progresses. Some wheat pasture available. Ranchers continue to cull herds, send cattle to market.

KENTUCKY: Unseasonably early snow west, north along Ohio River on 30th; accumulations 1 to 3 in. Temperatures, precipitation below normal.

Days suitable for fieldwork 5.2. Soil moisture 1% very short, 10% short, 84%, adequate 5% surplus. Cool dry weather most of week ideal for corn, soybean harvest. Tobacco quality mostly good. Burley 21% stripped, 17% 1992, 21% avg. Fall wheat 65% complete 66% 1992, 69% avg. Pastures, fall wheat emerged, livestock all good to excellent.

LOUISIANA: Temperatures 2.8 to 5.4° below normal. Extremes 39°; 91°. Rainfall 0.59 in. east central to 2.63 in. northeast.

Days suitable for fieldwork 5.0. Soil moisture 9% short, 62% adequate, 29% surplus. Hay 98% final cutting, 100% 1992, 98% avg. Winding down. Pecans 19% harvested, 34% 1992, 22% avg. Harvest just getting underway. Soybeans 100% turning color, 98% 1992, 99% avg.; 98% shedding leaves, 94% 1992, 93% avg. Harvest made good progress. Sweet potatoes 84% harvested, 80% 1992, 84% avg. Sugarcane 2% poor, 16% fair, 82% good; 28% harvested, 26% 1992, 25% avg. Harvest active, in full swing. Wheat 29% planted, 25% 1992, 23% avg.; 19% emerged 13% 1992, 12% avg. Progress was slow. Livestock 50% fair, 50% good. Cattlemen trimmed a few cows for the winter months. Pastures 16% very poor, 4% poor, 14% fair, 63% good, 3% excellent. Improved with the recent rains, cold weather halted growth. Vegetables 14% poor, 58% fair, 28% good.

MARYLAND & DELAWARE: MARYLAND: Precipitation 0.33 in., normal 0.72 in. Temperature 53.5°, normal 51.8°. Extremes 25°; 78°.

Days suitable for fieldwork 4.4. Topsoil 5% short, 71% adequate, 24% surplus. Subsoil 40% short, 40% adequate, 20% surplus. Small grains good. Wheat 70% seeded, 55% 1992, 64% avg. Barley 97% seeded, 88% 1992, 89% avg. Rye 82% seeded, 59% 1992, 72% avg. Field corn 85% harvested for grain, 62% 1992, 76% avg. Soybeans poor to fair; 42% harvested, 45% 1992, 47% avg. Sorghum fair to good; 36% harvested, 47% 1992, N/A avg. Tobacco 6% stripped, 8% 1992, 12% avg. Other hay third cut 92% complete, 97% 1992, 90% avg.; fourth cut 80% complete, 61% 1992, 50% avg. Alfalfa fifth cut 54% complete, 54% 1992, 43% avg. Hay supplies short to adequate. Pasture feed excellent. Apples 92% harvested, 86% 1992, 95% avg. DELAWARE: Precipitation 0.80 in., normal 0.76 in. Temperature 53.8°, normal 52.7°. Extremes 33°; 75°.

Days suitable for fieldwork 4.8. Topsoil 85% adequate, 15% surplus. Subsoil 29% short, 71% adequate. Small grains good. Wheat 55% seeded, 46% 1992, 54% avg. Barley 90% seeded, 41% 1992, 78% avg. Rye 69% seeded, 71% 1992, 70% avg. Field corn 94% harvested for grain, 78% 1992, 91% avg. Soybeans poor to fair; 90% shedding leaves, 99% 1992, 97% avg.; 32% harvested, 37% 1992, 43% avg.

Sorghum fair; 93% mature, 99% 1992, N/A avg.; 15% harvested, 26% 1992, N/A avg. Other hay fourth cut 1% complete, 97% 1992, 39% avg. Alfalfa hay fifth cut 44% complete, 93% 1992, 61% avg. Hay supplies short. Pasture poor to fair. Apples 97% harvested, 91% 1992, 95% avg.

MICHIGAN: Extremes 23°; 75°. Precipitation none to 1.15 in.

Days suitable for fieldwork 6.0. Soil moisture 70% adequate, 30% surplus. Dry beans 100% harvested, 98% 1992, 90% avg. Corn silage 95% harvested, 85% 1992, 96% avg. Potatoes 95% harvested, 96% 1992, 98% avg. Sugarbeets 90% harvested, 80% 1992, 75% avg. Hay 1% very poor, 4% poor, 25% fair, 50% good, 20% excellent. Pasture feed 85% of normal. Activities: Cutting silage, fall tillage, harvesting corn, soybeans, sugarbeets, seeding wheat.

MINNESOTA: Temperatures near normal to 6° below normal. Extremes 10°; 77°. Precipitation none to 0.19 in., 0.06 to 0.44 in. below normal. Greatest weekly precipitation was 0.54 in.

Days suitable for fieldwork 6.0. Topsoil 4% short, 84% adequate, 12% surplus. Sunflowers 72% harvested, 76% 1992, 94% avg. Corn 28% combined, 33% 1992, 79% avg.; 30% moisture content, 27% 1992, 21% avg.; stubble 22% plowed, 12% 1992, 49% avg. Soybeans 95% combined, 98% 1992, 99% avg.; 13% moisture content 12% 1992, 10% avg.; stubble 59% plowed, 51% 1992, 62% avg. Corn 25% very poor, 48% poor, 23% fair, 4% good.

MISSISSIPPI: Temperatures 57°, 3.5° below normal. Extremes 29°; 82°. Lower districts, southwest to the coastal, received the most rainfall. Coastal district averaged almost 4.00 in. of rainfall. Rainfall 1.67 in., 0.86 in. above normal. Soil temperatures 61°.

Days suitable for fieldwork 5.1, 4.6 1992, 4.9 avg. Soil moisture 3% very short, 12% short, 74% adequate, 9% surplus, 2% Excessive. Corn 97% harvested, 97% 1992, 95% avg.; 3% poor, 71% fair, 25% good, 1% excellent. Cotton 75% harvested, 81% 1992, 84% avg.; 4% very poor, 43% poor, 52% fair, 1% good. Rice 94% harvested, 100% 1992, 98% avg.; 15% poor, 50% fair, 35% good. Sorghum 98% harvested, 100% 1992, 99% avg.; 13% poor, 75% fair, 12% good. Soybeans 93% shedding, 98% 1992, 98% avg.; 58% harvested, 66% 1992, 58% avg.; 1% poor, 92% fair, 7% good. Sweet potatoes 85% harvested, 87% 1992, 90% avg.; 12% very poor, 12% poor, 25% fair, 38% good, 13% excellent. Wheat 50% planted, 54% 1992, 56% avg.; 30% emerged, 35% 1992, 36% avg.; 2% poor, 40% fair, 58% good. Pecans 20% harvested, 25% 1992, 18% avg.; 3% poor, 76% fair, 18% good, 3% excellent. Livestock 7% fair, 86% good, 7% excellent. Pasture feed 80% of normal.

MISSOURI: Temperatures 2 to 8° below normal. Precipitation 0.06 in., varying from none north central, northeast to 0.19 in. south central, southeast. Scattered snow flurries southern third.

Days suitable for fieldwork 5.9, ranging from 5.4 northeast to 6.3 northwest. Topsoil 76% adequate, 24% surplus. Corn harvested by districts: 100% southeast, 55% or less northern third of State. Soybeans mature 95%, 100% 1992, 98% avg.; harvest by district: 51% or less southwest, southeast to 80% northeast. Sorghum harvest ranges 41% northeast to 97% southeast. Pasture 1% poor, 17% fair, 70% good, 12% excellent.

MONTANA: Temperatures near normal. Precipitation none to light statewide.

Days suitable for fieldwork 5.3. Topsoil 16% short, 65% adequate, 19% surplus. Subsoil 17% short, 80% adequate, 3% surplus. Sugarbeets harvest 92% complete, 100% 1992, 100% avg. Dry beans harvest 88% complete, 100% 1992, 100% avg. Potatoes harvest 97% complete, 100% 1992, 100% avg. Pasture, range feed 102% of normal, unchanged from last week. Cattle, calves moved from summer ranges 72%, 80% 1992, 85% avg. Sheep, lambs moved from summer ranges 77%, 84% 1992, 86% avg.

NEBRASKA: Temperatures 7 to 10° below normal. Scattered light precipitation throughout the week.

Days suitable for fieldwork 6.8. Topsoil 3% short, 93% adequate, 4% surplus. Subsoil 1% short, 89% adequate, 10% surplus. Corn

harvest 46%, 36% 1992, 78% avg. Sorghum harvest 54%, 41% 1992, 83% avg. Soybean harvest 96%, 97% 1992, 98% avg. Wheat 1% poor, 6% fair, 81% good, 12% excellent. Pasture, range 100% of normal.

NEVADA: Dry conditions prevailed statewide. Temperatures above normal all areas. Extremes 12°; 91°.

Farmers, ranchers preparing for winter. Livestock movement to winter grazing continues, feeding activities starting some areas. Mild weather easy on livestock.

NEW ENGLAND: Precipitation 0.13 to 1.88 in. Temperatures 35 to 45° north; 43 to 52° south. Maximum temperatures 49 to 72° north; 63 to 71° south. Minimum 15 to 30° north; 24 to 38° south.

Maine potatoes harvest 100%, 100% 1992, 100% avg. Potatoes good. Field corn 98% harvested, 100% 1992, 100% avg. Field corn good to fair. Apples 100% harvested, size medium, color good, condition good. Cranberries 90% harvested, size medium, condition good. Major farm activities: Harvesting cranberries. Chopping corn.

NEW JERSEY: Temperatures near normal. Extremes 31°; 76°. Rainfall 1.34 in. north, 1.37 in. central, 1.34 in. south. Heaviest 24 hour total 1.17 in. on 30th, 31st. Estimated soil moisture, in percent field capacity, averaged 95% north, 97% central, 93% south. Four inch soil temperatures averaged 49° north, 52° central, 53° south.

Harvesting of apples. Cranberry harvest well advanced. Limited harvest of corn for grain, soybeans active in some areas. Pumpkins in good volume. Harvesting of sweet potatoes active.

NEW MEXICO: Most significant cold front of the season thus far brought the first freeze of the season to many southern locations during the latter part of the week, first significant snows to the north central mountains. Most locations around the State received precipitation in the form of either snow or rain with no totals exceeding 0.50 in. Temperatures averaged well below normal with a statewide average of 12° below normal. A few spots in the northeast experienced the first below zero readings of the season.

Days suitable for fieldwork 5.7. Soil moisture 63% short, 37% adequate. Crop conditions: Alfalfa poor to excellent; last clip finishing. Cotton 14% fair, 71% good, 15% excellent. Corn 8% poor, 15% fair, 77% good. Irrigated sorghum 30% fair, 65% good, 5% excellent. Dryland sorghum 40% poor, 60% fair. Irrigated wheat 11% poor, 33% fair, 56% good. Dryland wheat 60% poor, 30% fair, 10% good. Winter wheat 86% emerged. Chile 10% poor, 33% fair, 50% good, 7% excellent. Lettuce mostly good; harvest continues. Pecans poor to excellent, mostly good. Apple harvest mostly complete. Cattle, sheep fair to excellent, mostly good. Range feed condition 71% of normal.

NEW YORK: Weather turned cooler as week progressed. High temperatures were in the low 70s at beginning of week, fell into 40s by weekend. Lows in the 30s to 40s. Extremes 20°; 73°. Rainfall was light. Heaviest in southeast. Amounts there ranged 0.75 to 1.50 in. Elsewhere only 0.25 to 0.50 in. was received.

Activities: Corn harvest, apple picking, packing, making cider, potato digging, dry bean harvest, late season vegetable harvests, tending livestock. Wetness in some areas slowed or delayed activities.

NORTH CAROLINA: Temperatures 3° below normal to 3° above normal. Largest positive departures were in the coastal plains. Precipitation 3.87 in. at Wilmington to no rain at several locations.

Days suitable for fieldwork 5.0. Soil moisture 20% very short, 32% short, 35% adequate and 13% surplus. Crop condition: Pasture 5% very poor, 22% poor, 48% fair, 25% good. Corn 11% very poor, 43% poor, 33% fair, 13% good. Cotton 11% poor, 67% fair, 20% good, 2% excellent. Peanuts 35% poor, 39% fair, 26% good. Soybeans 3% very poor 19% poor, 56% fair, 21% good, 1% excellent. Sweet potatoes 3% poor, 65% fair, 29% good, 3% excellent. Apples 7% poor 57% fair, 36% good. Sorghum 14% poor, 76% fair, 10% good. Hay, roughage supplies 7% very short, 26% short, 64% adequate, 3% surplus. Apples harvested 90%, 85% 1992, 94% avg. Corn for grain 94%, 92% 1992, 91% avg. Sorghum for grain 83%, 74% 1992, 71% avg. Sweet potatoes harvested 75%, 81% 1992, 83% avg. Cotton

harvested 61%, 31% 1992, 48% avg. Peanuts dug 83%, 95% 1992, 94% avg. Peanuts threshed 68%, 83% 1992, 84% avg. Soybean drop leaf 83%, 92% 1992, 89% avg. Wheat emerged 21%, 19% 1992 21% avg. Major activities: Planting small grain; harvesting corn for grain, peanuts, corn for grain, cotton, sweet potatoes. Other activities included: Cutting hay; land preparation; tending livestock.

NORTH DAKOTA: Warm temperatures early in week changed to teens, single digits late in week. Precipitation light. Temperatures normal southeast, east central, northeast to 3° below normal northwest, west central. Extremes 1° west central; 78° west central.

Days suitable for fieldwork 6.2. Soil moisture supplies decreased, remained above average. Topsoil 11% very short, 66% short, 23% adequate. Subsoil 2% very short, 17% short, 78% adequate, 3% surplus. Corn, sunflower harvest well behind average while harvest of other late season crops virtually complete. Flax 98% harvested, 100% 1992, 100% avg. Corn for grain 61% harvested, 63% 1992, 89% avg. Dry beans 99% harvested, 100% 1992, 100% avg. Soybeans 99% harvested, 100% 1992, 100% avg. Sunflower 62% harvested, 74% 1992, 93% avg. Range, pasture 87% of normal.

OHIO: Average highs in the low 50s north to the upper 50s south were 3 to 9° below normal. Highs reached 70° or higher early in the week. Average lows were in the mid to upper 30s. On the 30th, temperatures fell to 26 to 32°. Most precipitation fell on the 30th, 31st. Western areas had 7-day totals of 0.25 in. or less. Rainfall 0.50 in. or more were common in central, eastern areas. Over 1.00 in. fell in the northeast. On the 1st, snow remained on the ground near Cincinnati; 3 to 5 in. was common in the northeast snowbelt.

Days suitable for fieldwork 6.8. Topsoil 20% short, 77% adequate, 3% surplus. Fall apples harvested 84%, 88% 1992, 90% avg. Grapes harvested 97%, 78% 1992, 80% avg. Sugarbeets harvested 74%. Pasture 3% very poor, 15% poor, 36% fair, 40% good, 6% excellent. Harvested corn moisture 21%. Harvested soybean moisture 13%. Corn, soybean harvest has slowed down in some areas due to a lack of elevator space. A few apple varieties are left to be picked.

OKLAHOMA: Temperatures 11° below normal northeast to 15° below normal south central. Precipitation none north central to 0.13 in. southeast.

Days suitable for fieldwork 6.2. Topsoil 38% short, 58% adequate, 4% surplus. Subsoil 14% short, 86% adequate. Soybeans 90% mature, 79% 1992, 81% avg.; 48% harvested, 46% 1992, 39% avg. Peanuts 10% poor, 12% fair, 78% good; 84% mature, 93% 1992, 97% avg.; 40% harvested, 72% 1992, 60% avg. Alfalfa 81% 5th cut, 76% 1992, 68% avg.; 6% 6th cut, 8% 1992, 3% avg. Feeder cattle, calves steady to \$2.00 higher.

OREGON: Temperatures normal to 8° above normal, exception northeastern corner slightly below normal. Precipitation: mostly dry statewide, most areas 0.10 in. or less.

Soil moisture 33% short, 67% adequate. 1994 winter wheat crop 93% planted, 68% emerged; 23% fair, 66% good, 11% excellent. Mild Russian wheat aphid infestation some spraying underway, Columbia Basin. Malheur & Klamath Co. sugarbeets harvest continues. Preseason mint work underway, central sections. Potato, onion harvest nearly complete most areas. Willamette Valley cole crops, pumpkin, squash, sweet corn harvests continued. Hood River Valley winter pear harvest nearly complete, apple picking continued. Willamette Valley apple, hazelnut, wine grape, walnut harvests continued; strawberry fields side dressed, caneberry pruning nearly complete. Cranberry harvest 80% complete, southern coast. Livestock good to excellent. Range, pasture feed 90% of normal. Weaning, processing cows, hauling calves to market full swing; weaning weights above normal. Fall pasture "green-up" underway statewide.

PENNSYLVANIA: Temperature 52°, 3° above normal. Extremes 24°; 76°. Precipitation 0.73 in., 0.07 in. above normal.

Days suitable for fieldwork 5. Soil moisture 6% short, 87% adequate, 7% surplus. Corn 38% harvested, 17% 1992, 33% avg. Ensilage corn harvested 95% complete, 83% 1992. Soybean harvest

39% complete, 38% 1992; 5% very poor, 7% poor, 28% fair, 48% good, 12% excellent. Potato harvest 95% complete, 94% 1992. Fall plowing 85% complete, 81% 1992. Wheat planted 92% complete, 90% 1992. Barley planted 98% complete, 96% 1992. Third cutting alfalfa 100% complete, 95% 1992. Fourth cutting alfalfa 75% complete, 78% 1992. Quality of hay made 25% poor, 44% fair, 31% good. Feed from pastures good to excellent. Apple harvest 88% complete, 87% 1992. Grapes harvest 99% complete, 92% 1992. Activities: Making hay, haylage; planting wheat; harvesting corn, soybeans, apples; hauling manure; caring for livestock.

PUERTO RICO: Island rainfall 1.07 in. was 0.58 in. below normal. Highest rainfall 4.49 in. at Pico Del Este, 3.50 in. at Jayuya, 2.87 in. at Arecibo Ionos. Obs. Island temperatures 80 to 81° on Coasts, 73 to 79° in Interior with mean station temperature 82.9° at San Juan WSFO to 66.7° at Pico Del Este. Extremes 60°; 95°.

SOUTH CAROLINA: After mild conditions, rains, lower temperatures ended week. Temperatures 1 to 2° below normal. Average rainfall 2.40 in.

Days suitable for fieldwork 5.7. Soil moisture 12% very short, 43% short, 45% adequate. Apples poor to fair; 94% harvested, 91% 1992, 96% avg. Barley fair; 58% planted, 50% 1992, 37% avg.; 36% emerged, 39% 1992, 26% avg. Oats fair; 63% planted, 52% 1992, 45% avg.; 45% emerged, 38% 1992, 29% avg. Rye fair; 67% planted, 53% 1992, 46% avg.; 50% emerged, 40% 1992, 32% avg. Wheat fair; 12% planted, 9% 1992, 12% avg.; 7% emerged, 5% 1992, 6% avg. Sorghum poor; 69% harvested, 77% 1992, 71% avg. Soybeans 13% very poor, 30% poor, 41% fair, 16% good; 96% leaves turning, 94% 1992, 96% avg.; 76% dropping leaves, 70% 1992, 75% avg.; 59% mature, 53% 1992, 61% avg.; 12% harvested, 10% 1992, 15% avg. Cotton 6% very poor, 55% poor, 38% fair, 1% good; 68% harvested, 35% 1992, 55% avg. Tobacco 95% stalks destroyed, 99% 1992, 93% avg. Sweet potatoes 73% harvested, 70% 1992, 74% avg. Fall hay poor to fair; 91% harvested, 94% 1992, 91% avg. Pecans poor to fair. Pasture feed 24% very poor, 26% poor, 43% fair, 7% good. Winter grazing fair; 81% planted, 77% 1992, 73% avg.; 62% emerged, 63% 1992, 56% avg.

SOUTH DAKOTA: Temperatures 5 to 10° below normal last week. Extremes 4°; 81°. Precipitation very light. Maximum 0.33 in.

Days suitable for fieldwork 6.3. Topsoil 2% very short, 32% short, 61% adequate, 5% surplus. Subsoil 2% very short, 17% short, 64% adequate, 17% surplus. Corn 3% very poor, 18% poor, 50% fair, 28% good, 1% excellent. Sunflowers 5% poor, 16% fair, 63% good, 16% excellent. Sorghum 5% very poor, 16% poor, 43% fair, 35% good, 1% excellent. Winter rye 32% fair, 44% good, 24% excellent. Corn 93% silage harvested, 94% 1992, 96% avg. Sorghum 96% silage harvested, 100% 1992, 100% avg. Sunflowers 65% harvested, 79% 1992, 94% avg. Dry, windy conditions allowed the harvest of all the row crops to make significant progress. Corn moisture content was between 20% to 30% in the eastern third. Livestock 2% fair, 75% good, 23% excellent. Pasture feed conditions 87% of normal. Some calves were becoming sick because of cold temperatures, dusty conditions.

TENNESSEE: Temperatures below normal by as much as 9° for the State. High reported on 25th, 26th 76°, the low reported on 28th 25°. Rainfall amounts were above normal in the east, below normal elsewhere. Knoxville had the most rain, with 1.19 in. reported.

Days suitable for fieldwork 5.6. Soil moisture 4% very short, 33% short, 62% adequate, 1% surplus. Corn 90% grain harvested, 86% 1992, 90% avg. Cotton 80% harvested, 64% 1992, 72% avg. Soybeans 91% mature, 85% 1992, 84% avg.; 43% harvested, 44% 1992, 45% avg. Tobacco 37% burley stripped, 38% 1992, 43% avg. Wheat 55% seeded, 52% 1992, 56% avg. Cool, dry weather made excellent harvesting weather, poor for stripping and grading tobacco. Cotton harvest is two weeks ahead of last year. Soybean harvest is advancing quickly. Some double crop beans are being harvested in west, Middle. Late tobacco is curing out slowly. Some tobacco producers in East indicated that the lateness of this year's crop will keep them from being ready when the markets open on November 22nd. Cattle are holding up well, water supplies are short in many areas.

TEXAS: A late week arctic surge broke numerous weather records across Texas. Records were set for daily lows for October 30th or 31st, also for all time October low temperatures. Earliest episode of freezing precipitation was marked at Abilene, Dallas-Fort Worth, San Antonio, Corpus Christi. Cold front, upper air system associated with arctic surge brought rain to southeastern two-thirds of State with sleet or snow flurries also noted in some areas. Earlier in week, a front triggered showers mainly in west, in Lower Valley and brought some cooling statewide. For week, temperatures averaged much below normal. Precipitation was below normal statewide.

Crops: Corn harvest virtually completed in High Plains. Cotton producers resumed harvesting in many areas of Plains last week where conditions allowed, but harvest was curtailed by cold, wet weather late in week. Harvest winding down in Northern Blacklands. Harvest made good progress in Trans-Pecos. Cotton condition 70% normal, 68% 1992. Grain sorghum harvest continued in full swing in most areas on Plains until 29th when colder and wet weather slowed or stopped harvest. Harvest winding down in Cross Timbers, East Texas. Grain sorghum 78% normal, 82% 1992. Small grains existing stands continued to make good progress in most areas due to recent rains. Some Blacklands producers were having to contend with armyworms in some fields of oats, wheat. In Edwards Plateau, a few fields of Oats had to be replanted due to damage caused by armyworms. Some parts of Northern High Plains, South Texas remained in need of moisture before planting can continue. Wheat 70% normal, 52% 1992. Peanuts scattered showers hampered harvest in some parts of Cross Timbers, Northern Low Plains. Irrigated yields have ranged from fair to good while some dryland peanuts were baled for hay. Harvest activity interrupted at weeks end by adverse weather conditions. Peanut 70% normal, 78% 1992. Soybeans harvest winding down in many areas of State. In Blacklands where reported yields have been fair to good, harvest almost completed.

Commercial Vegetables: In the Rio Grande Valley, tomato, onion plants continued to make good progress. In San Antonio-Winter Garden, cabbage continued to make good progress. In East Texas, sweet potato harvest resumed, previous weeks rains soured some of crop in some areas. Fall greens made good progress. In High Plains, pumpkin harvest coming to an end. In Trans-Pecos, cucumber, pepper harvesting continued. Pecans harvesting continued to expand across State. A few producers in Southern High Plains had to delay harvesting due to cold, moist, windy conditions. In Cross Timbers, early reports indicate a good crop.

Range and Livestock: Hay supplies continued to be short in many areas of State as producers were busy trying to harvest one more cutting of hay before arrival of anticipated freeze. Existing winter pastures continued to make good progress across many parts of State due to recent rains. Small grain pasture planting was active across State where conditions allowed. Supplemental feeding continued. In Edwards Plateau, breeding of Angora goats was active. Livestock were in fair to good condition across State.

UTAH: Temperature maximums 0.5° below normal, minimums averaged normal. Precipitation was light in the north central division, northern mountains, none for the rest of the State.

Days suitable for fieldwork 6.5. Soil moisture 6% short, 64% adequate, 30% surplus. Hay, roughage supplies 14% short, 84% adequate, 2% surplus. Winter wheat emerged 95%, 88% 1992. Corn mature 89%; grain harvested 42%, 95% 1992. Alfalfa hay 4th cutting 98%. Apples 97% picked. Potatoes harvested 96%. Cattle moved from summer range 93%, 100% 1992. Sheep moved from summer range 96%, 100% 1992. Pasture, range good to excellent.

VIRGINIA: Temperatures slightly below normal. Extremes 23°, 84°. Precipitation near normal.

Days suitable for fieldwork 5.2. Topsoil 5% very short, 46% short, 49% adequate. Pasture 3% very poor, 16% poor, 69% fair, 12% good. Corn silage harvesting completed. Corn harvested for grain 87%, 75% 1992, 82% avg. Soybean 2% very poor, 81% poor, 17% fair; harvested 28%, 24% 1992, 32% avg. Cotton harvesting 62% completed, 10% 1992, 33% avg. Peanuts dug 93%, 96% 1992, 95% avg.; combined 80%, 93% 1992, 91% avg. Fall apples 98%

harvested. Winter apples 70% harvested. Winter grains, grazing crops condition 4% very poor, 14% poor, 54% fair, 15% good, 13% excellent. Winter wheat 42% seeded, 38% 1992, 48% avg. Oats 88% seeded, 87% 1992, 86% avg. Barley 81% seeded, 70% 1992, 84% avg. Reseeding pastures, hayfields. Harvesting peppers, tomatoes, cucumbers, snapbeans. Stripping, grading fire, burley tobacco.

WASHINGTON: Temperatures 2° below normal to 6° above normal west; 1° below normal to 6° above normal east. Precipitation 0.17 to 1.05 in. west; none to 0.15 in. east. Freezing temperatures reported many eastern areas. Some freeze damage reported, none too severe.

Days suitable for fieldwork 6.8. Soil moisture 24% short, 76% adequate. Hay, other roughage 6% short, 92% adequate, 2% surplus. Range, pasture 14% poor, 56% fair, 30% good. Winter wheat dryland 25% fair, 75% good; irrigated 90% good, 10% excellent. Barley dryland 30% fair, 70% good; irrigated 100% good. Potatoes, dry beans, 100% good. Corn, 3% fair, 97% good. Winter field preparations were on the agenda for most of the State. Potato harvest continued. Grape harvest dragged on, as frosts caused some grapes to fall off the vines before the pickers could get to them. Cranberry crop was being harvested, looked to be down from last year. Cattle were grazing crop stubble.

WEST VIRGINIA: Temperature 47°. Extremes 23°, 78°. Precipitation 1.11 in.

Days suitable for fieldwork 4.6. Soil moisture 16% short, 76% adequate, 8% surplus. Pastures 8% poor, 47% fair, 45% good; 84% of normal. Cattle 3% fair, 97% good. Sheep 1% fair, 99% good. Corn 80% harvested. Wheat good; 55% Sown. Barley good; 100% Sown. Soybeans 10% fair, 90% good; 55% harvested. Farm activities: Moving livestock, feeding livestock, stripping tobacco, chopping silage, harvesting corn, harvesting soybeans, sowing wheat.

WISCONSIN: Scanty precipitation fell, except for heavier snow amounts in parts of the Lake Superior Snowbelt region across Door County. Some parts of Door county received up to 6 in. of snow. Temperature 39°, 5° below normal. Extremes 11°, 73°. Precipitation trace to 0.10 in.

Days suitable for fieldwork 5.8. Soil moisture 81% adequate, 19% surplus. Pasture feed 77% of normal, 71% 1992, 71% avg. General condition of crops 4% poor, 40% fair, 55% good, 1% excellent. Corn 2% very poor, 12% poor, 36% fair, 49% good, 1% excellent. Corn for grain 26% harvested, 17% 1992, 56% avg. Corn silo filling 90% complete, 83% 1992, 94% avg. Soybeans harvested 90%, 68% 1992, 81% avg. Fall tillage 42% complete, 31% 1992, 42% avg. Hay, roughage supplies 15% short, 73% adequate, 12% surplus. Despite cold weather, snow flurries, farmers had a good week for fall activities. Farmers were busy plowing, harvesting soybeans, corn. For the fourth consecutive week, farmers had over 5 days to do fieldwork. Farmers have been able to stay on schedule with their intended fall tillage because of the light precipitation received in October. General condition of crops remained in mostly good condition, following the trend of the whole growing season. Soybean harvest is nearing completion. Comments from reporters on yields have been favorable. Corn for silage is also coming to an end. Farmers have indicated that yields are lower than normal. Since other harvest activities are drawing to a close, farmers are focusing their attention on harvesting corn for grain. Corn harvested for grain jumped 16% from last week. Reports from Ag Agents, farmers have indicated that early test weights for corn have been between 46 to 50 pounds per bushel.

WYOMING: Temperatures below normal throughout the State, 9° below normal in Laramie to near normal in Lander. Precipitation mostly below normal. Lander, Rock Springs reported the largest amounts of precipitation with about a quarter of an inch.

Days suitable for fieldwork 5.4. Topsoil 11% short, 81% adequate, 8% surplus. Subsoil 15% short, 80% adequate, 5% surplus. Winter wheat for harvest in 1994 99% emerged, 100% 1993, 100% avg. Winter wheat good. Dry beans combined 94%, 100% 1992, 100% avg. Sugarbeets harvested 85%, 95% 1992, 90% avg. Cattle, calves moved from summer ranges 87%, 96% 1992. Sheep, lambs moved from summer ranges 85%, 97% 1992. Range, pasture feed good to excellent.

October 1993

MONTHLY DATA FROM SELECTED FOREIGN CITIES
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
*** = DATA NOT AVAILABLEInternational Weather and Crop Summary
HIGHLIGHTS

October 24 - 30, 1993

FSU: Winter grains entered dormancy in the north around usual dates. Moisture remained limited in southern Ukraine for winter grain establishment.

EUROPE: Dry, cool weather across northern Europe helped fieldwork, but the southeast remained unfavorably dry.

SOUTH ASIA: Dry, warm weather aided winter grain and oilseed planting and summer crop maturation.

SOUTHEAST ASIA: Typhoon Ira hit the northern Philippines. Localized flooding worsened in Indochina.

EASTERN ASIA: Soaking rains delayed rice harvesting across southern China, while dry weather favored fieldwork across the North China Plain.

AUSTRALIA: Rains favored southern wheat, but additional rain is needed across the west.

SOUTH AMERICA: Frost returned to Argentina, possibly causing additional damage to winter wheat. Drier weather is needed for planting across southern Brazil.

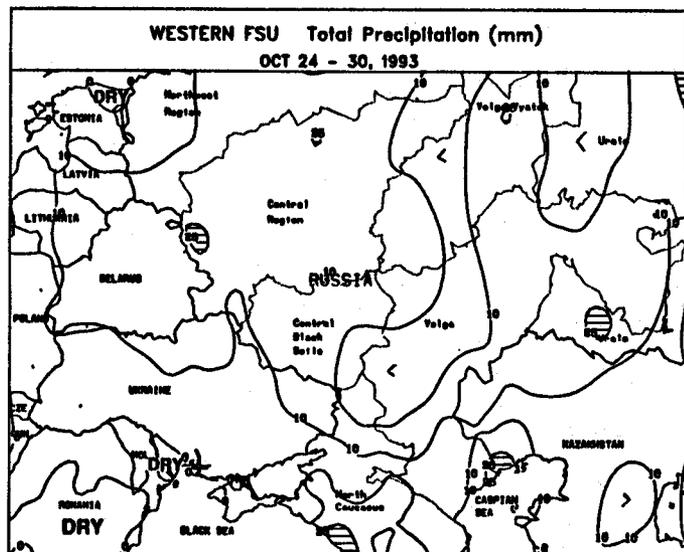
MEXICO: Mostly dry weather favored fieldwork across the northwestern and central crop areas.

NORTHWESTERN AFRICA: Preparations for winter grain planting were in the early stages. Soaking rain is needed before planting can become widespread.

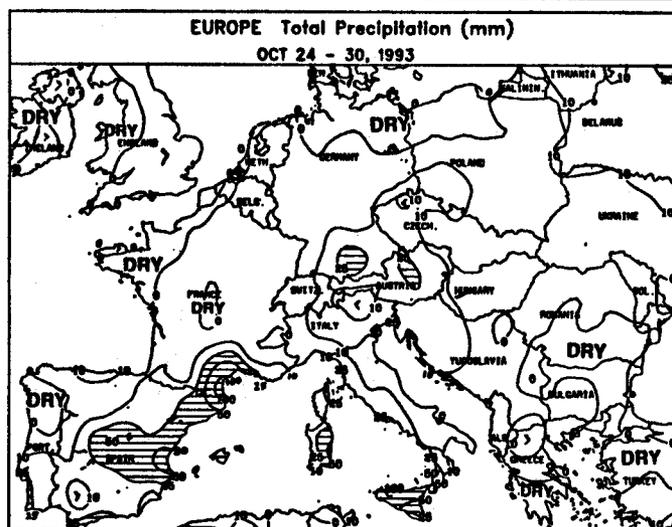
SOUTH AFRICA: Corn planting progressed, but rain lingered in northern crop areas, slowing fieldwork.

COUNTRY	CITY	TEMPERATURE (C)					PRECIPITATION (MM)		
		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG DPART	F/NRM	TOTAL	DPART F/NRM
NORWAY	OSLO	6	1	12	-9	3	-1.3	140	39
SWEDEN	STOCKHOLM	9	4	16	-6	6	-1.1	56	5
FINLND	HELSINKI	7	1	12	-8	4	-1.6	58	-15
U KING	GLASGOW	11	3	16	-7	7	-2.5	57	-73
	EDINBURGH	11	4	16	-6	7	-2.3	133	67
	BIRMINGHAM	11	4	17	-5	8	-2.3	76	24
	LONDON	13	7	17	-3	10	-1.1	155	81
IRELND	DUBLIN	11	6	15	-1	9	-2.0	61	-9
ICELND	REYKJAVIK	7	3	13	-7	5	0.8	45	-41
DENMRK	COPENHAGEN	10	5	16	-3	8	-1.8	40	-19
LUXEMB	LUXEMBOURG	11	7	17	1	9	-0.5	91	15
SWITZL	ZURICH	11	6	19	1	8	-1.1	97	27
	GENEVA	12	8	23	4	10	-0.5	199	125
FRANCE	PARIS/ORLY	13	8	20	1	10	***	94	**
	STRASBOURG	12	7	22	-1	10	-0.5	94	51
	BOURGES	14	8	22	3	11	-1.0	82	23
	BORDEAUX	16	10	24	3	13	-0.5	133	46
	TOULOUSE	17	9	24	3	13	-1.1	56	4
	MARSEILLE	19	13	23	5	16	0.6	53	-25
SPAIN	VALLADOLID	14	7	20	1	10	-2.6	142	106
	MADRID	16	9	23	1	12	-2.6	161	108
	SEVILLE	21	13	27	8	17	-3.0	69	3
PORTUG	LISBON	19	13	22	9	16	-2.6	198	123
GERMNY	HAMBURG	12	6	19	-3	9	-1.0	72	9
	BERLIN	13	6	20	-2	9	-0.7	23	-13
	DUSSELDORF	13	7	19	-2	10	-0.8	81	28
	LEIPZIG	12	6	21	-2	9	-0.4	17	-26
	DRESDEN	13	6	21	-3	10	0.4	47	-6
	STUTTGART	12	6	22	-1	9	-0.7	83	41
	NURNBERG	12	5	21	-3	9	-0.3	57	12
AUSTRI	VIENNA	15	7	25	-2	11	1.1	73	23
	INNSBRUCK	15	6	23	-2	10	1.0	107	55
CZECH	PRAGUE	12	4	21	-4	8	-0.7	41	11
POLAND	WARSAW	12	5	24	-6	8	-0.3	27	-10
	LODZ	12	5	23	-4	9	0.5	21	-18
	KATOWICE	13	6	25	-4	9	1.4	35	-20
	PRZEMYSL	14	7	25	-3	11	1.7	21	-21
HUNGAR	BUDAPEST	16	8	27	-1	12	1.4	93	59
F YUGO	BELGRADE	21	11	31	1	16	3.2	17	-25
ROMANI	BUCHAREST	19	8	31	-5	13	1.8	58	28
BULGAR	SOFIA	20	10	34	1	15	4.3	11	-27
ITALY	MILAN	17	10	23	4	14	0.6	236	131
	VERONA	17	10	23	3	14	0.7	176	98
	VENICE	18	12	24	5	15	1.2	97	26
	GENOA	19	14	22	8	16	-1.2	214	42
	ROME	23	16	28	10	20	2.5	136	44
	NAPLES	24	15	31	10	19	2.8	73	-58
GREECE	THESSALONIKA	24	14	32	7	19	3.1	7	-32
	LARISSA	26	13	31	8	19	3.2	7	-40
	ATHENS	26	17	29	14	21	2.1	0	-59
TURKEY	ISTANBUL	22	15	30	11	19	3.3	7	-57
	ANKARA	23	3	28	-5	13	1.1	1	-17
CYPRUS	LARNACA	30	19	33	16	24	2.7	10	-16
ESTONI	TALLINN	8	3	14	-5	5	-1.3	66	1
FSU	ST. PETERSBURG	7	2	15	-6	5	-1.2	75	12
LITHUA	KAUNAS	9	3	17	-3	6	-0.8	32	-17
FSU	MINSK	9	3	21	-4	6	0.0	47	0
	KAZAN	6	1	18	-11	3	-0.1	21	-25
	MOSCOW	8	2	20	-6	5	-0.2	45	-10
	YEKATERINBURG	5	0	15	-11	3	0.9	40	-1
	OMSK	6	0	18	-14	3	1.5	54	23
	KUSTANAY	9	1	19	-9	5	1.7	24	-2
	KRASNOYARSK	7	0	19	-8	3	2.6	35	-2
	NOVOSIBIRSK	6	1	16	-8	4	2.8	35	4
	BARNAUL	8	1	21	-10	4	1.6	19	-31
	KHABAROVSK	11	1	20	-8	6	1.2	41	-4
	VLADIVOSTOK	12	6	19	-2	9	1.1	90	36
	KIEV	12	5	26	-4	8	0.0	20	-13
	LVOV	14	6	26	-4	10	1.7	13	-33
	KIROVOGRAD	13	5	26	-7	9	0.6	5	-27

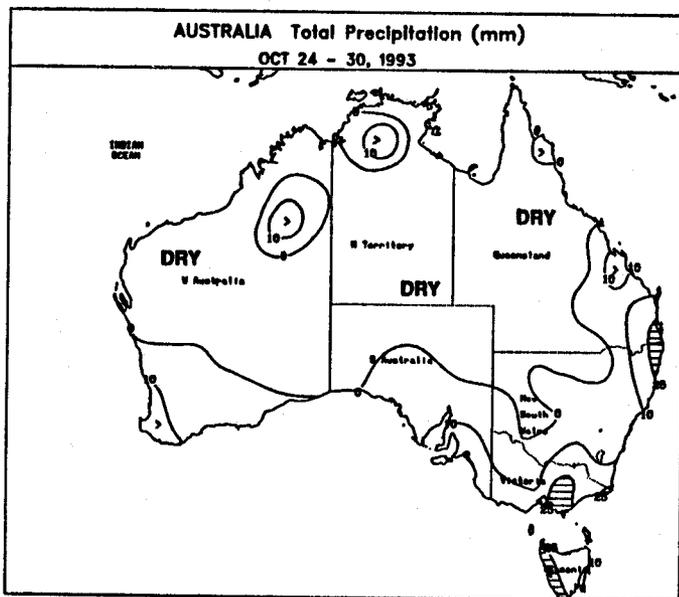
Based on Preliminary Reports



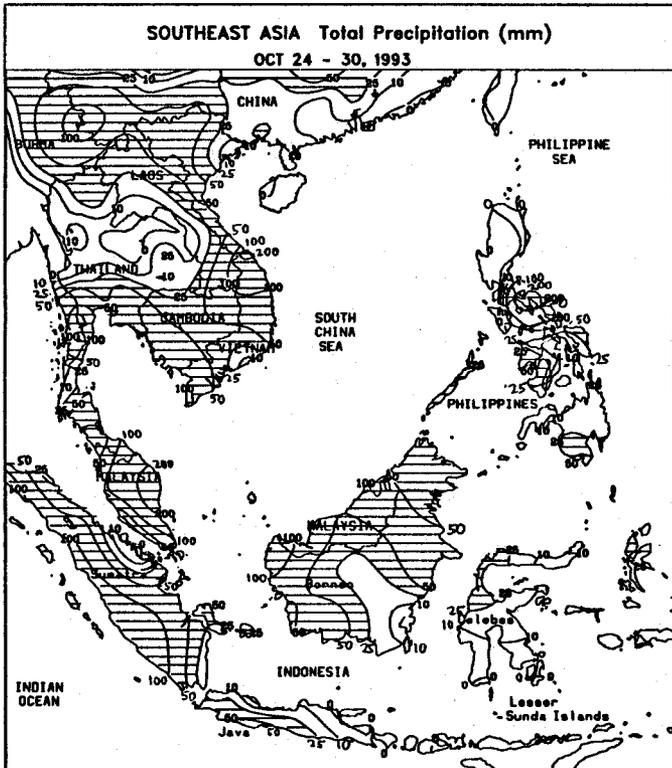
FSU-WESTERN: A strong cold front crossed the region, ushering in unseasonably cold air and mixed precipitation. Rain turned to snow showers with the greatest amounts of moisture (10-25mm) falling over the southern Baltic States, Belarus, Central Region, Black Soils Region, Volga Vyatsk, and upper Volga. Although generally dry weather helped the corn and sunflower harvests in Ukraine, moisture remained limited for winter grain establishment in southern areas. Weekly average temperatures ranged from 2 to -3 degrees Celsius (C) in the eastern Baltic States, northern Belarus, Northwest Region, Central Region, Black Soils Region, Volga Vyatsk, and Volga Valley, prompting winter grains to enter dormancy. Winter grains in Ukraine and North Caucasus continued to cold-harden prior to dormancy. Lowest temperatures ranged from -1 to -6 degrees C in the west and south and -5 to -11 degrees C in the northwest.



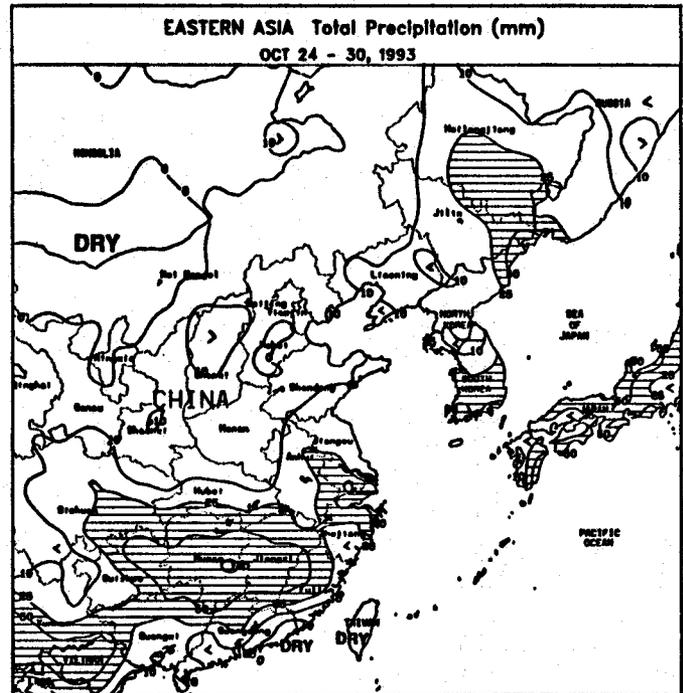
EUROPE: Mostly dry weather over Great Britain and from France across Germany to Poland favored sugar beet harvesting. Average temperatures of 4-8 degrees C kept growth of emerging winter crops at a minimum across the north, with temperatures ranging from 1 to 3 degrees C below normal. Unfavorably dry weather persisted across southeastern Europe, where soil moisture is low due to well-below-average seasonal rainfall, especially in Bulgaria and Greece. Welcomed drier weather in northern Italy eased excessive wetness, although variable showers (4-29 mm) kept some scattered areas too wet for fieldwork. Much of the rainfall was concentrated in the western Mediterranean, producing 25-86 mm in eastern Spain and 10-40 mm along Italy's west coast. Variable showers (5-35 mm) caused minor fieldwork delays in southern portions of Spain and Portugal. Light showers (1-10 mm) in southern France allowed some harvesting of corn and other crops.



AUSTRALIA: Mostly dry weather favored maturing winter wheat across southern Queensland and northern New South Wales. Light rain (7-15 mm) aided reproductive to filling winter wheat in Victoria and South Australia. Interior Western Australia remained mostly dry (1-5 mm), but below-normal temperatures (1-3 degrees C below normal) reduced evaporative losses for filling winter wheat.

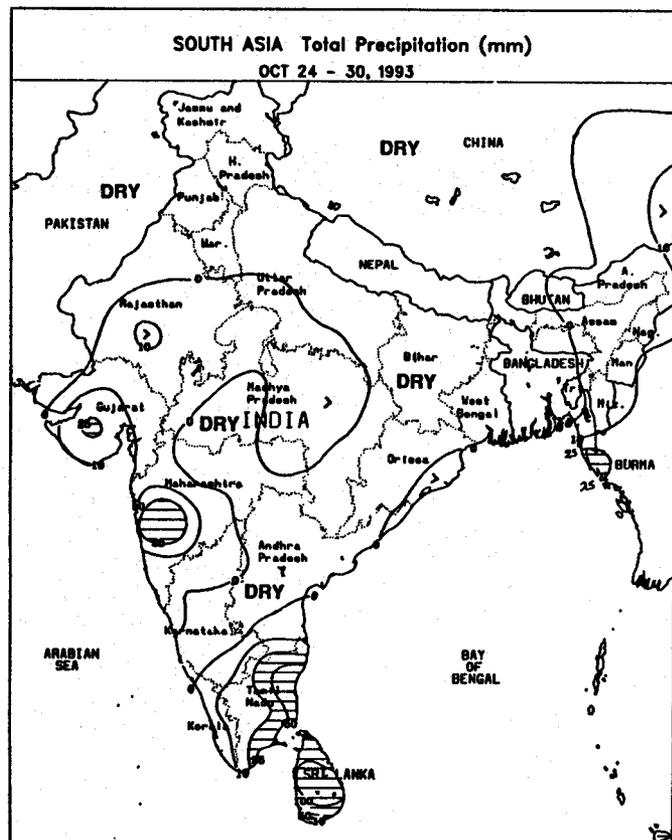


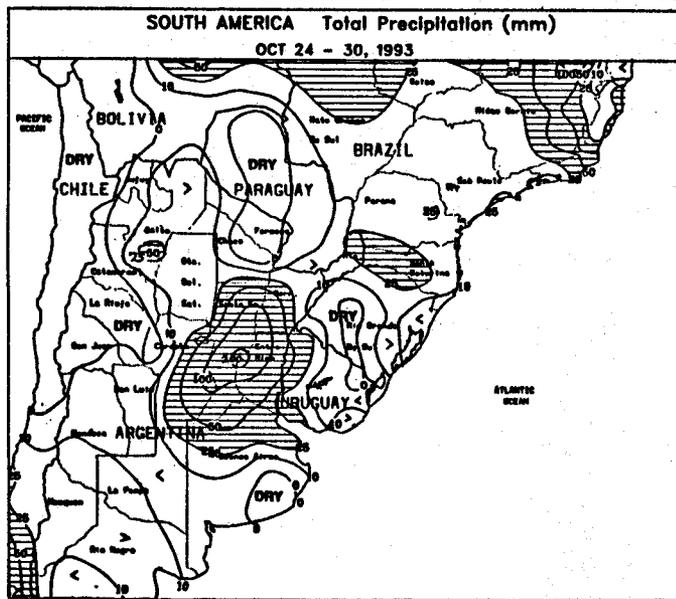
SOUTHEAST ASIA: Typhoon Ira hit eastern Luzon on November 1 with sustained winds of about 100 knots, threatening interior grain and sugarcane areas damaged by Typhoon Flo in early October. *(Details will appear in next week's summary as more information is received.)* Prior to the storm, heavy showers (50-211 mm) covered southeastern Luzon, with only moderate showers (10-35 mm) in the central and southern islands. In Indochina, heavy showers (50-100 mm) were again concentrated over central Vietnam, central Thailand near Bangkok, and southern portions of the Malay Peninsula. Unseasonably heavy rain (10-40 mm) occurred throughout northern and eastern Thailand. Rainfall tapered off across Java, with only isolated totals exceeding 25 mm. Rain is needed in Java soon to avoid rice planting delays.



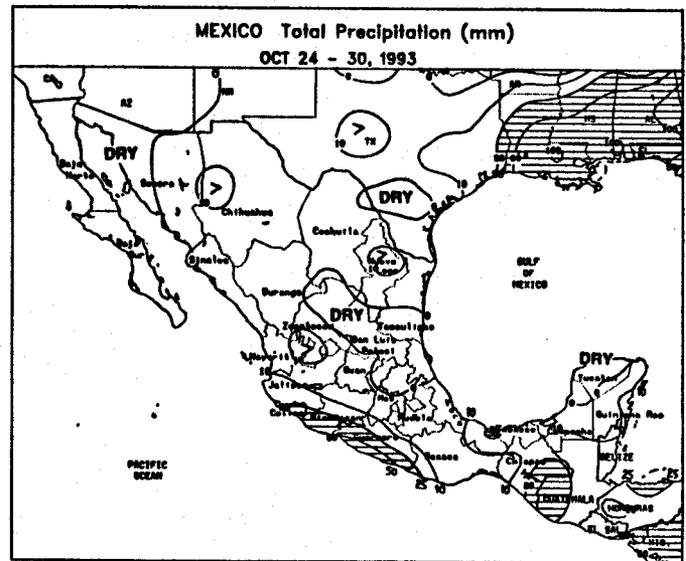
EASTERN ASIA: Soaking rain (10-50 mm, with isolated amounts greater than 100 mm) covered south-central China, delaying late double-crop rice harvesting, but increasing reservoir levels. Dry weather favored winter wheat planting and late summer crop harvesting across the North China Plain. In Manchuria, light to moderate precipitation (10-40 mm) slowed late corn and soybean harvesting. Temperatures averaged near to slightly below normal across most of China. After several weeks of mostly dry weather, moderate showers (20-50 mm) returned to South Korea and southern Japan, slowing late rice harvesting.

SOUTH ASIA: Dry, seasonably warm weather dominated central, northern, and eastern crop regions, favoring winter grain and oilseed planting and summer crop maturation. The dryness extended southward, although southernmost crop areas picked up moderate showers (15-100 mm), aiding vegetative rabi (fall-planted) crops. Showers elsewhere were isolated, but included Gujarat's western groundnut regions, coming about 2 months too late to help crop prospects.

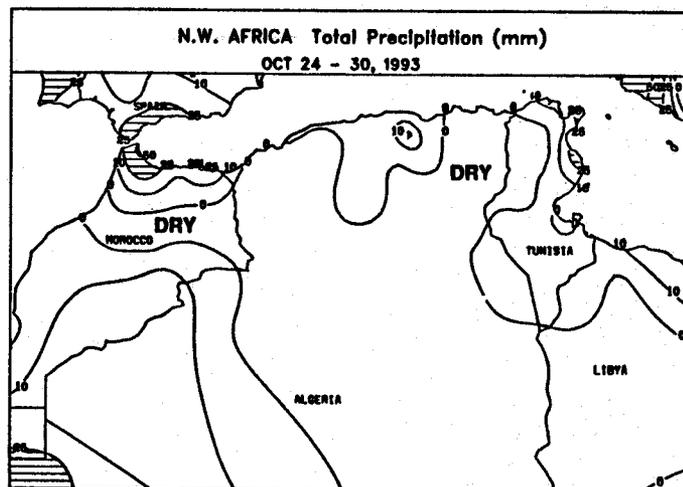




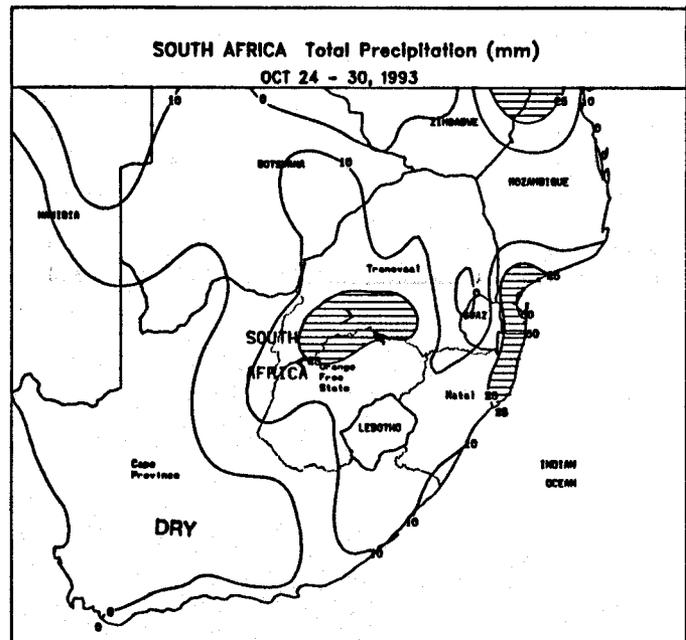
SOUTH AMERICA: In Argentina, scattered frost returned to portions of southern Buenos Aires, possibly causing additional damage to reproductive winter wheat. Widespread moderate to heavy rains (20-125 mm, with isolated amounts greater than 150 mm) covered northern Buenos Aires, eastern Cordoba, Santa Fe, and Entre Rios, favoring reproductive to filling wheat and increasing soil moisture for summer crops. Summer crop planting typically starts in earnest by late October. Across southern Brazil, scattered showers (10-40 mm) kept soils moist for summer crop germination. Early-season wetness has delayed planting, therefore drier weather in the next few weeks would be beneficial. Temperatures averaged 1-2 degrees C below normal across Argentina and near normal across southern Brazil.



MEXICO: Light to moderate (10-30 mm) showers favored filling corn across southern Mexico. Scattered light rain (1-10 mm) covered the remainder of the country, allowing corn harvesting and winter wheat planting to progress. Freezing temperatures were confined to the north-central mountains.



NORTHWESTERN AFRICA: Preparations for winter grain planting were in the early stages over most of the region. Little, if any, precipitation covered winter grain areas in Morocco, Algeria, and Tunisia. Producers over the region await the onset of consistent autumn rains before widespread planting can begin. Weekly average temperatures were near normal over the region.



SOUTH AFRICA: Drier weather covered corn areas of Orange Free State and Natal, with totals ranging from 3 to 16 mm. However, moderate showers (25-40 mm) swept across corn areas of southern Transvaal, causing further fieldwork delays. Light to moderate rain (5-36 mm) covered eastern Cape Province and Natal, increasing topsoil moisture for grain germination. More rain is needed in Natal's southern sugarcane areas. Dry weather in the southern Cape Province aided winter wheat harvest.

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

Annual subscriptions: domestic first class \$45, foreign \$55 (in U.S. funds by international money order or check drawn on U.S. bank) payable to U.S. Department of Commerce, NOAA. POSTMASTER: Send address changes to Weekly Weather and Crop Bulletin, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 5844, Washington, DC 20250. Order subscriptions from the office and address listed above. First class postage paid at Washington, DC, and additional mailing offices.

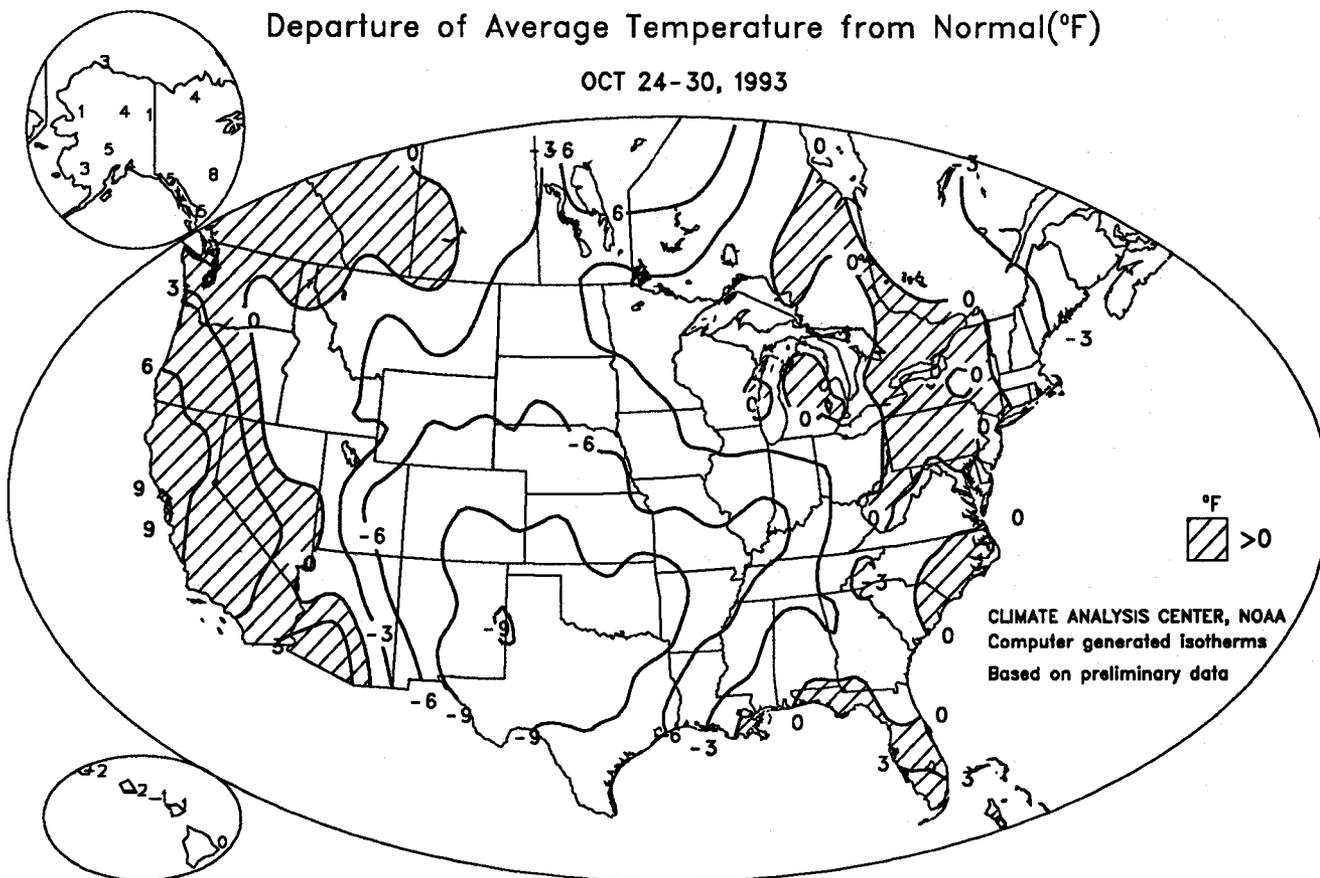
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Departure of Average Temperature from Normal(°F)

OCT 24-30, 1993



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