

WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
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National Weather Service

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and World Agricultural Outlook Board

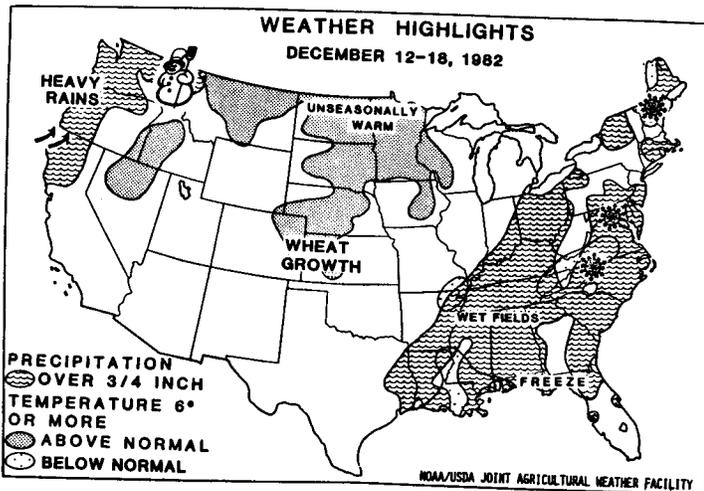
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Dec. 21, 1982

National Weather Summary

December 12 to 18



TUESDAY ... A strong Pacific frontal system spread a broad shield of mixed precipitation and gusty winds into the Northwest, while light snow spread from the northern Rockies across the northern Plains. A low-pressure system in the Gulf of Mexico spread moisture northward, and an eastward-moving cold front triggered light to moderate rainshowers through the lower Mississippi Valley, the Ohio Valley, and the lower Great Lakes region.

WEDNESDAY ... The strong flow of moist air from the Gulf and a slow-moving frontal system produced precipitation along the entire length of the Mississippi River and eastward to the Atlantic Ocean. Snow fell in the northern part of the Valley and in the Great Lakes area, and moderate to heavy showers fell from Alabama to Ohio. Rain and high wind battered the Northwest from northern California through Washington and Oregon. Another mass of very cold air moved southward through the Plains.

THURSDAY ... High wind and heavy rain continued along the northern and central Pacific coast region. Southerly winds reached 40 MPH, with higher gusts at many locations. Up to 4 inches of rain fell at some points along the coast. Snow covered the higher elevations and reached into Idaho and western Montana. Rain fell in the Northeast from North Carolina to New England, from the eastern Lakes region eastward, and in Florida. Cooler weather spread over much of the East, but only the northern Plains was severely cold.

FRIDAY ... A series of storms moving into the Pacific Northwest kept the high wind, rain, and snow going, but the rain was not as heavy. The

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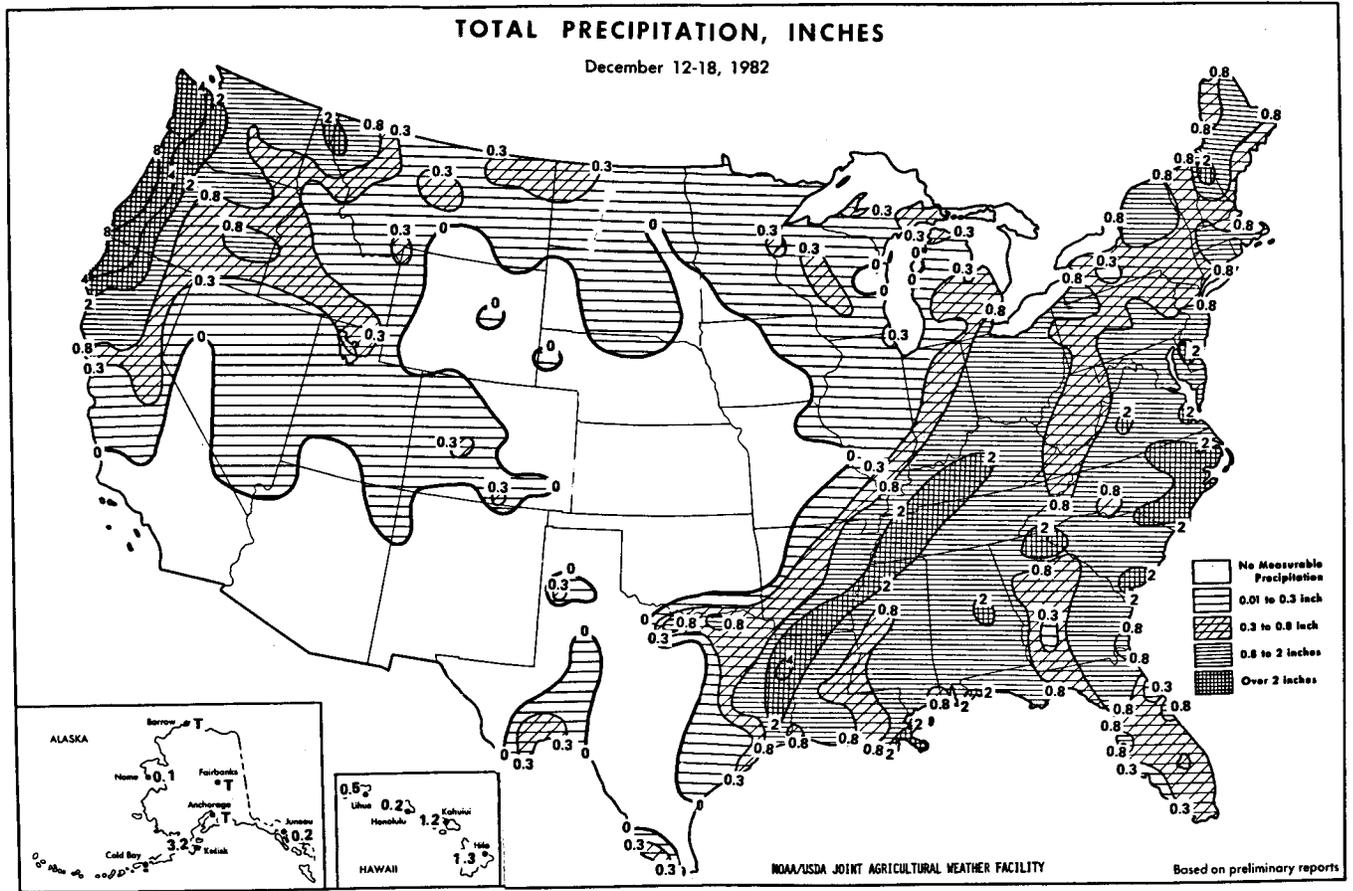
HIGHLIGHTS ... A series of Pacific storms moved onto the Pacific Northwest coast and kept that area wet and windy all week. Heavy snow fell in parts of the northern Rockies. The western two-thirds of the Nation was warmer than normal due to the influx of mid-Pacific air. Polar air from Canada kept much of the East cooler than normal. Early in the week, a storm off the east coast spread a swath of snow from the mid-Atlantic States to New England. Light snow and occasional freezing drizzle covered the northern Plains, and moisture from the Gulf of Mexico spread light to moderate precipitation from eastern Texas to New England and to the Atlantic Ocean. Freezing temperatures dipped into the northern part of the Florida Peninsula at the end of the week.

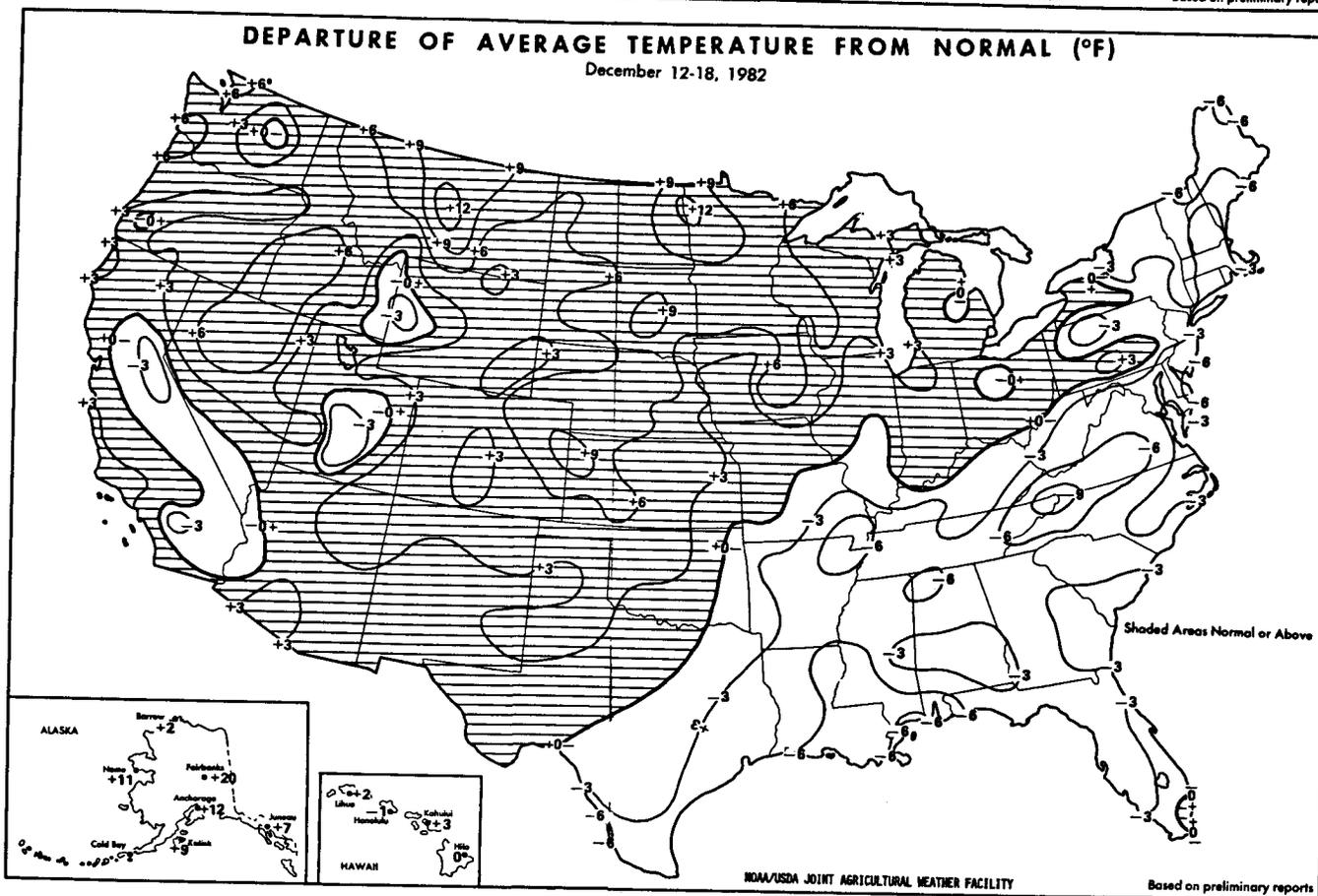
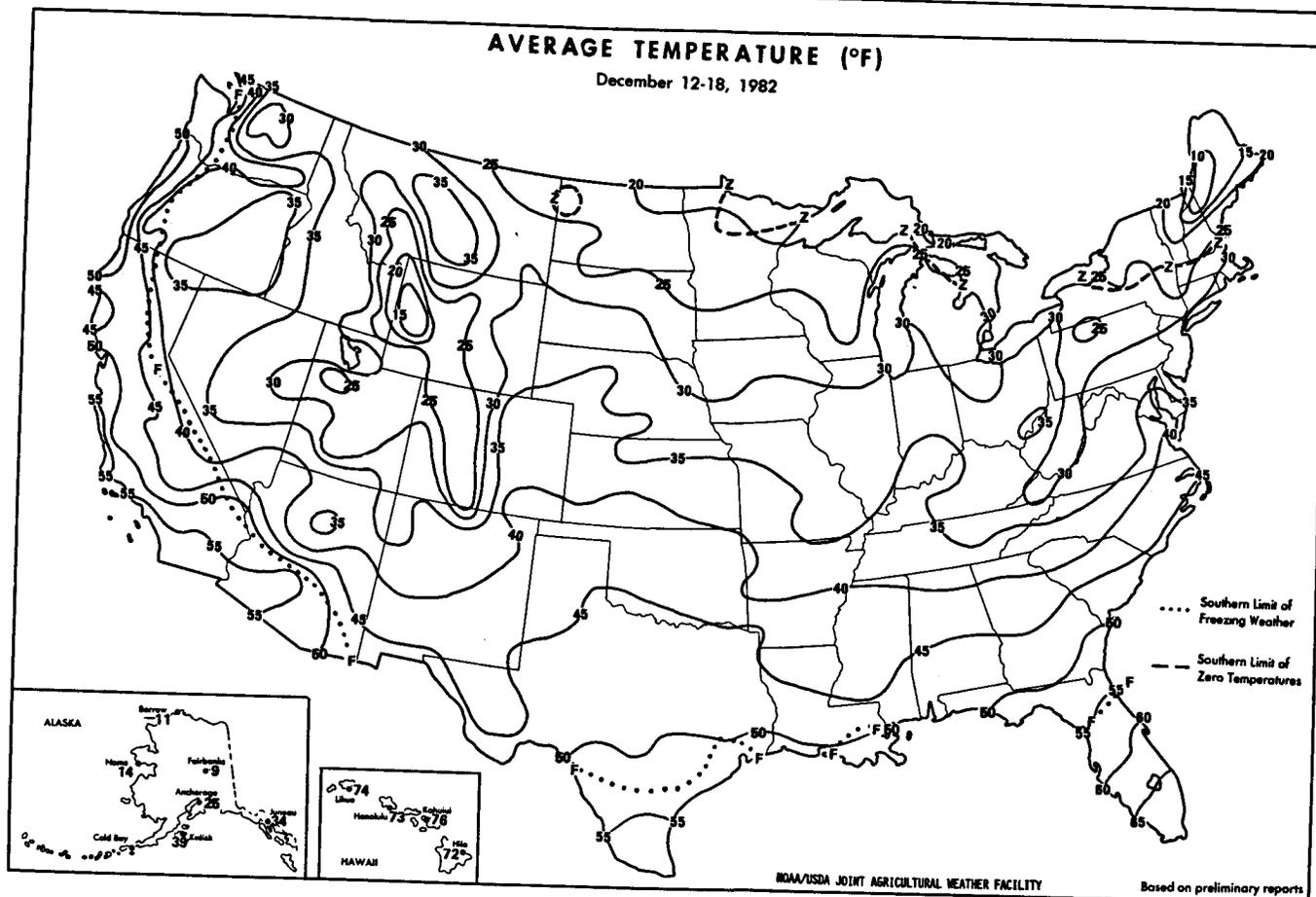
SUNDAY ... A storm system off the east coast spread a swath of snow from the mid-Atlantic region to southern New England. Rainshowers covered the southeast coast and all of Florida. Cold air behind the system sent freezing temperatures from northern Texas to Alabama, but most of the Plains warmed during the day under sunny skies. Showers moved across the Pacific Northwest and to central California and to the northern Rockies.

MONDAY ... Cold air settled over most of the United States. Freezing temperatures reached to the southeastern Texas coast and along the coast to the Florida Panhandle. Low temperatures sank to near zero in parts of West Virginia. A cold front over Western United States spread snow from the northern half of the Plateau into the northern Rockies. Rainshowers covered western Washington and Oregon.

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Weather Data for the Week Ending Dec. 18, 1982

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 NOV. 28	PCT. NORMAL SINCE NOV. 28	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	50	31	59	22	40	-5	1.5	.3	1.4	13.9	397	72.0	144	85	46	0	4	2	1
MOBILE	56	34	67	24	45	-8	.7	.7	.7	5.9	148	71.3	113	90	51	0	4	2	1
MONTGOMERY	57	35	68	26	46	-3	1.9	.7	1.9	8.3	244	64.0	138	80	45	0	3	1	1
AK ANCHORAGE	29	20	32	13	25	12	T	.2	T	.8	100	17.7	123	88	71	0	7	0	0
BARROW	-8	-13	-4	-16	-11	2	T	0	T	0	0	4.6	88	81	68	0	7	0	0
FAIRBANKS	18	0	27	-10	9	20	T	.1	T	.6	150	12.9	118	80	62	0	7	0	0
JUNEAU	38	30	45	18	34	7	.2	.8	.1	.8	26	42.3	81	97	73	0	3	4	0
KODIAK	42	36	44	32	39	9	3.2	2.1	.9	8.2	241	65.1	121	94	80	0	1	7	4
NOME	23	6	29	-7	14	11	.1	0	.1	.8	160	18.9	117	77	54	0	7	3	0
AZ PHOENIX	67	45	71	42	56	4	0	.2	0	2.3	460	10.0	154	87	34	0	0	0	0
PRESCOTT	53	26	64	23	40	1	0	.4	0	2.4	218	14.3	83	87	32	0	7	0	0
TUCSON	67	40	73	35	54	2	0	.2	0	1.9	317	13.3	128	77	27	0	0	0	0
YUMA	68	46	70	44	57	1	0	.1	0	1.9	950	5.1	196	61	29	0	0	0	0
AR FORT SMITH	53	27	62	16	40	-1	0	.7	0	4.7	224	46.7	115	90	44	0	6	4	0
LITTLE ROCK	47	29	52	17	38	-5	.5	.4	.3	3.5	130	57.1	129	87	59	0	0	0	0
CA BAKERSFIELD	59	38	65	33	49	1	T	.1	T	1.0	250	7.7	151	99	61	0	0	0	0
EUREKA	58	47	61	42	52	4	5.3	3.8	2.9	9.5	211	44.4	124	92	66	0	0	7	3
FRESNO	56	37	59	32	46	1	T	.4	T	1.3	108	14.2	153	98	67	0	1	1	0
LOS ANGELES	67	47	70	43	57	1	0	.4	0	1.2	100	13.1	121	88	34	0	0	0	0
RED BLUFF	53	41	60	34	47	0	1.4	.5	1.0	3.0	120	23.5	119	94	70	0	0	4	1
SACRAMENTO	50	37	57	32	44	-2	.6	.1	.6	2.5	132	29.0	175	98	81	0	1	2	1
SAN DIEGO	69	49	71	45	59	2	0	.4	0	1.1	110	12.0	146	87	40	0	0	0	0
SAN FRANCISCO	56	44	60	39	50	0	.3	.6	.2	2.1	84	31.2	185	87	65	0	0	3	0
CO DENVER	52	25	69	21	38	6	0	.1	0	.3	100	12.4	86	68	23	0	7	0	0
GRAND JUNCTION	42	23	47	17	33	3	.1	0	.1	.1	33	8.1	101	87	49	0	7	1	0
PUEBLO	57	18	74	10	37	4	0	.1	0	0	0	15.1	130	85	20	0	7	0	0
CT BRIDGEPORT	36	23	56	10	30	-4	.5	.2	.4	1.8	72	42.0	154	78	50	0	6	2	0
HARTFORD	36	17	59	4	27	-1	1.0	.1	1.0	1.8	62	48.0	118	75	40	0	6	2	1
DC WASHINGTON	44	28	62	20	36	-1	1.0	.3	.7	3.3	157	35.7	95	79	45	0	6	2	1
FL APALACHICOLA	61	40	70	30	50	-5	.9	.2	.8	3.8	165	69.7	127	89	53	0	1	2	1
DAYTONA BEACH	65	48	75	36	57	-3	.3	.2	.1	1.8	138	49.5	102	82	59	0	0	3	0
JACKSONVILLE	62	38	73	29	50	-5	.7	.1	.4	.9	56	50.5	95	95	58	0	3	3	0
KEY WEST	74	65	80	55	69	-2	T	.3	T	.2	20	36.4	94	80	56	0	0	1	0
MIAMI	76	59	84	45	68	0	.6	.3	.6	1.2	120	67.3	115	90	51	0	0	3	1
ORLANDO	69	48	78	38	58	-3	.5	.1	.4	1.0	83	51.6	103	92	54	0	0	2	0
TALLAHASSEE	63	38	77	26	50	-3	.6	.4	.4	3.0	107	57.4	98	89	45	0	3	2	0
TAMPA	67	47	78	34	57	-4	1.3	.8	1.2	1.3	87	55.8	117	91	58	0	0	3	1
WEST PALM BEACH	73	57	79	45	65	-2	.3	.2	.2	.9	64	79.9	133	84	54	0	0	3	0
GA ATLANTA	49	30	60	24	39	-4	.6	.4	.6	6.2	221	55.2	120	84	49	0	5	2	1
AUGUSTA	57	32	70	22	45	-1	1.1	.3	.5	3.4	148	39.0	95	87	44	0	4	3	1
MACON	57	35	71	26	46	-2	.7	.3	.7	4.2	156	45.3	109	94	50	0	2	2	1
SAVANNAH	60	37	73	30	49	-2	1.6	.8	1.3	2.3	110	50.8	103	84	42	0	3	4	1
HI HILO	78	65	80	62	72	0	1.3	-2.5	.7	2.8	24	165.5	132	88	63	0	0	6	1
HONOLULU	78	68	81	66	73	-1	.2	.6	.1	.3	14	32.0	155	86	60	0	0	3	0
KAHULUI	81	70	83	68	76	3	1.2	.5	.6	1.4	74	29.4	176	78	49	0	0	4	0
LIHUE	78	71	79	68	74	2	.5	.9	.3	1.5	36	71.2	178	81	62	0	0	4	0
ID BOISE	45	30	53	21	38	5	.7	.4	.6	1.6	160	13.1	116	84	54	0	4	4	1
LEWISTON	45	32	61	24	38	3	.3	0	.2	.7	78	12.1	98	90	62	0	3	3	0
IL CHICAGO	38	25	46	10	31	4	.3	.1	.1	1.8	257	17.1	168	85	58	0	6	5	0
MOCATELLO	38	25	46	10	31	4	.1	.2	.1	6.2	564	42.2	137	90	65	0	6	3	0
CHICAGO	34	24	43	7	29	2	.1	.2	T	4.7	392	42.9	127	82	56	0	6	1	0
MOLINE	37	23	48	8	30	3	T	.4	T	4.3	358	43.3	129	83	64	0	6	3	0
PEORIA	36	23	47	5	30	2	.1	.3	T	4.3	517	45.9	—	83	57	0	6	1	0
QUINCY	37	25	49	8	31	1	T	.4	T	6.2	517	45.9	—	121	94	0	7	3	0
ROCKFORD	34	17	43	3	26	1	.2	.2	.2	3.4	262	42.7	121	87	61	0	6	2	0
SPRINGFIELD	37	25	49	10	31	1	T	.4	T	7.7	550	42.9	130	87	54	0	3	2	1
IN EVANSVILLE	42	30	52	20	36	1	1.1	.4	.9	4.8	209	48.8	122	87	54	0	6	3	1
FORT WAYNE	36	24	44	10	30	1	.6	.1	.6	2.7	169	40.7	119	91	66	0	6	2	0
INDIANAPOLIS	39	27	46	13	33	2	.5	.1	.5	3.4	179	38.9	107	88	58	0	6	2	0
SOUTH BEND	37	26	44	13	32	4	.2	.3	.1	2.5	147	39.0	113	90	61	0	6	3	0
IA DES MOINES	39	24	54	4	32	7	T	.2	T	1.7	213	42.5	145	79	50	0	5	0	0
SIoux CITY	35	16	49	-1	25	1	T	.2	T	.4	50	28.4	111	92	71	0	6	0	0
WATERLOO	35	21	46	-4	28	6	0	.3	T	2.1	263	33.4	104	87	69	0	5	1	0
KS CONCORDIA	42	23	56	12	33	2	0	.2	0	1.0	167	36.4	136	89	54	0	6	0	0
DODGE CITY	53	28	66	17	41	7	0	.1	0	.2	100	18.6	96	72	32	0	5	0	0
GOODLAND	55	23	70	18	39	9	0	.1	0	0	0	25.0	154	72	25	0	6	0	0
TOPEKA	45	25	60	15	35	3	T	.3	T	2.3	209	36.9	110	84	49	0	7	0	0
WICHITA	48	26	61	14	37	3	0	.3	0	.7	88	26.2	89	92	49	0	7	0	0
KY BOWLING GREEN	42	26	50	16	34	-4	2.2	1.2	2.2	4.1	141	47.0	104	92	56	0	6	1	1
LEXINGTON	41	26	50	16	34	-2	1.9	1.2	1.9	3.5	152	37.2	90	85	48	0	5	2	1
LOUISVILLE	43	28	52	16	35	0	1.7	1.0	1.6	2.7	117	42.4	104	73	48	0	5	2	1
LA ALEXANDRIA	58	37	71	28	48	-4	.4	.7	.2	7.3	221	57.6	—	100	87	0	2	2	0
BATON ROUGE	58	35	67	25	47	-6	.5	.7	.5	10.4	297	51.1	100	87	51	0	2	2	1
LAKE CHARLES	60	38	71	30	49	-5	.8	.6	.6	3.2	82	51.9	99	94	51	0	2	2	1
NEW ORLEANS	58	41	66	30	49	-6	.7	.5	.7	8.5	250	63.3	117	89	55	0	1	2	1

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

Weather Data for the Week Ending Dec. 18, 1982

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 Nov. 28	PCT. NORMAL SINCE Nov. 28	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	
ME SHREVEPORT	56	32	72	20	44	-5	3.1	2.2	2.8	10.2	378	44.8	107	96	45	0	4	2	1	
ME CARIBOU	20	4	49	-10	12	-4	1.0	.4	1.0	1.7	89	36.2	104	82	58	0	7	1	0	
ME PORTLAND	31	12	52	0	22	-4	.3	.6	.3	1.0	33	39.2	102	75	46	0	7	1	0	
MD BALTIMORE	41	21	60	14	31	-4	1.8	1.0	1.0	3.5	146	36.1	94	87	47	0	6	2	2	
MD SALISBURY	43	24	62	8	34	-5	1.0	.3	.6	4.0	190	40.6	96	94	64	0	5	2	1	
MA BOSTON	38	23	61	10	30	-2	.4	.6	.2	1.1	35	43.9	108	74	39	0	5	2	0	
MA CHATHAM	40	28	52	14	34	--	1.7	.1	1.1	3.3	--	48.5	--	85	67	0	5	4	2	
MI ALPENA	32	15	39	-2	24	0	T	.4	T	1.7	25.1	96	91	64	0	7	2	0		
MI DETROIT	36	23	43	12	29	1	.8	.3	.6	2.3	144	32.5	108	87	56	0	6	3	1	
MI FLINT	36	22	42	13	29	2	.5	.2	.3	2.1	191	27.4	98	90	57	0	6	2	0	
MI GRAND RAPIDS	36	22	41	9	29	2	.4	.1	.3	4.6	288	34.7	114	83	58	0	6	3	0	
MI HOUGHTON LAKE	31	18	36	8	25	2	T	.4	T	2.1	140	30.0	110	85	64	0	7	2	0	
MI LANSING	34	18	42	6	26	-1	.5	.1	.4	2.9	207	27.3	94	95	65	0	6	2	0	
MI MARQUETTE	26	15	32	3	21	3	.1	.4	T	1.0	56	35.3	103	94	73	0	7	3	0	
MI MUSKEGON	35	25	41	13	30	2	.1	.5	.1	4.5	250	35.7	120	87	67	0	5	1	0	
MI SAULT STE. MARIE	27	9	33	-17	18	-2	.7	.2	.6	3.1	182	35.8	119	98	73	0	7	5	1	
MN ALEXANDRIA	30	16	35	-1	23	8	.1	.1	.1	.1	20	26.6	111	90	66	0	7	1	0	
MN DULUTH	26	14	32	-3	20	6	.2	.2	.1	.3	30	33.3	116	91	72	0	7	2	0	
MN INT'L FALLS	22	8	29	-10	15	6	.1	.1	.1	.1	14	24.6	98	94	72	0	7	2	0	
MN MINNEAPOLIS	33	18	40	2	26	7	.1	.1	.1	.1	17	26.1	105	88	64	0	7	2	0	
MN ROCHESTER	32	19	40	-1	25	6	.1	.1	.1	1.4	233	35.1	131	84	70	0	7	2	0	
MS GREENWOOD	51	32	63	24	41	-5	.7	.5	.7	10.0	278	60.4	--	87	53	0	3	1	1	
MS JACKSON	54	29	65	21	42	-7	.8	.4	.8	11.2	329	68.6	151	98	53	0	5	2	1	
MS MERIDIAN	57	34	65	28	46	-2	1.4	.1	1.3	10.8	300	61.3	129	79	42	0	4	2	1	
MO CAPE GIRARDEAU	40	27	48	18	34	-5	.2	.5	.1	4.8	218	49.5	119	95	72	0	7	2	0	
MO COLUMBIA	41	25	54	11	33	0	T	.4	T	5.3	408	46.5	130	87	56	0	6	0	0	
MO KANSAS CITY	41	23	55	10	32	1	T	.3	T	2.5	278	45.7	129	85	53	0	6	0	0	
MO SAINT LOUIS	42	28	55	14	35	0	T	.5	T	5.5	367	52.5	154	89	57	0	6	0	0	
MO SPRINGFIELD	47	26	60	12	37	1	0	.6	0	6.9	406	45.8	121	80	45	0	4	0	0	
MT BILLINGS	42	30	51	24	36	9	T	.1	T	.7	140	17.8	132	64	46	0	5	0	0	
MT GLASGOW	33	15	43	7	24	6	.5	.4	.3	.9	300	12.0	118	87	66	0	7	4	0	
MT GREAT FALLS	41	28	49	15	35	8	.3	.1	.3	.4	80	17.2	119	72	47	0	4	1	0	
MT HAVRE	40	18	54	-2	29	10	.1	.1	.1	.2	200	14.6	130	91	58	0	6	1	0	
MT HELENA	38	21	53	0	30	6	.1	.1	T	.7	140	13.6	127	79	49	0	5	2	0	
MT KALISPELL	34	26	42	20	30	6	1.0	.7	.6	1.3	144	18.9	129	96	78	0	7	6	1	
MT MILES CITY	35	17	44	-4	26	3	.1	0	.1	.5	167	15.1	116	85	60	0	7	2	0	
MT MISSOULA	34	23	46	-1	28	3	.3	.1	.2	.7	100	15.0	124	97	78	0	6	3	0	
NE GRAND ISLAND	44	19	59	8	32	5	T	.1	T	.2	67	34.4	154	86	46	0	7	0	0	
NE LINCOLN	41	17	55	7	29	1	T	.1	T	.1	20	36.5	138	84	51	0	7	0	0	
NE NORFOLK	41	19	52	8	30	6	T	.1	T	.4	133	29.3	126	90	56	0	6	0	0	
NE NORTH PLATTE	48	17	61	9	33	6	T	.1	T	0	0	18.9	99	89	35	0	7	0	0	
NE OMAHA	39	20	53	7	30	4	T	.2	T	.4	67	32.7	115	85	67	0	7	0	0	
NE SCOTTSBLUFF	49	16	61	8	33	5	.1	.1	.1	.1	25	21.3	154	82	35	0	7	1	0	
NE VALENTINE	43	16	54	1	29	5	T	.1	T	0	0	23.1	134	73	45	0	7	1	0	
NV ELY	43	12	49	-2	28	1	.1	0	.1	.9	150	15.4	188	87	46	0	7	1	0	
NV LAS VEGAS	55	34	60	30	44	-1	T	.1	T	1.0	250	3.7	88	80	37	0	1	1	0	
NV RENO	49	26	63	18	38	5	.1	.2	T	.8	114	10.1	153	80	36	0	6	2	0	
NV WINNEMUCCA	46	29	56	16	37	7	.2	.1	.1	1.5	188	8.8	107	80	42	0	5	2	0	
NH CONCORD	34	12	56	-2	23	-2	.4	.3	.4	.9	38	34.3	100	82	43	0	6	1	0	
NJ ATLANTIC CITY	38	17	57	4	28	-7	1.6	.7	.9	4.7	162	32.8	76	95	66	0	6	2	2	
NM ALBUQUERQUE	48	25	58	18	36	0	0	.1	0	.4	133	6.9	90	91	39	0	7	0	0	
NM CLOVIS	52	30	67	23	41	2	T	.1	T	.4	100	15.5	--	83	41	0	3	0	0	
NM ROSWELL	56	27	71	24	42	3	0	.1	0	.7	350	8.1	68	74	36	0	7	0	0	
NY ALBANY	32	15	54	2	24	-2	.3	.4	.3	.9	43	31.3	100	83	47	0	6	1	0	
NY BINGHAMTON	35	16	51	3	25	0	.5	.1	.5	1.0	53	33.9	96	86	49	0	6	3	0	
NY BUFFALO	36	20	49	11	28	0	.8	.1	.5	2.0	87	39.4	116	84	51	0	6	3	0	
NY NEW YORK	39	25	57	17	32	-3	.6	.2	.6	2.1	81	33.7	86	75	47	0	6	2	1	
NY ROCHESTER	35	19	50	6	27	-1	.6	.1	.3	1.6	89	30.9	102	79	51	0	6	4	0	
NY SYRACUSE	35	14	52	-5	24	-4	.7	0	.4	1.6	70	33.7	97	95	55	0	6	3	0	
NC ASHEVILLE	47	24	56	16	36	-3	.7	.1	.7	4.8	209	50.2	117	82	43	0	6	2	1	
NC CHARLOTTE	49	27	62	20	38	-4	.7	.1	.4	3.6	157	40.4	102	84	47	0	6	3	0	
NC GREENSBORO	46	24	60	15	35	-4	1.4	.7	.8	3.7	176	44.7	115	88	45	0	6	3	1	
NC HATTERAS	54	40	66	34	47	0	2.3	1.2	1.5	3.5	109	55.6	105	87	63	0	0	2	2	
NC NEW BERN	53	34	70	23	44	-3	3.0	2.1	2.0	4.2	168	45.4	85	84	54	0	4	3	2	
NC RALEIGH	49	27	66	18	38	-3	1.6	.9	.8	3.7	176	43.5	107	90	45	0	5	2	2	
NC WILMINGTON	55	34	69	23	45	-3	2.9	2.1	2.0	5.4	225	56.3	108	78	45	0	4	3	2	
ND BISMARCK	34	12	44	-2	23	7	.1	0	.1	.4	133	18.1	116	95	63	0	7	2	0	
ND FARGO	30	14	38	3	22	9	.1	0	.1	.1	33	20.1	106	92	67	0	7	3	0	
ND GRAND FORKS	30	16	36	5	23	12	.2	0	.1	.4	100	20.9	112	81	60	0	7	3	0	
ND WILLISTON	32	10	43	0	21	5	.4	.3	.2	1.3	433	17.0	121	91	71	0	7	3	0	
OH AKRON-CANTON	39	23	52	10	31	2	1.1	.6	.7	2.7	180	33.0	99	77	46	0	6	3	1	
OH CINCINNATI	41	26	51	14	33	0	1.5	.8	1.3	2.9	145	43.0	116	77	46	0	5	2	1	
OH CLEVELAND	38	23	47	11	30	0	1.3	.8	.8	2.7	169	35.2	107	77	49	0	6	4	1	
OH COLUMBUS	38	23	46	10	30	0	1.7	1.2	1.3	3.2	188	37.6	107	86	56	0	6	2	1	

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

Weather Data for the Week Ending Dec. 18, 1982

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 Nov. 28	PCT. NORMAL SINCE Nov. 28	TOTAL, IN., SINCE Jan. 1	PCT. NORMAL SINCE Jan. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERA- TURE °F		PRECIPI- TATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	38	24	47	9	31	0	1.0	.5	1.0	2.1	124	40.5	121	88	56	0	6	3	1
TOLEDO	35	21	43	5	28	0	.9	.4	.7	2.2	138	29.5	99	94	66	0	6	3	1
YOUNGSTOWN	39	23	52	12	31	2	.4	.2	.3	2.1	117	32.0	89	76	49	0	6	2	0
OK OKLAHOMA CITY	58	29	69	16	44	4	0	0	.5	56	34.7	116	81	37	0	4	0	0	
TULSA	55	30	68	16	42	2	0	.4	0	1.5	125	33.4	95	78	35	0	4	0	0
OR ASTORIA	53	44	57	41	49	6	5.4	3.1	1.2	13.2	183	73.1	122	96	71	0	0	7	6
BURNS	37	24	42	8	31	3	1.1	.7	.4	1.8	150	11.8	108	-	-	0	7	5	0
MEDFORD	48	35	55	28	42	4	3.7	2.9	1.9	5.3	212	18.5	97	99	72	0	2	7	3
PENDLETON	47	35	58	25	41	5	1.1	.8	.5	2.1	233	12.6	112	83	55	0	2	5	1
PORTLAND	50	42	56	36	46	5	3.8	2.4	1.4	7.2	171	41.1	122	88	74	0	0	7	3
SALEM	51	41	56	32	46	5	3.7	2.2	1.1	8.0	174	37.9	101	89	71	0	1	7	4
PA ALLENTOWN	39	21	58	14	30	-1	.7	.1	.7	2.0	83	43.0	107	82	48	0	6	1	1
ERIE	39	24	50	15	31	2	.9	.2	.6	1.9	86	39.7	110	77	49	0	6	3	1
HARRISBURG	41	25	55	18	33	0	1.0	.3	.9	1.4	64	38.6	100	81	45	0	6	2	1
PHILADELPHIA	38	22	57	12	30	-5	.9	.2	.5	2.7	117	40.1	107	87	53	0	6	3	1
PITTSBURGH	39	21	52	10	30	0	.8	.3	.7	2.0	125	31.2	91	79	47	0	6	2	1
SCRANTON	36	19	54	9	27	-2	.7	.2	.7	1.2	67	34.9	106	74	48	0	6	1	1
RI PROVIDENCE	38	21	59	4	30	-1	.9	0	.8	2.2	73	48.9	123	84	47	0	6	2	1
SC CHARLESTON	59	38	73	29	48	-1	1.8	1.1	1.5	2.8	140	45.3	91	84	45	0	3	3	1
COLUMBIA	54	31	69	19	42	-3	.9	.2	.4	3.3	157	49.1	111	89	43	0	4	3	0
FLORENCE	53	31	67	23	42	-4	1.9	1.2	1.8	3.2	168	39.3	94	95	50	0	4	2	1
GREENVILLE	49	28	57	20	38	-4	1.1	.2	.9	6.5	232	55.6	123	81	36	0	5	3	1
SD ABERDEEN	36	14	46	4	25	8	T	.1	T	0	25	-	-	82	57	0	7	1	0
HURON	38	17	49	8	28	8	T	.1	T	0	0	24.7	131	97	60	0	7	1	0
RAPID CITY	44	22	58	7	33	6	T	.1	T	.3	100	25.9	156	82	46	0	6	0	0
SIoux FALLS	34	16	48	-2	25	5	T	.1	T	.1	17	31.4	129	96	72	0	7	0	0
TN CHATTANOOGA	47	28	53	22	38	-3	1.5	.3	1.4	9.2	263	56.3	116	84	48	0	5	2	1
KNOXVILLE	44	25	55	18	35	-7	1.1	.1	.9	4.9	163	53.5	123	94	65	0	5	2	1
MEMPHIS	48	31	57	22	39	-3	1.9	.9	1.6	7.6	238	62.7	136	89	55	0	4	3	1
NASHVILLE	46	28	54	17	37	-3	1.5	.5	1.4	4.3	148	46.7	109	89	56	0	5	3	1
TX ABILENE	61	35	72	23	48	2	0	.2	0	1.0	167	21.1	92	77	34	0	3	0	0
AMARILLO	57	25	74	18	41	3	0	.2	0	.3	60	18.0	94	81	34	0	7	0	0
AUSTIN	62	38	75	26	50	-2	0	.5	0	1.4	88	26.0	84	85	37	0	2	0	0
BEAUMONT	62	40	75	30	51	-4	.5	.7	.5	3.1	91	56.7	108	92	52	0	1	1	0
BROWNSVILLE	70	48	78	40	59	-4	T	.3	T	2.6	289	25.2	104	95	47	0	0	0	0
CORPUS CHRISTI	66	43	80	35	54	-5	T	.3	T	.3	27	22.2	81	88	43	0	0	0	0
DEL RIO	63	36	74	33	50	-2	0	.1	0	.5	125	11.7	71	77	36	0	0	0	0
EL PASO	58	34	66	29	46	2	0	.1	0	1.5	500	9.9	130	80	35	0	3	0	0
FORT WORTH	60	36	73	22	48	0	0	.4	0	1.5	115	39.5	130	81	38	0	2	0	0
GALVESTON	60	48	70	33	54	-3	.9	0	.9	1.5	58	29.1	73	89	60	0	0	1	1
HOUSTON	62	38	75	27	50	-5	.2	.7	.2	2.1	75	39.3	86	89	46	0	2	1	0
LUBBOCK	60	29	77	22	44	3	0	.1	0	1.3	325	20.5	113	87	37	0	6	0	0
MIDLAND	63	32	74	26	47	1	0	.1	0	.8	267	14.1	108	84	29	0	4	0	0
SAN ANGELO	62	31	74	24	47	-1	0	.1	0	.7	175	18.1	105	88	32	0	5	0	0
SAN ANTONIO	63	36	71	27	50	-4	0	.4	0	1.3	130	21.9	84	82	34	0	3	0	0
VICTORIA	65	42	77	31	53	-3	T	.4	T	.3	21	32.0	97	91	47	0	2	1	0
WACO	62	36	75	26	49	-1	0	.5	0	1.3	93	28.3	96	95	41	0	3	0	0
WICHITA FALLS	59	31	72	19	45	1	0	.3	0	.4	44	37.6	145	86	36	0	5	0	0
UT BLANDING	42	23	48	15	32	3	.2	.1	.1	1.0	143	15.1	128	84	55	0	7	2	0
CEDAR CITY	43	22	50	15	33	2	T	.2	T	.9	129	15.5	158	71	44	0	7	0	0
SALT LAKE CITY	40	26	50	14	33	3	.3	0	.3	1.8	164	22.3	156	86	53	0	6	2	0
VT BURLINGTON	31	12	54	-9	21	-1	.7	.2	.6	1.7	100	32.0	101	77	50	0	6	2	1
VA NORFOLK	49	32	68	21	40	-2	1.6	.9	1.0	3.3	157	47.7	112	87	53	0	4	2	2
RICHMOND	43	25	66	15	34	-4	1.5	.8	.8	3.0	136	45.6	111	95	64	0	6	3	2
ROANOKE	40	21	53	11	30	-7	1.1	.3	.4	3.7	176	44.6	121	94	51	0	6	3	0
WA COLVILLE	35	29	47	15	32	5	1.7	1.2	.5	3.1	207	19.0	122	95	85	0	4	7	1
QUILLAYUTE	49	40	53	34	45	4	6.4	2.8	1.6	11.7	110	106.5	111	99	83	0	0	7	6
SEATTLE-TACOMA	49	42	54	40	46	5	2.9	1.5	.7	6.7	163	38.0	107	92	67	0	0	7	3
SPOKANE	38	30	45	18	34	4	1.3	.8	.6	2.6	173	16.4	103	94	78	0	4	7	1
YAKIMA	39	27	54	15	33	1	.9	.6	.3	1.5	188	10.1	140	91	70	0	4	5	0
WV BECKLEY	39	20	49	5	29	-3	.4	.4	.2	2.1	91	41.6	102	88	49	0	6	3	0
CHARLESTON	44	22	55	8	33	-3	.5	.2	.3	2.4	114	42.1	108	90	43	0	5	4	0
HUNTINGTON	43	25	51	12	34	-2	.9	.3	.8	2.8	140	42.1	113	83	41	0	5	4	1
PARKERSBURG	44	26	55	15	35	0	.9	.3	.8	2.6	144	36.0	91	97	49	0	5	3	1
WI GREEN BAY	31	19	36	3	25	4	T	.3	T	2.1	210	28.2	110	77	58	0	7	0	0
LA CROSSE	32	18	42	1	25	3	T	.2	T	1.1	157	23.4	82	96	72	0	7	1	0
MADISON	32	16	43	1	24	2	.2	.2	.2	3.4	309	31.0	106	90	65	0	7	2	0
MILWAUKEE	34	23	42	8	28	4	.2	.2	.1	3.9	325	36.0	129	88	62	0	7	2	0
WAUSAU	30	17	34	1	23	5	.1	.2	.1	1.1	138	37.9	123	87	64	0	7	1	0
WY CASPER	36	23	42	13	30	3	T	.1	T	2.0	500	18.8	174	79	54	0	7	1	0
CHEYENNE	45	25	56	19	35	6	T	.1	T	.4	133	18.9	135	69	32	0	6	0	0
LANDER	35	12	54	-6	23	0	0	.1	0	1.0	333	12.6	95	75	45	0	7	0	0
SHERIDAN	42	15	61	2	28	2	T	.1	T	.5	100	13.9	90	77	43	0	6	0	0
PR SAN JUAN	84	72	85	67	78	1	.6	.4	.5	3.1	94	131.3	232	85	55	0	0	3	1

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

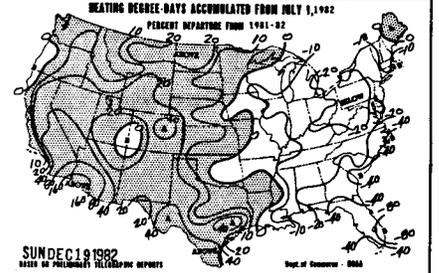
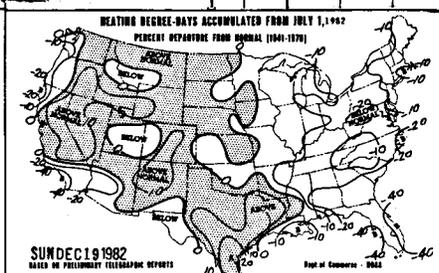
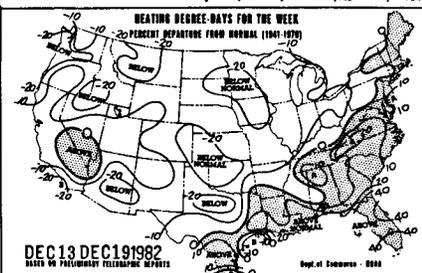
+100 = NORMAL & ACTUAL NEAR THE SAME

HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING DEC. 19, 1982.

BASED ON 1941-70 NORMALS.

+ACCUMULATION FROM JULY 1, 1982

Table with columns for STATES AND STATIONS, WEEKLY DEPARTURE, SEASONAL ACCUMULATION, and DEPARTURE FROM 1981-82. Rows list various cities across the United States with their corresponding heating degree day values.



Fall Weather Review

September, October, and November

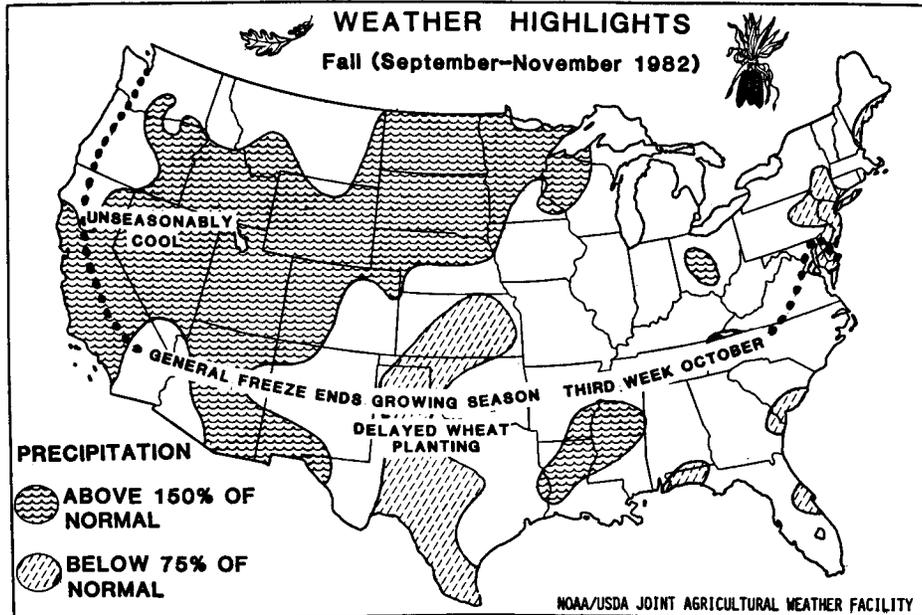
HIGHLIGHTS: The frequency of Pacific storms moving into central California instead of the Pacific Northwest caused well-above-normal precipitation from central California through the Rockies and into the northern Plains, while the Northwest had just normal to slightly less than normal. Snow piled high in the western mountains where temperatures averaged colder than normal but persisted only in the northern Great Lakes area in the East where temperatures were warmer than normal. The first general freeze came to the Corn Belt in the third week of October, about 2 weeks later than normal for most areas. Wet weather slowed harvest of the already late crop in the western portion of the Belt. Light, isolated rain in the winter wheat area of the central and southern Plains delayed planting and emergence of much of the crop, especially in Texas and Oklahoma, until November. More rain was needed as the period ended.

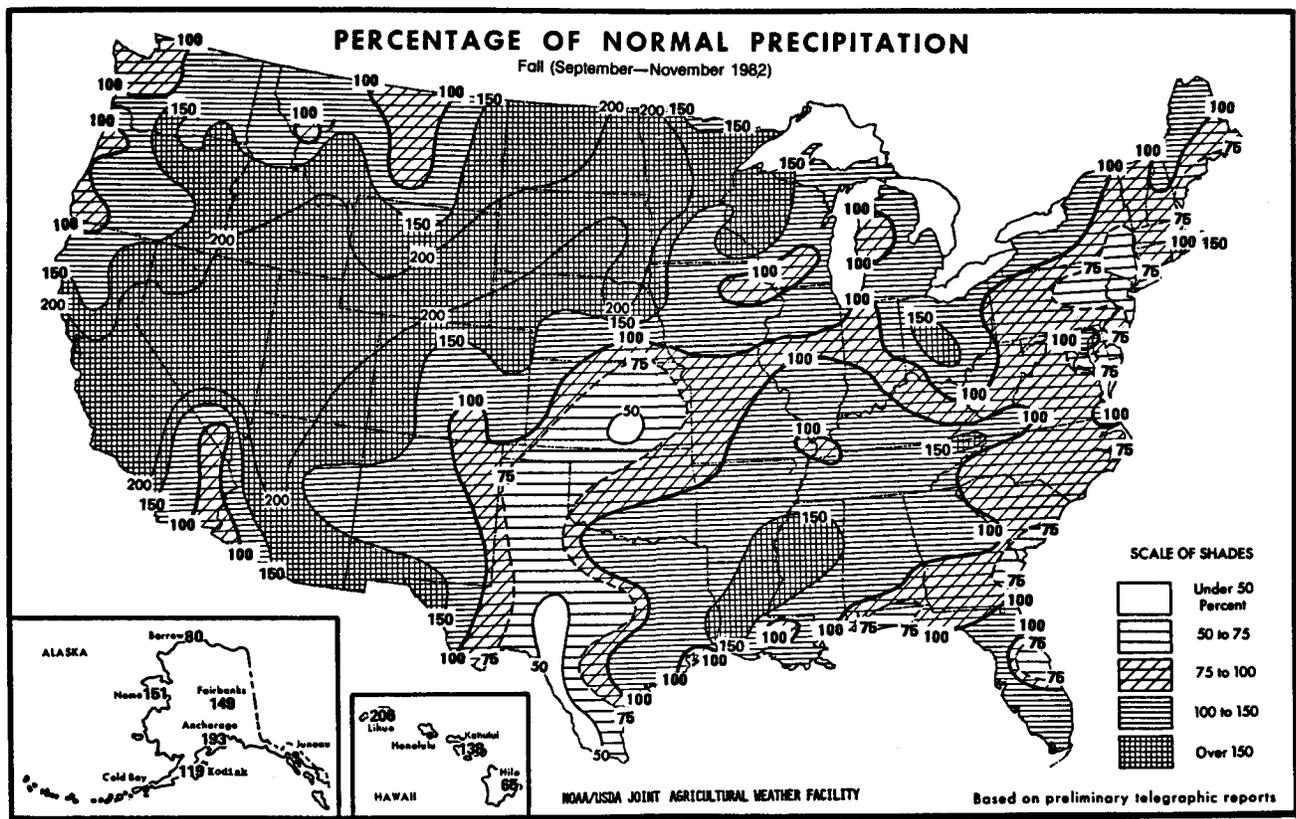
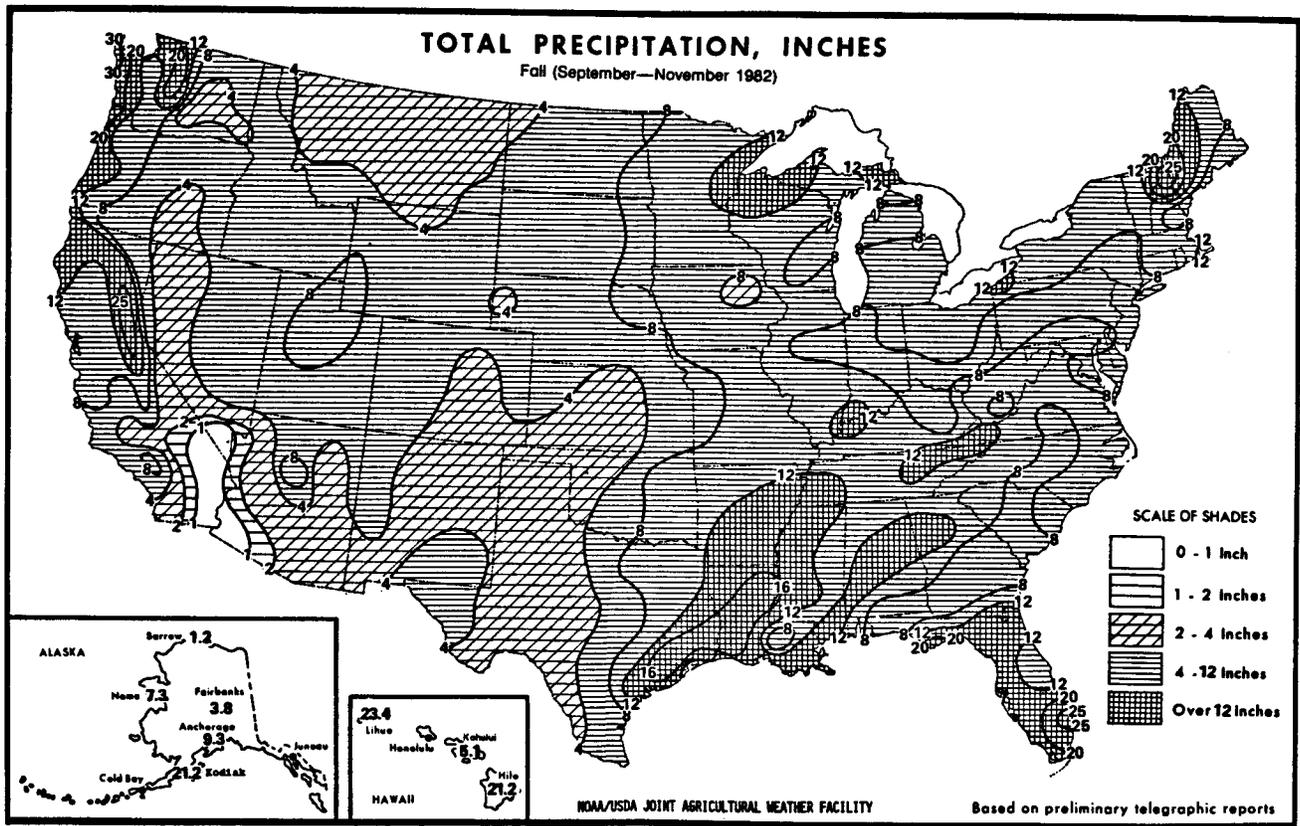
SEPTEMBER ... Nearly all of the area from the Rockies westward had well-above-normal rain, especially the area from central California northward through the Cascade Mountains and in the central Rockies centering in Utah. The rains were more sporadic east of the Rockies, and many areas were drier than normal. Timely rainfall fell over some of the winter wheatlands in the central Plains, but most of the area was too dry for planting. Weather through most of the western Corn Belt, where wet weather had delayed planting, was conducive to rapid crop development and some of the lateness was made up. Near the end of the month, Tropical Storm Olivia pushed moisture into the western mountains through California. The resulting heavy rain in California was disastrous to some fruits and veg-

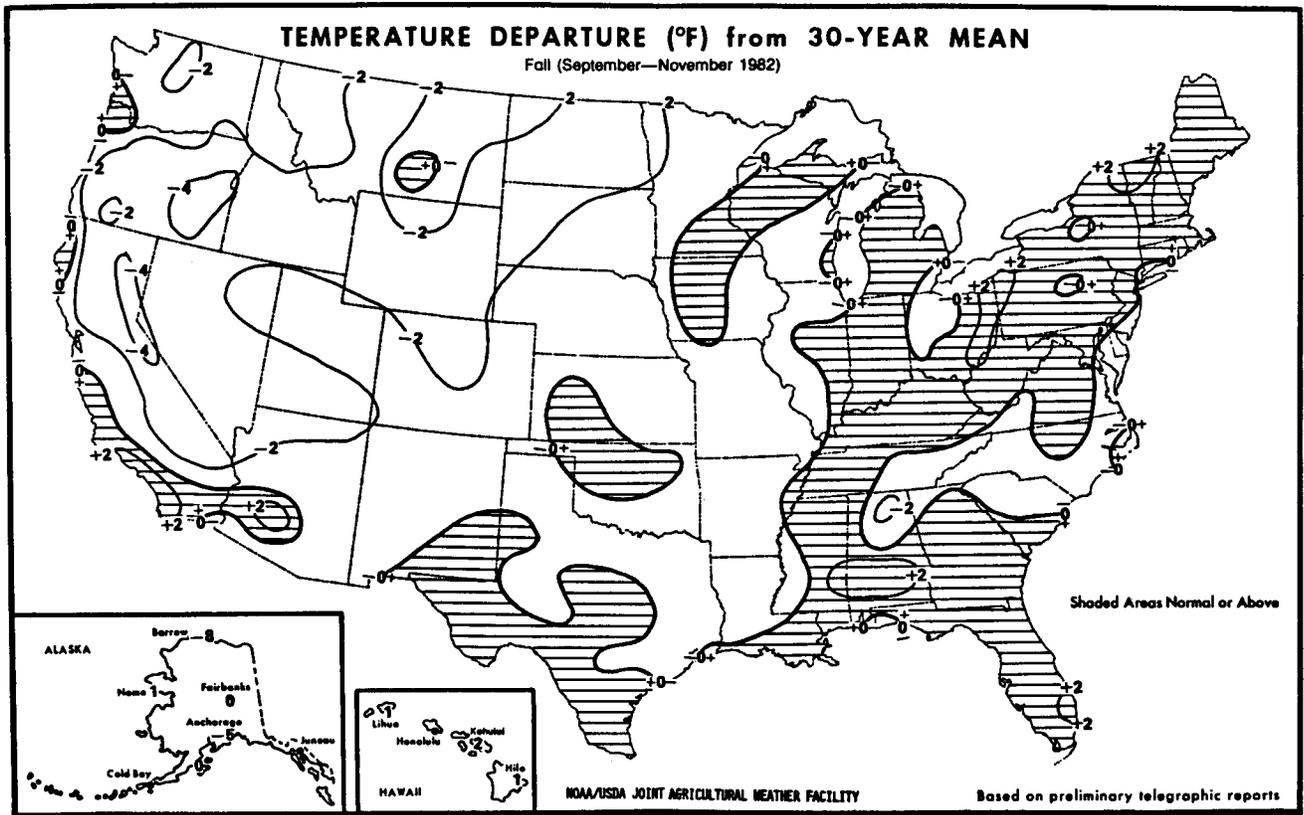
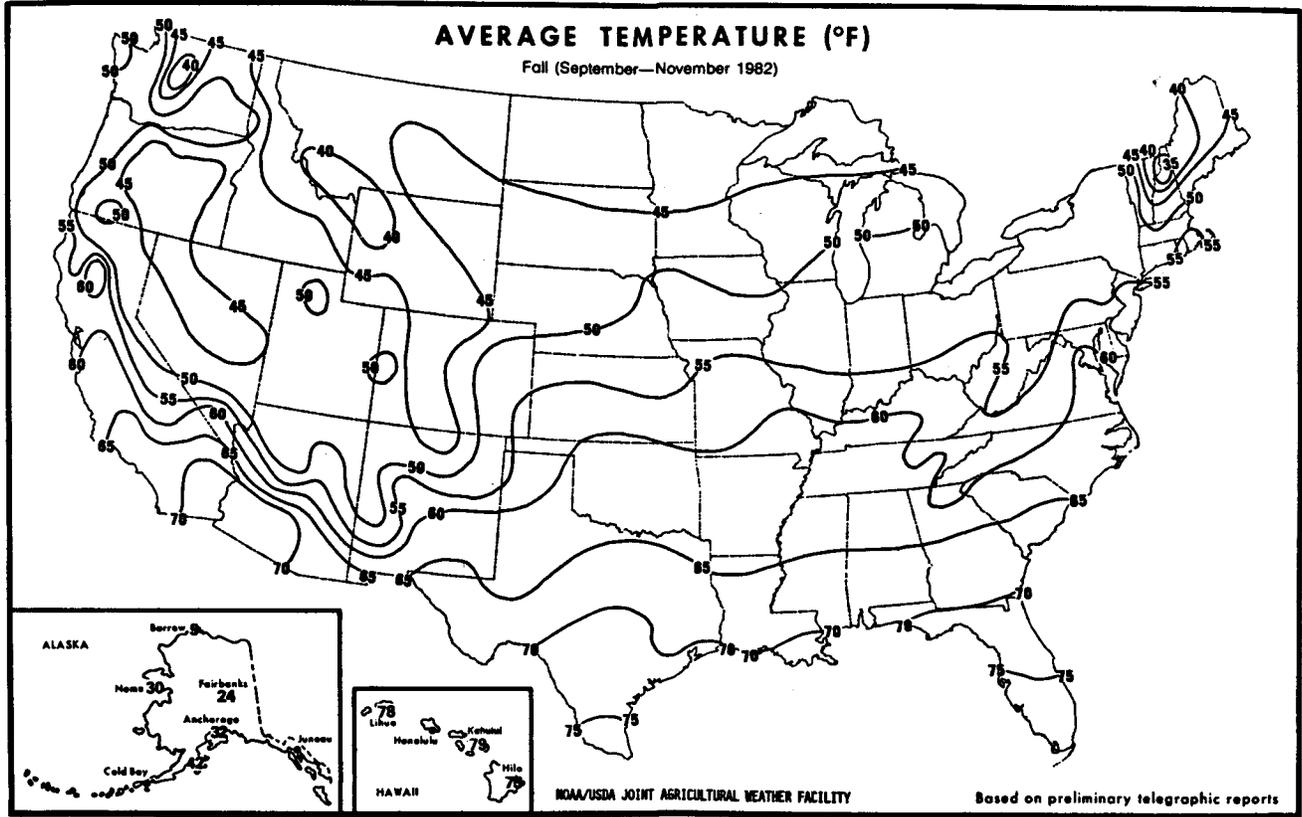
etables, especially raisens spread out to dry. At the end of the month, the remnants of Hurricane Paul moved over Mexico and brought heavy rain to parts of New Mexico.

OCTOBER ... The above-normal pattern of precipitation continued in central and northern California, and over the central and northern Plateau, and covered the entire northern Plains with well-above-normal rain. Persistent wet weather slowed the harvest of corn and soybeans in the western Corn Belt where development was still behind normal. The early-planted crop in the eastern Corn Belt was mostly harvested. In the third week, a cold outbreak covered the northern two-thirds of the Nation with freezing or colder temperatures and ended the growing season for most fall-harvested crops. It was another dry month in much of the winter wheat area of the central and southern Plains. Moisture was badly needed to germinate winter grain.

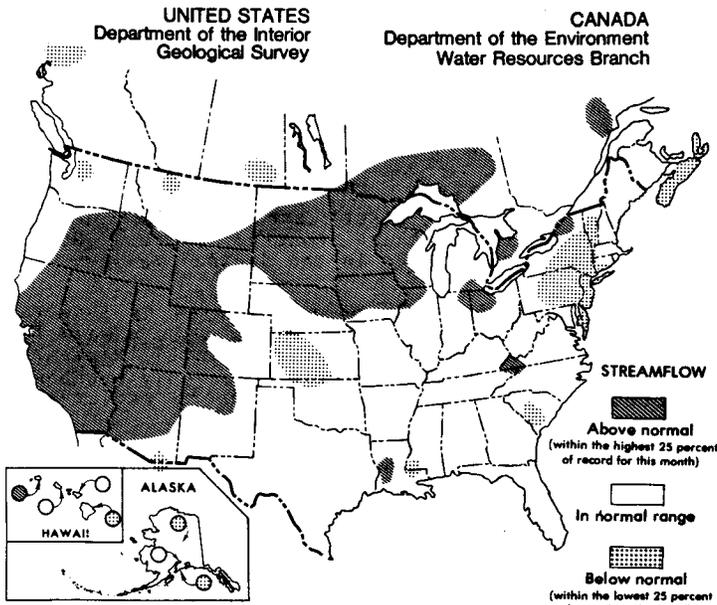
NOVEMBER ... Rain persisted in central California and the central Plateau, but the Pacific Northwest which should have been in the midst of its rainy season had generally less than three-fourths of the normal rain. Rain was ample across most of the South, through the Mississippi Valley, and the Great Lakes. Rain fell on most of the previously dry winter wheat areas of the central and southern Plains, but some parts still need more moisture. Much of the east coast was drier than normal. Temperatures were warmer than normal in the East and colder in the West. Snow accumulated in the western mountains but persisted only in the northern Great Lakes area in the East.







STREAMFLOW DURING NOVEMBER



Streamflow in the United States and southern Canada was generally in the normal range or above that range during November. Exceptions included a large area of below normal streamflow that centered on southeastern New York State.

Declining reservoir levels in the Delaware River basin prompted local officials to issue a drought watch in the early part of the month.

Streamflow increased seasonally in the Northeast, throughout most of the Ohio River basin, and in Wisconsin, Alabama, Arizona, Nevada, and the Pacific Coast States. Monthly mean flows remained in the above-normal range (within the highest 25 percent of record) in a large area that extended from Ontario southwest to California, and monthly and/or daily mean discharges were highest on record for November at several locations in Iowa, Michigan, Minnesota, North Dakota, Nebraska, Nevada, and Utah. For example, the monthly mean discharge of 1,850 cubic feet per second (cfs) and the daily mean flow of 6,740 cfs at Elkhorn River at Waterloo (drainage area 6,900 square miles) were highest for November in 62 years of record, and flow at that site remained in the above-normal range for the 7th consecutive month. In southeastern Iowa, the monthly mean flow of 118,900 cfs at Mississippi River at Keokuk (drainage area, 119,000 square miles) was highest for November in 100 years, surpassed only by the monthly mean flow of 211,300 cfs that occurred at that site in November 1881. Monthly mean discharge of the Minnesota River near Jordan, Minn., continued to increase, was over 7 times the November median flow, and was typical of the above-normal trend in streamflow and the record or near-record high flows of November in Western and North Central areas of the Nation.

Hurricane Iwa struck the State of Hawaii with winds up to 110 miles per hour on the afternoon of November 23. The islands of Niihau, Kauai, and parts of Oahu suffered heavy damage and were declared disaster areas by Governor Ariyoshi. Since little rain fell during the storm period, there were no reports of riverine flooding. Monthly mean flow of the East Branch of North Fork Wailua River near Lihue (island of Kauai) increased seasonally to 171 percent of median and was in the above-normal range. Flow at that site has been above median for 13 consecutive months.

By contrast, flows were in the below-normal range (within the lowest 25 percent of record) in most of New Jersey and parts of adjacent States during November, and parts of Vermont, South

Carolina, Louisiana, Kansas, Arizona, Washington, Montana, British Columbia, Saskatchewan, and Nova Scotia also experienced low flows. For example, monthly mean flow of Susquehanna River at Conklin, N.Y., increased seasonally during November, but was only 19 percent of median and remained in the below-normal range for the third consecutive month.

Declining reservoir levels in the Delaware River basin prompted local officials to issue a drought watch in the early part of the month. The New York City reservoir system, for example, was only 51 percent of capacity on November 29, about 30 percent below average for that date. Reservoir contents were generally near or above average elsewhere in the United States and southern Canada except for parts of Nova Scotia, Quebec, Maryland, North Carolina, and several Western States. In California, for example, the combined contents of 10 index reservoirs in northern and central parts of the State decreased to 135 percent of average at month's end and were 116 percent of the contents 1 year ago.

The combined flow of three large rivers--Mississippi, St. Lawrence, and Columbia--averaged 723,600 cubic feet per second during November, up 5 percent from October and 12 percent above the long-term median flow for the month. Because these three large rivers account for about half the runoff in the conterminous 48 States, their combined flow provides a quick, useful check on the status of the Nation's water resources.

Heating Degree Days (Base 65° F.)
November 1982

ALA. Birmingham	316	MAINE, Caribou	961	OKLA. Okla. City	490
Mobile	185	Portland	704	Tulsa	437
Montgomery	192	MD. Baltimore	495	OREG. Astoria	546
ALASKA, Anchorage	1315	Boston	515	Portland, U.	1075
Barrow	2261	Chatham	-	Medford	682
Fairbanks	1816	MICH. Alpena	864	Pendleton	825
Juneau	-	Detroit	696	Portland	614
Nome	1350	Flint	690	Salem	671
ARIZ. Flagstaff	888	Grand Rapids	717	PA. Allentown	577
Phoenix	103	Houghton Lake	855	Erie	605
Tucson	211	Lansing	739	Harrisburg	520
Winslow	638	Marquette U.	1069	Philadelphia	497
Yuma	79	S. Ste. Marie	976	Pittsburgh	605
ARK. Fort Smith	440	MIN. Duluth	1212	Scranton	619
Little Rock	411	Internat. Falls	1293	R.I. Providence	518
CALIF. Bakersfield	381	Minneapolis	997	S.C. Charleston	154
Eureka U.	381	Rochester	964	Columbia	306
Fresno	411	St. Cloud	1176	Greenville	370
Los Angeles U.	119	MISS. Jackson	286	S. DAK. Aberdeen	1111
Red Bluff	440	Meridian	226	Buron	1002
Stockton	454	Vicksburg U.	226	Rapid City	962
San Diego	93	MO. Columbia	619	Sioux Falls	1035
San Francisco	376	Kansas City	688	TENN. Chattanooga	418
COLO. Denver	875	St. Louis	569	Knoxville	416
Grand Junction	704	Springfield	551	Memphis	352
Pueblo	704	MO. Billings	926	Mobile	413
CONN. Bridgeport	530	Glasgow	1171	TEX. Abilene	340
Hartford	575	Great Falls	978	Amarillo	575
D.C. Washington	402	Havre	1173	Austin	245
FLA. Apalachicola	8	Helena	1119	Beaumont	154
Pt. Myers	7	Kalspell	1088	Brownsville	82
Jacksonville	95	Missoula	1072	Conroe Christi	134
Key West	0	NEBR. Grand Island	896	Dallas	-
Lakeand U.	0	Lincoln	840	Del Rio	221
Miami	0	Norfolk	915	El Paso	344
Orlando	16	North Platte	946	Fort Worth	316
W. Palm Beach	0	Omaha	844	Galveston U.	109
Tallahassee	106	Valentine	999	Houston	175
Tampa	18	NEV. Ely	951	Lubbock	485
GA. Atlanta	341	Las Vegas	429	Midland	378
Augusta	253	Winnemucca	843	San Angelo	338
Macon	215	N.H. Concord	692	San Antonio	237
Savannah	143	N.J. Atlantic City	497	Victoria	155
IDAHO, Boise	863	Trenton U.	-	Waco	285
Lewiston	779	N. MEX. Albuquerque	658	Wichita Falls	387
Pocatello	887	Chicago	772	UTAH, Milford	875
Id. Cairo U.	459	Moline	776	Salt Lake City	800
Id. Coeur d'Alene	486	Peoria	697	VT. Burlington	676
Fort Wayne	632	Rockford	801	VA. Lynchburg	446
Indianapolis	621	Springfield	656	Norfolk	334
South Bend	668	IND. Evansville	486	Richmond	399
IOWA, Burlington	-	Fort Wayne	632	Roanoke	509
Des Moines	791	Indianapolis	621	WASH. Colville	972
Des Moines	791	South Bend	668	Quillayute	706
Sioux City	916	IOWA, Burlington	-	Seattle-Tacoma	647
KANS. Concordia	815	Des Moines	791	Spokane	996
Dodge City	701	Sioux City	916	Walla Walla U.	779
Goodland	820	KANS. Concordia	815	Taina	868
Topeka	683	Dodge City	701	W. VA. Beckley	585
Wichita	653	Goodland	820	Charleston	480
KY. Lexington	500	Wichita	653	Huntington	464
Louisville	495	Lexington	500	Parkersburg U.	-
LA. Baton Rouge	184	Louisville	495	WIS. Green Bay	946
Lake Charles	162	LA. Baton Rouge	184	Milwaukee	802
New Orleans	146	Lake Charles	162	WFO. Casper	977
Shreveport	304	New Orleans	146	Cheyenne	1002
		Shreveport	304	Lander	1058
				Sheridan	983

Preliminary reports from airport locations, except those marked U for urban and R for rural.
*Estimated.

National Agricultural Summary

December 13-19

HIGHLIGHTS...Mild weather encouraged growth of winter wheat on the Great Plains. Wetness continued to delay the completion of soybean harvest in the South. Cotton picking resumed in the Southwest as fields dried. Wet fields and stormy conditions across the South held the number of days suitable for fieldwork in this region to less than 2. Soil moisture in the South was rated adequate to mostly surplus. Rain and snow caused some damage to soybeans and will make the completion of harvest difficult. Cotton harvest centered on the Southern Plains and in the Southwest. Eighty-seven percent of the acreage in the 14 major producing States had been harvested, lagging last year's 90% and the average of 91%. Some fields of corn remained for harvest in northern areas. A hard freeze is needed so fields can support machinery. Livestock continued in fair to good condition. Supplemental feeding increased. Calving and lambing continued active.

SMALL GRAINS...Mild weather over the Great Plains encouraged winter wheat emergence and top growth in areas with sufficient moisture. Wetness continued to delay the completion of seeding in the South. In southwestern and south-central areas of Kansas, topsoil moisture remained very short. Warm temperatures spurred growth in other areas of the State. Oklahoma winter wheat continued in fair to good condition. Wheat pastures in western areas of the State need rain for adequate growth. Recent rain and snow in Texas helped replenish topsoil moisture supplies and improved small grain prospects. Many dry-seeded fields germinated as a result of adequate moisture and warmer weather. Replanting made good progress in poorly emerged fields. Montana's winter wheat rated good condition, although snow cover was less than desired.

COTTON...In the 14 major producing States, 87% of the cotton acreage had been harvested, trailing last year's 90% and the average of 91%. Picking centered on the southern Plains and in the Southwest. Harvest in Arizona resumed on a limited scale as fields dried. Only 80% of the State's acreage had been harvested, behind the average progress of 91%. Harvest in Texas reached 83%, 3 points behind average. Picking in Texas made good progress as fields dried. The Oklahoma harvest reached the halfway mark.

FRUITS AND NUTS...Fruit growers in northern areas pruned trees as weather conditions permitted. Florida's citrus trees were in good condition with adequate soil moisture. Harvest of early and

midseason oranges increased rapidly. Arizona's citrus groves were wet but accessible for harvesting. Growers picked Navel and sweet oranges as demand warranted. Harvests of tangerines and tangerine-types increased. Lemons and grapefruit were picked on a limited scale. Citrus harvest continued active in the Lower Rio Grande Valley of Texas. California's lemon growers were picking for fresh market in desert areas and gearing up for harvest in southern coastal areas. Navel orange harvest continued in the Central Valley.

VEGETABLES...Cooler weather accompanied by showers and moderate to strong winds caused some damage to tender vegetable crops in Florida. Total shipments decreased 7% from the previous week. Only cabbage, carrots, celery, parsley, and peppers registered increases. Strawberry picking was very light but increasing. Recent rainfall improved crop prospects in the Lower Rio Grande Valley of Texas. As fields dried, harvesting picked up momentum in the San Antonio-Winter Garden areas. Muddy fields hampered harvesting in Arizona. The lettuce harvest was in full swing in Yuma County, but nearing completion in other areas. Wet fields delayed the carrot harvest in California's Salinas Valley and southern California. The lettuce harvest was active in the Palo Verde Valley but still limited in the Imperial Valley. Market tomato harvesting was virtually complete on the south coast.

OTHER CROPS...Wetness continued to delay the soybean harvest in the Southeast. A few fields of double-cropped soybeans remained for harvest throughout the region, but rain and snow kept growers out of fields for most of the week. Some damage was noted.

Corn harvest was nearly complete. However, some fields, especially in northern areas, were still standing. Farmers waited for a hard freeze before entering the remaining fields.

Tobacco growers prepared plantbeds in the Southeast. Marketing continued active in Virginia. Stripping of the 1982 crop neared completion in Maryland.

PASTURES AND LIVESTOCK...Mild weather made livestock care easier. Supplemental feeding continued. Ranges and pastures improved in Texas as a result of recent rains. Winter grasses provided sufficient grazing, although they were short in many areas. Livestock were in fair to good condition throughout the Nation. Lambing and calving was active.

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 SRS State Offices in cooperation with the National Weather Service.

ALABAMA: Temperatures averaged below normal. Rainfall 1.00 to 2.00 in. at most stations.

Fieldwork: 1.8 days. Soil moisture surplus except adequate extreme south. Wet conditions impeded completion of soybeans harvest and wheat seeding. Soybeans harvested 95%, wheat seeded 93%. Conditions: Livestock, pastures, and wheat fair to good.

ARIZONA: Mostly sunny skies. Isolated light snow, rain showers over northern half of State 13th. Average temperatures 2° below to 5° above normal.

Cotton harvest resumed limited scale as fields dried; 80% acreage harvested at least once, be-

hind last year's 93%, average 91%. Cotton fields in most parts of State drying. Maricopa, Pinal Counties reported farmers in cotton fields for 3.5 days latter part of week. Mohave, Graham Counties reported harvest at standstill because wet fields. Wheat, barley planting activities resumed as fields dried. Most counties all stages planting, some fields still too wet to work. Maricopa, Yuma Counties, plants emerging, established stands good condition. Sorghum, guar harvest limited scale. Alfalfa haying continued as fields allowed. Muddy fields hampered vegetable harvest. Lettuce picking winding down Pinal, Maricopa Counties, Parker-Poston area. Lettuce harvest full volume Yuma County. Cauliflower,

green onions, mixed vegetable harvest limited scale Maricopa County. Citrus groves wet but accessible for harvesting Navel, sweet oranges picked in volume as demand warranted. Harvest of tangerines, tangerine types increased for holiday season. Lemons, grapefruit picked limited scale.

ARKANSAS: Rainfall spotty over southeast half, little or none northwest half of State. Temperatures near normal. Highest temperature 66°, lowest temperature 12°. All departures from normal ranged from +2 to -3°. Most rainfall 3.03 in., least zero.

Cotton harvested 98%, 100% 1981, 98% average. A few cotton and soybean fields harvested, but too wet for land preparation. Grasses and pastures normal. Cattle in good condition, being fed hay. Flood waters receded, but many fields still flooded.

CALIFORNIA: The upper level wind flow pattern late in the week favored the movement of ocean developed storms moving east across central and northern California. Precipitation confined to the area north of the Tehachapi Mountains. Greatest rain totals along the coast north of Point Arena and over the north coast mountains. Substantial amounts over northern interior mountains also. Mean temperatures generally little changed from long term normals. Central Valley minimums down to freezing overnight about one night.

Cotton harvest winding down, 97% harvest, 97 last year, 98 average. Shredding and discing of residue was active. Small grain planting resumed. Emerged small grains showing good progress. Harvesting grain sorghum and corn. Last fields of rice being harvested. Some weed control practices active. Central Valley growers fumigating, pruning, burning brush, dormant and weed spraying - almonds, apricots, cherries, peaches. Bacon, Zutano avocados picking up. Desert lemon shippers now select picking for fresh market. Central and Southern Coastal lemon shippers gearing up. This week was final Christmas push for Central Valley Navels. Color and flavor improving. Broccoli moderate supply. Brussels sprouts harvest active. Carrot harvest delayed by wet fields Salinas Valley. Harvest continues San Joaquin Valley, Southern California. Cauliflower fairly light supply. Celery harvest light Salinas-Watsonville but fairly heavy Santa Maria. Lettuce harvest active Palo Verde Valley, still light Imperial Valley. Potato movement moderate to light. Market tomato harvest virtually complete South Coast. Cool weather continued to slow grass growth some areas, causing increase supplemental feeding. Calving, lambing tapering off some districts. Feedlots, dairy corrals muddy.

COLORADO: Pacific cold front 13th brought up to 12 in. of new snow to the mountains and 1 to 5 in. to the western valleys. Rest of week characterized by light snow in mountains and dry conditions at lower elevations. Temperatures well above normal in the east 13th and 17th with readings in the 50's and 60's and the low 70's in the southeast. Coolest days in east were 14th and 18th with readings in the 30's and 40's. High winds were noted in the mountains and foothills with gusts up to 60 mph.

FLORIDA: After unseasonable warmth the previous week, winter began in honest as two strong, cold fronts brought the coldest temperatures of the season. Freezes occurred over Panhandle on the 13th and again with heavy frost across Panhandle and north on the 18th with widespread frost into the central Peninsula and patchy frost southward to the northern Everglades. Rains averaged 1.00 to 2.00 in. Panhandle, 0.50 to 1.00 with early weak front, and 0.10 in. or less with late weak

front. Temperatures averaged 5 to 10° below normal. Topsoil moisture supplies generally adequate except some Interior and West Coast areas in central Peninsula. A few soybeans remain for harvest primarily in areas where rains, humidity delayed combining. Small grains growing rapidly. Wheat planting continues but is nearing completion. Tobacco plant bed fumigation remains active. Pastures improved particularly in the north as a result of rain 11th and 12th. Conditions fair to good, north, poor to fair, central; mostly good lower southern Peninsula, however cool weather, frost at weekend limited growth especially on permanent pastures. Cattle condition varies from fair to good. Calving in full swing. Citrus trees in generally good condition. Soil moisture adequate most areas. Recent cool nights will benefit both trees and fruit. Harvest of early and midseason oranges increasing rapidly. Cold front in early and late week brought cooler temperatures to vegetable areas. Scattered showers occurred with the cold front. Rainfall mostly light. Wind moderate to strong, some tender crops damaged by strong, cold winds of weekend. Patchy frost occurred few areas on weekend. Total shipments decreased 7% from previous week. Harvest gained cabbage, carrots, celery, parsley and peppers. Supplies about steady escarole and radishes. Volume declined snap beans, cauliflower, Chinese cabbage, sweet corn, cucumbers, eggplant, lettuce, okra, southern peas, squash and tomatoes. Very limited supply of fall watermelon remains available. Quality, size variable. Strawberry harvest very light but increasing. Quality generally good.

GEORGIA: Quite wet. Temperatures slightly below normal north, a little above normal south. Coldest period early in week. Rainfall early and again mid-week averaged near 2.50 in. and about 0.50 in. southeast. Weekend of 18th and 19th cooler than normal. Additional rain 18th and 19th averaged near 0.10 in., with near 0.25 in. at some spots in the north.

Soil moisture adequate southeast and southwest, mostly surplus north and central. Soybean, cotton, and pecan harvest and small grains seeding continue as major farm activities. Soybean and pecan harvest in the latter stages. Cotton harvest nearly complete. Wet weather causing damage to remaining soybeans in the north central and central regions. Tobacco bed preparation well underway in the southeast and southwest regions. Small grains in mostly good condition. Cattle and hogs in good condition.

HAWAII: Weather generally favorable for crop growth most of the week. High winds over weekend caused some damage to susceptible crops in exposed areas. Papaya supplies heavy from major production areas on Hawaii Island. Vegetable supplies generally adequate. Pineapple harvesting on some Islands shutdown for the holidays. Sugar responding well in areas hit by recent hurricane.

IDAHO: Several warm fronts moved through last week followed by weak cold fronts. Temperatures averaged 3 to 6° above normal. Lewiston recorded the high temperature of 60° while Fairfield had the low of -8°. Precipitation amounted to more than 0.05 in. above normal except eastern areas ranging from 2.01 in. at Sandpoint to 0.15 at Grangeville.

Preparation for the holidays, routine winter chores, and livestock feeding were the main farm activities. Some crop marketing was reported. Livestock in good condition. Corrals and feedlots in some areas in sloppy condition due to the wet weather of recent weeks. Calving reported in a few spots. Feed supplies appear to be adequate. High quality hay supplies said to be tight.

ILLINOIS: Temperatures 1 to 5° above normal in most areas except the south which was near normal. Precipitation ranged from 0.05 in. to near 2.00 in. with the heaviest amounts in the south. One in. of snow fell in parts of the north and central areas on the 15th.

Winter wheat condition -- 60% good, 32% fair, and 8% poor; some isolated damage from recent flooding. Fall plowing 65% complete, 1981 68%, average 72%. Livestock in mostly good condition. Soil moisture 53% adequate and 47% surplus.

INDIANA: Brief freezing of soils spurred field activities including finishing corn harvest, spreading lime, fertilizer and manure, and limited tillage. Most of week soils too soft to support equipment, especially in south. Other activities: Moving grain, cutting wood, equipment maintenance and repair, fence mending, caring for livestock and usual chores.

IOWA: A warm week with measurable precipitation limited to eastern-most counties. Temperatures averaged about 8° above normal. Maxima to 54° reported at Shenandoah and Des Moines the 18th. Snow cover over north diminished to little or none by the weekend.

KANSAS: Only trace amounts precipitation, mainly in southwest. Temperatures were in upper 30's to around 40°, 6 to 9° above normal.

Mild temperatures encouraged wheat emergence and top growth where sufficient moisture. Southwest and south central area topsoil moisture remains very short. Fall tillage and application of anhydrous ammonia. Cattle grazing stubble. Feedlots good condition. Cattle gaining well.

KENTUCKY: Mild, wet weather. Daily highs mostly in 50's. Rain mid-week with amounts averaging more than 1.00 in. Several areas exceeded 2.00 in.

Wet conditions limited activity in many areas. Burley markets now closed until January 10. Price still averaging around \$182 per cwt.

LOUISIANA: Rainfall averaged 0.46 to 2.86 in. Temperatures 2 to 6° below normal.

Soil moisture surplus. Days suitable: 1.7. Cotton harvested 96%, 100% 1981 and average. Soybeans harvested 96%, 99% 1981, 100% average. Sugarcane harvested 89%, 91% 1981, 92% average. Wheat seeded 86%, 98% 1981, 99% average; emerged 80%, 91% 1981; condition fair. Much of remaining acreage probably will not be seeded. Pecans harvested 87% 1982 and 1981, 92% average. Vegetables rated fair to good. Pastures fair condition; livestock fair to good.

MARYLAND AND DELAWARE: Last week was the first in four that temperatures averaged below normal. Soybean harvest and tobacco stripping winding up. Temperatures averaged 1° above normal in western Maryland and were 2 to 4° below normal elsewhere. Precipitation averaged 1.20 in. ranging from 0.56 in. at Frederick to 2.00 in. at Oakland, 1.37 in. in central Maryland, west of the Bay and 1.37 in. east of the Bay. Saturday the 18th was sunny and clear with highs in the low 30's and lows in the low 20's. Sunday the 19th was cloudy with snow and rain throughout the day. Sunday highs averaged in the upper 30's and lows in the low 20's.

MICHIGAN: Generally a warm week, though temperatures did drop into the single digits over much of the State. On average, temperatures were 4 to 6° above normal. Except for southeast Lower Michigan which received significant rainfall during

the first part of the week, precipitation generally was below normal. Amounts ranged from a trace in northwest lower section to nearly 1.50 in. in the southeast. Snow depths over Upper Michigan changed little from the previous week. Little measurable snow remained over Lower Michigan at week end.

MINNESOTA: Temperatures averaged 5 to 8° above normal in the southwest and south central and 8 to 10° above normal elsewhere. The extreme temperatures were a high of 49° at Winnebago and a low of -4° at Cambridge. Precipitation averaged near normal in the northwest and 0.10 to 0.15 in. below normal elsewhere. Precipitation totals were less than 0.20 in. with the southwest the driest.

MISSISSIPPI: Cold fronts resulted in below normal temperatures and above normal rainfall. Temperature extremes 15 and 69°. Greatest 24-hour rainfall 2.24 in. Greatest weekly rainfall 2.30 in.

Soil moisture surplus to excessive. Wet fields and more rain during the week limited fieldwork to 1.5 days suitable. Cotton 97% harvested, 100% last year, 99% average. Soybeans 92% harvested, 100% last year, 98% average. Pecans 91% harvested. Winter wheat 94% seeded; condition good to fair. Hay and roughage and grain supplies adequate. Pasture condition fair to good. Livestock condition good to fair.

MISSOURI: Temperatures slightly above normal in north, slightly below normal in south, but near normal elsewhere across the State. Bootheel area averaged 1.50 in. of precipitation, but the rest of State received no rainfall. Flooding continued along the lower Mississippi River.

Cotton 100% harvested, last year 100% and normal 100%.

MONTANA: Cool most areas first of week, mild temperatures remainder of week. Temperatures averaged 4 to 9° above normal. Highest 55° Harlowton, lowest -13° West Yellowstone. Precipitation light eastern sections and moderate to heavy west and through the mountains. Valleys of west received 0.50 to 1.50 in. precipitation while mountains received more than 3.00 in. Very windy along east slopes of mountains most days.

Winter wheat good condition, snow cover poor to fair. Livestock good condition, grazing open to difficult.

NEBRASKA: Temperatures: 5 to 7° above normal. Precipitation very light across the State.

NEVADA: Northern areas fell victim to occasional periods strong gusty winds although precipitation generally light. In contrast, south area had mostly fair skies, light winds, and seasonal temperatures. Cold front early in period produced dusting of snow some valleys north with one foot in Sierras. Light rain spread into southern areas. Fair weather and light winds prevailed remainder of period. Temperature extremes: 70 and -2°.

Cotton harvest well along. Open weather aided trucking potatoes to market and easy on livestock.

NEW ENGLAND: Most precipitation fell as rain in all but the higher elevations. Amounts averaged between 0.50 and 1.50 in. over the area, with some locally higher totals in northern sections. Significant snowfall was limited to a small band south of Boston. Temperatures started out well below normal with high readings in the single numbers north and teens central and south. Then a surge of tropical air on the 16th sent temperatures soar-

ing to around 50° in the north to the low 60's in the south. More seasonal temperatures for the start of the weekend.

NEW JERSEY: Temperatures 3° below normal, averaging 29° north, 32° south, and 34° coastal areas. Extremes: 3° at Long Branch and Neshanic Station and 62° at Longbranch. Precipitation was slightly above normal, averaging 0.98 in. north 0.83 in. south and 0.97 in. coastal sections. The heaviest 24 hour total reported 1.05 in. on 16th to 17th at Long Branch and Toms River. Heaviest 24 hour snowfall 2 in. on 19th to 20th at Charlotteburg, Newton, Flemington and Neshanic Station.

Farmers caring for livestock, pruning fruit, selling Christmas trees and tending to other normal winter chores.

NEW MEXICO: Average temperatures between 3 and 7° above normal in the northeast and near or slightly above normal elsewhere.

Soil moisture supplies adequate. Ice storms have caused damage in some areas. Cotton harvest beginning to slow down. Winter wheat and barley in fair to good condition. Approximately 70% of the fields on the eastside being grazed. Grain sorghum harvest nearing completion. Pecan harvest active. Red chile harvest complete in most areas. Ranges in good to excellent condition. Livestock in good condition with some supplemental feeding. Breaking of ice on water tanks required. Cotton harvested 92%, 90% 1981, 81% average.

NEW YORK: Warm frontal system by mid week. Fair but cold weather again by weekend. Average temperatures mainly in 20's. Weekly low: -20° at Stillwater Reservoir. Precipitation 1.75 in. at Booneville, 1.00 in. at Massena and Bridgehampton and less than 0.25 in. in New York City and Dansville. Elsewhere 0.25 to 1.00 in.

NORTH CAROLINA: Temperatures: 3 to 5° above normal. Precipitation: Heavy, above normal.

Fieldwork: 1.9 days suitable. Soil moisture: 35% adequate and 65% surplus. Conditions: Wheat, oats, barley and rye mostly good. Harvest: Cotton 96%, 1981 100%, average 98%; sorghum 100, 1981 and average 100%; soybeans 85%, 1981 98%, average 91%. Major farm activities: Soybean and cotton harvest, seeding of small grains, cutting of firewood, machine repair, and grading tobacco.

NORTH DAKOTA: Temperatures averaged from 7° above normal north central to 10° above normal northeast. Extremes: 48° south central on the 17th to -11° north central on the 12th. Precipitation was 0.15 in. above normal west to 0.03 in. below normal southeast. Northwest areas had 3 in. of new snow on the 14th with a total of 7 in. on the ground.

Mild weather in most areas aided farmers in sunflower harvest which was nearing completion. Weather was also a boon to livestock care. Light snow and freezing rain made roads slippery over the weekend in the east. Otherwise, most rural roads in mostly good driving condition.

OHIO: Temperatures normal central; 1 to 2° above normal south, and 1 to 2° subnormal north. Average temperatures in mid 30's to lower 40's. Nights averaged in upper teens to mid 20's. Precipitation abundant early in week, averaging 1.00 in.; ranging from 0.60 in. to near 2.00 in. Light snow cover north. Soil temperatures in low to mid 30's.

Farm activities centered on livestock care, general maintenance, and hauling grain. Livestock still grazing in corn stubble.

OKLAHOMA: Temperatures averaged from 5° above normal in Panhandle to 1° below normal south central. No significant rain fell.

Wheat remained in good to fair condition. Wheat pasture in some areas of west needs rain for adequate growth. With clear, open weather, cattle in good to fair condition with some supplemental feeding needed. Cotton harvest half completed.

OREGON: Heavy rain caused more flooding at coast and at most basins in the Willamette Valley. Amounts up to 8.00 in. fell at coast and up to 6.00 in. inland. Up to 1.25 in. of precipitation fell at most areas east of Cascades to less than 0.50 in. in the far northeast. Temperatures were 3 to 4° above normal in the west and 2° above normal in the east except for the southeast which had temperatures of 1° below normal.

Soil moisture surplus in west, adequate to surplus in east. Excessive rains caused many fields to lay underwater in the west. Winter wheat condition fair to mostly good. Livestock condition fair to mostly good. Range and pasture conditions fair to mostly good to under water.

PENNSYLVANIA: There were two important frontal passages. The first one on 16th left 0.50 to 1.00 in. of needed rainfall across most of State. The second cold front brought light snow to the State on 19th. Accumulations measured only a few inches. Week began with cold temperatures below zero in the central mountains and by mid-week temperatures hit the 40's and 50's. Returned to cold temperatures during weekend.

SOUTH CAROLINA: Temperatures averaged cooler than usual in most areas, although warm weather occurred midweek. Weekend rainfall produced 0.50 to 1.00 in. Combined with cold temperatures light amounts of freezing rain reported.

Cotton 99% harvested, 99 last year and 100 average. Rainy, damp weather continues to slow cotton and soybean harvest along with seeding small grains.

SOUTH DAKOTA: Temperatures averaged 3 to 10° above normal. Extremes: -4 and 60°. Little precipitation.

Late corn harvesting still in progress.

TENNESSEE: A cold front moved through 15th accompanied by rains ranging from 0.50 in. northeast to near 2.00 in. middle and west. High pressure 17th and 18th. Another cold front on 19th with rainfall amounts less than 0.25 in. Both low temperatures for the week were in the 20's and 30's. Highs were in the 40's and 50's.

Cotton harvested 100%, 1981 100%, average 100%.

TEXAS: Weak high pressure system replaced Pacific cold front when it moved out of State; no precipitation noted with frontal passage. Although cooler air moved into State, sunny conditions warmed temperatures. Temperatures above normal most of State, except South Central Texas, Coastal Bend, Upper Coast where normal temperatures found. Below normal readings South Texas and Lower Valley. Precipitation near normal over Northern High Plains to almost 0.50 in. below normal over South Central Texas, Coastal Bend and Upper Coast.

Range and pasture: Ranges and pastures improve as rainfall earlier this month increased moisture supplies many areas. Winter grasses, weeds providing sufficient grazing, although grasses short many areas. Heavy frost and freezing temperatures stopped pasture growth Northeast Texas. Wheat and oat pastures improving, producers Low Plains buying more stocker cattle. Supplemental feeding opera-

tions increased across State with colder weather. Cattle remain in generally fair condition.

Crops: Most field activities resumed as warmer temperatures returned. The recent rain and snow helped replenish topsoil moisture supplies; subsoil supplies remain low. Small grain prospects improved with additional moisture. Cotton harvest good progress as fields dry. Cold, wet weather lower yields some fields. Adequate moisture supplies and warmer temperatures improved small grain stands. Many dry-seeded fields germinated, although growth spotty some areas. Replanting good progress poorly emerged fields. Greenbugs and grain mites problems across Blacklands, control measures active. Wheat condition across the State was 66% of normal with 6% excellent; 37% good; 38% fair; 17% poor; and 2% failure. Peanut harvest virtually complete with few fields remaining. Yields poor across Cross Timbers, some fields abandoned because of poor crop prospects. Sugarcane harvest good progress Lower Valley. Cotton harvested 83%, 86% 1981, 86% average. Wheat emerged 96%, 100% 1981, 100% average. Peanuts harvested 100%, 98% 1981, 99% average. Pecans harvested 89%, 76% 1981, 81% average. Soybeans harvested 100%, 98% 1981, 99% average. Oats planted 99%, 100% 1981, 100% average.

Commercial vegetables: Lower Rio Grande Valley, citrus harvest active with strong gift fruit market. Fall and winter vegetables good progress following recent rainfall. San Antonio-Winter Garden, carrot, tomato, spinach harvest picked up as fields dry. Broccoli good progress. Weather ideal pecan harvest, and operations active many orchards.

UTAH: Periods of precipitation over most of State. Accumulated amounts generally light to moderate. Average temperatures ranged from 9° below normal to 4° above normal.

Sorting and marketing of apples, onions, and and potatoes continue as needed. Care and feeding of livestock major farm activity.

VIRGINIA: Following last weekend's snow cover, temperatures cooled to well below normal under partly cloudy skies and light winds. A frontal system advanced across State on 16th was preceded by rain--amounts varying from 0.50 to 1.25 in. Temperatures returned to near normal behind the front. Precipitation returned to the State on 19th as an area of snow moved into the State in advance of a cold front. Generally, 1.00 to 3.00 in. accumulations were reported over all but the Tidewater sections.

Cold, snowy conditions pushed topsoil moisture to 34% adequate and 66% surplus while holding days suitable for fieldwork to less than 1. Major activities continue to revolve around livestock feeding, calving, lambing, vaccinating and other normal winter chores. Cutting firewood, marketing tobacco, repair of machinery, buildings and fences, record keeping and planning for next year's purchases also active. Soybean harvest 95% complete, behind last year's 100%

and the average of 97%. Wet conditions continue to delay completion of harvest. The snow has pushed beans down and may make harvest of some areas impossible. Grain sorghum harvest 95% complete, 91% in 1981 and 88% for the average. Pastures and winter grains and grazing crops are both rated excellent. Feeding of hay picked up to a more normal winter rate. Hay supplies reported adequate. Calving active with fall calves in good condition. Lambing picking up with no problems reported.

WASHINGTON: The flow around a large, deep low pressure system centered in the Gulf of Alaska brought wet--but relatively mild--air throughout the week. The coldest minimum temperatures, reported early in the week, were less than 10° in eastern areas, but ranged into the upper teens and twenty's through most of the week. All areas reported significant precipitation totals ranging from near 1.00 in. east of the Cascades to nearly 6.00 in. on the north coast.

West: Very little farm activity. Christmas tree cutting winding down. Livestock on winter rations. Some pruning and tying of caneberries took place. Heavy rains during last week has also caused severe flooding in Kitsap County.

East: Snow fell last week, but has melted off in many areas. Fall grain continue in fair to good condition. Pruning of grapes and tree fruit continue. Feeding of livestock is taking place. Hay supplies adequate.

WEST VIRGINIA: Temperatures averaged 2° below normal. High 57°, low -5°. Precipitation averaged near normal.

Soil moisture adequate to surplus. Days worked averaged 1.9. Hay supplies adequate to short. Grain and other feed supplies adequate.

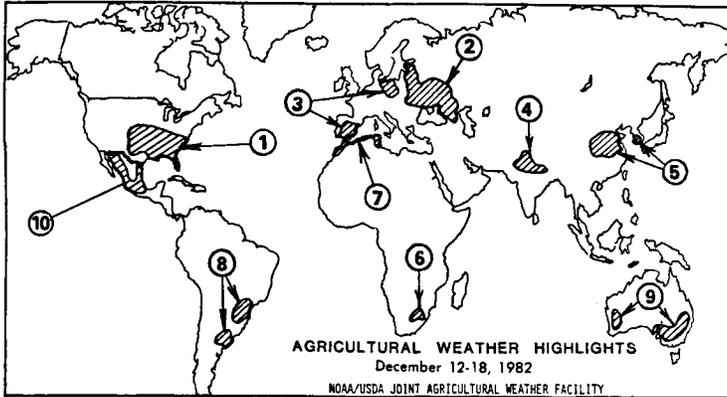
WISCONSIN: Week began and ended on a mild note. Temperatures were near or slightly above normal. Late snow developed over west and northwest late on 15th and spread over State night of 15th. By 16th 1 to 3 in. of light snow were reported across much of south, with patchy 5 in. amounts in the higher terrain in southeast. However only a dusting was reported across central and northern areas. Light snow fell again over weekend with 2 to 5 in. totals reported across north on 18th and 19th, but only scattered areas of snow and drizzle were reported in the south. High temperature for the week was 43° reported at Madison and Racine, while the coldest was 7° at Hudson. Average frost depth for the State 5.7 in. while the snow depth averaged 1.0 in.

WYOMING: Temperatures near normal. Moisture below normal.

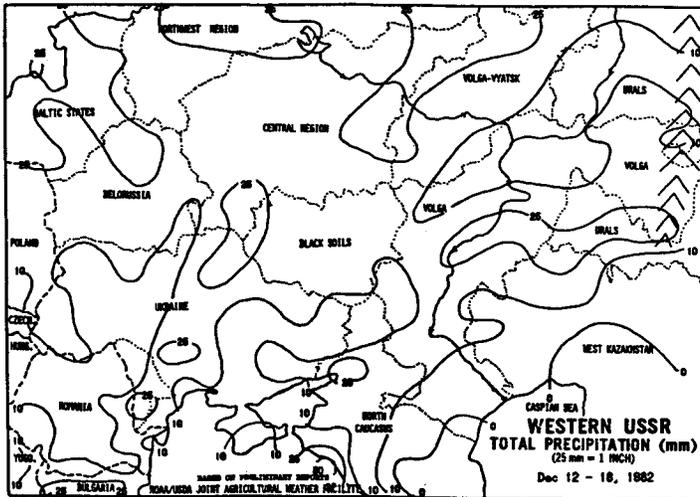
Winter wheat mostly good condition. Livestock mostly good condition; supplemental feeding in areas with snow cover, other areas utilizing winter pastures. Mild winter thus far.

International Weather and Crop Summary

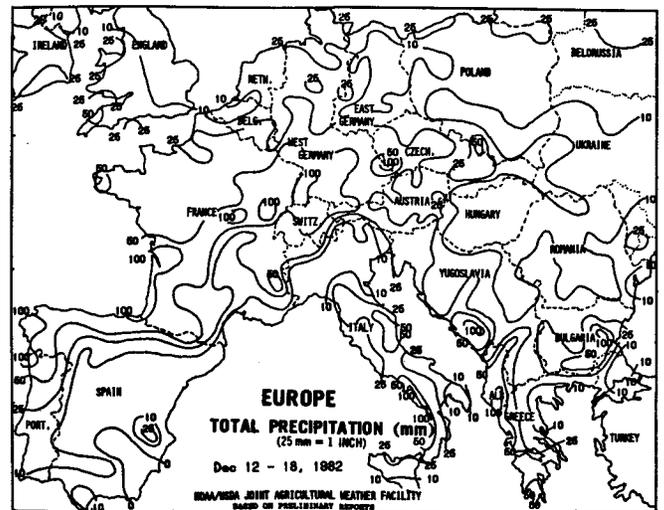
December 12 to 18, 1982



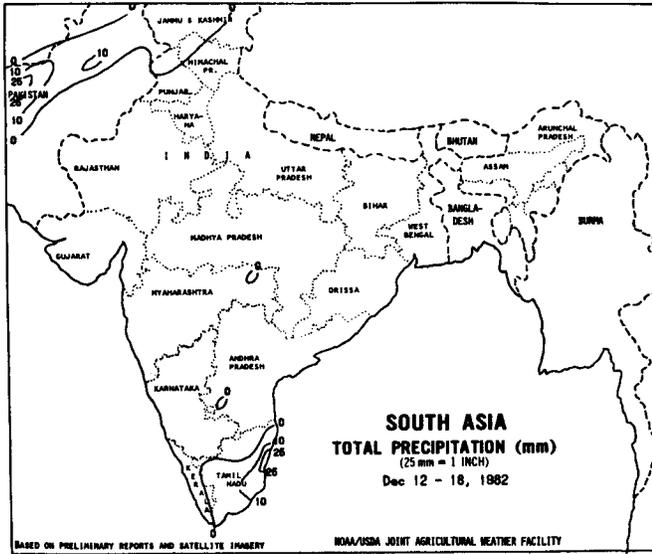
1. **UNITED STATES** ... Wetness over the Southeast further delays harvest. Mild weather over southern and parts of central Plains spurs wheat development.
2. **WESTERN USSR** ... Widespread precipitation falls in north and west while lighter amounts fall in south. Above-average temperatures conducive for crop growth in south.
3. **EUROPE** ... Wet weather over much of the continent benefits some dry areas of Poland and aids crop growth in south. Too dry in southern Spain for winter grain planting.
4. **SOUTH ASIA** ... Dry weather aids cotton and winter rice harvesting but unfavorable for northern winter grain.
5. **EASTERN ASIA** ... Cold, dry weather covers dormant winter grains in China.
6. **SOUTH AFRICA** ... Becoming too dry in the Maize Triangle as corn advances through vegetative growth.
7. **NORTHWESTERN AFRICA** ... Showers aid emergence of winter grains in Tunisia, Algeria, and northern Morocco but southern Morocco still too dry.
8. **SOUTH AMERICA** ... Showers caused some delays in soybean planting in Parana, but planting progresses throughout southern Brazil. Wet weather aids summer crops in Argentina.
9. **AUSTRALIA** ... Dry weather aids wheat harvesting but further stresses summer crops in the east and south.
10. **MEXICO** ... Rains over the Southwest slow harvesting but improve soil moisture. Sunny, dry weather in most other areas allows field preparation for next year's crops.



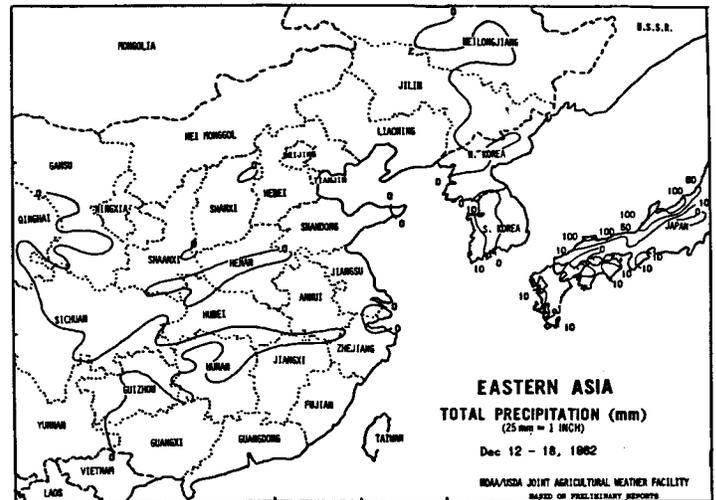
WESTERN USSR...Precipitation was more abundant this week especially in western and northern portions of the winter grain area. Average temperatures remained near or below freezing in the northern half of the grain belt, but a notable warming trend pushed average temperatures above freezing in southern winter grain areas. In fact, temperatures averaged well above normal throughout the Ukraine, the southern Volga Valley, and the North Caucasus. Weekly precipitation in these areas was mostly below 10 mm except for a narrow band in the central Ukraine and isolated locations throughout the remainder of the region. The warmer than average weather likely promoted an additional period conducive for crop growth in southern winter grain areas.



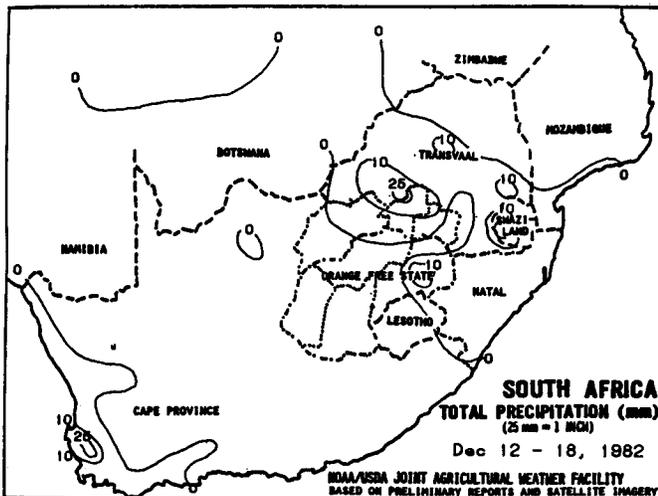
EUROPE...Much of Europe received seasonal to above-average precipitation for the week. In fact, the only significant areas of below-average precipitation were Spain, eastern England, East Germany, southern Poland, Hungary, Romania, and eastern Yugoslavia. Locally heavy rain fell in Italy and areas bordering the Adriatic Sea. Abundant rains also fell in France. Significant moisture aided chronically dry areas of central and northern Poland. Temperatures generally averaged above normal except in England. Winter grains likely added some growth in western and southern Europe. Showers in northern Spain aided early growth of winter grains, but continued dryness in much of southern Spain hindered winter grain planting.



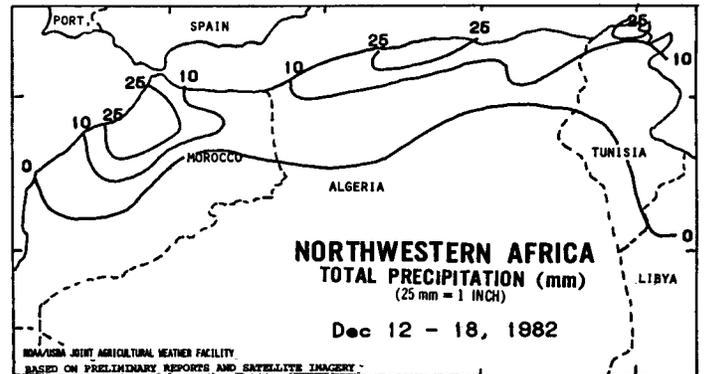
SOUTH ASIA... Dry weather covered nearly all of India except in extreme southern portions where mostly below-average rainfall occurred. The dry conditions aided harvesting of cotton and winter rice. The dry weather extended into much of Pakistan to the west and Bangladesh and Burma to the east. The dryness in northern India continues to cause concern about prospects for unirrigated winter grains which are in the vegetative growth stage.



EASTERN ASIA... Dry weather covered nearly all of China and Korea except for some light showers mostly south of the Yangtze River and along the southwest coast of South Korea. A few light showers were also scattered across Shaanxi and Henan Provinces north of the Yangtze River. Subfreezing temperatures throughout the winter grain areas of the North China Plain kept crops dormant.



SOUTH AFRICA... Mostly dry weather continued across the Maize Triangle where corn is in vegetative growth. Some scattered showers dotted the northern portion of the corn area, but weekly totals were generally below the long-term average. Warm weather reduced topsoil moisture by evapotranspiration. Thus, widespread and frequent rains will be needed soon to meet the increasing moisture demands as the corn crop progresses through vegetative growth and into the reproductive cycle. At present, spotty areas throughout the Orange Free State and the Transvaal may be becoming too dry, but there is still sufficient time for adequate rainfall to maintain favorable crop prospects.



NORTHWESTERN AFRICA... Beneficial moisture fell across most of the principal crop areas except southern Morocco. Planting of winter grain is underway in all areas and timely moisture in Algeria and Tunisia has provided favorable conditions for emergence and early growth. In Morocco, rainfall has been less abundant. The recent rains benefited northern grain areas; however, southern crop areas remain too dry for favorable germination and emergence. Rain is needed soon in southern areas to improve growth conditions.



ADDITIONAL NOVEMBER DATA FROM ISSUE VOL 69 #49, DEC. 7, 1982

	Temp.	Temp Departure	Precip.	Precip Departure	% Precip
ALASKA					
KODIAK	37	+2	7.6	+2.2	141
HAWAII					
HILO	75	+1	4.6	-9.0	34
HONOLULU	76	-1	1.3	-1.7	43
KAHULUI	77	+2	1.9	- .4	83
LIHUE	76	+1	3.7	-1.9	66

CORRECTION BARROW ALASKA TEMPERATURE -10 TEMPERATURE DEPARTURE -10

National Weather Summary (continued from back cover)

windy conditions spread eastward over the central and northern Rockies, but the snow fell only in the northern Rockies. The winds through the Rockies produced some dramatic effects on temperatures. Early in the morning, Boulder, Colo., with a warming downslope wind, reported a temperature of 55°, while Greeley, only 40 miles away, recorded 18° and calm wind. Most of the East had no precipitation. Only a few snowshowers fell from the northern Plains through the Great Lakes region.

SATURDAY ... Very cold weather blew into the East Coast States, and freezing temperatures covered the Florida Panhandle and spread into the northern part of the peninsula. Later, warm, moist air flowed northward into the Plains and Mississippi River Valley. Light showers developed from Louisiana to Georgia and northward through the Great Lakes. Freezing drizzle prevailed in the northern Plains. Wet, windy weather continued in the Pacific Northwest. High wind continued in the northern Rockies and blew out onto the northern High Plains.

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