WEEKLY WEATHER AND CROP BULLETIN

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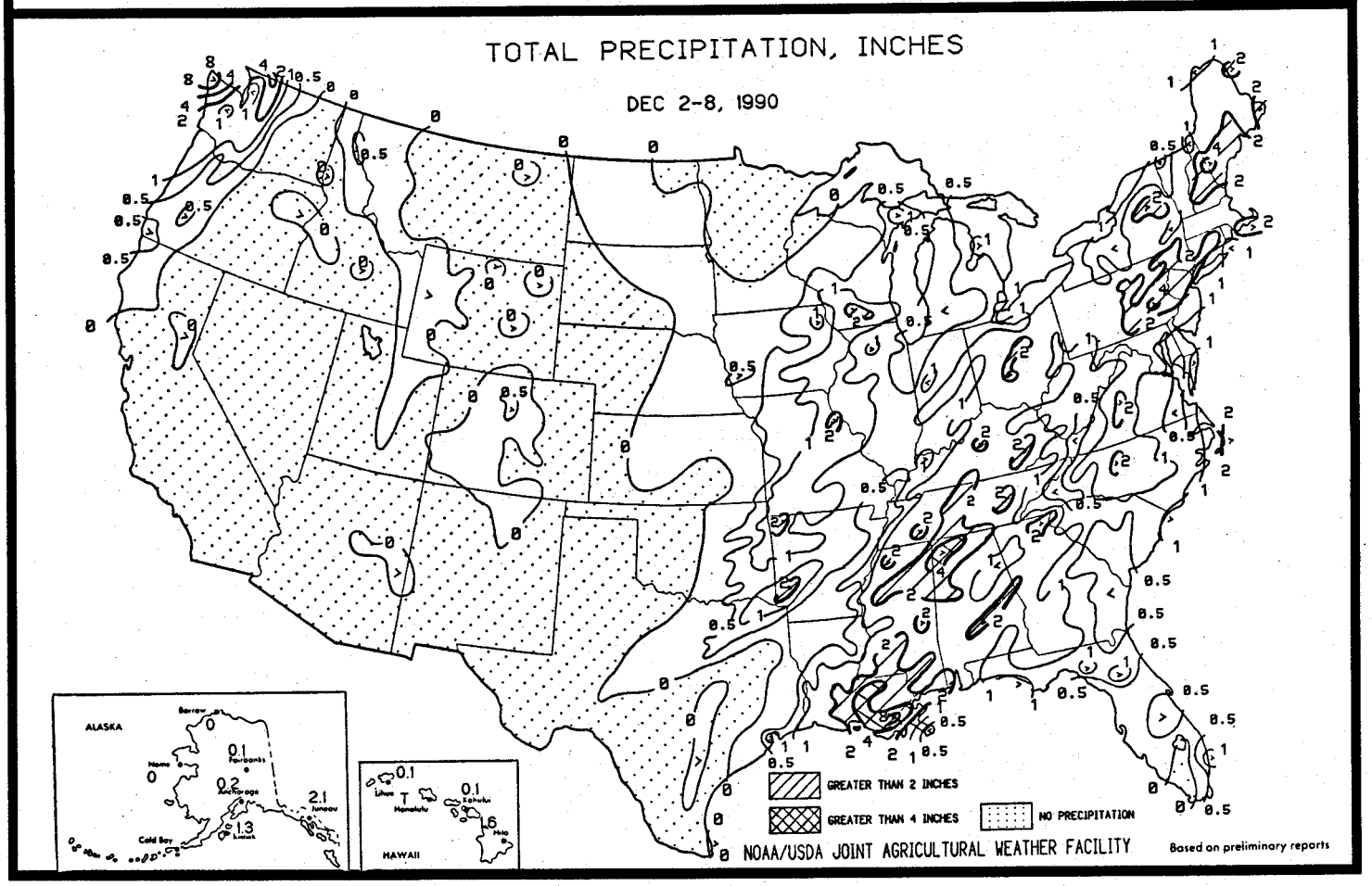

HIGHLIGHTS

December 2-8, 1990

Early in the week, a fierce winter storm developed in the **southern Plains** and tracked steadily northeastward. By Wednesday morning, the storm was located north of **Maine**, having produced a broad stripe of heavy snow from **eastern Nebraska** to **northern Lower Michigan** to **northern Maine**. Snowfall totals included 17 inches in **Madison, Wisconsin** and over a foot in **northern Maine**. In addition, the storm's trailing cold front dumped heavy rain from the lower **Mississippi Valley** to the **Northeast**. Rainfall totaled greater than 8 inches near **New Orleans** in a 2-day period. Tornadoes were reported Monday in **Alabama** and **Florida**. Heavy rain continued in **western Washington** early in the week. At midweek, cold air swept to the **Gulf coast** and the **Southeast** behind the departing storm. Late in the week, a storm developed in the **Gulf of Mexico**, bringing rain to the **Gulf Coast States** and the immediate **Atlantic coast**. At week's end, several record-high temperatures were established in the **northern Plains**.

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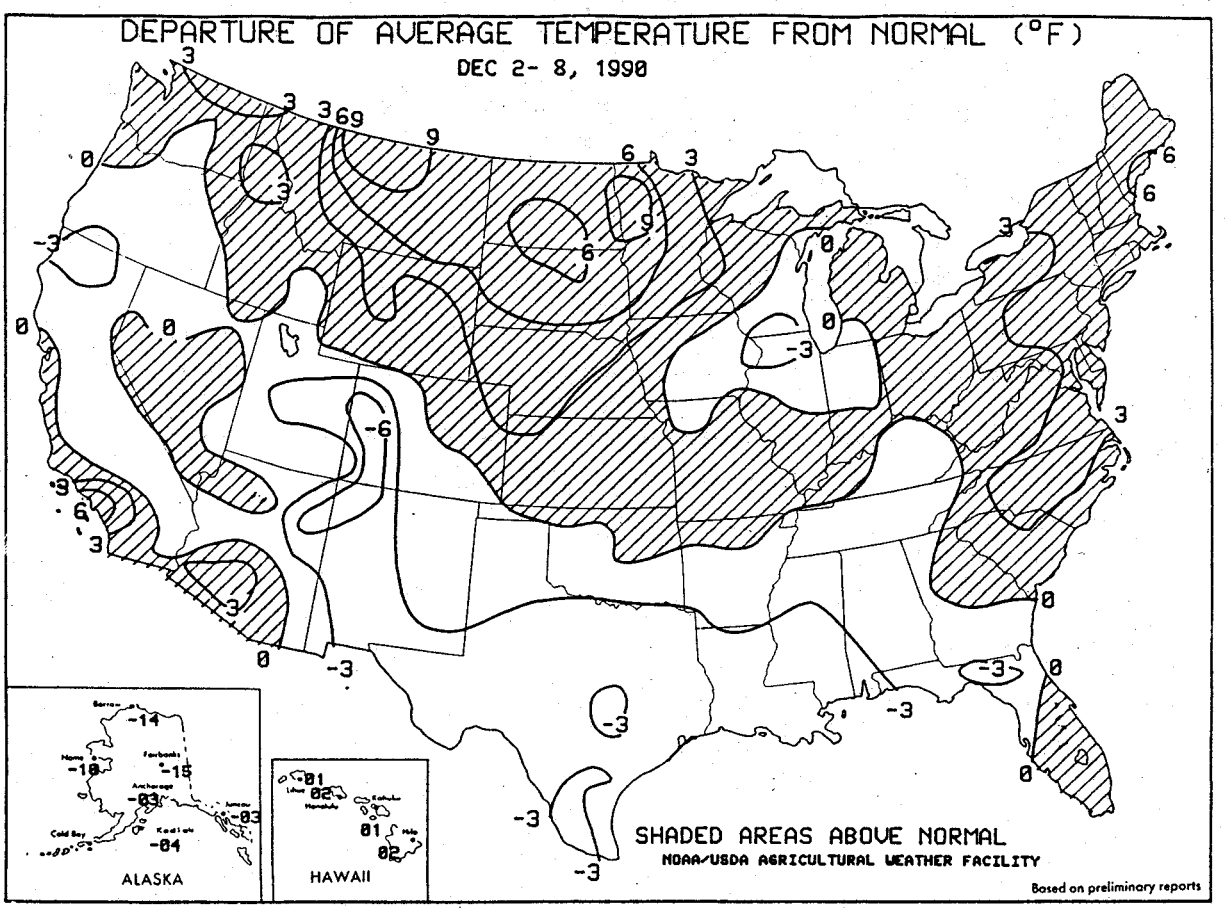
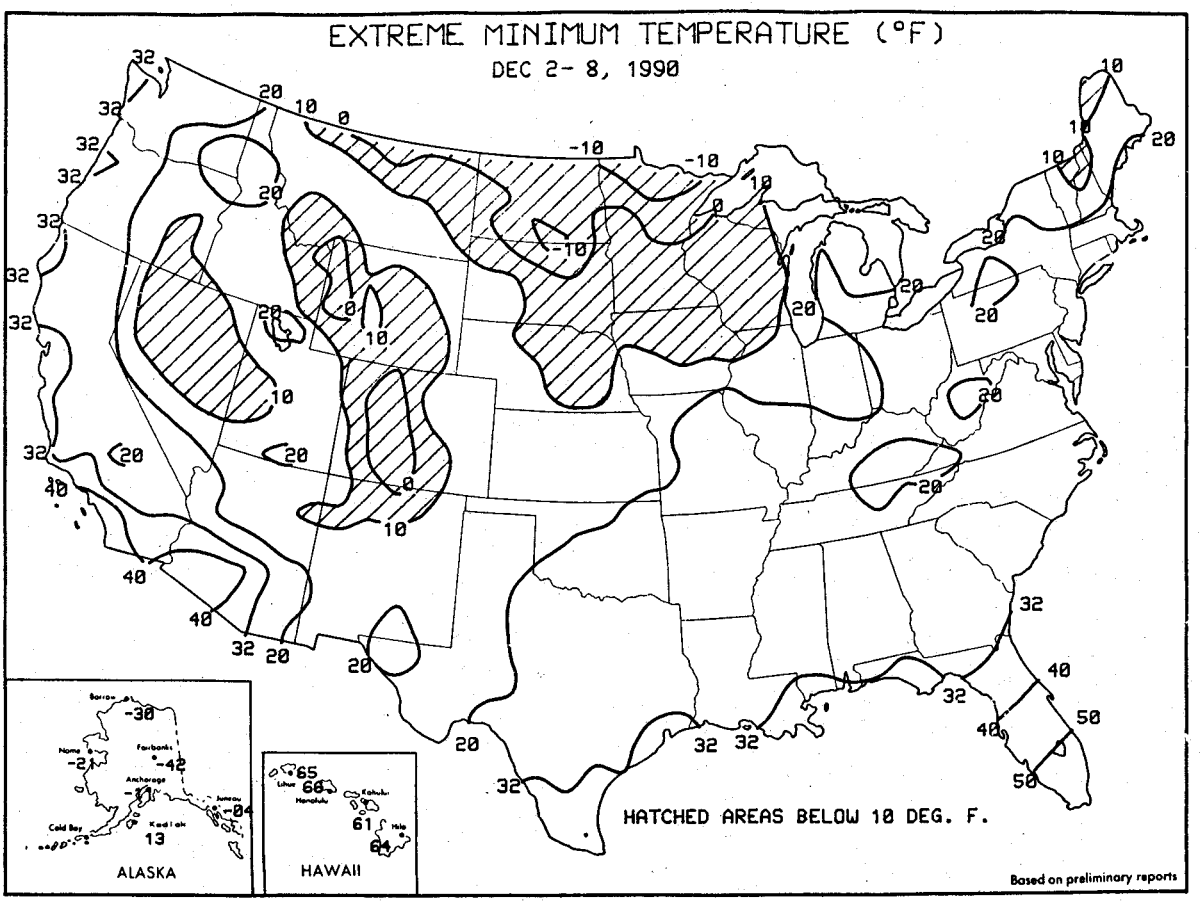
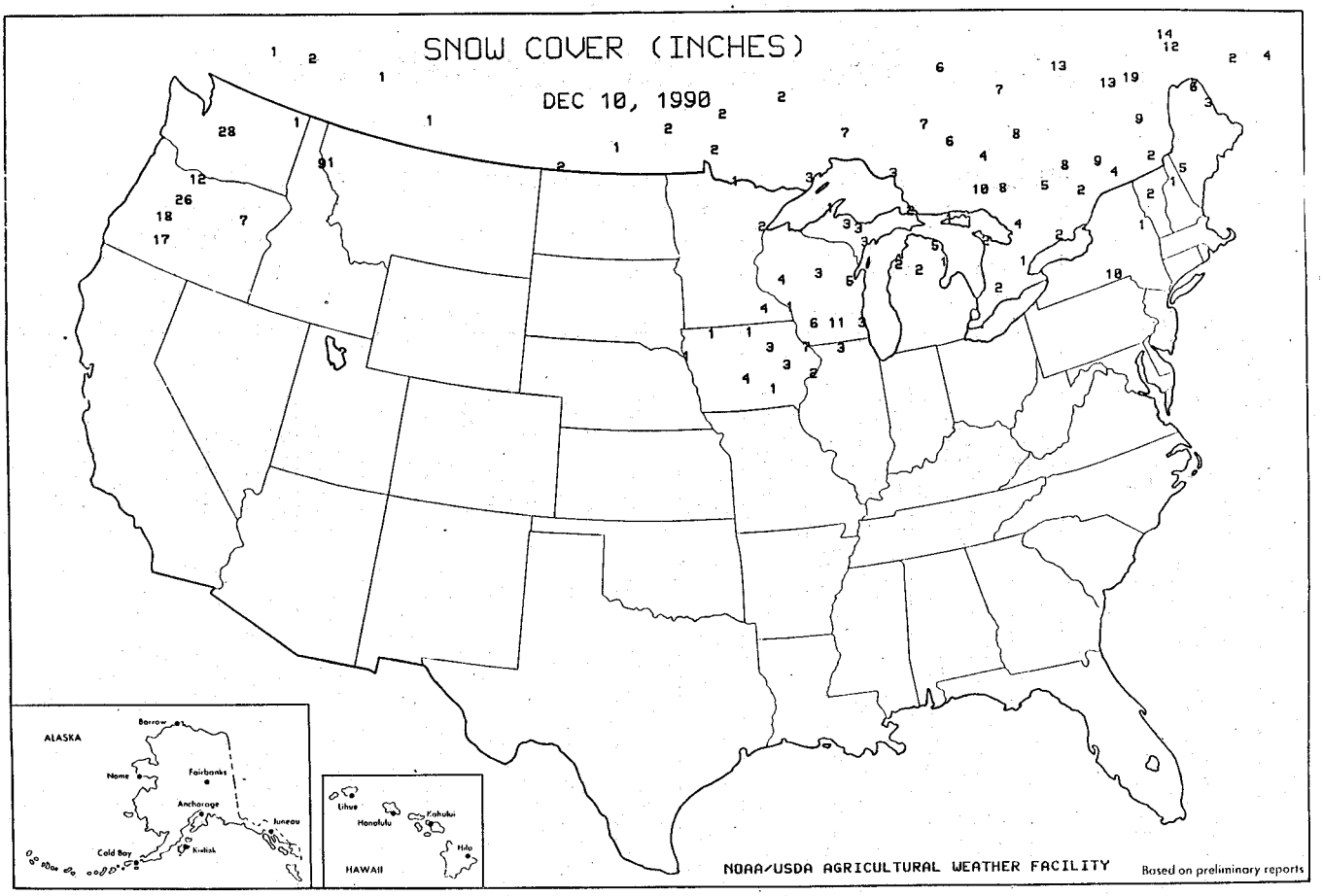
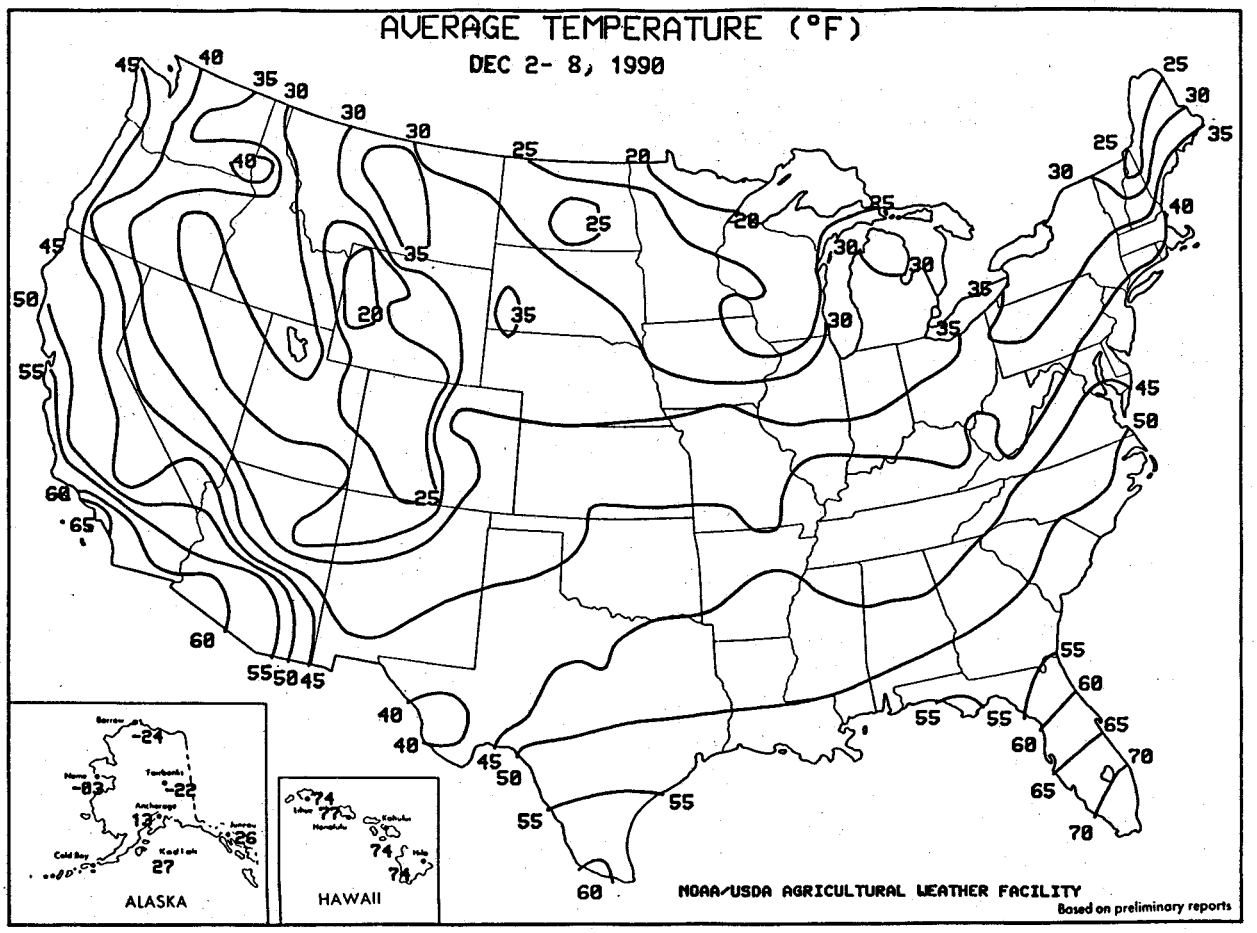

DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)
DEC 2- 8, 1990
SHADED AREAS ABOVE NORMAL
NOAA/USDA AGRICULTURAL WEATHER FACILITY
Based on preliminary reports
ALASKA
HAWAII


EXTREME MINIMUM TEMPERATURE (°F)
DEC 2- 8, 1990
HATCHED AREAS BELOW 10 DEG. F.
Based on preliminary reports
ALASKA
HAWAII


SNOW COVER (INCHES)
DEC 10, 1990
ALASKA
Barrow
Nome
Fairbanks
Anchorage
Juneau
Cold Bay
Kodiak
HAWAII
Lihue
Honolulu
Kahului
Hilo
NOAA/USDA AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


AVERAGE TEMPERATURE (°F)
DEC 2- 8, 1990
ALASKA
HAWAII
NOAA/USDA AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

National Weather Data for Selected Cities

Weather Data for the Week Ending December 8, 1990

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMP. °F		PRECIP.	
	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 Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	56	34	67	23	45	-2	.7	-.3	.4	.7	59	42.1	83	84	42	0	4	3	0
MOBILE	61	41	73	31	51	-4	2.1	.9	2.0	2.1	156	52.9	88	87	44	0	2	2	1
MONTGOMERY	59	37	76	23	48	-3	1.9	.9	1.8	1.9	168	52.0	115	91	42	0	2	3	1
AK ANCHORAGE	20	6	30	-11	13	-3	.2	-.1	.1	.2	71	16.7	119	88	70	0	7	3	0
BARROW	-20	-28	-17	-30	-24	-14	T	.0	T	T	0	4.5	102	73	48	0	7	0	0
FAIRBANKS	-16	-29	1	-42	-22	-15	.1	-.1	.1	.1	53	15.7	159	72	56	0	7	2	0
JUNEAU	32	20	41	-4	26	-3	2.1	1.1	1.2	2.1	171	55.6	112	98	78	0	6	3	2
KODIAK	34	20	41	13	27	-4	1.3	.1	1.1	1.9	131	62.9	111	95	69	0	7	4	1
NOME	5	-11	15	-21	-3	-10	T	-.1	T	T	0	21.2	151	72	47	0	7	0	0
AZ PHOENIX	73	45	78	43	59	4	.0	-.2	.0	.0	0	7.3	116	46	13	0	0	0	0
PRESCOTT	56	19	62	17	38	-1	.0	-.4	.0	.0	0	15.3	87	60	14	0	7	0	0
TUCSON	71	40	78	34	56	2	.0	-.2	.0	.0	0	13.4	129	43	11	0	0	0	0
YUMA	73	49	75	46	61	3	.0	-.1	.0	.0	0	2.2	102	22	11	0	0	0	0
AR FORT SMITH	55	31	64	24	43	-1	1.0	.3	1.0	1.0	118	57.3	152	94	43	0	5	1	1
LITTLE ROCK	56	36	64	29	46	1	.5	-.5	.5	.5	45	56.1	122	67	45	0	1	2	1
CA BAKERSFIELD	62	33	65	31	48	-2	.0	-.1	.0	.0	0	3.2	63	92	39	0	2	0	0
EUREKA	56	38	60	36	47	-3	T	-1.3	T	T	3	26.4	79	92	63	0	0	1	0
FRESNO	61	32	67	31	46	-1	.0	-.3	.0	.0	0	8.0	88	94	40	0	7	0	0
LOS ANGELES	80	52	84	46	66	8	.0	-.3	.0	.0	0	5.2	49	57	14	0	0	0	0
REDDING	61	29	67	26	45	-4	T	-1.5	T	T	0	24.0	68	88	28	0	7	0	0
SACRAMENTO	60	33	66	31	47	-1	.0	-.6	.0	.0	0	12.0	82	93	40	0	2	0	0
SAN DIEGO	75	46	79	45	61	2	.0	-.4	.0	.0	0	6.6	77	61	20	0	0	0	0
SAN FRANCISCO	62	42	65	38	52	1	.0	-.7	.0	.0	0	8.6	51	87	37	0	0	0	0
CO DENVER	51	22	66	13	37	2	.1	-.1	.1	.1	38	16.5	112	74	20	0	7	2	0
GRAND JUNCTION	36	12	42	9	24	-7	.0	-.1	.0	.0	0	7.4	100	78	36	0	7	0	0
PUEBLO	54	14	67	6	34	-1	T	-.1	T	T	22	15.4	145	82	21	0	7	1	0
CT BRIDGEPORT	48	35	59	31	42	4	1.1	.2	.7	1.1	111	41.3	107	80	46	0	2	3	1
HARTFORD	46	31	59	29	38	5	2.1	1.1	1.9	2.1	186	50.4	123	80	47	0	5	2	1
DC WASHINGTON	54	36	65	29	45	3	1.1	.4	.7	1.1	131	37.2	102	84	43	0	2	2	1
FL APALACHICOLA	66	46	78	36	56	-1	.8	.1	.6	.8	98	37.3	71	94	49	0	0	2	1
DAYTONA BEACH	74	50	81	38	62	1	.2	-.3	.2	.2	37	36.0	77	96	53	0	0	2	0
JACKSONVILLE	67	43	81	29	55	-2	.9	.4	.4	.9	157	30.0	60	96	55	0	1	4	0
KEY WEST	79	71	82	65	75	3	.8	.3	.6	.8	141	35.9	94	89	67	0	0	4	1
MIAMI	78	65	80	54	72	2	.4	.0	.4	.5	94	51.1	91	88	63	0	0	3	0
ORLANDO	74	52	80	42	63	0	.8	.4	.8	.8	164	31.7	66	96	57	0	0	1	1
TALLAHASSEE	65	37	79	28	51	-3	1.1	.1	.6	1.1	96	42.4	70	97	48	0	3	3	1
TAMPA	75	52	83	41	63	1	.1	-.4	.1	.1	9	34.3	76	96	55	0	0	1	0
WEST PALM BEACH	78	64	82	52	71	3	.7	.2	.6	.7	124	54.6	94	87	60	0	0	2	1
GA ATLANTA	56	38	70	30	47	1	1.3	.4	1.1	1.3	129	55.8	124	82	40	0	3	2	1
AUGUSTA	62	36	75	24	49	0	.5	-.1	.3	.5	76	39.2	97	94	42	0	3	4	0
MACON	62	38	76	26	50	-1	1.1	.3	.6	1.1	118	33.5	81	92	41	0	2	3	2
SAVANNAH	63	42	73	29	53	0	.4	-.2	.3	.4	64	41.4	87	94	49	0	2	3	0
HI HILO	82	66	83	64	74	2	1.6	-1.6	.7	1.8	49	183.0	154	93	65	0	0	5	1
HONOLULU	84	69	86	66	77	2	T	-.7	T	T	1	14.7	71	85	48	0	0	1	0
KAHULUI	82	67	84	61	74	0	.1	-.5	.1	.1	8	20.3	127	89	65	0	0	1	0
LIHUE	78	70	79	65	74	0	.1	-1.1	.1	.2	13	34.4	87	88	69	0	0	3	0
ID BOISE	45	22	52	19	34	0	T	-.3	T	T	3	11.1	106	83	39	0	7	0	0
LEWISTON	51	36	59	30	43	7	T	-.3	T	T	10	10.7	90	64	35	0	2	1	0
POCATELLO	40	15	48	9	28	-1	.0	-.2	.0	.0	0	9.0	91	85	42	0	7	0	0
IL CHICAGO	40	21	47	15	31	-1	.5	-.1	.5	.5	73	41.2	127	87	53	0	7	1	0
MOLINE	37	18	44	10	28	-3	1.4	1.0	.9	1.4	282	48.8	137	92	56	0	7	2	2
PEORIA	40	22	50	16	31	-1	1.0	.6	.8	1.0	191	52.7	158	94	61	0	7	2	1
QUINCY	43	25	52	22	34	1	.2	-.2	.2	.2	45	37.5	103	83	48	0	7	1	0
ROCKFORD	35	15	40	6	25	-4	.7	.3	.6	.7	134	43.2	123	93	64	0	7	2	1
SPRINGFIELD	43	26	50	21	35	0	1.0	.5	.5	1.0	173	48.7	150	90	57	0	6	2	1
IN EVANSVILLE	50	30	61	22	40	1	.9	.1	.6	.9	101	46.0	118	91	47	0	5	2	1
FORT WAYNE	40	26	50	18	33	0	1.6	1.1	1.6	1.6	248	48.6	149	91	60	0	7	2	1
INDIANAPOLIS	44	25	60	14	35	0	1.1	.4	1.0	1.2	147	43.9	120	98	66	0	6	3	1
SOUTH BEND	40	24	45	12	32	-1	.7	.0	.4	.7	89	51.1	143	90	57	0	7	2	0
IA DES MOINES	37	21	47	11	29	-1	.9	.7	.7	.9	314	42.7	143	88	56	0	7	2	1
SIOUX CITY	39	20	49	9	29	2	.4	.2	.3	.4	171	24.3	98	91	57	0	7	2	0
WATERLOO	34	16	42	6	25	-1	.5	.3	.5	.5	164	40.8	128	98	62	0	7	2	0
KS CONCORDIA	46	27	60	17	36	2	.1	-.1	.1	.1	50	25.3	95	79	45	0	6	1	0
DODGE CITY	55	21	69	18	38	2	T	-.1	T	T	13	20.4	102	72	27	0	7	1	0
GOODLAND	48	24	61	20	36	3	T	-.1	T	T	0	19.2	122	75	33	0	7	0	0
TOPEKA	48	26	61	18	37	2	.2	-.1	.2	.2	51	33.7	104	86	39	0	6	1	0
WICHITA	51	24	61	18	38	0	T	-.3	T	T	0	18.6	67	81	36	0	6	0	0
KY BOWLING GREEN	50	31	64	20	41	0	1.6	.7	.8	1.6	145	43.5	95	92	56	0	5	2	2
LEXINGTON	47	29	61	20	38	-1	1.3	.4	.7	1.3	133	43.3	101	91	50	0	5	2	2
LOUISVILLE	50	30	63	22	40	0	1.3	.5	.8	1.3	137	49.9	122	90	46	0	4	3	1
LA ALEXANDRIA	61	36	79	29	49	-3	1.6	.5	1.0	1.6	128	54.1	111	94	47	0	2	4	1
BATON ROUGE	61	39	70	30	50	-5	3.1	2.0	1.7	3.1	248	63.7	123	93	46	0	3	4	3
LAKE CHARLES	62	39	76	29	50	-5	1.1	.0	.5	1.1	84	50.8	101	95	48	0	2	4	1
NEW ORLEANS	62	44	77	32	53	-3	7.3	6.2	6.5	7.3	562	58.7	106	89	49	0	1	3	2

Based on 1951-80 normals

Weather Data for the Week Ending December 8, 1990

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMP. °F		PRECIP.	
	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 Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	61	35	74	27	48	-3	.2	-.7	.1	.2	17	61.9	152	89	40	0	3	3	0
ME CARIBOU	33	18	45	9	25	5	2.1	1.3	2.0	2.1	244	42.9	126	86	63	0	7	3	1
PORTLAND	44	28	55	20	36	7	3.6	2.5	3.5	3.6	294	48.4	121	88	51	0	6	2	1
MD BALTIMORE	53	32	64	23	43	3	.7	-.1	.6	.7	82	37.7	96	85	36	0	3	2	1
SALISBURY	54	32	64	22	43	2	1.3	.5	.9	1.3	137	38.4	90	90	47	0	4	4	1
MA BOSTON	48	34	61	29	41	4	1.1	.1	1.1	1.1	97	44.4	110	78	51	0	3	4	1
CHATHAM	48	37	55	29	42	4	1.4	.3	.9	1.4	110	40.4	94	78	58	0	2	3	1
MI ALPENA	35	22	40	18	28	1	.7	.3	.6	.7	137	30.1	110	88	57	0	7	3	1
DETROIT	41	27	47	20	34	2	1.4	.8	1.4	1.4	215	39.7	138	87	53	0	6	2	1
FLINT	38	23	42	18	31	0	.4	-.1	.3	.4	65	31.0	113	89	57	0	7	2	0
GRAND RAPIDS	38	24	44	22	31	0	.4	-.3	.3	.4	49	40.0	126	94	61	0	7	2	0
HOUGHTON LAKE	34	23	40	16	28	2	.2	-.2	.2	.2	45	29.3	110	87	63	0	7	3	0
LANSING	37	23	42	20	30	0	.4	-.2	.3	.4	65	35.3	126	87	54	0	7	2	0
MARQUETTE	30	17	41	10	24	2	.5	-.1	.3	.5	74	31.5	89	85	65	0	7	2	0
MUSKEGON	39	27	47	21	33	1	.5	-.1	.4	.5	68	35.1	119	88	56	0	7	2	0
SAULT ST. MARIE	30	20	37	14	25	1	.5	-.2	.3	.5	65	33.1	105	85	61	0	7	4	0
MN ALEXANDRIA	37	17	51	8	27	8	T	-.2	T	T	0	20.5	85	88	48	0	7	0	0
DULUTH	32	12	45	-6	22	3	T	-.3	T	T	0	33.0	116	87	55	0	7	0	0
INT'L FALLS	28	6	45	-18	17	3	T	-.2	T	T	0	19.1	82	88	58	0	7	0	0
MINNEAPOLIS	36	19	50	6	27	4	.2	-.1	.1	.2	60	32.2	126	84	55	0	7	2	0
ROCHESTER	31	16	40	1	24	1	.6	.3	.5	.6	215	42.9	155	88	66	0	7	2	1
MS GREENWOOD	57	34	68	23	45	-3	1.3	.1	1.3	1.3	95	46.8	96	92	48	0	5	2	1
JACKSON	59	33	69	24	46	-4	2.0	.8	1.6	2.0	152	49.6	104	95	48	0	5	3	1
MERIDIAN	59	35	69	26	47	-3	1.5	.3	1.0	1.5	110	60.4	123	96	43	0	4	4	1
MO CAPE GIRARDEAU	53	30	63	24	41	--	.4	-.5	.3	.4	37	45.9	110	92	49	0	5	2	0
COLUMBIA	47	27	57	21	37	0	1.3	.8	1.3	1.3	237	51.5	146	83	47	0	6	1	1
KANSAS CITY	46	26	59	18	36	-1	.2	-.1	.2	.2	55	39.7	114	87	43	0	6	2	0
SAINT LOUIS	49	30	58	24	40	2	1.1	.6	.7	1.1	179	39.7	123	78	45	0	6	2	1
SPRINGFIELD	51	28	60	20	40	1	1.3	.7	1.3	1.3	181	58.4	155	87	45	0	6	1	1
MT BILLINGS	48	27	58	18	37	7	.0	-.2	.0	.0	0	10.8	75	55	22	0	6	0	0
GLASGOW	40	17	55	3	28	7	T	.0	T	T	33	6.4	60	84	48	0	7	1	0
GREAT FALLS	47	28	58	17	38	9	.0	-.2	.0	T	5	13.3	93	56	26	0	4	0	0
HAVRE	49	20	61	-3	35	11	T	-.1	T	T	0	5.9	52	71	34	0	6	0	0
HELENA	44	21	57	12	32	6	T	-.1	T	T	0	8.0	72	71	31	0	7	0	0
KALISPELL	36	21	44	14	28	1	.2	-.2	.1	.2	47	38.4	264	91	64	0	7	2	0
MILES CITY	45	21	58	10	33	8	T	-.1	T	T	0	8.7	63	73	34	0	7	0	0
MISSOULA	38	21	49	16	30	2	.1	-.1	.1	.1	44	12.5	103	92	55	0	7	2	0
NE GRAND ISLAND	44	20	60	5	32	2	.2	.1	.2	.2	121	26.1	116	87	52	0	7	1	0
LINCOLN	46	21	61	5	33	3	.3	.1	.3	.3	163	26.0	98	90	47	0	7	2	0
NORFOLK	41	21	56	3	31	3	.3	.1	.2	.3	169	26.6	115	87	52	0	7	2	0
NORTH PLATTE	47	19	58	13	33	4	T	-.1	T	T	0	15.8	83	94	36	0	7	0	0
OMAHA	40	24	55	16	32	1	.3	.1	.2	.3	118	23.5	79	84	59	0	7	2	0
SCOTTSBLUFF	50	18	62	13	34	4	.0	-.1	.0	.0	0	17.3	122	75	21	0	7	0	0
VALENTINE	47	17	62	8	32	5	T	-.1	T	T	0	16.8	100	81	29	0	7	0	0
NV ELY	47	10	57	4	29	1	.0	-.2	.0	.0	0	8.4	101	74	24	0	7	0	0
LAS VEGAS	61	34	63	31	47	0	.0	-.1	.0	.0	0	3.8	99	43	15	0	2	0	0
RENO	53	19	64	16	36	2	.0	-.2	.0	.0	0	4.8	77	85	24	0	7	0	0
WINNEMUCCA	48	14	59	6	31	-1	.0	-.2	.0	.0	0	5.8	82	84	31	0	7	0	0
NH CONCORD	43	22	54	14	33	4	1.6	.8	1.5	1.6	172	38.8	114	92	50	0	6	2	1
NJ ATLANTIC CITY	52	29	60	22	40	1	.7	-.1	.4	.7	78	34.0	87	91	46	0	6	4	0
NM ALBUQUERQUE	48	21	54	14	35	-3	.0	-.1	.0	.0	0	9.6	128	56	18	0	7	0	0
CLOVIS	55	24	66	20	40	-1	.0	-.1	.0	.0	0	12.9	78	68	22	0	7	0	0
ROSWELL	58	24	69	18	41	-1	.0	-.1	.0	.0	0	7.3	71	54	14	0	7	0	0
NY ALBANY	43	28	51	24	36	5	1.1	.4	.9	1.1	143	43.6	131	88	49	0	6	2	1
BINGHAMTON	40	26	50	20	33	3	1.2	.5	.7	1.2	154	42.0	121	89	57	0	7	2	1
BUFFALO	41	28	49	23	35	2	.8	.0	.5	.8	86	43.0	124	87	53	0	7	3	0
NEW YORK	50	37	60	32	43	4	1.9	1.1	1.1	1.9	198	48.3	121	80	45	0	2	2	2
ROCHESTER	41	27	48	22	34	2	.8	.2	.6	.8	114	36.8	125	89	54	0	6	3	1
SYRACUSE	41	26	48	22	33	1	1.1	.3	.5	1.1	126	45.4	124	91	55	0	7	3	1
NC ASHEVILLE	54	33	62	22	44	2	.5	-.2	.5	.5	66	55.6	134	91	48	0	4	3	0
CHARLOTTE	58	39	65	27	49	4	1.0	.3	.9	1.0	124	47.4	118	85	42	0	3	4	1
GREENSBORO	56	36	66	28	46	4	2.0	1.3	1.9	2.0	252	41.4	104	85	43	0	3	4	1
HATTERAS	62	43	73	31	53	2	2.7	1.7	1.3	2.7	239	45.3	86	89	46	0	1	4	2
NEW BERN	62	39	74	28	51	2	1.0	.2	.5	1.0	108	49.7	99	89	41	0	2	4	0
RALEIGH	59	37	70	27	48	4	1.1	.4	.7	1.1	139	35.6	91	84	42	0	3	4	1
WILMINGTON	63	41	75	29	52	2	1.5	.8	.8	1.5	179	52.2	103	94	44	0	2	3	2
ND BISMARCK	37	9	50	-11	23	3	.2	.1	.2	.2	138	12.4	84	91	56	0	7	1	0
FARGO	40	17	53	4	29	11	T	-.1	T	T	0	16.2	86	85	48	0	7	0	0
GRAND FORKS	37	15	53	-4	26	10	T	-.1	T	T	25	15.5	87	87	58	0	7	1	0
WILLISTON	36	17	50	2	27	7	.1	-.1	.1	.1	46	9.0	69	87	51	0	7	1	0
OH AKRON-CANTON	42	28	58	23	35	1	1.2	.6	1.1	1.2	176	60.1	178	92	61	0	6	4	1
CINCINNATI	46	28	62	18	37	0	1.3	.6	1.0	1.3	169	51.0	135	85	49	0	5	3	1
CLEVELAND	42	29	58	25	36	1	1.4	.7	1.3	1.4	190	46.6	141	85	55	0	6	2	1
COLUMBUS	44	29	60	22	37	2	1.3	.7	1.2	1.3	197	47.5	136	85	55	0	5	2	1

Based on 1951-80 normals

Weather Data for the Week Ending December 8, 1990

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMP. °F		PRECIP.	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTRME. HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	44	29	61	19	36	1	1.7	1.1	1.5	1.7	256	51.4	157	92	59	0	5	2	1
TOLEDO	41	27	57	22	34	2	1.6	1.0	1.6	1.6	238	34.4	116	91	58	0	6	2	1
YOUNGSTOWN	41	28	51	22	34	2	1.3	.6	1.1	1.3	178	41.5	118	93	57	0	6	3	1
OK OKLAHOMA CITY	55	31	65	25	43	1	.1	-.2	.1	.1	22	39.2	131	70	32	0	4	1	0
TULSA	55	34	66	28	45	2	.5	.1	.5	.5	98	36.4	98	74	35	0	3	1	1
OR ASTORIA	51	39	55	30	45	1	1.7	-.8	1.1	2.2	75	69.7	114	96	68	0	1	5	1
BURNS	43	14	51	9	29	-1	.0	-.3	.0	.0	0	4.5	50	87	37	0	7	0	0
MEDFORD	43	29	49	28	36	-3	.1	-.7	.1	.1	8	12.5	73	100	79	0	7	2	0
PENDLETON	46	30	60	20	38	1	T	-.4	T	T	2	8.6	80	84	56	0	4	0	0
PORTLAND	49	38	55	28	44	1	.3	-1.1	.3	.7	45	31.2	97	93	65	0	1	1	0
SALEM	49	36	59	32	43	1	.4	-1.2	.4	.9	53	34.0	98	95	71	0	1	2	0
PA ALLENTOWN	49	29	61	25	39	4	2.2	1.4	1.6	2.2	228	40.8	99	87	46	0	7	2	2
ERIE	41	31	50	26	36	2	1.2	.4	1.0	1.2	127	46.1	123	84	55	0	4	2	1
HARRISBURG	49	30	58	25	39	3	2.1	1.4	1.7	2.1	246	40.1	109	91	45	0	7	2	1
PHILADELPHIA	52	34	62	29	43	4	1.2	.4	.9	1.2	133	33.1	86	88	50	0	3	2	1
PITTSBURGH	44	29	55	23	36	1	1.5	.9	1.4	1.5	230	45.2	132	86	56	0	5	3	1
SCRANTON	46	28	57	25	37	4	1.5	.9	.7	1.5	213	43.3	132	85	49	0	7	4	2
RI PROVIDENCE	48	31	61	23	39	3	2.4	1.4	2.1	2.4	209	41.7	100	87	46	0	4	4	1
SC CHARLESTON	63	42	73	31	53	1	.9	.3	.5	.9	131	42.1	86	94	54	0	2	3	1
COLUMBIA	62	36	74	26	49	1	.4	-.3	.2	.4	56	42.3	91	94	41	0	4	4	0
FLORENCE	63	39	74	30	51	2	1.0	.4	.3	1.0	145	32.2	77	84	39	0	2	5	0
GREENVILLE	58	36	65	24	47	2	.5	-.3	.4	.5	53	46.7	97	90	40	0	3	3	0
SD ABERDEEN	39	14	54	-9	27	6	.1	.0	.1	.1	85	20.6	119	91	52	0	7	1	0
HURON	43	15	59	2	29	6	T	-.1	T	T	14	22.6	125	87	44	0	7	1	0
RAPID CITY	51	21	60	13	36	7	.0	-.1	.0	.0	0	16.2	103	70	24	0	7	0	0
SIOUX FALLS	40	19	53	11	30	6	.1	-.1	.1	.1	35	18.7	80	89	51	0	7	2	0
TN CHATTANOOGA	53	34	64	24	44	0	1.7	.6	1.3	1.7	133	59.9	123	89	46	0	4	2	1
KNOXVILLE	52	33	65	23	42	-1	.8	-.2	.6	.8	73	47.0	108	85	45	0	4	2	1
MEMPHIS	55	34	66	27	44	-1	1.2	.2	.9	1.2	100	50.4	106	88	46	0	5	2	1
NASHVILLE	53	32	64	21	42	-1	2.0	1.0	1.0	2.0	177	38.3	86	88	47	0	5	2	2
TX ABILENE	57	32	66	23	44	-4	.1	-.1	.1	.1	29	30.6	135	66	28	0	4	1	0
AMARILLO	57	21	69	17	39	-1	.0	-.1	.0	.0	0	17.3	93	65	20	0	7	0	0
AUSTIN	65	40	74	29	52	-2	T	-.5	T	T	2	27.8	93	79	28	0	2	1	0
BEAUMONT	64	41	76	32	52	-4	1.0	-.1	.8	1.0	80	63.8	124	97	50	0	3	3	1
BROWNSVILLE	71	47	84	37	59	-5	T	-.2	T	T	7	18.8	77	80	29	0	0	1	0
CORPUS CHRISTI	69	45	82	31	57	-4	T	-.3	T	T	3	20.7	69	78	28	0	1	1	0
DEL RIO	65	38	76	29	51	-3	.0	-.1	.0	.0	0	25.4	151	58	21	0	3	0	0
EL PASO	58	25	68	19	42	-4	.0	-.1	.0	.0	0	12.5	172	65	16	0	6	0	0
FORT WORTH	57	34	65	28	46	-4	.5	.1	.5	.5	98	44.3	149	82	35	0	3	1	0
GALVESTON	63	50	72	41	56	-2	.4	-.4	.3	.4	47	36.8	97	85	50	0	0	2	0
HOUSTON	65	40	77	28	52	-4	.2	-.7	.2	.2	16	39.6	91	90	41	0	2	1	0
LUBBOCK	58	24	67	19	41	-2	.0	-.1	.0	.0	0	15.5	90	62	15	0	7	0	0
MIDLAND	60	26	74	19	43	-4	.0	-.1	.0	.0	0	13.5	102	67	16	0	6	0	0
SAN ANGELO	60	30	72	20	45	-5	T	-.1	T	T	12	28.6	163	74	28	0	5	1	0
SAN ANTONIO	65	37	75	26	51	-4	.0	-.4	.0	.0	0	38.1	137	80	29	0	3	0	0
VICTORIA	67	38	80	30	53	-5	T	-.5	T	T	0	35.0	99	83	31	0	3	0	0
WACO	61	35	68	28	48	-3	T	-.4	T	T	0	37.1	126	82	31	0	4	0	0
WICHITA FALLS	57	29	67	23	43	-3	T	-.3	T	T	0	36.8	144	76	26	0	5	0	0
UT CEDAR CITY	46	16	52	12	31	-2	.0	-.2	.0	.0	0	9.6	98	78	26	0	7	0	0
SALT LAKE CITY	41	23	46	18	32	-1	T	-.3	T	T	0	10.2	72	90	44	0	7	0	0
VT BURLINGTON	40	23	48	19	32	5	.7	.1	.4	.7	106	38.7	122	92	55	0	7	2	0
VA NORFOLK	58	39	68	29	49	3	1.4	.7	.7	1.4	180	44.2	104	79	42	0	1	3	1
RICHMOND	57	35	67	25	46	4	.5	-.3	.2	.5	52	39.9	96	85	39	0	2	4	0
ROANOKE	52	34	59	27	43	2	1.0	.3	1.0	1.0	132	40.8	111	80	39	0	4	1	1
WA QUILLAYUTE	49	39	51	31	44	2	10.2	6.4	5.3	10.8	246	111.2	119	100	77	0	1	6	4
SEATTLE-TACOMA	49	38	53	32	43	1	1.5	.1	.8	2.0	123	43.2	128	96	72	0	1	4	1
SPOKANE	39	25	47	18	32	2	T	-.5	T	.1	21	17.3	118	92	65	0	6	2	0
YAKIMA	44	23	53	15	33	-1	T	-.3	T	T	3	6.0	88	93	58	0	7	0	0
WV BECKLEY	46	30	58	20	38	2	.3	-.4	.2	.3	40	36.8	92	85	51	0	5	2	0
CHARLESTON	50	32	62	25	41	2	.8	.1	.8	.8	102	37.9	95	86	46	0	5	3	1
HUNTINGTON	49	32	63	22	41	1	.8	.1	.6	.8	101	44.7	116	79	45	0	5	3	1
PARKERSBURG	47	31	60	20	39	1	1.2	.7	1.0	1.2	185	45.2	127	92	51	0	5	2	1
WI GREEN BAY	32	13	37	5	23	-2	.9	.6	.9	.9	236	34.8	130	90	58	0	7	1	1
LACROSSE	35	19	44	12	27	1	1.4	1.2	1.3	1.4	465	36.6	126	90	53	0	7	2	1
MADISON	34	14	43	3	24	-3	2.1	1.7	2.1	2.1	486	35.2	119	90	58	0	7	1	1
MILWAUKEE	36	20	44	12	28	-1	1.0	.6	1.0	1.0	191	39.3	134	89	55	0	7	2	1
WAUSAU	32	16	44	8	24	1	.4	.1	.4	.4	108	33.8	110	92	60	0	7	1	0
WY CASPER	40	19	50	6	29	1	.2	.1	.2	.2	138	12.2	112	70	34	0	7	1	0
CHEYENNE	45	22	55	12	33	2	T	-.1	T	T	0	19.3	148	60	22	0	7	0	0
LANDER	42	16	53	12	29	4	T	-.1	T	T	0	11.1	88	71	29	0	7	0	0
SHERIDAN	49	17	63	13	33	6	T	-.2	T	T	0	12.9	89	75	24	0	7	0	0

Based on 1951-80 normals

November Weather and Crop Summary

WEATHER

The typical storm track of November consisted of disturbances plunging **southeastward** from the **Pacific Northwest** to the **central** or **southern Plains**, then lifting **northeastward** to **New England**. Thus, coastal and mountain sections of the **Pacific Northwest** wrung out more than ample moisture. As **Gulf of Mexico** moisture worked into the storms east of the **Rocky Divide**, much of the center third of the Nation had above-normal precipitation. The areas suffering most from long-term drought conditions also experienced below-normal monthly precipitation. These areas are portions of the **Southeast**, the **Northern Plains**, and much of the **West**. Virtually the entire Nation had above-average temperatures for the month.

Two major storms progressed across the **Nation** during the first 10 days of November. Each storm drenched the **Pacific Northwest**, produced a stripe of snow from the **Plains** to the **Great Lakes**, and dumped heavy rain on portions of the **Gulf Coast** and **Atlantic Coast States**. The second storm brought the first round of flooding to **western Washington State**. A period of tranquility reigned at mid-month, providing perfect harvest conditions. Only the **Pacific Northwest** and **New England** received substantial precipitation during this time.

The weather pattern amplified once again during the last 10 days of November. Serious flooding occurred in **western Washington State** after the 21st, persisting in varying degrees for several days. High winds fanned forest fires in the **central and northern Rockies** the latter half of Thanksgiving week. An arctic front brought below-normal temperatures to the **northern Plains** and ameliorated fire conditions after Thanksgiving. The last three storms to push across the **Nation** were preceded by record warmth **from the Plains eastward**. The last two storms produced swaths of heavy rain from **east Texas** to the **Northeast**. The last storm produced tornadoes in **Missouri** and **Illinois** before exiting the **Nation**.

ROW CROP HARVEST

Most of November had excellent weather for crop harvest. Lack of moisture and warmer-than-normal temperatures over most of the **Nation** helped harvests to progress rapidly during the month. Rain the second week of the month slowed harvest in the **central and eastern Corn Belt**. By the end of November, harvest progress was ahead of normal in most areas.

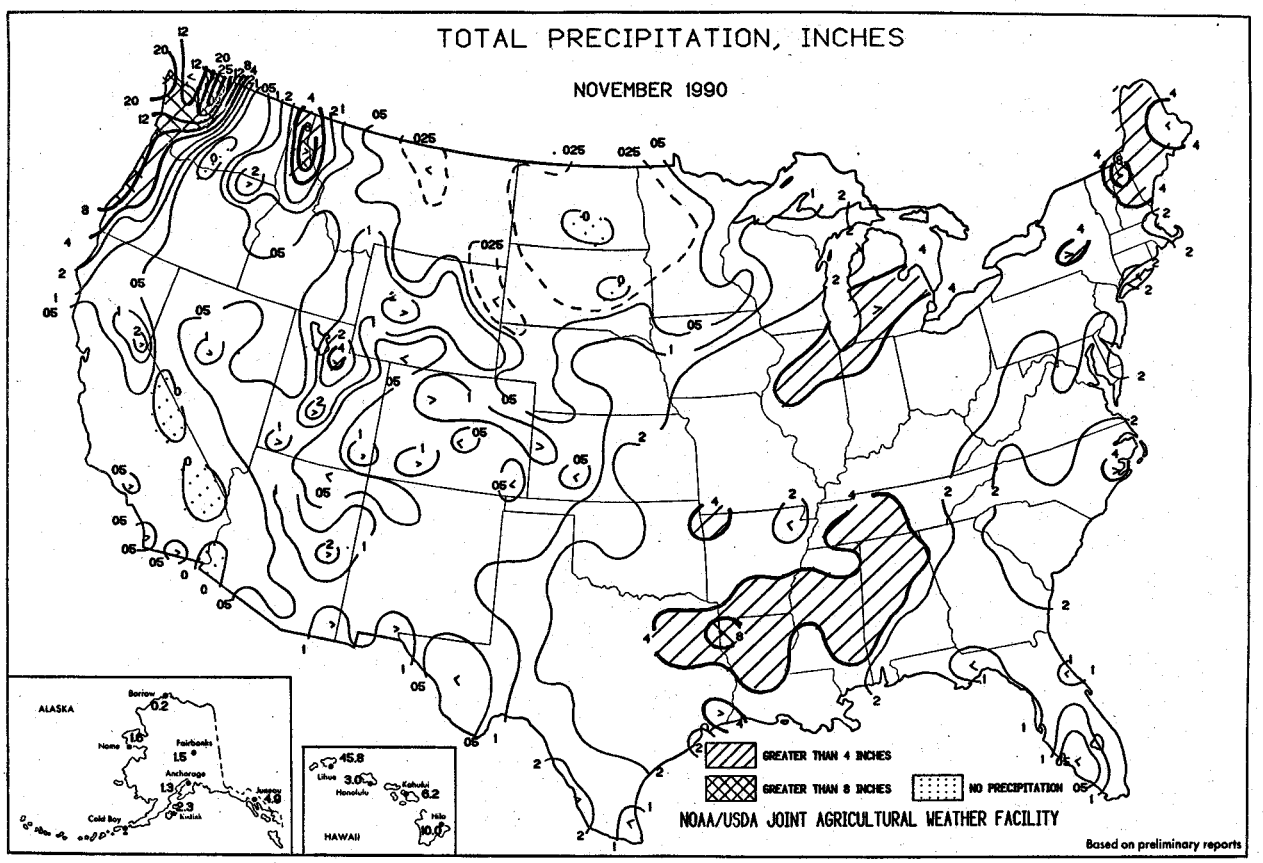
Early in the month, corn harvest was 79 percent (%) complete, 1 point behind the 5-year average. Harvest was generally ahead of normal in the Plains States and Southeast, with the Texas harvest complete. Rains slowed harvest in the eastern Corn Belt. Michigan harvest was 45% complete, 25 points behind normal. Ninety-seven percent of the crop was harvested by the end of the month. Harvest progressed rapidly in the eastern Corn Belt. Harvest progress in most Corn Belt States was at or above normal.

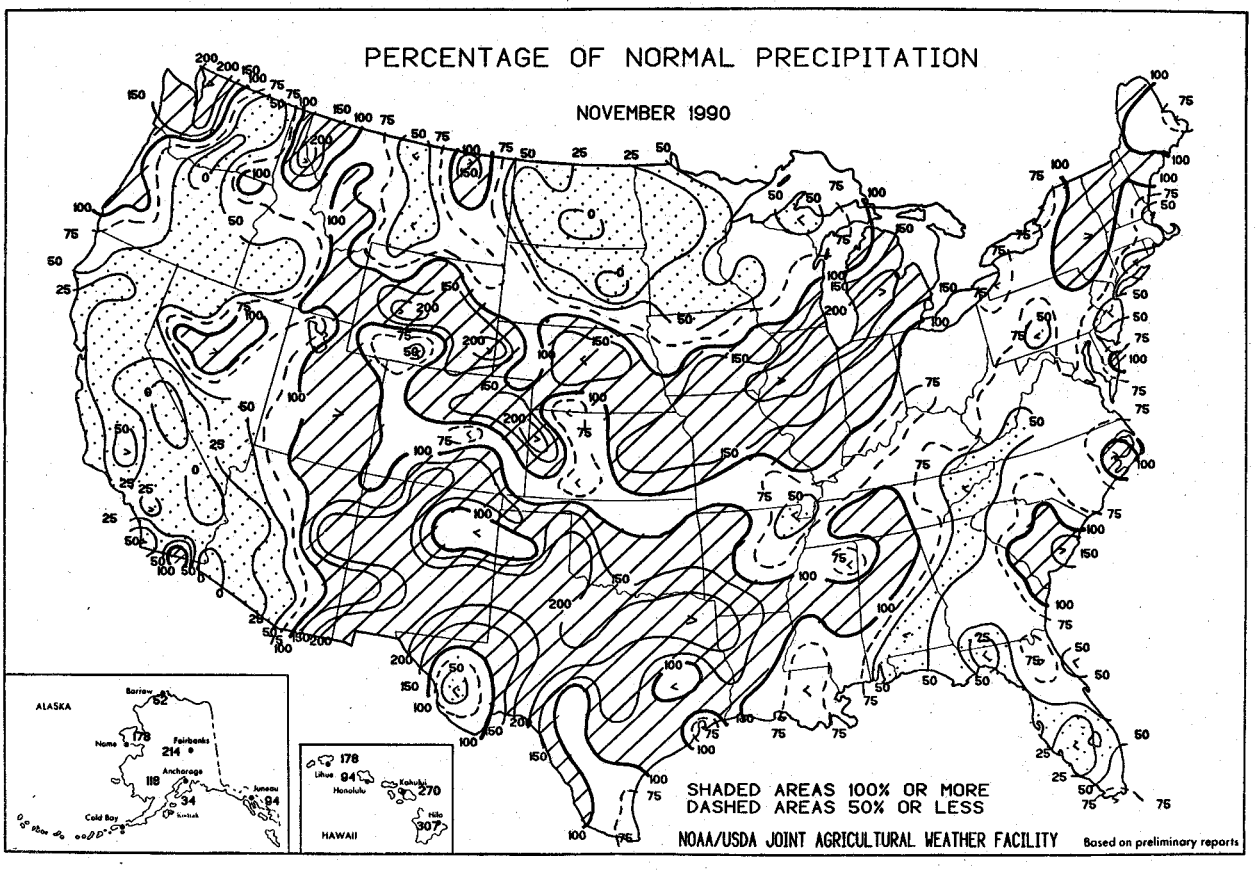
By November 4, the soybean harvest was 84% complete, 4 points ahead of normal. Harvest was complete in Iowa, Nebraska, and South Dakota. In mid-November, the soybean harvest was 95% complete, 5 points ahead of normal. North and South Carolina, at 58% and 47% respectively, were the only States below 80% harvested; however both were ahead of average.

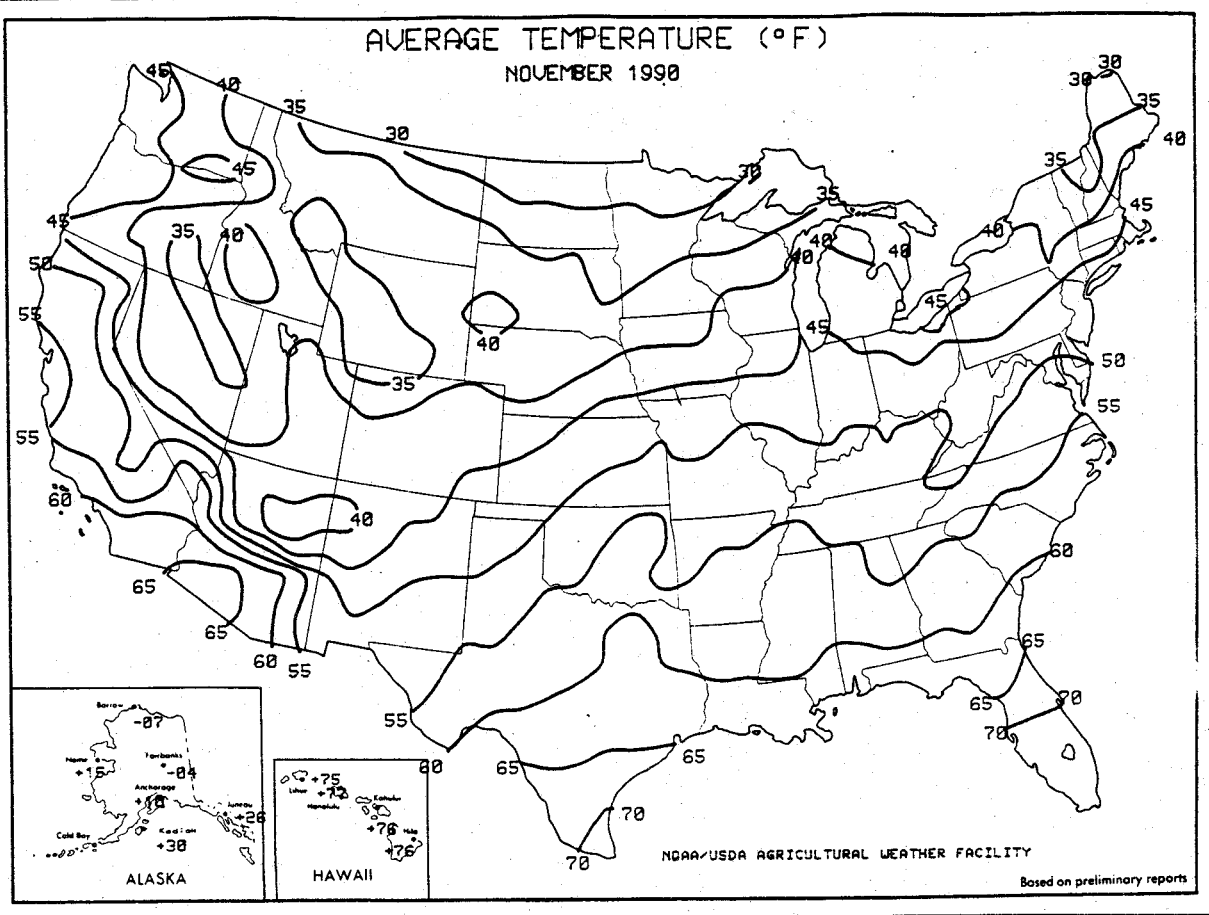
Cotton harvest was equal to or above normal in all major producing States in early November. Harvest was 64% complete, 8 points ahead of normal. Excessive moisture early in the month in Arkansas caused some bolls to rot, resulting in reduced yields and grade. By mid-November, cotton harvest was 78% complete, 9 points ahead of normal. By the end of the month, harvest was 88% complete, 6 points ahead of normal. Texas High Plains cotton harvest was hampered by high humidity and heavy morning dew. Yields were good to excellent.

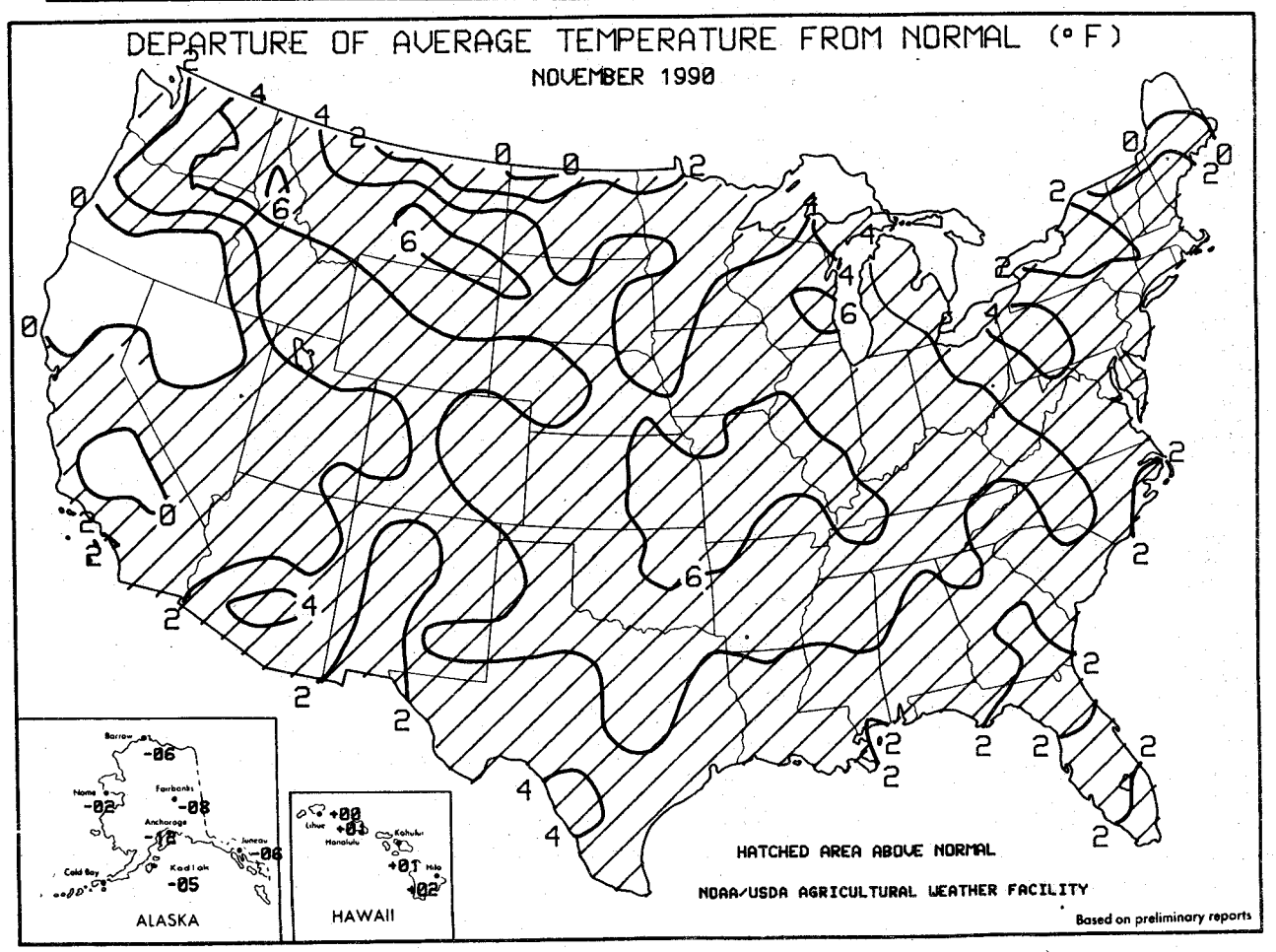
WINTER WHEAT PLANTING

By early November, 91% of the winter wheat crop was planted and 79% emerged, both 1 point ahead of normal. Planting was complete in Colorado, Montana, Nebraska, and South Dakota. Rain in the central and southern Plains benefited wheat fields. Seeding in Arkansas was delayed due to late soybean harvest. In mid-November the winter wheat crop was in mostly good condition with 90% of the crop emerged, 1 point ahead of normal. Condition was mostly good in all States except Montana, Oregon, and South Dakota, where the crop was mostly fair. By the end of November, 93% of the winter wheat crop was emerged and in mostly good condition. In the Panhandle of Nebraska, high, gusty winds caused soil erosion in some wheat fields. In California and Florida, small grain seeding was slowed due to lack of moisture.


TOTAL PRECIPITATION, INCHES
NOVEMBER 1990
GREATER THAN 4 INCHES
GREATER THAN 8 INCHES
NO PRECIPITATION
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports
ALASKA
HAWAII


PERCENTAGE OF NORMAL PRECIPITATION
NOVEMBER 1990
SHADED AREAS 100% OR MORE
DASHED AREAS 50% OR LESS
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports
ALASKA
HAWAII


AVERAGE TEMPERATURE (°F)
NOVEMBER 1990
ALASKA
HAWAII
NOAA/USDA AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)
NOVEMBER 1990
ALASKA
HAWAII
HATCHED AREA ABOVE NORMAL
NOAA/USDA AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

TEMPERATURE AND PRECIPITATION SUMMARY
NOVEMBER 1990

STATES AND STATIONS	Temp. °F Average	Temp. °F Departure	Precip. Total	Precip. Departure
AL BIRMINGHAM	56	4	4.0	0.4
HUNTSVILLE	55	4	4.7	0.5
MOBILE	61	2	1.8	-1.9
MONTGOMERY	58	2	1.4	-1.5
AK ANCHORAGE	10	-12	1.3	0.2
BARROW	-6	-6	0.2	-0.1
FAIRBANKS	-4	-8	1.5	0.8
JUNEAU	26	-6	4.9	-0.3
KODIAK	30	-5	2.3	-3.4
NOME	15	-2	1.6	0.7
AZ FLAGSTAFF	38	2	1.1	-0.6
PHOENIX	66	5	0.2	-0.4
PRESCOTT	46	2	0.4	-0.9
TUCSON	62	3	0.2	-0.4
WINSLOW	42	-1	1.0	0.6
YUMA	66	3	T	-0.2
AR FORT SMITH	55	5	3.8	0.3
LITTLE ROCK	57	6	3.3	-1.1
CA BAKERSFIELD	54	-2	0.5	-0.2
BISHOP	46	0	0.0	-0.5
EUREKA	50	-2	3.1	-2.8
FRESNO	53	0	0.5	-0.8
LOS ANGELES	64	3	0.1	-1.4
REDDING	52	-2	0.7	-4.9
SACRAMENTO	53	0	0.4	-1.8
SAN DIEGO	63	1	0.6	-0.4
SAN FRANCISCO	56	1	0.3	-2.0
STOCKTON	--	-	0.5	-1.3
CO ALAMOSA	32	3	0.9	-0.5
CO. SPRINGS	43	5	0.3	0.2
DENVER	44	6	1.3	0.5
GRAND JUNCTION	40	0	0.6	0.0
PUEBLO	44	4	0.5	0.1
CT BRIDGEPORT	47	2	1.9	-1.9
HARTFORD	44	3	3.8	-0.3
DC WASHINGTON	52	3	2.2	-0.6
FL APALACHICOLA	63	2	1.6	-1.2
DAYTONA BEACH	67	2	0.8	-1.8
FT. MYERS	73	3	T	-1.4
JACKSONVILLE	63	2	1.2	-0.5
KEY WEST	76	0	2.9	-0.3
MIAMI	74	1	1.7	-1.0
ORLANDO	69	2	1.0	-0.8
TALLAHASSEE	61	2	0.6	-2.7
TAMPA	70	3	0.7	-1.2
WEST PALM BEACH	74	2	1.2	-2.1
GA ATHEN	56	4	1.4	-1.9
ATLANTA	56	4	1.3	-2.1
AUGUSTA	56	2	2.6	0.5
MACON	57	1	1.3	-1.0
SAVANNAH	61	3	2.5	0.6
HI HILO	75	2	45.8	30.9
HONOLULU	77	1	3.0	-0.2
KAHULUI	76	1	6.2	3.9
LIHUE	75	0	10.0	4.4
ID BOISE	41	1	0.6	-0.7
LEWISTON	47	7	1.0	-0.1
POCATELLO	38	3	0.9	0.0
IL CAIRO	--	-	3.8	-0.2
CHICAGO	45	4	5.6	3.5
MOLINE	44	5	2.9	0.9
PEORIA	45	5	7.2	5.2
QUINCY	47	6	2.5	0.4
ROCKFORD	42	4	3.6	1.4
SPRINGFIELD	48	5	3.5	1.5
IN EVANSVILLE	51	5	2.9	-0.4
FORT WAYNE	45	5	3.3	0.7
INDIANAPOLIS	47	5	3.2	0.2
SOUTH BEND	46	5	6.7	3.9
IA DES MOINES	44	5	2.5	1.0
DUBUQUE	41	5	2.7	0.2
SIOUX CITY	40	4	0.9	-0.1
WATERLOO	40	5	1.3	-0.3
KS CONCORDIA	47	6	1.4	0.4
DODGE CITY	48	6	0.4	-0.3
GOODLAND	43	5	1.5	0.9
TOPEKA	49	6	2.9	1.2
WICHITA	50	6	2.0	0.6
KY BOWLING GREEN	52	6	3.2	-0.7
JACKSON	52	9	2.9	-0.3
LEXINGTON	50	5	2.7	-0.6
LOUISVILLE	52	6	2.3	-1.1
PADUCAH	54	7	2.3	-1.7
LA ALEXANDRIA	60	2	3.9	-0.2
BATON ROUGE	62	3	2.1	-1.8
LAKE CHARLES	62	2	3.6	-0.6
NEW ORLEANS	62	2	3.2	-0.8
SHREVEPORT	59	3	8.8	5.1
ME CARIBOU	31	0	4.2	1.0
PORTLAND	42	3	7.5	2.8
MD BALTIMORE	50	3	2.1	-1.0
SALISBURY	50	2	3.0	0.0
MA BOSTON	49	3	1.4	-2.8
CHATHAM	46	1	1.6	-2.9
MI ALPENA	38	3	2.9	0.7
DETROIT	44	5	2.6	0.3
FLINT	42	4	4.3	2.0
GRAND RAPIDS	43	4	7.1	4.3
HOUGHTON LAKE	38	3	2.9	0.6
LANSING	42	4	5.4	3.0
MARQUETTE	34	4	1.0	-1.9
MUSKEGON	43	4	5.3	2.5
SAULT ST. MARIE	36	3	3.9	0.7
MN ALEXANDRIA	33	4	0.1	-1.0
DULUTH	31	3	0.6	-1.0
INT'L FALLS	28	3	0.8	-0.5
MINNEAPOLIS	37	4	0.6	-0.6
ROCHESTER	38	5	0.4	-1.0
ST. CLOUD	34	4	0.3	-1.0
MS GREENWOOD	58	5	3.5	-1.0
JACKSON	58	3	3.3	-0.6
MERIDIAN	58	4	5.1	1.7
TUPELO	56	5	3.1	-1.6
MO CAPE GIRARDEAU	--	-	3.5	-0.2
COLUMBIA	50	6	3.1	0.8
KANSAS CITY	50	6	3.0	1.4
SAINT LOUIS	53	8	3.4	0.8
SPRINGFIELD	52	7	2.4	-0.5
MT BILLINGS	41	6	0.3	-0.5
GLASGOW	31	2	0.5	0.2
GREAT FALLS	38	3	0.7	0.0
HAVRE	33	2	0.1	-0.4
HELENA	37	6	0.4	-0.2
KALISPELL	35	4	1.6	0.3
MILES CITY	37	6	0.5	-0.1
MISSOULA	36	4	0.9	0.0
NE GRAND ISLAND	43	5	0.8	0.0
LINCOLN	45	6	1.1	0.1
NORFOLK	40	4	1.3	0.6
NORTH PLATTE	38	3	0.9	0.3
OMAHA	44	4	1.1	-0.2
SCOTTSBLUFF	39	3	1.2	0.7
VALENTINE	38	5	0.6	0.2
NV ELKO	34	-1	1.0	0.2
ELY	34	1	0.4	-0.2
LAS VEGAS	55	2	0.1	-0.3
RENO	41	1	0.2	-0.4
WINNEMUCCA	36	-2	0.2	-0.6
NH CONCORD	40	3	3.2	-0.4
NJ ATLANTIC CITY	48	2	2.0	-1.7
NM ALBUQUERQUE	45	1	0.9	0.5
CLOVIS	49	3	1.3	0.8
ROSWELL	53	5	0.6	0.2
NY ALBANY	42	2	3.7	0.6
BINGHAMTON	41	2	3.2	0.2
BUFFALO	43	3	2.6	-1.0
NEW YORK	51	3	2.2	-1.6
ROCHESTER	42	2	2.3	-0.4
SYRACUSE	42	1	3.2	-0.2
NC ASHEVILLE	50	3	1.6	-1.5
CHARLOTTE	55	4	2.8	-0.1
GREENSBORO	52	4	1.9	-0.6
HATTERAS	58	1	3.8	-1.0
NEW BERN	56	1	3.8	0.7
RALEIGH	54	4	1.5	-1.3
WILMINGTON	58	2	2.1	-1.1
ND BISMARCK	31	3	0.0	-0.5
FARGO	32	4	T	-0.8
GRAND FORKS	29	3	T	-0.8
WILLISTON	30	2	0.1	-0.3
OH AKRON-CANTON	44	3	2.1	-0.4
CINCINNATI	49	5	2.3	-0.8
CLEVELAND	45	3	2.3	-0.5
COLUMBUS	46	4	2.0	-0.6
DAYTON	47	5	2.5	-0.2
MANSFIELD	44	3	2.4	-0.3
TOLEDO	44	5	2.3	-0.1
YOUNGSTOWN	45	4	2.2	-0.6
OK OKLAHOMA CITY	55	6	1.6	0.1
TULSA	56	7	2.4	-0.1
OR ASTORIA	48	1	11.3	1.1
BURNS	34	-1	0.3	-0.9
MEDFORD	42	-1	1.5	-1.4
PENDLETON	45	4	0.9	-0.6
PORTLAND	48	3	3.7	-1.5
SALEM	47	2	4.9	-0.8
PA ALLENTOWN	46	3	3.5	-0.2
ERIE	46	4	2.7	-1.1
HARRISBURG	47	3	2.6	-0.6
PHILADELPHIA	50	4	1.2	-2.1
PITTSBURGH	46	4	2.0	-0.3
SCRANTON	44	3	3.3	0.4
WILLIAMSPORT	44	3	2.7	-1.0
RI PROVIDENCE	47	3	2.4	-1.8
SC CHARLESTON	60	4	3.8	1.6
COLUMBIA	56	2	2.0	-0.5
FLORENCE	58	3	1.5	-0.7
GREENVILLE	54	3	1.9	-1.2
SD ABERDEEN	35	5	T	-0.5
HURON	36	4	T	-0.7
RAPID CITY	40	6	0.4	0.0
SIOUX FALLS	36	3	0.6	-0.3
TN BRISTOL	49	3	1.3	-1.7
CHATTANOOGA	53	4	3.7	-0.5
KNOXVILLE	52	3	1.8	-2.0
MEMPHIS	57	6	3.4	-0.7
NASHVILLE	54	6	4.3	0.8
TX ABILENE	57	4	2.3	0.9
AMARILLO	50	4	0.5	-0.1
AUSTIN	64	5	3.9	1.7
BEAUMONT	63	3	5.5	1.3
BROWNSVILLE	71	3	0.9	-0.5
CORPUS CHRISTI	69	3	1.3	-0.1
DEL RIO	63	3	1.2	0.4
EL PASO	53	1	1.3	1.0
FORT WORTH	60	5	3.8	1.7
GALVESTON	66	3	1.9	-1.2
HOUSTON	63	3	3.9	0.3
LAREDO	68	3	3.4	2.2
LUBBOCK	53	5	1.3	0.7
MIDLAND	56	3	0.8	0.2
SAN ANGELO	57	3	2.5	1.6
SAN ANTONIO	63	4	3.1	0.8
VICTORIA	66	4	2.3	0.1
WACO	62	4	3.5	1.3
WICHITA FALLS	56	4	2.5	1.1
UT BLANDING	--	-	1.4	0.5
CEDAR CITY	39	0	0.8	-0.1
SALT LAKE CITY	41	2	1.2	0.0
VT BURLINGTON	40	3	3.9	1.1
VA LYNCHBURG	47	4	1.7	-1.2
NORFOLK	55	3	1.7	-1.1
RICHMOND	53	4	1.7	-1.6
ROANOKE	52	5	1.1	-1.5
WA COLVILLE	34	0	0.7	-1.4
QUILLAYUTE	45	1	22.6	9.5
SEATTLE-TACOMA	47	2	10.7	5.1
SPOKANE	39	4	0.8	-1.2
WALLA WALLA	--	-	2.0	0.1
YAKIMA	42	4	0.0	-1.0
WV BECKLEY	48	6	1.7	-1.2
CHARLESTON	51	5	2.1	-0.8
ELKINS	43	2	1.7	-1.0
HUNTINGTON	50	4	2.5	-0.3
PARKERSBURG	48	4	2.2	-0.2
WI GREEN BAY	29	6	1.6	-0.2
LA CROSSE	41	6	0.7	-0.8
MADISON	41	6	1.6	-0.2
MILWAUKEE	44	7	3.5	1.6
WAUSAU	37	5	1.2	-0.6
WY CASPER	37	4	1.3	0.6
CHEYENNE	39	4	0.7	0.2
LANDER	33	3	2.3	1.5
SHERIDAN	38	5	0.9	0.1
PR SAN JUAN	81	1	5.3	-0.8

Based on 1951-80 normals

November Weather in Historical Perspective

Temperatures for November 1990 averaged well above normal across the contiguous United States and ranked as the sixth warmest November on record (fig. 1). Novembers during the last 4 years have been warmer than average. The national precipitation index indicates that November 1990 was slightly below the long-term mean (fig. 2). The filtered curve shows the long-term variations and suggests that Novembers have generally been getting wetter during the last 90 years.

Regional rankings for the nine climatically homogeneous regions (see fig. 3 on page 15) are listed in table 1. Most of the country averaged in the warm third of the historical distribution with over 350 daily record-high temperatures reported. The West region had their 10th driest November on record, while the unusually wet conditions along the Washington coast were counterbalanced by drier-than-normal conditions inland to give the Northwest region a middle-third ranking.

The year so far has been unusually warm over the Nation, with January-November 1990 ranking as the third warmest such period on record (fig. 3). In Florida, 1990 marks the second consecutive year with below-normal January-November precipitation (fig. 4).

TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR NOV 1990, BASED ON THE PERIOD 1895-1990. 1 = DRIEST/COLDEST, 96 = WETTEST/HOTTEST.

REGION	PRECIPITATION	TEMPERATURE
NORTHEAST	43	83
EAST NORTH CENTRAL	49	88
CENTRAL	53	93
SOUTHEAST	26	80
WEST NORTH CENTRAL	30	79
SOUTH	57	88
SOUTHWEST	53	66
NORTHWEST	41	75
WEST	10	43
NATIONAL	28	91

TABLE 1-S. EXTREMES, NORMALS, AND 1990 VALUES FOR NOV

Figure 1

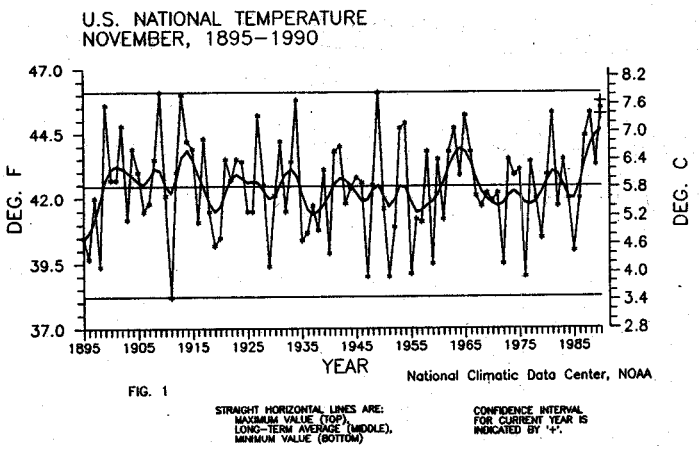


Figure 2

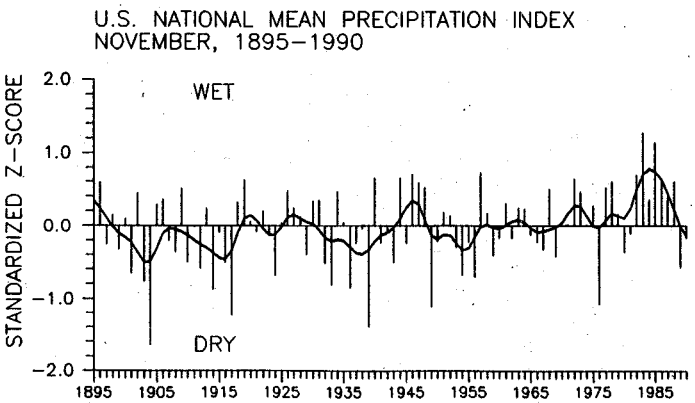


Figure 3

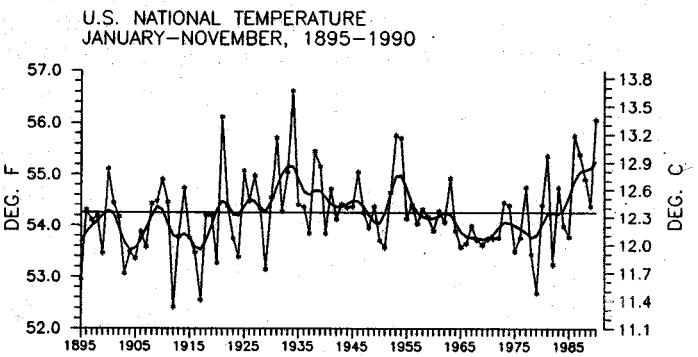
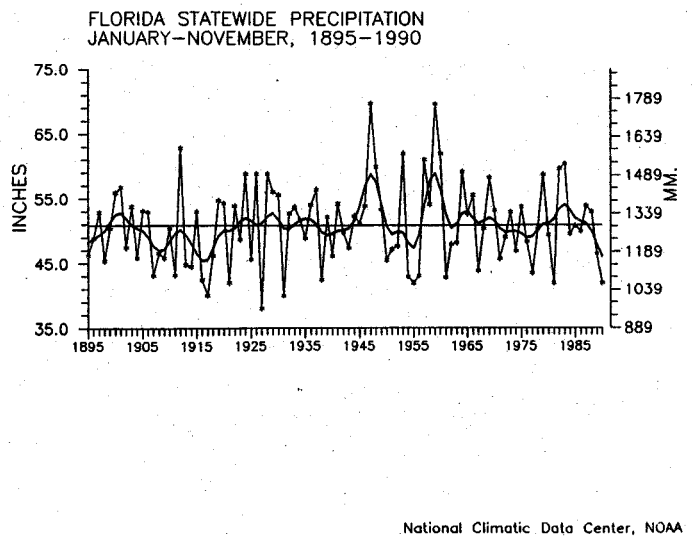
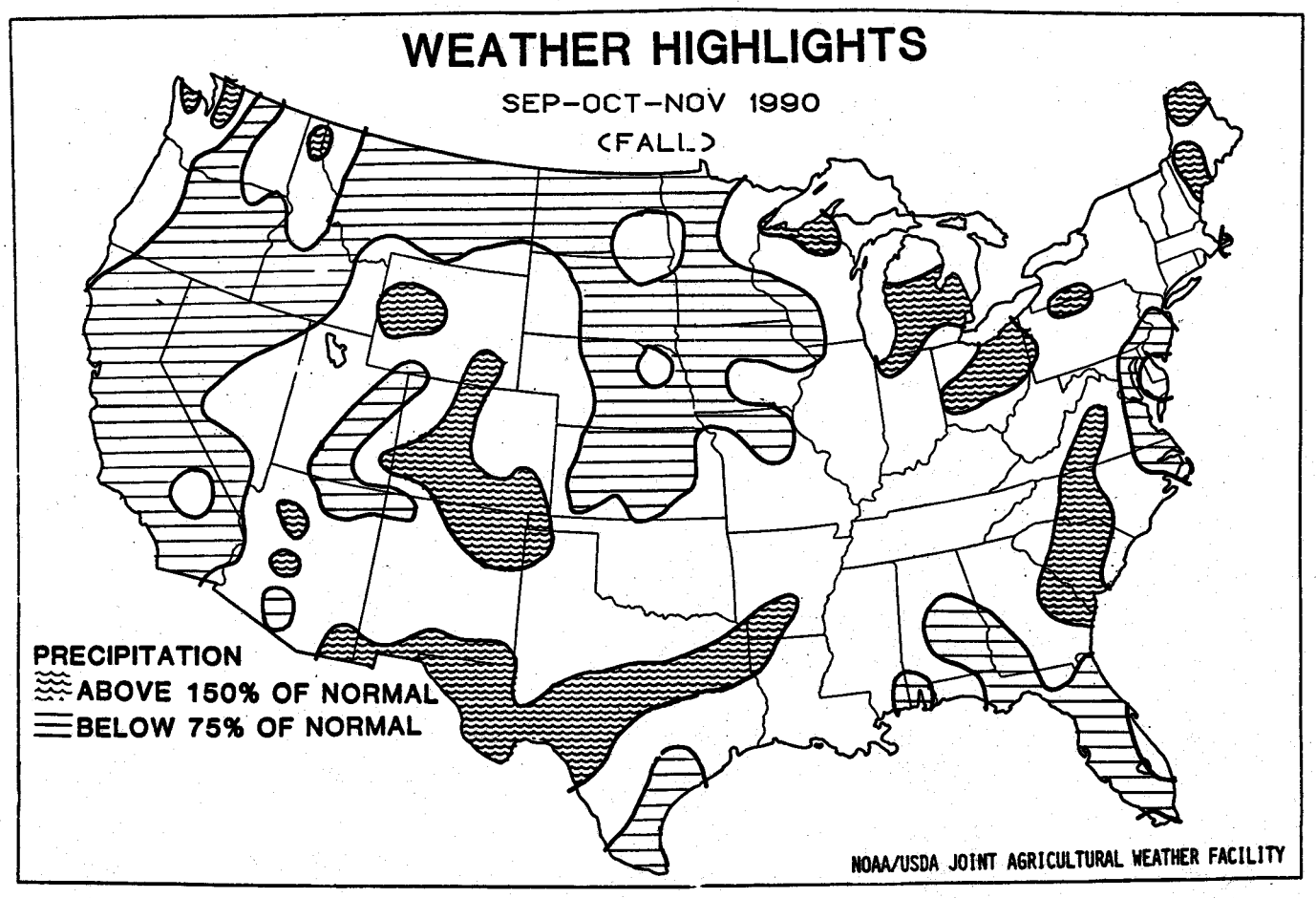


Figure 4





Autumn Weather Review

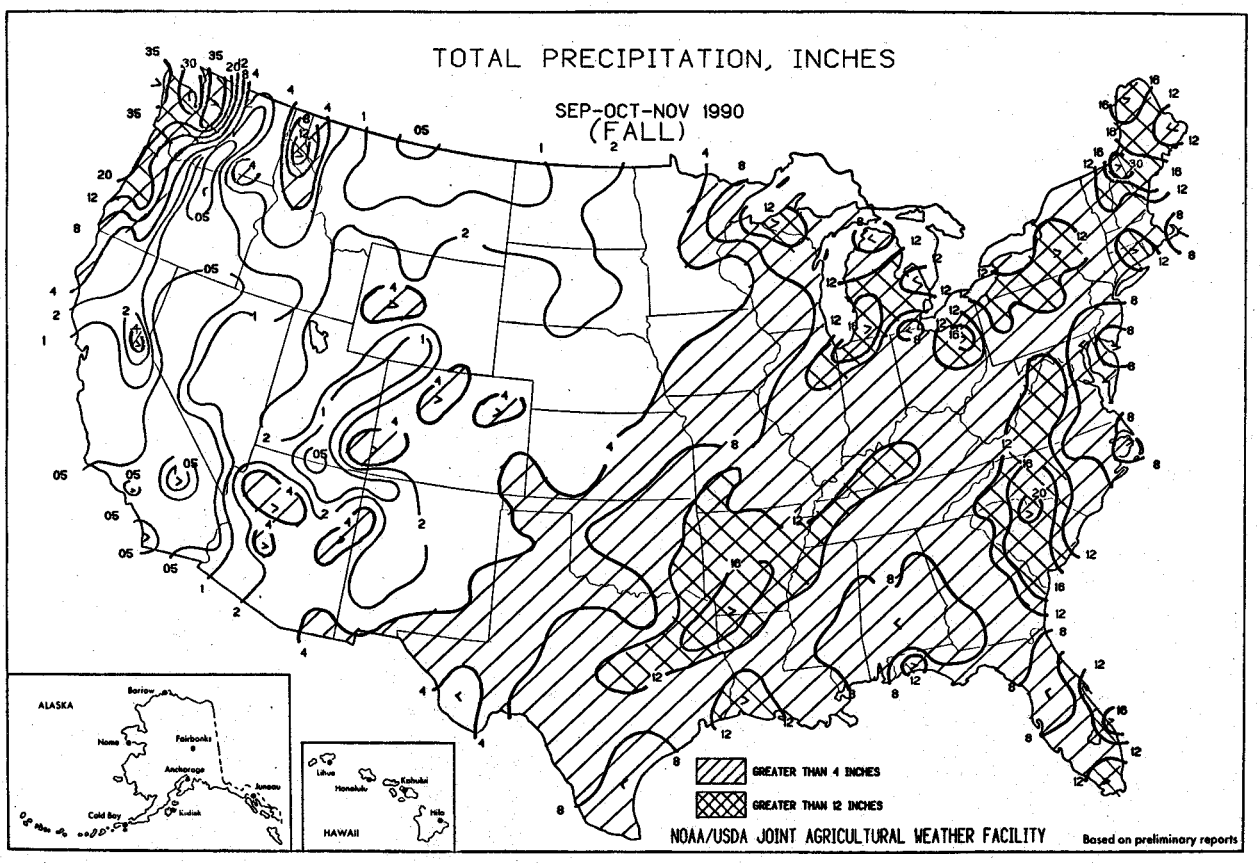
September - November 1990

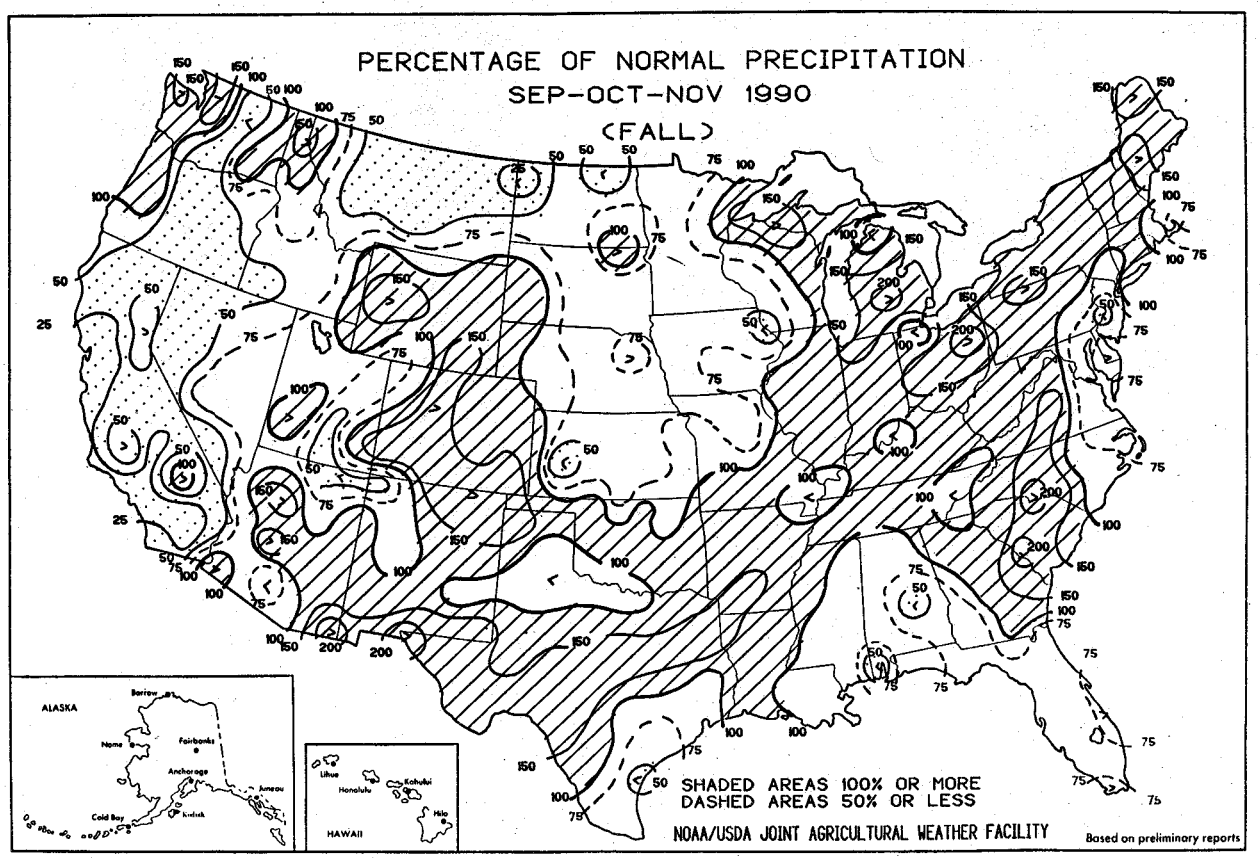
HIGHLIGHTS: Abnormally warm weather prevailed as temperatures averaged above normal across most of the country. Cold arctic air, however, plunged into the Central United States behind several strong frontal systems. These systems also caused unseasonably heavy precipitation in the central Rockies and portions of the southern Plains to the Great Lakes and Atlantic coast. Seasonable rains drenched the northern Pacific coast, with heavy amounts producing severe flooding in western Washington. Dry conditions prevailed over much of the West, northern and central Plains, western Corn Belt, and parts of the Southeast.

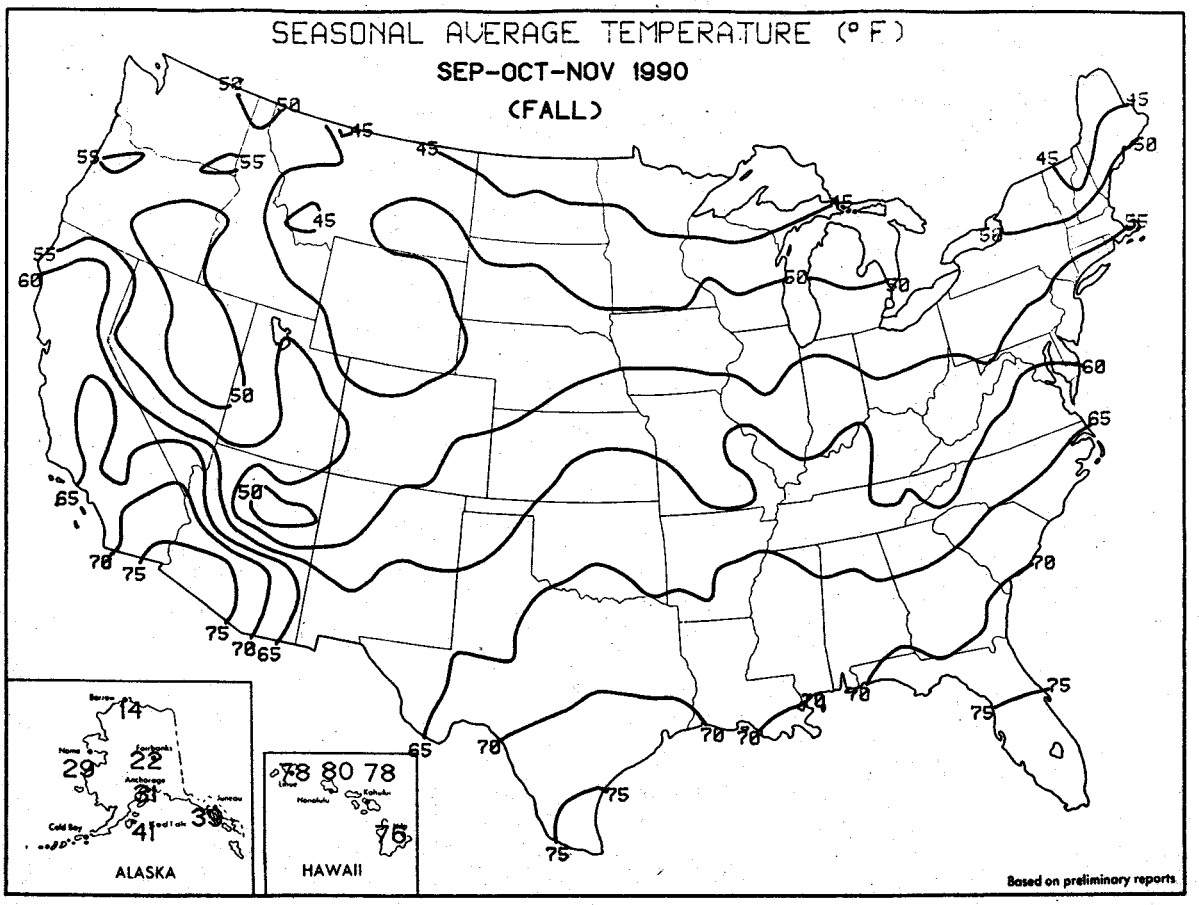
SEPTEMBER: Most of the Southeast, Corn Belt, northern and central Plains, and the Northwest were warm and dry throughout the month. The continuing dry weather worsened long-term drought along the southern Atlantic coast. The northern and middle Atlantic coast also experienced dry but cooler weather. Thunderstorms soaked much of the Great Lakes, upper Ohio Valley, southern Plains, and Southwest with needed rain, but heavy amounts caused local flooding.

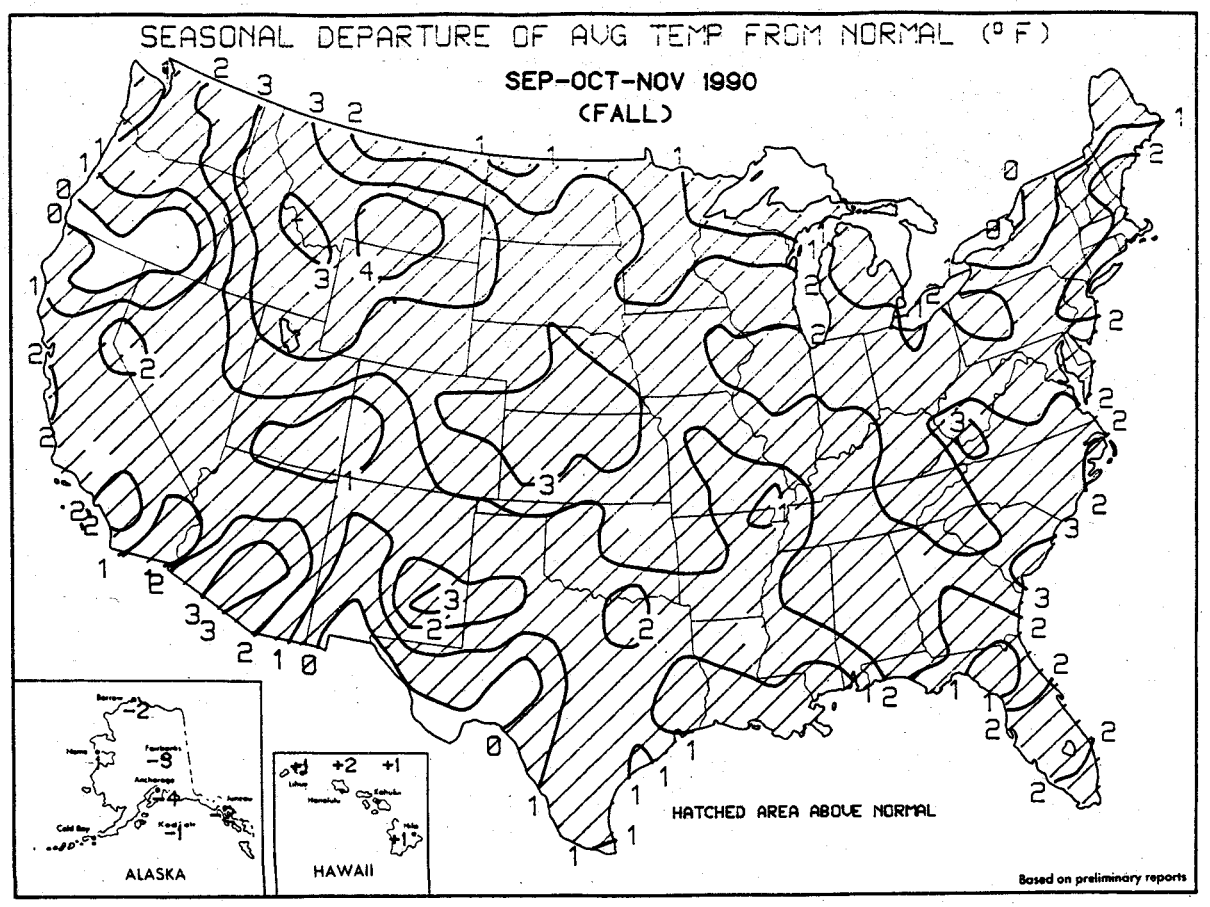
OCTOBER: During the first part of the month, intense thunderstorms developed along a slow moving cold front and dumped torrential rains in Arkansas and substantial rains over the eastern Corn Belt. The front stalled along the Atlantic seaboard and combined with the remnants of Tropical Storm Marco and Hurricane Klaus to bring torrents of rain (8-14 inches) and widespread flooding to Georgia, the Carolinas, and Virginia. A frontal system, in mid-October, brought severe weather across the Mississippi Valley to the Atlantic coast. During the latter part of the month, more than 4 inches of rain caused additional flooding in the middle and southern Atlantic Coast States. Pacific storms battered the Northwest with heavy rain, while dry weather continued over the northern Plains and parts of the central Plains, western Corn Belt, the Southeast, and the West.

NOVEMBER: Unseasonable late-autumn warmth continued as temperatures averaged above normal over most of the Nation. During the first part of the month, however, abnormally cold air settled over much of the country as temperatures dropped to single digits in the central Plains. Storm systems spread heavy precipitation across much of the Rockies, central and southern Plains, and Mississippi Valley, while persistent rains caused severe flooding in western Washington. Long-term drought continued over much of the northern Plains and the West and parts of the Southeast.


TOTAL PRECIPITATION, INCHES
SEP-OCT-NOV 1990
(FALL)
GREATER THAN 4 INCHES
GREATER THAN 12 INCHES
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports
ALASKA
HAWAII


PERCENTAGE OF NORMAL PRECIPITATION
SEP-OCT-NOV 1990
(FALL)
SHADED AREAS 100% OR MORE
DASHED AREAS 50% OR LESS
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports
ALASKA
HAWAII


SEASONAL AVERAGE TEMPERATURE (°F)
SEP-OCT-NOV 1990
(FALL)
ALASKA
HAWAII
Based on preliminary reports


SEASONAL DEPARTURE OF AVG TEMP FROM NORMAL (°F)
SEP-OCT-NOV 1990
(FALL)
HATCHED AREA ABOVE NORMAL
ALASKA
HAWAII
Based on preliminary reports

Autumn 1990 in Historical Perspective

Temperatures of the autumn of 1990 averaged across the contiguous United States were well above the long-term mean and ranked as the fourth warmest on record (fig. 1). The filtered curve, showing the long-term variations, suggests that autumns from the mid-1960's to mid-1980's were predominantly cool, but that the last 4 years returned to near normal to warm autumns. The national precipitation index ranked the autumn of 1990 as the 47th driest on record (fig. 2).

The temperature and precipitation rankings for the nine climatically homogeneous regions in the United States (fig. 3) are listed in table 1. All regions ranked in the warmest third of the historical distribution, with the West North Central region having the third warmest autumn on record. The regional pattern of precipitation was more variable than that of temperature. The Northeast, Central, and Southwest regions ranked in the wet third of the distribution, while the West and West North Central ranked in the dry third.

The West region had the fifth driest autumn in 1990 (fig. 4). The last five autumns have been near or below the long-term mean, which contrasts sharply with the record wetness of the early 1980's.

Figure 3

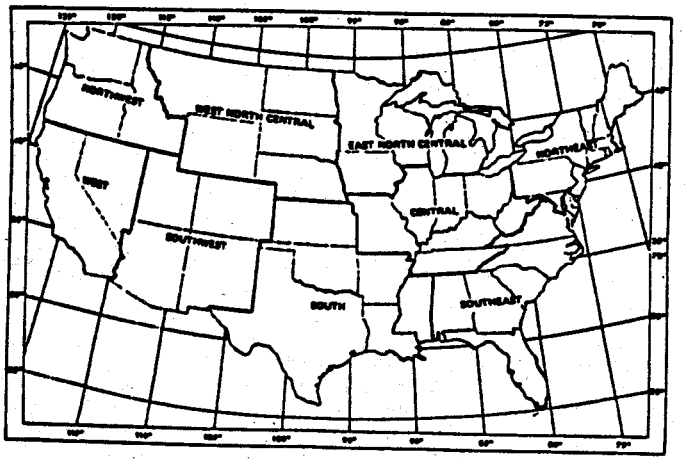


Figure 1

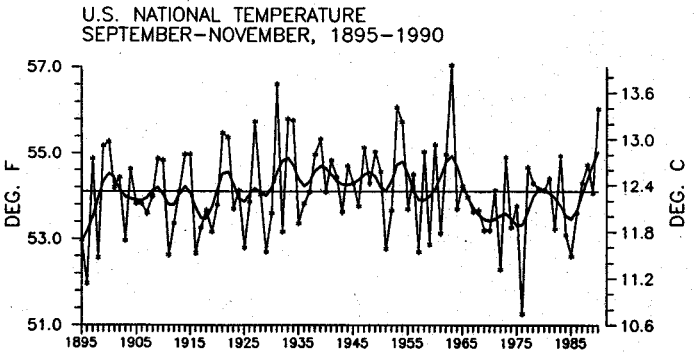


TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR SEP-NOV 1990, BASED ON THE PERIOD 1895-1990. 1 = DRIEST/COLDEST, 96 = WETTEST/HOTTEST.

REGION	PRECIPITATION	TEMPERATURE
NORTHEAST	83	81
EAST NORTH CENTRAL	50	80
CENTRAL	67	76
SOUTHEAST	45	86
WEST NORTH CENTRAL	14	94
SOUTH	54	81
SOUTHWEST	71	87
NORTHWEST	39	88
WEST	5	86
NATIONAL	49	93

Figure 2

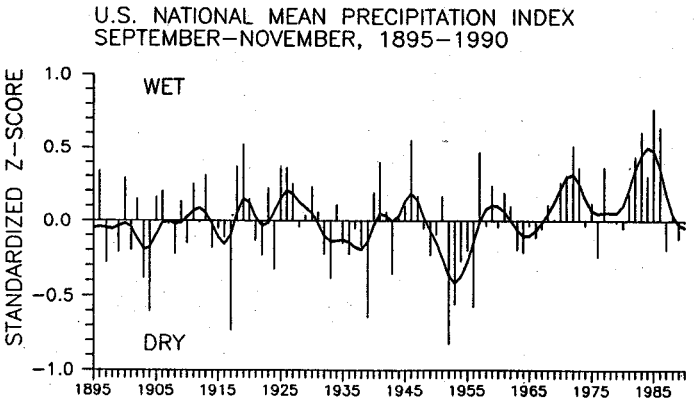
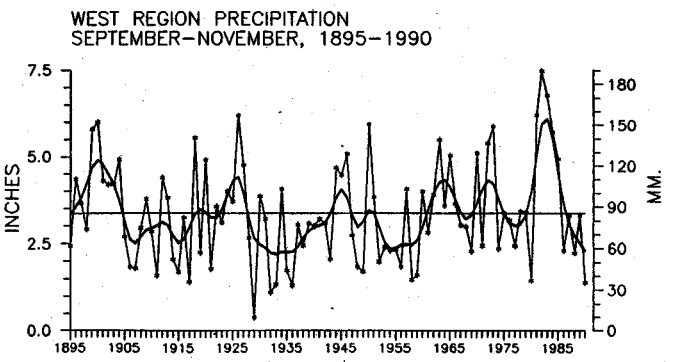


Figure 4



National Climatic Data Center, NOAA

National Agricultural Summary

December 3-9, 1990

HIGHLIGHTS: Heavy snow fell over the **upper midwest,** especially in **Wisconsin,** where snow amounts ranged from 6 to 22 inches. Continued dry conditions and short soil moisture were major concerns for the **Great Plains** and most of the **West.** Most of the **Eastern half** of the **Nation** received moisture.

SMALL GRAINS: Texas winter wheat crop was 96 percent (%) emerged, 1 point above the 5-year average, with greenbug and Russian wheat aphid damage. Kentucky wheat was in mostly good condition, with late-seeded wheat benefiting from favorable weather conditions. Kansas wheat had continued good development, with light greenbug activity and some wheat streak mosaic in west and central areas. Rain improved the wheat stand and condition in Louisiana. Wyoming winter wheat crop was mostly fair to good with additional moisture needed for good development.

CORN: Corn harvest continued throughout the Nation. Producers were waiting for fields to dry and moisture content of grain to decrease.

SOYBEANS: Georgia soybean crop was mostly very poor to poor with 97% harvested, 9 points ahead of normal. Soybean harvest in Texas was nearing completion mostly due to favorable weather conditions. Alabama soybeans were 99% harvested, 5 points ahead of normal.

COTTON: Cotton harvest in Texas was 85% complete, 8 points behind normal, with average to good yields. Arizona harvest was 99% complete, 3 points ahead of normal, with stalk shredding and plowdown continuing. Late cotton harvest and pink bollworm control continued in California.

OTHER FIELD CROPS: Texas peanut harvest was 89% complete, 2 points behind normal. Sunflower harvest was 89% complete, 4 points behind normal. Burley and dark air-cured tobacco in Kentucky was good quality. Louisiana sugarcane was 89% harvested, 3 points ahead of normal. Sweetpotato harvest was 98% complete, 1 point behind normal.

FRUIT AND NUTS: Pecan harvest in Texas was 59% complete, 15 points behind normal with variable quality and yields. Arizona citrus and pecan harvests continued, while apple packing continued in the east. Florida citrus harvest was very active for all types except temple oranges. Navel orange movement was strong in preparation for the holiday season. Pruning of fruit and nut orchards was active in western areas of Oregon. California Fuji apple, navel orange, and date harvests continued. Kiwifruit and persimmons were packed. California desert grapefruit and tangerine harvests continued, while the lemon crop was gaining color.

VEGETABLES: Texas Rio Grande Valley pepper and lettuce harvests continued and the onion crop was in good condition. Mixed vegetable harvest continued throughout Arizona. Florida fall vegetable harvest was nearly complete in the central areas and active in the south. Freezing temperatures and heavy rain damaged the vegetable crop in southeastern Louisiana. California celery and iceberg lettuce supplies were light with variable quality. Potato harvest continued in the Hemet-Perris area of California.

PASTURES AND LIVESTOCK: Pasture and livestock remain mostly fair to good in most areas. The northern Plains and most of the West have poor to fair pasture conditions. Hay supplies were adequate in South Dakota. Range conditions were poor to very poor in the southern two-thirds of California and poor to fair in the northern third.

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 mostly between 0.50 to 1.50 in.; over 2.00 in. local areas. Temperatures 4 to 8° below normal.

Days suitable for fieldwork 4.0. Soil moisture 31% short, 61% adequate, 8% surplus. Early week rains helped replenish soil moisture, boost small grain development. Soybeans 99% harvested, 96% 1989, 94% avg. Winter wheat 90% seeded, 84% 1989, 88% avg. Pastures 6% very poor, 33% poor, 41% fair, 20% good. Livestock 2% poor, 54% fair, 44% good. Primary activities: Harvesting soybeans, fall vegetables, pecans; seeding, fertilizing winter annuals; soil testing; turning land, applying lime; pruning fruits trees; machinery, equipment, fence repair; providing supplemental feed to cattle; selling catfish, restocking ponds; general care of livestock, poultry, catfish.

ARIZONA: Sunny, warmer weather 30th through 2nd; abundant sunshine 3rd, 4th. High cloudiness 5th; high pressure 6th, sunny skies, extremely dry air; dew points single digits. Warming continued 7th, 8th; maximum temperatures 60s higher elevations, 70s at 5,000 ft., upper 70s lower western deserts 8th. Temperatures 6° below normal to 4° above.

Cotton 99% harvested, 98% 1989, 96% 5 year avg.; stalk shredding, plow down moderate to mostly active. Sheep grazing activities alfalfa increased; crop fair, mostly good condition; harvest activity mostly light; green chopping alfalfa central; new, renovated stands good condition except selected areas, below normal condition. Wheat, barley seedbed preparations, planting progressed normally; 54% seeded, 39% stands established, 52% seeded 1989, 35% stands established 1989; small grains mostly good condition producing areas. Citrus, pecan, mixed vegetable harvests continued active statewide; apple packing continued east.

ARKANSAS: Temperatures were slightly below normal first of week, by weekend normal. Rainfall scattered, light first of week. Extremes 16°; 71°. Rainfall none to 1.28 in.

Farming activities were limited by wet fields. Soil moisture adequate. Wheat progressing normally. Livestock in good condition.

CALIFORNIA: Strong high pressure over the State kept most areas dry, very warm. The only precipitation fell on the far north coast in the middle of the week. Record high temperatures were reported on the central coast, while frosty mornings were plentiful in the inland valleys under clear calm nights.

Open weather permitted good progress field activities. Late cotton harvest ongoing. Shredding, discing pink boll worm control continued. Ground preparation, herbicide applications next year's crop progressed. Corn, grain sorghum, sugarbeet harvests continued. Seeding small grains, forage mixes, new alfalfa slowed, low soil moisture. Emerged fields irrigated, sprayed weed control. Alfalfa green chopping normal. Fuji apples harvested, good quality reported. Avocado harvest continued; Zutano, Hass varieties picked. Deglet Noor date harvest ongoing. Kiwifruit, persimmons packed. Normal fall cultural practices continued in stone fruit, nut orchards; pruning, cultivation, removal of unwanted tree varieties, cultivation of open ground, fumigation for replants, new plantings. Navel orange harvest continued. Desert grapefruit quality, yield both good. Lemons maturing, gaining color while tangerines were picked. Minneola tangelos progressing normally, first picking set for early January. Broccoli light supply, generally good quality. Cauliflower light supply, variable quality. Celery light supply, Salinas area, variable quality. Iceberg head lettuce light supply, good quality, Huron area. Potato harvest continued Hemet Perris. Cool nights delayed early morning desert vegetable harvest. Livestock on supplemental feed most areas, average to good condition. Range conditions poor to very poor in the southern two thirds of State, poor to fair in northern third. Little to no growth on winter pastures north central, southern areas. Sheep grazing continued southern, central counties.

COLORADO: State was dominated by high pressure at the beginning of the week resulting in warm sunny days. Weak front moved through the State on 6th resulting in light precipitation a little snow. Precipitation for the period was zero to 0.05 in. Temperatures were above average for the week with some stations in the eastern Plains 15 to 20° growing days.

FLORIDA: Lightest rain totals in south; most areas under 0.50 in. Elsewhere, most areas had at least 0.50 in; many localities 1.00 to 2.00 in. Temperatures 6 to 9° below normal, north, 1 to 4° below elsewhere. Extreme highs reached low, mid 70s Panhandle, Big Bend to low 80s northeast, mid 80s south. Coldest lows in upper 20s north to around 40° central, around 50° southeast coast.

Soil moisture mostly short throughout State, except few coastal, other low lying Peninsula areas. Showers beneficial but too light many areas to fully alleviate moisture shortages. Sugarcane, harvest, planting continued active. Pastures 20% poor, 45% fair, 30% good, 5% excellent. Cattle fair to good, Panhandle, upper Peninsula, good lower Peninsula. Rain light early week, variable over citrus belt as cold front moved across State late week. Rain helped relieve surface dryness. Accompanying colder weather will help endure tree semi dormancy for protection in case of latter cold weather. Citrus harvest very active; all types being harvested except Temples. Navel orange movement strong for holiday season; tangelos, tangerines, seedless grapefruit also being shipped to all markets. Caretakers, growers finishing preparation of groves, equipment for possibility of cold weather. Cooler weather latter part of week, vegetable producing areas. Rainfall again limited. Soil moisture, water tables low, many areas. Fall harvest central areas, nearly complete; active, southern areas. Volume leaders: tomatoes, cucumbers, squash, peppers, celery, snap beans, lettuce, radishes, eggplant, Cabbage harvest underway Hastings, central areas.

GEORGIA: Cold week. Temperatures 3 to 6° below normal except 1 or 2° below normal northeast. Coldest mostly 20s; ranged upper teens mountains low, mid 30s near Atlantic coast. Warmest low 60s mountains, near 80° southeast. Rain 3rd, 7th. Totals 0.50 to 1.50 in. common.

Days suitable for fieldwork 5.3. Soil moisture 4% very short, 38% short, 57% adequate, 1% surplus.

Cotton 99% harvested, 97% 1989, 94% avg. Sorghum 99% harvested for grain, 99% 1989, 98% avg. Soybeans 42% very poor, 40% poor, 12% fair, 6% good; 97% harvested, 94% 1989, 88% avg. Wheat 3% poor, 46% fair, 51% good; 88% planted, 80% 1989, 83% avg.; 70% emerged, 52% 1989, 64% avg. Rye 1% poor, 60% fair, 37% good, 2% excellent; 100% planted, 98% 1989, 96% avg. Other small grains 7% poor, 38% fair, 55% good; 95% planted, 92% 1989, 93% avg. Pecans 6% very poor, 52% poor, 42% fair; 91% harvested, 88% 1989, 83% avg. Onions 56% fair, 44% good; 86% planted, NA 1989, NA avg. Pasture 5% very poor, 17% poor, 45% fair, 33% good; Cattle, hogs mostly good. Activities: Harvest of late row crops, small grain seeding, onion planting, routine care of livestock, poultry.

HAWAII: Favorable weather for crop production returned to islands most of week. Days were warm, sunny with cool nighttime temperatures. Winds variable 5 to 20 mph most of week. Temperatures low 60s to mid 80s. Rainfall none to 6.50 in.

Days suitable for farm work 7.0. Papaya production currently heavy. Sugar, pineapple harvest continuous. Wind caused some damage vine, fruit crops exposed areas.

IDAHO: No weather data available.

Soil moisture adequate north; short rest of State. Activities: Attending meetings, shop work, livestock care, livestock marketing. Hay, roughage supplies adequate. Livestock condition good to excellent.

ILLINOIS: Temperatures 1° below normal to 3° above normal. Precipitation mostly none, scattered showers less than 0.50 in.

Winter wheat mostly good. Livestock good to excellent.

INDIANA: Temperatures 2 to 4° above normal. Lows teens to low 20s, highs upper 40s to low 50s. Precipitation averaged none to 0.50 in.

Corn harvest slowed by wet fields. Other activities: Plowing, moving grain, processing tobacco, spreading fertilizer, lime, disking stalks, machinery repair, clearing fence rows, hauling manure, tax preparation, care of livestock. Unseasonably warm week.

IOWA: Temperatures 8° above normal northwest to 2° below normal east. Extremes 1°; 58°. Precipitation trace to 0.75 in.; average 0.10 in. Over half of snow cover for major storm on 2nd to 3rd, melted with northwestern, extreme southern snow free by weekend.

Excellent weather returned giving livestock stress relief. Livestock movement to market is moderate. Grain to market is light as most are waiting for higher grain prices. Fertilizer supplies mostly adequate.

KANSAS: Temperatures near normal. Precipitation varied from 0.01 in. southwest to 0.17 in northeast.

Wheat continued good development; needs moisture. Green bugs light. Wheat streak mosaic continues show up west, central districts.

KENTUCKY: Temperatures near normal, highs near 50°, a few degrees above normal; lows 30°, few degrees below normal. Precipitation above normal, near 0.80 in. west, 1.00 to 1.50 in. central, east, isolated amounts over 2.00 in. south.

Soil moisture generally adequate. Wheat mostly good condition, late seeded wheat small, but benefiting from favorable conditions. Some corn still unharvested, moisture content slow in coming down. Burley, dark air cured tobacco good quality, selling well. Livestock gleaning fields, utilizing late pasture. Winter feed expected to be ample.

LOUISIANA: Temperatures 2.7 to 4.9° below normal. Extremes 24°; 79°. Rainfall 0.22 to 4.49 in.

Days suitable for fieldwork 3.1. Soil moisture 2% short, 68% adequate, 30% surplus. Pecans harvested 90%, 88% 1989, 85% avg. Sugarcane harvested 89%, 88% 1989, 86% avg. Sweetpotatoes harvested 98%, 100% 1989, 99% avg. Wheat planted 93%, 97% 1989, 90% avg.; emerged 89%, 93% 1989, 83% avg.; 26% fair, 69% good, 5% excellent. Rain improved stands, overall conditions. Livestock 6% poor, 45% fair, 49% good. Pasture 24% poor, 55% fair, 21% good. Vegetables 3% very poor, 11% poor, 57% fair, 26% good, 3% excellent. Freezing temperatures, heavy rains damaged vegetable crop, southeast.

MARYLAND & DELAWARE: MARYLAND: Precipitation 1.22 in. Temperature 42°, normal 40°. Extremes 16°; 69°.

Activities for the week: Repairing fence; hauling manure; spreading fertilizer; maintaining machinery; caring for livestock.

DELAWARE: Precipitation 0.62 in. Temperature 43°, normal 41°. Extremes 21°; 66°.

Activities for the week: Repairing fence; hauling manure; spreading fertilizer; maintaining machinery; caring for livestock.

MICHIGAN: Temperatures 1° below to 4° above normal. Extremes 10°; 57°. Precipitation 0.19 to 1.80 in. across the State. Cold, some snow at the beginning of the week, reported over most of the State. Warm weather late in the week reduced snow cover.

Corn 95% harvested, 100% 1989, 90% avg. Major activities: Harvesting corn, marketing grain, caring for livestock. Livestock feed supplies adequate. Livestock condition good.

MINNESOTA: Temperatures 6 to 8° above normal. Extremes 15°; 58°. Precipitation none to 0.10 in., greatest weekly total 1.07 in.

MISSISSIPPI: Temperatures 3° below normal. Extremes 18°; 75°. Rainfall near normal. Rainfall 1.86 in., 0.64 in. above normal. Soil temperature 49°.

Days suitable for fieldwork 3.1, 3.4 1989, 3.0 avg. Soil moisture 1% very short, 11% short, 77% adequate, 11% surplus. Soybeans 99% harvested, 97% 1989, 94% avg.; 3% very poor, 47% poor, 49% fair, 1% good. Wheat 91% planted, 96% 1989, 89% avg.; 76% emerged, 90% 1989, 87% avg.; 9% poor, 65% fair, 26% good. Pecans 68% harvested, 85% last year, 77% avg. Pasture 8% very poor, 31% poor, 35% fair, 26% good. Livestock 8% very poor, 1% poor, 45% fair,

MISSISSIPPI: Temperatures 3° below normal. Extremes 18°; 75°. Rainfall near normal. Rainfall 1.86 in., 0.64 in. above normal. Soil temperature 49°.

Days suitable for fieldwork 3.1, 3.4 1989, 3.0 avg. Soil moisture 1% very short, 11% short, 77% adequate, 11% surplus. Soybeans were 99% harvested, 97% 1989, 94% avg.; 3% very poor, 47% poor, 49% fair, 1% good. Wheat 91% planted, 96% 1989, 89% avg.; 76% emerged, 90% 1989, 87% avg.; 9% poor, 65% fair, 26% good. Pecans 68% harvested, 85% 1989, 77% avg. Pasture 8% very poor, 31% poor, 35% fair, 26% good. Livestock 8% very poor, 1% poor, 45% fair, 46% good. Hay, roughage 59% short, 41% adequate. Feed grain 20% short, 80% adequate. Activities: Feeding cattle.

MISSOURI: Temperatures near normal, coolest in northeast. Precipitation spotty, up to 1.00 in. or

more several southern counties, little or none north.

Farmers caring for livestock, doing barnyard work. Winter wheat, pastures still green. Pasture feed available most areas.

MONTANA: Temperatures above normal, precipitation limited. Highest amount in extreme northwest of 0.54 in. Most eastern areas none.

Topsoil mostly dry except scattered locations in west, extreme north. Winter wheat 25% poor, 75% fair. Dry soils leaving winter wheat vulnerable to winter damage. Snow cover mostly poor. Wind damage to winter wheat so far this season light.

NEBRASKA: Temperatures 4 to 8° above normal across the State. Extremes 1°; 65°. Precipitation occurred 2nd none up to third of an inch.

NEVADA: Temperatures close to normal. Extremes -1°; 70°. Precipitation none most areas to 0.12 extreme north.

Major farm, ranch activities: Caring for livestock, general maintenance.

NEW ENGLAND: Precipitation 2.50 to 3.60 in. southern Maine, 0.70 to 2.10 in. rest of north, 1.10 to 2.80 in. south. Temperatures low 20s to mid 30s north, low 30s to low 40s south. Maximum temperatures mid 40s to low 60s, minimum temperatures 9° north to low 30s south.

Major farm activities: General repairs, maintenance.

NEW JERSEY: Temperatures much above normal, 38° south, 41° north, 44° coastal. Extremes 23°; 64°. Precipitation above normal north, south, near coastal, averaged 2.54 in. north, 1.27 in. south, 0.81 in. coastal. Heaviest 24 hour total 3.13 in. on 3rd, 4th. Heaviest 24 hour snowfall 1 in. on 4th, 5th.

Corn, soybean harvest completed. Farmers busy deer hunting; cutting, digging, selling Christmas trees; pruning fruit, caring for livestock.

NEW MEXICO: Temperatures mostly below normal. A few isolated stations slightly above normal. Precipitation in Des Moines.

NEW YORK: Temperatures near normal to 5° above normal. Coldest day 5th. Temperatures that day failed to get above freezing in nearly all areas. Extremes 10°; 60°. Precipitation was above normal. Most areas received between 1.00 to 2.00 in. Much of this fell as snow, sleet, freezing rain, rain on 3rd to 4th. Snow belt region also received flurries on 5th.

Corn for grain harvest continued where possible. Wet fields delayed progress in many areas. Orchard clean up, maintenance continued active. Many farmers spent time during the week hunting. Mild weather made outside activities easier.

NORTH CAROLINA: Temperatures 1 to 2° above normal in the Mountains 6° above in the Piedmont. Extremes 12°; 75°. Precipitation 0.32 to 3.07 in.

Days suitable for fieldwork 4.6 . Soil moisture 13% short, 80% adequate, 7% surplus. Pasture 9% poor, 37% fair, 53% good, 1% excellent. Livestock feed from pasture 55%. Harvested: Soybeans 90%. Wheat emerged 78%. Planted: wheat 93%. Crop condition: Wheat 20% fair, 77% good, 3% excellent; oats 23% fair, 75% good, 2% excellent; barley 25% fair, 74% good, 1% excellent; rye 23% fair, 75% good, 2% excellent. Major activities: Harvesting soybeans; planting small grains; tending livestock. Other activities included: harvesting cotton, sorghum; cutting wood; cutting, tagging Christmas trees; fumigating tobacco plant beds; land preparation; equipment repair; general farm maintenance.

NORTH DAKOTA: Temperatures 4 to 9° above normal. Precipitation 0.06 in. northeast to 0.14 in. central.

Soil moisture is short to very short. Most snow has melted statewide. Pastures remain open in most areas. Hay supplies are adequate. Sales of livestock normal. Grain sales below normal.

OHIO: High temperatures low to mid 40s; 2 to 4° above normal. Lows mid to upper 20s; 1 to 5° above normal. Precipitation mostly 0.40 to 1.50 in.; up to 1.00 in. above normal in north. Soil temperatures at the 4.00 in. depth under bare soil averaged in the upper 30s.

Stormy weather early in the period brought cold, wet conditions to the Buckeye State. Outside work was limited for the first couple of days because of the poor conditions. Livestock has not been stressed by extreme weather conditions.

OKLAHOMA: Temperatures 4° below normal south central to 1° above normal Panhandle. No precipitation.

Warm, open weather aided harvest cleanup, growth of wheat, other pastures. Dry weather caused stress, particularly western areas. Prices of feeder steers, steer calves steady to $2 per cwt. lower than preceding week.

OREGON: Temperatures near normal coast; western valleys; except Rouge Valley 4° below normal. Temperatures quite variable east, average near normal; Redmond 4° above normal. Precipitation 0.50 to 1.75 in. along coast, up to 2.75 in. Coast Range. North Cascades 0.70 to 1.50 in. Western valleys 0.40 in., except Medford received 0.10 in. Precipitation 0.10 in. or less east, except extreme east received no rainfall.

Soil moisture adequate to surplus west, short to adequate east. Deep soil moisture mostly short Columbia Basin, winter wheat looks mostly very good. Alfalfa sprayed for fall weed control Hermiston area. Some weed spraying west also. Pruning underway in western fruit, nut orchards. Trellis repairs in caneberries. Peach leaf curl sprays applied. Livestock condition mostly good. Range, pasture good west, fair east. Northeastern mountains had frozen ground. Sheep near lambing Douglas Co. Winter feeding in full swing east.

PENNSYLVANIA: A wet week with normal temperatures across the Commonwealth. Temperature 35° at normal. Extremes 10°; 62°. Precipitation 1.56 in, 0.83 in. above normal.

Corn 92% harvested, 92% 1989, 96% avg. Soybean harvest 98% complete, 93% 1989, 96% avg. Activities: Harvesting corn, soybeans; spreading fertilizer; maintaining machinery, caring for livestock.

PUERTO RICO: Rainfall 1.32 in. was 0.16 in. above normal. Highest weekly total 4.48 in. at Pico Del Este Luquillo, 3.61 at Trujillo Alto, 3.21 in. at Canovanas. Highest 24 hour total 3.00 in. at Pico Del Este Luquillo. Divisional temperatures 76 to 78° on the Coasts, 70 to 73° in the Interior with mean station temperature 63° at Pico Del Este Luquillo to 80° at Roosevelt Roads N.S. Extremes 55°; 90°.

SOUTH CAROLINA: Temperatures 4° below normal northwest to 3° below normal near the coast. Light to moderate rainfall 0.75 in. along the coast to 1.30 in. mountains.

SOUTH DAKOTA: Temperatures 5 to 10° above normal, statewide. Extremes -10°; 65°. No precipitation west; light to heavy snow east; up to 12.0 in. extreme southeast. Presently no measurable snow cover statewide due to unseasonably warm temperatures.

Some reports of winter wheat jointing in west.

TENNESSEE: Cold front moved across State early week with rain. High pressure dominated remainder week. Temperatures below normal statewide. East slightly below normal, departure -2°. Plateau largest departure, -6°. Precipitation below normal most areas, except Plateau, 0.50 in. above normal.

Good week for outdoor work. Tending livestock, general farm chores main activities.

TEXAS: Chilly temperatures prevailed, cold fronts early, late week brought Canadian air. Cold surge following early week front brought first fall freezes much of south, Upper Coast. Late week front brought freezing temperatures Coastal Bend, Parts far south. Precipitation limited during week. Temperatures below normal, except northern Rolling Plains. Rainfall below normal statewide.

Crops: Grain sorghum harvest virtually complete all areas. Only few fields remained Low Plains. Grain sorghum 100% harvested, 98% 1989, 98% avg. Cotton harvest winding down Plains, open conditions continued. Windy conditions problem some harvesters, yields, grades continued good. Harvest full swing Trans Pecos. Dry, windy weather allowed some producers harvest late into night. Average to good yields. Cotton 100% open bolls, 100% 1989, 98% avg.; harvested 85%, 94% 1989, 77% avg. Small Grains continued progress, dry, windy weather strained moisture levels many fields. Producers many area like soaking rain. Some green bug damage Blacklands, control spraying. Producers Trans Pecos reported Russian wheat aphid. Wheat 100% planted, 99% 1989, 99% avg.; 96% emerged, 93% 1989, 95% avg. Soybeans harvest nearing completion, open conditions allowed harvest progress well. Yields varied poor to average. Peanut harvest continued with few delays. Yields, grades remained high Plains, lower than earlier expectations Blacklands, east. Producers central better yields later fields, final stage harvest neared. Other field crops: Peanuts 89% harvested, 90% 1989, 91% avg. Pecans 59% harvested, 72% 1989, 74% avg. Soybeans 90% harvested, 89% 1989, 91% avg. Sugarbeets 92% harvested, 97% 1989, 89% avg. Sunflowers 84% harvested, 89% 1989, 93% avg. Oats planted 88%, 94% 1989, 93% avg.

Commercial Vegetables: Rio Grande Valley, pepper, lettuce harvest continued. Onions good condition. Spring land preparation continued. Whitefly major problem, causing lower yields. San Antonio Winter Garden, vegetable good progress, open conditions continued. Bean, broccoli, cauliflower, tomato, squash harvest continued. Pecan harvest beginning wind down Blacklands, producers reported light crop, poor quality nuts. Short, light crop expected east, central. Elsewhere, yields remained high, fair to good quality nuts.

Range and Livestock: Cold, dusty weather hamper livestock northern areas, for most part, livestock continued good shape as winter weather approached. Winter pastures continued provide good grazing, last week's frosts took toll summer forages. Supplemental feeding continued increase. Some stockers moved to feedlots. Range, pasture 3% very poor, 7% poor, 43% fair, 39% good, 8% excellent.

UTAH: Precipitation less than 0.01 throughout State. Temperature 1° below normal in northern half, 3° below normal in southern half; average 3° below normal throughout the State.

Moisture level is low in most of the State, concerns over dry weather continue. Range conditions reported mostly fair to poor. Maintenance of equipment, preparation for coming year continues.

VIRGINIA: Temperatures about 2° above normal. Precipitation was near normal.

Days suitable for fieldwork 4.1. Topsoil 13% short, 79% adequate, 8% surplus. Soybeans harvested 94%, 93% 1989, 77% avg. Winter grains, grazing crops condition 7% poor, 55% fair, 32% good, 6% excellent. Pasture 2% very poor, 11% poor, 44% fair, 34% good, 9% excellent. Forage from pastures, winter grazing crops dairy cattle 16%, beef cattle 59%, sheep 61%. Small grain germination and growth improved with rains. Producers plowed, pruned fruit trees, prepared tobacco for market, spread lime.

WASHINGTON: Temperatures 1° below normal to 4° above normal east, 2° below normal to 2° above normal west. Precipitation none to 0.61 in. east, 0.84 to 2.51 in. west.

Days suitable for fieldwork 1.68. Soil moisture 45% short, 54% adequate, 1% surplus. Range, pasture 1% very poor, 34% poor, 30% fair, 35% good. Hay, other roughage 4% short, 95% adequate, 1% surplus. Winter wheat 5% poor, 25% fair, 70% good. Barley 45% fair, 55% good. Rains, flooding continued in western areas, with many areas beginning to clean up the aftermath. Cropland damage estimates continued to come in. Pruning activities continued in eastern areas, cattle continued to be moved to winter pastures, while calves were marketed. Some areas are still able to use fall pastures, many operations were on winter feeding programs. Farmers are also on winter schedules attending meetings, repairing equipment.

WEST VIRGINIA: Temperature 39°, 2° below to 2° above normal. Extremes 13°; 64°. Precipitation 0.56 in.

Days suitable for fieldwork 4.6. Soil moisture 13% short, 87% adequate. Pasture 16% poor, 21% fair, 63% good. Cattle, sheep good. Corn 2% fair, 98% good; 93% harvested. Farm activities: Corn, soybean harvesting, livestock care, farm maintenance.

WISCONSIN: Temperature 27°. Extremes -7° ; 54°. Major snowstorm on 3rd. Heaviest amounts southwest to east central. Amounts ranged from 6.00 to 22.0 in. Blowing, drifting also a problem. Higher temperatures later in week started to melt accumulations.

WYOMING: Temperatures mostly below normal. Scattered light precipitation. Below normal throughout State.

Corn harvest continues. Winter wheat fair to good. Additional moisture needed for good development. Livestock mostly good condition. Culling, marketing continues.

International Weather and Crop Summary

HIGHLIGHTS

December 2-8, 1990

WESTERN USSR ... Unseasonably warm, dry weather covers dormant winter grains in the north. A late-week storm produces significant precipitation over southernmost crop areas.

NORTHWESTERN AFRICA ... Winter grain planting is well underway in Morocco, Algeria, and Tunisia. Moisture is adequate to abundant for planting in most areas.

EUROPE ... Storms bring beneficial snow and rain to the Balkans and to Britain. Abnormally cold temperatures cover most crop areas.

EASTERN ASIA ... Moderate to heavy rain continues in sections of northeastern Japan. Mostly dry and unseasonably warm weather continues over much of China.

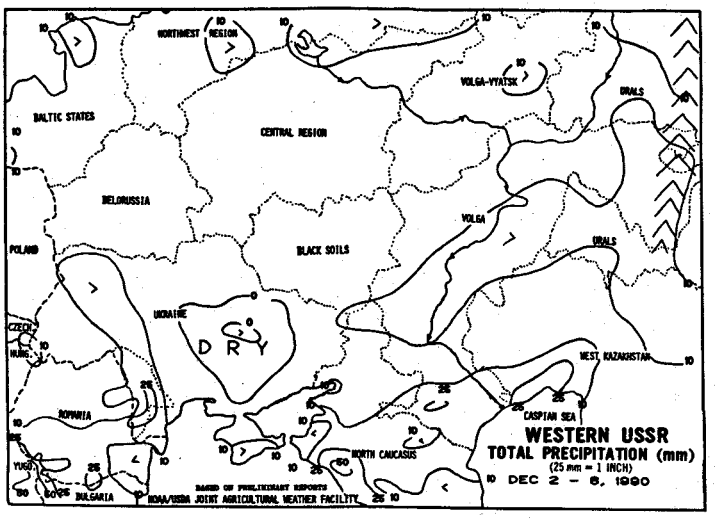
SOUTH ASIA ... Seasonable weather favors winter wheat planting and summer crop harvests.

SOUTHEAST ASIA ... Showers increase irrigation reserves over the Philippines and Indonesia.

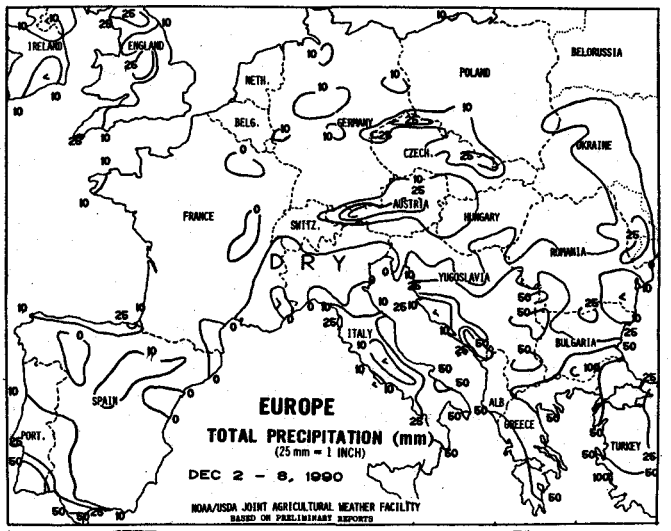
SOUTH AFRICA ... Much-needed rain increases moisture for corn planting in primary crop regions.

SOUTH AMERICA ... In Argentina, generally favorable conditions prevail for wheat harvesting and summer crop establishment. In south-central Brazil, showers slow planting in the south.

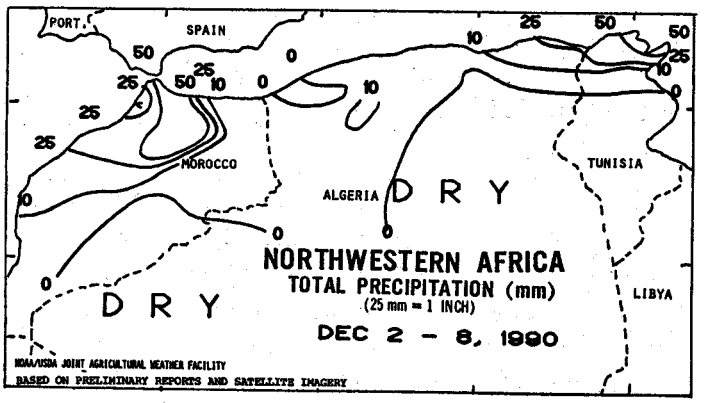
AUSTRALIA ... Moderate to heavy rain delays winter grain harvest in the south. Scattered showers provide relief from unseasonable heat in the east.



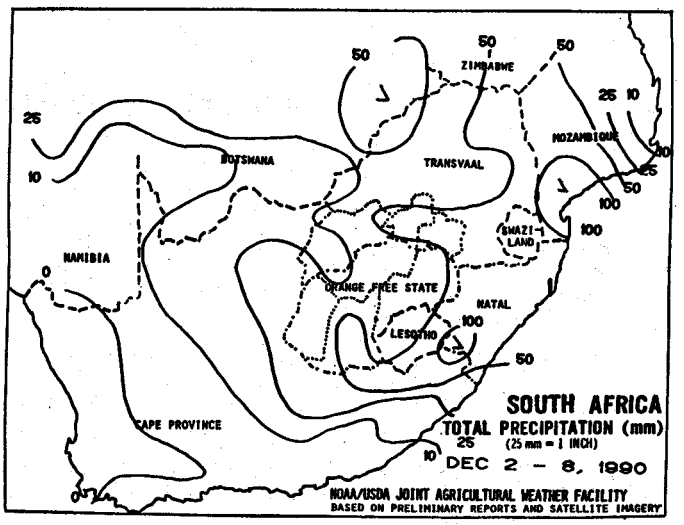
WESTERN USSR ... Unseasonable warm weather continued over the northern two-thirds of the region, accompanied by light precipitation (1-10mm). Further south, a storm system moved eastward from the Mediterranean Sea through the Black Sea late in the week, producing light to moderate precipitation (10-53mm) over the western Ukraine, Moldavia, the Crimea, and the western North Caucasus. The precipitation began as rain before changing over to snow. Weekly average temperatures across the south were near-normal, prompting winter grains to begin entering dormancy about 3 weeks later than usual.



EUROPE ... An area of low pressure brought widespread moderate to heavy snow and rain (15-50mm) to the Balkans and southern Italy for the second consecutive week. The moisture continued to replenish depleted soil moisture levels and provided protective snow cover for winter grains from central and northern Yugoslavia eastward to eastern Romania. A similar storm brought moderate to heavy rain and snow (10-40mm) to central and northern Great Britain late in the week. Elsewhere, scattered light rain and snow (mostly less than 10mm) fell over most crop areas. Below normal temperatures (1-4 degrees C below normal) covered nearly all of Europe, halting growth of still vegetative winter crops in the south.

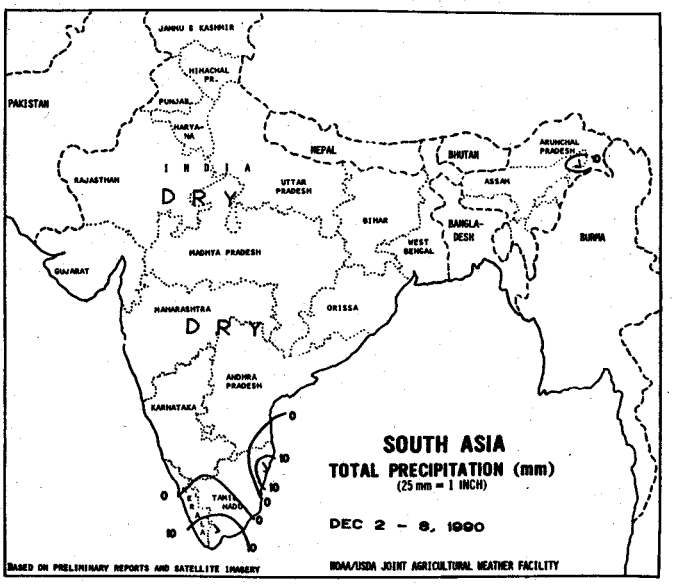


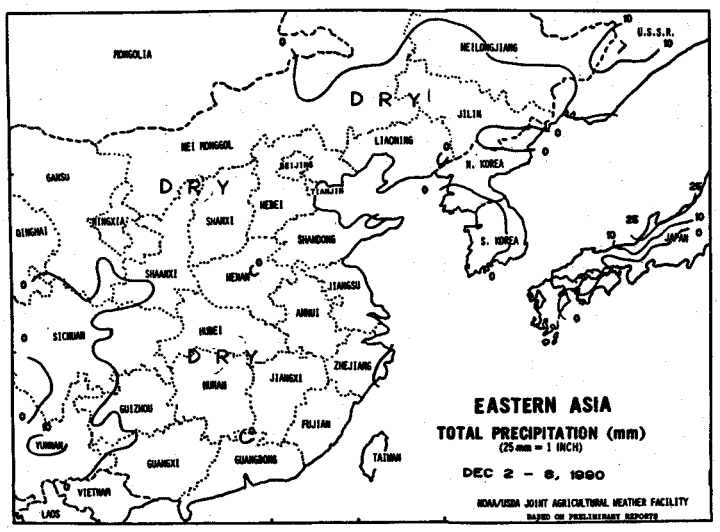
NORTHWESTERN AFRICA ... Winter grain planting was well underway in Morocco, Algeria, and Tunisia. Widespread precipitation (19-55mm) over northern winter grain areas in Morocco, eastern Algeria and Tunisia continued to provide abundant moisture for winter grain planting and early plant establishment. Generally dry weather (precipitation less than 10mm) over winter grain areas in western Algeria and southern crop areas in eastern Algeria and Tunisia allowed fieldwork to progress without delay. Light showers (10-25mm) over southern Morocco boosted topsoil moisture for planting.



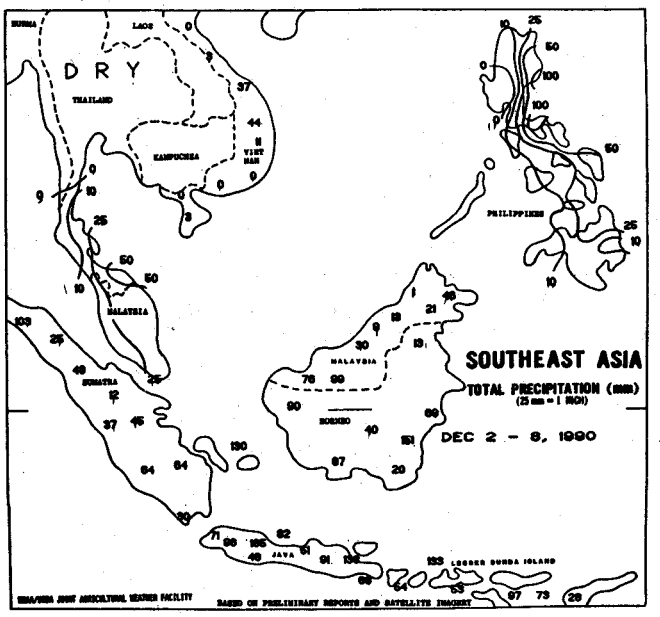
SOUTH AFRICA ... Much-needed rain covered most primary corn areas, boosting topsoil moisture levels for planting. Rainfall ranged from 25 to 81mm across the Maize Triangle, although dry pockets persisted in the northwest. More rain is needed across the western two-thirds of the Maize Triangle to recharge subsoil moisture, depleted by this season's below-normal rainfall. Elsewhere, moderate to heavy showers (43-121mm) covered crop regions of Natal and the eastern Cape Province but dry, warmer-than-normal weather dominated the southern Cape Province.

SOUTH ASIA ... Seasonable dry, warm weather across the region favored continued winter wheat planting and summer crop harvests. In southern India, light rain (1-20mm) was limited to isolated coastal areas.

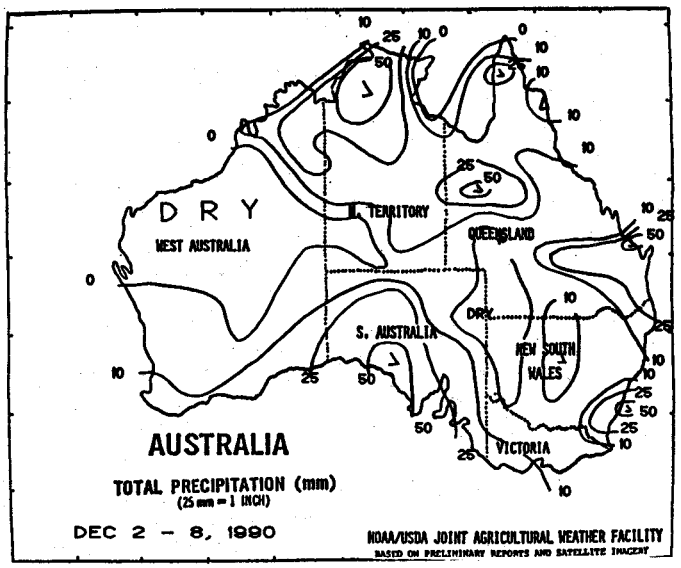




EASTERN ASIA ... Seasonably dry weather covered all but southwestern China, where scattered showers (less than 10mm) fell. Moderate to heavy rain (15-50mm) kept soils wet in northeastern Japan while southern Japan turned dry. Above normal temperatures continued over much of central and northern China, allowing late season growth of winter crops in all but northern sections of the North China Plain. Dormant or semidormant winter crops in northern growing areas still lack protective snow cover.



SOUTHEAST ASIA ... Moderate to heavy showers (25-143mm) continued over Philippine crop regions from northeastern Luzon to northern Mindanao, benefitting fall planted grains. Heaviest rain (100mm or more) was again concentrated over southern Luzon. Moderate rain (25-83mm) fell along the east coast of the Malay Peninsula but only light rain (less than 15mm) covered western Malaysia's primary palm oil regions. Seasonable showers (50-165mm) continued over the southern half of eastern Malaysia as well as Indonesia. Java received its heaviest rainfall of the season (50-165mm), improving irrigation reserves for rice planting.



AUSTRALIA ... Moderate to heavy rain (10-40mm) from Western Australia eastward to western Victoria caused delays in winter grain harvest but helped ease long-term dryness. Harvest delays were lengthened in western sections by below normal temperatures (1-4 degrees C below normal). Very heavy rain (70-90mm) in South Australia's Eyre Peninsula may have caused localized flooding. In the east, scattered showers (5-20mm) delayed winter grain harvest but provided relief from much above normal temperatures (mean weekly temperatures 4-7 degrees C above normal), which continued to stress nonirrigated summer crops.

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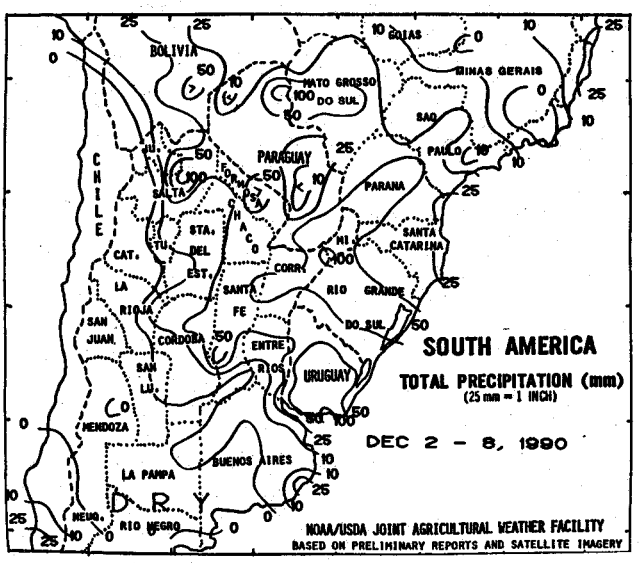
SOUTH AMERICA ... In Argentina, favorable wheat harvesting weather prevailed over Buenos Aires, southern Cordoba, La Pampa, and extreme southern Santa Fe. Weekly rainfall averaged less than 8mm in most areas, allowing the harvest pace to increase following earlier delays due to wetness. Heavier showers (25-73mm) slowed fieldwork over the northern two-thirds of Santa Fe, Chaco and Formosa. Moisture is adequate to abundant throughout Argentina's summer crop areas for corn emergence and soybean planting. In south-central Brazil, widespread showers (25-89mm) covered all but far northern soybean areas, favoring early growth but causing additional planting delays in Rio Grande do Sul. Dry weather returned to northern soybean areas of southern Goais and Minas Gerais, where moisture is limited for crop establishment. Soybean planting progress is reportedly behind average but similar to last year's pace.



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