

WEEKLY WEATHER AND CROP BULLETIN

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

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

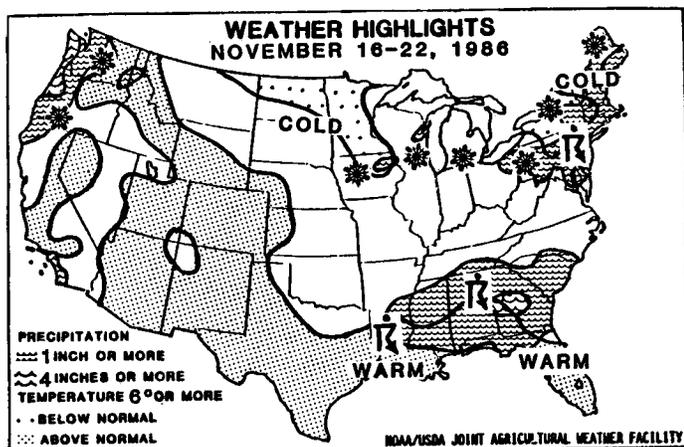
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National Weather Summary

November 16 to 22, 1986



HIGHLIGHTS: Heavy snow fell from northeastern Iowa and southern Minnesota eastward through southern Wisconsin. Heavy snow also fell in parts of the Northeast. Moderate to heavy rainshowers covered the area from the mid-Atlantic States to eastern New England. Thunderstorms produced moderate to heavy showers from northern Louisiana through central Georgia. Heavy rain fell along the Northwest Coast, and heavy snow covered the Cascade Mountains. Moderate rainshowers wet the southern coast of California and spread into the Southwest. Average temperatures were much colder than normal in the upper Mississippi Valley and the Northeast interior. The West and the South were warmer than normal.

SUNDAY...Rain was widespread along the northern Pacific coast with snow through the Cascades. Lighter rain or snow spread across the northern Rockies into Montana. Heavy thunderstorms reached from central Mississippi through central Georgia, and lighter showers fell in most of the South and through the Tennessee and upper Ohio Valley. Relatively mild temperatures prevailed over most of the Nation.

MONDAY...Snow reached from the northern Rockies to the upper Mississippi Valley as colder air began moving into the northern Great Plains. Rainshowers spread across southern California. A few thunderstorms dotted the gulf coast, and showers covered the Southeast. Drizzle prevailed from the lower Great Lakes to New England.

TUESDAY...Storm systems off the northern and southern Pacific coasts spread showers throughout the area west of the Continental Divide. Moderate to heavy snow fell at higher elevations. Snow was

widespread from the upper Mississippi Valley through the Great Lakes and into parts of the lower Lake States. Showers and occasional thunderstorms reached from Illinois to the mid-Atlantic States while lighter showers covered the Northeast. Snow fell in the northern Appalachians. Bitter cold weather settled over the northern Plains.

WEDNESDAY...Heavy snow fell from Iowa into Wisconsin and lighter amounts through the northern Plains and Great Lakes. Some freezing rain fell in the southern Great Lakes region. Light rainshowers reached from northern Texas through the central Plains and Ohio Valley. Late in the day heavy showers and thunderstorms reached from Mississippi to South Carolina as light showers covered the South and the Tennessee Valley.

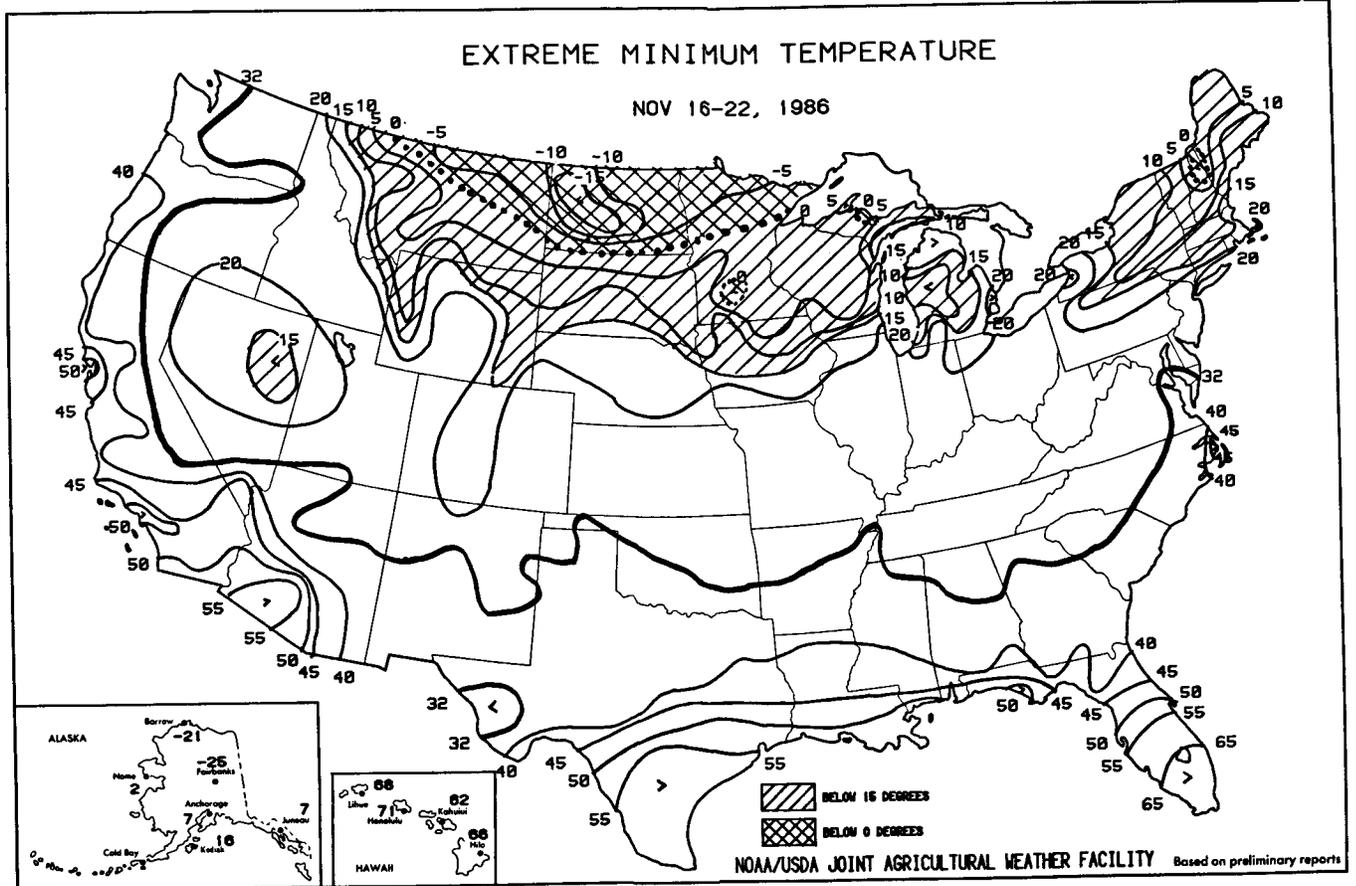
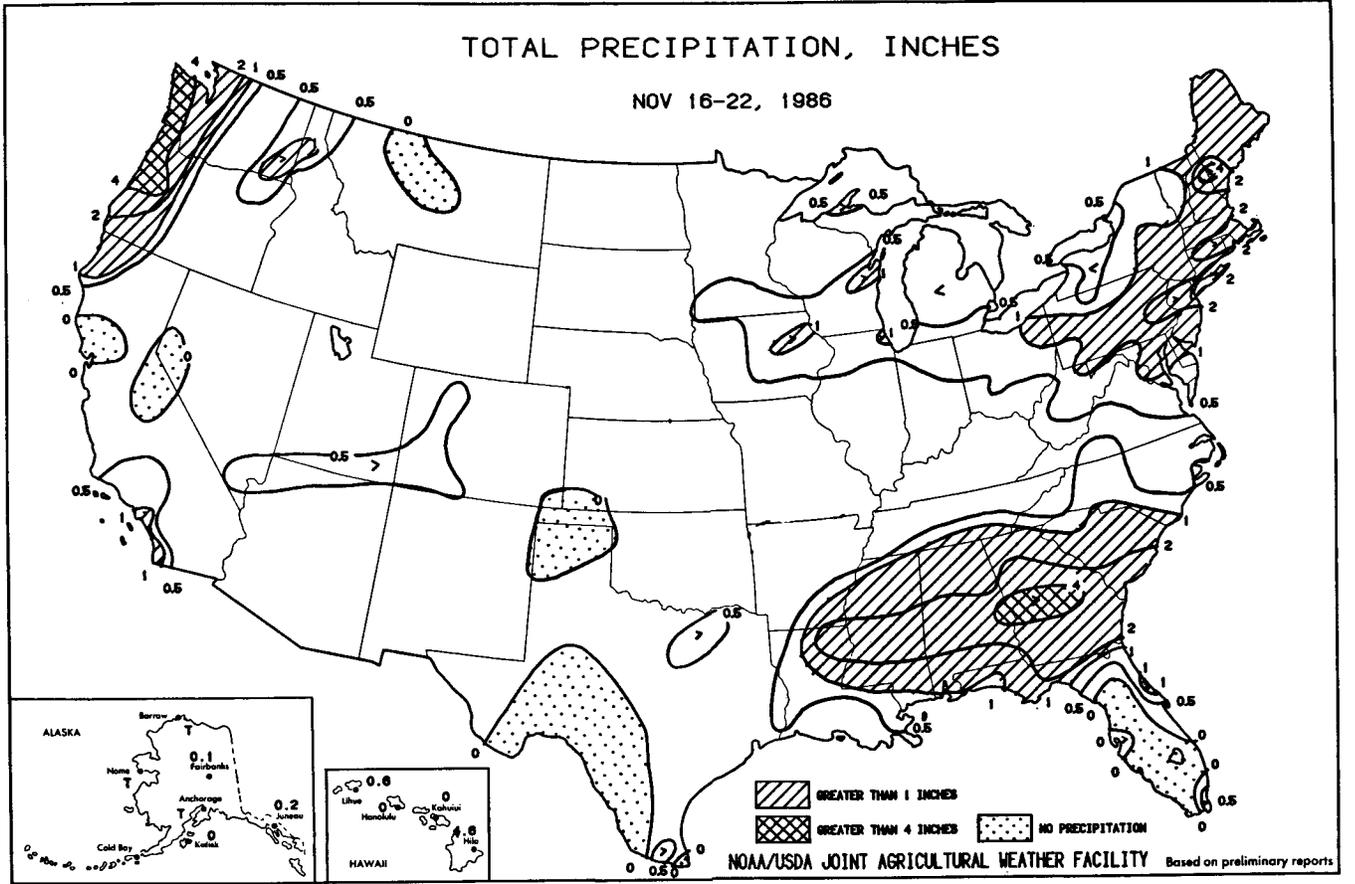
THURSDAY...Thunderstorms and heavy rainshowers reached from the Southeast through the Atlantic Coast States to the New England coast. Freezing rain and heavy snow spread from the Great Lakes to western Pennsylvania, New York, and New England. Another Pacific storm brought moderate rain to the northwest coast and rain and snow showers inland. Cold weather moved into the Northeast, but record-warm weather was over Florida.

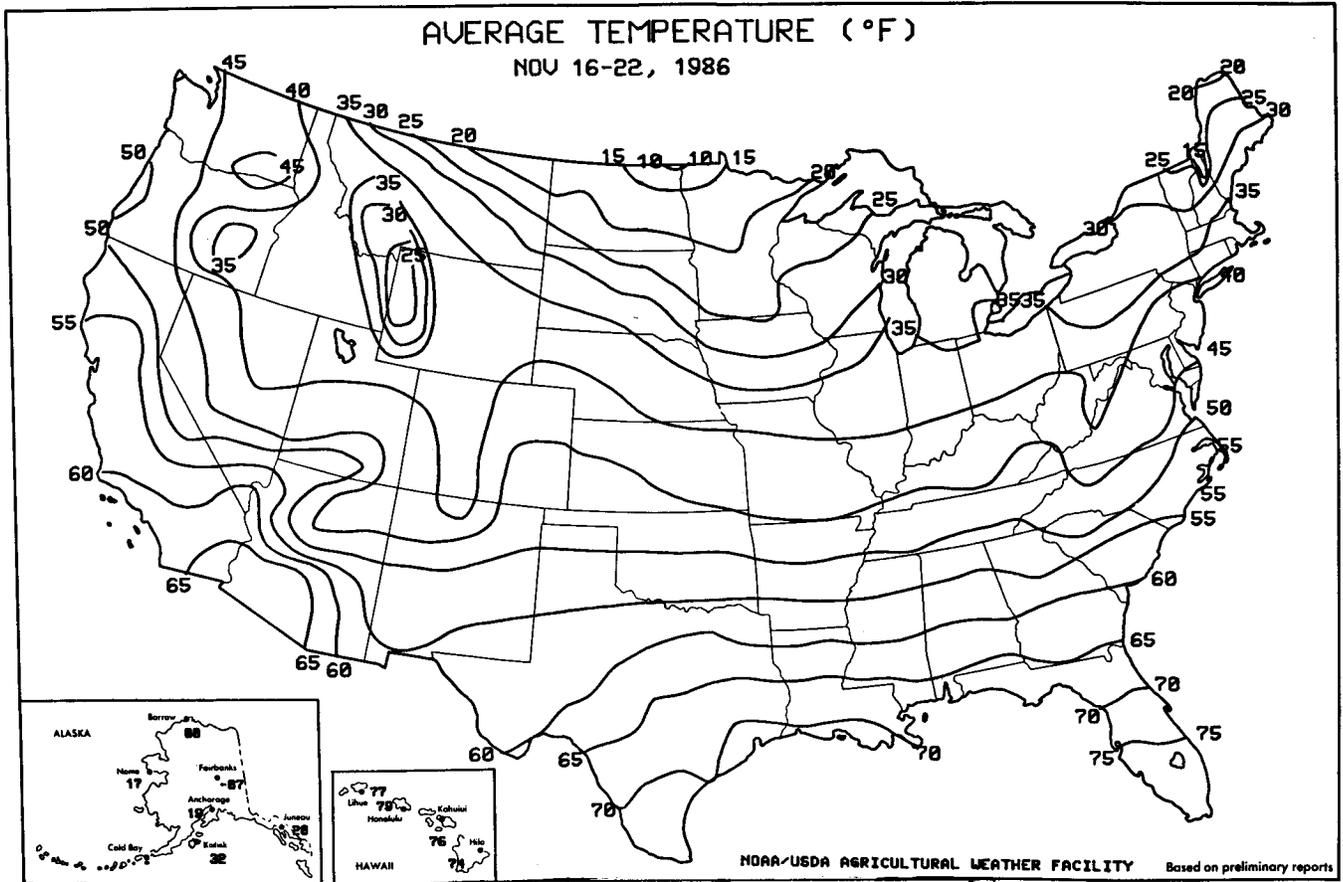
FRIDAY...Heavy snow fell in upper New England and snow showers covered the western areas. Moderate rain continued along the northwest coast while mostly rainshowers spread across the Plateau and northern Rockies as warmer weather covered the Northwest. Light showers developed from eastern Texas through Louisiana as the day ended.

SATURDAY...Heavy showers and thunderstorms developed from Arkansas and Louisiana to central Alabama. Lighter showers spread throughout the Mississippi Valley. Rain continued in western Washington with snow in the Cascade Mountains. Light rain or snow showers covered the Northwest and the southern Rockies.

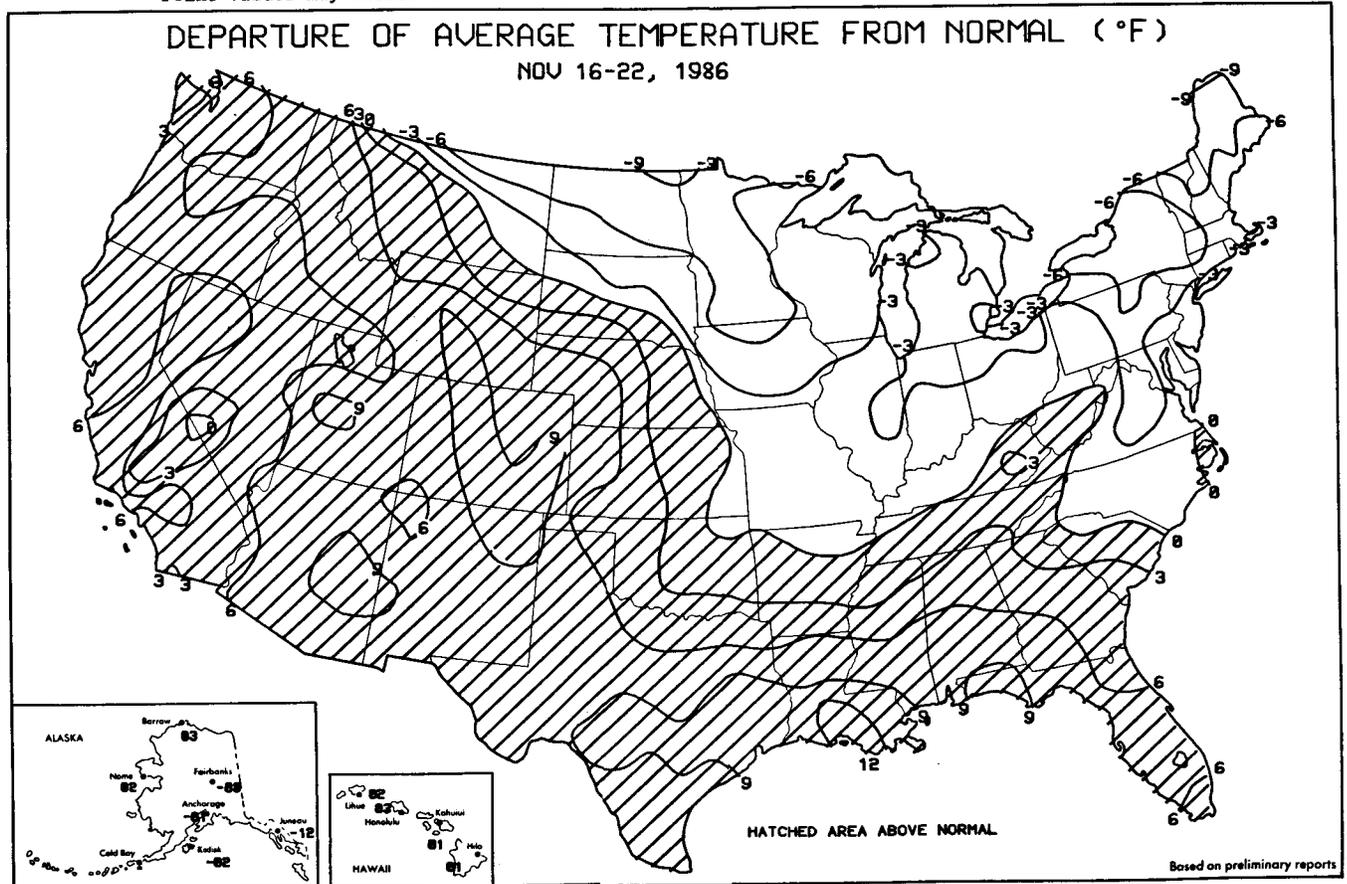
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Point values may differ on these computerized maps from the reported values in the tables.



Heating Degree Day Summary Table

CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
ASSESSMENT AND INFORMATION SERVICES CENTER-NESDIS-NOAA

LAST DATE OF DATA COLLECTION PERIOD IS 11-22-1986
ACCUMULATIONS ARE FROM JULY 1
** = NORMAL LESS THAN 100 OR RATIO INCALCULABLE

Table with columns: STATE CITY, CALL WEEK TOTAL, WEEK DEV FROM NORM, WEEK DEV FROM L YR, CUM TOTAL, CUM FROM NORM, CUM FROM FROM L YR, CUM DEV FROM FROM L YR, CUM DEV FROM FROM L YR, CUM DEV FROM FROM L YR, STATE CITY, CALL WEEK TOTAL, WEEK DEV FROM NORM, WEEK DEV FROM L YR, CUM TOTAL, CUM FROM NORM, CUM FROM FROM L YR, CUM DEV FROM FROM L YR, CUM DEV FROM FROM L YR, CUM DEV FROM FROM L YR. Lists cities like Birmingham, Mobile, Montgomery, etc., with their respective heating degree day data.

National Weather Data for Selected Cities

Weather Data for the Week Ending November 22, 1986

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	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	66	45	77	31	55	4	.8	-.1	.3	12.2	128	33.8	70	98	56	0	1	5	0
MOBILE	74	56	80	45	65	8	1.5	-.6	.9	12.0	103	50.0	86	98	70	0	0	4	1
MONTGOMERY	70	51	81	34	61	7	3.5	2.8	1.5	12.8	143	43.5	100	97	57	0	0	5	3
AK ANCHORAGE	24	15	32	7	19	-1	T	-.2	T	7.9	158	17.3	125	80	57	0	0	7	0
BARROW	6	-6	17	-21	0	-3	T	0	T	2.0	149	4.0	89	89	78	0	0	7	0
FAIRBANKS	1	-16	28	-25	-8	-10	.1	0	T	2.8	123	9.4	100	89	75	0	0	7	0
JUNEAU	25	15	37	7	20	-11	.2	-.9	T	26.8	149	61.1	129	85	54	0	0	2	0
KODIAK	37	27	43	16	32	-2	T	-.4	T	17.9	79	65.2	98	78	52	0	5	0	0
NOME	23	11	37	2	17	2	T	-.2	T	8.9	207	16.4	118	74	49	0	7	0	0
AZ PHOENIX	77	59	81	55	68	9	T	-.1	T	.9	55	6.2	102	74	33	0	0	1	0
PRESCOTT	62	38	66	33	50	8	.1	-.2	.1	3.2	88	11.3	67	75	35	0	0	1	0
TUCSON	76	52	81	45	64	6	.2	0	.2	1.2	46	10.5	105	82	34	0	0	1	0
YUMA	78	59	82	55	68	6	.1	-.1	0	.5	70	1.6	73	73	36	0	0	2	0
AR FORT SMITH	62	38	70	29	50	1	.1	-.8	.1	8.0	89	36.1	100	96	49	0	1	0	0
LITTLE ROCK	59	44	73	37	51	1	.2	-.8	.2	11.7	124	39.2	97	91	59	0	0	2	0
CA BAKERSFIELD	64	49	71	40	57	2	.6	-.4	.6	6	68	4.9	100	94	62	0	0	1	0
EUREKA	61	47	65	42	54	3	1.2	-.3	.9	5.9	75	33.3	109	95	75	0	5	0	1
FRESNO	68	49	71	41	58	6	.5	-.3	.4	27	10.1	119	88	48	0	0	2	0	
LOS ANGELES	72	60	80	54	66	5	1.1	-.7	.9	2.7	179	15.6	156	85	50	0	0	2	0
REDDING	65	39	71	34	52	5	.3	***	.3	3.3	***	***	***	96	45	0	0	0	1
SACRAMENTO	70	43	73	39	57	5	T	-.6	T	.7	26	17.0	126	94	41	0	0	0	0
SAN DIEGO	69	59	76	54	64	3	1.2	-.9	1.0	3.6	275	11.3	149	92	63	0	0	2	0
SAN FRANCISCO	65	51	69	47	58	4	T	-.6	T	.5	18	19.1	124	96	60	0	0	2	0
CO DENVER	59	30	70	26	44	7	T	-.2	T	2.8	97	11.2	77	73	27	0	5	0	0
GRAND JUNCTION	56	34	63	29	45	7	.2	-.1	.1	3.5	173	8.0	110	91	44	0	3	4	0
PUEBLO	64	29	74	22	47	8	.3	-.1	.3	1.7	87	10.2	97	82	23	0	4	1	0
CT BRIDGEPORT	45	35	53	21	40	-5	1.4	-.5	.7	6.0	64	27.4	75	83	53	0	3	3	2
HARTFORD	44	24	53	9	34	-6	2.2	1.2	.8	7.5	73	37.3	95	92	51	0	7	4	3
DC WASHINGTON	52	35	59	31	44	-4	1.3	-.6	.9	6.9	85	26.7	76	87	51	0	2	2	1
FL APALACHICOLA	78	61	82	48	69	10	1.0	-.3	.4	19.6	142	52.9	105	96	73	0	0	3	0
DAYTONA BEACH	80	60	86	47	70	6	1.0	-.4	1.0	10.3	78	42.9	94	99	62	0	0	1	0
JACKSONVILLE	76	55	82	39	66	6	.8	-.3	.4	4.7	39	37.5	76	99	64	0	0	4	0
KEY WEST	85	74	87	70	80	5	0	-.7	0	7.5	54	29.1	79	94	68	0	0	0	0
MIAMI	86	70	89	68	78	6	.4	-.1	.3	12.3	71	63.1	114	97	60	0	0	2	0
ORLANDO	84	63	88	53	74	7	.1	-.3	.1	11.2	114	45.6	100	97	51	0	0	1	0
TALLAHASSEE	76	57	82	37	66	9	3.9	3.1	3.2	10.2	86	59.3	101	98	62	0	0	4	1
TAMPA	83	66	85	54	75	9	.1	-.3	.1	10.2	103	38.1	87	96	56	0	0	0	0
WEST PALM BEACH	85	70	87	68	78	7	0	-.7	0	15.9	80	55.9	98	95	57	0	0	0	0
GA ATLANTA	64	47	77	34	55	4	2.2	1.4	2.1	12.1	150	34.6	80	92	57	0	0	5	1
AUGUSTA	67	47	75	33	57	4	1.9	1.4	1.6	8.0	114	38.0	97	96	59	0	1	2	2
MACON	69	49	82	31	59	5	3.6	3.0	2.5	11.5	168	31.8	80	97	57	0	0	3	3
SAVANNAH	70	53	81	37	61	5	3.2	2.7	1.3	5.7	65	39.6	85	96	63	0	0	4	3
HI HILO	81	68	82	66	75	1	4.6	-.9	1.9	59.5	217	162.1	146	96	71	0	0	0	3
HONOLULU	86	73	87	71	79	3	T	-.8	T	7.2	148	12.4	65	83	54	0	0	0	0
KAHULUI	85	68	87	62	77	2	T	-.6	T	1.8	64	12.5	77	85	52	0	0	0	0
LIHUE	81	73	82	68	77	2	.6	-.7	.3	10.0	92	24.6	66	87	68	0	0	2	0
ID BOISE	53	35	61	28	44	6	.6	-.3	.4	4.2	187	14.2	142	83	47	0	2	4	0
LEWISTON	52	39	58	34	46	7	T	-.3	T	1.9	74	9.5	86	78	47	0	0	0	0
POCATELLO	48	31	56	23	40	6	.3	-.1	.2	2.6	117	12.2	126	88	47	0	3	4	1
IL CHICAGO	43	30	52	27	37	-2	.8	-.3	.6	11.9	166	30.2	98	91	59	0	6	4	0
MOLINE	43	25	56	21	34	-3	.9	-.5	.4	11.0	138	38.8	111	94	63	0	6	5	0
PEORIA	45	28	54	25	37	-1	.4	0	.2	11.6	153	34.1	106	95	62	0	7	4	0
QUINCY	47	29	56	22	38	-2	.3	-.2	.2	16.2	180	39.0	110	92	59	0	7	2	0
ROCKFORD	39	25	48	17	32	-4	.9	-.4	.6	13.3	159	33.5	98	94	64	0	7	5	1
SPRINGFIELD	47	30	54	27	39	-2	.3	-.1	.1	13.2	188	33.3	107	94	62	0	5	3	0
IN EVANSVILLE	50	34	54	23	42	-2	.2	-.7	.1	8.5	112	34.6	93	97	59	0	2	2	0
FORT WAYNE	41	30	51	17	36	-3	.5	-.1	.4	8.7	124	40.0	128	96	73	0	4	4	0
INDIANAPOLIS	44	33	49	26	38	-2	.2	-.6	.2	14.3	192	43.1	122	92	67	0	4	0	0
SOUTH BEND	42	28	50	14	35	-4	.7	-.1	.4	9.1	107	33.4	97	93	67	0	6	2	0
IA DES MOINES	42	23	57	15	32	-4	.7	-.4	.5	11.2	175	41.5	141	97	60	0	6	5	0
ST LOUIS	40	21	51	6	31	-4	.4	-.2	.3	8.8	177	32.1	132	95	68	0	7	3	0
SILOUX CITY	37	19	43	7	28	-6	1.0	-.6	.4	9.3	132	35.3	112	98	72	0	7	4	0
WATERLOO	53	29	67	23	41	2	T	-.2	T	10.6	188	38.8	148	88	50	0	5	1	0
KS CONCORDIA	61	32	67	27	46	5	T	-.1	T	2.8	75	19.3	97	88	36	0	4	1	0
DODGE CITY	58	29	73	26	43	7	0	-.1	0	3.2	116	15.1	96	81	31	0	6	0	0
GOODLAND	54	30	65	25	42	1	.1	-.3	.1	10.3	135	36.1	114	94	51	0	6	1	0
TOPEKA	57	31	62	25	44	2	T	-.3	T	8.0	113	30.0	110	92	41	0	5	0	0
WICHITA	53	36	62	26	44	-1	.2	-.8	.2	13.1	149	32.1	74	94	68	0	2	1	0
KY BOWLING GREEN	50	37	58	30	43	-1	.4	-.4	.4	9.7	123	29.5	72	93	67	0	1	1	0
LEXINGTON	50	37	58	30	43	-1	.4	-.4	.4	9.7	123	29.5	72	93	67	0	1	1	0
LOUISVILLE	50	37	58	28	43	-1	.1	-.7	.1	8.6	101	33.0	84	89	65	0	1	3	0
LA ALEXANDRIA	74	57	83	44	65	9	.6	-.6	.3	9.8	97	36.1	74	90	56	0	0	2	0
BATON ROUGE	78	60	84	48	69	11	.1	-.9	.1	9.7	99	44.1	89	94	63	0	0	3	0
LAKE CHARLES	79	61	84	50	70	11	.1	-.8	.1	13.9	123	43.2	92	99	68	0	0	3	0
NEW ORLEANS	78	62	85	53	70	11	.8	-.3	.4	8.2	72	38.8	73	97	69	0	0	2	0

Based on 1951-80 normals.

Weather Data for the Week Ending November 22, 1986

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	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	70	52	79	40	61	6	.3	-.6	.2	15.0	173	49.2	126	99	56	0	0	0	0
ME CARIBOU	27	14	41	2	21	2	2.2	1.4	2.0	7.7	86	31.5	97	93	69	0	0	0	0
PORTLAND	42	25	52	11	34	-.9	2.1	1.0	1.8	8.7	82	37.3	99	86	40	0	0	0	0
MD BALTIMORE	52	33	58	28	43	-.2	1.3	.6	1.0	7.4	84	27.1	72	91	51	0	0	0	0
SALISBURY	55	34	62	28	44	-.3	.7	0	.4	5.5	55	25.6	63	96	55	0	0	0	0
MA BOSTON	48	31	52	19	40	-.5	-.7	0	1.6	9.7	99	37.3	98	83	49	0	0	0	0
CHATHAM	48	34	54	29	41	-.3	2.3	1.2	1.4	12.6	119	45.8	113	91	60	0	0	0	0
MI ALPENA	35	26	42	17	31	-.3	.3	-.2	.3	10.5	160	29.6	113	92	63	0	0	0	0
DETROIT	42	28	56	19	35	-.3	.7	.1	.6	11.8	194	34.5	124	95	62	0	0	0	0
FLINT	39	27	50	13	33	-.4	-.4	-.1	.4	13.4	216	35.6	134	91	65	0	0	0	0
GRAND RAPIDS	38	26	46	9	32	-.5	-.2	-.5	.2	15.1	183	46.1	148	93	67	0	0	0	0
HOUGHTON LAKE	35	24	44	8	29	-.4	-.2	-.4	.1	11.6	171	32.8	129	94	68	0	0	0	0
LANSING	39	24	50	8	32	-.5	-.4	-.2	.3	11.5	181	35.5	133	92	64	0	0	0	0
MARQUETTE	31	13	35	-.3	22	-.6	-.3	-.4	.2	8.2	87	29.6	87	96	65	0	0	0	0
MUSKOGON	40	27	49	10	34	-.4	-.2	-.5	.2	16.2	206	33.5	119	89	62	0	0	0	0
SAULT STE. MARIE	32	19	37	4	26	-.6	.5	-.3	.3	10.3	112	34.8	116	91	71	0	0	0	0
MN ALEXANDRIA	30	10	38	6	20	-.7	-.1	-.1	.1	5.1	102	32.9	140	95	66	0	0	0	0
DULUTH	29	15	35	2	22	-.4	-.2	-.2	.2	8.9	132	35.9	128	90	59	0	0	0	0
INT'L FALLS	26	8	34	-.9	17	-.6	-.2	-.1	.1	4.2	72	17.9	77	91	61	0	0	0	0
MINNEAPOLIS	33	15	43	10	24	-.7	-.3	-.2	.2	9.2	173	36.2	144	98	69	0	0	0	0
ROCHESTER	34	15	41	3	24	-.6	-.6	-.3	.3	14.9	299	39.6	146	98	68	0	0	0	0
MS GREENWOOD	65	46	74	35	55	.3	1.1	.8	1.3	13.6	147	33.7	73	97	58	0	0	0	0
JACKSON	60	50	80	40	60	.6	3.0	1.9	1.0	13.8	152	41.9	91	99	60	0	0	0	0
MERIDIAN	69	50	80	37	60	.7	3.4	2.5	1.2	13.5	159	41.1	88	99	58	0	0	0	0
MO CAPE GIRARDEAU	52	36	67	29	44	-.1	-.2	-.7	.1	7.1	81	37.2	94	94	63	0	0	0	0
COLUMBIA	52	31	59	24	41	-.1	-.2	-.2	.1	14.6	171	36.2	108	92	50	0	0	0	0
KANSAS CITY	51	29	62	25	40	-.2	-.2	-.2	.1	14.4	169	37.6	113	93	52	0	0	0	0
SAINT LOUIS	50	32	59	23	41	-.2	-.2	-.4	.2	14.4	210	33.3	107	93	56	0	0	0	0
SPRINGFIELD	56	29	65	24	42	-.1	T	T	T	17.9	187	38.2	106	97	44	0	0	0	0
MT BILLINGS	45	28	52	10	36	.3	T	T	T	2.9	93	14.3	101	77	43	0	0	0	0
GLASGOW	32	9	43	-.5	20	-.7	-.2	-.1	.2	5.2	307	13.2	119	92	73	0	0	0	0
GREAT FALLS	47	26	59	13	36	.4	T	T	T	2.8	116	13.6	95	71	44	0	0	0	0
HAVRE	34	11	50	-.8	22	-.6	.1	0	.1	6.5	369	17.1	163	91	64	0	0	0	0
HELENA	46	25	58	8	36	.6	.1	0	.1	3.0	158	11.6	109	87	46	0	0	0	0
KALISPELL	41	27	48	9	34	.5	.2	-.1	.1	4.4	149	16.3	117	97	73	0	0	0	0
MILES CITY	40	19	46	4	30	.0	.1	0	0	4.0	164	15.2	116	92	61	0	0	0	0
MISSOULA	43	30	55	23	36	.6	.2	0	.2	4.6	185	15.6	132	93	58	0	0	0	0
NE GRAND ISLAND	49	25	62	17	37	.2	T	T	T	7.2	173	24.6	110	92	49	0	0	0	0
LINCOLN	48	26	63	20	37	.0	T	T	T	11.8	222	38.2	147	92	54	0	0	0	0
NORFOLK	44	26	59	19	35	.2	-.1	.2	.2	6.7	166	30.4	132	95	60	0	0	0	0
NORTH PLATTE	56	25	73	20	41	.1	T	T	T	2.8	92	16.7	88	90	32	0	0	0	0
OMAHA	42	26	59	20	34	-.2	-.2	-.1	.1	12.4	194	36.5	126	94	74	0	0	0	0
SCOTTSDUFF	55	28	70	24	41	.3	.3	.2	.3	3.9	172	21.2	151	85	35	0	0	0	0
VALENTINE	50	24	71	17	37	.7	.1	0	.1	5.2	200	20.6	123	81	45	0	0	0	0
NV ELY	53	24	63	14	38	.6	.1	-.1	0	2.8	159	8.4	104	94	42	0	0	0	0
LAS VEGAS	67	49	71	46	58	.8	.8	.6	.8	.9	96	2.1	55	76	35	0	0	0	0
RENO	63	28	69	20	46	.7	0	0	.3	33	8.8	144	78	27	0	0	0	0	0
WINNEMUCCA	59	27	68	18	43	.6	T	-.2	T	1.6	113	5.4	79	73	32	0	0	0	0
NH CONCORD	41	20	52	2	31	-.6	1.8	.9	1.1	7.6	85	35.1	109	93	48	0	0	0	0
NJ ATLANTIC CITY	55	32	60	23	44	-.1	1.8	.9	1.3	10.5	121	35.0	94	94	49	0	0	0	0
NM ALBUQUERQUE	60	37	64	34	49	.6	.3	-.2	.2	3.3	163	12.6	168	93	40	0	0	0	0
CLOVIS	64	39	72	31	51	.6	T	-.1	T	7.6	186	19.5	117	80	33	0	0	0	0
ROSWELL	69	40	76	32	55	.7	.1	0	.1	11.3	386	23.1	248	86	27	0	0	0	0
NY ALBANY	40	24	52	6	32	-.6	1.6	.9	.6	8.4	101	39.2	123	97	61	0	0	0	0
BINGHAMTON	37	26	43	10	32	-.5	1.5	.7	.9	9.9	116	40.4	122	89	67	0	0	0	0
BUFFALO	38	27	48	19	33	-.7	.5	-.4	.2	10.3	115	34.6	105	92	61	0	0	0	0
NEW YORK	51	36	57	26	44	-.2	2.0	1.1	.9	7.9	83	32.0	84	83	48	0	0	0	0
ROCHESTER	38	26	51	18	32	-.7	.4	-.2	.4	9.8	137	31.9	114	93	60	0	0	0	0
SYRACUSE	38	26	50	13	32	-.8	.9	-.1	.6	11.3	126	38.2	109	93	64	0	0	0	0
NC ASHEVILLE	57	36	69	24	47	.1	.4	-.4	.4	9.4	97	27.1	63	94	52	0	0	0	0
CHARLOTTE	55	42	61	31	49	-.1	1.0	-.3	1.0	7.3	88	23.2	59	95	64	0	0	0	0
GREENSBORO	53	39	57	27	46	-.2	.7	-.1	.7	7.5	86	25.8	67	97	60	0	0	0	0
HATTERAS	63	50	70	46	56	.1	.2	-.1	.2	5.1	36	40.8	82	95	65	0	0	0	0
NEW BERN	60	44	65	35	52	-.2	.6	-.2	.5	5.4	48	40.3	83	99	70	0	0	0	0
RALEIGH	53	40	58	28	47	-.2	-.4	-.4	.4	4.6	57	33.5	89	96	63	0	0	0	0
WILMINGTON	63	45	70	34	54	-.1	.5	-.3	.3	7.4	67	52.0	106	97	62	0	0	0	0
ND BISMARCK	30	9	41	-.16	20	-.7	-.2	-.1	.2	6.8	261	24.2	164	89	74	0	0	0	0
FARGO	26	10	37	-.4	18	-.8	T	-.2	T	5.2	136	23.2	123	87	70	0	0	0	0
GRAND FORKS	26	5	33	-.8	16	-.8	.1	-.1	.1	4.2	111	15.5	89	90	73	0	0	0	0
WILLISTON	29	6	42	-.17	18	-.8	.4	-.3	.4	5.1	207	21.7	166	91	74	0	0	0	0
OH AKRON-CANTON	41	31	47	24	36	-.4	1.3	-.7	.8	8.9	127	27.4	84	92	67	0	0	0	0
CINCINNATI	47	34	53	26	41	-.2	.3	-.5	.3	8.6	111	29.2	80	92	61	0	0	0	0
CLEVELAND	42	33	51	29	38	-.3	1.5	-.8	.8	11.3	153	36.9	116	91	62	0	0	0	0
COLUMBUS	45	33	52	28	39	-.2	.5	-.2	.3	9.2	140	30.9	92	95	55	0	0	0	0

Based on 1951-80 normals.

Weather Data for the Week Ending November 22, 1986

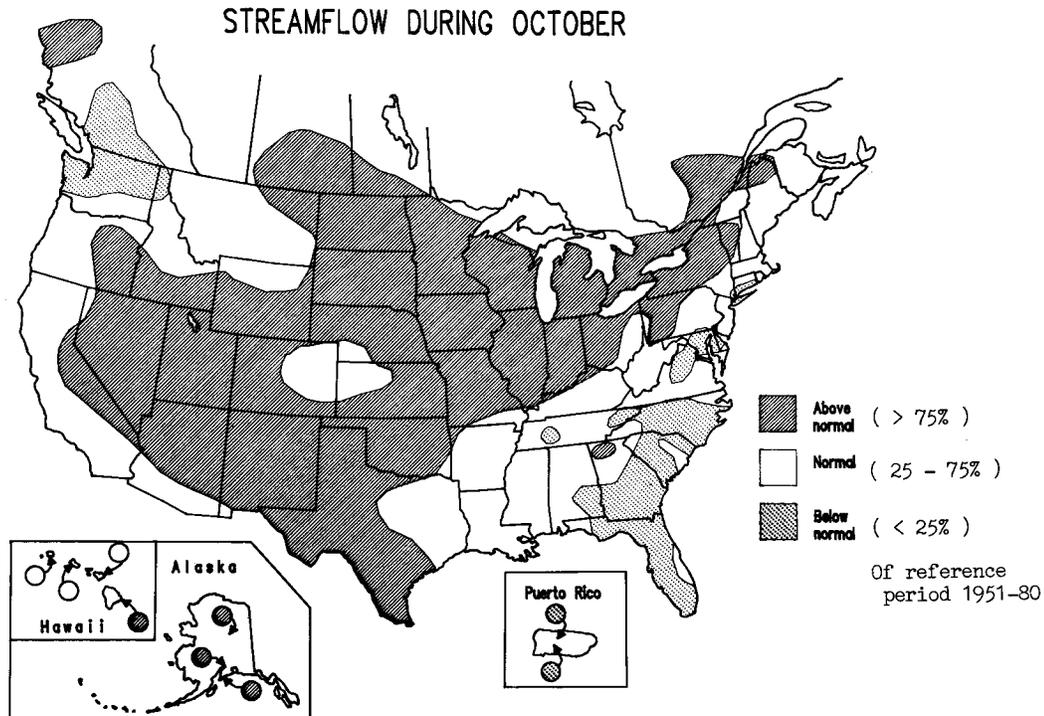
STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE SEPT. 1	PCT. NORMAL SINCE SEPT. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE		PRECIPITATION	
																90 AND ABOVE	52 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	44	33	49	29	39	-2	.3	-.3	.3	10.8	170	38.3	122	94	68	0	4	2	0
TOLEDO	41	29	53	16	35	-3	.7	.1	.4	10.4	169	34.5	121	94	69	0	6	3	0
YOUNGSTOWN	40	32	47	24	36	-3	1.1	.4	.7	10.8	138	41.7	123	96	71	0	4	3	1
OK OKLAHOMA CITY	61	38	69	32	50	3	.1	-.3	.1	20.3	277	42.1	143	96	48	0	1	1	0
TULSA	58	36	65	31	47	-1	T	-.6	T	15.9	163	40.8	112	92	52	0	1	1	0
OR ASTORIA	54	44	56	36	49	3	4.9	2.5	2.0	15.1	92	50.8	92	96	80	0	0	6	3
BURNS	51	31	57	24	41	7	T	T	T	2.3	108	9.8	146	96	80	0	5	0	0
MEDFORD	53	39	61	34	46	4	1.1	.4	.7	5.3	119	15.5	100	98	71	0	0	5	1
PENDLETON	54	41	64	37	48	8	.9	.5	.6	3.5	135	11.0	109	83	51	0	0	5	1
PORTLAND	55	45	61	38	50	6	2.0	.7	.8	9.2	111	27.4	93	96	71	0	0	7	2
SALEM	54	44	59	36	49	5	3.2	1.8	1.3	9.7	108	32.2	102	94	75	0	0	7	1
PA ALLENTOWN	46	29	55	21	38	-4	2.6	1.7	1.5	10.2	104	37.7	95	90	50	0	4	3	2
ERIE	41	31	51	24	36	-3	.8	-.1	.5	14.6	146	41.8	119	89	61	0	4	3	2
HARRISBURG	44	31	51	23	37	-5	1.9	1.2	1.0	7.9	91	37.1	106	92	53	0	5	2	2
PHILADELPHIA	52	34	59	27	43	-2	1.7	.9	.8	9.5	111	33.2	90	93	51	0	3	3	2
PITTSBURGH	43	33	51	29	38	-2	.7	.1	.3	7.9	112	32.6	98	80	57	0	4	3	2
SCRANTON	42	28	51	16	35	-4	1.8	1.1	1.0	8.9	106	41.5	131	89	62	0	5	4	2
RI PROVIDENCE	49	29	56	17	39	-3	2.0	1.0	1.5	7.8	75	36.5	92	91	49	0	4	5	2
SC CHARLESTON	68	50	73	38	59	4	3.1	2.6	2.6	11.2	119	42.7	89	97	67	0	0	2	2
COLUMBIA	63	47	72	31	55	2	1.4	.8	1.3	11.9	139	30.8	69	98	60	0	1	3	2
FLORENCE	62	45	68	34	54	0	1.2	.6	.8	8.7	108	28.1	70	98	60	0	0	1	1
GREENVILLE	57	40	61	29	49	-1	.7	-.1	.5	11.7	117	33.0	72	95	64	0	1	2	1
SD ABERDEEN	32	15	45	2	24	-4	.1	0	.1	3.7	125	25.7	149	94	69	0	7	3	0
HURON	35	18	48	7	27	-3	.4	.2	.4	5.0	151	27.4	152	98	66	0	7	3	0
RAPID CITY	45	25	57	10	35	-5	.2	0	.1	6.1	269	21.4	136	86	53	0	6	3	0
SIOUX FALLS	36	17	44	6	26	-5	.5	.3	.4	11.4	225	30.5	131	94	71	0	7	3	0
TN CHATTANOOGA	61	42	75	30	52	4	1.2	.2	1.0	15.3	151	32.8	71	97	59	0	1	3	1
KNOXVILLE	58	40	72	26	49	1	.3	-.6	.3	9.3	111	26.5	64	96	63	0	2	2	0
MEMPHIS	60	42	69	34	51	1	.4	-.6	.3	9.9	111	31.1	68	96	56	0	0	2	0
NASHVILLE	58	39	68	27	49	1	.1	-.7	.1	9.5	108	25.9	61	92	58	0	3	3	0
TX ABILENE	71	46	80	37	59	7	T	-.3	T	10.3	160	27.7	125	80	31	0	1	0	0
AMARILLO	64	37	75	32	51	7	0	-.1	0	5.0	139	24.4	132	81	31	0	0	0	0
AUSTIN	77	57	85	50	67	10	.1	-.4	.1	13.4	156	28.1	97	98	50	0	1	2	0
BEAUMONT	78	62	84	53	70	11	.9	-.2	.9	15.4	120	50.3	107	96	69	0	0	2	1
BROWNSVILLE	83	67	87	57	75	8	0	-.3	0	12.5	126	23.8	99	100	65	0	0	0	0
CORPUS CHRISTI	79	64	86	57	72	8	T	-.3	T	10.2	97	27.1	95	100	70	0	0	1	0
DEL RIO	82	55	82	49	70	11	0	-.1	0	9.4	167	22.6	137	86	47	0	0	0	0
EL PASO	69	46	75	37	57	7	.1	0	.5	10.4	10.7	145	92	93	39	0	0	2	0
FORT WORTH	72	48	86	38	60	6	.8	.3	.5	8.6	120	28.9	105	93	37	0	0	2	0
GALVESTON	77	67	83	61	72	10	.2	-.6	.1	13.4	126	28.8	81	98	73	0	0	2	0
HOUSTON	78	61	83	52	70	11	.2	-.6	.1	11.6	105	33.6	84	95	65	0	0	3	0
LUBBOCK	68	43	76	37	55	8	.2	-.1	.2	11.5	262	25.2	146	84	31	0	0	1	0
MIDLAND	72	44	79	38	58	7	0	-.1	0	15.9	399	28.7	219	84	30	0	0	0	0
SAN ANGELO	74	46	82	34	60	7	0	-.2	0	14.5	248	29.8	172	89	37	0	0	0	0
SAN ANTONIO	77	57	87	55	67	9	T	-.5	T	10.1	119	34.4	126	97	51	0	0	0	0
VICTORIA	77	62	84	59	70	8	T	-.6	T	11.2	100	33.0	96	98	68	0	0	1	0
WACO	73	51	85	37	62	6	.3	-.2	.3	11.5	145	31.2	109	99	59	0	0	2	0
WICHITA FALLS	69	42	78	38	56	5	.1	-.2	.1	12.6	178	32.1	127	91	39	0	0	1	1
UT BLANDING	54	34	56	30	44	7	.8	.7	.8	5.6	188	15.2	150	98	58	0	2	2	0
CEDAR CITY	57	33	60	26	45	8	.1	-.1	.1	2.4	103	10.4	111	89	46	0	2	2	0
SALT LAKE CITY	52	32	59	29	42	4	.4	-.1	.3	4.2	145	19.2	141	89	41	0	4	4	0
VT BURLINGTON	36	24	47	12	30	-5	.8	-.1	.4	9.5	117	38.0	125	85	52	0	5	3	0
VA NORFOLK	58	43	63	38	50	-1	T	-.6	T	2.7	28	22.3	54	93	61	0	0	2	1
RICHMOND	53	36	59	29	44	-4	.7	-.1	.6	5.1	52	30.9	78	95	58	0	3	2	0
ROANOKE	54	34	60	27	44	-2	.5	-.1	.5	8.6	101	27.4	77	88	50	0	2	1	0
WA COLVILLE	46	35	57	28	40	8	.7	-.2	.4	5.0	144	19.9	138	94	66	0	3	4	0
QUILLAYUTE	51	38	54	32	44	1	6.7	3.4	2.3	17.6	68	82.8	98	99	85	0	1	7	6
SEATTLE-TACOMA	52	44	58	41	48	4	2.1	.7	.8	9.1	96	29.7	97	93	70	0	0	6	2
SPOKANE	45	35	53	27	40	6	T	.3	.3	3.4	106	13.5	99	97	67	0	2	5	0
YAKIMA	54	30	60	23	42	5	T	-.2	T	2.5	172	7.9	123	90	46	0	5	0	0
WV BECKLEY	47	34	58	29	41	0	.4	-.3	.3	10.4	131	34.7	91	96	61	0	2	4	0
CHARLESTON	51	38	64	30	45	0	.8	-.1	.4	10.8	139	40.0	104	97	60	0	1	2	0
HUNTINGTON	51	37	63	26	44	0	.2	-.5	.2	10.8	144	34.3	93	97	63	0	1	1	0
PARKERSBURG	47	36	55	29	42	-1	.4	-.3	.4	10.3	150	33.5	88	92	59	0	7	3	1
WI GREEN BAY	36	18	42	5	27	-6	1.1	.7	.7	10.6	161	30.7	118	98	65	0	7	3	0
LA CROSSE	36	18	47	8	27	-6	.5	.2	.3	12.4	186	31.7	110	95	62	0	7	3	0
MADISON	37	20	45	4	29	-5	.7	.3	.3	9.5	143	30.9	107	94	61	0	7	4	0
MILWAUKEE	43	28	52	23	36	0	.5	0	.2	10.2	156	40.6	143	90	57	0	6	3	0
WAUSAU	34	18	45	3	26	-4	.4	0	.3	13.5	181	30.6	102	88	59	0	7	3	0
WY CASPER	48	28	54	23	38	7	.2	.1	.1	5.2	242	15.6	144	87	42	0	5	3	0
CHEYENNE	50	28	64	23	39	6	T	-.1	T	4.7	217	14.1	109	81	37	0	6	2	0
LANDER	49	27	54	24	38	9	.1	-.1	.1	4.0	151	11.6	93	80	39	0	7	1	0
SHERIDAN	43	21	53	4	32	9	.3	-.1	.2	5.0	167	15.4	110	89	50	0	6	2	0
PR SAN JUAN	86	73	87	72	79	0	.3	-.1	.2	14.0	89	48.5	102	98	69	0	0	3	0

Based on 1951-80 normals.

National Water Conditions

UNITED STATES
Department of the Interior
Geological Survey

CANADA
Department of the Environment
Water Resources Branch



National Water Conditions for October

A major autumn flood in Oklahoma, Kansas, Missouri, Illinois, and adjacent States was the direct result of runoff from torrential rains associated with a stationary frontal system and the remnants of Hurricane Paine. As much as 25 inches of rain were reported in north-central Oklahoma from September 29 to October 3. Peak discharges on many rivers and streams exceeded the peak of the 1951-80 records. Devastating floods also occurred in south-central Alaska, with the hardest hit areas around Seward, Bradley Lake, and Susitna River Valley.

Streamflow was in the normal or above-normal range at 85 percent of the 192 index stations. Below-normal streamflow persisted in parts of the Pacific northwest and the Southeast. Monthly mean flows were highest of record for October in 10 States and lowest of record in parts of New York, Florida, and Puerto Rico.

The combined flow of the three largest rivers (St. Lawrence, Mississippi, and Columbia) averaged a record-breaking 1,351,500 cubic feet per second (cfs) during October, exceeding the 1973 high of 928,800 cfs by 45 percent.

The flows of all three rivers were in the above-normal range with the flows of the St. Lawrence and the Mississippi setting records for the month.

National Agricultural Summary

November 17 to 23, 1986

HIGHLIGHTS: Rain hampered harvest in the Southeast, the Delta, and parts of the eastern Corn Belt. However, farmers made good harvesting progress between showers. Winter wheat benefited from the moisture and warmer temperatures. Fieldwork averaged less than 4 days in most areas of the Nation. In the central Great Plains and along the west coast, fieldwork averaged 5 days or more. Soil moisture was generally adequate. Most of the dryness was alleviated in the Southeast.

Winter wheat was mostly good. Seeding was 94 percent(%) finished, 1 percentage point below the 5-year average. Eighty-nine percent of the acreage was emerged compared with the 88% average. Warmer temperatures are needed in some areas to complete emergence. Seeding was finished or virtually finished in all States except California, Georgia, Missouri, North Carolina, and Oklahoma. Corn harvest climbed 6 points ahead of the previous week to 92% completion. Harvest equaled the average but was 10 points ahead of 1985. Soybean harvest moved at a slower pace, up 4 points from the previous week but 3 points slower than the 90% average. Corn harvest and wetness kept soybean harvest from reaching its full potential. Cotton harvest reached 60% completion. Harvest remained considerably behind normal in New Mexico, Oklahoma, South Carolina, and Texas. Grain sorghum was 90% harvested compared with 93% last year and average. Livestock was mostly good. Pastures were fair to good.

SMALL GRAINS: In the 20 major producing States, winter wheat was 94% seeded compared with 94% last year and 95% average. Wetness hampered seeding in the Southeast and Delta, while dryness curtailed seeding in California. Emergence was 1 point ahead of normal at 89% completion. Emergence equaled or was ahead of normal in nearly all States. Seeding was 70% finished in Missouri, 19 points below the average. Some intended acreage may not be seeded. Nebraska's wheat was mostly good. Replanting continued in western Oklahoma. Seeding was only 5 points behind normal despite a slow start. In Texas, warmer temperatures increased growth. Seeding increased as fields dried. Late planted fields progressed well following the wet, cold conditions of the previous week.

CORN: Corn was 92% harvested, equaling the average but 10 points ahead of 1985. Harvest was up 6 points from the previous week. Harvest was up 10 points and pulled even with the average in Michigan at 85% completion. In Colorado, harvest gained 15 points but was still 7 points below the average. South Dakota's harvest gained 10 points but was still about 2 weeks behind schedule. Harvest was at least 90% finished in 11 of the 17 major producing States.

SOYBEANS: Soybean harvest lagged 3 points behind the average at 87% completion. Rain slowed harvest in the Southeast, the Delta, and a few Corn Belt States. Harvest was nearing completion in the Corn Belt with most States more than 95% finished. Missouri's harvest jumped 6 points, lessing the deficit to 6 points below normal. Harvest was behind normal by 12 points or more in Arkansas, North Carolina, Kansas, and Tennessee. Frozen ground aided soybean harvest in Kansas. Only a few soybeans in wet, low lying areas remained to be harvested in Nebraska.

COTTON: Cotton picking advanced 4 points from the previous week to 60% completion. Last year, 66% of the crop was harvested and normally 68% would be harvested by this date. Precipitation plagued harvest in the Southeast and Delta States. Harvest was near completion in Alabama, Arkansas, Mississippi, and Missouri. Harvest was 5% finished in Oklahoma, 30 points lower than normal. The cold weather defoliated many plants, and harvest could begin before all bolls are fully open. In Texas, cotton harvest lagged 20 points behind the 49% average. Harvest gained momentum in the Great Plains and was just getting underway at Cross Timbers. Harvest in South Carolina and New Mexico was 23 and 25 points behind normal, respectively. California's harvest progressed well and shredding and discing rapidly followed. Isolated rain slowed cotton harvest in northwestern and southeastern Arizona.

OTHER CROPS: Sorghum harvest climbed 6 points ahead of last week but fell 3 points short of the 93% average. Oklahoma's harvest was 15 points behind normal but leaped to 70% completion from the 55% completion the previous week. In Texas, 84% of the acreage was harvested, compared with 96% normally.

Texas' peanut harvest was 80% finished, 5 points above the average. Wet fields in the Plains caused nuts to breakoff. The cold weather caused minor losses in some areas.

Tobacco producers prepared tobacco for opening day in the Burley Belt. Stripping progressed normally in Tennessee. Tobacco was 30% stripped in Maryland.

FRUIT AND NUTS: Irrigation continued in Florida's citrus areas. Growers watered young trees as dryness slowed fruit splitting. Orange harvest for processing increased, and grapefruit movement was active in all areas. Texas citrus harvest continued increasing. Quality, texture, and color were good. Sizes were fair to good. California's navel orange harvest slowed because of late maturity and small sizes. Desert grapefruit, lemon, and tangerine harvests progressed with good quality. Pruning continued in deciduous orchards. Dry weather aided fall orchard work but caused extra irrigation. Arizona's citrus harvest advanced, and valencia oranges matured normally.

VEGETABLES: Above-normal temperatures accelerated plant growth in Florida's vegetable producing areas. Harvest was active for most fall vegetables. Tomatoes, cucumbers, green peppers, sweet corn, snap beans, and celery accounted for most of the volume. Fall and winter vegetable movement increased in the Rio Grande Valley. High humidity increased disease, but growers began taking appropriate measures. Cabbage and cauliflower harvests increased in the San Antonio-Winter Garden area. Lettuce and bell pepper harvests were nearly finished in Trans-Pecos. In California, cauliflower was moderate in Salinas but fairly light in Santa Maria. Harvest increased in the desert. Broccoli was heavy in Salinas. Lettuce packing continued in the Huron and Firebaugh Districts. Spring lettuce planting continued, and early fields began germinating.

PASTURES AND LIVESTOCK: Pastures were mostly fair to good. Livestock was mostly good. In some areas livestock continued suffering from the effects of the cold weather.

CROP PROGRESS

FOR WEEK ENDING NOVEMBER 23, 1986

SOYBEANS
% HARVESTED

	1986	1985	AVG.
ALA	83	77	84
ARK	71	80	83
GA	63	60	66
ILL	99	95	97
IND	97	93	97
IOWA	97	95	98
KANS	75	80	90
KY	78	70	76
LA	91	83	89
MICH	95	85	95
MINN	99	99	99
MISS	78	80	82
MO	70	63	84
NEBR	98	100	100
N C	39	30	53
OHIO	96	91	95
S C	44	36	51
S DAK	100	100	100
TENN	65	75	80

19 STATES 87 84 90

THESE 19 STATES PRODUCED 96% OF THE 1985 SOYBEANS CROP.

CORN
% HARVESTED

	1986	1985	AVG.
COLO	83	88	90
GA	100	99	100
ILL	97	90	95
IND	96	83	92
IOWA	94	84	94
KANS	96	96	98
KY	97	87	93
MICH	85	70	85
MINN	92	84	91
MO	84	79	89
NEBR	90	80	90
N C	100	100	100
OHIO	90	74	85
PA	78	74	82
S DAK	81	68	92
TEX	100	100	100
WIS	84	61	79

17 STATES 92 82 92

THESE 17 STATES PRODUCED 93% OF THE 1985 CORN CROP.

GRAIN SORGHUM
% HARVESTED

	1986	1985	AVG.
ARK	100	100	99
ILL	97	91	91
KANS	90	95	90
LA	100	100	100
MISS	100	100	100
MO	84	76	87
NEBR	97	97	95
OKLA	70	95	85
S DAK	94	94	97
TENN	98	100	NA
TEX	84	92	96

11 STATES 90 93 NA

EXCL. STATES WITH NA 90 93 93

THESE 11 STATES PRODUCED 94% OF THE 1985 GRAIN SORGHUM CROP.

NA - NOT AVAILABLE.

COTTON
% HARVESTED

	1986	1985	AVG.
ALA	95	92	92
ARIZ	86	70	80
ARK	97	94	91
CALIF	90	82	84
GA	79	88	83
LA	100	97	92
MISS	99	94	90
MO	99	89	92
N MEX	50	55	75
N C	86	65	82
OKLA	5	45	35
S C	71	94	94
TENN	92	87	89
TEX	29	45	49

14 STATES 60 66 68

THESE 14 STATES PRODUCED 100% OF THE 1985 COTTON CROP.

WINTER WHEAT
% PLANTED

	1986	1985	AVG.
ARK	79	83	77
CALIF	50	50	47
COLO	100	99	100
GA	54	43	48
IDAHO	100	100	100
ILL	97	98	93
IND	99	100	98
KANS	95	97	99
MICH	100	100	100
MO	70	88	89
MONT	100	100	100
NEBR	100	100	100
N MEX	100	NA	NA
N C	80	63	76
OHIO	99	100	100
OKLA	90	98	95
OREG	98	96	98
S DAK	100	100	100
TEX	98	88	93
WASH	100	100	100

20 STATES 94 NA NA

EXCL. STATES WITH NA 94 94 95

THESE 20 STATES PRODUCED 91% OF THE 1985 WINTER WHEAT CROP.

NA - NOT AVAILABLE.

WINTER WHEAT
% EMERGED

	1986	1985	AVG.
ARK	69	NA	NA
CALIF	25	35	29
COLO	97	98	94
GA	42	32	NA
IDAHO	100	100	100
ILL	94	89	88
IND	95	98	95
KANS	95	90	95
MICH	75	95	NA
MO	56	78	79
MONT	75	80	88
NEBR	100	100	100
N MEX	100	NA	NA
N C	70	NA	NA
OHIO	90	96	96
OKLA	75	85	75
OREG	95	90	93
S DAK	100	100	100
TEX	93	77	82
WASH	100	100	100

20 STATES 87 NA NA

EXCL. STATES WITH NA 89 88 88

THESE 20 STATES PRODUCED 91% OF THE 1985 WINTER WHEAT CROP.

NA - NOT AVAILABLE.

CROP CONDITION, PERCENT

STATE	WINTER WHEAT				
	VP	P	F	G	EX
ARK	0	0	6	76	18
COLO	1	3	24	65	7
GA	0	1	35	61	3
ILL	0	3	17	72	8
IND	0	1	32	64	3
KANS	4	1	8	44	43
MICH	5	20	40	30	5
MO	6	10	42	41	1
MONT	0	0	47	53	0
NEBR	0	0	6	81	13
N MEX	0	0	38	62	0
N C	0	0	32	68	0
OHIO	0	0	34	59	7
OKLA	0	0	50	50	0
OREG	0	0	20	50	30
S DAK	1	0	7	75	17
TEX	0	0	20	59	21
WASH	0	5	10	85	0

VP - VERY POOR P - POOR
F - FAIR G - GOOD EX - EXCELLENT

State Summaries of Weather and Agriculture

ALABAMA: Temperatures averaged 1° to 3° above normal north, 5 to 10° above normal central, south. Rainfall totals averaged 1.00 to 3.00 in.

Days suitable for fieldwork 3.5. Soil moisture 4% short, 77% adequate, 19% surplus. Virtually all peanuts dug, combined. Cotton harvest also winding down. Harvesting soybeans, pecans, late fall vegetables; planting small grains, winter grazing crops; routine care of livestock, poultry.

ARIZONA: Storm system spread sub-tropical moisture 17th to 19th, producing showers, thunderstorms statewide. Some heavy rain, hail. Colder, drier air made air mass very unstable; two tornadoes reported. By late 19th to 21st, skies mostly sunny, milder temperatures. Late 21st to 22nd, cold front over Great Basin produced light precipitation eastern half, snow level 7,000 ft. Snowfall amounts White Mountains from traces to 3.00 in. Moisture amounts between 0.10 to 1.00 in. Average temperatures 1 to 10° above normal.

Small grain seedbed preparation, planting underway. Cotton harvest advanced. Acreage remaining mostly Pima cotton. Isolated rains slowed harvest northwest, southeast. Shredding, plow down light to active statewide. Alfalfa hay cutting generally winding down. Sheeping off mostly moderate. Green chopping active central. Existing hay stands fair to good, new stands good. Corn harvested west, virtually completed elsewhere. Sorghum harvest nearing completion. Peanut, sesame harvests continued. Lettuce, cauliflower, broccoli, mixed vegetables shipped. Asparagus cutting began. Sweet corn harvest finished. Vegetable planting continued. Immature vegetable stands good. Citrus harvest advanced. Valencia oranges maturing normally. Citrus groves good. Pecan harvest took place. Apple shipping advanced.

ARKANSAS: Temperatures recovered from previous weeks record cold weather. Most stations reported at or above normal temperatures. Most areas received rainfall except south where moderate amounts as couple of weak fronts moved through. Temperature extremes 26°; 77°. Rainfall none to 3.09 in.

Days suitable for fieldwork 4.0. Soil moisture 2% short, 54% adequate, 44% surplus. Crop growth slow. Major activities: Seeding wheat, oats, fall forages; harvesting soybeans, pecans; scraping cotton; fertilizing winter annuals; winterizing machinery; vaccinating cattle; building, repairing fences; weaning, marketing fall calf crop. Wet weather slowed harvest, seeding operations.

CALIFORNIA: Low pressure area moved on shore 17th, 18th with locally heavy amounts of rain southern part of State. Weak frontal systems brought showers over northern half of State middle, end of week. Southwest flow kept temperatures above normal.

Mostly open weather permitted rapid fieldwork. Burning, discing rice stubble active. Seeding, germination winter gains slow, moisture needed. Cotton harvest progress good. Shredding, discing followed rapidly. Field corn, sunflower harvests approached completion. Some sugarbeets dug. Fall sugarbeet seeding good progress. Non-dormant alfalfa fields irrigated. Dry weather aided fall orchard work, caused extra irrigations. Pruning continued deciduous orchards. Table grape harvest completed. Navel orange harvest slow; late maturity, sizes small. Desert grapefruit, lemon, tangerines, harvest progressed, good quality. Artichokes moderate, variable quality, Salinas. Very light harvesting, fall asparagus, Imperial Valley. Broccoli heavy, Salinas; light, Santa Maria; good quality. Fall harvest active,

excellent quality, Firebaugh District. Harvest light but increasing, desert; active; Fremont-San Jose, Patterson-Newman. Light packing underway, Imperial Valley. Cauliflower moderate, Salinas; fairly light, Santa Maria; good quality. Harvesting picked up, desert; continued; Fremont-San Jose, Clovis, Huron, Firebaugh Districts. Celery heavy, Salinas, Santa Maria; good quality. Sweet corn harvest over, Fremont-San Jose. Lettuce packing continued; Huron, Firebaugh districts, very good quality. Spring planting continued, early fields germinating. Harvest increased, Palo Verde Valley, light weights. Onions, fresh market, planted, Westside. Bell pepper harvest viable due absence frost, Fremont-San Jose. Movement fall potatoes, Tulalake-Butte Valley, going full-time; fair demand, good prices. Sweetpotato hotbed preparation, fumigation continued; Merced-Atwater, Modesto-Turlock. Packing market tomatoes active, south coast. Ranges, pastures northern, central districts continued deteriorate due lack rain. Supplemental feeding increasing since grass short. Water supplies low most areas. Calving, lambing continued active.

COLORADO: Temperatures averaged 2 to 10° above normal. Precipitation averaged none to 0.60 in.

Days suitable for fieldwork 5.1. Soil moisture 27% short, 60% adequate, 13% surplus. Sorghum harvested for grain 86%, 98% 1985, 90% avg. Livestock good; pasture fair to good.

FLORIDA: Very warm, near record highs central, south Peninsula until late week cold front moved through. Cooler by weekend except southern Peninsula. Temperatures mostly 6 to 8° above normal. Rainfall 1.00 to 2.00 in. Panhandle, northern Peninsula, less than 0.25 in. central, south.

Soil moisture short central Peninsula, eastern Panhandle, adequate elsewhere. Soybean harvest good progress, rain delays some areas. Peanut, cotton harvest neared completion. Sugarcane harvest increased. Planting small grains continued, early plantings good. Panhandle, southwest coast, northeastern coastal pastures good; elsewhere, mostly fair. Midweek rains benefited small grain pastures Panhandle, many northern areas. Cattle fair to good. Marketing of calves steady. Warm, dry, citrus areas; few light, scattered showers, irrigation continued; growers also watered young trees. Fruit splitting slowed due to dryness. Orange harvest increased for processing. Grapefruit movement active all areas. Caretakers prepared for winter season. Above normal temperatures over vegetable producing areas accelerated plant growth. Harvest active most fall crops. Good supplies tomatoes, cucumbers, green peppers, sweet corn, snap beans, celery. Also available squash, radishes, eggplant, escarole, lettuce, carrots.

GEORGIA: Temperatures near normal northeast; 5 to 10° above normal central, south. Temperature extremes 22° Blairsville, 22nd; 83° Bainbridge on 20th. Rainfall totals 1.00 to 3.00 in. common, local totals near 5.00 in.

Days suitable for fieldwork 3.3. Soil moisture 3% very short, 14% short, 63% adequate, 20% surplus. Cotton 4% very poor, 25% poor, 58% fair, 13% good. Sorghum grain 19% poor, 71% fair, 10% good; 93% harvested, 92% 1985. Peanuts 5% very poor, 17% poor, 60% fair, 18% good; 99% dug, 100% 1985, 100% avg.; 96% threshed, 100% 1985, 100% avg. Soybeans 9% very poor, 29% poor, 58% fair, 4% good. Rye 39% fair, 59% good, 2% excellent; 79% planted, 82% 1985, 81% avg. Other small grains 75% planted, 71% 1985, 72% avg. Pecans 2% very poor, 7% poor, 48% fair, 43% good; 53% harvested, 66% 1985, 51%

avg. Pasture 1% very poor, 15% poor, 51% fair, 33% good. Hay 2% very poor, 25% poor, 51% fair, 22% good. Cattle 3% poor, 33% fair, 63% good, 1% excellent. Hogs 2% poor, 24% fair, 72% good, 2% excellent. Main activities: Pecans, row crops harvested; planting small grains; pace slower due to weather. Routine livestock, poultry care.

HAWAII: Conditions variable. Passing showers, cloudy skies early week. Northeasterly winds 10 to 25 mph, stronger gusts over weekend. Temperatures ranged lower 60s to upper 80s. Rainfall ranged none to 8.60 in.

Days suitable for fieldwork 7.0. Soil moisture adequate. Cool temperatures, overcast skies slowed progress some crops. Previous week's damp conditions slowed farm activities some areas. Banana harvesting active. Papayas down slightly. Vegetables fair.

IDAHO: Above normal temperatures. Precipitation below normal except north central mountains, Panhandle.

Farm activities include shop work, fall clean up, marketing calves, weaning, moving cattle to wintering areas. Livestock good. Hay, roughage supplies adequate to surplus.

ILLINOIS: Temperatures averaged 2 to 8° below normal. Precipitation none to 0.87 in. Up to 7 in. snow north. One to 2 in. on ground now.

Days suitable for fieldwork 4.5. Soil moisture 71% adequate, 29% surplus. Pasture 3% poor, 36% fair, 58% good, 3% excellent. Major farm activities: Harvesting corn, soybeans, sorghum, seeding wheat.

INDIANA: Temperatures 2 to 3° below normal. Lows high 20s to low 30s. Highs mid to upper 40s. Precipitation widespread, ranging from 0.25 in. west to 1.00 in. north. Four inch bare soil temperatures below 50° threshold level for nitrogen conversion.

Fieldwork averaged 3.2 days. Topsoil moisture 61% adequate, 39% surplus. Subsoil moisture 7% short, 72% adequate, 21% surplus. Corn 18% moisture content, soybeans 16% moisture content. Spring cropland 38% tilled, 33% 1985, 50% avg. Wheat stands fair to mostly good.

IOWA: Cold week. Temperature extremes -1°; 60°. Precipitation moderate south, west increasing north, east.

Days suitable for fieldwork 3.5. Topsoil moisture 53% adequate, 47% surplus; subsoil moisture 61% adequate, 39% surplus. Corn, soybean harvest lagging southwest, south central; almost complete elsewhere. Fall tillage 22%, 20% 1985, 40% avg.; fall fertilizer application 14%, 15% 1985, 37% avg. Livestock mostly good; some flu problems in hogs. Corn stalk grazing limited to moderate.

KANSAS: Precipitation less than 0.10 in., ranging none to few hundredths. Temperatures averaged 41° north central to 45° southwest; 1° below normal southeast, 7° above normal northwest; 1 to 5° above normal elsewhere.

Days suitable for fieldwork 5.0. Soil moisture 4% short, 72% adequate, 24% surplus. Cold temperatures allow combining sorghum, soybeans over frozen ground. Wheat pastured 10%, wheat seeding continued east. Wheat 4% very poor, 1% poor, 8% fair, 44% good, 43% excellent. Pastures poor to fair northwest and west central, good to excellent elsewhere.

KENTUCKY: Temperatures averaged within 2° of normal. Readings mild early and late in week, cooler midweek. High temperatures mid 50s to mid 60s, lows in 20s. Rainfall light to moderate with amounts ranging from 0.20 in. far west to 0.66 in.

southeast. Almost all rain second half of week. Normal amounts for week in 0.80 to 0.90 in. range.

Soil moisture mostly adequate. Corn for grain harvest virtually complete. Soybean harvest progressed well conditions allowed. Burley tobacco markets open 24th. Pastures still providing some grazing.

LOUISIANA: Temperature 4 to 10° above normal. Temperature extremes 36°; 86°. Rainfall averaged 0.36 to 2.72 in.

Days suitable for fieldwork 3.7. Soil moisture 57% adequate, 43% surplus. Sugarcane good; 63% harvested, 50% 1985, 57% avg. Sweetpotatoes 99% harvested, 90% 1985, 96% avg. Pecans 72% harvested, 64% 1985, 52% avg. Wheat fair to good; 66% planted, 43% 1985, 63% avg.; 52% emerged, 29% 1985, 46% avg. Vegetables, pasture, livestock fair to good. Main activities: Harvesting pecans, soybeans, sugarcane; planting wheat; topdressing winter pastures.

MARYLAND & DELAWARE: Maryland: Temperatures averaged 3° below normal over State; lowest temperature 13° Cumberland; highest temperature 62° Glenn Dale, Chestertown. Precipitation averaged 1.28 in., ranging from 0.46 in. Cambridge to 2.12 in. Bel Air.

Days suitable for fieldwork 2.9. Topsoil moisture adequate. Subsoil moisture short. Corn for grain harvested 95%, 97% 1985, 99% avg. Soybeans 65% harvested. Small grains good. Tobacco 30% stripped, 29% 1985. Pastures fair to good. Hay supplies very short to short.

Delaware: Temperatures averaged 3° below normal over State; lowest temperature 20° Georgetown; highest temperature 61° Milford. Precipitation averaged 1.21 in., ranging from 0.75 in. Georgetown to 1.64 in. Wilmington.

Days suitable for fieldwork 3.5. Topsoil moisture adequate. Subsoil moisture short. Corn for grain harvested, 97%, 100% 1985, 100% avg. Soybeans 68% harvested, 65% 1985, 87% avg. Small grains fair to good. Pastures fair. Hay supplies short to adequate.

MICHIGAN: Temperatures ranged 3 to 4° below normal. Temperature extremes -3°; 56°. Precipitation ranged from 0.20 to 1.10 in. across State.

Days suitable for fieldwork 4.0. Soil moisture 70% adequate, 30% surplus. Corn 85% harvested, 70% 1985, 85% avg. Soybeans 95% harvested, 85% 1985, 95% avg. Winter wheat 100% planted, 100% 1985, 100% avg.; 75% emerged, 95% 1985; 5% very poor, 20% poor, 40% fair, 30% good, 5% excellent. Major activities: Corn, soybean harvesting, fertilizer spreading, chisel plowing, mouse baiting.

MINNESOTA: Temperatures averaged 6 to 11° below normal for State. Temperature extremes -13°; 51°. Precipitation averaged 0.10 to 0.48 in. above normal. Greatest weekly total 0.86 in.

Farmers made good progress with corn harvest last week, no progress made with fall plowing because ground froze week earlier. Field corn 92% harvested, 84% 1985, 91% avg.; 21% moisture content of grain, 22% 1985, 20% avg.; 50% stubble plowed, 44% 1985, 61% avg.

MISSISSIPPI: Temperatures 1 to 12° above normal, extremes 26°; 85°. Cold front moved into State, most of cold air stayed in northern counties. Greatest 24-hour total rainfall 2.35 in.

Days suitable for fieldwork 2.2, 4.8 1985, 3.3 avg. Soil moisture 4% short, 38% adequate, 45% surplus, 13% excessive. Wheat 70% planted, 61% 1985, 71% avg.; 5% poor, 55% fair, 38% good, 2% excellent. Pecans 62% harvested, 56% 1985, 55% avg.; 10% very poor, 6% poor, 42% fair, 38% good, 4% excellent.

MISSOURI: Temperatures averaged 2° below normal, 15° warmer than last week. Light rainfall, less than 0.25 in. statewide.

Days suitable for fieldwork 3.3. Soil moisture 40% adequate, 60% surplus. Wheat planting last week showed 10% increase, in part because some intended acres will not be planted. Field preparation for spring planting 32%, 41% 1985, 49% avg. Pasture 1% poor, 31% fair, 62% good, 6% excellent.

MONTANA: Northeast, parts north central temperatures averaged 4 to 9° below normal. Remainder averaged 2 to 9° above normal. Precipitation heaviest west 0.25 in. to more than 2.00 in.; southwest, south central, northeast about 0.25 in. Elsewhere very little precipitation. Very windy central areas after midweek.

Main farm, ranch activity livestock care, marketing, machinery maintenance, repair.

NEBRASKA: Rainfall averaged few tenths. Temperatures ranged 7° above west, 3° below east. Temperatures extremes 15°; 73°.

Days suitable for fieldwork 6.2. Topsoil moisture 3% short, 79% adequate, 18% surplus. Subsoil moisture 9% short, 77% adequate, 14% surplus. Wheat mostly good. Soybeans wet low lying areas remain to be harvested. Majority of sorghum remaining to be harvested, southeast. Pasture, range feed supplies mostly adequate. Continued movement cattle, calves to stubble fields.

NEVADA: Storm midweek dropped about 1.00 in. rain extreme south. Northern areas mostly sunny, dry with temperatures 5 to 10° above normal.

Mild, sunny weather easy on livestock. Trucking potatoes to market also aided by favorable weather.

NEW ENGLAND: Temperatures averaged 20s over far northern areas, 30s elsewhere; below normal. Rainfall averaged 2.50 to 2.75 in. coastal, 2.00 to 2.50 in. central, 1.00 to 2.00 in. elsewhere.

Major farm activities: Machinery repair, tending livestock, clearing snow.

NEW JERSEY: Temperatures below normal north, near normal south, coastal, averaging 36° north, 42° south, 45° coastal. Extremes 11°; 62°. Precipitation much above normal, averaging 2.97 in. north, 2.34 in. south, 1.68 in. coastal. Heaviest 24-hour total 2.34 in. on 20th, 21st. Heaviest 24-hour snowfall 4 in. on 18th, 19th.

Soil moisture adequate to excessive. Frequent rain delayed combining of soybeans, corn for grain. Very limited volumes of hardy vegetables moved to market along with apples, sweetpotatoes, squash from storages. Fruit tree pruning active. Cider making, turkey preparations for Thanksgiving active.

NEW MEXICO: Average weekly temperatures about 5° above normal most of week. Colder air accompanied by rain, snow moved in late week. Precipitation 0.50 to near 1.00 in. rain or snow equivalent over central mountains on weekend.

Days suitable for fieldwork 5.5. Moisture 8% short, 69% adequate, 23% surplus. Freeze damage 30% none, 40% light, 15% moderate, 15% severe. Alfalfa 22% poor, 56% fair, 22% good. Cotton 34% poor, 33% fair, 33% good. Corn 13% poor, 38% fair, 49% good. Barley 43% fair, 57% good. Irrigated grain sorghum 67% fair, 33% good. Dryland grain sorghum 50% fair, 50% good. Pecans 25% fair, 75% good. Chile 40% fair, 60% good. Cattle 19% fair, 81% good. Sheep 7% fair, 93% good. Range 38% fair, 62% good.

NEW YORK: Near normal temperatures ranged from mid 20s north, higher elevations to low to mid 30s

elsewhere. Above normal precipitation east, north, south but below normal west. Most precipitation in form of snow.

Days suitable for fieldwork 4.5. Grain corn harvest 74% complete. Dry bean harvest virtually complete. Soil moisture mostly surplus.

NORTH CAROLINA: Temperatures averaged 3° below normal Piedmont Region, 1 to 2° below normal rest of State. Temperature extremes 19°; 75°. Precipitation ranged from 0.19 to 1.22 in.

Days suitable for fieldwork 2.3. Soil moisture 25% short, 67% adequate, 8% surplus. Cotton harvest slightly ahead of average. Soybeans harvest behind average. Wheat planting ahead of average. Small grain fair to mostly good. Oats planted 88%, 78% 1985, 86% avg. Barley planted 92%, 77% 1985, 85% avg. Rye planted 86%, 82% 1985, 83% avg. Sorghum harvested 85%, 89% 1985, 91% avg. Sweetpotato harvest nearing completion. Pasture 2% poor, 57% fair, 41% good. Major farm activities: Seeding small grains; harvesting soybeans, cotton, sorghum, sweetpotatoes; marketing tobacco; land preparation; cutting firewood, Christmas trees; tending livestock; conservation work; spreading lime; general farm maintenance.

NORTH DAKOTA: Winter continued. Temperatures remain below normal 2 to 11°. Extremes -20° northeast, 18th; 45° southwest, 21st. Precipitation above normal, except northeast, 0.01 to 0.48 in. south east.

Harvest continued southeast, could finish by week's end with expected good weather. Some sunflowers will remain unharvested until spring in other districts. Most cattle on feed for past 2 weeks. Warmer weather allowed some producers to turn cattle back on range with supplemental hay, southwest.

OHIO: High temperatures averaged 40s; 2 to 5° subnormal. Low temperatures averaged low 30s; normal to 2° above normal. Precipitation 0.25 to 1.50 in.; lightest south, heaviest north.

Days suitable for fieldwork 3.0. Soil moisture 44% adequate, 56% surplus. Rain, milder temperatures softened soils; fieldwork slowed. Many areas need freeze for soils to support harvest machinery. Winter wheat seeding virtually complete; stands good.

OKLAHOMA: Temperatures averaged normal central to 6° above normal Panhandle. Precipitation averaged none Panhandle to 0.20 in. southeast.

Days suitable for fieldwork 5.1. Topsoil moisture 75% adequate, 25% surplus. Subsoil moisture 100% adequate. Wheat 50% fair, 50% good; 90% planted, 98% 1985, 95% avg.; 75% emerged, 85% 1985, 75% avg.; 25% grazed, 35% 1985, 15% avg. Replanting continued west. Sorghum 70% harvested, 95% 1985, 85% avg. Hard freeze preceding week reduced moisture content, mild temperatures early week facilitated harvest. Cotton 85% fair, 15% good; 90% open bolls, 98% 1985, 99% avg.; 5% harvested, 45% 1985, 35% avg. Cold weather defoliated many plants, harvesting could begin before all bolls fully open. Pastures mostly good. Cattle marketings down, prices steady from preceding week.

OREGON: Temperatures above normal statewide. Highest average temperatures Willamette Valley, coldest high plateau. West of Cascades all areas received more than 1.00 in. precipitation. Precipitation of less than 1.00 in. east, except 1.81 in. LaGrande.

Soil moisture 10% short, 70% adequate, 20% surplus. Field crops in normal condition. Nearly all fieldwork completed. Some seeding of CRP acres. Some spraying, pruning of fruit trees as weather permits. Finishing up carrot harvest

Umatilla County. Onion movement improved from last year. Livestock, range, pasture mostly good. Fall weather good for low elevation grass east. Most cattle off summer ranges. Snow in high mountains. Some movement of cows to California underway. Calves weaned, sold.

PENNSYLVANIA: Week slightly cooler than normal, soggy. Western sections snow. Average temperature 36°, 4° below normal. Temperature extremes 8°; 59°. Average precipitation 1.57 in., 0.80 in. above normal.

Days suitable for fieldwork 3.0. Soil moisture 53% adequate, 47% surplus. Corn harvest 78% complete, 74% 1985, 82% avg. Corn 1% very poor, 1% poor, 24% fair, 49% good, 25% excellent. Soybean harvest 82% complete, 74% 1985, 83% avg. Soybeans 2% very poor, 2% poor, 11% fair, 57% good, 28% excellent. Amount of feed being obtained from pastures average to below average. Activities: Harvesting soybeans, corn grain, corn silage; spreading manure, fertilizer.

PUERTO RICO: Island average rainfall of 2.00 in., 0.68 in. above normal. Highest weekly total rainfall 9.04 in. Puerto Real followed by 7.23 in. Sabana Grande, 6.11 in. Corozal Aes. Highest 24-hour total 4.42 in. Puerto Real. Divisional temperature averaged about 79° on coasts, 74 to 75° interior; mean station temperature ranging from 71° Adjuntas to 81° Roosevelt Roads. Lowest minimum temperature 55° Adjuntas, highest maximum temperature 91° San Sebastian.

SOUTH CAROLINA: Temperatures varied; 2 to 4° below normal. Heavy frost, freeze many areas. Rainfall scattered, heavy, amounts ranged 0.66 to 3.27 in.

Days available for fieldwork 2.2. Soil moisture 2% very short, 16% short, 66% adequate, 16% surplus. Cotton open bolls 100%; 71% harvested, 94% 1985, 94% avg.; 51% very poor, 29% poor, 20% fair. Soybean leaves turning 100%; 100% leaves shedding; 96% mature; 44% harvested, 36% 1985, 51% avg.; 7% very poor, 44% poor, 49% fair. Tobacco 93% stalks destroyed, 100% 1985, 100% avg. Sweetpotatoes fair; 84% harvested, 91% 1985, 100% avg. Peanuts poor to fair; 87% harvested, 95% 1985, 98% avg. Barley, oats, rye, wheat fair to good. Pastures, livestock fair to good.

SOUTH DAKOTA: Average temperatures ranged 6° below to 10° above normal. Extremes -14°; 64°. Precipitation snow, generally near normal.

Days suitable for fieldwork 3.4. Topsoil moisture surplus east central, adequate elsewhere; 3% short, 83% adequate, 14% surplus. Sorghum, sunflower harvest neared completion. Corn harvest 2 weeks behind normal, but ahead of last year. Livestock good to excellent. Supplemental feeding beginning as needed. Feed, stockwater adequate.

TENNESSEE: Temperatures near normal west, mid state, above normal east. Low 24°; high 75°. Rainfall widespread.

Days suitable for fieldwork 1.7. Soil moisture 13% short, 73% adequate, 14% surplus. Corn 94% harvested, 93% 1985, 92% avg. Burley tobacco 75% stripped, 75% 1985, 75% avg. Wheat 75% seeded, 85% 1985, 75% avg. Soybean harvesting progress 15% behind normal. Cotton harvesting ahead of average.

TEXAS: Pleasant, mild weather early week except early morning fog, low clouds southeast, much coast. Weak cold front produced showers south Plains. Upper air disturbance triggered showers Upper Coast. Rain showers mixed with some snow Panhandle. Very heavy rains southeast, east central areas. Rainfall near normal, slightly below normal except Upper Coast, east. Temperatures slightly below normal Rolling Plains; above normal east, south central, normal elsewhere.

Crops: Grain sorghum harvest active Plains, Cross-Timbers. Most fields standing only minor lodging. Yields continued good levels. Harvest should be complete another 1 or 2 weeks good weather. Mature 99%, 100% 1985, 100% avg. Cotton harvest gained momentum Plains. Harvest getting underway Cross-Timbers. Gins keeping up with current harvest. Yields below average. Open weather needed for further boll opening, harvesting. Open bolls 81%, 95% 1985, 96% avg. All small grains benefited from mild, open weather across State. Warmer temperatures helped increase growth wheat, oats. Seeding increased as fields dried out. Later planted fields make good progress after wet, cold conditions Plains. Some spraying greenbugs Blacklands. Wheat, oats good grazing. Some fertilization central. Peanut harvest good progress. Wet fields Plains caused some breakoff as nuts being dug. Yields, quality good. Some minor losses cold, wet weather scattered areas. Harvested 80%, 58% 1985, 75% avg. Soybean harvest winding down Plains, lower than average yields because prolonged wetness. Continued damp, wet weather Upper Coast prevented much activity. Quality poor. Harvested 81%, 49% 1985, 75% avg. Sugarbeet harvest continued High Plains. Yields good; sugar content low. Sugarcane harvest continued Valley, good yields. Other crops harvested: Sunflowers 82%, 82% 1985, 88% avg. Sugarbeets 50%, 61% 1985, 82% avg. Pecans 64%, 34% 1985, 45% avg. Other crops planted: Oats 92%, 78% 1985, 90% avg.

Commercial Vegetables: Rio Grande Valley, movement fall, winter vegetables increased. High humidity increased diseases, spraying underway. Harvest citrus continued increasing. Quality good. Sizes fair to good. Texture, color good. San Antonio-Winter Garden harvest cabbage, cauliflower increased as fields dried. Spinach, carrots good condition. Trans-Pecos, harvest red chilies main activity. Most bell pepper, lettuce harvest over except Presidio area, lettuce harvest continued. Pecan harvest good progress much State. Quality, price good; small crop. Quality excellent Trans-Pecos.

Range and Livestock: Range, pasture conditions at this time best in years most areas. Native ranges, small grains providing adequate grazing. Livestock recovered from last week's cold temperatures, once again showing good gains on small grains. Supplemental feeding slacked off many areas. Early lambing continued Hill Country.

UTAH: Precipitation light north, moderate southeast, south central, heavy extreme southwest. Temperatures 7 to 8° above normal.

Soil moisture 15% short, 85% adequate. Corn harvest near completion, delayed by high grain moisture. Winter wheat 23% fair, 72% good, 5% excellent. Winter range mostly good. Fall crop residue grazing favorable. Livestock generally good. Silage, hay supplies adequate. Major farm activities: Fall tillage, fertilizer application, hauling manure, winter equipment repair, seeding CRP acres, marketing cattle, weaning calves.

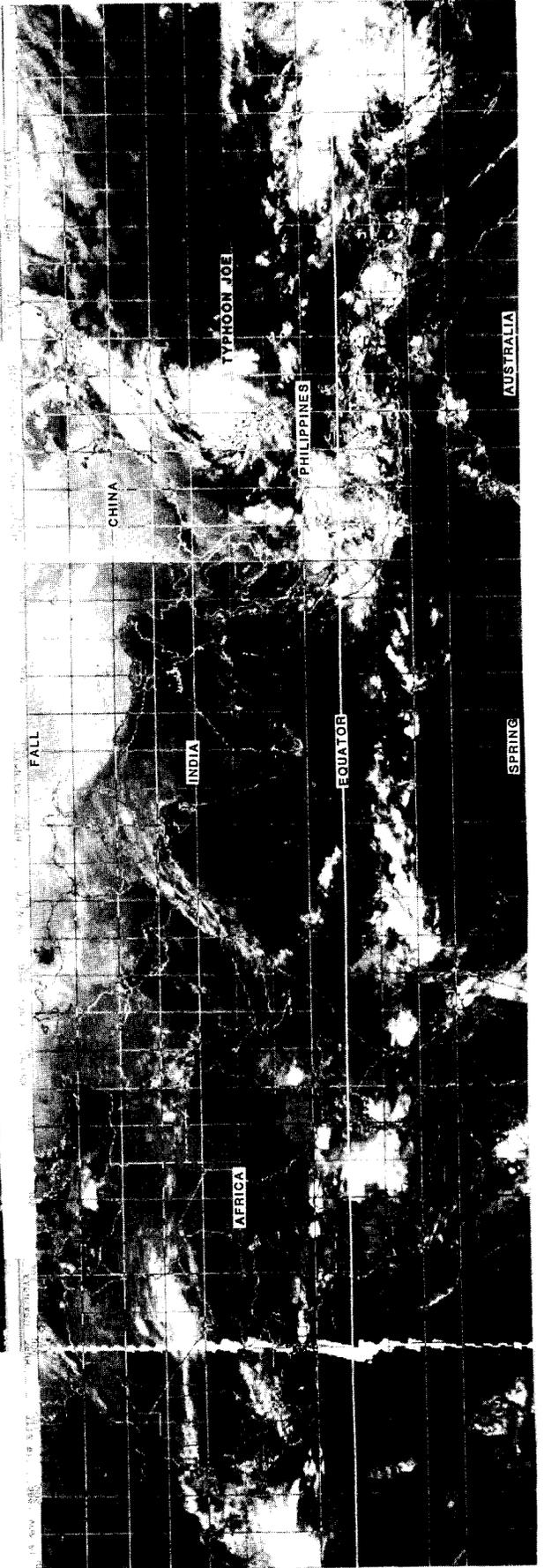
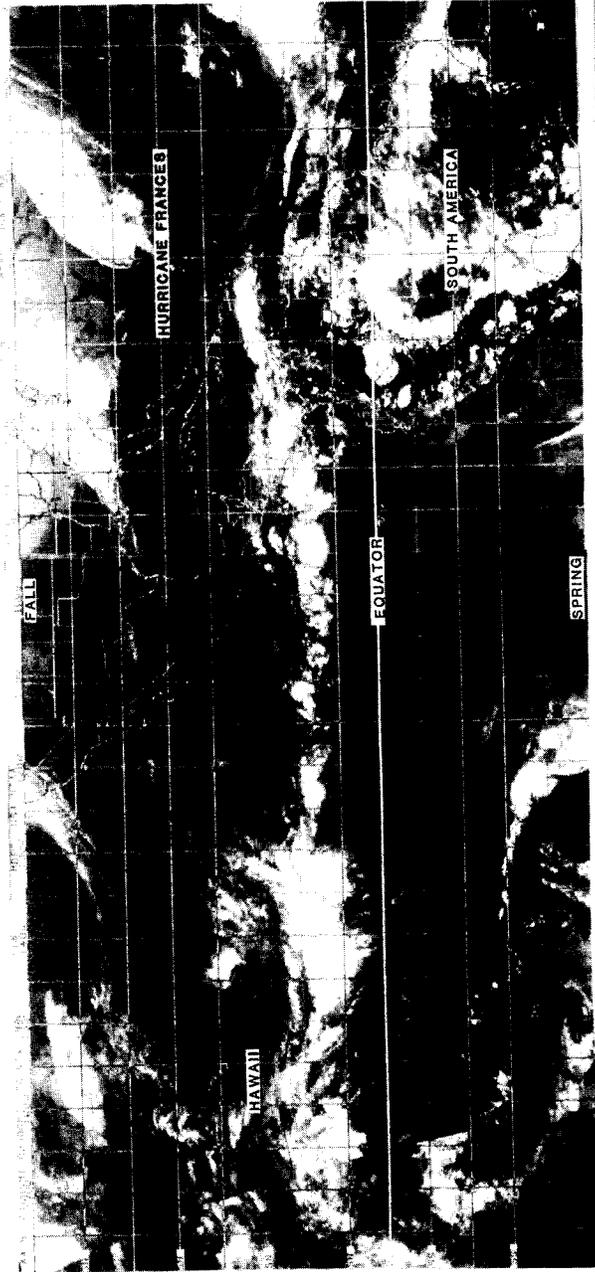
VIRGINIA: Cold, wet. Very little sunshine. Temperatures averaged well below normal. Range 9 to 64°. Precipitation averaged from 0.50 in. southwest to over 1.00 in. north.

Days suitable for fieldwork 2.6. Topsoil moisture 7% short, 84% adequate, 9% surplus. More light rain limited fieldwork. Livestock care, hunting, winter chores main activities. Grain corn harvest 92% complete, 91% 1985, 93% avg. Soybean harvest 57% complete, 50% 1985, 71% avg. Wheat 78% seeded, 75% 1985, 85% avg. Small grains good. Pastures mostly good, fair north. Livestock good to excellent. Calving, lambing underway. Cattle feeding more active, especially north.

(Continued to back cover)

Global Weather Satellite Image

November 19,20, 1986



International Weather and Crop Summary

November 16 - 22, 1986

HIGHLIGHTS:

UNITED STATES ... Rain hampers harvest in the Southeast, the Delta, and parts of the eastern Corn Belt. However, harvest progresses between showers.

WESTERN U.S.S.R. ... Snow blankets eastern winter grain areas, providing protection from cold weather.

EUROPE ... Weather conditions continue favorable for winter grains in northern and western Europe. Persistent cold, dry weather in Hungary, Yugoslavia, and Romania hampers winter grain emergence and limits plant establishment.

SOUTH ASIA ... Dry weather favors maturing cotton and rice in India.

EASTERN ASIA ... Dry weather in the North China Plain helps final cotton harvest efforts. Winter wheat begins cold hardening in northern areas.

MEXICO ... Mostly dry weather favors crop harvesting.

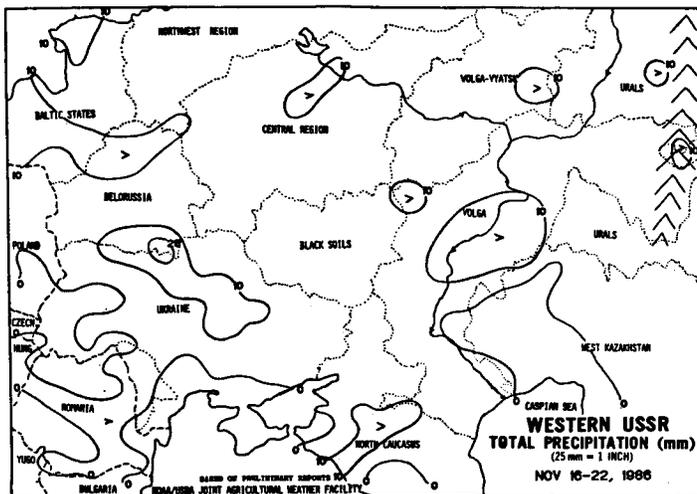
SOUTHEAST ASIA ... Mostly dry weather continues in Indochina's upland crop region. Light to moderate showers fall in the Philippines.

SOUTH AMERICA ... Widespread rain maintains adequate moisture for early summer crop growth in Argentina. Mostly dry weather in south-central Brazil favors fieldwork, but moisture is limited in Sao Paulo.

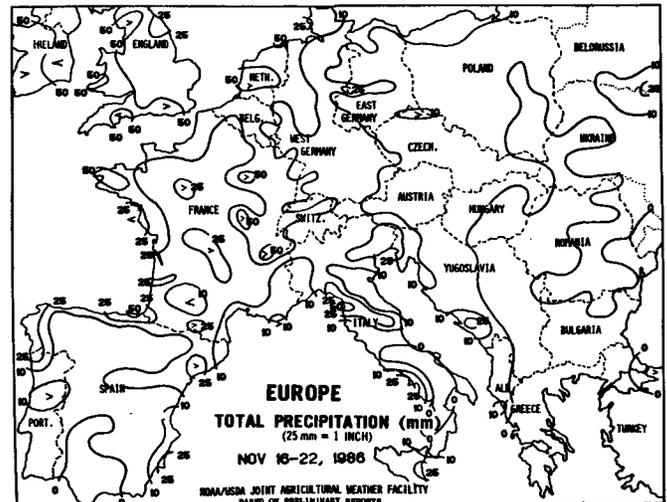
AUSTRALIA ... Showers in southeastern Australia benefit grain-filling wheat and early vegetative summer crops. Drier weather to the north and in Western Australia aid maturing wheat.

SOUTH AFRICA ... Moderate to heavy showers in all grain areas promote establishment of corn. Periods of dry weather within the week favor continued planting.

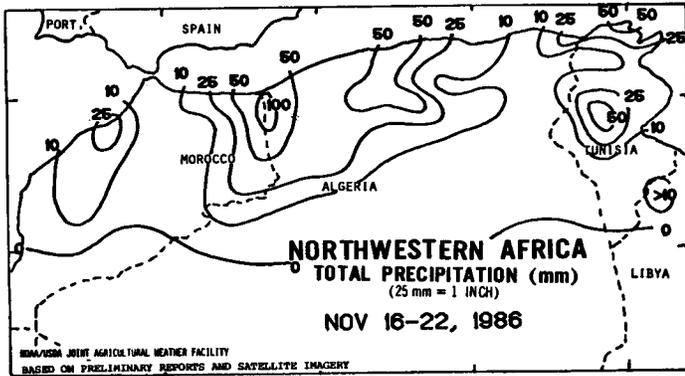
NORTHWESTERN AFRICA ... Showers in Morocco, Algeria, and Tunisia continue to provide favorable soil moisture for wheat planting that is usually well underway in most areas.



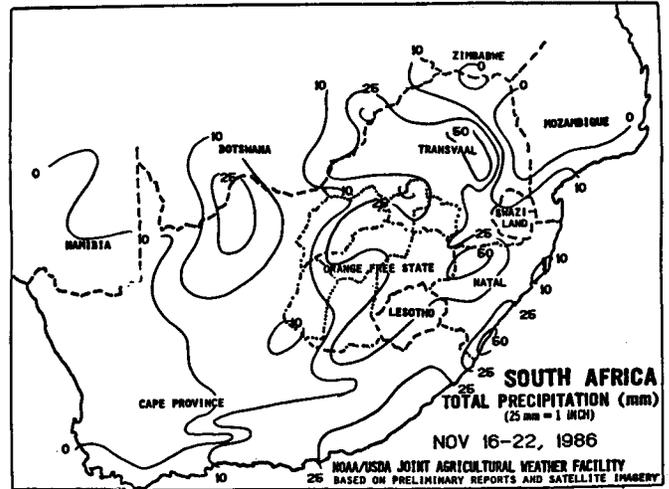
WESTERN U.S.S.R. ... Midweek snow blanketed winter grains in the eastern half of the Central Region, the Volga Vyatsk, the eastern Black Soils, and the middle and upper Volga. Heaviest snow fell over the middle Volga where precipitation amounts ranged from 10 to 20mm. By week's end, the coldest weather of the autumn covered these areas with night lows falling to around -10 degrees C. Snow cover provided sufficient protection from potential winterkill. Further west and south, gradual warming occurred in the Baltic States, Belorussia, Ukraine, and North Caucasus. Light rain (3 to 15mm) covered these areas and winter grains continued to slip into dormancy. Dry planting conditions and unseasonable cold autumn weather over the Ukraine and North Caucasus has likely caused spotty winter grain emergence and reduced plant tillering, making the crop more susceptible to potential winterkill.



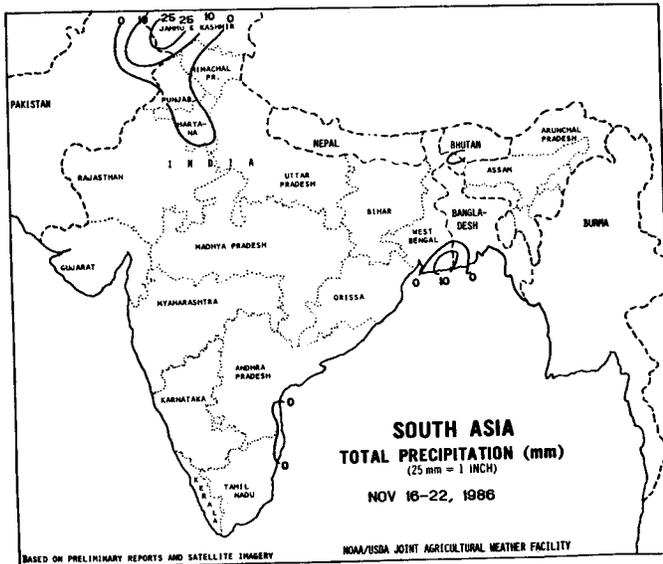
EUROPE ... Widespread showers (20 to 65mm) and mild weather continued over England and France, favoring winter wheat establishment. Drier weather covered corn areas in southwestern France, helping the harvest. Reports indicate the French corn harvest is nearly complete. Light showers (10 to 25mm) covered winter grains in West Germany and northern Italy. Dry weather over the Iberian Peninsula allowed winter grain planting to progress with minimal delays. Moisture conditions this year for winter grain emergence and plant establishment in England, France, West Germany, and East Germany are much better than last year. However, continued unseasonable cold, dry weather in Hungary, Yugoslavia, and western Romania has hampered winter grain emergence and limited autumn plant establishment, making the crops in these areas more susceptible to potential winterkill.



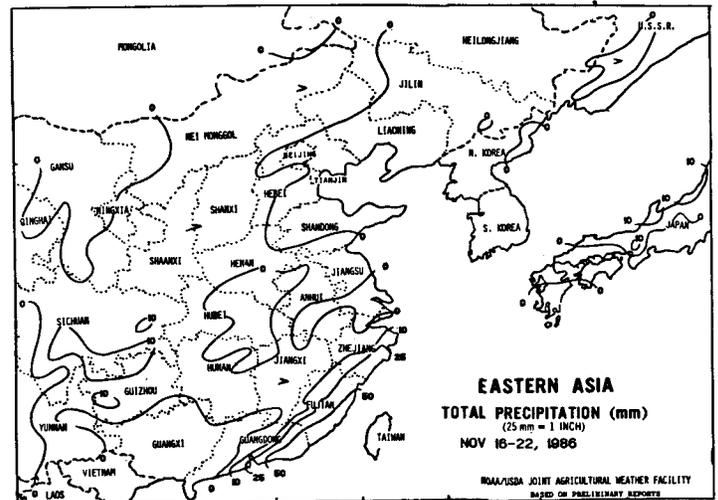
NORTHWESTERN AFRICA ... Early-week showers in Morocco continued to increase soil moisture for wheat planting. Dry weather followed the rain, allowing access to fields by week's end. In Algeria and Tunisia, wet weather (around 25mm) continued to provide adequate moisture conditions for wheat emergence and early growth. Wheat planting is normally well underway in most areas. For the growing season thus far, conditions for wheat emergence and early growth are much better than last year.



SOUTH AFRICA ... Moderate to heavy showers (15 to more than 50mm) fell throughout South Africa's grain areas, promoting emergence and establishment of recently planted corn. Drier than normal weather continued in the western Maize Triangle and northeastern Transvaal. Generally, moisture is adequate throughout the major growing regions for crop establishment. Corn planting was underway in all areas and can continue through December.



SOUTH ASIA ... Dry weather covered India, benefiting maturing cotton and rice in southern and eastern crop areas. In India, cotton is in the boll forming to maturing stages of development, with some harvesting from Orissa to Maharashtra. Light to moderate rain (3 to 17mm) fell in the north from Haryana to northern Pakistan, improving moisture reserves for the irrigation of winter grains currently in the early stages of development.



EASTERN ASIA ... Mostly dry weather covered China. Dry weather over the North China Plain helped late cotton harvest efforts. Near-normal temperatures over North China Plain wheat areas allowed gradual cold hardening in Shaanxi, Shanxi, Hebei, and Beijing. Winter wheat in Sichuan, Hubei, Henan, Anhui, and Shandong continued in the vegetative stage. Mostly dry weather in the Yangtze Valley helped rice harvest. Early-week wet weather in Guangdong, Fujian, and Zhejiang was followed by favorable dry harvest weather.

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(Continued from p. 14)

WASHINGTON: Above normal temperatures, precipitation statewide. Warm, rain showers west. Cool, clear east.

Days suitable for fieldwork 4.0. Soil moisture 20% short, 70% adequate, 10% surplus. Winter wheat 100% seeded, 1985 100%, 100% avg. Winter wheat emerged 100%, 1985 100%, 100% avg. Field work in some counties halted because of snow. Christmas tree farms continued cutting.

WEST VIRGINIA: Temperatures 1 to 4° below normal. Temperature extremes 19° Greenbank; 68° Williamson. Average temperature 41°. Precipitation above normal. Average precipitation 0.63 in.

Days suitable for fieldwork 1.8. Soil moisture 8% short, 42% adequate, 50% surplus. Corn 89% harvested, 81% of normal.

WISCONSIN: Cold, snowy week. Temperatures averaged 27°, 3° below normal; low -6°, high 52°. Precipitation 0.20 to 1.00 in. mostly snow. Snowfall 1 to 5 in. on 18th, 3 to 6 in. on 20th.

Days suitable for fieldwork 2.3. Soil moisture 60% adequate, 40% surplus. Snow halted harvest activities. Corn harvest 84% complete, 61% 1985, 79% avg. Soybean harvest 89% complete, 72% 1985, 89% avg. Fall plowing 43% complete, 45% 1985, 59% avg. Hay, winter wheat generally good.

WYOMING: Temperatures mostly above normal. Precipitation generally below normal.

Corn harvest continued. Winter wheat mostly good. Livestock mostly good, supplemental feeding in areas with snow cover.

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